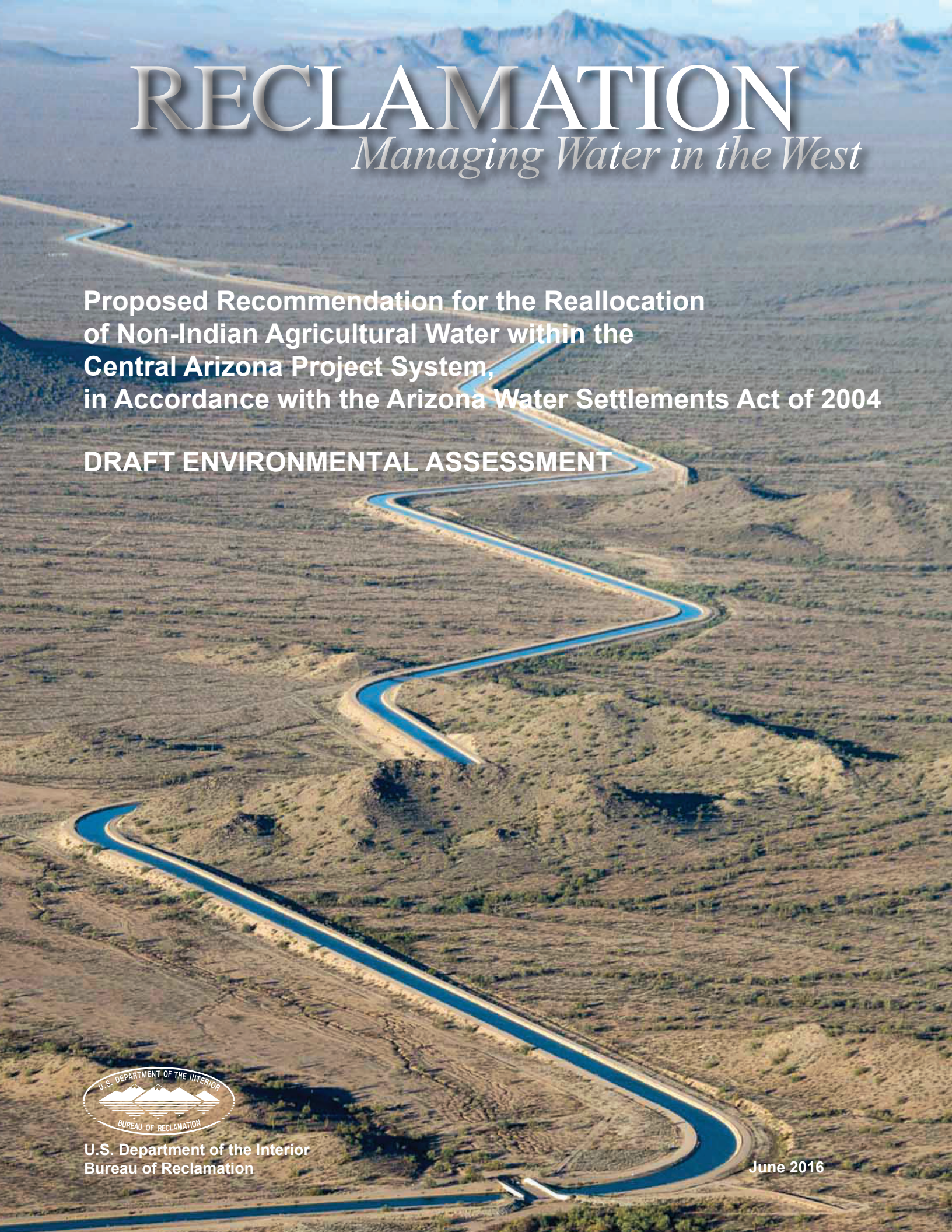

RECLAMATION
Managing Water in the West

Proposed Recommendation for the Reallocation of Non-Indian Agricultural Water within the Central Arizona Project System, in Accordance with the Arizona Water Settlements Act of 2004

DRAFT ENVIRONMENTAL ASSESSMENT

U.S. Department of the Interior
Bureau of Reclamation

June 2016

DRAFT ENVIRONMENTAL ASSESSMENT

FOR THE PROPOSED

ARIZONA DEPARTMENT OF WATER RESOURCES RECOMMENDATION FOR THE REALLOCATION OF NON-INDIAN AGRICULTURAL PRIORITY CENTRAL ARIZONA PROJECT WATER IN ACCORDANCE WITH THE ARIZONA WATER SETTLEMENTS ACT OF 2004

PREPARED FOR

U.S. BUREAU OF RECLAMATION

PREPARED BY

ERO RESOURCES CORPORATION

DENVER, COLORADO

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JUNE 2016

Mission Statements

The **U.S. Department of the Interior** protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

~ ~ ~ ~ ~

The mission of the **Bureau of Reclamation** is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Abbreviations, Acronyms, and Defined Terms

ADWR	Arizona Department of Water Resources
AFA	acre-feet annually
AGFD	Arizona Game and Fish Department
AMA	Active Management Area
Apache Junction WUCFD	Apache Junction Water Utilities Community Facilities District
ASM	Arizona State Museum
ASU	Arizona State University
AWSA	Arizona Water Settlements Act
BA	Biological Assessment
BCPA	Boulder Canyon Project Act
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
bls	below land surface
CAGRD	Central Arizona Groundwater Replenishment District
CAIDD	Central Arizona Irrigation and Drainage District
CAP	Central Arizona Project
CAWCD	Central Arizona Water Conservation District
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH	Critical Habitat
Code	Groundwater Code
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
Decree	1964 *Arizona v. California* decree
DSI	demand and supply imbalance
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973, as amended
ESRV	East Salt River Valley
FONSI	Finding of No Significant Impact
FR	Federal Register
FWCA	Fish and Wildlife Coordination Act
FWS	U.S. Fish and Wildlife Service
GSF	groundwater savings facilities
IDD	Irrigation and Drainage District
INA	Irrigation Non-Expansion Area
ITAs	Indian Trust Assets
Listed species	federally listed species under the ESA, as amended
LTSC	long-term storage credits
MAFA	million acre-feet annually
M&I	municipal and industrial
MDWID	Metropolitan Domestic Water Improvement District
MHI	median household income

MCL	maximum contaminant level
MSIDD	Maricopa Stanfield Irrigation and Drainage District
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NIA	Non-Indian Agricultural
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
National Register	National Register of Historic Places
P.L.	Public Law
Proposed Action	Secretary approval of Water Reallocation Recommendation
Proposed Recipients	municipal and industrial water users recommended by ADWR for water reallocations
Reclamation	Bureau of Reclamation
ROD	Record of Decision
Secretary	Secretary of the Interior
SHPO	State Historic Preservation Office
SMCL	secondary maximum contaminant level
USC	United States Code
USF	underground storage facility
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
WRDC	Water Resources Development Commission
WSRV	West Salt River Valley

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FOR THE PROPOSED
ARIZONA DEPARTMENT OF WATER RESOURCES RECOMMENDATION FOR THE REALLOCATION OF NON-INDIAN AGRICULTURAL PRIORITY CENTRAL ARIZONA PROJECT WATER IN ACCORDANCE WITH THE ARIZONA WATER SETTLEMENTS ACT OF 2004

1.0 Purpose and Need

1.1 Introduction

The Secretary of the Interior (Secretary), through the Bureau of Reclamation (Reclamation), proposes to reallocate 46,629 acre-feet annually (AFA) per year of designated Non-Indian Agricultural (NIA) Priority Central Arizona Project (CAP) water pursuant to the Arizona Water Settlements Act (AWSA) of 2004 (Public Law (P.L.) 108-451, Section 104) and in accordance with Arizona Department of Water Resources (ADWR) recommendations.

In compliance with the AWSA, ADWR analyzed the applications for the NIA Priority CAP water and made a recommendation to the Secretary. Reclamation is tasked with completion of the environmental analysis on the recommendation so the Secretary has the necessary information on impacts on the human environment to make an informed decision on the recommendation.

The recommendation distributes NIA Priority CAP water into two pools. The first pool of 34,629 AFA is designated for Municipal Pool water providers. The other pool of 12,000 AFA is designated for Industrial Pool water users. The two pools total 46,629 AFA for use within the CAP service area. Each pool lists individual applicants and the AFA to be reallocated with the recommendation that each applicant be offered a CAP water service subcontract.

Although approval or rejection of ADWR's recommendation for reallocation is congressionally mandated and nondiscretionary, the AWSA states that, prior to making a decision to accept or reject the recommendation, Reclamation must comply with the National Environmental Policy Act of 1969, as amended (NEPA). Other laws include, but are not limited to, the Endangered Species Act of 1973 (ESA); National Historic Preservation Act of 1966, as amended (NHPA); and amendments to the Department of the Interior's regulations for implementing NEPA (43 Code of Federal Regulations (CFR) Part 46, October 15, 2008). Reclamation is the designated Lead Federal Agency as defined in 43 CFR 46.225-46.230. Cooperating Agencies include the Central Arizona Water Conservation District (CAWCD) and ADWR.

1.2 Background Summary

With Arizona's location in the arid southwest, its leaders have long recognized the importance of, and need for, the dependable long-term water supply of the Colorado River. The history of the allocation and use of water sources in Arizona is complex. Since the early 20th century, Arizonans have negotiated with other users of Colorado River water to ensure that Arizona

received an allocation that could sustain economic and population growth. These negotiations have included the Upper Colorado River Basin states of Colorado, Wyoming, New Mexico, and Utah; the other Lower Colorado River Basin states of Arizona, California, and Nevada; and Mexico.

Additionally, Arizona has been on the forefront of water management, particularly with respect to the management of groundwater resources in areas with the highest volumes of water use. Internally, Arizona's agricultural sectors, industrial drivers, and urban populations have struggled over how to apportion groundwater supplies to sustain both economic activity and quality of life in one of the nation's most arid states (ADWR c n.d.).

Obtaining the authorization for construction of the CAP represents one of Arizona's hard-won victories in its efforts to address water supplies and groundwater depletions within the state. The 336-mile CAP canal allowed transportation of Colorado River water, a renewable water supply available to the state, to areas where there was significant demand for the water. The availability of CAP water reduced the reliance on groundwater. The context for this current reallocation project is situated in both water supply and demand, and in the allocation of Colorado River water and groundwater in Arizona, and how those two supplies relate to one another.

1.2.1 History of Water Supply and Demand for Two Water Sources within Arizona

1.2.1.1 The Colorado River

The Colorado River has an extensive drainage basin that collects water from more than 250,000 square miles of the United States' most arid lands. The river itself extends more than 1,400 miles from the headwaters in Wyoming and Colorado to the Gulf of California in Mexico. Within the United States, the river provides water to more than 40 million people and irrigates more than 3.5 million acres of land. Despite the river's expansive drainage area, considerable length, and demand for its water, the Colorado River yields only about 4 percent of a large river like the Mississippi. The combination of high demand and low yield has resulted in the Colorado River being one of the most highly managed and contentiously litigated river systems in the United States.

The management of the Colorado River is subject to the Law of the River, which is a constantly evolving compilation of interstate compacts, intrastate and interstate agreements, federal and state legislation, including a U.S. Supreme Court opinion and decree and an International Treaty that controls the distribution and management of water from the Colorado River system (Water Education Foundation 1998). The current drought across the Southwest, particularly over the last 15 years, is stressing the river system and current management policies.

In the early 1900s, the ever-increasing use of Colorado River water in California concerned other users of Colorado River water and, with congressional approval, commissioners were appointed to begin negotiating a compact to allocate the waters of the Colorado River. The result was the 1922 Colorado River Compact (Compact). The Compact divided the Colorado River Basin into an Upper Basin and a Lower Basin, identified the point of division between the basins, and allocated 7.5 million acre-feet annually (MAFA) of annual beneficial consumptive use to each basin with an additional 1.0 MAFA authorized for the Lower Basin. The Compact did not allocate a specific volume of water to each state, nor did it address the issue of tributary flows.

Consequently, the Arizona legislature refused to ratify the Compact because it did not provide the state adequate protection against California and its ability to use more of the river than Arizona and Nevada.

The next significant milestone in the development of the Law of the River was the Boulder Canyon Project Act (BCPA), which was enacted in 1928 and declared effective by presidential proclamation in 1929. The BCPA authorized construction of the Hoover Dam and power plant and California's All-American Canal. The BCPA could only be implemented, however, if the Compact was ratified by all seven states. An alternative method of ratification was provided if any six of the seven basin states, including California, approved the Compact. Under the alternative method, California was forced to permanently limit its consumptive use of Colorado River water to 4.4 MAFA (Nathanson 1980). California agreed to this restriction through the California Limitation Act in 1929. The BCPA also authorized the Secretary to enter into agreements with the Lower Basin states for the annual apportionment of the Lower Basin amount. The allocations were 4.4 MAFA plus 50 percent of surpluses to California, 2.8 MAFA plus 50 percent of surpluses to Arizona, and 300,000 AFA to Nevada in perpetuity.

Arizona responded to the BCPA by filing three cases between 1930 and 1935 with the U.S. Supreme Court. The Supreme Court denied all three cases; but Arizona was permitted to re-petition the court if it could prove it was being harmed by the BCPA's implementation. Subsequently, Arizona's position and water policy changed dramatically in 1939 because of the need for Hoover Dam power and for increased demand for water to serve growing populations. The result was that the Arizona legislature ratified the Compact in 1944.

Arizona entered into a contract with the federal government for 2.8 MAFA of water, under the provisions of the BCPA. Though California had internally limited itself to 4.4 MAFA, it never formally recognized the BCPA allocations and denied that Arizona had a right to 2.8 MAFA of water.

In 1947, Arizona introduced the first bill for authorization of the CAP (Johnson 1977). California opposed the bill because they believed Arizona did not have any legal claim to the Colorado River water that would be transported through the project (Hundley 1986). In 1951, Congress postponed all action on CAP proposals until the two states reached an agreement. In 1952, Arizona filed suit against California in the U.S. Supreme Court, contending that lack of formal allocation of Colorado River water in the Lower Basin harmed Arizona.

The 1964 *Arizona v. California* decree (Decree) endorsed the provisions of the BCPA, confirmed the Lower Basin allocations previously set forth, and excluded Arizona's tributary rivers from Colorado River accounting. The Decree incorporated all federal and Indian uses within the states in the annual allocation and established the Secretary as the water master for the Lower Basin. The entitlements granted pursuant to the BCPA were determined to be permanent and could not be lost for lack of use.

Despite the provisions of the Decree, California continued successfully to lobby against congressional approval of the CAP. Ultimately, Arizona was forced to compromise. In exchange for California withholding its opposition to a CAP bill, Arizona agreed that in times of shortage on the Colorado River, CAP diversions would not affect California's receipt of its full

4.4 MAFA allocation. Arizona was able to obtain authorization and move Colorado River water to the parts of the state experiencing groundwater level declines. The junior priority status of the CAP significantly impacts Arizona, particularly if there is a shortage on the Colorado River, and is now one of the major components of future water management planning in the state (Pontius 1997).

1.2.1.2 Groundwater

Historically, Arizona has relied heavily on groundwater to meet demand. The result was overdraft of groundwater supplies, particularly in the central and southern parts of the state. Groundwater depletion is a serious issue with numerous ramifications including, but not limited to, subsidence (sinking) and earth fissuring (cracking), aquifer compaction (collapsing) leading to decreased aquifer storage space, economic impacts caused by increased pumping costs and costs associated with deepening wells, and water quality problems.

From the early to mid-20th century, Arizonans became increasingly aware of the groundwater depletions and the impact on Arizona's already scarce water resources and recognized that action was necessary to address the issue. In 1976, a 25-member committee was formed to address the groundwater conflicts after the Arizona Supreme Court ruled in favor of agricultural water users to limit the amount of groundwater that municipalities and industry are permitted to pump. The committee proposed the Groundwater Management Act, and became law in 1980. It is implemented as the Groundwater Code (Code) (ADWR c n.d.).

1.2.1.3 The Groundwater Code

The Code established the basis for how groundwater resources are managed for municipal, industrial, and agricultural use sectors. It set limits on who may pump groundwater and how much can be pumped, and established the purposes for which groundwater may be pumped. The Code also outlines provisions for controlling overdraft in certain areas, allocating groundwater resources effectively while responding to changing needs, and augmenting groundwater supplies through renewable sources.

The Code included provisions to: 1) determine who gets permits for what types of activities; 2) regulate the expansion of agriculture and development in areas where overdraft is severe; and 3) monitor the use of groundwater (ADWR d n.d.). To implement the requirements of the Code, ADWR was created by the State and given broad regulatory authority over the management of groundwater resources. The Code requires that ADWR track groundwater withdrawals to manage sources over the long term and during drought (ADWR d n.d.). Since enacted, the Code has been lauded as one of the most innovative water management programs among local and state governments.

The Code established three levels of groundwater management based on the potential for overdraft:

1. Active Management Areas (AMAs) are the most heavily managed and were established in areas where high demand and/or significant overdraft were occurring, or have potential to occur (ADWR a n.d.);

2. Irrigation Non-Expansion Areas (INAs) were established in areas that had insufficient groundwater to meet irrigation demands over the long term, but did not warrant the intensive regulation of an AMA; and
3. Outside of AMAs and INAs, groundwater must be put to beneficial use and all wells must comply with state statutes for drilling and constructing wells.

1.2.1.4 Active Management Areas (AMAs)

Four initial AMAs were established where overdraft was the most severe: Phoenix, Tucson, Pinal, and Prescott. A fifth AMA, the Santa Cruz, was added in 1994, from the southern part of the Tucson AMA. The five AMAs are regulated according to management plans with clearly defined objectives for municipal, industrial, and agricultural water use and groundwater conservation and recharge. AMA geographies are based on watersheds and basins, not political boundaries (ADWR a n.d.). AMA water resource issues include drought planning over the long and short term, identifying conservation opportunities and renewable water sources, locating and accessing groundwater augmentation sources, and managing the increased costs of water due to shortages and the need to transport water from other locations.

The guiding principle or goal of management for most of the AMAs includes achieving or maintaining safe yield. Safe yield means balancing groundwater use with recharge and the use of renewable water sources, such as surface water and reclaimed water, to reduce or eliminate overdraft of groundwater. Colorado River water delivered through the CAP plays an important role in achieving and maintaining safe yield in the Phoenix, Tucson, and Pinal AMAs by reducing groundwater use and provides a renewable source of water for groundwater recharge.

Phoenix and Tucson are Arizona's most populated areas, and the Pinal AMA is currently dominated by an agricultural economy. The primary management goal for the Phoenix and Tucson AMAs is to achieve safe yield of groundwater by 2025. The primary management goal for the Pinal AMA is to allow development of non-irrigation uses of water, preserve the agricultural economy, and conserve water for future non-irrigation use. Both Phoenix and Tucson continue to experience annual overdraft of groundwater supplies despite the use of renewable supplies, including water allocated from CAP and other offsets to groundwater pumping (ADWR a, c n.d.).

Within the Phoenix AMA, the current distribution of water use is 47 percent by municipalities, 33 percent by agriculture, 12 percent by Native American tribes, and 8 percent by industry. Within the Tucson AMA, municipalities account for 53 percent of water use, while agriculture uses 24 percent, industry uses 18 percent, and Native American tribes use 5 percent. Within the Pinal AMA, 80 percent of water use is by agriculture, 14 percent by Native American tribes, 4 percent by municipalities, and 2 percent by industry (ADWR b n.d.).

The Phoenix AMA will likely have an overdraft of groundwater resources of about 150,000 AFA by 2025. The Tucson AMA can likely reduce groundwater overdraft and achieve safe yield by 2025 if it maximizes reclaimed water supplies. The Pinal AMA is likely to experience a reduction in groundwater use over time as agriculture decreases (ADWR b n.d.). Despite the positive impact of the CAP in Arizona, the Phoenix, Pinal, and Tucson AMAs continue to face overconsumption of groundwater resources due to the imbalance between the locations of the state's population centers and the locations where groundwater is more abundant.

1.2.2 Central Arizona Project

Congress introduced the first bill for authorization of the CAP in 1947, and the CAP was eventually authorized under the 1968 Colorado River Basin Project Act. Construction of the CAP began in 1973 and completed in 1993. The CAP canal is 336 miles long beginning at Lake Havasu on Arizona's western border at the Colorado River and terminating just south of Tucson. The CAP delivers about 1.5 MAFA of Colorado River water to Arizona agricultural users, municipalities, industries, and Native American tribes and communities (CAP a n.d.). CAP was federally funded with Arizona obligated to repay the federal government about $1.5 billion of the $4 billion cost of the project over 50 years. CAP is operated by the CAWCD, and governed by an elected board of directors from Maricopa, Pima, and Pinal Counties (CAP b n.d.).

1.2.2.1 Past, Current, and Future Allocations of CAP Water

Following authorization of the CAP in 1968, the Secretary requested the assistance of the predecessor agency to ADWR in planning for the distribution of CAP water among the uses and potential recipients of CAP allocations. ADWR and its predecessor agency provided recommendations to the Secretary for allocation of CAP water to non-Indian water users in Arizona for municipal and industrial (M&I) and NIA uses. Determinations of appropriate allocation of CAP water for Native American tribes and communities were undertaken by the Secretary (DOI 2010).

Secretary Thomas S. Kleppe provided initial allocations of CAP water for Indian use in the *Federal Register* (41 FR 45883) in 1976 and Arizona provided recommendations for M&I allocations in 1977 and for NIA allocations in 1979. Several modifications were proposed over the years; and in 1983, Secretary James Watt signed a Record of Decision (ROD) published in the *Federal Register* (48 FR 12446) that identified specific amounts or percentages of CAP water to be allocated to Indian, M&I, and NIA uses (ADWR 1983). The 1983 ROD also identified the method by which priorities would be applied to these water use sectors during years of water supply shortage and, based on this, CAP water identified for each of these sectors is referred to by its priority (DOI 2010).

The 1983 ROD outlined that 309,828 AFA are allocated to Indian communities, 638,823 AFA are allocated to non-Indian M&I, and the remaining water is distributed to NIA users by proportion. Water from Indian, M&I, and NIA pools that was not delivered in any given year is available to be sold as excess CAP water to other users. This excess water is only available during years when there is undelivered Indian, M&I, and NIA water. During years of water supply shortfall, M&I and Indian CAP users have first priority on CAP water supplies, and NIA water uses are reduced pro rata until exhausted.

After the initial 1983 allocation recommendations, a total of 65,647 AFA of M&I water and 29.3 percent of NIA water was not contracted and was left available for reallocation at a later time. In addition, the NIA priority users had a "take-or-pay" provision in their subcontract to pay for their annual allocation whether or not it was delivered. Due to this and other factors, certain NIA subcontractors experienced financial difficulties. Litigation ensued and was resolved through the 2004 AWSA. The AWSA established a final allocation of CAP water, with additional

allocations of Indian priority water, a reallocation of the 65,647 AFA of the previously uncontracted M&I priority water to 20 specific M&I entities[1], and the reallocation of certain NIA Priority CAP water (Appendix A). The AWSA directed the Secretary to allocate to ADWR up to 96,295 AFA of NIA Priority CAP water, to be held in trust for future reallocation (71 FR 165, August 25, 2006). At this time, because this 96,295 AFA of NIA Priority CAP water has not been through the reallocation process, it is ordered and used by excess water customers of the CAP. If reallocated through this process, this water would be able to be ordered and used by NIA Priority CAP customers.

1.2.3 ADWR's Reallocation Recommendation Process

1.2.3.1 Summary of Recommendation

Applications were received for approximately three times the volumes of water available for reallocation in the municipal water provider and industrial water user categories, not including the municipal water provider category within the Central Arizona Irrigation and Drainage District (CAIDD) and Maricopa Stanfield Irrigation and Drainage District (MSIDD) areas. Within the municipal water provider category, 17 applications were received for a total requested amount of 93,879 AFA. A recommendation was made to allocate the full amount identified for this category of 34,629 AFA to 13 applicants (later changed to 12 applicants due to the purchase of H2O Water Company by the Town of Queen Creek). Within the industrial water user category, six applications were received for a total requested amount of 41,248 AFA. A recommendation was made to also allocate the full amount identified for this category of 12,000 AFA to the six applicants. The applications from M&I water users recommended by ADWR for water reallocations (Proposed Recipients) are shown in Appendix B. ADWR's recommendation was submitted to the Secretary on January 16, 2014, and the process for selecting the Proposed Recipients is in Appendix C.

1.2.3.2 Reallocation Recommendation Process

In 2012, ADWR began the public process to make a recommendation to the Secretary for reallocation. The process to provide recommendations for the reallocation of 96,295 AFA of NIA Priority CAP water to M&I users began with a public meeting on October 2, 2012. The public meeting provided information on the process and gave the public an opportunity to comment on the proposed reallocation process. The public comment period ended on November 9, 2012.

ADWR received comments that were considered and addressed, and a Final Process and Evaluation Criteria released in February 2013 outlining the structure of the reallocation process and the criteria that would be used to evaluate submitted applications. The reallocation process stated a recommendation would be made to the Secretary for allocation of 55,255 AFA during

[1] Specific entities that received portions of the 65,647 AF allocated by the 2004 AWSA include the Town of Superior, Cave Creek Water Company, Chaparral Water Company, Town of El Mirage, City of Goodyear, H2O Water Company, City of Mesa, City of Peoria, City of Scottsdale, Avra Water Cooperative, City of Chandler, Del Lago (Vail) Water Company, City of Glendale, Community Water Company of Green Valley, Metropolitan Domestic Water Improvement District, Town of Oro Valley, City of Phoenix, City of Surprise, City of Tucson, and Valley Utilities Water Company.

one of two proposed phases of reallocation, which was scheduled to begin in 2013. Of the 55,255 AFA, municipal providers inside the CAP service area could apply for 34,629 AFA of water and 12,000 AFA would be made available to industrial water users inside the CAP service area. A total of 8,626 AFA (4,313 AFA each) would be made available to the CAIDD area and the MSIDD area as required by the AWSA.

As identified in the AWSA, the remaining 6,374 AFA of water for the CAIDD and MSIDD areas would be made available to applicants within the CAIDD and MSIDD areas, together with the 8,626 AFA that was not allocated in the first phase. Because no applicants were from the CAIDD or MSIDD areas in the first phase of this reallocation, the full 15,000 AFA would be available for any municipal water providers within those two specified areas in the second phase, expected to begin in 2021. The criteria for reallocations in the second phase have not yet been determined. Pursuant to the AWSA, for the water identified for the CAIDD and MSIDD areas, any remaining uncontracted water by 2030 would be offered to the Pinal County Water Augmentation Authority (ADWR e n.d.).

The remaining 41,040 AFA would be recommended for allocation in 2021 in a second phase as follows: 17,333 AFA will be made available to municipal water providers inside the CAP service area and 17,333 AFA will be made available outside of the CAP service area.

During the current phase, another public meeting held on March 12, 2013, describing the application process to interested parties and stakeholders to help them make their requests for NIA priority water. The application requirements were reviewed and the deadline for the applications was established, indicating all applications should be completed by June 14, 2013. ADWR offered, and encouraged, pre-application meetings between potential applicants and ADWR prior to the application deadline. Specific application evaluation criteria were developed and evaluated equally among the different user pools.

1.2.3.3 Evaluation Criteria

ADWR developed the evaluation criteria for the applications to support the goals identified by ADWR and the public for the first phase of the reallocation, which were to:

- Reduce groundwater overdraft;
- Provide an additional source of water to areas with limited physical availability of groundwater; and
- Meet near-term demands for existing municipal water providers and industrial users that have permanent demands and are currently using groundwater, have groundwater rights, or are purchasing excess CAP water.

As identified above, there were three different applicant categories in this process: municipal water providers, industrial water users, and municipal water providers within the CAIDD and MSIDD areas. While some specific criteria were identified for each of these categories, some criteria applied to all applicants.

1.2.3.3.1 Criteria Applicable to All Applicants

In order to be eligible for recommendation of available water, all applicants had to demonstrate the following:

- An existing entity that serves water or operates within the CAP service area;
- The ability to use, store, and recover water or to replenish water in accordance with AMA goals;
- The ability to pay for and deliver the reallocated water;
- A plan showing how to use the allocated water and how to manage the future shortages associated with this allocated water; and
- A projected Demand and Supply Imbalance (DSI) for 2020 and presentation of the data to support a DSI. Recommendations for allocations will not exceed the DSI projections.

1.2.3.3.2 Criteria Applicable to Industrial Applicants

Additional specific criteria for industrial applicants were to:

- Hold groundwater rights in the area;
- Demonstrate a DSI greater than 400 AFA;
- Identify a specific use in a specified location; and
- Industrial applicants who use municipal water could not apply for a water allocation if the municipality where they are located also applied (ADWR e n.d.).

1.2.3.3.3 Criteria Applicable to Municipal Applicants

Municipal water providers were evaluated under specific criteria, as described below.

Municipal Water Providers

The Central Arizona Groundwater Replenishment District (CAGRD) was considered within the municipal water provider category. The CAGRD is a groundwater replenishment authority operated by the CAWCD. The purpose of the CAGRD is to provide a means for landowners and water providers that must rely on groundwater to demonstrate sufficient water availability consistent with the water management goals of the particular AMA. If a development does not have CAP water or other supplies that are consistent with the management goal, it must enroll in the CAGRD.[2]

The 2020 DSI for the CAGRD was calculated based on an AMA's projected actual groundwater replenishment obligations for 2020, but not its replenishment reserve requirements. In addition, if a CAGRD member service area or a water provider serving a member's land received a

[2] The CAGRD must replenish (or recharge) in each AMA the amount of groundwater pumped by or delivered to its members in that AMA that exceeds the pumping limitations imposed by the State's Assured Water Supply Rules. This category of water is referred to as "excess groundwater." The replenishment may be accomplished through the operation of underground storage facilities or groundwater savings facilities. Water used for replenishment may be CAP water or water from any other lawfully available source, except groundwater withdrawn from within an AMA.

each area). The CAGRD was not eligible to apply for this pool of water. In addition, CAIDD and MSIDD applicants could request more than their allotted pool. The remaining DSI would be considered in the municipal water provider category.

1.2.3.4 ADWR Application Evaluation Process

ADWR reviewed the applications based on the criteria identified and verified the projected DSIs using available water management data. When the applications were reviewed, several decisions and adjustments were needed. Some applicants were not able to show a DSI by 2020 and, therefore, were not qualified to be included in the recommendation. In the evaluation, all treated effluent that was physically and legally available to an applicant was considered as an available supply.

The total amount of long-term storage credits for an applicant was divided by 100 (based on proof of 100-year water supply) and considered the annual amount of water available. Surface water supplies were considered a renewable water supply. Excess CAP water was not considered a long-term renewable water supply and some lease and exchange water was prohibited from consideration pursuant to Indian water rights settlements. Annual leases were not considered long-term renewable water supplies.

Additionally, some municipal pool applicants had a DSI of less than 400 AFA and ADWR determined that fulfilling the request would best achieve the water management goals of this reallocation. For other applicants, ADWR determined their DSI was greater than the requested amount. For these applicants, the recommendation was limited to the requested amount. The remaining amount available for reallocation was redistributed on a pro rata basis based on each applicant's ADWR-verified DSI (ADWR e n.d.).

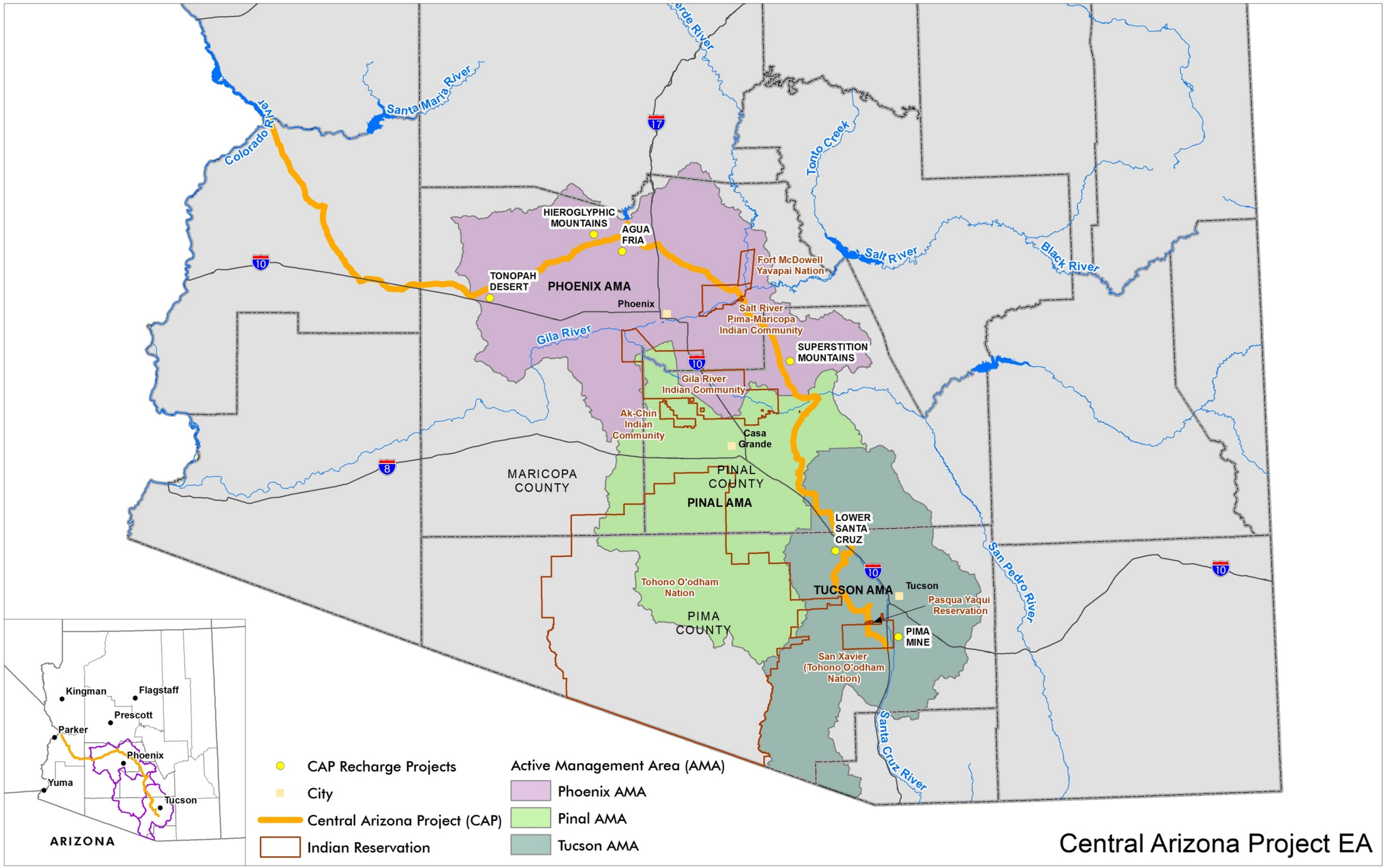
1.3 Purpose and Need

1.3.1 Purpose of the Project

The AWSA obligates the Secretary to approve or reject ADWR's recommendation for reallocation. The purpose of this EA is to provide all relevant information to the Secretary in a single, clear, and concise way to make an informed decision to accept or reject the recommendation to reallocate the NIA Priority CAP water. The purpose of the project is to reallocate NIA Priority CAP water for M&I use pursuant to the AWSA and according to ADWR's recommendation.

Based on ADWR's recommendation, the project would allow the reallocation of 46,629 AFA of NIA Priority CAP water to M&I users within the Phoenix, Pinal, and Tucson AMAs (Figure 1).

Figure 1. Project Area Map



1.3.2 Need for the Project

The need for the water reallocation is to address the continuing imbalance of water supply and demand in certain local and service areas of central Arizona by providing renewable water supplies to entities currently using overdrawn groundwater supplies. Although water use has declined or remained constant in recent decades, continued population growth in the state will eventually result in an overall water supply shortfall. The projected statewide water demand will increase to between 8.1 and 8.6 MAFA by 2035 and to between 8.6 and 9.1 MAFA by 2060 (Water Resources Development Commission (WRDC) (2011).

In 2014, municipal water demand was 1.4 MAFA, which was 21 percent of all state water demand. The WRDC (2011) estimated that municipal demand will increase to roughly 2.7 MAFA by 2035 and 3.4 MAFA by 2060. In 2014, industrial uses accounted for approximately 6 percent of Arizona's water demand (about 400,000 AFA). Industrial use is expected to increase over time to sustain economic growth. While these projections are based on high estimates of population growth, Arizona's urban populations are anticipated to grow even if economic growth is slower than expected. According to the WRDC, between 0.9 and 3.2 MAFA of water will need to be developed in Arizona over the next 20 years to sustain population growth and meet consumption demands for municipal, industrial, agricultural, and other water uses combined.

If the recommendation is accepted, some water users within the Phoenix, Pinal, and Tucson AMAs would receive the reallocated NIA Priority CAP water. The Phoenix and Tucson metropolitan areas account for about 80 percent of Arizona's population and are expected to continue to be the major population centers, while Pinal County is currently dominated by an agricultural economy, and change of that land use is unknown (ADWR 2014a).

Both Phoenix and Tucson AMAs continue to experience annual overdraft of groundwater supplies even when renewable supplies are considered, such as current CAP subcontracts and offsets to groundwater pumping. The approval of the recommendation would contribute to the ADWR goal of reducing groundwater overdraft by increasing the Proposed Recipients' renewable surface water supplies.

1.4 Public Involvement and Scoping

Scoping is an open process held early in the analysis to determine the breadth of issues and alternatives that need to be analyzed in a NEPA document, so the decision maker can make an informed decision. Agency and public scoping for this EA began when Reclamation's scoping newsletter was sent on November 19, 2015. The mailing list for the scoping newsletter is in Appendix D.

The scoping newsletter was also posted on Reclamation's website on November 30, 2015. The scoping period was defined as November 19, 2015 to December 18, 2015. The scoping period expired and was later reinitiated at the request of stakeholders and was issued again through a Reclamation press release from January 5 to January 18, 2016. The scoping newsletter and press release are in Appendix D.

The Proposed Recipients of the NIA Priority CAP Water recommendation were invited to an informational meeting on December 7, 2015. Reclamation presented information on the NEPA

EA process and the upcoming public scoping meetings to the Proposed Recipients. There were 29 attendees at the meeting. The Proposed Recipient meeting invitation and meeting agenda are in Appendix E.

The following dates and locations indicate where and when public scoping meetings took place:

- Tuesday, December 8, 2015, in Phoenix, Arizona
- Wednesday, December 9, 2015, in Casa Grande, Arizona
- Thursday, December 10, 2015, in Tucson, Arizona

There were four meeting attendees on December 8, no attendees on December 9, and seven attendees on December 10.

Reclamation received two public responses during the scoping period. The first comment came from Save the Scenic Santa Ritas Association, and stated that Reclamation provided insufficient notice of the scoping process and requested an extension of the comment period. Reclamation honored this request and the comment period was extended by press release to January 18, 2016. The letter also stated that the Rosemont Mine should be analyzed as a connected action to the proposed water reallocation.

The second response came from the Pima County Regional Wastewater Reclamation Department. Pima County requested that the EA address impacts of the additional use of proposed NIA Priority CAP water by M&I recipients on other water users in the Tucson AMA and also address impacts on the natural environment. No tribal or other agency comments were received during the scoping period.

2.0 Description of Alternatives

2.1 Project Area

2.1.1 Active Management Areas (AMAs)

The project is located within the CAP service area in the Phoenix, Pinal, and Tucson AMAs (as described in Section 1.2, Background Summary). Figure 1 shows the overall project area and Figures 3 through 5 show the individual AMAs and Proposed Recipient service areas within each AMA.

2.2 Formulation and Evaluation of Alternatives

For the purposes of this NEPA analysis, only two alternatives were considered – the Proposed Action, approval of the ADWR recommendation, and the No Action, or rejection of the ADWR recommendation.

2.3 No Action (Rejection of the ADWR Recommendation)

Reclamation is required to analyze a no action alternative under NEPA. No action by the Secretary (i.e., not accept or reject ADWR's water reallocation recommendation) would result in a violation of the AWSA. Although the potential rejection of the reallocation recommendation could be an action taken by the Secretary, for the purposes of this NEPA analysis, the No Action

alternative is defined as a rejection by the Secretary of the reallocation recommendation made by ADWR. Defining the No Action alternative as the rejection of ADWR's reallocation recommendation allows the inclusion of a no action alternative in accordance with 40 CFR 1502.14 and provides a basis with which to compare the Proposed Action.

In accordance with the AWSA, if ADWR's reallocation recommendation were rejected, ADWR would then be required to revise its recommendation and submit it to the Secretary. A new recommendation could potentially require a new reallocation determination process and NEPA analysis. It is not possible to assume what a different recommendation would be since the basis for the Secretary's potential rejection is unknown. Therefore, the No Action alternative reflects an uncertain delay in the reallocation process. The NIA Priority CAP water would continue to be sold as excess CAP water.

2.4 Proposed Action (Approval of Proposed Reallocation Recommendation)

The Proposed Action (or Proposed Reallocation) is the Secretary's approval of ADWR's recommendation for reallocation of 46,629 AFA of NIA Priority CAP water. In compliance with the AWSA, ADWR analyzed the applications for the NIA Priority CAP water and made a recommendation to the Secretary to distribute NIA Priority CAP water into two pools: 34,629 AFA for Municipal Pool water providers and 12,000 AFA for Industrial Pool water users, totaling 46,629 AFA for use within the CAP service area. Although the water would be assigned for M&I purposes, the reallocated water would retain the NIA priority. During periods of shortages on the Colorado River, the Proposed Recipients may not receive all or part of the NIA Priority CAP water due to the low priority of the water within the CAWCD pool structure. The list of Proposed Recipients and the AFA proposed by ADWR for reallocation to each recipient are shown in Table 1.

Table 1. List of Proposed Recipients and Their Recommended Allocation.

Recipient	Pool	Volume (AFA)
Apache Junction Water Utilities Community Facilities District (WUCFD)	Municipal	817
Carefree Water Company	Municipal	112
Central Arizona Groundwater Replenishment District	Municipal	18,185
City of Buckeye	Municipal	2,786
City of El Mirage	Municipal	1,318
EPCOR- Sun City West	Municipal	1,000
Freeport-McMoRan-Sierrita Inc.	Industrial	5,678
Johnson Utilities	Municipal	3,217
Metropolitan Domestic Water Improvement Creek	Municipal	299
New Harquahala Generating Company	Industrial	400
Resolution Copper Mining	Industrial	2,238
Rosemont Copper Co.	Industrial	1,124
Salt River Project	Industrial	2,160
Town of Cave Creek	Municipal	386
Town of Gilbert	Municipal	1,832
Town of Marana	Municipal	515
Town of Queen Creek*	Municipal	4,162
Viewpoint RV and Golf Resort	Industrial	400
Total Volume (AFA)		46,629

*H2O Water Company was acquired by the Town of Queen Creek in November 2013. Therefore, their proposed reallocations have been combined under the Town of Queen Creek (1,000 AFA for H2O plus 3,162 AFA for Town of Queen Creek).

Under the Proposed Action, the Secretary would accept ADWR's recommendation for NIA Priority CAP Water reallocation and the Proposed Recipients would enter into a subcontract with the CAWCD and the United States (through Reclamation). The NIA Priority CAP water would be available based on established CAP water priority standards. Most Proposed Recipients would use existing infrastructure to receive the new allocation. For Proposed Recipients who would need to construct infrastructure to receive the NIA Priority CAP Water reallocation, all environmental compliance, including NEPA, would have to be completed prior to the Proposed Recipient's ability to have the water delivered. This environmental compliance clause is part of all CAP subcontracts.

3.0 Affected Environment and Environmental Consequences

This section describes the affected environment of the Proposed Action (referred to as the "analysis area," which varies by resource). It evaluates likely environmental consequences for each resource from the Proposed Action.

The consequences of the No Action alternative are described for each of the resources to provide a baseline for the Proposed Action to be analyzed. For each resource, the cumulative effects of the Proposed Action are analyzed. Section 3.8—Resources Considered But Not Affected summarizes the resources considered for analysis, but were determined not likely to be affected by the project.

The 18 Proposed Recipients recommended by ADWR for the Proposed Reallocation include 12 municipal and 6 industrial users. The affected environment and environmental consequences of the Proposed Action includes a regional analysis based on the locations of the Proposed Recipients. The potential direct, indirect, and cumulative impacts to understand broad impacts resulting from accepting the Proposed Reallocation are analyzed with respect to individual Proposed Recipients and their locations.

For Proposed Recipients who have proposed construction of infrastructure for additional water storage and conveyance (see Table 6 in Section 3.6.2), any attempt to quantify potential impacts from additional development is speculative at this time as the need for new facilities, their number, location, design details, and the resulting land disturbance have not been identified. Environmental clearance would be necessary prior to any ground-disturbing activities and is not covered in this analysis.

3.1 Potential Connected Actions

A comment received during the public scoping period indicated that because the Proposed Action would be to allocate CAP water to the proposed Rosemont Mine, the Proposed Action is connected to the mine and that, as a connected project, the reallocation project requires an environmental impact statement and the significant impacts of the mine need to be evaluated in the context of the Proposed Action (see Section 1.4—Public Involvement and Scoping). This section addresses the Proposed Action and its connection to the proposed Rosemont Mine as well as the other proposed Resolution Mine and active Sierrita Mine.

NEPA regulations (40 CFR 1508.25) indicate an action is considered a connected action if: (1) the proposed action automatically triggers other actions that may require environmental impact statements; (2) cannot or will not proceed unless other actions are taken previously or simultaneously; or (3) are interdependent parts of a larger action and depend on the larger action for their justification.

To evaluate whether the Proposed Action and the proposed Rosemont and Resolution Mines and the active Sierrita Mine are connected, Reclamation applied the three criteria in the NEPA regulations regarding connected actions:

1. Secretary approval of ADWR's recommendation for the proposed mines to receive NIA Priority CAP water does not automatically trigger development of the proposed mines

and would not alter the active mine's operations. The approval of the allocations is not contingent upon the regulatory approval of the mines, or the operation of the mines themselves. Conversely, the approval of the proposed mines and any conditions that might be required, are not contingent on the Proposed Action. In the absence of the Proposed Action, all of the mines would be more reliant on groundwater pumping to meet their future needs.

Both the Rosemont and Sierrita Mines have groundwater pumping rights that are sufficient to meet their water needs, but are seeking to supplement their water supplies with NIA Priority CAP water to reduce groundwater pumping. As of June 2013, the proposed Rosemont Mine had accrued 42,593 AFA of long-term storage credit in the Tucson AMA. Rosemont Mine's estimated average water demand is 5,000 AFA. Sierrita Mine has an average water demand of 23,098 AFA, which is supplied by their existing groundwater rights and withdrawal permits.

Resolution Mine's water management plan consists of using CAP water directly, long-term storage credits, and groundwater pumping via existing Type II groundwater rights and a mineral extraction permit. As part of its plan to use renewable water supplies, it will continue to purchase excess CAP water as available and plans to acquire additional water from both long- and near-term opportunity purchases from other water uses throughout Arizona (Resolution 2013). Average demand over the 42-year mine life is estimated to be 11,300 AFA. Rosemont Mine has been actively purchasing excess CAP water and has already accrued 275,000 AFA of long-term storage credit as of June 2013 (Rosemont 2013). Rosemont Mine estimates that their current long-term storage credits will supply the water they need to get through Mine Year 22. In the absence of any additional CAP water storage credits, groundwater pumping from the existing Type II groundwater rights and a mineral extraction permit would provide the necessary additional water needed to finish mining through Mine Year 42. However, Resolution Mine's goal is to continue to acquire renewable water supplies to eliminate their need to pump groundwater.

2. The Proposed Action can proceed even if the proposed mines are not permitted prior to or simultaneously with the Secretary's approval. If approved, both proposed mines intend to store their allotment during pre-production to offset future withdrawals during production. If not approved, the allotments recommended for the proposed mines would be reverted to the pool for the next reallocation process. Regardless of when the mines are permitted and mineral extraction initiated, the proposed mines' ability to receive and store CAP water as part of the Proposed Action is independent of their mining action. For the Sierrita Mine, mining operations would continue to proceed regardless of the Proposed Action.
3. Because each proposed mine's receipt of CAP water is not contingent on mine approval, the Proposed Action does not depend upon the proposed mines. None of the proposed or active mines depend upon receipt of CAP water to proceed with their mining actions. Therefore, Reclamation believes these actions are not interdependent parts of a larger action, nor do they depend on a larger action for their justification.

Reclamation has determined the Proposed Action and the approval of the mines are not connected actions under NEPA. Reclamation's decision on the Proposed Action would not

remove or restrict discretion to approve or disapprove the proposed mines, or to establish conditions or require mitigation for the proposed mines' Plans of Operation.

3.2 Background for Cumulative Effects

Potential effects of the Proposed Reallocation could occur in the context of other actions that are likely to occur in the analysis area. Cumulative effects result from incremental effects of the approval of the Proposed Reallocation when combined with effects of other past, present, and reasonably foreseeable future actions. These impacts are analyzed regardless of who undertakes the actions (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively significant, actions taking place over time.

3.2.1 Past, Present, and Reasonably Foreseeable Future Actions

Past and present actions are actions that have occurred or are ongoing in the analysis area. "Reasonably foreseeable future actions" are defined as actions that are not speculative—they have been approved, are included in planning and budget documents prepared by the individual(s), or are likely to occur given trends (Environmental Protection Agency (EPA) 1999).

Past, present, and potential future actions were identified through public and agency scoping and available information on known projects under consideration. Actions that meet all of the following criteria are considered reasonably foreseeable and are included in the cumulative impacts analysis:

- The potential impacts of the future action would occur within the same geographic area (analysis area) and during the same time as the potential impacts of the Proposed Action.
- The future action may affect the same environmental resources as the Proposed Action.
- There is a reasonable expectation the future action would occur; the future action is not speculative.
- There is sufficient information available to define the future action and assess potential cumulative impacts (EPA 1999; Council on Environmental Quality (CEQ) 1997a).

3.2.1.1 CAP Water Projects

Because of the nature of the Proposed Action and the extensive analysis area, only select municipal planning projects or other site-specific actions are included in the cumulative effects analysis. These projects are within the Phoenix, Tucson, and Pinal AMAs, and are associated with CAP.

3.2.1.1.1 Harquahala Water Supply Project Scottsdale Wheeling Agreement with CAP

This project involves use of the CAP canal to deliver water from groundwater pumping to recipients in the Scottsdale vicinity using a wheeling agreement. A wheeling agreement involves transporting water through the CAP canal that is not CAP water. The groundwater pumping would take place on City of Scottsdale property, within the Phoenix AMA, and would be delivered to multiple golf courses and the City of Scottsdale as a supplemental water supply.

The intended outcome of the project would be to reduce the amount of potable water used to irrigate the golf courses. The project would transport an estimated 3,000 AFA of groundwater within the Phoenix AMA (City of Scottsdale 2015).

3.2.1.1.2 Community Water Company of Green Valley (CWC) Pipeline and Recharge Project

The CWC serves the Santa Cruz AMA, but could affect the Tucson AMA as they are adjacent. The proposed project would involve construction of an underground storage facility (USF) and a pipeline to transport CAP water to the USF. CWC is one of the only CAP water entitlement holders in the Tucson area, with 2,858 AFA. In 2010, the Secretary approved the EA for Project Renews, authorizing CWC to transport and deliver the CAP entitlement. A pipeline would transport CAP water from the CAP terminus at Pima Mine Road and I-19 to a recharge facility at Old Nogales Highway. The pipeline capacity would surpass the current CAP entitlement in anticipation of future CAP water that may be contracted by CWC. The recharge station would be located on a 72-acre State Trust Land parcel near the Town of Sahuarita. The initial phase would recharge 3,000 AFA at this site. The EA completed for the project found no significant negative impacts, and some beneficial impacts on groundwater recharge. Wildlife habitat is expected to be created and enhanced by the presence of the recharge facility ponds. The project would be funded by Augusta Resources, the parent company of Rosemont Mine. The USF would likely be used to store Rosemont's reallocation of NIA CAP water considered under this proposal. The project is expected to be completed in late 2017 (CWC 2015).

3.2.1.1.3 Farmers' Investment Company (FICO) Pipeline

FICO is the world's largest grower and processor of pecans, and is located in the Santa Cruz valley within the Tucson AMA. FICO proposes to construct a pipeline to deliver CAP water to its groves. The pipeline would parallel the CWC pipeline discussed above, and CAP water transported through it would be used to recharge groundwater. FICO has been designated a groundwater savings facility (GSF) by ADWR. FICO has drafted a plan to develop its land as a sustainable community with a 50-year timeframe, which was adopted by the Santa Cruz town council in 2015. FICO plans to operate the pecan farm for the foreseeable future, and CAP water delivered by the pipeline would be used for agriculture. FICO uses about 25,000 AFA, all of which has come from groundwater. FICO would be able to access about 3,900 AFA from CAP, which would reduce the need for groundwater. Additionally, the pipeline, if approved, would enable FICO to accept and store CAP water from other parties who have CAP water allocations. The Sierrita Mine, which would receive part of the reallocation analyzed in this EA, proposed to store its reallocated CAP water at FICO (Sahuarita Farms 2016).

3.2.1.1.4 Pima County Trails Project

The CAP Canal Trail was conceived during the initial construction plan for the CAP canal. Pima County has proposed to construct a 60-mile trail along the CAP canal in Pima County. The CAP Canal Trail segment through the Town of Marana is proposed for construction. The 7-mile stretch would either be on the berm above the canal or on the western side of the canal. The CAP Canal Trail has been listed on the National Register of Historic Places (National Register). The Marana trail segment is currently being analyzed in a Draft EA (Reclamation 2016b).

3.2.1.2 Water Demands, Population Growth, and Land Use

Water demands in the Tucson and Phoenix AMAs have increased over time and are expected to continue to increase by about 6 percent and 19 percent by 2040, respectively. Water demand in the Pinal AMA is expected to decrease by about 11 percent during the same period due to the reduction of the agricultural sector and increase in residential development, and in part due to the increasing cost of water in the county (Pinal Comprehensive Plan 2016). The agricultural sectors in all three AMAs are declining, and water use for agriculture is expected to decrease over the next 25 years. By 2040, the population in the AMAs is expected to increase by 57 percent in the Phoenix AMA, 171 percent in the Pinal AMA, and 38 percent in the Tucson AMA (ADWR 2016).

3.2.1.3 Climate Change

The potential effects of climate change are being considered as a component of cumulative impacts. Changes in climate cause changes in vegetation, land use, species distribution, water availability and demand, and frequencies of environmental disturbance; these changes, in turn, influence one another. The following sections provide a brief background on climate change and climate projections for the Southwest, including Arizona. However, the cumulative effects of climate change for each resource are described in the following resource sections.

3.2.1.3.1 Background

The best available scientific information indicates that global climate change is occurring, as evidenced by increased air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels (Intergovernmental Panel on Climate Change (IPCC) 2014). Reconstructions of the Earth's climate over the past 2,000 years have shown that while temperature fluctuations have varied, each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850. The period from 1983 to 2012 was likely the warmest 30-year period of the last 1,400 years in the Northern Hemisphere (IPCC 2014). General effects of climate change include rising sea levels, increased temperatures, and changes in precipitation patterns. These changes, however, are not uniform, and there are regional variations. Precipitation changes may mean more precipitation in some regions and less in others, a trend toward more rain and less snow, earlier and shorter runoff periods, and changes to the seasonal patterns and extremes of precipitation (Brekke et al. 2009).

3.2.1.3.2 Climate Projections in the Southwest

Climate models predict that the arid regions of the southwestern United States will become increasingly dry and that a transition to a more arid climate is already underway (Lenart et al. 2007; Loehman 2010). Temperatures have increased by almost 2°F in the last century, with the 2001-2010 decade being the warmest since records began 110 years ago. Average annual temperatures are projected to rise an additional 3.5°F to 9.5°F by the end of this century, with the greatest temperature increases expected in the summer and fall. Drought conditions are already common in the Southwest and drought periods are expected to become more frequent, intense, and longer. Drought will affect important water sources, including the Colorado River Basin. Combined with expected population growth, climate change will exacerbate existing stresses (Garfin et al. 2014). Colorado River flows, which supply water to the CAP, are likely to decrease 5 to 20 percent by 2050 due to climate change (Reclamation 2012).

Projected changes to the climate in the desert Southwest include the following:

- Continued increases in temperature, but at a rate faster than observed in recent decades (Loehman 2010);
- Periods of extreme temperatures (heat waves) may increase in frequency, intensity, and duration over the next century (Diffenbaugh et al. 2005), and may be combined with periods of warm-season drying (Diffenbaugh and Ashfaq 2010); and
- Some precipitation events (e.g., intense rain and associated flooding) are expected to be more extreme, and severe events may occur roughly twice as often as they historically have (Kharin et al. 2007).

Arid ecosystems are particularly sensitive to climate change because the organisms in these regions are already adapted to live near their physiological limits for water and temperature stress. Slight changes in temperature and precipitation patterns in arid ecosystems can significantly alter the composition, abundance, and distribution of species (Loehman 2010). Temperature-related changes to ecosystems are likely to lead to an upward elevational shift of some woodland and montane communities, an expansion of desert scrub communities, and a northward migration of southwestern deserts.

In summary, changing climate conditions in the Southwest, including increased temperatures, reduced precipitation, lower snowpack, and increased evapotranspiration, are likely to result in significant changes to the hydrologic cycle and water sources for both human use and ecosystem function. The combined effect of cyclical drought and a changing climate are expected to result in a continued warming and drying trend for Arizona. With Arizona's reliance on CAP water to supply a significant quantity of renewable water supplies to the state and Arizona's junior water right for Colorado River water, the projected climate changes have the potential to decrease the state's Colorado River water supply while simultaneously increasing water demand.

3.3 Land Use

3.3.1 Analysis Area

The analysis area for evaluation of land use impacts is the Phoenix, Pinal, and Tucson AMAs, and, where appropriate to provide a better picture of land use, Maricopa, Pima, and Pinal Counties were included in the analysis. Yavapai County overlaps only a small portion of the Phoenix AMA and is not included in the analysis as none of the Proposed Recipients are located within that county. All of the Proposed Recipients fall within the three AMAs and three counties listed above. Land ownership within the AMAs includes private, federal, state trust, tribal, county, and municipal. State trust lands are owned by the state of Arizona and are managed to maximize profit for the benefit of the public school system. State law authorizes state trust lands to be sold for private development under specific circumstances. The current land ownership in each of the AMAs includes land managed by Reclamation and related to the CAP, including associated infrastructure and recharge stations.

3.3.2 Affected Environment

3.3.2.1 Phoenix AMA Land Ownership and Use

The Phoenix AMA includes portions of Maricopa County and Pinal County, and a small portion of southern Yavapai County. This AMA is 5,646 square miles (3.61 million acres) and is dominated by private land under residential, commercial, and agricultural uses. Table 2 outlines the land ownership and uses in the Phoenix AMA.

Table 2. Land Ownership and Uses in the Phoenix AMA.

Ownership	Managing Entity	Percent of Ownership	Uses
Private	Various	43.7	Includes residential, industrial, and agricultural lands.
State	State Trust Lands	16.0	Includes lands used for grazing and agriculture.
Federal	BLM	18.3	Includes portions of the Big Horn, Hummingbird Springs, Signal Mountain, Sierra Estrella, and North and South Maricopa Mountains Wildernesses; and a portion of the Sonoran Desert National Monument. Land uses include recreation, grazing, and resource conservation.
	U.S. Forest Service (USFS)-Tonto National Forest	10.2	Includes a portion of the Superstition Wilderness. Land uses include recreation, grazing, and resource conservation.
	U.S. Military	0.2	Includes Luke Air Force Base. Land uses include military activity.
	National Park Service (NPS)	0.1	Includes the Hohokam National Monument. Land uses include resource conservation and recreation.
Tribal	BIA and Tribes	8.0	Includes portions of the Fort McDowell Yavapai Reservation, Salt River Pima-Maricopa Indian Community, and GRIC. Land uses include domestic, commercial, and agriculture.
Other	Reclamation	3.6	Includes land managed for the CAP and its associated facilities, and CAWCD-operated groundwater recharge facilities. Other land uses include resource conservation and recreation.
	Local and County		Includes local and regional parks, including White Tank Mountain Regional Park (30,000 acres), South Mountain Park (16,000 acres), Estrella Mountain Park (19,840 acres), and McDowell Mountain Regional Park (21.099 acres). Land use includes recreation.

Source: ADWR 2010.

3.3.2.2 Pinal AMA Land Ownership and Use

The Pinal AMA includes portions of Pima, Pinal, and Maricopa Counties. This AMA is 4,100 square miles (2.62 million acres). The Pinal AMA is dominated by tribal lands under agricultural, grazing, residential, and commercial uses. Table 3 outlines the land ownership and uses in the Pinal AMA.

Table 3. Land Ownership and Uses in the Pinal AMA.

Ownership	Managing Entity	Percent of Ownership	Uses
Private	Various	22.5	Includes residential, industrial, mining, and agricultural lands.
State	State Trust Lands	13.0	Includes portions of the Ironwood and Sonoran Desert National Monuments. Land uses include agriculture, grazing, and recreation.
Federal	BLM	10.5	Includes portions of the Coyote Mountain and Sierra Estrella Wildernesses and a portion of the Sonoran Desert and Ironwood National Monuments. Land uses include recreation, grazing, and resource conservation.
	U.S. Military	1.9	Includes Barry Goldwater Air Force Base, part of which is within the Sonoran Desert National Monument. Land use includes military activity.
Tribal	BIA and Tribes	51.4	Includes portions of the Tohono O'odham Reservation, Ak-Chin Indian Reservation, and GRIC. Land uses include domestic, commercial, agriculture, and grazing.
Other	Reclamation	0.7	Includes land managed for the CAP and its associated facilities, and CAWCD-operated groundwater recharge facilities. Other land uses include resource conservation and recreation.
	Local and County		Includes local and county parks. Land use includes recreation.

Source: ADWR 2010.

3.3.2.3 Tucson AMA Land Ownership and Use

The Tucson AMA includes portions of Pima and Pinal Counties. This AMA is 3,869 square miles (2.48 million acres). The Tucson AMA has a relatively large proportion of land held in state trust, which is used primarily for grazing. Table 4 outlines the land ownership and uses in the Tucson AMA.

Table 4. Land Ownership and Uses in the Tucson AMA.

Ownership	Managing Entity	Percent of Ownership	Uses
Private	Various	31.2	Includes residential, industrial, mining, and agricultural lands.
State	State Trust Lands	37.8	Primary land use is grazing.
Federal	BLM	6.2	Includes portions of the Baboquivari Peak and Coyote Mountain Wildernesses and a portion of the Ironwood National Monument. Land uses include recreation, grazing, and resource conservation.
	USFS-Coronado National Forest	11.6	Includes portions of the Pajarita, Pusch Ridge, Rincon Mountain, and Mt. Wrightson Wildernesses. Land uses include recreation, mining, grazing, and resource conservation.
	FWS	4.6	Includes the Buenos Aires National Wildlife Refuge. Land uses include resource conservation and recreation.
	U.S. Military	0.4	Includes Davis Monthan Air Force Base. Land use includes military activity.
	NPS	3.0	Includes Saguaro National Park and Saguaro Wilderness. Land uses include resource conservation and recreation.
Tribal	BIA and Tribes	4.4	Includes portions of the Tohono O'odham Reservation and Pascua Yaqui Indian Reservation. Land uses include agriculture, grazing, domestic, and commercial.
Other	Reclamation	0.8	Includes land managed for the CAP and its associated facilities, and CAWCD-operated groundwater recharge facilities. Other land uses include resource conservation and recreation.
	Local and County		Includes local and county parks. Land use includes recreation.

Source: ADWR 2010.

3.3.2.4 County Level Land Use

Arizona's counties are required by state law to complete comprehensive plans, which outline land use and economic strategies to accommodate projected population growth. Maricopa, Pima, and Pinal Counties have all completed, or updated, comprehensive plans in the past three years. The plans outline the current land use patterns and provide concrete goals to adapt to the demands of growing populations and changing economic sectors. The comprehensive plans outline that development within the counties should happen in areas where services and infrastructure, including access to water, are currently or readily available to meet the needs of residents and businesses. Maricopa, Pima, and Pinal Counties have distinct land use patterns, with zoning for residential, industrial, and commercial uses within incorporated places.

Maricopa County, which falls largely within the Phoenix AMA, is the most densely populated county in the state. It has experienced rapid changes in land use patterns in recent history, transforming from a rural low-density county to an urban county with numerous master-planned communities and increasing population. Maricopa County's comprehensive plan identifies areas where urban growth should be concentrated based on the availability of infrastructure, including water. About 30 percent of the county is private land and 11 percent is state trust land (Maricopa County Comprehensive Plan 2016).

Pima County is characterized by a mix of rapidly growing urban areas and rural less densely populated areas. Pima County identifies in-fill of urban areas that will result in relatively high-density population in urban centers as a land use strategy for the coming decade to accommodate growing population demands without encroaching on open space and wildlife habitat. About 31.2 percent of the land in the county is privately owned and 13 percent is state trust land (Pima County Comprehensive Plan 2015).

Pinal County is characterized by rural low-density land use patterns, with much of the land under tribal ownership. Much of the development in Pinal County over the last decade has taken place in unincorporated areas, where the rural character of the county is preserved. The Pinal County comprehensive plan identifies a relatively large proportion of land to be designated as open space and trails to preserve the county's rural character. Pinal County has seen a decrease in agricultural land use and production, while experiencing residential development. About 27 percent of the land in the county is privately owned and 36 percent of the county is state trust land (Pinal County Comprehensive Plan Update 2014).

3.3.2.5 Industrial Land Use

Industrial development within the AMAs takes place on private, state trust, and federal lands. Industrial development on private land is subject to zoning laws within municipalities and counties, as outlined in the comprehensive plans. Industrial development on federal lands requires a permit and compliance with NEPA. The industrial Proposed Recipients are located on private and federal lands within the Phoenix and Tucson AMAs and are within Maricopa, Pima, and Pinal Counties.

3.3.3 Environmental Consequences

3.3.3.1 No Action Alternative

Under the No Action alternative, the Secretary would reject the allocation recommendation (i.e., the Proposed Action). In accordance with the AWSA, ADWR would then be required to revise and provide to Reclamation another NIA Priority CAP water reallocation recommendation that potentially could require a new reallocation determination process and NEPA analysis. It is not possible to assume what the new recommendation would be since the basis for the Secretary's potential rejection is not known. Therefore, the No Action alternative for this NEPA analysis reflects an indeterminate delay in the allocation process and, until a future reallocation is approved by the Secretary, no reallocation would occur.

Under the No Action alternative, the land ownership and use, including residential, commercial, and industrial uses, within the Phoenix, Pinal, and Tucson AMAs may continue under the current patterns. Private land would continue to be developed following state, county, and municipal guidelines and zoning restrictions. Land use patterns would likely change as population growth occurs, and the economies in the AMAs and counties would continue to shift from rural to urban centers. Before development of subdivisions in the AMAs can take place, developers must demonstrate an assured water supply, which verifies the subdivision has available water for the next 100 years (ADWR 2011). It is expected in all of the AMAs that population growth would lead to land use change patterns, including more dense population centers and conversion of private agricultural land and state trust land to private residential and commercial land. There would be no changes to land ownership and use of federal or tribal lands or to the lands managed by Reclamation for the CAP canal or associated infrastructure as a result of the No Action alternative.

3.3.3.2 Proposed Action

Under the Proposed Action, there would be no direct impacts on land ownership within the Phoenix, Pinal, and Tucson AMAs. The Proposed Recipients would receive their allocations of water from the CAP, which could result in some minor changes to land use within the areas managed by Reclamation for the CAP and associated infrastructure. The City of Buckeye and the three mines are proposing to construct infrastructure for delivery and storage of CAP water from the reallocation. These projects would be covered under a separate environmental compliance process, as stated in the terms of their contracts; however, there may be indirect effects that result in minimal land use changes associated with construction of pipelines and USFs. There would likely be no impacts on land ownership. All other Proposed Recipients have existing infrastructure in place to receive the reallocated CAP water under the current land use patterns. Development of private land for residential and commercial use would continue, although if developers were unable to demonstrate an assured water supply, the rate of development of residential areas could be affected.

3.3.4 Cumulative Effects

3.3.4.1 CAP Water Projects, Water Demand, Population Growth, and Land Use

As discussed in Section 3.2.1.2, the demands for water across the AMAs are changing from agricultural uses to residential, commercial, and industrial uses. The Proposed Action, taken together with increased population demanding more water, would have a cumulative impact on

land use patterns. Agricultural water demand is decreasing across the AMAs, while residential and commercial water demand has been increasing in past years and will continue to increase. The Proposed Action and CAP water projects described in Section 3.2.1.1 would provide water that would be used either directly for consumption or to reduce the dependence on groundwater for municipal, residential, commercial, and industrial development. A secure source of renewable water would accommodate economic development, which would likely result in changes to land use patterns and changes to land ownership within the AMAs. Agricultural lands may be converted to municipal, commercial, and industrial lands. State trust lands may be converted to private ownership for development under specific circumstances.

3.3.4.2 Climate Change

As discussed in Section 3.2.1.3, climate models predict that the arid regions of the southwestern United States will become increasingly dry and that a transition to a more arid climate is already underway. Land use patterns may be impacted by the Proposed Action, taken together with climate change, in that the rate at which land is developed could be dependent upon water availability. In an increasingly dry region, development of land with water availability would likely happen before lands with a more tenuous water situation. Areas where water is not available may not be developed unless water sources can be developed. The result may be uneven development of land across the AMAs, where populations and economic growth are concentrated around areas where a secure water supply is available.

During periods of shortages on the Colorado River, the Proposed Recipients may not receive all or part of the NIA Priority CAP water due to the low priority of the water within the CAWCD pool structure. This could result in impacts on where and how land is used for development and could affect the types of development and changes in land use patterns. Projected future conditions as a result of climate change would require increased implementation of water conservation measures and increased use of water recycling/reuse programs, which would impact the rate and extent of land use changes and development.

3.4 Biological Resources

3.4.1 Analysis Area

The analysis area for impacts on biological resources includes the three AMAs where the Proposed Recipients are located: Phoenix, Pinal, and Tucson. The AMAs overlap large portions of Maricopa, Pima, and Pinal Counties.

3.4.2 Affected Environment

3.4.2.1 Vegetation/Wetlands

The analysis area contains seven biotic communities—Lower Colorado River Valley Sonoran Desertscrub, Arizona Upland Sonoran Desertscrub, Interior Chaparral, Semidesert Grassland, Madrean Evergreen Woodland, Petran Montane Conifer Forest, and Great Basin Conifer Woodland (Hendricks 1985; Brown 1994; Brown and Brennan 2007; Northern Arizona University 2016). In addition, there are extensive disturbed areas, which are areas that were altered by human activity (such as areas cleared of native vegetation for development or agricultural purposes). Although not a biotic community shown on the Brown (1994) biotic

community map (Figure 2), Riparian Deciduous Forests are important because they provide valuable wildlife habitat.

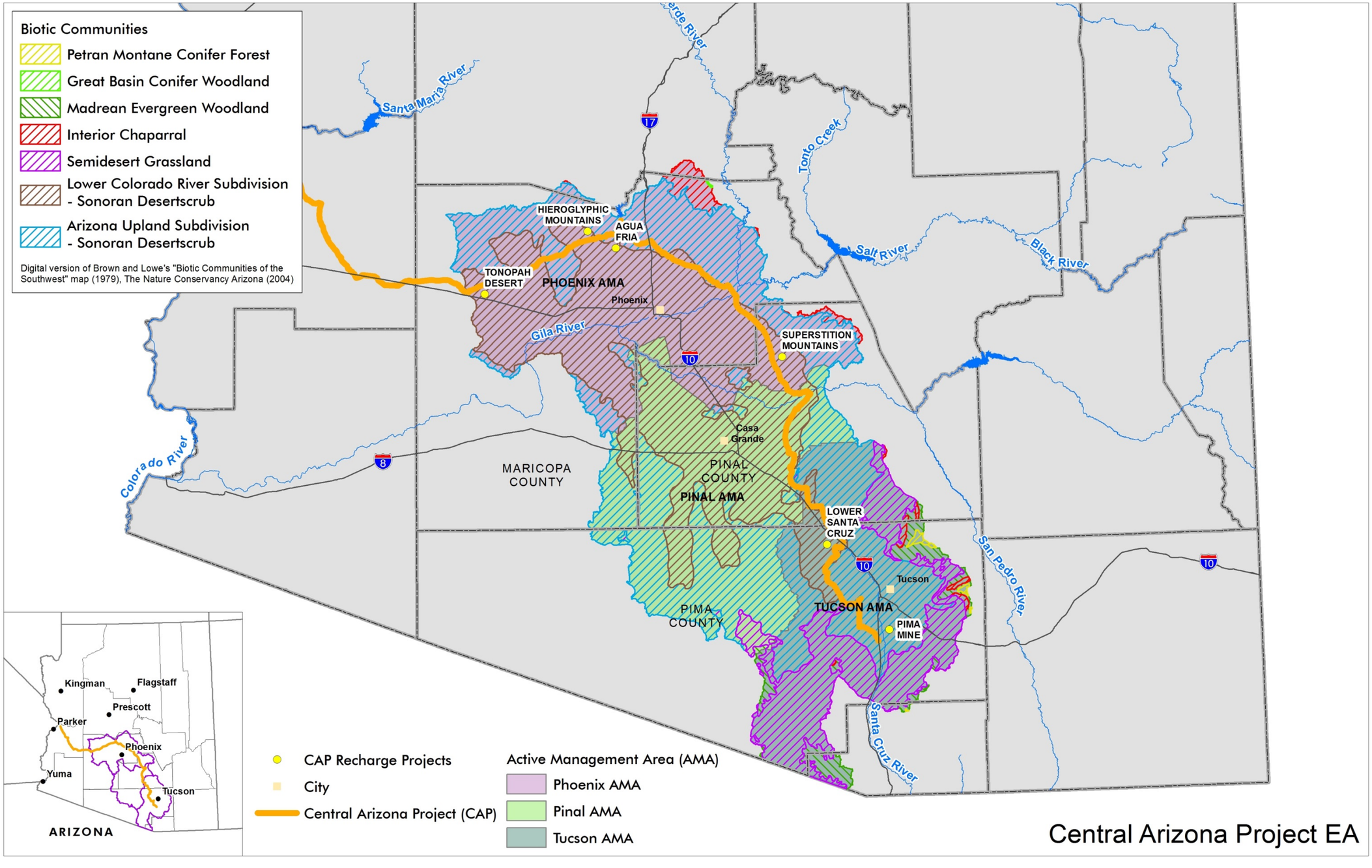
Lower Colorado River Valley Sonoran Desertscrub. Lower Colorado River Valley Sonoran Desertscrub, along with Arizona Upland Sonoran Desertscrub, is the most widespread biotic community in the analysis area. The dominant vegetation community consists of the creosote-cacti association, which is common in sandy or gravelly soils (desert pavement) at lower elevations. Common vegetation species include creosote bush (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), various chollas (*Cylindropuntia* ssp.), saguaro (*Carnegiea gigantea*), barrel cactus (*Ferocactus acanthodes*), prickly pear (*Opuntia* ssp.), cattle saltbrush (*Atriplex polycarpa*), and ironwood (*Olneya tesota*).

Arizona Upland Sonoran Desertscrub. Arizona Upland Sonoran Desertscrub occurs in higher uplands and foothills. This biotic community generally occurs around the northern, eastern, and southern periphery of the Lower Colorado River Valley Sonoran Desertscrub biotic community. Trees and shrubs tend to occur at a higher frequency in these higher elevations. Common species include yellow paloverde (*Parkinsonia microphylla*), fairy duster (*Calliandra eriophylla*), catclaw acacia (*Senegalia greggii*), ocotillo (*Fouquieria splendens*), and honey mesquite (*Prosopis glandulosa*). Several different cacti occur in this biotic community including saguaro, teddybear cholla (*Cylindropuntia bigelovii*), buckhorn cholla (*C. acanthocarpa*), jumping cholla (*C. fulgida*), various barrel cacti (*Ferocactus* ssp.), and a variety of prickly pears.

Interior Chaparral. Interior Chaparral is a dense shrubland community forming the transition zone between Arizona Upland Sonoran Desertscrub and the coniferous Mogollon Rim north and east of Phoenix. Common species in this region include Sonoran scrub oak (*Quercus turbinella*), pointleaf manzanita (*Arctostaphylos pungens*), buckthorn (*Rhamnus crocea*), alligator juniper (*Juniperis deppeana*), sugar sumac (*Rhus ovata*), and Arizona cypress (*Hesperocyparis arizonica*).

Semidesert Grassland. The Semidesert Grassland biotic community is most prominent in the southern and eastern sections of the Tucson AMA. This biotic community is a transition area between the Sonoran and Chihuahuan Deserts. Drought-tolerant grasses include sideoats grama (*Bouteloua curtipendula*), black grama (*B. eriopoda*), tobosagrass (*Pleuraphis mutica*), woollygrass (*Dasyochloa pulchella*), and threeawn (*Aristida* ssp). Common shrubs and cacti include creosote bush, mesquite, catclaw mimosa (*Mimosa aculeaticarpa*), graythorn (*Ziziphus obtusifolia*), sotols (*Dasylirion* spp.), and several prickly pear variations.

Figure 2. Biotic Community Map



Madrean Evergreen Woodland. With its origins in the Sierra Madre mountain range of Mexico, the Madrean Evergreen Woodland biotic community occurs in the southeastern portion of the state in the mountain areas of the Tucson AMA. The elevation of this community ranges between 4,000 and 7,000 feet above sea level (Hendricks 1985). A mixture of evergreen oak including Mexican blue-oak (*Quercus oblongifolia*) and Emory oak (*Q. emoryi*) occur at the lower elevations of this biotic community, whereas various pines including Mexican pinyon (*Pinus cembroides*), Apache pine (*P. engelmannii*), and Chihuahua pine (*P. leiophylla*) become more common in higher elevations. Other common tree and shrub species include Arizona white oak (*Quercus arizonica*), mountain mahogany (*Cerocarpus montanus*), Arizona madrone (*Arbutus arizonica*), Mexican cliffrose (*Purshia mexicana*), and skunkbrush (*Rhus trilobata*). Other common plants include prickly pear, Parry's agave (*Agave parryi*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), and sideoats grama.

Petran Montane Conifer Forest and Great Basin Conifer Forest. These two biotic communities are very limited within the AMAs – the former occurs on the eastern edge of the Tucson AMA and the latter on the northeastern edge of the Phoenix AMA (Figure 2). Petran Montane Conifer Forests are mixed conifer and ponderosa pine (*Pinus ponderosa*) forests, and Great Basin Conifer Forests consist of pinyon pine (*Pinus edulis*) and juniper (*Juniperus* spp.) trees.

Riparian Deciduous Forests. In the analysis area, vegetation along the rivers, including the Santa Cruz, Verde, and Salt (which form the Gila River), and their floodplains would be classified as Riparian Deciduous Forests. Dominant species in the riparian woodland community type include Fremont cottonwood (*Populus fremontii*), Goodding's willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), velvet mesquite (*Prosopis velutina*), salt cedar (*Tamarix ramosissima*), and seepwillow (*Baccharis salicifolia*). Dominant wetland plant species include cattail (*Typha* spp.), horsetail (*Equisetum* spp.), bulrush (*Schoenoplectus* spp.), rush (*Juncus* spp.), spikerush (*Eleocharis* spp.), and sedge (*Carex* spp.).

Disturbed Areas. Disturbed lands include areas that have been cleared of native vegetation as a result of human activity. Developed areas containing roads; commercial, industrial, and residential development; and agricultural areas are classified as disturbed areas.

3.4.2.2 Wildlife

The analysis area provides habitat for a variety of terrestrial wildlife species typical of the Sonoran Desertscrub, Semidesert Grasslands and riparian habitats in Arizona, as described in Brown (1994). Multiple rivers and creeks provide habitat for a variety of native and nonnative fish species.

Terrestrial Wildlife. The AMAs provide habitat for numerous bird species including cactus wren (*Campylorhynchus brunneicapillus*), curve-billed thrasher (*Toxostoma curvirostre*), Gila woodpecker (*Melanerpes uropygialis*), mourning dove (*Zenaida macroura*), Harris' hawk (*Parabuteo unicinctus*), red-tailed hawk (*Buteo jamaicensis*), black-throated sparrow (*Amphispiza bilineata*), and roadrunner (*Geococcyx californianus*).

Large mammals typically occurring in Sonoran Desertscrub and riparian habitats include mule deer (*Odocoileus hemonius*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), and

javelina (*Pecari tajacu*). Typical small mammal species include black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), white-throated woodrat (*Neotoma albigula*), kangaroo rat (*Dipodomys* spp.), cactus deermouse (*Peromyscus eremicus*), California leaf-nosed bat (*Macrotis californicus*), and California myotis (*Myotis californicus*). Furbearing species such as beaver (*Castor canadensis*) and raccoon (*Procyon lotor*) occur in riparian areas. The AMAs also provide habitat for a variety of reptiles such as desert iguana (*Dipsosaurus dorsalis*), tiger whiptail (*Aspidoscelis tigris*), western diamond-backed rattlesnake (*Crotalus atrox*), banded gecko (*Coleonyx variegatus*), Gila monster (*Heloderma suspectum*), and chuckwalla (*Sauromalus ater*).

Aquatic Wildlife. A variety of native and introduced fish species occur in the rivers and creeks within the AMAs. All streams are intermittent unless otherwise stated. The Tucson AMA contains the perennial Romero Canyon, Sabino Canyon, Cienega Creek, and Sycamore Canyon. Intermittent streams are the Santa Cruz River, Pantano Wash, Rillito Creek, and Sabino Creek. The Phoenix AMA contains the perennial Verde River, intermittent and perennial portions of the Gila and Salt Rivers, the Agua Fria River, and the Hassayampa River, as well as tributaries of these rivers including Skunk Creek, Cave Creek, New River, Waterman Wash, Centennial Wash, and Queen Creek. The Pinal AMA contains the intermittent Gila River, Santa Cruz River, Aguirre Wash, and Santa Rosa Wash. Excluding threatened and endangered species, which are discussed in the next section, common native fish species include desert sucker (*Catostomus clarki*), Gila longfin dace (*Agosia chrysogaster chrysogaster*), and Sonora sucker (*Catostomus insignis*) (AGFD 2016a). Some nonnative species include bluegill (*Lepomis macrochirus*), channel catfish (*Ictalurus punctatus*), common carp (*Cyprinus carpio*), green sunfish (*Lepomis cyanellus*), and largemouth bass (*Micropterus salmoides*).

3.4.2.3 Threatened and Endangered Species

Table 5 contains the federally listed species (listed species) and designated and proposed critical habitat identified by the FWS as potentially occurring in the Phoenix, Pinal, and Tucson AMAs in Arizona. The boundaries of the three AMAs were uploaded to AGFD's Online Environmental Review Tool to review Heritage Data Management System (HDMS) species data and potential habitat models. This environmental review, in conjunction with species habitat and distribution descriptions (FWS 2016a; AGFD 2016a), was used to identify which species have potential to occur in the three AMAs (Table 5).

Table 5. Federally Listed, Proposed, and Candidate Species, Designated or Proposed Critical Habitats, within Phoenix, Pinal, and Tucson AMAs, in Arizona.

Common Name (Scientific Name)	Federal Status Critical Habitat by AMA	Habitat	Potential to Occur in Analysis area by AMA*
MAMMALS			
Black-footed ferret (*Mustela nigripes*)	Experimental, Non-Essential Population	Prairie dog colonies, providing prey and burrows for shelter	Historical occurrence
Jaguar (*Panthera onca*)	Endangered Critical Habitat (CH) - Pinal and Tucson	Lowland wet habitats and oak-pine woodlands	Pinal and Tucson
Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*)	Endangered	Desertscrub and grassland habitat with agave and columnar cacti present as food plants	Phoenix, Pinal, and Tucson

Common Name (Scientific Name)	Federal Status Critical Habitat by AMA	Habitat	Potential to Occur in Analysis area by AMA*
Ocelot (*Leopardus pardalis*)	Endangered	Subtropical thorn forest, thorn scrub and dense brushy thickets, riparian bottomland, below 4,000 feet	Phoenix and Tucson
Sonoran pronghorn (*Antilocapra americana sonoriensis*)	Endangered	Broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations	Phoenix and Tucson
BIRDS			
California least tern (*Sterna antillarum brown*)	Endangered	Open, bare, or sparsely vegetated sand, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, or drainage systems; known from highway 101 ponds near Glendale, Arizona	Phoenix[1] and Tucson
Masked bobwhite (quail) (*Colinus virginianus ridgwayi*)	Endangered	Broad valley desert grasslands, 3,090 to 3,720 feet	Tucson
Mexican spotted owl (*Strix occidentalis lucida*)	Threatened CH-Tucson	Nests in canyons and dense conifer forests with multilayered foliage structure	Phoenix, Pinal, and Tucson
Southwestern willow flycatcher (*Empidonax traillii extimus*)	Endangered CH-Phoenix and Pinal	Cottonwood/willow and tamarisk vegetation communities along rivers and streams	Phoenix, Pinal, and Tucson
Sprague's pipit (*Anthus spragueii*)	Candidate	Grasslands with vegetation of intermediate height and lacking woody shrubs	Phoenix[2], Pinal[2], and Tucson
Yellow-billed cuckoo (*Coccyzus americanus*)	Threatened Proposed CH-Phoenix, Pinal, and Tucson	Nests in multistoried riparian habitat, willow, cottonwood, and sometimes salt cedar	Phoenix, Pinal, and Tucson
Yuma clapper rail (*Rallus longirostris yumanensis*)	Endangered	Fresh water and brackish marshes with dense emergent vegetation	Phoenix, Pinal, and Tucson[2]
FISH			
Colorado pikeminnow (*Ptychocheilus lucius*)	Endangered	Experimental, nonessential populations have been introduced in the Salt and Verde Rivers; occur in turbid, deep, strongly flowing waters	Phoenix[1]
Desert pupfish (*Cyprinodon macularius*)	Endangered	Shallow springs, small streams, and marshes; tolerates saline and warm water, below 5,000 feet	Phoenix, Pinal, and Tucson
Gila chub (*Gila intermedia*)	Endangered CH-Phoenix and Tucson	Smaller headwater streams, cienegas, and springs or marshes of the Gila River basin	Phoenix, Pinal, and Tucson
Gila topminnow (*Poeciliopsis occidentalis*)	Endangered	Small streams, springs, cienegas, and vegetated shallows, below 4,500 feet	Phoenix, Pinal[1], and Tucson
Headwater chub (*Gila nigra*)	Proposed Threatened	Middle to upper reaches of moderately-sized streams; East, Middle, and West Forks of the Gila River	Outside of the Phoenix and Pinal AMAs
Razorback sucker (*Xyrauchen texanus*)	Endangered CH-Phoenix	Riverine and lacustrine areas, generally not in fast-moving water; may use backwaters	Phoenix[1]
Roundtail chub (*Gila robusta*)	Proposed Threatened	Cool to warm waters of rivers and streams, often occupies the deepest pools and eddies of large streams	Phoenix
Sonora chub (*Gila ditaenia*)	Threatened CH-Tucson	Large, deep, and permanent pools in Sycamore Creek	Tucson
Woundfin (*Plagopterus argentissimus*)	Experimental, Non-Essential Population	Shallow, warm, turbid, fast-flowing water; tolerates high salinity	Historically Phoenix[1]

Common Name (Scientific Name)	Federal Status Critical Habitat by AMA	Habitat	Potential to Occur in Analysis area by AMA*
AMPHIBIANS AND REPTILES			
Arizona treefrog (Huachuca/Canelo Population) (*Hyla wrightorum*)	Candidate	Found on the ground or in shrubs and trees near ponds and streams, usually in coniferous forests	Outside of the Tucson AMA
Chiricahua leopard Frog (*Rana chiricahuensis*)	Threatened CH-Tucson	Streams, rivers, backwaters, ponds, or stock tanks; 3,300 to 8,900 feet	Phoenix, Pinal[1], and Tucson
Northern Mexican gartersnake (*Thamnophis eques megalops*)	Threatened Proposed CH-Phoenix and Tucson	Ponds and cienegas, lowland river riparian forests and woodlands, or upland stream gallery forests	Phoenix, Pinal[1], and Tucson
Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*)	Candidate	Pond and stream habitats, Quitobaquito Springs in Organ Pipe Cactus National Monument	Outside of the Tucson AMA
INSECTS			
Stephan's riffle beetle (*Heterelmis stephani*)	Candidate	Isolated springs called cienegas, occurring at mid-elevations; distribution is confined to Madera Canyon in the Coronado National Forest in Santa Cruz County, Arizona	Tucson
SNAILS			
Huachuca springsnail (*Pyrgulopsis thompsoni*)	Candidate	Flowing streams emerging from the ground, or spring-fed cienegas; located in Santa Cruz County, Arizona	Tucson[1]
PLANTS			
Acuna cactus (*Echinomastus erectocentrus* var. *acunensis*)	Endangered Proposed CH-Phoenix and Pinal	Low gravelly hills, bajadas, rocky knolls; 1,200 to 3,375 feet	Phoenix[1], Pinal, and Tucson[1]
Arizona cliff-rose (*Purshia subintegra*)	Endangered	Rolling, rocky limestone hills and slopes; 2,120 to 4,000 feet	Phoenix[1]
Arizona hedgehog cactus (*Echinocereus triglochidiatus* var. *arizonicus*)	Endangered	Rugged steep-walled canyons, boulder-pile ridges and slopes; grow in open areas, narrow cracks between boulders, and in understory of shrubs; 3,300 to 5,700 feet	Phoenix and Pinal[1]
Huachuca water-umbel (*Lilaeopsis schaffneriana* var. *recurve*)	Endangered	Cienegas or marshy wetlands within Sonoran desertscrub, grassland or oak woodland, and conifer forests; 2,000 to 6,000 feet	Tucson
Kearney's blue-star (*Amsonia kearneyana*)	Endangered	Canyon bottoms and sides in oak woodlands; 3,685 to 4,500 feet	Tucson
Nichol's turk's head cactus (*Echinocactus horizonthalonius* var. *nicholii*)	Endangered	Open vegetation, gravelly bajadas with limestone clasts at lower elevations; 2,000 to 3,600 feet	Pinal and Tucson
Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*)	Endangered	Ridges in semi-desert grassland and alluvial fans in Sonoran desertscrub; 2,300 to 5,000 feet	Pinal and Tucson

*Potential to occur within an AMA was determined from FWS Information for Planning and Conservation (IPaC) (FWS 2016a) or species information (FWS 2016b), AGFD online review, HDMS data within 3 miles of the analysis area (AGFD 2016b), and AGFD species abstracts and distribution (AGFD 2016a).

[1]Potential to occur in an AMA based on FWS IPaC list (FWS 2016a) or species information (FWS 2016b); no AGFD HDMS records within 3 miles of the analysis area.

[2]Potential to occur in an AMA based on AGFD online review, predicted species range models (AGFD 2016b).

3.4.3 Environmental Consequences

3.4.3.1 No Action Alternative

Under the No Action alternative, the Secretary would reject the allocation recommendation (i.e., the Proposed Action). Therefore, the No Action alternative for this NEPA analysis reflects an indeterminate delay in the allocation process and, until a future reallocation is approved by the Secretary, no reallocation would occur. Many of the Proposed Recipients would continue to pump groundwater for their water needs. Groundwater pumping may affect biological resources by depleting aquifers, resulting in altered streamflow and altered water availability to groundwater-related vegetation along streams and creeks (Fonseca 2008). Many threatened, endangered, and sensitive species rely on wetland and riparian vegetation for food, shelter, and reproduction. Increases in the depth to groundwater could eventually result in a shift to upland vegetation and loss of riparian and wetland habitat (Fonseca 2008).

3.4.3.2 Proposed Action

3.4.3.2.1 Vegetation/Wetlands

The Proposed Action would not result in any direct impacts or ground disturbance. For Proposed Recipients who have proposed construction of infrastructure for additional water storage and conveyance, environmental clearance would be necessary prior to any ground-disturbing activities. Any attempt to quantify impacts from additional development, such as impacts on vegetation that may result from land clearing and construction equipment, is speculative at this time. Potential loss of upland vegetation from installation of new water facilities (e.g., treatment plants or pipelines) are also impossible to quantify since the need for new facilities and their number or location have not been identified.

Qualitatively, potential indirect impacts of the Proposed Action may include a minor loss of upland vegetation from additional land development and subsequent land clearing activities within the municipalities. However, currently no specific developments are planned that would be dependent upon the additional water available under the Proposed Reallocation.

There could be an indirect change in riparian habitat through ground disturbance and vegetation clearing if infrastructure developments are needed, but it is currently not possible to quantify these impacts. The Proposed Reallocation would not alter flows of existing surface waters within the AMAs.

3.4.3.2.2 Wildlife

Terrestrial Wildlife. The Proposed Reallocation may result in a minor amount of ground disturbance and loss of vegetation (habitat) from future construction of water conveyance facilities. Housing and industrial developments are currently underway by the Proposed Recipients and would not be dependent on the Proposed Action to continue. Potential indirect impacts on wildlife habitat from installation of any new water infrastructure are impossible to quantify since the specific locations of potential pipelines or USFs have not been identified. Construction of new diversions or development of land for residential, commercial, industrial, or agricultural purposes would be subject to applicable federal or tribal laws and regulations.

Aquatic Wildlife. The Proposed Action would not alter streamflows or surface water quality within the AMAs that might affect habitat for fish and other aquatic wildlife. Because of this, there would be no substantial changes to diversity of river habitat, depth of pools, existence of shallow riffles, or backwater areas that provide aquatic wildlife habitat. No changes in the distribution or abundance of native or nonnative fish are expected from the Proposed Action. The distribution of nonnative fish within local streams, transferred inadvertently through CAP water and within the CAP aqueduct, continues to be monitored by AGFD, Arizona State University (ASU), and Reclamation.

3.4.3.2.3 Threatened and Endangered Species

Under Section 7 of the ESA, any proposed action with a federal nexus that may result in an effect (positive or negative) on federally listed or proposed species would require consultation. Potential indirect disturbance or habitat effects for listed species from the installation of new water facilities (e.g., treatment plants or pipelines) are impossible to quantify in this analysis since the specific locations have not been identified. Construction of new diversions or development of land for residential, commercial, industrial, or agricultural purposes would be subject to applicable federal and tribal laws and regulations, including the ESA. Therefore, future developments by the Proposed Recipients would be analyzed under a separate NEPA analysis to ensure effects on listed species are addressed. Without conceptual plans and/or locations of potential developments, determining effects on listed species from new developments is not currently possible. Table 5 in Section 3.4.2.2 provides the potential listed species and designated critical habitats present within each AMA.

CAP water, coming from the Colorado River system where at least 27 threatened, endangered, candidate, and proposed species rely on the river for survival, was previously consulted on with the FWS. FWS issued a Biological and Conference Opinion in 2008 analyzing effects on listed species from storage, delivery, and diversion of water within the Lower Colorado River; therefore, new impacts from use of the CAP water would not occur from the Proposed Action (FWS 2008). For existing infrastructure delivering CAP water to the Proposed Recipients, there would be no effect on listed species. However, additional details on future water or recharge facilities are needed to make further effects determinations. Potential effects on listed species would be required as part of subcontract agreements with Reclamation.

3.4.4 Cumulative Effects

3.4.4.1 CAP Water Projects, Water Demand, Population Growth, and Land Use

Past, present, and reasonably foreseeable future actions and scenarios described in Section 3.2, in combination with the Proposed Action, would result in cumulative effects on biological resources. The broad cumulative effects include increased human water demands in the Phoenix and Tucson AMAs, with a reduced demand in the Pinal AMA; increased human population centers and conversion of land uses to residential in all three AMAs; and a decline in agricultural land uses in all three AMAs. Water will likely become increasingly scarce, especially when designated for wildlife benefit versus human development, and management decisions will need to consider what priority wildlife is given in the distribution of water. Groundwater pumping from wells and recharge of water would mostly occur within the same subbasin, yet not always (Table 6).

The drawdown of shallow groundwater aquifers could result in localized loss of riparian and wetland vegetation and wildlife dependent on these habitats, though without specific development locations, this loss cannot be quantified. This effect may be greatest in the Tucson AMA where shallow groundwater exists, groundwater-dependent riparian habitats occur, and water may be recharged into different subbasins than where the water is withdrawn (Fonseca 2008). However, the use of CAP water to offset groundwater pumping under the Proposed Action and other CAP water projects will help slow the drawdown of aquifers locally.

3.4.4.2 Climate Change

As stated in Section 3.2.1.3, climate models predict the arid regions of the southwestern United States will become increasingly dry and that a transition to a more arid climate is already underway. Projected increases in drought, wildfire, invasive species, pests, and changes in species' geographic ranges would increase threats to native forests and ecosystems in the Southwest. Warmer, drier conditions, combined with the accumulation of dead trees and other fuel, have contributed to an increase in the size of wildfires in recent decades, resulting in the transformation of ecosystems. In the AMAs, the likely result would be loss of habitat, an increase in invasive species and pests, and increased risk of fire, though it is difficult to determine how soon these effects would occur.

Climate change would likely stress groundwater-based systems and result in decreased groundwater recharge. A reliable water supply is crucial for sustaining ecosystems in this dry region. Increased water demand and reduced water supplies would add new stresses to already strained water resources. The Proposed Reallocation of NIA Priority CAP water to the Proposed Recipients that intend to recharge the water under the Recharge Program to develop Long Term Storage Credits (LTSC) would help mitigate future water shortages from climate change, and would benefit biological resources that depend on the scarce water resources.

3.5 Cultural Resources

3.5.1 Analysis Area

The analysis area for impacts on cultural resources includes the conveyance system and all associated facilities for the CAP project within the three AMAs in which the Proposed Recipients are located: Phoenix, Pinal, and Tucson. The AMAs overlap large portions of Maricopa, Pima, and Pinal Counties.

3.5.2 Affected Environment

3.5.2.1 Project Research

Previous cultural surveys and mitigation projects for the CAP have been extensive. Identification and mitigation of cultural resources were completed under multiple environmental impact statements prior to the construction of CAP (Reclamation 1974, 1979, 1982, 1985). Cultural resource studies associated with CAP began in 1968 when Reclamation provided funds for surveys to the NPS. The NPS divided the entire proposed aqueduct alignment (consisting of the Granite Reef Aqueduct, the Salt-Gila Aqueduct, and the Tucson Aqueduct) into three relatively equidistant segments and awarded survey work to Prescott College, ASU, and Arizona State Museum (ASM). Surveys also included proposed reservoir locations.

Additional resurveys (also routed through the NPS) of the aqueduct alignments were conducted by ASM, ASU, and the Nevada Archaeological Survey at the University of Nevada, Las Vegas in the early 1970s (Rogge 1983). Mitigation of significant sites and surveys of the Orme and Buttes Reservoirs also began at that time. Mitigation of significant sites began in earnest in the late 1970s and early 1980s. Data recovery projects continued into the 1990s. Although some Indian distribution systems either are under construction or remain in the planning process, the majority of construction of the aqueduct and associated dams was completed by 1994. Site assessments of cultural resources associated with different phases of the CAP continue. None of the Indian distribution systems are included in the Proposed Action.

3.5.3 Environmental Consequences

3.5.3.1 No Action Alternative

Under the No Action alternative, the Secretary would reject the allocation recommendation (i.e., the Proposed Action). In accordance with the AWSA, ADWR would then be required to revise and provide to Reclamation another NIA Priority CAP water reallocation recommendation that potentially could require a new reallocation determination process and NEPA analysis for the new recommendation. It is not possible to assume what the new recommendation would be since the basis for the Secretary's potential rejection is not known. Therefore, the No Action alternative for this NEPA analysis reflects an indeterminate delay in the allocation process and, until a future reallocation is approved by the Secretary, no reallocation would occur.

Construction of new facilities or modifications to existing facilities are not proposed under this alternative. Proposed Recipients would continue to pump groundwater for their water needs, which would not impact cultural resources within the AMAs. The No Action alternative would have no impact on cultural resources regardless of any delays to the reallocation process. If the allocation recommendation is rejected and a new recommendation is proposed at some indeterminate time in the future, potential impacts on cultural resources would be considered under a separate future NEPA analysis.

3.5.3.2 Proposed Action

Under the Proposed Action, ADWR's reallocation recommendation for NIA Priority CAP water would be accepted by the Secretary and each Proposed Recipient would enter into a subcontract with the CAWCD and begin receiving their CAP water allocation based on established priority standards. The City of Buckeye and the three mines may construct infrastructure for delivery and storage of CAP water from the allocation. These projects would be covered under a separate environmental compliance process (including Section 106), as stated in the terms of their contracts; however, indirect effects may result in adverse effects on cultural resources associated with construction of pipelines and USFs. Any attempt to quantify impacts from additional development, such as impacts on cultural resources that may result from land clearing activities, is speculative because the specific location of the infrastructure is unknown at this time. For Proposed Recipients constructing future infrastructure to receive their allocation, the CAP subcontract would indicate that CAP water would not be delivered to the subcontractor unless and until the subcontractor has performed required surveys and mitigations, if necessary, and obtained final environmental clearance from Reclamation.

3.5.4 Cumulative Effects

3.5.4.1 Population Growth and Land Use

The populations in the AMAs are expected to increase independently of the Proposed Reallocation. Land use is likely to shift from agriculture and grazing uses to residential, commercial, and industrial uses and, therefore, additional ground-clearing activities for development. Cumulative effects on cultural resources have resulted from past land development in the AMAs and also depend on the rate and type of future development in the AMAs, which depends on local development plans and policies. Because of the projected land use shifts and past and future additional ground-clearing activities, cumulative impacts on cultural resources may occur when the Proposed Action is considered in combination with other reasonably foreseeable actions.

3.5.4.2 Climate Change

As described in Section 3.2.1.3, the potential effects of climate change are being considered as a component of cumulative impacts. Global climate change is occurring and climate models predict the arid regions of the southwestern United States will become increasingly dry. Drought periods are expected to become more frequent, intense, and longer, resulting in impacts on natural and cultural resources. Cultural resources, historic buildings, archaeological sites, and historic landscapes would experience similar effects from climate change as the natural resources that are located in the same area. Cultural resources are individually unique and nonrenewable. Climate change projections indicate these irreplaceable resources would likely be altered, deteriorated, or removed at faster rates than previously observed (NPS 2015).

3.6 Water Resources

3.6.1 Analysis Area

For purposes of analyzing water resources, the analysis area is the AMA and subbasin in which the service area for each of the municipal Proposed Recipients and the land areas for each of the industrial Proposed Recipients are located.

For the Proposed Recipient CAGRD, the analysis area involves multiple AMAs and subbasins. CAGRD uses the following recharge facilities: Aqua Fria, Hieroglyphic Mountains, and Tonopah USFs in the West Salt River Valley Subbasin (WSRV); the Superstition Mountains USF in the East Salt River Valley Subbasin (ESRV); the Lower Santa Cruz Constructed USF in the Avra Valley Subbasin; and the Pima Mine Road USF in the Upper Santa Cruz Subbasin. CAGRD also could use the following GSFs that are permitted for CAGRD storage: New Magma Irrigation and Drainage District (IDD) in the ESRV Subbasin, Maricopa Stanfield IDD in the Maricopa-Stanfield Subbasin, Queen Creek IDD in the ESRV Subbasin, Tonopah Irrigation District in the WSRV Subbasin, and Kai Farms in the Avra Valley Subbasin. Because of the multiple districts and subbasins, CAGRD will be discussed with regard to these subbasins.

3.6.2 Affected Environment

The affected environment is discussed with regard to each AMA and AMA subbasin in which the Proposed Recipients are located. Table 6 summarizes the Proposed Recipients, their DSI developed by ADWR, proposed allocation quantity and use, and AMA and subbasin in which the

Proposed Recipients are located. Figures 3 through 5 show the location of each Proposed Recipient with regard to the AMAs and AMA subbasins.

Unless otherwise noted, information in this section for each of the AMAs and AMA subbasins was summarized from ADWR 1999a, 1999b, 1999c, and 2010.

3.6.2.1 Phoenix AMA

The Phoenix AMA is located in central Arizona and covers 5,646 square miles (Figure 3). The Phoenix AMA is in the basin and range physiographic province, which consists of gently sloping alluvial valleys located between north- to northwest-trending mountain ranges. Annual precipitation for the AMA averages 7 to 8 inches per year while the average evapotranspiration rate is about 79 inches per year. Urban and agricultural development is centered in the WSRV Subbasin and ESRV Subbasin. Within the Phoenix AMA, the current distribution of water use is 46 percent by municipalities, 33 percent by agriculture, 12 percent by Native American tribes, and 9 percent by industry (ADWR 2014b).

3.6.2.1.1 Carefree Subbasin

The Carefree Water Company is located in the Carefree Subbasin, which covers about 140 square miles and is located in the northeastern portion of the Phoenix AMA. The Carefree Subbasin consists of alluvial fan and playa deposits up to 2,000 feet thick bound to the east by the northernmost McDowell Mountains, to the north by a mountainous area southwest of New River Mesa, and to the south and west by low-lying hills including Black Mountain. The CAP canal does not flow through the Carefree Subbasin. The aquifers in the subbasin are relatively shallow and unproductive.

Mountain-front recharge is the primary source of recharge in the subbasin and groundwater flow is generally to the west-southwest into the ESRV Subbasin. The estimated groundwater storage was determined in 1994 to be 570,000 AFA to a depth of 1,200 feet below land surface (bls). Depth to groundwater in 1998 ranged from less than 30 feet bls near Cave Creek to more than 390 feet bls in the eastern portion of the subbasin. Due to groundwater pumping, groundwater levels began declining in the 1960s with declines exceeding 10 feet per year. Since the early 1990s, groundwater levels began to stabilize and then increase associated with increased CAP water use in lieu of groundwater pumping. A groundwater cone of depression (a depression in the groundwater table roughly conical in shape, produced in a water table by the extraction of groundwater) occurs near the Town of Cave Creek, which draws in groundwater from the northwest and southeast.

3.6.2.1.2 East Salt River Valley Subbasin

The Proposed Recipients in the ESRV Subbasin of the Phoenix AMA are the Town of Cave Creek, Apache Junction WUCFD, CAGRD, Town of Gilbert, Town of Queen Creek, Viewpoint RV and Golf Resort, Salt River Project, Resolution Copper Mine, and Johnson Utilities. The ESRV Subbasin is the eastern subbasin of the AMA and is about 1,710 square miles. The CAP canal flows through the ESRV Subbasin from north to southeast.

Table 6. Proposed Recipient Summary.

		Proposed Action			Affected Environment				
Pool[1]	Proposed Recipient	Use of Allocation	ADWR-Verified DSI (AFA)	Allocation Recommendation (AFA)	AMA	AMA Subbasin	Has Used Existing Infrastructure to Receive CAP Water?	Storage and Recovery Information	Recovery in Same Subbasin?
M	Apache Junction WUCFD	Direct use for Portalis Project	2,354	817	Phoenix	East Salt River Valley	Yes	NA	NA
M	CAGRD	Recharge at USFs and storage at GSFs	52,359	18,185	Phoenix and Tucson	East and West Salt River Valleys, Avra Valley, Upper Santa Cruz	Yes	Used to partially meet statutory replenishment obligations of Member Lands and Member Service Areas.	Yes
M	Carefree Water Company	Direct use	112	112	Phoenix	Carefree	Yes	NA	NA
M	City of Buckeye	Storage and recovery	8,022	2,786	Phoenix	Hassayampa and West Salt River Valley	Yes	Storage at Tonopah ID GSF, or Tonopah Desert USF, or Hassayampa USF; Recovery with existing recovery wells.	Yes/No
M	City of El Mirage	Storage and recovery	3,795	1,318	Phoenix	West Salt River Valley	Yes	Storage at Aqua Fria Managed and Constructed USFs, Hieroglyphic Mountains USF, and Tonopah Desert USF; Recovery with existing recovery wells.	Yes
M	EPCOR - Sun City West	Storage and recovery for Sun City West District	4,155	1,000	Phoenix	West Salt River Valley	Yes	Storage at Maricopa Water District GSF; Recovery with wells located in service area.	Yes
M	Johnson Utilities	Storage at GSF and occasional direct use	9,262	3,217	Phoenix and Pinal	East Salt River Valley and Eloy	Yes	Storage in New Magma IDD or Hohokam IDD; Recovery with existing wells.	Yes
M	Metropolitan Domestic Water Improvement District	Storage and recovery for Metro SW-Diablo Village to meet demands	299	299	Tucson	Avra Valley and Upper Santa Cruz	Yes	Storage at Southern Avra Valley USF; Recovery with existing wells.	No
M	Town of Cave Creek	Direct use in Dessert Hills Water System	386	386	Phoenix	East Salt River Valley	Yes	NA	NA
M	Town of Gilbert	Direct use	5,274	1,832	Phoenix	East Salt River Valley	Yes	NA	NA
M	Town of Marana	Storage and recovery	1,483	515	Tucson	Avra Valley and Upper Santa Cruz	Yes	Storage at Lower Santa Cruz USF; Recovery with existing wells located within the service area.	Yes
M	Town of Queen Creek	Direct use first, storage and recovery for balance of allocation	15,827[2]	4,162[2]	Phoenix	East Salt River Valley	Yes	Storage at Superstition Mountain Recharge Facility; Recovery with existing production wells located in service area.	Yes
I	Freeport-McMoRan-Sierrita Inc.	Storage and recovery	23,098	5,678	Tucson	Upper Santa Cruz	No	Storage in FICO GSF; Recovery with existing wells.	Yes upon completion of FICO GSF
I	New Harquahala Generating Company	Direct use	400	400	NA	NA	Yes	NA	NA
I	Resolution Copper Mining	Storage until mine operational	9,106	2,238	Phoenix	East Salt River Valley	Yes	Storage in New Magma IDD, Roosevelt Water Conservation District GSF, Tonopah Desert USF, Hohokam IDD; Recovery with mine wells.	Yes/No
I	Rosemont Copper Co.	Storage until mine operational	4,574	1,124	Tucson	Upper Santa Cruz	Yes	Previous storage in Lower Santa Cruz USF and Pima Mine Road USF. Intent is to store water via Community Water Company pipeline in Upper Santa Cruz subbasin; Recovery with mine wells.	Intent to do so but dependent on CWC pipeline and construction of new recharge facility in Green Valley
I	Salt River Project	Direct use and storage and recovery	8,788	2,160	Phoenix	East Salt River Valley	Yes	NA	NA
I	Viewpoint RV and Golf Resort	Direct use for irrigation	400	400	Phoenix	East Salt River Valley	Yes	NA	NA

Note: ADWR = Arizona Department of Water Resources; AFA = acre-feet annually; DSI = Demand and Supply Imbalance; NA = Not Applicable.
[1] M = Municipal; I = Industrial.
[2] Includes H2O Water Company DSI and recommended allocation.

Figure 3. Proposed Recipients within Phoenix AMA

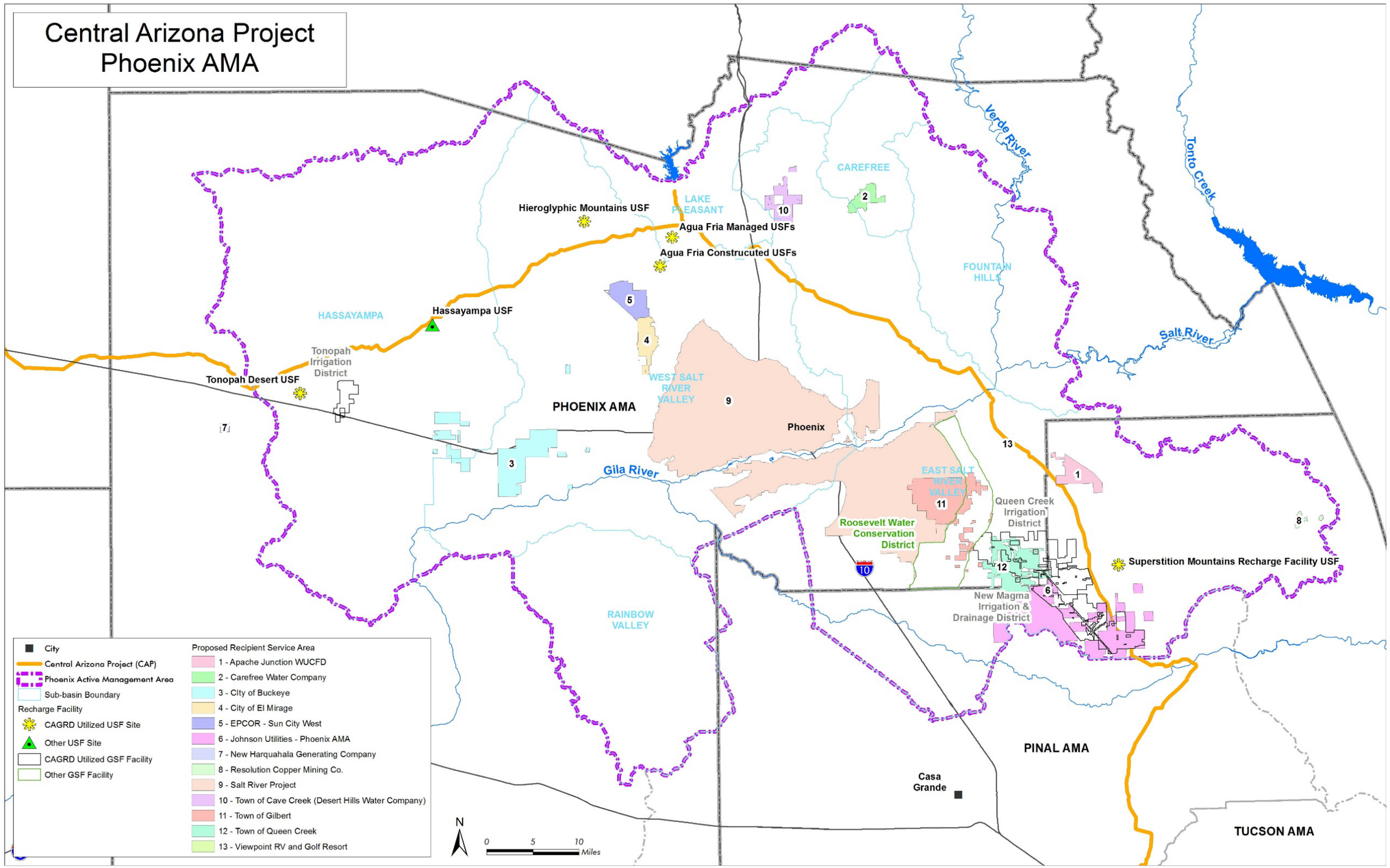


Figure 4. Proposed Recipients within Pinal AMA

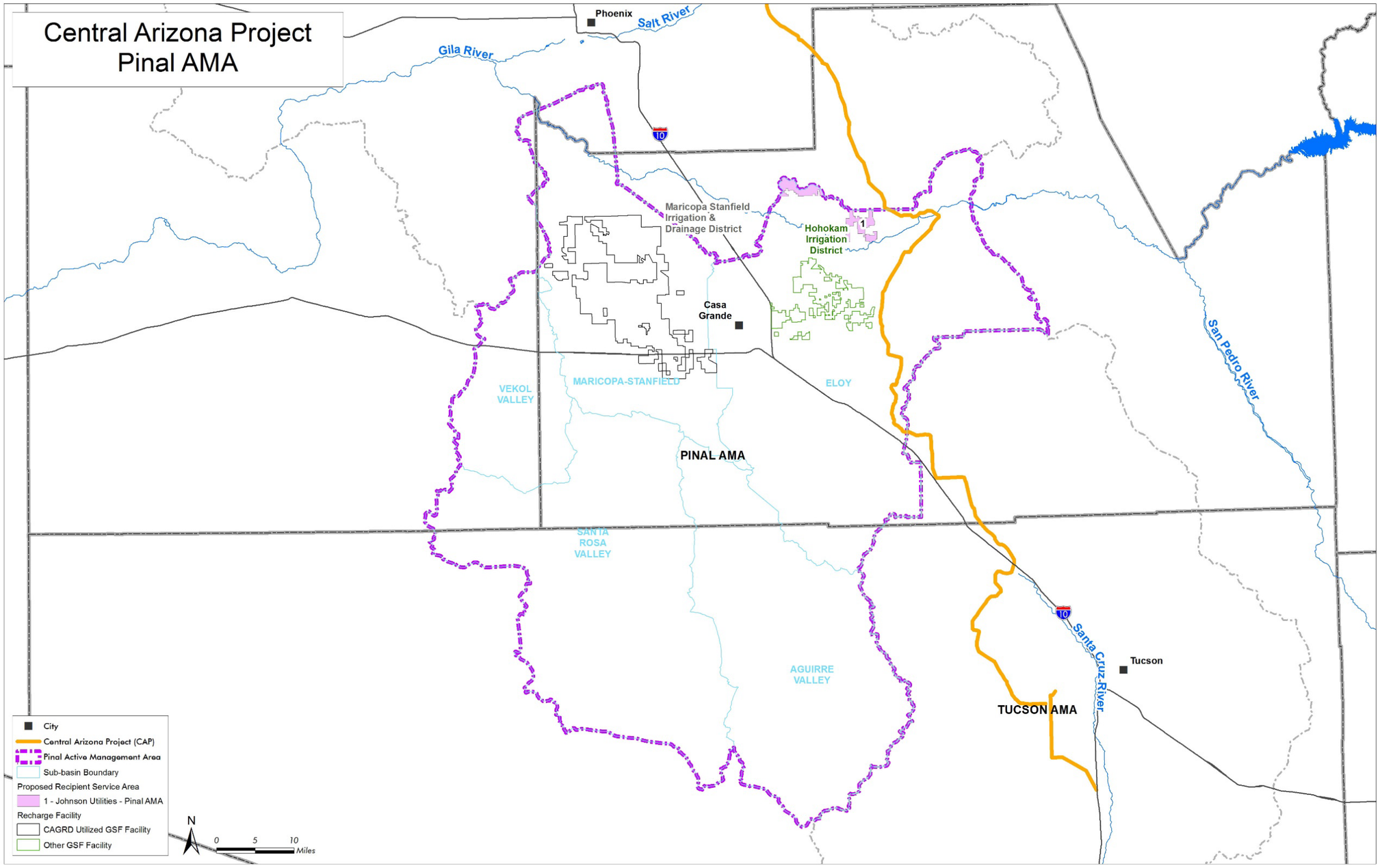
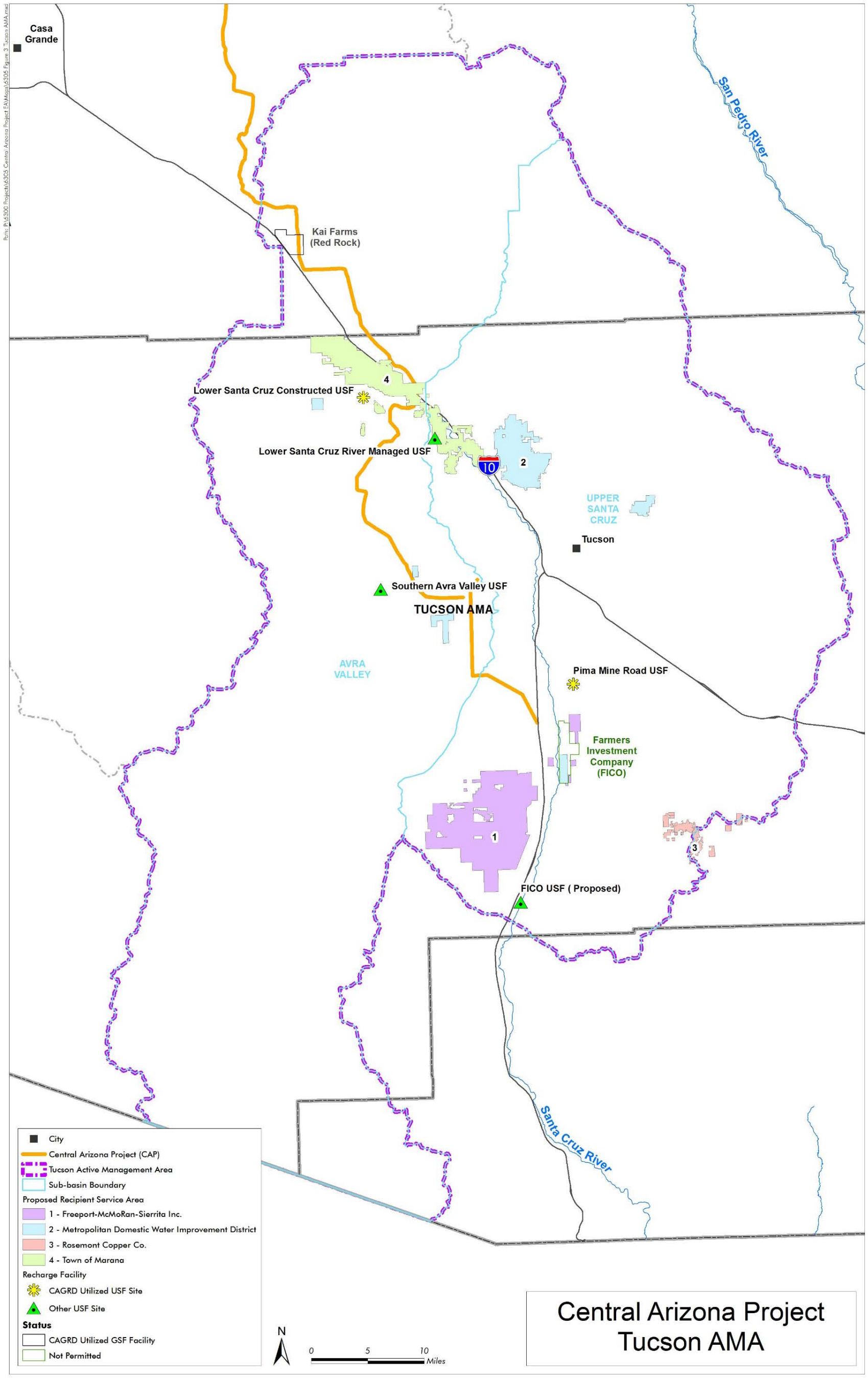


Figure 5. Proposed Recipients within Tucson AMA



The thickness of the basin fill sediments ranges from 100 feet near the basin margins to 10,000 feet near Gilbert. The basin fill is characterized as three distinct water-bearing units – a lower conglomerate unit from which 49 percent of the groundwater is withdrawn, a middle silt and clay unit from which 40 percent of groundwater is withdrawn, and an upper sand and gravel unit from which 11 percent of groundwater is withdrawn. Prior to development of the region, groundwater flowed into the subbasin from the north, south, and southeast and exited the subbasin to the west. Depth to groundwater ranges from 10 feet bls near Superior to 800 feet bls south of Cave Creek, but is highly variable due to three large groundwater cones of depression associated with groundwater pumping beneath Scottsdale, Mesa, and the Santan Mountains. The cones of depression have resulted in groundwater flow directions toward the cones. Earth fissuring (long narrow cracks in the earth) has occurred in the subbasin as a result of localized groundwater pumping near Apache Junction, Queen Creek, North Scottsdale, and Paradise Valley. Although groundwater levels have declined significantly since about 1940, that trend has been reversed recently due to extensive recharge of water to the aquifer; from 1992 to 2002 when groundwater recharge exceeded withdrawal by 2.7 MAFA.

3.6.2.1.3 West Salt River Valley Subbasin

The Proposed Recipients in the WSRV Subbasin are CAGRD, EPCOR-Sun City West, City of Buckeye, and City of El Mirage. Although part of the Salt River Project service area is located in the WSRV Subbasin, the generating stations where the CAP water would be directly used are located in the ESRV Subbasin. At about 1,330 square miles, the WSRV Subbasin is the second largest in the Phoenix AMA. The subbasin is bounded to the north by the Hieroglyphic Mountains and Hedgpeth Hills; to the east by Union Hills, Phoenix Mountains, and Papago Buttes; to the south by the South Mountains, Estrella Mountains, and Buckeye Hills; and to the west by the White Tank Mountains. The CAP canal flows through the WSRV Subbasin from west to east through the northern portion of the subbasin.

Basin fill sediments in the WSRV Subbasin are similar to those in the ESRV Subbasin with groundwater being obtained relatively evenly between the three distinct water-bearing units – a lower conglomerate unit with a thickness ranging from less than 100 feet bls to more than 10,000 feet bls, a middle silt and clay unit with a thickness ranging from less than 100 feet bls to more than 1,300 feet bls, and an upper sand and gravel unit with a thickness ranging from 100 feet bls to more than 500 feet bls. A large underground salt body occurs southeast of Luke Air Force Base (located between the City of Buckeye and the City of El Mirage; Figure 3) at a depth of 880 to more than 6,000 feet bls, which affects groundwater salinity levels.

Groundwater recharge occurs naturally from mountain recharge and from stream recharge, and anthropogenically from irrigation water and effluent discharge. Groundwater enters the ESRV Subbasin from the neighboring Lake Pleasant, the northern Hassayampa, ESRV, and Maricopa-Stanfield Subbasins. In 1998, depth to groundwater ranged from less than 50 feet bls near the Salt and Gila Rivers to more than 550 feet bls near Union Hills. Two large groundwater cones of depression within the subbasin control the direction of groundwater flow – one near Luke Air Force Base located near the center of the WSRV Subbasin and one in Deer Valley near Hedgpeth Hills located in the north-central portion of the WSRV Subbasin. Subsidence of up to 17 feet along with earth fissures have occurred in an area of approximately 140 square miles near Luke Air Force Base. Historically, groundwater flow direction was toward and along the Salt and Gila Rivers and exited the subbasin into the southern portion of the Hassayampa Subbasin.

3.6.2.1.4 Hassayampa Subbasin

The Proposed Recipients City of Buckeye and CAGRD are located in the Hassayampa Subbasin, and New Harquahala Generating Company is located just to the west. The Hassayampa Subbasin is the westernmost subbasin in the Phoenix AMA and covers approximately 1,200 square miles. The subbasin is bounded on the north by the Vulture and Wickenburg Mountains, on the east by the White Tank Mountains, on the south by the Buckeye Hills and Gila Bend Mountains, and on the west by the Big Horn and Belmont Mountains and Palo Verde Hills. The CAP canal flows through the Hassayampa Subbasin from west to east.

The Hassayampa Subbasin is a gently sloping alluvial plain consisting of three hydrogeological units – a lower unconsolidated sand unit 100 feet to more than 1,000 feet thick, a middle clay and silt unit 230 to 300 feet thick, and an upper sand and gravel unit 30 to 60 feet thick. Depth to groundwater ranges from about 20 feet bls in the southwest portion of the subbasin to more than 600 feet bls in the northern portion. Groundwater enters the subbasin from the northeast and flows south toward the Gila River. Groundwater recharge includes streambed infiltration and mountain front recharge. Groundwater storage north of I-10 is estimated at more than 12 MAFA. Groundwater flows from northeast to southwest toward two groundwater cones of depression – one under Tonopah and one south of Tonopah in the Centennial Wash area. These depressions are a result of groundwater pumping associated with agricultural development beginning in the 1950s.

3.6.2.2 Pinal AMA

The Pinal AMA covers 4,100 square miles and is south of the Phoenix AMA (Figure 4). The Pinal AMA is in the basin and range physiographic province and consists of gently sloping alluvial valleys located between north- to northwest-trending mountain ranges. Within the Pinal AMA, 81 percent of water use is by agriculture, 14 percent by Native American tribes, 3 percent by municipalities, and 2 percent by industry (ADWR 2014b).

3.6.2.2.1 Eloy Subbasin

The Proposed Recipient Johnson Utilities' service area is located partially in the ESRV Subbasin of the Phoenix AMA and partially in the Eloy Subbasin of the Pinal AMA. The subbasin is bounded to the east by the Picacho Mountains and to the northwest by the Sacaton Mountains. A groundwater divide separates the Eloy Subbasin and the Maricopa-Stanfield Subbasin to the west. The CAP canal flows into the subbasin from north to south in the northeastern portion of the subbasin.

Groundwater flow within the subbasin is generally to the north toward the Gila River into the ESRV Subbasin of the Phoenix AMA. Three groundwater units are present – a lower conglomerate unit; a middle silt and clay unit; and an upper alluvial unit of sands, gravels, silts, and clays deposited by the ancestral Gila and Santa Cruz Rivers. Historical groundwater use has created a cone of depression in the subbasin along with associated land subsidence. In recent years, groundwater levels have generally increased in the southern portion of the subbasin but have remained stable or have continued to decline in the northern portion of the subbasin. Depth to groundwater ranges from 532 feet bls in the northeast portion of the subbasin to more than 400 feet bls near Picacho. The estimated groundwater storage is 22.6 MAFA to a depth of 1,000 feet bls.

3.6.2.2.2 Maricopa-Stanfield Subbasin

The Proposed Recipient CAGRD is permitted to store CAP water in the MSIDD located in the Maricopa-Stanfield Subbasin. The subbasin is bounded to the west by the Top Mountains and to the northeast by the Sacaton Mountains. A groundwater divide separates the Maricopa-Stanfield Subbasin and the Eloy Subbasin to the east. The CAP canal flows does not flow through the subbasin.

Groundwater flow within the subbasin is generally to the north toward the Gila River and into cones of depression located west of the Towns of Maricopa and Stanfield. Three groundwater units are present – a lower conglomerate unit; a middle silt and clay unit; and an upper alluvial unit of sands, gravels, silts, and clays deposited by the ancestral Gila and Santa Cruz Rivers. In recent years, groundwater levels have generally been recovering and rising due to the use of CAP water in lieu of groundwater pumping. Depth to groundwater ranges from 51 feet bls near the Gila River to more than 600 feet bls near Stanfield. The estimated groundwater storage is 8.6 MAFA to a depth of 1,000 feet bls.

3.6.2.3 Tucson AMA

The Tucson AMA (Figure 5) covers 3,869 square miles and is east of the Pinal AMA. The Tucson AMA is in the basin and range physiographic province and consists of gently sloping alluvial valleys located between north- to northwest-trending mountain ranges. In the Tucson AMA, municipalities account for 44 percent of water use, 31 percent by agriculture, 18 percent by industry, and 6 percent by Native American tribes (ADWR 2014b).[3]

3.6.2.3.1 Avra Valley Subbasin

Proposed Recipients located within the Avra Valley Subbasin are the Town of Marana and the Metropolitan Domestic Water Improvement District (MDWID). The Avra Valley Subbasin is bounded to the east by the Sierrita, Tucson, and Tortalita Mountains and to the west by the Baboquivari and Silver Bell Mountains. The Avra Valley Subbasin represents the western Tucson AMA subbasin and is orientated north-south. Groundwater from the Avra Valley Subbasin flows into the Pinal AMA. The CAP canal runs from northwest to southeast through the subbasin.

Two groundwater units are present – a lower alluvial unit consisting of sands and conglomerates on the valley edges grading to silts and mudstones in the center, and an upper alluvial unit consisting of silts and gravels ranging in thickness from less than 100 feet to more than 1,000 feet. The upper alluvial unit represents the primary water producer in the subbasin. In 1995, depth to groundwater in the Altar Valley ranged from less than 200 feet bls to more than 700 feet bls and in the Avra Valley from less than 200 feet bls to more than 500 feet bls. Between 1994-1995 and 2004-2005, groundwater levels rose 30 to 60 feet in the northern portion of the subbasin near the Town of Marana in response to agricultural retirement, use of CAP water in lieu of groundwater pumping, and groundwater recharge activities. In the northern portion of the subbasin, land subsidence has been measured at 1.1 feet (Anderson 1989). In the southern portion of the subbasin, depth to groundwater has generally been stable or continued to decrease

[3] Totals do not equal 100 percent due to rounding errors.

in elevation as a result of groundwater pumping. Groundwater flow is generally from south to north and the estimated storage is 17 to 24 MAFA to a depth of 1,000 feet.

3.6.2.3.2 Upper Santa Cruz Subbasin

The Proposed Recipients located within the Upper Santa Cruz (USC) Subbasin are the Town of Marana, MDWID, Rosemont Copper Company, and Freeport-McMoRan-Sierrita Incorporated. The USC Subbasin is bounded to the east by the Santa Catalina, Rincon, and Santa Rita Mountains and to the west by the Sierrita, Tucson, and Tortalita Mountains. The USC Subbasin is the eastern Tucson AMA subbasin and groundwater from the subbasin flows into the Avra Valley Subbasin. The CAP canal enters the subbasin between the Tucson and Sierrita Mountains and terminates near Green Valley.

Four groundwater units are present – the lowest unit, the Pantano Formation, consists of sandstones, conglomerates, and mudstones; the lower middle unit, the Tinaja Beds, consists of sandstones, conglomerates, siltstones, and mudstones up to 5,000 feet thick; the upper middle unit, the Fort Lowell Formation, consists of unconsolidated to moderately consolidated sands and silts 300 to 400 feet thick; and the upper alluvial unit consists of unconsolidated sands and gravels less than 100 feet thick. The USC Subbasin is relatively deep compared with other subbasins with the depth to bedrock in the center of the subbasin exceeding 11,000 feet bls.

Groundwater flow within the subbasin is generally from south to northwest, but extensive pumping in the Tucson Central Wellfield area for municipal water use and the Green Valley/Sahuarita area associated with mining activities have created deflections in the groundwater flow direction and localized cones of depression. Between 1940 and 1995, groundwater levels declined up to 200 feet in the Tucson area and 150 feet in the Green Valley/Sahuarita area. In 1995, depth to groundwater ranged from less than 100 feet bls to more than 600 feet bls. Between 1994-1995 and 2004-2005, groundwater levels have generally declined by more than 15 feet. Land subsidence in the Tucson Central Wellfield area from the early/mid-1990s to 2011 was measured up to 0.9 feet (ADWR 2015).

Groundwater storage is estimated to be 32.9 MAFA to a depth of 1,000 feet (Mason and Hipke 2013). The Fort Lowell Formation supplied most of the water used in the Tucson basin; however, portions of this formation are partially or completely dewatered and the Tinaja Beds are now the principal water-bearing unit used.

3.6.2.4 CAP Water

Under the Proposed Action, CAP water would be allocated to the Proposed Recipients for either direct use or recharge to offset groundwater reliance. CAP water is water from the Colorado River that has been transported through the CAP system. CAWCD monitors CAP water quality on a monthly and quarterly basis along the CAP aqueduct by regularly scheduled collection of grab samples and real-time water quality data from installed sensors. In general, CAP water is slightly basic calcium-sulfate-dominant water with total dissolved solids typically measured at concentrations greater than the federal secondary maximum contaminant level (SMCL) of 500 milligrams per liter (mg/L) and sulfate concentrations generally just below the SMCL of 250 mg/L. No exceedances of federal MCLs were reported by CAP in the 2014, 2013, 2012, and 2011 water quality reports (CAP 2015, 2014a, 2013, 2012).

NIA Priority CAP water is the lowest priority of long-term project water within the CAP system. During times of shortages, excess CAP water would be the first to be cut back, followed by NIA Priority CAP water. The current projections for available excess water over the next four years, after satisfaction of CAP's contractual commitment to the Agricultural Settlement Pool, are as follows (CAP 2014b):

- 2016: 75,000 AFA
- 2017: 157,000 AFA
- 2018: 139,000 AFA
- 2019: 121,000 AFA

However, 116,966 AFA NIA Priority CAP water is yet to be allocated, not including the 46,629 AFA of NIA Priority CAP water under discussion in this EA. CAP also delivers 68,400 AFA of On-River Priority 3 contract water. Excess CAP water represents the unused portion of Arizona's annual Colorado River entitlement and it would decrease over time as existing entitlement holders more fully use their allocation to meet demand. Since 2009, use of CAP water by long-term entitlement holders has increased, which has reduced the amount of excess CAP water available each year. As a result, no excess water has been available for distribution to M&I excess customers since 2010 (CAP 2014b). The available excess water projections noted above would be available to AWBA and CAGRD but would likely not be enough to allow distribution to M&I customers. Except for Freeport-McMoRan-Sierrita Inc., all Proposed Recipients have previously purchased CAP water either for direct use or recharge and either under a M&I subcontract or excess water subcontract. Freeport-McMoRan-Sierrita Inc. has relied solely on groundwater for its operational needs (Sierrita 2013).

3.6.3 Environmental Consequences

This section describes the anticipated environmental consequences resulting from the No Action and Proposed Action alternatives. As described in Section 2.0–Description of Alternatives, the actions being analyzed are the acceptance or rejection of ADWR's Proposed Reallocation.

3.6.3.1 No Action Alternative

Under the No Action alternative, the Secretary would reject the allocation recommendation (i.e., the Proposed Action). In accordance with the AWSA, ADWR would then be required to revise and provide to Reclamation another NIA Priority CAP water reallocation recommendation that potentially could require a new reallocation determination process and NEPA analysis for the new recommendation. It is not possible to assume what the new recommendation would be since the basis for the Secretary's potential rejection is not known. Therefore, the No Action alternative for this NEPA analysis reflects an indeterminate delay in the allocation process and, until a future reallocation is approved by the Secretary, no reallocation would occur.

Based on the reason(s) for potential rejection, some or all of the currently Proposed Recipients may not be recommended as part of the new recommendation. Because the current list of Proposed Recipients have forecasted water demand that is greater than their sustainable supply, the No Action alternative of rejecting ADWR's recommendation would have an adverse impact because their water demand would result in continued pumping of groundwater, which is a nonrenewable supply.

Under the No Action alternative, Sierrita Mine would continue to pump groundwater from the Tucson AMA to meet its operational needs of 23,098 AFA and no CAP water would be recharged in the near term to offset its consumption. The remaining Proposed Recipients would likely seek to obtain alternative water supplies, if available, to meet their demand-supply imbalance or rely on accrued groundwater credits or continued groundwater pumping.

3.6.3.2 Proposed Action

Under the Proposed Action, ADWR's reallocation recommendation for NIA Priority CAP water would be accepted by the Secretary and each Proposed Recipient would enter into a subcontract with the CAWCD and begin receiving their CAP water allocation based on established priority standards. Most Proposed Recipients would use existing infrastructure to receive their allocation. For Proposed Recipients constructing future infrastructure to receive their allocation, the CAP subcontract would indicate that CAP water would not be delivered to the subcontractor unless and until the subcontractor has obtained final environmental clearance from Reclamation for the system or systems through which the CAP water is to be conveyed.

Environmental consequences related to the Proposed Action are discussed relative to the Proposed Recipients' planned use of the CAP water, which is either direct use or storage of the water underground, or in some cases both.

3.6.3.2.1 Direct Use of CAP Allocation

The following Proposed Recipients intend to directly use their CAP allocation: Carefree Water Company, Town of Cave Creek, Apache Junction WUCFD, Town of Gilbert, Town of Queen Creek, Viewpoint RV and Golf Resort, New Harquahala Generating Company, and Salt River Project. Each of these recipients have received and used CAP water previously and, based on their proposed direct use of their allocation, no adverse impacts are anticipated because there would be no change from the current uses. All of these Proposed Recipients have been recommended to receive their allocation because their projected water demand is in excess of their projected available water supplies, as verified by ADWR. The action is beneficial and their use of NIA Priority CAP water would help reduce groundwater overdraft in the Phoenix and Tucson AMAs in proportion to the amount they would receive annually.

For municipalities that would directly use their allocation (Carefree Water Company, Town of Cave Creek, Apache Junction WUCFD, Town of Gilbert, and Town of Queen Creek), their customers may notice a change in the taste of their tap water due to the variations in the dissolved major cations and anions between the water they currently receive versus CAP water. This is not anticipated to be a major adverse impact because each municipality would be required to treat their customers' water as necessary to meet federal water quality standards and because taste is subjective.

3.6.3.2.2 Recharge of CAP Allocation

The following Proposed Recipients intend to recharge their CAP allocation: MDWID, EPCOR-Sun City West, Town of Marana, Salt River Project, Town of Queen Creek, City of El Mirage, Town of Buckeye, Johnson Utilities, CAGRD, Rosemont Copper Company, Resolution Copper Mining, and Freeport-McMoRan-Sierrita Inc. Except for CAGRD, the purpose for recharging the Proposed Recipients' CAP allocation is to offset their groundwater use. In the case of

CAGRD, it is to meet replenishment obligations incurred as a result of excess groundwater use by CAGRD members. Except for Freeport-McMoRan-Sierrita Inc., existing infrastructure would be used to convey the water to existing USFs. Based on the use of CAP water to offset groundwater use and the use of existing infrastructure to convey the water, no adverse impacts are anticipated. Freeport-McMoRan-Sierrita Inc. has not previously acquired CAP water and its plan is to recharge its CAP allocation at the permitted FICO GSF, which is currently in the process of constructing a pipeline from the CAP terminus to the GSF. If the pipeline to the FICO GSF is not constructed by the time the NIA Priority CAP water is made available, Freeport-McMoRan-Sierrita Inc. would recharge its allocation at an existing recharge facility for LTSC. Freeport-McMoRan-Sierrita Inc.'s use of its allocation is not dependent on completion of the pipeline. Therefore, the actions are not connected and Freeport-McMoRan-Sierrita Inc.'s receipt and use of its proposed allocation is not anticipated to result in an adverse impact from pipeline construction or continued mining.

The Town of Buckeye would use existing infrastructure and USFs to initially store their allocation, or they may potentially construct and operate a new USF in the future to store their allocation.

This reallocation would slightly benefit other current water users in the same AMA because the service area substitution of CAP water for groundwater will reduce groundwater overdraft and help to address individual supply and demand imbalances. Except for the proposed mines, which have not currently constructed recovery wells, Proposed Recipients would use existing wells to recover their groundwater. At the subbasin scale, some of the Proposed Recipients would recharge some or all of their CAP water in a different subbasin than they would recover their water (Table 6). Because there is no requirement that the entity recharge and recover its allocation in the same subbasin, this is not considered a significant adverse impact on other water users located in the subbasin in which a net reduction in storage may occur. The Proposed Recipients would be recharging and recovering their allocation in their respective AMAs so the overall effect would result in further progress in reaching AMA water management goals.

3.6.4 Cumulative Effects

3.6.4.1 Water Use

Water uses in the Tucson and Phoenix AMAs have increased over time and are expected to continue to increase by about 6 percent and 19 percent by 2040, respectively, while water demand in the Pinal AMA is expected to decrease by about 14 percent during the same period (ADWR 2016; Pinal Comprehensive Plan 2016). By 2040, the population in the AMAs is expected to increase by 57 percent in the Phoenix AMA, 171 percent in the Pinal AMA, and 38 percent in the Tucson AMA. These uses would likely result in a continued water supply/demand imbalance for the AMAs. With increased water use, water users of lower priority CAP water, such as the NIA Priority CAP water, would likely experience periods of reduced availability. With decreased availability of CAP water, Proposed Recipients relying on NIA Priority CAP water to meet demand would likely use groundwater to supplement their water supply if other water sources are not or cannot be obtained. Similar to the changes resulting from climate change, the increased water use would require increased implementation of water conservation measures and increased use of water recycling/reuse programs. With these cumulative impacts, the need and search for new renewable water supplies for the AMAs would likely need to

continue if conservation measures and use of water recycling/reuse programs are not enough to achieve safe yield conditions in the AMAs.

3.6.4.2 Climate Change

As stated in Section 3.2.1.3, climate models predict that the arid regions of the southwestern United States will become increasingly dry and that a transition to a more arid climate is already underway. Changing climate conditions in the Southwest deserts, including increased temperatures, reduced precipitation, lower snowpack, and increased evapotranspiration, are likely to result in significant changes to the hydrologic cycle and water resources. In the three AMAs, the likely result would be reduced groundwater recharge that would limit groundwater availability for water supply, though the effects may occur over centuries (Hughson et al. 2011). Reduced recharge would result in increased difficulty in achieving and maintaining the AMA goals of the safe yield of groundwater.

Colorado River flows, which supply water to the CAP, are likely to decrease 5 to 20 percent by 2050 due to climate change (Reclamation 2012). With Arizona's reliance on CAP water to supply a significant quantity of renewable water supplies to the state and Arizona's junior water right for Colorado River water, the projected climate changes have the potential to decrease the state's Colorado River water supply. Arizona has been preparing for the potential effects of future shortages on the Colorado River by storing excess CAP water when available. This action is also helpful in combatting potential impacts associated with climate change. Projected future conditions as a result of climate change would require increased implementation of water conservation measures and increased use of water recycling/reuse programs.

During periods of shortages on the Colorado River, the Proposed Recipients may not receive all or part of the NIA Priority CAP water due to the low priority of the water within the CAWCD pool structure. This would result in each Proposed Recipient potentially relying on their available groundwater water supplies and increasing their reliance on any groundwater credits accrued if they cannot acquire alternate water supplies to fulfill their needs.

3.7 Socioeconomic Resources

3.7.1 Analysis Area

The analysis of social and economic conditions addresses the relationships between the Proposed Action and the communities it may affect. There would be no immediate (i.e., direct) impacts on socioeconomic resources from the Secretary's approval of ADWR's reallocation recommendation. Socioeconomic conditions that may be indirectly affected by the Proposed Action include population, economic characteristics, and residential and commercial development.

The analysis area for impacts on socioeconomic resources includes the three AMAs in which the Proposed Recipients are located: Phoenix, Pinal, and Tucson. Where appropriate, the socioeconomic analysis includes the four counties in which the AMAs are located: Maricopa, Pima, Pinal, and Yavapai. The Phoenix AMA overlaps only a small portion of Yavapai County's southern portion. Yavapai County, therefore, is not discussed in depth as none of the Proposed Recipients are located in that county. For more specific information about socioeconomic conditions, the communities in which the Proposed Recipients are located and,

when available, the Proposed Recipients themselves, are analyzed. When appropriate, the United States and Arizona are included in the analysis to provide context and comparison for the AMAs, counties, municipalities, and Proposed Recipients.

Tucson is included in the analysis where the Proposed Recipients' communities are analyzed because the MDWID intends to distribute the proposed reallocated NIA Priority CAP water to the Diablo Village development, which is in Tucson. Johnson Utilities serves portions of Maricopa and Pinal Counties and has service areas in both the Phoenix and Pinal AMAs. The industrial Proposed Recipients are all located in the Phoenix or Tucson AMA. Viewpoint RV Park and Golf Resort, and Resolution Copper are located in the Phoenix AMA. Rosemont Copper Company and Freeport-McMoRan-Sierrita Inc. are located in the Tucson AMA.

3.7.2 Affected Environment

3.7.2.1 Socioeconomics

3.7.2.1.1 Population and Demographic Characteristics

Historic, current, and projected population for the socioeconomic environment is analyzed at the AMA and Proposed Recipient level. Demographics, including race and ethnicity, are analyzed by the county and municipality in which the Proposed Recipients are located.

The Phoenix, Pinal, and Tucson AMAs have a combined population of 5.31 million, which is about 80 percent of Arizona's total population. The population of the combined service areas for the municipal Proposed Recipients is about 501,000, which represents about 8 percent of Arizona's population, and about 9.5 percent of the AMAs' population (ADWR 2016). Arizona's population is growing rapidly. Between 2000 and 2010, the state experienced a population increase of 25 percent, and between 2010 and 2014, a population increase of 4 percent (U.S. Census Bureau (USCB) 2014). Likewise, the AMAs' and municipal Proposed Recipients' service areas have experienced population growth comparable to, and in some cases far exceeding Arizona's growth. Pinal AMA's growth rate is expected to far exceed Arizona's growth rate over the next 25 years. Johnson Utilities' Pinal service area and the City of Buckeye are expected to experience an increase in population greater than 300 percent by 2040 (ADWR 2016). Table 7 provides the historic, current, and projected populations and percent population change for Arizona, the AMAs, and the service areas for the municipal Proposed Recipients of the NIA Priority CAP water under the Proposed Action.

Table 7. Historic and Projected Populations – AMAs and Proposed Recipients.

Proposed Recipient	2000	2010	% Change 2000-2010	2016	% Change 2010-2016	2040 (Projected)	% Change 2016-2040
Phoenix AMA	3,118,000	3,959,000	27	4,390,000	11	6,438,000	47
Pinal AMA	99,143	191,518	93	228,000	19	543,000	138
Tucson AMA	835,504	980,988	17	1,044,000	6	1,403,000	34
Apache Junction Water Facilities District	13,598	13,554	0	15,032	11	20,893	39
Carefree Water Company	2,179	2,447	12	2,619	7	3,210	23
Cave Creek Water Company	3,553	5,015	41	5,568	11	8,483	52
City of Buckeye	5,060	27,072	435	40,452	49	195,474	383
City of El Mirage	13,707	35,179	157	36,890	5	54,341	47
EPCOR - Sun City West	26,420	24,212	-8	24,526	1	25,863	5
Johnson Utilities - Phoenix	1,145	55,615	4757	65,747	18	113,186	72
Johnson Utilities - Pinal	NA	2,595	NA	6,553	153	26,453	304
MDWID	445	2,415	443	2,508	4	5,165	106
Town of Gilbert	109,576	210,913	92	244,616	16	320,635	31
Town of Marana	3,423	13,360	290	18,591	39	39,679	113
Town of Queen Creek	10,838	63,718	488	77,009	21	122,806	59

Source: ADWR 2016.

The populations that would be served by the municipal Proposed Recipients are diverse. Table 8 provides the proportions of populations that are non-White and Hispanic or Latino for the state, counties, and municipalities in which the Proposed Recipients are located. While Maricopa, Pima, and Pinal Counties have similar Hispanic population proportions as Arizona, the municipalities in which the Proposed Recipients are located vary in their racial and ethnic characteristics. The cities of El Mirage, Buckeye, and Tucson have greater proportions of Hispanic or Latino ethnicity residents than Arizona and the counties. Carefree, Cave Creek, and EPCOR - Sun City West have substantially lower Hispanic or Latino ethnicity population proportions than the state and counties.

None of the Proposed Recipient communities have a substantially greater proportion of the population that identifies as a non-White race overall. Arizona and Pinal County both have a higher proportion of the population that is American Indian or Alaska Native than the United States; however, the Proposed Recipient communities all have a lower proportion of their populations than the United States, Arizona, and Pinal County. Arizona, the counties, and all of the Proposed Recipient communities have a lower proportion of their populations that identify their race as Black or African American, or as Native Hawaiian or other Pacific Islander races, than the country as a whole. Gilbert has a slightly higher proportion of its population that are Asian than the United States; while all of the other Proposed Recipient communities have a comparable or lower proportion of Asian residents than the United States Buckeye, El Mirage, and Tucson, all have a higher proportion of residents that identify as an other non-specified race than Arizona and the United States.

Table 8. Non-White and Hispanic Populations for the United States, Arizona, Counties, and Communities Receiving Reallocated Water.

Community	Black or African American (%)	American Indian and Alaska Native (%)	Asian (%)	Native Hawaiian and Other Pacific Islander (%)	Some Other Race (%)	Non-White (%)	Hispanic or Latino (%)
United States	13.7	1.7	5.9	0.4	5.2	26.9	16.9
Arizona	5.1	5.4	3.8	0.4	7.1	21.8	30.1
Maricopa County	6.2	2.7	4.6	0.4	6.7	20.6	29.9
Pima County	4.6	4.2	3.8	0.4	9.2	22.2	35.4
Pinal County	5.4	6.4	2.4	0.7	6.4	21.3	29.0
Yavapai County	1.0	3.0	1.4	0.1	3.0	8.5	13.9
Apache Junction	1.8	3.4	1.7	0.1	3.5	10.5	16.8
Buckeye	8.7	2.4	1.9	0.3	9.2	22.5	37.6
Carefree	0.0	0.0	0.0	0.0	0.1	0.1	3.2
Cave Creek	0.8	2.6	0.5	0.0	2.1	6.0	3.8
El Mirage	6.8	2.6	2.5	0.3	10.6	22.8	47.0
Gilbert	4.5	1.7	7.5	0.4	2.6	16.7	15.6
Marana	4.4	1.4	6.0	0.4	5.4	17.6	20.8
Queen Creek	2.9	1.9	1.8	0.1	6.5	13.2	17.7
Sun City West	0.3	0.3	1.6	0.0	0.4	2.6	0.6
Tucson	6.3	3.8	3.9	0.4	11.6	26.0	42.2

Source: USCB 2014.

3.7.2.1.2 Economic Characteristics

The economic characteristics analysis area includes Maricopa, Pima, Pinal, and Yavapai Counties and the municipalities in which the municipal Proposed Recipients are located. Table 9 provides the economic characteristics of Arizona, the counties, and the municipalities in which the Proposed Recipients are located. Economic characteristics analyzed include labor force and employment characteristics, unemployment, and income including poverty rates.

Table 9. Economic Attributes for the United States, Arizona, Counties, and Communities Receiving Reallocated Water, 2009–2010.

Community	Civilian Labor Force (%)	Unemploy-ment Rate (%)	Median Household Income (dollars)	Per Capita Income (dollars)	Families Below Poverty Level (%)	Individuals Below Poverty Level (%)
United States	63.5	5.8	53,482	28,555	11.5	15.6
Arizona	59.7	5.9	49,928	25,537	13.3	18.2
Maricopa County	63.6	5.6	53,689	27,477	12.7	17.1
Pima County	58.8	6.3	46,233	25,524	13.2	19.0
Pinal County	50.9	5.9	50,248	20,983	11.5	16.8
Yavapai County	50.7	5.5	44,000	25,068	11.2	16.1
Apache Junction	45.5	7.4	36,771	15,129	17.0	23.9
Buckeye	53.3	4.8	58,703	20,149	12.8	16.2
Carefree	39.7	1.9	93,130	62,325	12.2	10.4
Cave Creek	58.4	3.7	78,972	46,517	3.8	6.2
El Mirage	63.6	5.8	47,564	17,849	17.2	19.6
Gilbert	73.4	4.6	81,485	31,546	5.3	6.8
Marana	64.5	4.7	74,817	33,649	3.3	4.9
Queen Creek	69.5	2.9	83,809	77,594	7.2	8.6
Sun City West	10.9	0.9	45,157	36,304	2.1	4.6
Tucson	60.80	7.3	37,149	20,437	18.6	25.1

Source: UCSB 2014.

The communities in which the Proposed Recipients are located vary in their economic characteristics. The median household income (MHI) in Arizona is estimated at about $50,000, which is slightly lower than the MHI for the United States. Maricopa County has a nearly identical MHI to the national MHI, while Pinal County has a MHI similar to Arizona, and Pima and Yavapai Counties have a slightly lower MHI than Arizona. Carefree, Cave Creek, Gilbert, Marana, and Queen Creek have substantially higher MHIs than the state and counties while Apache Junction and Tucson have substantially lower MHIs than the state and counties. El Mirage and Sun City West have lower, but comparable MHIs, to the state and counties; while Buckeye has a higher, but comparable, MHI to the state and counties (USCB 2014).

Arizona has slightly higher rates of families and individuals living below the poverty rate than the United States. Apache Junction, El Mirage, and Tucson have higher poverty rates than the United States while Cave Creek, Gilbert, Marana, Queen Creek, and Sun City West have substantially lower poverty rates than Arizona and the counties. Unemployment rates among the communities are comparable to Arizona, the counties, and the United States, with Tucson having slightly higher unemployment rates and Carefree, Cave Creek, Queen Creek, and Sun City West having lower unemployment rates (USCB 2014).

The workforce characteristics differ across the communities as Sun City West and Carefree have a substantially lower proportion of their civilian population in the workforce and a lower unemployment rate than Arizona and the other communities. This can be attributed to the high proportion of retired individuals living in these communities (USCB 2014).

The major occupations across all of the communities are professional services including management, business, science, and arts occupations (between 25 and 68 percent) and sales and office occupations (between 10 and 36 percent). More than 50 percent of the workforce across the communities is employed in professional services and sales and office occupations. Sixty-

one percent of Arizona's workforce is employed in the professional and services and sales occupations (USCB 2014).

Major employment sectors across the communities are social services, including education, health care, and social assistance (18 to 29 percent); professional services, including scientific, management, administrative, and waste management services (9 to 27 percent); and retail trade (5 to 15 percent). More than 40 percent of the workforce across the communities, and 46 percent of Arizona's workforce, is employed in these three sectors (USCB 2014).

3.7.2.1.3 Residential Development

Along with population change, the AMAs and Proposed Recipients are experiencing, and are expected to continue to experience, growth in residential development. Analysis of residential and commercial development includes the three dominant counties in which the AMAs are located: Maricopa, Pima, and Pinal. The median home value in Arizona in 2014 was $176,700 (USCB 2014).

Residential development in Maricopa County is expected to increase by 1.0 to 1.6 percent annually between 2020 and 2040. The overall number of residential units in Maricopa County is projected to increase 67.7 percent between 2010 and 2040 (Maricopa Association of Governments (MAG) 2013). The median home value in Maricopa County in 2014 was $206,300, slightly higher than the median home value in Arizona (USCB 2014).

In 2014, the estimated number of housing units in Pima County was about 450,000 units. Pima County does not have projections for residential development, but it can be inferred that, because the population of the Tucson AMA (which is mostly in Pima County) is expected to increase by 26 percent between 2016 and 2040, that residential development will also increase (USCB 2014). The MDWID intends to use the proposed reallocated NIA Priority CAP water for the Diablo Village development, which is currently built out to only 6 percent, but is expected to grow. The median home value in Pima County in 2014 was $158,400, lower than Maricopa County's and Arizona's median home values (USCB 2014).

Pinal County has been experiencing growth in residential development similar to Maricopa County. Between 2000 and 2015, Pinal County experienced a 40-percent increase in housing units. Between 2020 and 2040, the number of housing units in the county is projected to increase by 35.4 percent (Applied Economics 2009). Major drivers of residential development in Pinal County are its proximity to Phoenix and housing affordability (Pinal County Comprehensive Plan Update 2014). The median home value in Pinal County in 2014 was $145,900, lower than Maricopa and Pima Counties' and Arizona's median home values (USCB 2014).

3.7.2.2 Environmental Justice

Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" was issued by the President of the United States on February 11, 1994. This order established requirements to address environmental justice concerns within the context of agency operations. As part of the NEPA process, agencies are required to identify and address disproportionately high and adverse human health or environmental effects on minority or low-income communities. Federal agencies are directed to

ensure that federal programs or activities do not result, either directly or indirectly, in discrimination on the basis of race, color, or national origin.

The CEQ has provided guidance on addressing environmental justice under NEPA (CEQ 1997b). Under the guidance, minority populations are identified where the percentage of minorities in the affected area exceeds 50 percent, or where the minority population percentage of the affected area is meaningfully greater than the minority population percentage of a much broader area. Likewise, low-income populations are identified where the percentage of the population within the affected area that falls below the poverty line is meaningfully greater than the proportion of the broader area. For this analysis, the minority race and ethnic populations, and the proportion of residents that fall below the poverty line within the individual Proposed Recipient communities, are compared with Arizona and the United States to determine if they are considered EO 12898 populations.

3.7.2.2.1 Race and Ethnicity

Within the analysis area, Buckeye, El Mirage, and Tucson have Hispanic or Latino population proportions that are above Arizona's and the counties' Hispanic or Latino population proportions. The communities, however, would not constitute EO 12898 populations as their Hispanic or Latino and non-White populations do not exceed 50 percent of the total population and are not meaningfully greater than Arizona's non-White and Hispanic or Latino populations. Non-White minority populations in each of the Proposed Recipient communities are below or comparable to Arizona's and the counties' non-White minority populations. No individual race represents a disproportionately higher part of the populations, nor does any minority race exceed 50 percent of the population within any of the Proposed Recipient communities (see Section 3.7.2.1.1 and Table 8).

3.7.2.2.2 Low-Income Populations

Low-income populations for this analysis are defined as those individuals and families that have fallen below the poverty line within a year of the most recent available census data, which was published in 2014. The poverty threshold in 2014 for a family of four with two children under 18 years of age was about $28,000 per year in household income. The poverty threshold for an individual under 65 years of age in 2014 was about $12,000 per year in individual income (USCB 2014). The household poverty rates are between $18,000 for a household of three and $49,000 for a household of nine or more.

As discussed in Section 3.7.2.1.2 and outlined in Table 9, Arizona has slightly higher rates of families and individuals living below the poverty rate than the United States. Apache Junction, El Mirage, and Tucson have higher poverty rates than the United States while Cave Creek, Gilbert, Marana, Queen Creek, and Sun City West have substantially lower poverty rates than Arizona and the counties. Apache Junction, El Mirage, and Tucson would not be considered EO 12898 populations because the poverty rates for families and individuals within these communities are not meaningfully higher than state and national rates, nor do they exceed 50 percent of the population (Table 9).

3.7.3 Environmental Consequences

3.7.3.1 No Action Alternative

Under the No Action alternative, the Secretary would reject the Proposed Reallocation recommendation (i.e., the Proposed Action). In accordance with the AWSA, ADWR would then be required to revise and provide to Reclamation another NIA Priority CAP water reallocation recommendation that potentially could require a new reallocation determination process and NEPA analysis for the new recommendation. It is not possible to assume what the new recommendation would be since the basis for the Secretary's potential rejection is not known. Therefore, the No Action alternative for this NEPA analysis reflects an indeterminate delay in the allocation process and, until a future reallocation is approved by the Secretary, no reallocation would occur.

Under the No Action alternative, indirect long-term impacts on the socioeconomic environment may include delays or reductions in residential development to meet population growth demands. The municipal Proposed Recipients would likely use available groundwater resources to supply water for residential and commercial development in the short term, which may result in overdraft of groundwater. Overdraft of groundwater may affect water quality, which would affect economic development and the quality of life of residents in the communities. If development continues at its current and projected rates, overdraft of groundwater may lead to reduction in water availability and result in housing shortages, loss of jobs, and reductions in tax revenues. Industrial Proposed Recipients that have groundwater rights would continue to operate, using groundwater sources. There would be no direct impact on income and employment, but an indirect adverse impact may result due to a lack of reliable renewable water sources that would accommodate the communities' economic sectors.

For Proposed Recipients, the potential rejection of ADWR's reallocation recommendation also has the potential to slightly impact the resulting cost of future recipient's NIA Priority CAP water since the cost of any additional NEPA analysis(es) would be incurred by the recipients as part of the purchase price of the CAP water in order to recapture back capital charges.

Within the Pinal AMA, Diablo Village, which would be the recipient of water allocated to the MDWID under the recommendation, would rely on the CAGRD for groundwater replenishment services under the No Action alternative. The CAGRD would also not receive the proposed allocated water under the No Action alternative, thus having less water for replenishment services. Currently and under the No Action alternative, the Diablo Village development would use groundwater supplied from two wells and an emergency backup interconnect with Tucson Water. The groundwater level below Diablo Village is currently very deep, and the rejection of the recommendation would result in greater groundwater depletions – up to 245 feet over the next 100 years.

3.7.3.2 Proposed Action

Under the Proposed Action, ADWR's reallocation recommendation for NIA Priority CAP water would be accepted by the Secretary and each Proposed Recipient would enter into a subcontract with the CAWCD and begin receiving their CAP water allocation based on established priority standards.

3.7.3.2.1 Socioeconomics

The proposed NIA Priority CAP water reallocations would cost the Proposed Recipients approximately $161 per AFA of water for the actual cost of delivering the water. An additional $4 per AFA for would be charged for environmental compliance during the first year. In addition, back capital charges and debt repayment would total $1,300 to $1,500 per AFA, which would be paid in five annual payments.

Payments for allocated water would result in an annual delivery cost between $18,032 and $2.93 million for municipal Proposed Recipients, and between $64,400 and $360,318 for industrial Proposed Recipients. Back capital charges and debt repayment would cost municipal Proposed Recipients between $145,600 and $27.28 million, and between $520,000 and $3.36 million for industrial Proposed Recipients, paid over five years. Environmental compliance would cost the Proposed Recipients between $448 and $72,740, and between $1,760 and $8,952 for the industrial Proposed Recipients, paid once during the first year of water delivery. It is likely these costs would be passed along to the users within the municipal Proposed Recipients' service areas, resulting in an increase in water costs for individual users. The increase for industrial Proposed Recipients would likely be absorbed as operating expenses.

Population growth and economic development are expected to continue within the AMAs, the counties, and the communities. The Proposed Action, when added to the beneficial effects of economic growth, would accommodate the overall socioeconomic development within the analysis area. Socioeconomic impacts within the analysis area are also expected to range from minor beneficial to minor adverse impacts. Minor beneficial impacts include a relatively secure water supply so that communities and industrial recipients could plan economic development and growth, while reducing groundwater overdraft. Adverse indirect impacts would result from potential future shortages of CAP water. During periods of shortages on the Colorado River, the Proposed Recipients may not receive all or part of the NIA Priority CAP water due to the low priority of the water within the CAWCD pool structure. While the Proposed Action would not have a direct impact on income and employment, the availability of a stable and affordable water supply would accommodate the economic sectors that form the basis of the communities' economies.

Under the Proposed Action, the municipal Proposed Recipients that are intending to use the reallocated NIA Priority CAP water directly would have additional water supplies to support population growth and economic development, which are expected to occur independently of the Proposed Action, while reducing groundwater overdraft. The municipal Proposed Recipients that are intending to use the reallocated NIA Priority CAP water for storage and recovery would be able to balance their water needs and demands and reduce groundwater overdraft.

3.7.3.2.2 Environmental Justice

No communities within the analysis area would be considered to have EO 12898 populations. The reallocation of NIA Priority CAP water to the Proposed Recipients may result in economic growth in the AMAs, counties, and communities, including those with a higher ratio of Hispanic or Latino residents and families and individuals that fall below the poverty line.

3.7.4 Cumulative Effects

3.7.4.1 CAP Water Projects, Water Demand, Population Growth, and Land Use

As discussed in Section 3.2.1.2, past and future increasing populations within the AMAs and communities have resulted in, and are expected to continue to, result in increased water demand as residential and economic development continues. During periods of shortages on the Colorado River, the Proposed Recipients may not receive all or part of the NIA Priority CAP water due to the low priority of the water within the CAWCD pool structure. In these events, the Proposed Recipients would likely use groundwater to supplement their water supply if other water sources are not or cannot be obtained. The increased water demand would require increased implementation of water conservation measures and increased use of water recycling/reuse programs, which could lead to slower rates of economic growth and increased water costs for the Proposed Recipients. With these cumulative impacts, the need and search for new renewable water supplies for the AMAs under projects such as the Proposed Action and other CAP water projects would likely need to continue if conservation measures and use of water recycling/reuse programs are not enough to achieve safe yield conditions in the AMAs.

3.7.4.2 Climate Change

As discussed in Section 3.2.1.3, climate models predict the arid regions of the southwestern United States will become increasingly dry and that a transition to a more arid climate is already underway. Population growth in the arid Southwest, for which water is a necessary requirement, would contribute to stresses on the environment and the water resources in the region. Arizona has been preparing for the potential effects of future shortages on the Colorado River by storing excess CAP water when available. The reallocation of NIA Priority CAP water to the Proposed Recipients who intend to store the water would help mitigate future water shortages from climate change, which would be a beneficial impact.

During periods of shortages on the Colorado River, the Proposed Recipients may not receive all or part of the NIA Priority CAP water due to the low priority of the water within the CAWCD pool structure. This could result in slower and potentially lower levels of economic development than is projected within the communities. This could also lead to increased costs for water as it becomes more scarce. Projected future conditions as a result of climate change would require increased implementation of water conservation measures and increased use of water recycling/reuse programs, which would impact the rate and extent of economic growth and development.

3.8 Resources Considered But Not Affected

Due to the nature of the Proposed Action, the following resource areas are not anticipated to be affected to any measurable degree and, therefore, are not included in the analysis: air quality, geology and soils, recreation resources, and visual resources.

4.0 Environmental Laws and Directives Considered

This section presents a summary of selected federal laws, regulations, and EOs considered in preparation of this EA.

4.1 National Environmental Policy Act of 1969, as amended (P.L. 91-190)

This law requires federal agencies to evaluate the potential environmental consequences of major federal actions. NEPA also requires full public disclosure about the Proposed Action, accompanying alternatives, impacts, and mitigation. Public and agency scoping was initiated on November 19, 2015. Additional details on the scoping process are available in Section 1.4. This EA was prepared in accordance with NEPA requirements.

4.2 Fish and Wildlife Coordination Act (FWCA) (P.L. 85-624)

The FWCA provides a procedural framework for the consideration of fish and wildlife conservation measures in federal water resource development projects. Coordination with the FWS is required on all federal water development projects. The effects of the CAP were originally addressed in an amended FWCA report prepared by the FWS in 1989. A scoping notice for this EA was sent to the Arizona Ecological Service office of the FWS and no concerns were expressed by that agency with respect to the FWCA. No further coordination pursuant to the FWCA is anticipated.

4.3 Endangered Species Act of 1973 (ESA) (P.L. 93-205)

The ESA provides protection for plants and animals that are currently in danger of extinction (endangered) and those that may become extinct in the foreseeable future (threatened). Section 7 of this law requires federal agencies to ensure that all federally associated activities do not have adverse impacts on the continued existence of threatened or endangered species or designated areas (critical habitat) that are important in conserving those species. Because construction of new water diversions or development of land for residential, commercial, industrial, or agricultural purposes would be subject to applicable federal and tribal laws and regulations, including the ESA, these future developments would be analyzed under a separate NEPA analysis to address effects on listed species as part of subcontract agreements with Reclamation.

4.4 Wild and Scenic Rivers Act of 1968 (P.L. 90-542)

This law designated the initial components of the National Wild and Scenic River System and established procedures for including other rivers or reaches of rivers that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, and preserving them in a free-flowing condition. The act applies to waters designated, or eligible for designation, as wild and scenic. Because there would be no construction or other disturbance associated with the Proposed Action, no wild and scenic rivers within the analysis area would be affected by the Proposed Action. While no impacts on designated wild and scenic rivers, or waters eligible for designation, are anticipated from future actions required to take and use the reallocated water, any proposed future actions would be subject to a subsequent environmental compliance process pursuant to the Water Service Subcontract.

4.5 Wilderness Act of 1964 (P.L. 88-577, as amended)

This law established the National Wilderness Preservation System to preserve certain federal lands (Wilderness Areas) for the public purposes of recreation, scenic, scientific, educational, conservation, and historical use by current and future generations of the American people. No wilderness areas within the three AMAs would be affected by the Proposed Action as there would be no associated ground disturbance within the AMA wilderness areas associated with the receipt of NIA Priority CAP water for any of the Proposed Recipients. Any future ground disturbances for water infrastructure would be subject to a separate environmental analysis under the terms of the Proposed Recipient contracts, and in compliance with the Wilderness Act.

4.6 Clean Water Act (CWA) (P.L. 92-500, as amended)

This law establishes the basic structure for regulating discharges of pollutants into the nation's rivers, lakes, estuaries, and coastal waters. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged and/or fill material into waters of the United States including wetlands. If waters of the United States might be affected by construction of potential future infrastructure by the Proposed Recipient(s), a delineation of waters of the United States and application(s) for 404 permit(s) would be submitted to the Corps on a case-by-case basis.

On December 5, 2002, EPA Region 9 approved the state of Arizona's Pollutant Discharge Elimination System (AZPDES) Program pursuant to Section 402 of the CWA. An AZPDES permit would be obtained from the state by the Proposed Recipient(s) prior to construction. If required in the future, a CWA Section 401 certification would be obtained from the state by the Proposed Recipient(s).

4.7 National Historic Preservation Act (NHPA) (P.L. 89-665, as amended by P.L. 96-515)

The NHPA protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are listed on, or that are eligible for listing on, the National Register must be taken into account in planning and operations. Any property that may qualify for listing on the National Register must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

Section 306108 (formerly Section 106) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. The Advisory Council on Historic Preservation (ACHP) is then afforded a reasonable opportunity to comment. The historic preservation review process is outlined in regulations issued by the ACHP. Revised regulations, known as "Protection of Historic Properties" (36 CFR Part 800), were updated on August 5, 2004.

In addition to considering the effects of their undertakings on historic properties, Section 306102 (formerly Section 110) of the NHPA requires federal agencies to establish a historic preservation program to identify and protect historic properties under their management or control. The plans must include a process for evaluating historic properties for listing on the National Register.

The following Native American tribes have been sent this draft EA for their information:

- Ak Chin Indian Community
- Fort McDowell Yavapai Nation
- Gila River Indian Community
- Hopi Tribe
- Pascua Yaqui Tribe
- Salt River Pima-Maricopa Indian Community
- San Carlos Apache Agency
- San Carlos Apache Tribe
- San Xavier Allottee Association, Inc.
- Tohono O'odham Nation
- Tonto Apache Tribe
- Yavapai-Apache Nation
- Yavapai-Prescott Indian Tribe

No comments were received from these tribes during the scoping period.

4.8 Farmland Protection Policy Act (P.L. 97-98)

This law requires identification of proposed actions that would adversely affect any lands classified as prime and unique farmlands to minimize the unnecessary and irreversible conversion of farmland to nonagricultural uses. The U.S. Department of Agriculture's Natural Resources and Conservation Service administers this law. No ground disturbance would occur under the Proposed Action. Any future land development or other ground disturbances for water infrastructure would be subject to a separate environmental analysis under the terms of the Proposed Recipient contracts, and in compliance with the Farmland Protection Policy Act.

4.9 Executive Order 11988 (Floodplain Management)

This presidential directive encourages federal agencies to avoid, if reasonable alternatives exist, the short- and long-term adverse impacts associated with floodplain development. Federal agencies are required to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains in carrying out agency responsibility. No ground disturbance would occur in floodplains under the Proposed Action. Any future land development or other ground disturbances for water infrastructure would be subject to a separate environmental analysis under the terms of the Proposed Recipient contracts, and in compliance with EO 11988.

4.10 Executive Order 12898 (Environmental Justice)

EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of federal actions on minority populations and low-income populations. As noted in Section 3.7–Socioeconomic Resources, within the analysis area, Buckeye, El Mirage, and Tucson have Hispanic or Latino population proportions that are above Arizona's and the counties' Hispanic or Latino population proportions. The communities, however, would not constitute EO 12898 populations as their

Hispanic or Latino and non-White populations do not exceed 50 percent of the total population and are not meaningfully greater than Arizona's non-White and Hispanic or Latino populations. Non-White minority populations in each of the Proposed Recipient communities are below or comparable to Arizona's and the counties' non-White minority populations. Apache Junction, El Mirage, and Tucson have higher poverty rates than Arizona and the United States, but would not be considered EO 12898 populations because the poverty rates for families and individuals are not meaningfully higher than state and national rates. Thus, the Proposed Action is not an environmental justice consideration.

4.11 Executive Order 11990 (Wetlands)

EO 11990 requires federal agencies, in carrying out their land management responsibilities, to take action that would minimize the destruction, loss, or degradation of wetlands and take action to preserve and enhance the natural and beneficial values of wetlands. No wetlands are anticipated to be affected by the Proposed Action. Any future development or other work in waters of the United States for water infrastructure would be subject to a separate environmental analysis under the terms of the Proposed Recipient contracts, and in compliance with Section 404 of the CWA.

4.12 Department of the Interior, Secretarial Order, Indian Trust Assets (ITAs)

ITAs are legal interests in assets held in trust by the U.S. government for Native American tribes or individual Native Americans. These assets can be real property or intangible rights including lands, minerals, water rights, hunting rights, other natural resources, and money. The trust responsibility requires that all federal agencies take actions reasonably necessary to protect ITAs. The water rights included in the Proposed Reallocation are not ITAs and, therefore, there would be no impact on ITAs from the Proposed Action.

5.0 Agencies and Persons Consulted

5.1 Agencies and Entities Consulted

5.1.1 Federal

Advisory Council on Historic Preservation
Bureau of Land Management
National Park Service
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
U.S. Forest Service
U.S. Geological Survey

5.1.2 State

Arizona Department of Environmental Quality
Arizona Game and Fish Department
Arizona State Historic Preservation Office
Arizona State Lands Department
Arizona State Parks
Arizona Department of Transportation

5.1.3 Counties

Maricopa County
Pima County
Pinal County

5.2 Cooperating Agencies

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Central Arizona Water Conservation District

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Appendix A. Regulatory Framework (AWSA)

Appendix A consists of the Arizona Water Settlements Act – Public Law 108–451 dated December 10, 2004. Because the Act is a certified and protected document, it could not be made Section 508 accessible. Therefore, a link to the Act is provided below.

https://www.gpo.gov/fdsys/pkg/PLAW-108publ451/pdf/PLAW-108publ451.pdf

Appendix B. Proposed Recipient Water Reallocation Applications

Appendix B consists of the Proposed Recipient Water Reallocation Applications. Because the applications are numerous, oftentimes lengthy, and not in a format suitable for optical character recognition, the applications were not made Section 508 accessible. Therefore, a link to the applications is provided below.

http://www.azwater.gov/AzDWR/PublicInformationOfficer/Non-IndianAgriculturalReallocationProcess.htm

Appendix C. ADWR Process for Selecting Proposed Recipients

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SANDRA A. FABRITZ-WHITNEY
Director

ARIZONA DEPARTMENT OF WATER RESOURCES

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Non-Indian Agricultural Priority Central Arizona Project Water Reallocation
Final Process and Evaluation Criteria
February 2013

Introduction and Goals

On December 10, 2004, the Arizona Water Settlements Act, Public Law 108-451 (Settlements Act), was enacted. The Settlements Act ratified the Arizona Water Settlement Agreement (Agreement) between the United States, the Arizona Department of Water Resources (Department), and the Central Arizona Water Conservation District (CAWCD) and provided for the reallocation of 96,295 acre-feet of Non-Indian Agricultural Priority Central Arizona Project Water (NIA Priority CAP water) for municipal and industrial uses in the state of Arizona

Both the Settlements Act and the Agreement required the Secretary of the Interior (Secretary) to reallocate the 96,295 acre-feet of NIA Priority water to the Department "to be held under contract in trust for further allocation."[1] Both the Settlements Act and the Agreement also specified that the Director of the Department shall submit a recommendation for reallocation to the Secretary, and any reallocation shall be based on the Director's recommendation or revised recommendation.[2] The Agreement further provided that the Department develop eligibility criteria and make the NIA Priority water available for reallocation "at periodic intervals, starting in 2010."[3] On August 22, 2006, the Secretary reallocated the 96,295 acre-feet of NIA Priority water to the Department acknowledging that "before the water may be further allocated the Director of ADWR shall submit to the Secretary of the Interior a recommendation for reallocation."[4]

The Department has identified the following goals for this reallocation:

1) Reduce groundwater overdraft,
2) Provide an additional source of water to areas with limited physical availability of groundwater, and

[1] Settlements Act § 104(a)(2)(A); see also Agreement Paragraphs 3.1 and 9.3.1.
[2] Settlements Act § 104(a)(2)(C); see also Agreement Paragraph 9.3.4. The Department has traditionally provided recommendations of allocations of CAP water to the Secretary, consistent with its authority in A.R.S. § 45-107.
[3] Agreement Paragraph 9.3.4.
[4] *Notice of Modification to the Secretary of the Interior's Record of Decision, Publication of a Final Decision of CAP Water Reallocation*, 71 Fed. Reg. 50449, 50451 (Aug. 25, 2006).

3) Meet the near-term demands for existing municipal water providers (not including irrigation districts that serve non-irrigation uses) and industrial users of groundwater or Excess Central Arizona Project (CAP) water that have permanent demands.

The Department has received letters of interest for this reallocation water in volumes that exceed the amount available for reallocation and expects that a greater volume will be requested through the application process. Therefore, requested volumes may not be fully met for all applicants in this process.

This reallocation is for NIA Priority water which has a lower priority than Indian and Municipal and Industrial (M&I) Priority CAP water. This water is expected to have reduced availability, especially during times when Arizona is affected by shortage operations on the Colorado River. The Department's analysis of the average availability of this 96,295 af of NIA Priority water predicts that an average of about 64,000 af will be available over the next 100 years, assuming a moderate development schedule on the mainstem of the Colorado River. This availability is expected to reduce to an average of about 58,000 af after 2030 due to projected increases in use for all Colorado River water users. Within this average availability over the next 100 years, it is anticipated that this NIA water supply will be fully available in some years, partially available in other years, and in some years it will not be available at all. Recipients of this reallocation will need alternate water supplies and the necessary infrastructure to use those alternate water supplies in order to meet future firm demands in years of reduced or no availability of this NIA Priority water.

Structure of the Reallocation Process

The reallocation will be structured so that volumes of water will be available at periodic intervals as follows:

1. The Department will offer the 96,295 acre-feet of CAP NIA Priority entitlement to existing non-Indian M&I water providers and industrial water users in a tiered process with phases starting in 2013, 2021 and, if needed, in 2030. The timing will coincide with necessary actions required to meet requirements of the Agreement, as well as other considerations.

   Different types of water users are eligible for this reallocation. Several different 'pools' have been created within this reallocation process to acknowledge these different types of water users and to allow applicants to compete more fairly within their own category.

2. First, the reallocation is divided between potential applicants within the three-county CAWCD service area (CAP service area), including the Central Arizona Groundwater Replenishment District (CAGRD), and potential applicants outside the CAP service area. The Agreement provides that the Department "shall make [NIA Priority water] available for reallocation to non-Indian M&I water users *within* the State of Arizona."[5] Neither the Agreement, to which the State of Arizona, CAWCD, and Reclamation are parties, nor the Settlement Act limit the reallocation to the CAP service area.[6] Allocating CAP water outside the CAP service area is also consistent with state statute and with previous allocations. Section 48-3707(A), A.R.S. provides that "Water users outside the district may contract for a water supply from the central Arizona project directly with the secretary or with the district on the basis of paying costs allocated by the secretary." In 1983, the Secretary allocated CAP water to 13 entities outside the CAP service area.[7]

[5] Agreement, Paragraph 9.3.4.2 (emphasis added).

[6] Compare Agreement, Paragraphs 9.3.4.3 and 9.3.4.4, in which the parties agreed to provide a right of first refusal for a volume of water in each of two specified areas.

[7] 48 Fed. Reg. 12446, March 24, 1983.

3. The full reallocation volume of 96,295 af has been divided into these two pools. Water demand studies and population projections for 2020 were analyzed with the final assessment indicating that approximately 18% of the state's population will be outside of the CAP service area and 82% will be within the CAP service area. This ratio was applied to the full reallocation volume to derive the distribution of 78,962 af to be available within the CAP service area and 17,333 af available for outside of the CAP service area.
4. A pool of 12,000 af has been identified for Industrial water users within the CAP service area. This volume was determined by applying an average percentage of industrial water demands compared to municipal water demands to the pool of water available for reallocation within the CAP service area. This pool of water will be made available for the 2013 phase of the reallocation and is part of the CAP service area reallocation amount of 78,962 af.
5. A pool of 34,629 af has been identified for M&I water providers within the CAP service area and the CAGRD. CAGRD member service areas and water providers that serve member lands can compete in the process, as well as the CAGRD itself. This pool of water will be made available for the 2013 phase of the reallocation and is part of the CAP service area reallocation amount of 78,962 af.
6. Another pool of 17,333 af has been identified for M&I water providers within the CAP service area and the CAGRD and will be made available in the 2021 phase of the reallocation. This pool is also part of the CAP service area reallocation amount of 78,962 af.
7. The amount identified for outside of the CAP service area (17,333 af) will be offered in the 2021 phase of the reallocation. Anticipated applicants in this category have indicated that this timing will allow for the technical, engineering, and financial planning that may be required to utilize this water supply. Whether the resulting acquisition of the entitlement is diverted from the Colorado River or utilized in an exchange for other locally available surface water supplies with an entity that has a right to that water, the acquired entitlement can be used to augment existing M&I water supplies to address near-term water needs. The Department will develop selection criteria and process details in a timeframe closer to the initiation of this phase of the process.
8. The Agreement provides that M&I water providers serving two defined areas in the Pinal AMA (the Central Arizona Irrigation and Drainage District (CAIDD) area and the Maricopa Stanfield Irrigation and Drainage District (MSIDD) area, as defined in Exhibits 9.3.4.3 and 9.3.4.4 in the Agreement) have a right of first refusal to 7.8% of the water in each phase of the reallocation for each area, up to 7,500 af for each area. A total of 15,000 af has been reserved for water providers in the CAIDD area and the MSIDD area, with 4,313 af reserved for each area for the 2013 phase of the reallocation. This total 15,000 af is within the CAP service area and is a segregated pool of water within the CAP service area reallocation amount of 78,962 af.
9. The Agreement provides that beginning in 2021, the remaining amount of the 15,000 af reserved for water providers in the CAIDD and MSIDD areas (6,374 af), plus any of the 4,313 af that had been previously offered to the CAIDD and MSIDD areas separately that has not been contracted, will be offered for reallocation to all water providers within either of those two areas under criteria determined by the Department.
10. The Agreement further provides that beginning in 2030, any water held for first refusal by water providers within the CAIDD and MSIDD areas and not yet contracted will be offered to the Pinal County Water Augmentation Authority consistent with their right of second refusal.
11. If NIA Priority water (other than the 15,000 af held for first refusal by the CAIDD or MSIDD areas) is not contracted during the 2013 and 2021 phases, a second phase of the 2021 reallocation may be initiated. This remaining NIA Priority water and the water management needs of the state will be assessed, and the reallocation process and criteria for this remaining water will be determined at that time. The Department will develop selection criteria and process details at a time closer to the initiation of this phase of the process.

Selection Criteria for 2012 CAP Service Area Reallocation

The following criteria will be used to evaluate all applicants for the 2013 CAP service area reallocation phase of the NIA Priority Reallocation, unless otherwise specified.

1. Qualified applicants can include existing municipal providers (not including irrigation districts that serve non-irrigation uses) located within the CAP service area, industrial water users located within the CAP service area, and the CAGRD.
2. Qualified applicants must be able to demonstrate that the costs associated with acquiring and utilizing this supply have been analyzed and that there exists the ability and intention to meet these financial requirements.
3. Qualified applicants must demonstrate the ability to: (1) directly use this NIA Priority water, (2) store and recover, or (3) replenish this water in a manner consistent with the water management goals for the AMA.
4. Qualified applicants will need to provide a water management plan that demonstrates how they plan to utilize this water supply by 2020, and how they will manage the future shortages associated with this water supply. Applicants should describe the necessary infrastructure used to access this NIA Priority water supply. If an alternate water supply will be used, applicants shall discuss the source of this supply and the infrastructure to be used to access this alternate supply. All financial obligations associated with these water supplies and the necessary infrastructure shall be discussed within the financial analysis.
5. The Department will consider each applicant's Demand and Supply Imbalance projected for 2020 when recommending allocations. Demand and Supply Imbalance will be calculated by subtracting available renewable water supplies for 2020 from projected demands for 2020. Renewable supplies shall include all water supplies available to the applicant except groundwater and Excess CAP water. Applicants will be asked to submit their Demand and Supply Imbalance projections and the Department will substantiate the submittals using previously submitted and other available data commonly used in Department planning studies.
6. If an applicant's Requested Volume exceeds the Demand and Supply Imbalance for 2020, the Requested Volume will be reduced accordingly. For each pool of water identified for this phase of the reallocation, if the sum of all Requested Volumes for reallocation exceeds the available amount, the annual reallocation recommendation for each applicant will be distributed from the available reallocation amount on a pro-rata basis with the Requested Volumes of all qualified applicants in that pool.
7. For the CAIDD and MSIDD Pools (4,313 af each):
    a. Municipal providers shall provide water to the CAIDD and/or the MSIDD areas identified in the Agreement Exhibits 9.3.4.3 and 9.3.4.4.
    b. CAGRD is not eligible to compete for this pool of the reallocation.
    c. Municipal providers serving the CAIDD area and/or the MSIDD area will be evaluated for an annual reallocation recommendation based on all of the criteria described in this document, including their Demand and Supply Imbalances for 2020.
    d. If the Requested Volumes for these pools of water exceed the available amounts, the remaining Requested Volumes for each applicant will be included for evaluation under the Municipal Pool.

8. For the Industrial Pool (12,000 af):
    a. Qualified industrial applicants will include currently authorized groundwater users and must demonstrate a Demand and Supply Imbalance for 2020 greater than 400 acre-feet per year.
    b. Application requests must be for a specific use in a specified location.
    c. An industrial user that receives water from a municipal provider may apply for this Industrial Pool of water if the requested amount is not also counted under the municipal provider's requested amount.
    d. Applications will be evaluated based on the demonstration of the replacement of an actual groundwater use.

9. For the Municipal Pool (34,629 af):
    a. Municipal providers, both public and private, and the CAGRD will be evaluated in the same pool.
    b. The Demand and Supply Imbalance for the CAGRD will be calculated based on its projected actual 2020 replenishment obligation (not necessarily the Plan of Operation projection), not including its replenishment reserve requirements.
    c. If a member service area or water provider serving a member land specifies that an allocation of this NIA Priority water will be used to reduce its reported Excess Groundwater use to the CAGRD and is recommended to receive part of this NIA Priority water, CAGRD's Demand and Supply Imbalance will be reduced accordingly.

Appendix D. Scoping Newsletter, Mailing List, and Press Release

Scoping Newsletter 1
November 2015

The Bureau of Reclamation (Reclamation), in cooperation with the Arizona Department of Water Resources (ADWR) and the Central Arizona Water Conservation District (CAWCD), is preparing an environmental assessment (EA) to act upon the recommendation by ADWR for the proposed reallocation of 46,629 acre-feet annually (AFA) of non-Indian agricultural (NIA) priority water to municipal and industrial (M&I) users in the Phoenix, Pinal, and Tucson Active Management Areas (AMAs) within the Central Arizona Project (CAP) service area. The Arizona Water Settlements Act of 2004 outlines that this water can be reallocated to M&I users upon approval by the Secretary of the Department of the Interior (Secretary). The reallocation of this water is needed to help AMAs meet their targets for reducing groundwater overdraft, while still developing their economies.

The EA is being prepared to meet the requirements of the National Environmental Policy Act (NEPA). The EA will help Reclamation and the Secretary understand the effects the proposed reallocations will have on the environment and natural resources. The EA, and any public comments received on its adequacy in describing the anticipated effects, will be considered prior to a decision being made whether or not to approve ADWR's recommendation for the proposed reallocations.

Under NEPA, the first phase in preparing an EA is to conduct "scoping." The purpose of scoping is to identify the environmental issues associated with the proposed project. Reclamation is asking the public for comments to help determine the scope of the analysis to be contained in the EA. Please send your thoughts, ideas, and concerns regarding the recommendation for proposed water reallocation and the issues that should be analyzed in the EA to Reclamation by December 18, 2015.

Reclamation is hosting three public meetings and open houses (December 8, 9, and 10, 2015) to provide the public with information on the proposed approval of ADWR's recommendation for water reallocation and an opportunity to submit written and oral comments directly to Reclamation. One meeting will be held in each of the AMAs where proposed recipients are located: Phoenix, Pinal County, and Tucson. The scoping meetings schedule is below. The open house portion of each meeting will be from 4:30 pm to 6:30 pm. Brief presentations from Reclamation regarding the EA process and from ADWR and CAWCD regarding the proposed project will begin at 4:30 pm, followed by the opportunity for the public to provide oral and/or written testimony, to view resource-specific information, and to ask

questions about specific resources and the NEPA process. Oral testimony will be limited to three minutes per person. A court reporter will be on hand to record comments.

We encourage you to attend one of the open houses and to share your scoping comments with Reclamation.

PROJECT DESCRIPTION

Historically, Arizona has relied heavily on groundwater to meet demand, resulting in overdraft of groundwater supplies, particularly in the central and southern parts of the state. Groundwater depletion is a serious issue that impacts drinking water quality, domestic water availability, economic growth, agricultural production, and environmental sustainability. Colorado River water delivered through the CAP plays an important role in reducing groundwater overdraft in the Phoenix, Pinal County, and Tucson communities by reducing groundwater use and providing a renewable source for groundwater recharge.

The CAP canal is 336 miles long, beginning at Lake Havasu on Arizona's western border at the Colorado River and terminating just south of Tucson. The CAP delivers about 1.5 million acre-feet annually (MAFA) of Colorado River water per year to Arizona's cities and towns, agricultural users, industries, and American Indian tribes and communities. An acre-foot (AF) is about the amount of water a family of four consumes in one year. The CAP was authorized by Congress in 1968 and was constructed between 1973 and 1993. The CAP is operated by the CAWCD and is overseen by an elected board of directors from Maricopa, Pima, and Pinal counties.

Since 1968, the Secretary has made multiple recommendations regarding the allocation of water for M&I, NIA, and Indian uses. Notably, in 1983, Secretary James Watt signed a Record of Decision published in the Federal Register (48 Fed. Reg. 12446) that identified specific amounts of CAP water to be allocated to M&I, NIA, and Indian users.

After the 1983 allocation recommendation, a total of 65,647 acre-feet annually (AFA) of M&I priority water, and 96,295 AFA of NIA priority water was not contracted. Therefore, the water was available for reallocation at a later time. The Arizona Water Settlements Act of 2004 (AWSA) was passed by Congress, establishing a final allocation of this available water. Under AWSA, a reallocation of the 65,647 AFA of previously uncontracted M&I priority water went to 20 specific M&I entities. Moreover, the Secretary made available 96,295 AFA of NIA priority water to ADWR to be held in trust for future allocation.

In 2012 ADWR began a reallocation process for 46,629 AFA of NIA priority water held in trust under the AWSA. They held public meetings and accepted applications from M&I users. The applications were reviewed and evaluated under specific criteria, with four primary goals:

- reduce groundwater overdraft
- provide additional water sources to areas with limited physical availability of groundwater
- meet current and future water demands
- meet the near-term demands for existing municipal water providers and industrial users of groundwater or excess CAP water that have permanent demands.

The Secretary will use the information from the NEPA process to make her decision regarding whether to accept or reject the ADWR recommendation.

PURPOSE AND NEED FOR THE PROJECT

Purpose

The AWSA obligates the Secretary to approve or reject ADWR's recommendation for reallocation. The purpose of the EA is to provide all the relevant information to the Secretary in a single, clear, and concise way so she can make an informed decision to accept or reject the recommendation and reallocate the NIA priority water. The purpose of the proposed action is to reallocate NIA Priority CAP water for M&I use pursuant to the AWSA and according to ADWR's recommendation.

Based on ADWR's recommendation, the proposed action would allow the reallocation of 46,629 AFA of NIA Priority CAP water to M&I users within the Phoenix, Pinal, and Tucson AMAs (see map).

Need

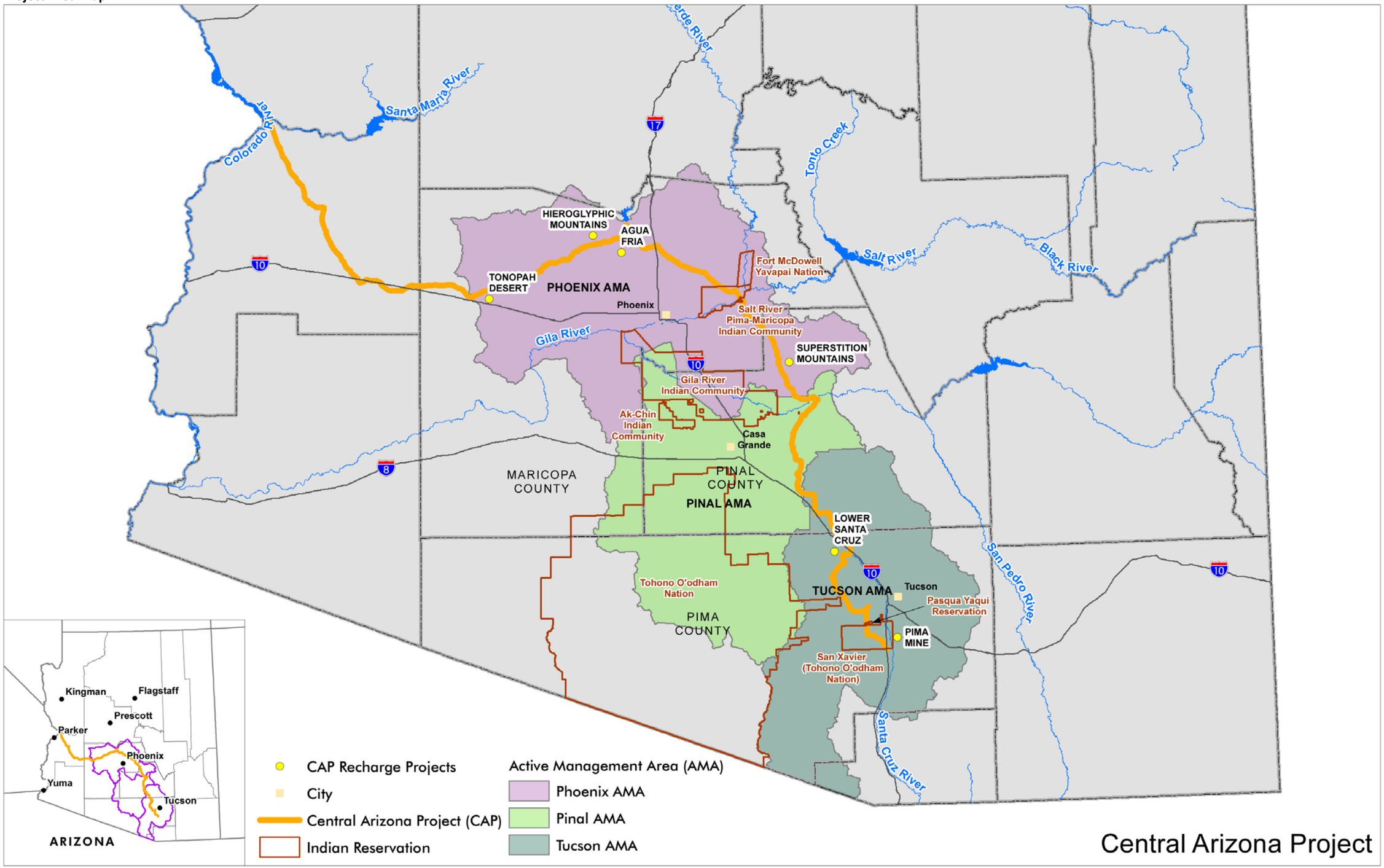
The need for the water reallocation is to address the continuing imbalance of water supply and demand in central Arizona, specifically the overdraft of groundwater in the Phoenix and Tucson AMAs. While Arizona's population has increased by 157 percent between 1980 and 2010 (ADWR 2015), statewide water use has either declined or remained constant at approximately 7 MAFA per year. This is attributed to retirement of agricultural lands, reclaimed water use, conservation efforts, and water management initiatives. Although water use has declined or remained constant, continued population growth in the state will eventually result in an overall water supply shortfall. Because of population growth, the projected statewide water demand will increase to between 8.1 and 8.6 MAFA by 2035 and to between 8.6 and 9.1 MAFA by 2060 (Water Resources Development Commission (WRDC) 2011).

In 2006, municipal water demand was measured at 1.6 MAFA, which was 25 percent of all state water demand. The WRDC (2011) estimates that municipal demand will increase to roughly 2.7 MAFA by 2035 and 3.4 MAFA by 2060. Industrial uses account for approximately 6 percent of Arizona's water supply (about 400,000 AFA) and are also expected to increase over time to sustain economic growth. While these projections are based on high estimates of population growth, Arizona's urban populations are expected to grow even if economic growth is slower than expected. Between 0.9 and 3.2 MAFA of water will need to be developed in Arizona over the next 20 years to sustain population growth and meet consumption demands.

If the proposed action is approved, users within the Phoenix, Pinal, and Tucson AMAs would receive the reallocated NIA priority water. The Phoenix and Tucson metropolitan areas account for about 80 percent of Arizona's population and are expected to continue to be the major population centers, while Pinal County is currently dominated by an agricultural economy (Arizona Department of Economic Security 2012). The primary goal for the Phoenix and Tucson AMAs is to achieve a balance between the pumping and the replenishment of groundwater by 2025, so that groundwater resources are not depleted. The primary goals for the Pinal AMA are to develop nonirrigation uses of water, preserve the agricultural economy, and conserve water for future nonirrigation use.

Both Phoenix and Tucson continue to experience annual overdraft of groundwater supplies after renewable supplies are considered, including water currently allocated from CAP and offsets to groundwater pumping. The proposed action would contribute to the ADWR goal of reducing groundwater overdraft by increasing renewable surface water supplies that can be used for consumption and for recharging groundwater sources.

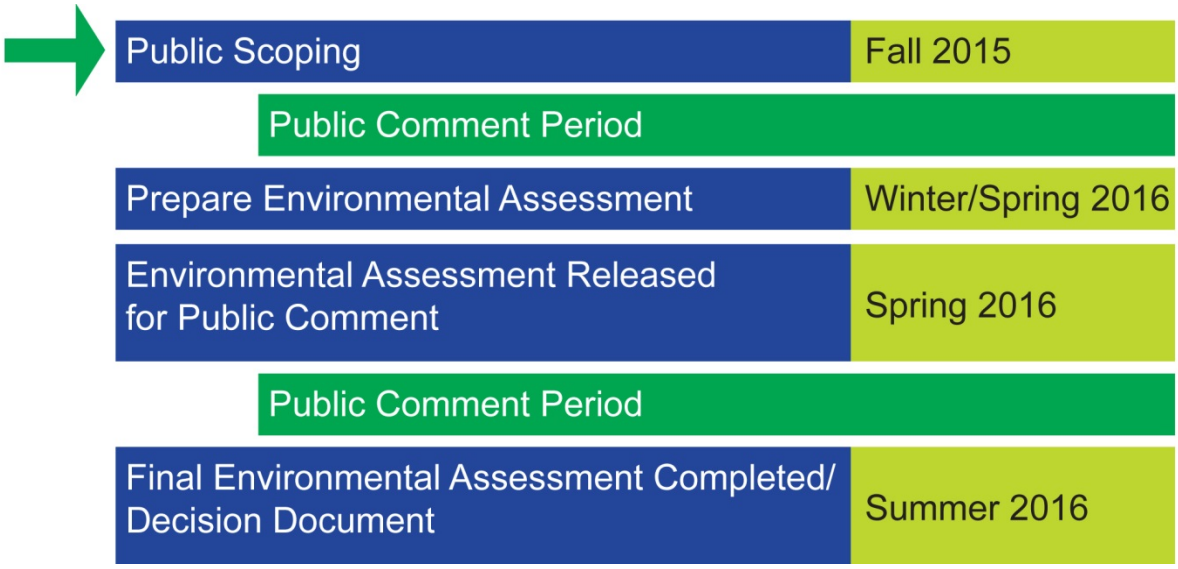
Project Area Map



PROPOSED RECIPIENTS

Recipient	Pool	Volume (acre-feet (AFA)/year)
Carefree Water Company	Municipal	112
Metropolitan Domestic Water Improvement District	Municipal	299
Town of Cave Creek	Municipal	386
EPCOR- Sun City West	Municipal	1,000
H_2O Water Company-Town of Queen Creek	Municipal	1,000
Town of Marana	Municipal	515
Apache Junction WUCFD	Municipal	817
City of El Mirage	Municipal	1,318
Town of Gilbert	Municipal	1,832
City of Buckeye	Municipal	2,786
Town of Queen Creek	Municipal	3,162
Johnson Utilities	Municipal	3,217
Central Arizona Groundwater Replenishment District	Municipal	18,185
Viewpoint RV and Golf Resort	Industrial	400
New Harquahala Generating Company	Industrial	400
Rosemont Copper Co.	Industrial	1,124
Salt River Project	Industrial	2,160
Resolution Copper Mining	Industrial	2,238
Freeport-McMoRan- Sierrita Inc.	Industrial	5,678
Total Volume (AFA/year)		46,629

PROJECT TIMELINE



HOW TO PROVIDE SCOPING COMMENTS

Reclamation requests your input to identify issues or concerns that should be analyzed in the EA for the proposed reallocation of CAP water. You can provide comments in two ways:

1. Attend one of the scoping open houses and provide written and/or oral comments to Reclamation staff there.

2. Send written comments to:

U.S. Department of the Interior, Bureau of Reclamation
Phoenix Area Office
Attn: Kimberly Musser (PXAO-1500)
6150 West Thunderbird Road
Glendale, AZ 85306-4001
E-mail: cap_NIA@eroresources.com

Please include your address, phone number, and e-mail address in your comment.

You should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. Please submit all comments by December 18, 2015. For questions regarding the EA process, please contact:

Kimberly Musser at (623) 773-6216 or kmusser@usbr.gov.

ADDITIONAL INFORMATION

Additional information regarding the proposed NIA CAP system water reallocation recommendation can be found on or requested through Reclamation's website:

http://www.usbr.gov/lc/phoenix/

Information about the background of the CAP can be found at:

http://www.cap-az.com/

Information about the Arizona Water Settlements Act of 2004, which provides the legal basis for the proposed project can be found at:

http://www.azwater.gov/AzDWR/SurfaceWater/Adjudications/AZWaterSettlements.htm

Information about ADWR's process for making recommendations for the proposed reallocation can be found at:

http://www.azwater.gov/AzDWR/PublicInformationOfficer/Non-IndianAgriculturalReallocationProcess.htm

REFERENCES

Arizona Department of Economic Security (ADES) 2012. Employment and Population Statistics: Medium Series Population Projections, 2012-2050. Available at: https://population.az.gov/population-projections.

Arizona Department of Water Resources (ADWR). 2014. Arizona's Next Century: A Strategic Vision for Water Supply Sustainability (Strategic Vision) (http://www.azwater.gov/AzDWR/Arizonas_Strategic_Vision/).

Water Resource Development Commission (WRDC). 2011. Final Report. Available at: http://www.azwater.gov/AzDWR/WaterManagement/WRDC_HB2661/documents/WRDCFinalReportVolumeI.pdf.

OPEN HOUSE SCHEDULE

Phoenix
December 8, 2015
4:30 to 6:30 PM

Kenilworth Elementary School Auditorium
1210 N 5th Ave
Phoenix, AZ 85003

Casa Grande
December 9, 2015
4:30 to 6:30 PM

Casa Grande Middle School Auditorium
300 W McMurray Blvd
Casa Grande, AZ 85122

Tucson
December 10, 2015
4:30 to 6:30 PM

Valencia Public Library Large Meeting Room
202 W Valencia Rd
Tucson, AZ 85706

U.S. Department of the Interior, Bureau of Reclamation
Phoenix Area Office
6150 West Thunderbird Road
Glendale, AZ 85306-4001

Addressee
National Park Service Department of the Interior 2120 North Central Ave., Suite 120 Phoenix, AZ 85004-1455
Sallie McGuire Chief AZ Section, Regulatory Branch U.S. Army Corps of Engineers 3636 North Central Avenue, Suite 760 Phoenix, AZ 85012-1936
Chief Tucson District U.S. Geological Survey 520 North Park Avenue, Suite 221 Tucson, AZ 85719
Dr. James Leenhouts Water Resources Division U.S. Geological Survey 520 N Park Av Ste 22 Tucson, AZ 85719-5075
District Manager Desert SW Regional Office Western Area Power Administration P.O. Box 6457 Phoenix, AZ 85005
Supervisor Tonto National Forest USDA Forest Service 2324 E. McDowell Rd Phoenix, AZ 85006-2440
Director Raymond Suazo Arizona State Office Bureau of Land Management 1 N. Central Ave Ste 800 Phoenix, AZ 85004-4427
Mr. Jim Rorabaugh U.S. Fish and Wildlife Service 201 N Bonita Ste 141 Tucson, AZ 85745-3053
Mr. Steve Spangle Arizona Ecological Services Field Office U.S. Fish and Wildlife Service 2321 W Royal Palm Rd Ste 103 Phoenix, AZ 85021-4974
Jean Calhoun US Fish & Wildlife Service Tucson Sub-Office 201 N. Bonita, Suite 141 Tucson, AZ 85745
Greg Beatty US Fish & Wildlife Service 2321 W. Royal Palm Road, Suite 103 Phoenix, AZ 85021
David Schweikert

U. S. House of Representatives 10603 N. Hayden Rd Ste 108 Scottsdale, AZ 85260-5571
Honorable Raul Grijalva Congressman 810 East 22nd St., Suite 102 Tucson, AZ 85713
Honorable John McCain Senator 407 West Congress St., Suite 103 Tucson, AZ 85701
The Honorable Jeff Flake Senator 2200 East Camelback Road Suite 120 Phoenix, AZ 85016
Honorable Paul Gosar Congressman Arizona 4th District 122 N. Cortez Street, Suite 104 Prescott, AZ 86301
Matt Salmon Congressman Arizona 5th District 207 North Gilbert Road, Suite 209 Gilbert, AZ 85234
Honorable Ruben Gallego Congressman Arizona 7th District 411 N. Central Ave Suite 150 Phoenix, AZ 85004
Honorable Trent Franks Congressman Arizona 8th District 7121 West Bell Road Suite 200 Glendale, AZ 85308
Honorable Kyrsten Sinema Congresswoman Arizona 9th District 2944 N. 44th Street Suite 150 Phoenix, AZ 85018
Director AZ Department of Environmental Quality 1110 West Washington St. Phoenix, AZ 85007
Amanda Stone Director, Southern District AZ Department of Environmental Quality 400 W. Congress, Suite 433 Tucson, AZ 85701
Director AZ Game & Fish Department 5000 West Carefree Highway

Phoenix, AZ 85086-5000
Nongame Branch Chief AZ Game & Fish Department 5000 W Carefree Hwy Phoenix, AZ 85086-5000
Mr. Jeff Sorensen Native Fish and Invertebrates Program Manager AZ Game & Fish Department 5000 W Carefree Hwy Phoenix, AZ 85086-5000
Director AZ State Lands Department 1616 West Adams Phoenix, AZ 85007
Southern Arizona Office AZ State Lands Department 177 North Church Ave., Suite 1100 Tucson, AZ 85701
Governor State of Arizona State Capitol Building 1700 West Washington Phoenix, AZ 85007
State Engineer's Office AZ Dept of Transportation 206 South 17th Ave., Rm 131A, MD102A Phoenix, AZ 85007
State Historic Preservation Officer AZ State Parks 1300 W. Washington St Phoenix, AZ 85007-2828
Mr. Thomas Buschatzke Director AZ Department of Water Resources 3550 N Central Ave Phoenix, AZ 85012-2100
Mr. C. H. Huckelberry County Administrator Pima County 130 West Congress St., 10th Fl. Tucson, AZ 85701
Office of the Mayor and Council Town of Sahuarita 375 West Sahuarita Center Way Sahuarita, AZ 85629
Town Manager Town of Sahuarita P.O. Box 879 Sahuarita, AZ 85629
Michael Ortega City Manager City of Tucson 255 W. Alameda P.O. Box 27210 Tucson, AZ 85726-7210

Greg Stanley County Manager Pinal County 31 N. Pinal Street Florence, AZ 85132
Tom Manos County Administrator Maricopa County 301 W. Jefferson, 10th Floor Phoenix, Arizona 85003
City of Goodyear Mark Holmes, Water Resources Manager PO Box 5100 Goodyear, AZ 85338
City of Goodyear Bob Beckley, Deputy City Manager 190 North Litchfield Road Goodyear, AZ 85338
City of Peoria Robin E. Bain, Environmental Resources Manager 8401 W. Monroe Street Peoria, AZ 85345
City of Peoria Alan R. Dulaney, Water Policy Administrator 8401 W. Monroe Street Peoria, AZ 85345
City of Surprise Angela Lucci 16000 North Civic Center Plaza Surprise, AZ 85374
City of Surprise Christine Nunez 16000 North Civic Center Plaza Surprise, AZ 85374
City of Tempe Eric Kamienski, Water Resources Manager Tempe Public Works Department – Water Utilities 255 East Marigold Lane Tempe, AZ 85281
Water Utilities Community Facilities District Frank Blanco, Water District Director Apache Junction Water District PO Box 4768 Apache Junction, AZ 85178-0014
City of Buckeye Ron Whitler, Water Resources Department 423 Arizona Eastern Avenue Buckeye, AZ 85326
Town of Gilbert Hakon Johanson, Water Resources Manager 50 E. Civic Center Drive Gilbert, AZ 85296
EPCOR-Sun City West Jake Lenderking, Water Resources Manager 2355 W. Pinnacle Peak Road, Suite 300

Phoenix, AZ 85027
Johnson Utilities Daniel Hodges 5320 E. Shea Blvd, Ste. 200 Scottsdale, AZ 85254
Johnson Utilities Copy: Carlos D. Ronstadt The Law Office of Carlos D. Ronstadt, PLLC 7000 N. 16th St., Suite 120, No. 510 Phoenix, AZ 85020-5547
City of El Mirage Larry Dobrosky, Dep. City Manager/PW Director 12145 NW Grand Avenue El Mirage, AZ 85335
Town of Queen Creek Paul T. Gardner, Utilities Director 50 S. Ellsworth Road Queen Creek, AZ 85142
Town of Marana John Kmiec, Utilities Director 5100 W. Ina Road Marana, AZ 85743
Town of Cave Creek Jessica Marlow, PE, Utilities Manager 37622 N. Cave Creek Road Cave Creek, AZ 85331
Carefree Water Company Greg Crossman, General Manager PO Box 702 Carefree, AZ 85377
General Manager Central Arizona Water Conservation District P.O. Box 43020 Phoenix, AZ 85080-3020
Pima County Regional Flood Control District 97 East Congress St., 3rd Floor Tucson, AZ 85701
Jackson Jenkins Director Pima County Regional Wastewater Reclamation Department 201 N. Stone, 8th Floor Tucson, AZ 85701
Joe Olsen General Manager Metropolitan Domestic Water Improvement District 6265 N. La Canada Tucson, AZ 85704
Suzanne Shields Director Pima County Regional Flood Control District 97 E. Congress, 3rd Floor Tucson, AZ 85701
Dennis Rule Director Central Arizona Groundwater Replenishment District

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General Manager Salt River Project PO Box 52025 Phoenix, AZ 85072-2025
Ron McEachern District Manager Central Arizona Irrigation and Drainage Distric (CAIDD) P. O. Box 605 231 S. Sunshine Blvd. Eloy, Arizona 85131
Brian Betcher, P.E. General Manager Maricopa-Stanfield Irrigation & Drainage District 41630 West Louis Johnson Drive Maricopa, AZ 85239
Joe Singleton Executive Director Pinal County Water Augmentation Authority PO Box 12684 Casa Grande, Arizona 85130
Kathleen Ferris Executive Director Arizona Municipal Water Association 3003 N. Central Ave., Suite 1550 Phoenix, AZ 85012
Warren Tenney President Southern Arizona Water Users' Association PO Box 35481 Tucson, AZ 85740-5481
Central Arizona Groundwater Replenishment District Perri Benemelis PO Box 43020 Phoenix, AZ 85080
Metropolitan Domestic Water Improvement District Mark R. Strattton, P.E. PO Box 36870 Tucson, AZ 85740
Metropolitan Domestic Water Improvement District Michael Block PO Box 36870 Tucson, AZ 85740
Center for Biological Diversity P.O. Box 710 Tucson, AZ 85702-0710
Arizona Wildlife Federation P.O. Box 51510 Mesa, AZ 85208

Maricopa Audubon Society PO Box 15451 Phoenix, AZ 85060-5451
Arizona Riparian Council Juile Ann Wrigley Global Institute of Sustainability Arizona State University PO Box 875402 Tempe, AZ 85287-5402
Desert Rivers Audubon 1121 N. Terrace Rd Chandler, AZ 85266-8230
Kendall Kroesen Urban Program Manager Tucson Audubon Society 300 E University Blvd, #120 Tucson, AZ 85705
Emily Brott Sonoran Institute 44 E. Broadway Blvd, Suite 350 Tucson, AZ 85701
Arizona Chapter The Nature Conservancy 1510 East Fort Lowell Tucson, AZ 85719
Defenders of Wildlife 1101 14th Street NW, Suite 1400 Washington, DC 20005
Rincon Group Sierra Club 738 North 5th Ave., #214 Tucson, AZ 85705
Director Western Regional Office Bureau of Indian Affairs 400 North 5th Street Two Arizona Center, 12th Floor, MS100 Phoenix, AZ 85004
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Honorable Edward D. Manuel Chairperson Tohono O'odham Nation P.O. Box 837 Sells, AZ 85634
Honorable Austin Nunez Chairperson Tohono O'odham Nation San Xavier District 2018 West San Xavier Road Tucson, AZ 85746

Honorable Marla Kay Henry Chairperson Chichut Kuk District Tohono O'odham Nation PO Box 837 Sells, AZ 85634-0837
Honorable Peter Yucupicio Chairperson Pascua Yaqui Tribe 7474 South Camino De Oeste Tucson, AZ 85757
Honorable Delbert W. Ray, Sr. President Salt River Pima-Maricopa Indian Community 10005 E. Osborn Blvd Scottsdale, AZ 85256-4019
Honorable Vivian L. Burdette Chairperson Tonto Apache Tribe Reservation 30 Payson, AZ 85541
Honorable Ernest Jones, Sr. President Yavapai Prescott Indian Tribe 530 E. Merritt St Prescott, AZ 86301-2038
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Honorable Thomas Beauty Chairperson Yavapai Apache Nation PO Box 1248 Camp Verde, AZ 85322-1248
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New Harquahala Generating Company Rita P. Maguire, Michael J. Pearce Maguire & Pearce PLLC 2999 N. 44th Street, Suite 630 Phoenix, AZ 85018
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Ms. Nancy Freeman Groundwater Awareness League P.O. Box 934 Green Valley, AZ 85622

News Release

RECLAMATION
Managing Water in the West

Phoenix Area Office
Glendale, Arizona

Contact: Rose Davis (702) 293-8421 Kimberly Musser (623) 773-6216

For Immediate Release: January 5, 2016

Reclamation Seeking Public Comments on Proposed Reallocation of Non-Indian Agricultural Water within the Central Arizona Project System

Phoenix, Ariz. – The Bureau of Reclamation's Phoenix Area Office (Reclamation) announced today that it is continuing to seek public comments on the proposed reallocation of non-Indian agricultural water within the Central Arizona Project system. In October 2015, Reclamation, in cooperation with the Arizona Department of Water Resources (ADWR) and the Central Arizona Water Conservation District, began preparing an Environmental Assessment (EA) for a proposed reallocation of 46,629 acres of non-Indian agricultural water for use by municipal and industrial users in the Phoenix, Pinal, and Tucson Active Management Areas (AMAs).

The reallocation of the subject water would be used by the AMA's to augment their existing water supplies, which are located within the Central Arizona Project service area, and to help these users meet their targets for reducing groundwater overdraft, while still developing their economies. The proposed reallocation is based on a prior recommendation provided by the ADWR.

The Arizona Water Settlements Act of 2004 outlines that this water can be reallocated to municipal and industrial users upon approval by the Secretary of the Interior (Secretary). The EA is being prepared to meet the requirements of the National Environmental Policy Act. The EA will help Reclamation and the Secretary understand the effects the proposed reallocations will have on the environment and natural resources, and will inform the Secretary's decision on whether to approve the proposed reallocations based on ADWR's recommendation.

Reclamation is currently seeking public input regarding the potential impacts of the proposed action, the alternatives that should be considered, and other concerns and issues that should be addressed in the EA.

Anyone desiring to submit comments on the proposed recommendations should send them by postal mail to Reclamation's Phoenix Area Office, 6150 W. Thunderbird Rd., Glendale, AZ 85306, Attn: PXAO-1500, or via facsimile to (623) 773-6486 by January 18, 2016. Submitted comments on the proposed recommendations are available for public review at any time. A public scoping newsletter with additional information on this proposed action is available on the Phoenix Area Office website at: http://www.usbr.gov/lc/phoenix/

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Reclamation is the largest wholesale water supplier and the second largest producer of hydroelectric power in the United States, with operations and facilities in the 17 Western States. Its facilities also provide substantial flood control, recreation, and fish and wildlife benefits.

Appendix E. Proposed Recipient Meeting Materials

ENVIRONMENTAL ASSESSMENT TO EVALUATE ARIZONA DEPARTMENT OF WATER RESOURCES RECOMMENDATION FOR THE REALLOCATION OF NON-INDIAN AGRICULTURE WATER IN ACCORDANCE WITH THE ARIZONA WATER SETTLEMENTS ACT OF 2004

PROPOSED RECIPIENT SCOPING MEETING AGENDA

Monday, December 7, 2015 **1:30 – 3:30 PM MST**

Meeting Purpose: Scoping meeting for the Proposed Recipients of Central Arizona Project (CAP) water to be reallocated from non-Indian agricultural (NIA) use to municipal and industrial (M&I) use, under the Arizona Water Settlement Act of 2004 (AWSA).

1. **Introductions (Reclamation)**
2. **Agency Briefing (Reclamation)**
3. **Overview of NEPA Process (ERO Resources)**
4. **EA Project Status/Schedule (ERO Resources)**
    - Where we're at in the process
        - Public Scoping Meetings
    - EA development
5. **What the NEPA Document Covers and Does Not Cover (Reclamation)**
6. **Proposed Recipient Costs Associated with the NEPA Process (CAWCD)**
7. **Q&A**

November 3, 2015

Name
Title
Address
Address

Dear Proposed Recipient,

The Bureau of Reclamation (Reclamation) invites you to attend a scoping meeting for the proposed recipients of Central Arizona Project (CAP) water to be reallocated from non-Indian agricultural (NIA) use to municipal and industrial (M&I) use under the Arizona Water Settlement Act of 2004 (AWSA). Proposed Recipients, which includes your entity, are the M&I applicants that the Arizona Department of Water Resources (ADWR) has recommended to receive CAP water under the proposed reallocation. The AWSA outlines that this water can be reallocated to M&I users upon approval by the Secretary of the Department of the Interior (Secretary).

As you are aware, ADWR began the process of reallocating 46,629 acre-feet annually (AFA) of the 96,295 AF of NIA priority water held in trust to non-Indian M&I water users within the State of Arizona in 2012, with scoping meetings and the opportunity for stakeholders to comment on the proposed reallocation process. ADWR received applications from M&I entities to receive the reallocated water in 2013 and has drafted its recommendation for the Secretary. This scoping meeting initiates the National Environmental Policy Act (NEPA), compliance with which is necessary for the Secretary to approve the recommendations and for the water to be reallocated to Arizona's cities, towns, and industries.

Reclamation is preparing an environmental assessment (EA) to provide the NEPA compliance needed to act upon the recommendation made by ADWR for the proposed reallocation of NIA water to M&I users in the Phoenix, Pinal, and Tucson Active Management Areas within the CAP service area. The EA will help Reclamation and the Secretary understand the effects the proposed reallocations will have on the environment and natural resources, and will inform the Secretary's decision, or her designee, whether to approve the proposed reallocations based on ADWR's recommendation.

Under NEPA, the first phase in preparing an EA is to conduct "scoping." The purpose of scoping is to identify the environmental issues associated with the proposed project. Reclamation is now asking you, the proposed recipients of the reallocated water, for comments and feedback to help determine the scope of the analysis to be included in the EA.

Meeting details are as follows:

Date:	**Monday, December 7**
Time:	**1:30 to 3:30 PM**
Location:	**Burton Central Library, Lecture Hall** **1221 N. Central Avenue** **Phoenix, Arizona 85004**

During the meeting, Reclamation, ADWR, and Central Arizona Water Conservation District will give important information about the recommended reallocations and the environmental compliance process that is ahead. You will also have the opportunity to view exhibits and provide verbal and/or written comments. Please plan on having at least one representative from your entity attend the meeting. **Please RSVP to Kimberly Musser at kmusser@usbr.gov by November 30, 2015**.

Sincerely,

Leslie Meyers, Area Manager
U.S. Department of the Interior, Bureau of Reclamation