RECLAMATION

Managing Water in the West

Environmental Assessment

CAP Water Option and Lease from the Gila River Indian Community to Apache Junction's Water Utilities Community Facilities District

U. S. Department of the Interior
Bureau of Reclamation
Phoenix Area Office

October 2011

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.

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS iii

CHAPTER 1 – PURPOSE AND NEED 1
1.1 INTRODUCTION 1
1.2 BACKGROUND/ OVERVIEW OF FEDERAL AND STATE WATER REGULATIONS AND POLICIES DIRECTING CAP ENTITLEMENT TRANSFERS 1
1.3 PURPOSE AND NEED FOR ACTION 5
1.4 PROJECT LOCATION 5
1.4.1 Gila River Indian Community 5
1.4.2 WUCFD 6
1.5 SUMMARY OF PUBLIC INVOLVEMENT 7

CHAPTER 2 – PROPOSED ACTION AND NO ACTION ALTERNATIVE 9
2.1 No Action Alternative 9
2.2 THE PROPOSED ACTION 10
2.2.1 Gila River Indian Community 10
2.2.2 WUCFD 10

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES 13
3.1 Water Resources 13
3.1.1 Affected Environment 13
3.1.2 Environmental Consequences 15
3.2 Land Use 16
3.2.1 Affected Environment 16
3.2.2 Environmental Consequences 16
3.3 Biological Resources 17
3.3.1 Affected Environment 17
3.2.2 Environmental Consequences 23
3.4 Cultural Resources 23
3.4.1 Affected Environment 23
3.4.2 Environmental Consequences 24
3.5 Socioeconomic considerations 25
3.5.1 Affected Environment 25
Native American programs." 25
3.5.2 Environmental Consequences 27
3.6 Summary of Impacts 28

CHAPTER 4 – CONSULTATION AND COORDINATION 29

CHAPTER 5 – ENVIRONMENTAL LAWS AND DIRECTIVES CONSIDERED 31

CHAPTER 6 – LIST OF PREPARERS 35

CHAPTER 7 – LITERATURE CITED AND REFERENCES 37

LIST OF TABLES AND APPENDIX

Table 1. – Distribution of Water in the Lower Basin of the Colorado River 1

Table 2. – GIS Mapped Acreages within the WUCFD's Service Area..... 18

Table 4. – Population Demographics for Arizona, Pinal County and the City of Apache Junction 26

Table 5. – Population Projections for Arizona, Pinal County and the City of Apache Junction 26

Table 6. – Comparative Population and Economic Characteristics for the City of Apache Junction, Pinal County and the state of Arizona..... 26

APPENDIX A - FIGURES

Figure 1. – General Vicinity Map. A-1

Figure 2. – Direct Delivery Options for WUCFD's Additional CAP Entitlement. A-2

Figure 3. – Recharge Options for WUCFD's Additional CAP Entitlement A-3

ACRONYMS AND ABBREVIATIONS

ACT	Gila River Indian Community Water Rights Settlement Act of 2004
ADWR	Arizona Department of Water Resources
AF	acre-feet
AFA	acre-feet/annually
AGFD	Arizona Game and Fish Department
AGREEMENT	Gila River Community Water Rights Settlement Agreement
AJWUCFD	Apache Junction Water Utilities Community Facilities District
AMA	Active Management Area
AWS	Assured Water Supply
BIA	Bureau of Indian Affairs
BRWTP	Brown Road Water Treatment Plant
CAGRD	Central Arizona Groundwater Replenishment District
CAP	Central Arizona Project
CAWCD	Central Arizona Water Conservation District
CAWS	Certificate of Assured Water Supply
CC&N	Certificate of Convenience and Necessity
CFR	Code of Federal Regulations
CRBPA	Colorado River Basin Project Act
COMMUNITY	Gila River Indian Community
CWA	Clean Water Act
DAWS	Designation of Assured Water Supply
DPS	Distinct population segment
EA	Environmental Assessment
ESA	Endangered Species Act of 1973, as amended
ESRVSB	East Salt River Valley Sub-Basin
EO	Executive Order
FONSI	Finding of No Significant Impact
FR	Federal Register
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information System
HDMS	Heritage Database Management System
IGA	Intergovernmental agreement
ITA	Indian Trust Asset
M&I	municipal and industrial
MAFA	million acre-feet annually
MGD	million gallons per day
NIA	non-Indian Agriculture
O&M	Operation & Maintenance
OM&R	Operation, Maintenance and Replacement
NHPA	National Historic Preservation Act
NEPA	National Environmental Policy Act
PAMA	Phoenix Active Management Area
P.L.	Public Law

Reclamation	Bureau of Reclamation
RWCD	Roosevelt Water Conservation District
Secretary	Secretary of the Department of the Interior
SHPO	State Historic Preservation Office
SMCFD	Superstition Mountains Community Facilities District No. 1
SMRP	Superstition Mountain Recharge Project
SCWTP	South CAP Water Treatment Plant
T&E	Threatened and Endangered Species
USFWS	U.S. Fish and Wildlife Service

CHAPTER 1 – PURPOSE AND NEED

1.1 INTRODUCTION

This Environmental Assessment (EA) describes the environmental effects from the proposed 100-year option and lease of 1,000 acre-feet annually (afa) of Central Arizona Project (CAP) water from the Gila River Indian Community (Community) to Apache Junction's Water Utilities Community Facilities District (WUCFD) (Figure 1). Approval of the CAP water lease by the Bureau of Reclamation (Reclamation) and the Bureau of Indian Affairs (BIA), acting on behalf of the Secretary of the Interior (Secretary), is required and constitutes a Federal action. This EA has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), as amended, the Council on Environmental Quality's regulations for implementing NEPA (40 CFR 1500-1508), and the Department of the Interior's regulations implementing NEPA (43 CFR Part 46). This EA identifies impacts anticipated to result from the Secretary's approval of the agreement to lease a portion of the Community's CAP water entitlement to WUCFD.

1.2 BACKGROUND/ OVERVIEW OF FEDERAL AND STATE WATER REGULATIONS AND POLICIES DIRECTING CAP ENTITLEMENT TRANSFERS

The rights to use water resources from the Colorado River are shared by seven Colorado River basin states, tribes, and Mexico. Water rights are determined by Federal legislation, court decisions, international treaty, and administrative decisions, which in combination create the "Law of the River." The Colorado River basin is divided into the Upper Basin, which has an entitlement of 7.5 million acre-feet annually (mafa), and the Lower Basin, which is entitled to 7.5 mafa. Lee's Ferry, located about 18 miles downstream of Glen Canyon Dam in northern Arizona, divides the Upper and Lower Basins. By treaty, Mexico is entitled to 1.5 mafa. The Lower Basin entitlement by state is summarized in Table 1.

Table 1. – Distribution of Water in the Lower Basin of the Colorado River

State	Water Allotment
Arizona	2.8 mafa
California	4.4 mafa
Nevada	300,000 afa

The US Congress passed the Colorado River Basin Project Act (CRBPA) on September 30, 1968 (P.L. 90-537). The CRBPA authorized the Secretary, acting through Reclamation, to build, operate, and maintain the CAP to deliver Colorado River water to

central and southern Arizona. Construction of the CAP began in 1973 and was completed 20 years later at a cost of more than $4 billion. The CAP conveys Colorado River water in Arizona through a 336-mile long system of pumping plants, aqueducts, tunnels, dams, and reservoirs. Starting at Lake Havasu, the main aqueduct extends east to Phoenix then south to Tucson, where it terminates. The CAP has the physical capacity to deliver 2.2 mafa of Arizona's allotted 2.8 mafa, assuming the system is operating 24 hours per day, 7 days per week. However, the average delivery volume is lower, approximately 1.5 mafa, due to time offline for operational needs, such as pump and canal system maintenance and repair.

CRBPA also provided the Secretary with the authority to execute contracts for CAP water. Consistent with Federal reclamation laws, uses of CAP water are distributed to three main sectors: municipal and industrial (M&I), non-Indian agricultural (NIA), and Indian. Although the original intent of the CAP system was to distribute water primarily for agriculture, CAP water demand and distribution have shifted in response to population growth in central and southern Arizona and increased awareness of Indian water rights and needs. CAP demand is now focused more on water uses for M&I and tribal entities than for NIA.

In 1971, the Arizona State Legislature authorized the formation of the Central Arizona Water Conservation District (CAWCD) to repay the Federal government for the construction cost of the CAP, to contract for delivery of Colorado River water, and to operate and maintain the CAP aqueduct. The CAP system is operated and maintained by the CAWCD under a 1987 Operation and Maintenance (O&M) transfer contract with Reclamation. Today, CAWCD is a municipal corporation governed by a 15-member board of directors with representation from Maricopa, Pinal, and Pima counties. A 1988 repayment contract between the Secretary and CAWCD established the process by which CAWCD and the system's users would repay the Federal government for costs associated with construction of the CAP.

In 1980, the Arizona legislature passed the Groundwater Management Act. It established Active Management Areas (AMAs) within which goals for managing groundwater withdrawals were identified. Within the Phoenix AMA (PAMA), the AMA that the city of Apache Junction is within, the goal is to obtain a safe-yield, or a balance between groundwater withdrawals out of, and natural and artificial recharge into, the basin. One way to achieve this goal is through the assured water supply (AWS) rules. These rules require demonstration of a 100-year water supply that is physically, legally and continuously available, considering current and committed demand as well as growth projections, which are consistent with achieving the goal of safe yield. Within an AMA, a developer can receive a Certificate of Assured Water Supply (CAWS) for an individual subdivision from the Arizona Department of Water Resources (ADWR) or the subdivision can receive service from a water company that has received a Designation of AWS (DAWS) from ADWR. Under the AWS rules adopted by ADWR in 1995, the use of renewable water supplies, such as effluent, CAP water, or other surface water supplies, is required for new development within the service area. If renewable water supplies are not provided directly by the water provider, they may meet their replenishment

requirements by enrolling in the Central Arizona Groundwater Replenishment District (CAGRD). WUCFD, who is one of the City of Apache Junction's water service providers, is a member of CAGRD.

CAGRD was created by the Arizona State Legislature in 1993, and is operated by the CAWCD. Member lands (developments that have joined CAGRD to qualify for a CAWS) and member service areas (water providers that have joined CAGRD to obtain a DAWS) pay CAGRD to replenish groundwater they have pumped that is in excess of their ADWR groundwater allowance. The member lands or member service areas must report annually to CAGRD any groundwater pumped in excess of the maximum allowed by AWS rules. The total volume of excess groundwater reported for all CAGRD members within that AMA becomes the replenishment obligation for the CAGRD and must be recharged in that AMA within 3 years. ADWR has authority and establishes regulatory requirements for groundwater use within the PAMA. CAGRD must report the replenishment obligation to ADWR and all replenishment completed in the previous year.

Gila River Indian Community

Title II of Public Law 108-451 (118 Stat. 3499), the Gila River Indian Community Water Rights Settlement Act of 2004(Act), was enacted on December 10, 2004. The Act authorized settlement of the water rights claims of the Gila River Indian Community, and in section 203 authorized, ratified and confirmed the Gila River Indian Community Water Rights Settlement Agreement (Agreement) dated December 21, 2005 and any amendments necessary to the Agreement to make it consistent with the Act. The Act, in section 205(a)(2)(A), also directed the Secretary to amend the Community's CAP water delivery contract to authorize the Community, with the approval of the Secretary, to enter into leases, options to lease, exchanges, or options to exchange of CAP water within Maricopa, Pinal, Pima, La Paz, Yavapai, Gila, Graham, Greenlee, Santa Cruz, or Coconino Counties for a term not to exceed 100 years.

The Community's CAP water delivery contract, dated May 15, 2006, provides at subarticle 5.3.6 that the Community may, with the approval of the Secretary, enter into leases, options to lease, exchanges, or options to exchange for their CAP water. The Community's option to lease with WUCFD falls under this provision. Thus, the United States is an approving party to this lease, in conformance with the Act, the Agreement, and the Community's CAP water delivery contract.

The Colorado River water available to the Community as part of the 2005 settlement agreement for the Gila River Indian Community totals 311,800 afa of CAP water;: 173,100 afa of CAP Indian priority water made available under an October 22, 1992 CAP water delivery contract between the Secretary and the Community; 18,100 afa of CAP Indian priority water, which the Secretary acquired from Harquahala Valley Irrigation District as CAP non-Indian agricultural priority water and converted to CAP Indian priority water; 18,600 afa of CAP non-Indian agricultural priority water acquired under an August 7, 1992 agreement among the United States, the Community, and the Roosevelt Water Conservation District – it was converted from a percentage entitlement

to a quantified entitlement in the 2005 amended and restated agreement; and 102,000 afa of CAP non-Indian agricultural priority water reallocated to the Community under the Act.

In accordance with a firming agreement entered into under the Act, the State of Arizona is required, for a 100-year period, to improve the delivery priority of 15,000 af of the 102,000 afa of non-Indian agricultural priority water reallocated to the Community under that statute. In the event that deliveries of CAP non-Indian agricultural priority water are reduced in times of shortage, Arizona will supply water to the Community from other sources in order to "firm" this 15,000 afa water supply so that it is delivered in the same manner as water with CAP M&I priority water. The 100-year period began January 1, 2008.

The Act further provides that up to 17,000 afa of CAP M&I priority water under CAP subcontract No. 3-07-30-W0307 among the United States, CAWCD, and ASARCO Incorporated, dated November 17, 1993, may be reallocated to the Community upon execution of an exchange and lease agreement among the Community, the United States, and Asarco Incorporated. Such an agreement has not been executed to date.

As of August 2011, the Community has entered into the following leases for CAP water: 7,000 afa to the City of Goodyear, 7,000 afa to the City of Peoria, 15,000 afa to the City of Phoenix, and 12,000 afa to the City of Scottsdale. These leases are each dated May 15, 2006, and the 100-year term of each lease commenced on January 13, 2008.

The Community entered into a settlement agreement with Phelps Dodge (now Freeport-McMoRan Copper & Gold, Inc.), which included a lease for 12,000 afa of CAP water and an option to lease up to an additional 10,000afa as part of the Community's water settlement agreement.

The Community also entered into an exchange agreement for reclaimed water with the neighboring municipalities of Chandler and Mesa, in which the Community exchanges a portion of its CAP water for treated effluent water. In addition, the Community leased a total of 32,618 af of its 2008 allocation to the Salt River Project Agricultural Improvement and Power District and the Salt River Valley Water Users' Association under a 1-year lease.

As of August 2011, construction of the infrastructure to deliver CAP water to the Community for agricultural use is ongoing, but the Community is taking partial delivery of its CAP water supplies (Marquez 2011).

WUCFD

The City of Apache Junction receives its water from two large municipal providers, the Arizona Water Company and the WUCFD. Both water providers have a CAP allocation. For purposes of this EA, only WUCFD will be discussed as they are the party to the

option and lease agreement with the Community. On March 24, 1983, the Secretary allocated WUCFD's predecessor agency, Palm Springs Water Company, 2,919 afa of CAP water. In 1997, WUCFD acquired the assets of Palm Springs Water Company through bankruptcy proceedings. WUCFD's CAP water service subcontract for 2,919 afa was executed on May 25, 2007 (07-XX-30-W0494). WUCFD began using its CAP allocation in January 1998 (WUCFD 1997).

1.3 PURPOSE AND NEED FOR ACTION

WUCFD has been issued a DAWS through 2025, based on current, committed and projected demands and available supplies consistent with ADWR's AWS rules (ADWR 2010). WUCFD is able to meet the water demands for current and anticipated population growth for the next 14 years based upon the renewable and reclaimed water supplies identified in their DAWS. To further offset their future potable water demand, the WUCFD is proposing to enter into an option and lease agreement with the Community for 1,000 afa of CAP entitlement. It is WUCFD's intention to enter into the lease before the option term expires. The addition of this renewable water source would reduce WUCFD's dependence on groundwater within its service area, including the additional cost of the use of CAGRD's replenishment services and would lessen their reliance on excess CAP water, which may not always be available.

The Community does not have an immediate demand for its entire CAP water entitlement and would like to lease 1,000 afa of its entitlement. The Community would also benefit financially from leasing a portion of its entitlement.

The need for the project is to: (1) meet the WUCFD's future potable water demand, and (2) secure a long-term, economically feasible right to a renewable water supply.

1.4 PROJECT LOCATION

The project is located in Pinal County, Arizona, and includes WUCFD's existing and future water service area (Figure 1). WUCFD's existing and future service area is located within the PAMA.

1.4.1 Gila River Indian Community

The Gila River Indian Community is located southeast of the Phoenix Metropolitan area within Maricopa and Pinal Counties and encompasses over 583 square miles. Construction of the infrastructure to deliver CAP water to the Community for agricultural use is ongoing and estimated to be completed by 2029 (Marquez 2011). The Community does receive a portion of its CAP water supplies through the Pima Interconnect (Marquez 2011). In addition, the Community exchanges a portion of its CAP water for treated effluent from neighboring municipalities of Chandler and Mesa. A portion of the

Community's CAP allocation is delivered to groundwater savings facilities, where the water is used in-lieu of pumping groundwater, and under Arizona Law, the Community receives long-term storage credits they can either sell or use at a later date (Marquez 2011).

1.4.2 WUCFD

WUCFD, located in the southeast Phoenix valley, is a special district that was formed in 1994 by the City of Apache Junction (WUCFD 2011). It is primarily responsible for providing water service in the City of Apache Junction within its own water service area (WUCFD 2011). This accounts for about one-third of the City of Apache Junction's land area (WUCFD 2011). The City of Apache Junction's planning area within WUCFD's water service area is mostly undeveloped. WUCFD's northern boundary for the most part is Broadway Avenue; the eastern boundary is Barkley Road; the southern boundary extends south of Ray Avenue; and the western boundary is generally along Ironwood Drive. The City of Apache Junction is a part of the Phoenix metropolitan area's East Valley with the cities of Mesa and Gilbert to the west and the Superstition Wilderness and Tonto National Forest bordering the east side of its city limits. If the City of Apache Junction's future planning area is annexed, WUCFD would serve an additional 39 square miles or 24,834 acres (City of Apache Junction 2010). The future water service area extends south of Elliot Road to Germann Road and from Meridian Road to two miles east of Barkley Road (City of Apache Junction 2010). It is unclear if and when annexation will occur.

Of the approximate 10,303 acres within WUCFD's service area, only 3,015 acres are developed. The developed areas represent approximately 29 percent of the analysis area (per GIS data acquired from WUCFD and the City of Apache Junction). Approximately 7,288 acres of undeveloped lands, including open space owned by other federal agencies, are within WUCFD's existing service area (per GIS data acquired from WUCFD and the City of Apache Junction). Of the area proposed to be annexed by the City of Apache Junction and included in WUCFD's service area, 99 percent (approximately 24,550 acres) are undeveloped (per GIS data acquired from WUCFD and the City of Apache Junction).

WUCFD provides potable water service to approximately 3,909 residential-single and multi-family connections and 270 commercial connections (Frank Blanco, WUCFD, pers. comm.). The WUCFD actively serves a population of approximately 13,030 people within its sixteen square mile water service area.

The existing CAP canal and associated infrastructure are used to deliver WUCFD's CAP allocation (Figure 2). The water is diverted from the CAP canal at the Mesa Right Turnout and delivered via buried pipeline for treatment at the City of Mesa's Brown Road Water Treatment Plant (BRWTP). BRWTP is located at 7750 East Brown Road, which is along Brown Road between Power and Ellsworth Roads. Up to 2,919 afa of WUCFD's CAP allocation can be treated by the City of Mesa pursuant to a 2006

agreement. After the water is treated at BRWTP, the Mesa Interconnect, an existing infrastructure, is used to deliver the treated water to WUCFD's service area. The Mesa Interconnect includes a water booster station and a pump house at Baseline and Signal Butte Roads and a water main extending about 4 miles east to Idaho Road, which is connected to Mesa's water line.

Existing infrastructure is also used to deliver groundwater within WUCFD's water service area. WUCFD currently is capable of delivering groundwater from 3 production wells that are permitted by the State for recovery of recharge credits. In addition, there are 4 reservoirs and associated booster stations that are used to deliver drinking water to customers.

1.5 SUMMARY OF PUBLIC INVOLVEMENT

Reclamation distributed a notice of availability of the EA to interested Federal, state, county and local agencies on October 28, 2011. Concurrent with this notice, the EA was posted to Reclamation's website (http://www.usbr.gov/lc/phoenix/) for a 15 day review.

This page intentionally left blank.

CHAPTER 2 – PROPOSED ACTION AND NO ACTION ALTERNATIVE

2.1 NO ACTION ALTERNATIVE

Under the no action alternative, WUCFD would continue to be responsible for the delivery of potable water to its service area in accordance with the requirements of its DAWS and other applicable state and Federal regulations. As a provision of WUCFD's 2010 DAWS (section II. G, iii), construction of a new 1.1 million gallons per day (mgd) CAP Water Treatment Plant is anticipated, whether through direct ownership or entering into an agreement for co-ownership with another water provider. The proposed treatment plant is anticipated to be built on a 6 acre parcel of land along the Fannin-McFarland Aqueduct, Reach 2 of the Central Arizona Project, which is north of the intersection of Houston and Ironwood Roads. The land, where WUCFD proposes to build their water treatment plant, has previously been considered under NEPA, as the land was surplus CAP land released by Reclamation (Reclamation 2009). In addition, WUCFD may also use the City of Mesa's proposed South CAP Water Treatment Plant (SCWTP) and the associated turnout for delivery and treatment of their CAP allocation. The City of Mesa's proposed SCWTP would be located at Signal Butte Road and Elliot Road.

Water would continue to be recharged locally. WUCFD currently recharges effluent within WUCFD's service area at Superstition Mountains Community Facilities District No. 1 (SMCFD). The facility is located on South Ironwood Drive at Guadalupe Avenue. The recharged effluent accumulates as effluent credits, which SMCFD sells to WUCFD. The water can also delivered to WUCFD's groundwater savings facility partners: New Magma Irrigation District (NMID) and Roosevelt Water Conservation District (RWCD), which are located within the East Salt River Valley Sub Basin (ESRVSB), for accrual of long-term credits (Figure 3).

WUCFD would continue to purchase excess CAP water from CAWCD's Access to Excess Program as well as potentially purchasing water from CAWCD's future Project Acquisition, Development, and Delivery (ADD) Water Program, and would continue to earn long-term storage credits through recharge of CAP supplies and unused reclaimed water developed within the service area. Other possible alternatives would be to purchase water from the Arizona State Land Department's 2,000 af of CAP M&I water designated for Apache Junction or a portion of the 2,906 af of Reserve CAP M&I water reserved for the entire state of Arizona (WUCFD 2010). WUCFD would also consider entering into water exchanges with other east valley cities (WUCFD 2010). Another viable option for WUCFD would be to pursue other CAP lease agreements with other Native American communities. In the event that water is not leased to WUCFD from the Community and/or excess CAP water is not available for purchase, WUCFD would recover through existing permitted recovery wells or extinguish its long-term storage credits earned through the recharge of excess and unused CAP water as well as reclaimed water to offset any ground water pumping over the legal limit. New development with the City of Apache Junction's limits and outside of Arizona Water Company's CC&N

would be served by WUCFD under its current DAWS. A modification to the WUCFD's DAWS would be submitted to ADWR prior to exceeding its current limit.

If and when the City of Apache Junction's future planning area is annexed, the additional land would be served by WUCFD. If WUCFD's water supplies are insufficient to meet the future water demand and AWS requirements, developers would be expected to acquire renewable supplies needed to serve the proposed developments.

2.2 THE PROPOSED ACTION

2.2.1 Gila River Indian Community

The infrastructure necessary to take, treat, and serve CAP water to the Community has not yet been completely developed and is estimated to be completed by 2029 (Marquez 2011). With the infrastructure that is already in place, the Community is able to take partial delivery of its CAP water. The Community has entered into leases or options to lease for up to 107,000 afa and exchanges of 32,500 afa with parties to the Community's settlement agreement. Their remaining allocation (172,300 afa) of 311,800 afa is available for current and future uses on-Reservation or for other Community purposes. Thus, the Community has determined that 1,000 afa is available for lease at this time and would like to lease it to WUCFD in order to capitalize on their CAP entitlement.

Under the proposed action, the Regional Directors of Reclamation's Lower Colorado Region and BIA's Western Regional Office would approve the 100-year lease of 1,000 afa of CAP water to WUCFD from the Community for a 100-year period.

The lease would commit 1,000 afa of the Community's CAP water entitlement to WUCFD for a 100-year term. WUCFD would pay the operation, maintenance and replacement (OM&R) costs to the United States or the operating agency for the 1,000 afa of leased water delivered.

2.2.2 WUCFD

The 1,000 afa leased water would be added to the existing CAP water supplies available to the WUCFD. As with its existing CAP supplies, WUCFD intends to convey the leased CAP water to its customers using existing and proposed infrastructure (see section 1.4.2 and 2. 1). The leased Colorado River water would be treated to drinking water standards at the treatment plants, and could be used anywhere throughout WUCFD's water service area. The lease would also allow for WUCFD to convey the leased CAP water to recharge facilities within the PAMA, such as CAWCD's Superstition Mountain Recharge Project (SMRP) or other future underground storage facilities within the PAMA (Figure 3). SMRP is located immediately east of the CAP's Fannin-McFarland Aqueduct and its associated flood control structure, the Sonoqui Dike, between the Ocotillo Road alignment on the north and Combs Road alignment on the south. It is 13 miles south of

the City of Apache Junction. By recharging the leased CAP water, WUCFD would be able to annually store and recover the water to meet their current demands or earn long-term storage credits to offset future ground water pumping. The water could also be delivered to WUCFD's in-lieu partners; NMID and RWCD. Under this option, an in-lieu partner (i.e., irrigation district) would schedule and receive a certain amount of CAP water that the irrigation district would deliver to its customers in-lieu of pumping groundwater. WUCFD would then earn long-term storage credits for the amount of water delivered to the irrigation district. No modification to the existing facilities would be required to handle the additional 1,000 afa. However, within WUCFD's 5 year Capital Improvement Plan (2010-2014) upgrades are anticipated for two booster stations and their associated storage tanks and for portions of their water distribution system piping (Apache Junction Water Company 2010). The Capital Improvement Plans are not contingent upon the 1,000 afa lease.

In accordance with the contract, WUCFD cannot use, lease, transfer the use of, or otherwise cause the leased water to be delivered for use outside of the boundaries of the CAP service area, except for use within WUCFD's water service area where it extends beyond the CAP service area, nor are they permitted to transfer, assign, sublease or otherwise designate or authorize the use of others to all or any part of the leased water without written approval of the Community and the Secretary. WUCFD has the right to use the leased water for any purpose that is consistent with Arizona law and not expressly prohibited by the option and lease agreement, including supplying water to customers within its water service area or for groundwater recharge.

This page intentionally left blank.

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the affected environment and likely environmental consequences of the proposed lease of 1,000 afa of the Community's CAP water entitlement to WUCFD. Because the proposed action would not result in additional ground disturbance for new infrastructure required to treat, deliver, and store beyond what would already occur under the no action alternative, there would be no direct impact to resources within the project area. A number of resource areas are not expected to be affected to any measureable degree, either directly or indirectly; therefore, are not included in this analysis. These include air quality, recreation, and geology and soils.

3.1 WATER RESOURCES

3.1.1 Affected Environment

WUCFD is located within the ESRVSB in the PAMA. The main water drainage within the PAMA is the Gila River and four principal tributaries: the Salt, Verde, Agua Fria and Hassayampa Rivers. The Salt River is the closest tributary to WUCFD's boundary. Other tributaries associated with WUCFD's water service area are Weekes Wash, Siphon Draw and other unnamed washes. These drainages are ephemeral and flow only in response to rainfall events.

Historical records indicate impacts from mining, municipal use and industrial water supplies have altered the groundwater levels within WUCFD's water service area. Fissuring and land subsidence have also been attributed to aquifer dewatering in the southern portion of the ESRVSB. There has been some recovery of groundwater levels within the WUCFD's water service area due to effluent recharge. However, no studies have been performed to confirm the significance of this recharge on the aquifer. The use of CAP water in lieu of groundwater has also contributed to recovery of groundwater levels. WUCFD participates with groundwater savings facility partners, NMIDD and RWCD, within ESRVSB.

WUCFD relies both on renewable supplies (CAP water) and groundwater for its potable water source. With WUCFD service area encompassing the southern half of the City of Apache Junction's city limits, the current and proposed water service area is mostly undeveloped. Despite this, WUCFD serves a population of approximately 13,030 people through a total of approximately 4,179 residential, municipal and commercial meter connections (Frank Blanco, WUCFD, pers. comm.). The quality of water delivered by WUCFD consistently meets the Safe Drinking Water Standards established by the Environmental Protection Agency, Arizona Department of Environmental Quality and Pinal County (City of Apache Junction 2010).

WUCFD has a DAWS from ADWR and is a member service area of the CAGRD. ADWR's Decision and Order, dated September 29, 2010, states that 3,995.16 afa are physically, legally and continuously available to WUCFD to support its AWS designation. This amount exceeds the 2025 annual estimated water demand of 3,562.04 afa (ADWR 2010a). The water demand estimated by ADWR and WUCFD was based on a projection of residential development that is reasonably expected to be approved through calendar year 2025. The DAWS will expire on December 31, 2025 or when demands exceed 3,562.04 afa.

ADWR's 2010 DAWS for WUCFD determined that 2,769 af of groundwater could be pumped annually by WUCFD, and that the current demand is 1,886 afa (ADWR 2010a). The Town must meet the depth to groundwater criteria established in the AWS Rules and has the legal right to withdraw groundwater from the identified point(s) of withdrawal. ADWR has issued a Recovery Well Permit to allow the recovery of recharged water from WUCFD's three designated wells. Of the three well sites, only one well (Well 6) is treated for arsenic. All groundwater pumped and delivered is mixed with Colorado River water.
As a municipal provider and participant in CAGRD, WUCFD is obligated to have the amount of excess groundwater withdrawn replenished by CAGRD based on its DAWS. It may obtain long-term storage credits through the recharge of renewable water supplies. WUCFD currently has an excess of 24,286 af of long-term storage credits as a result of recharging its current CAP entitlement and excess CAP purchases, as well as unused reclaimed water. WUCFD may use the leased 1,000 afa CAP entitlement to increase the recharge component of its water portfolio and reduce its dependency on groundwater supplies, as well as reduce the need and associated expense of having the CAGRD fulfill its replenishment obligations.

WUCFD previously held Water Storage Permits issued by ADWR for NMID and RWCD groundwater savings facilities. They plan to renew their Water Storage Permits at these groundwater savings facilities as well as apply for a Water Storage Permit at the newly constructed SMRP recharge facility. By delivering water to SMRP and future groundwater saving facility partners, WUCFD will be able to annually store and recover or earn long-term storage credits through the recharge of renewable water supplies (CAP). WUCFD also has an intergovernmental agreement (IGA) with Superstition Mountains Community Facilities District to purchase long-term storage credits developed through effluent recharge at their Underground Storage Facility (WUCFD 2010). The IGA allows for the purchase of up to 2,120 afa until December 15, 2015.

WUCFD is also entitled to 2,919 afa of Colorado River water labeled as subcontract water. The entire allocation could be treated at BRWTP, pursuant to an agreement with the City of Mesa that expires on March 17, 2016. Due to the term of this agreement, WUCFD only has a long-term treatment capacity of 1,232 afa, as stated in their 5 Year Capital Improvement Plan. This long-term treatment capacity is based on the treatment capacity of a water treatment plant proposed to be built to treat WUCFD's CAP allocation. Thus, ADWR's 2010 DAWS has determined that only 1,232 afa is

physically, continuously, and legally available for 100 years. Other CAP water sources WUCFD utilizes are excess water and incentive recharge water, when it is available.

3.1.2 Environmental Consequences

No Action
Under the no action alternative, WUCFD would continue to purchase excess CAP water from CAWCD's Access to Excess Program when available as well as CAWCD's future ADD water Program, and will continue to earn long-term storage credits through recharge of unused reclaimed water developed within WUCFD's service area. WUCFD would also continue to pursue a number of long-term water supply options to meet its potable demands, such as acquiring additional renewable water resources for direct use (e.g., CAP water leases with Native American communities), recharging available reclaimed water, or acquiring additional CAP water supplies.

If the City's proposed planning area is annexed, it is unclear how much of the leased 1,000 afa of CAP water would be used within the future water service area. If WUCFD's supplies do not meet the AWS rules, WUCFD would require developers to provide renewable supplies for their future developments. The developers would also be financial responsible for constructing the water conveyance infrastructure needed for the delivery of potable water within the development.

Proposed Action
The proposed action would not result in additional CAP water delivery, recharge or storage facilities beyond what would already occur under the no action. Consequently, there would be no identifiable impacts to the CAP or WUCFD's operations as a result of this lease. Thus, no construction-related impacts resulting from the lease are anticipated. The potential recharge of an additional 1,000 afa of CAP water is not anticipated to result in substantial changes to the current local groundwater quality. This determination is based upon the lack of reported adverse water quality impacts. The acquisition of additional lease water would enable WUCFD to reduce its existing annual groundwater use. The cumulative effect of recharge with CAP water from all sources is a gradual blending of water qualities of ambient groundwater, with an increase in TDS concentration not likely.

By leasing 1,000 afa of CAP entitlement from the Community, WUCFD would contribute to meeting their groundwater reduction obligations under the AWS program. The increased CAP water availability for WUCFD would reduce its reliance on groundwater resources and would be consistent with the PAMA water management goals.

If the proposed planning area is annexed, the additional 1,000 afa could be used to meet WUCFD's future water demand. However, it is uncertain how much would be used within the future water service area nor is it known how the water will be applied.

3.2 LAND USE

3.2.1 Affected Environment.

For purposes of this EA, the project area is defined as the lands within WUCFD's service area as well as their proposed future water service area as outlined in the City of Apache Junction's 2010 General Plan. WUCFD's existing water service area covers about 16 square miles or 10,303 acres, of which approximately 29 percent are developed and receive water from the WUCFD (per GIS data acquired from WUCFD and the City of Apache Junction). The major land uses of developed areas within WUCFD's water service area consist of residential, commercial/industrial, and public/institutional/recreational. Approximately 71 percent of the existing service area consists of rural area, vacant and/or undeveloped land (per GIS data acquired from WUCFD and the City of Apache Junction). Of the 24,834 acres proposed to be included in the City of Apache Junction and under WUCFD's jurisdiction, one percent of the land is already developed (per GIS data acquired from WUCFD and the City of Apache Junction).

The City of Apache Junction's General Plan dated 2010 provides overall direction for the future growth and development of the community. It is a dynamic document that is reviewed annually and amended as deemed appropriate (Apache Junction 2010). The General Plan does encompass future master plan community areas. The future master plan community areas are located in the southern half of the City of Apache Junction's planning area, which incorporates the existing and future water service area for WUCFD. While portions of the future master plan community areas are located outside of the current city boundary and WUCFD's water service area, it is anticipated that these areas will be annexed by the City of Apache Junction and will be included in WUCFD's water service area.

3.2.2 Environmental Consequences

No Action
Based on its DAWS from ADWR, WUCFD has the capacity to provide water to anticipated users within the current service area. In the absence of the proposed lease agreement, growth and development within WUCFD's water service area would continue to be guided by Apache Junction's General Plan. The City of Apache Junction's planning area, as described in the General Plan, is approximately 95 square miles, of which only 34.8 square miles are currently incorporated. The General Plan's land use element is projected according to build out, or the theoretical point at which the City is completely developed in accordance with the future land use plan. Land use changes included in the General Plan include residential, commercial and industrial development. The build out population within the City's incorporated area is estimated at 140,000 people. Based on this projected population, WUCFD's water demand could increase to approximately 14,000 afa. This would require 10,000 afa of additional water supplies. If

WUCFD is unable to obtain the additional long term water supply, it is anticipated that developers would be expected to acquire renewable supplies needed to serve the proposed future developments.

Proposed Action
WUCFD has obtained a DAWS from ADWR and has the ability to provide water to future users within its current service area. The additional CAP water would either be directly distributed to its customers or would be recharged and recovered using existing and future facilities.

The City of Apache Junction would continue to be developed based upon the demand for residential and commercial development and other market conditions. All growth would continue to be guided by the City of Apache Junction's General Plan. However, due to the speculative nature of the City's growth (i.e. when and where the growth would occur), it is unclear when the additional 10,000 afa needed for build out will be required. The leased CAP water could be applied to the additional 10,000 afa needed for build out.

3.3 BIOLOGICAL RESOURCES

3.3.1 Affected Environment

Vegetation and Wildlife Habitat
The City of Apache Junction is not fully developed, with portions of the planning area remaining as vacant and undeveloped land. Vegetation in the undisturbed portions of the WUCFD's service area is typical of both the Lower Colorado River Valley and Arizona upland subdivisions of the Sonoran desertscrub biotic community described in Biotic Communities of the Southwestern United States and Northwestern Mexico (Brown 1994). The Lower River Valley subdivision is characterized by creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), ocotillo (*Fouquieria splendens*), brittlebush (*Encelia farinosa*), Foothill palo verde (*Cercidium microphyllum*), saguaro (*Carnegiea gigantea*) and ironwood (*Olneya tesota*). The composition of the Arizona upland subdivision consists of the palo verde-cacti-mixed scrub community (Brown 1994). Predominate species represented include saguaro, mesquite (*Prosopis* spp.), blue palo verde (*Cercidium floridum*), triangle-leaf bursage (*Ambrosia deltoidea*), prickly pear (*Opuntia phaeacantha*), and barrel cacti (*Ferocactus* spp).

Two general habitat types are present within the WUCFD's service area including upland and xeroriparian vegetation communities. The approximate percentages of habitat types found within WUCFD's service area are found in Table 2.

Table 2. – GIS Mapped Acreages within the WUCFD's Service Area

Habitat Type	Existing Service Area Acres	Proposed Service Area Acres
Upland Habitat	6,312	23,337
Xeroriparian	976	1,173

Source: City of Apache Junction's 2010 General Plan's GIS data.

Upland habitat is typically found in the southern portion of the WUCFD's service area, where development has not occurred. Drainages that cross WUCFD's service area include Weekes Wash, Siphon Draw and many other unnamed washes. These drainages, including areas around the CAP canal, often support xeroriparian habitat which typically develop denser vegetation and larger individual trees than the surrounding upland desert.

Upland habitat is dominated by uniform creosote bush flats typical of Lower Colorado River Valley subdivisions of the Sonoran desertscrub biotic community. However, the increased plant density and/or structural diversity along the xeroriparian drainages provide increased forage and cover resources for wildlife including reptiles, birds, small mammals, and large mammals, such as the coyote (*Canis latrans*) and javelina (*Pecari tajacu*). Most of these species utilize both upland and wash habitat for movement and are not strictly dependent on washes as movement corridors. With less cover in the adjacent upland habitat, larger wildlife species tend to move along washes.

The remaining lands within WUCFD's service area are highly disturbed due to residential, commercial, and municipal growth.

This analysis was based on a literature review, knowledge of the range and habitat requirements of known species and aerial photography of the area.

Special-Status Species

Special-status species include Federally listed species and species tracked by the Arizona Game and Fish Department (AGFD) in its Heritage Data Management System (HDMS)[1] (AGFD 2011). The potential for the occurrence of an adverse impact to U.S. Fish & Wildlife Service (USFWS) endangered, threatened, proposed, or candidate species occurring within the water service areas was evaluated. The USFWS currently identifies 19 special-status species that are known or have the potential to occur in Pinal County (USFWS 2011a). The list includes three plants, six fish, three reptiles, five birds, and two mammal species (Table 3). The AGFD's HDMS was also accessed and species with known records of occurrence within the project area were identified. Only two species were identified, the Sonoran desert tortoise (*Gopherus agassizii*) and the bald eagle (*Haliaeetus leucocephalus*). Burrowing owls (*Athene cunicularia*) are also known to occur within the project area.

Based on the nature of the proposed action and the size of the project area, species-specific surveys were not conducted. Determinations of species' potential to occur within the service areas were based on habitat types and species ranges. The lesser long-nosed bat, Sonoran desert tortoise and Tucson shovel-nosed snake may have a potential to occur within the project area. The remaining listed species within Pinal County were excluded from further examination because (1) the range of the species was outside of the project area, or (2) there is no suitable habitat for the species in the project area.

Table 3. – USFWS' List of Endangered, Threatened, and Candidate Species for Pinal County

Species	Status
Acuna cactus (*Echinomastus erectocentrus var. acunensis*)	Candidate
Arizona hedgehog cactus (*Echinocereus triglochidiatus var.arizonicus)*	Endangered
Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)	Delisted; Petitioned for Relisting
Desert pupfish (*Cyprinodon macularius*)	Endangered
Desert tortoise, Sonoran population (*Gopherus agassizii*)	Candidate
Gila chub (*Gila intermedia)*	Endangered
Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*)	Endangered
Loach minnow (*Tiaroga cobitis)*	Threatened
Mexican spotted owl (*Strix occidentalis lucida*)	Threatened
Nichol turk's head cactus (*Echinocactus horizonthalonius var. nicholii)*	Endangered
Northern Mexican gartersnake (*Thamnophis eques megalops*)	Candidate
Ocelot (*Leopardus pardalis)*	Endangered
Razorback sucker (*Xyrauchen texanus*)	Endangered
Roundtail chub (*Gila robusta*)	Candidate
Southwestern willow flycatcher (*Empidonax traillii extimus*)	Endangered
Spikedace (*Meda fulgida*)	Threatened
Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*)	Candidate
Yellow-billed cuckoo (*Coccyzus americanus*)	Candidate
Yuma clapper rail (*Rallus longirostris yumanensis*)	Endangered

Lesser long-nosed bat

The lesser long-nosed bat is one of three leaf-nosed bats in Arizona (Hoffmeister 1986). This species was listed as endangered on September 30, 1988 (53 FR 38456). The lesser long-nosed bat belongs to the Phyllostomidae family. It is distinguished from all non-Phyllostomids in Arizona by its elongated snout tipped with a triangular leaf-shaped flap

of skin. It is distinguished from the other two Phyllostomids by greatly reduced tail membrane and lack of a tail (Hinman and Snow 2003). In Arizona, this species is found from the Picacho Mountains to the Agua Dulce Mountains in the southwest and the Galiuro and Chiricahua mountains in the southeast (Hinman and Snow 2003).

Lesser long-nosed bats are found in desert grassland and shrubland up to the oak transition zone. They forage in habitat that includes saguaro, ocotillo, paloverde, organ pipe cactus (*Cereus thurberi*), and later in the summer among agaves (*Agave* sp.). Lesser long-nosed bats feed on nectar and pollen from saguaros and agaves (Hinman and Snow 2003). They feed on ripe cactus fruits at the end of the flowering season. They cannot tolerate prolonged exposure to cold, do not hibernate, and spend winters in Mexico. Daytime and maternity roosts are located in caves and abandoned mines. Lesser long-nosed bats have been known to forage long distances from their roost sites. Bats from caves located in the Pinacate Mountains in Mexico forage at Organ Pipe Cactus National Monument, approximately 50 miles away due to the lack of foraging habitat near the roost site. The FWS considers 40 miles a reasonable foraging distance (Scott Richardson, FWS, personal communication).

Threats to this species include disturbance of roost sites, loss of food resources through over harvesting of agaves in Mexico, spread of agriculture, and livestock grazing.

The project lies approximately 45 miles from the closest known occupied roost site, but is outside the reasonable foraging range of bats occupying the closest roost. The presence of saguaros, in the project vicinity, suggests that lesser long-nosed bats may have a small potential to forage in the area during summer months; however, because of distance to the nearest roost it would not be a significant resource.

Bald Eagle

The bald eagle was de-listed nationwide in the lower 48 states in July 2007 (72 FR 37346). As a result of a subsequent lawsuit and court ruling, the USFWS was ordered to conduct a status review of the Sonoran desert area bald eagle to determine whether listing that population as a distinct population segment (DPS) was warranted and, if determined to qualify as a DPS, whether the eagle should remain on the endangered species list. While the status review was conducted, the Sonoran desert area bald eagles were listed by court-ordered under the Endangered Species Act (ESA) as a threatened DPS. On September 30, 2010, the U.S. District Court lifted the injunction that lead to the bald eagle being placed back on the list in 2008, but this determination is presently under judicial consideration (USFWS 2011b). The bald eagle is also protected under The Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Bald eagles are a large bird of prey that is three feet long and has a six to seven foot wingspan. At around 5-years old, bald eagles acquire adult plumage with white heads and tails, darkish brown-black bodies, yellow bills, and unfeathered legs and feet. They eat primarily fish, but waterfowl, small mammals, and carrion (dead animals) constitute a portion of their diet. In Arizona, bald eagles nest in large deciduous or coniferous trees or near water (reservoirs, rivers, and streams). Migrant and unmated/immature bald

eagles can also be found in more unusual and diverse locations, such as adjacent to highways, grasslands, etc. (USFWS 2011b).

The bald eagle was previously threatened and endangered due to reproductive failure caused by pesticide use (primarily DDT), unrestricted killing by humans, habitat loss, human encroachment on nesting sites, entanglement in fishing line, reduction in native fish species and heavy metal exposure (USFWS 2011b). The recovery is due in part to habitat protection and management actions.

The project area has no suitable forage or nesting habitat. The nearest known nesting bald eagles occur along the Salt River.

Sonoran Desert Tortoise

The FWS published a 12-Month finding on the petition to list the Sonoran population of the desert tortoise as endangered or threatened in the Federal Register (75 FR 78094) on December 14, 2010. The Federal Register notice stated that listing the Sonoran population of the desert tortoise was warranted but precluding by higher priority listing actions. The Sonoran population was placed on the Candidate List, but as such it receives no official protection under the ESA. The AGFD has assembled a team of responsible management agencies and is currently working on preparation of a Conservation Agreement for this species. Recently some parties (Murphy et al. 2011) have begin to consider the Sonoran desert tortoise a separate species (*Gopherus morafkai*).

In Arizona's Sonoran Desert, the desert tortoise typically occurs in the paloverde-cacti mixed scrub series (75 FR 78094). Rangewide, the desert tortoise is typically found at elevations of 984 to 3500 feet. They are usually inactive from mid-November until February. There are typically three seasons of activity for the Sonoran desert tortoise. Spring (March through June) is characterized by increasing temperature, decreasing rainfall and variable tortoise activity (Averill-Murray et al. 2002). Summer (July through October) is hot and generally includes peak rainfall and peak tortoise activity (Averill-Murray et al. 2002). Moderate tortoise activity occurs in October as temperatures begin to decline (Averill-Murray et al. 2002). Activity increases during and after rains, and they will visit depressions in which rain water has collected (Averill-Murray et al. 2002). The Sonoran desert tortoise eats a variety of plants, including grasses, forbs, succulents, and shrubs but the staple diet in the Arizona Uplands is primarily grasses, desert vines and mallow (Van Devender et al. 2002). Both exotic and native plant species are consumed.

Current threats to the Sonoran population of the desert tortoise include loss, modification, and fragmentation of habitat. The incidence of Mycoplasmosis (Upper Respiratory Tract Disease) in the Sonoran population is not considered a significant impact due to the disjunct (marked by a separation) nature of the tortoise populations (Dickinson et al. 2002). Cutaneous dyskeratosis (formerly called shell necrosis) was first described in the Mohave Desert near Riverside, California. Shell disease may not be a serious problem among Sonoran tortoises (Dickinson et al. 2002).

According to HDMS, the Sonoran desert tortoise is found within 2 miles of the project area (AGFD 2011). The desert tortoise can be found within the Superstition Mountains that are adjacent to the project area.

Tucson shovel-nosed snake

The FWS published a 12-month finding on the petition to list the Tucson shovel-nosed snake as threatened or endangered in the Federal Register (75 FR 16050) on March 31, 2010. USFWS determined that listing the Tucson shovel-nosed snake was warranted but precluding by higher priority listing actions. The Tucson shovel-nosed snake was placed on the Candidate List, but as such it receives no official protection under ESA.

The Tucson shovel-nosed snake is a small snake (10-17 inches) with a shovel-shaped snout and an inset lower jaw. Its overall coloring mimics the coral snake, with a pale yellow to cream-colored body with 21 or more black or brown saddle-like bands across the back, with orange-red saddle-like bands in between. The most notable features distinguishing them from other subspecies are (a) the orange-red bands suffused with dark pigment, making them appear brown or partly black, and (b) both black and red bands not encircling the body (USFWS 2010b). Although originally thought to be primarily nocturnal, Tucson shovel-nosed snakes have been documented as being active during crepuscular and daylight hours (USFWS 2010a). Rosen et al. (1996, in USFWS 2010a) notes that activity seems to be highest when the summer and spring temperatures are moderate, and when the relative humidity is high. When active, the Tucson shovel-nosed snake generally forages for prey such as insects, centipedes and scorpions.

Threats affecting the subspecies include habitat loss and fragmentation due to urban and rural development; road construction, use and maintenance; potential solar power facilities; agriculture; and wildfires (USFWS 2010b).

The current range for the Tucson shovel-nosed snake encompasses most of the area between the Phoenix and Tucson metropolitan areas. This includes the area west of Tucson, north along Avra Valley in Pima County to western Pinal County, and then north to eastern Maricopa County (USFWS 2010a). Rosen (2003 in USFWS 2010a) suggests that the Tucson shovel-nosed snake is found in more productive creosote-mesquite floodplain habitats, with soils described as soft, sandy loams, with sparse gravel. No known species specific surveys have been conducted in the study area; however, the area is located within the historic range of the Tucson shovel-nosed snake.

Tucson shovel-nosed snake populations persist near the project vicinity in areas dominated by creosote flats. Nearest known concentrations are along State Route 79 (Pinal Pioneer Parkway) both north of Florence and south of Florence Junction; and north and east of the San Tan Mountains (USFWS 2010a). Suitable habitat for the Tucson shovel-nosed snake is present in the project area. The majority of the study area consists of relatively undisturbed creosote flats dissected by washes dominated by creosote and mesquite. However, the project area does occur within the extreme northern portion of the described current range for the Tucson shovel-nosed snake.

3.2.2 Environmental Consequences

No Action Alternative
Under the no action alternative, on-going development is anticipated to convert undisturbed habitat into residential, municipal and commercial properties. This conversion of habitat would have an adverse effect on local wildlife. This may impact any special-status species that occur within the area. On-going development within WUCFD's existing and future service area would be subject to compliance with local, state, and Federal laws and ordinances to protect biological resources.

Proposed Action
There would be no additional construction or expansion of existing infrastructure for the delivery, storage, or recharge of CAP water above what would already occur under the no action alternative. The lease would not cause additional development and subsequent loss of habitat above the no action alternative. New development will occur within WUCFD's existing and future service area with or without the lease of this CAP water and would be subject to compliance with local, state, and Federal laws and ordinances protecting biological resources. The leasing of a portion of the Community's CAP water entitlement to WUCFD would have similar effects to biological resources within or adjacent to the area as that of the no action alternative. There would be no impacts above that of the no action alternative to any special-status species, including the lesser long-nosed bat, the Sonoran desert tortoise, the Tucson shovel-nosed snake, or to the bald eagle.

3.4 CULTURAL RESOURCES

3.4.1 Affected Environment.

The history of Apache Junction is quite long and dates back to the native peoples that inhabited the area long before it became the modern community it is today. Prehistoric remains typical of the project area are those of the Hohokam (A.D. 500-1450). Earlier Archaic (7,500 B.C. - A.D. 300/500) and Paleoindian (10,000-7,500 B.C.) remains, while not common, may also be present, but are probably deeply buried. The Protohistoric period (A.D. 1450-1750) represents the transition from prehistoric Hohokam to the beginning of the Spanish occupation of Southern Arizona. The descendants of the Hohokam that remained in the area became part of the Akimel O'odham, or Pima, whom the Spanish met during their explorations of the area. Beside the Akimel O'odham, the Southeastern Yavapai and Western Apache tribes were located in east-central Arizona and occupied or used the region.

By 1821, Spanish control of southern Arizona ended when Mexico gained its independence. Mexican control of the area was short-lived and by 1848 much of southern Arizona became part of the United States through the Treaty of Guadalupe Hidalgo. Additional territory was added in 1853 with the Gadsden Purchase.

Scattered farming communities developed slowly in the area, but growth was hastened with the arrival of a railroad spur near the farming community of Rittenhouse. The area continued to develop, and by 1912, when Arizona gained statehood Queen Creek (formerly Rittenhouse) had developed into a true community with farming remaining a key component of growth. Apache Junction, unlike many other towns, did not develop a centralized downtown area, and its history revolved around the area's ties to mining.

The project area contains a number of mostly prehistoric and some historic cultural resources that have been identified by various projects such as construction of the Central Arizona Project canal, highway development, and commercial and residential construction. Undoubtedly, other cultural resource sites remain to be found. While some of the identified sites were investigated in conjunction with specific projects, such as the Central Arizona Project, other significant sites remain undisturbed and should be avoided if at all possible.

Archaeological projects conducted within the WUCFD's water service area are mainly related to commercial and residential development. To date, at least 30 sites have been recorded within the service area; most of these are prehistoric. The sites are primarily residential and have yielded a variety of artifacts and features, including houses, agricultural terraces and canals.

3.4.2 Environmental Consequences

No Action Alternative

Changes in future land use patterns associated with urban expansion may affect cultural resources within the service area. It is assumed that anticipated growth would continue within the region and would be served by existing and future water sources. The City of Apache Junction's General Plan (2010) stipulates that preservation of archaeological assets is a priority. Furthermore, it calls for establishing funding sources for an archeological inventory and developing a preservation program in cooperation with the State Historical Preservation Office. Any future ground disturbing activities, where artifacts are identified, the State Historic Preservation Office (SHPO) must be notified and appropriate procedures followed.

Proposed Action

The leasing of a portion of the Community's CAP water entitlement to WUCFD would not involve any additional ground-disturbing activities above that of the no action alternative; as a result, there would be no effect to cultural resources. Current growth within WUCFD's existing service area can be supported by existing water supplies and is not dependent on this water lease. The additional 1,000 afa could assist in supporting the anticipated growth within the proposed City annexed lands. However, the specific location of such future water use is speculative, and no information on cultural resource impacts is possible to identify at this time. State law and any local requirements would apply to such development in the future.

3.5 SOCIOECONOMIC CONSIDERATIONS

3.5.1 Affected Environment

Executive Order 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 order also requires that "the responsibilities set forth shall apply equally to Native American programs."

Demographics, Employment and Income Patterns
An analysis was conducted by evaluating census data obtained from the U.S. Census Bureau. The Census 2000 and 2010 documents demographic characteristics including population, racial, economic, and employment. The American Community Survey from 2005 through 2009 was also used in order to obtain a more accurate description of the socioeconomic situation of the City of Apache Junction. Since WUCFD's water service area lies with the city limits of Apache Junction, the socioeconomic trends were evaluated based on the City of Apache Junction's demographic characteristics compared to that of Pinal County and the state of Arizona. The WUCFD's active service area generally includes a large portion of undeveloped land and some development within the incorporated limits of the City of Apache Junction. The WUCFD will be responsible for providing service for future development within the city limits and future proposed annexed land. According to the 2010 DAWS, WUCFD is prepared to provide water to its current population estimate for the next 100 years. According to demographic projections, the City of Apache Junction will continue to experience population growth (Table 5). In fact, the City of Apache Junction is currently ranked 17th out of all incorporated places within the State of Arizona based on the 2010 Census (Arizona Department of Administration 2010). From April 2000 to April 2010, there has been a 12.7 percent growth in the population within the City of Apache Junction (Table 4). The City of Apache Junction has a higher percentage of whites than Pinal County and the state of Arizona, according to the 2000 and 2010 Census data. The median household income for the Apache Junction was lower than that of Pinal County and the state of Arizona. The Arizona Department of Commerce, Strategic Investment and Research, December 2008 Special Unemployment Report and the Arizona Department of Economic Security, Arizona Workforce Informer 2008 also indicated the City of Apache Junction had reported a lower unemployment rate as well. Table 6 summarizes the census data for the City of Apache Junction, Pinal County and the state of Arizona for comparative purposes.

Table 4. – Population Demographics for Arizona, Pinal County and the City of Apache Junction

	Apache Junction		Pinal County		Arizona	
Census Year	Population	% Change	Population	% Change	Population	% Change
1980	9,935	-	90,918	32.6%	2,718,425	53.1%
1990	18,100	82.1%	116,379	28%	3,665,228	34.8%
2000	31,814	75.7%	179,727	54.4%	5,130,632	39.9%
2010	37,507	12.7%	375,770	109.1%	6,392,017	24.6%

Source: Decennial U.S. Census and Central Arizona Association of Governments (2008) from City of Apache Junction's 2010 General Plan and from 2010 Census Redistricting Data (Public Law 94-171) Summary File, Table P1 (Arizona Department of Administration 2010).

Table 5. – Population Projections for Arizona, Pinal County and the City of Apache Junction

Area	2010	2015	2020	2025	2030
Apache Junction	37,507	52,149	67,045	81,877	96,437
Pinal County	364,587	486,363	609,720	732,282	852,463
State of Arizona	6,999,810	7,915,629	8,779,567	9,588,745	10,347,543

Source: Central Arizona Association of Governments (2007) from City of Apache Junction's 2010 General Plan.

Table 6. – Comparative Population and Economic Characteristics for the City of Apache Junction, Pinal County and the state of Arizona

Socioeconomic Characteristics	City of Apache Junction	Pinal County	Arizona
Population Characteristics			
Population, [1] 2010	37,507	375,770	6,392,017
Percent White Population, [1] 2010 and [2] 2000	92.7% [2]	72.4% [1]	73% [1]
Percent Non-white of Population, [1] 2010 and [2] 2000	7.3% [2]	27.6% [1]	27% [1]
Economic Characteristics			
Median Household Income, [1] 2005-2009 and [2] 2009	$38,499 [1]	$49,088[2]	$48,711 [2]
Unemployment Rate, 2008	4.8%	6.6%	5.5%
Persons Below Poverty, [1] 2009 and [2] 2005-2009	14% [2]	13.7% [1]	16.5% [1]

Source: U.S. Census Bureau: Census 2000, 2010 and the 2005 - 2009 American Community Survey. The Arizona Dept. of Commerce, Strategic Investment and Research, December 2008 Special Unemployment Report and the Arizona Department of Economic Security / Arizona Workforce Informer (2008) from Apache Junction's 2010 General Plan were also used.

3.5.2 Environmental Consequences

No Action Alternative
Under the no action alternative, WUCFD would continue to purchase excess CAP water when available from CAWCD's Access to Excess Program as well as CAWCD's potential future ADD Water Program, and would continue to pay the required fees to recharge reclaimed or CAP water supplies. WUCFD would also continue to pursue the acquisition of 2,000 af of CAP M&I water designated for Apache Junction through the Arizona State Land Department or a portion of the 2,906 af of Reserve CAP M&I water reserved for the entire state of Arizona. Another option for WUCFD would be to entering into water exchanges with other east valley cities. WUCFD would also continue to pursue other long-term water supply options to meet its potable demands, such as acquiring additional renewable water resources for direct use (e.g., CAP water leases with Native American communities or requiring developers to supply water for future development).

The availability of these alternative water sources would support the City of Apache Junction's population growth and economic development as identified in WUCFD's 2010 DAWS and the City's General Plan. However, the cost associated with acquiring these resources may impact WUCFD's water rates.

Proposed Action
The proposed lease would have no quantifiable direct, indirect and cumulative effect to current and anticipated future trends in demographics, income, or employment within the WUCFD's existing and future service area.

Under the proposed action, WUCFD would assume responsibility for paying the OM&R fees to CAWCD for the delivery of the additional CAP water from the lease effective date until the lease terminates (100 years from the option effective date). The option effective date is the later of the date the option and lease agreement is executed by both parties or the date the Secretary approves the option and lease agreement. WUCFD may also recharge the CAP water to accumulate CAP recharge credits. If this occurs, the WUCFD would pay the required fees for recharging the water. Those fees would cover the underground storage costs of direct recharge. Although the financial impact of acquiring any additional water supply has the ability to impact WUCFD's future water rates, utilization of replenishment services of the CAGRD are projected to be more expensive.

The Community would benefit financially from leasing a portion of its entitlement as WUCFD will pay the Community, as outlined in the following two paragraphs, for the lease of 1,000 afa of CAP water over the 100-year term.

Upon execution of the option and lease agreement by both parties, WUCFD will pay the Community the option price of $250,000. If WUCFD exercises the option, fifty percent of the option price ($125,000), without any consideration for interest, will be credited against the total water lease charge. The total water lease charge is $3,000,000 plus

interest from the date of execution of the option and lease agreement by both parties through the lease effective date. The interest rate to be applied to the unpaid balance of the water lease charge will be calculated on the anniversary of the lease effective date at an annual rate of 5% plus the lower of either 1) the most recently available LIBOR, or 2) 7%.

WUCFD may elect to pay one-half of the total water lease charge within thirty days after the lease effective date, with the remaining balance to be paid in 15 equal annual payments, payable on the next 15 anniversary dates of the lease effective date, plus interest. Interest accrued will not be added to the unpaid water lease charge, nor itself bear interest unless delinquent.

The proposed action would not adversely affect minority or low-income communities as defined under EO 12898.

3.6 SUMMARY OF IMPACTS

The proposed action primarily impacts the financial obligations for the use of the CAP water entitlement for distribution and recharge. Since the Community is currently unable to utilize its entire CAP water entitlement, it would like to lease 1,000 afa of its entitlement to WUCFD. The Community would benefit financially from leasing a portion of its entitlement to WUCFD over the 100-year term.

WUCFD would not only pay for the option and lease, but would also incur the annual OM&R costs for the 1,000 afa of leased water. Potential uses of the leased water would incur the same costs for treatment and delivery, and/or storage and recovery, as CAP water that was acquired from any other source, including the Access to Excess Program or other leases the WUCFD would enter into to meet its needs.

CHAPTER 4 – CONSULTATION AND COORDINATION

List of Agencies Contacted:
Reclamation submitted information on the proposed action to the following entities during development of the EA. The names of individuals are retained in the administrative record.

County and Local
Gila River Indian Community
Water Utilities Community Facilities District

Federal
Bureau of Indian Affairs

This page intentionally left blank.

CHAPTER 5 – ENVIRONMENTAL LAWS AND DIRECTIVES CONSIDERED

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

This law requires Federal agencies to evaluate the potential consequences of major Federal actions. An action becomes "Federalized" when it is implemented by a Federal agency, wholly or partially funded with Federal monies, or requires authorization from a Federal agency. The intent of NEPA is to promote consideration of environmental impacts in the planning and decision-making processes prior to project implementation. NEPA also encourages full public disclosure of the proposed action, any action alternatives, potential environmental effects, and mitigation.

This EA was prepared in accordance with the requirements of NEPA. Reclamation distributed a notice of availability to interested Indian tribes and Federal, state, county and local agencies on October 28, 2011. The Environmental Assessment along with the draft finding of no significant impact (FONSI) was posted to Reclamation's website (http://www.usbr.gov/lc/phoenix/) for a 15-day review.

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

This act requires coordination with Federal and state wildlife agencies (USFWS and AGFD) for the purpose of mitigating project-caused losses to wildlife resources from water development projects.

The proposed project is not a new water development project. In addition, the proposed action would not impact or divert surface water in WUCFD or the Gila River Indian Community's service areas.

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

Section 7 of the ESA requires Federal agencies to consult with USFWS to ensure that undertaking, funding, permitting or authorizing an action is not likely to jeopardize the continued existence of listed plant or animal species or destroy or adversely modify designated critical habitat. The list of species maintained by USFWS for Pinal County was reviewed and three listed or candidate species are known or likely to occur within the existing and future water service area.

The proposed action would not result in additional construction of infrastructure or ground disturbing activities, nor would it result in changes in land use patterns. There were three Federally listed and candidate species identified within the project area. No biological assessment was prepared since there would be no effect to the Federally listed and candidate species.

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

This act designated the initial components of the National Wild and Scenic River System. It established procedures for including other rivers or reaches of rivers that possess outstanding scenic, recreational, geologic, fish-and-wildlife, historic, cultural, or other similar resources, and preserving these rivers in a free-flowing condition.

There are no rivers designated or proposed for designation as wild or scenic within or near WUCFD service areas.

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

This act established the National Wilderness Preservation System to preserve certain Federal lands for the public purposes of recreation, scenic, scientific, educational, conservation, and historical use by current and future generations of Americans. There are no lands designated or proposed for designation as wilderness areas within WUCFD's existing and future water service areas. However, the Superstition Mountain Wilderness is east of the City of Apache Junction and WUCFD's existing and future water service area. The Superstition Wilderness was designated by the U.S. States Congress in 1964. The wilderness is managed by the Forest Service.

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

The CWA is intended to direct the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters by controlling the discharge of pollutants. The basic means to achieving the goals of the CWA is through a system of water quality standards, discharge limitations, and permits. Section 404 of the CWA identifies conditions under which a permit is required for actions that result in placement of fill or dredged material into waters of the U.S. In addition, a 401 water quality certification and 402 Arizona Pollutant Discharge Elimination System permit are required for activities that discharge pollutants to waters of the US.

There would be no additional construction of infrastructure or delivery system features as part of the proposed action and it would not require authorization under a CWA 401 water quality certification and 402 or 404 permit.

National Historic Preservation Act (NHPA) (P.L. 89-665)

NHPA establishes as Federal policy the protection of historic sites and values in cooperation with states, tribes, and local governments.

The proposed project does not result in additional ground disturbance beyond what would occur under the no action alternative; therefore, it does not have the potential to effect prehistoric or historic properties.

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

This act requires identification of proposed actions that would adversely affect any lands classified as prime and unique farmlands and minimizes the unnecessary and irreversible conversion of farmland to nonagricultural uses. The U.S. Department of Agriculture's Natural Resources and Conservation Service administers this act. The proposed action would not directly impact lands classified as prime and unique farmlands. The proposed action would not result in changes to land use or affect prime or unique farmland.

Executive Order 11988 (Floodplain Management)

This Presidential directive encourages Federal agencies to avoid, where practicable alternatives exist, the short- and long-term adverse impacts associated with floodplain development. Federal agencies are required to reduce the risk of flood loss and minimize the impacts of floods on human safety, health and welfare. In carrying out their responsibilities, agencies must also restore and preserve the natural and beneficial values served by floodplains.

The 100-year floodplain for the Salt River extends into WUCFD's water service area. The 1,000 afa of CAP water might be recharged at the SMRP or other future ground saving facilities with the PAMA. These facilities have the capacity or are projected to accept these flows with no required expansion of the site. The proposed action would not affect floodplain capacity.

Executive Order 12898 (Environmental Justice) (EO 12898)

This executive order requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of Federal actions on minority and/or low-income populations. Low-income populations include communities or individuals living in proximity to one another and meeting the U.S. Census Bureau statistical thresholds for poverty. 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's percentage of a much broader area.

The Census 2000 and 2010 data was reviewed for the City of Apache Junction. WUCFD is a water service provider of the City of Apache Junction; WUCFD's current service area lies within and slightly outside of the city boundaries. If the Apache Junction annexes its proposed planning area, WUCFD would be the water service provider. No disproportionately high or adverse human health or environmental effects on minority and/or low-income populations would result from the proposed action. In fact, the Community, as consider under EO 12898, would benefit financially from the lease.

Executive Order 11990 (Wetlands) (EO 11990)

This executive order requires Federal agencies, in carrying out their land management responsibilities, to take action that will minimize the destruction, loss, or degradation of wetlands, and take action to preserve and enhance the natural and beneficial values of wetlands.

There are no wetlands in the project area that would be affected.

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

ITAs are legal interests in assets held in trust by the U.S. government for Indian tribes or individual Indians. These assets can be real property or intangible rights and include water rights, hunting rights, money, lands, minerals, and other natural resources. The trust responsibility requires that all Federal agencies take actions reasonably necessary to protect ITAs.

The Community's CAP water entitlement is a trust asset. The proposed action would have a positive benefit to the Community through income earned as a result of leasing the water to WUCFD.

CHAPTER 6 – LIST OF PREPARERS

Preparer
Bureau of Reclamation:
Nichole Olsker, Biologist

Other Contributors/Reviewers
Bureau of Reclamation:
Bruce Ellis, Supervisor of the Environmental Resource Management Division
John McGlothlen, National Environmental Policy Act Compliance Specialist
Jon Czaplicki, Archaeologist
Don Reiff, GIS Team Lead
Jim Beadnell, Contract and Repayment Specialist
Brenda Paquette, Management and Program Analyst
John Bodenchuk, Geologist
Alex Smith, Wildlife Biologist

Water Utilities Community Facilities District:
Frank Blanco, Water District Director
Daniel Sayre, GIS/Engineering Technician

Bureau of Indian Affairs
Amy Heuslein, Environmental Protection Officer

This page intentionally left blank.

CHAPTER 7 – LITERATURE CITED AND REFERENCES

Arizona Department of Administration, Office of Employment and Population Statistics. 2010. *2000 to 2010 population change at a glance*: T*able 1. Arizona Counties and Incorporated Places, Population Change between 2000 and 2010.* http://www.workforce.az.gov/census-data.aspx. Accessed August 21, 2011.

Arizona Department of Commerce. 2008. Strategic Investment and Research, December 2008 Special Unemployment Report.

_____. 2009. *Profile: Pinal County, Arizona*. http://pinalcountyaz.gov/Visitors/Documents/pinal%20county.pdf . Accessed August 19, 2011.

Apache Junction Water Company. 2010. *Water System Master Plan Update; 5 Year CIP (2010-2014) Water System Capital Improvements*. Produced by Narasimhan Consulting Services, Inc. (NCS)

Arizona Department of Water Resources (ADWR). 2010a. *Apache Junction Water Utilities Community Facilities District Assured Water Supply Designation: Decision & Order 86-002025.001 and AWS 2010-014, September 29, 2010*.

_____. 2010b. *Schedule AWS Supplement for Designated Providers - Annual Report 2010*.

Arizona Game and Fish Department (AGFD). 2011. *Arizona's Natural Heritage Program. Heritage Data Management System (HDMS)*. Environmental Review On-Line Tool. http://www.azgfd.-gov/hgis/, accessed on August 18, 2011.

Averill-Murray, R.C., B.E. Martin, S.J. Bailey, and E.B. Wirt. 2002. *Activity and Behavior of the Sonoran Desert Tortoise in Arizona In The Sonoran Desert Tortoise.*

Brown, D.E. 1994. *Biotic Communities of the Southwest*. University of Utah Press, Salt Lake City.

Center for Biological Diversity (CBD). 2004. *Petition to List the Tucson Shovel-nosed Snake (Chionactis occipitalis klauberi) as an Endangered Species.* Ms. on file, CBD, Tucson.

City of Apache Junction. 2010. *Apache Junction 2010 General Plan*. http://www.ajcity.net/index.aspx?NID=518 . Accessed July 1, 2011.

Dickinson, V.M, J.L. Jarchow, M.H. Trueblood, and J.C. DeVos. 2002. *Are Freeranging Sonoran Desert Tortoises Healthy? In The Sonoran Desert Tortoise.* Natural History, Biology, and Conservation. Thomas R. Van Devender (ed). The University of Arizona Press. Tucson, AZ.

Hinman, K and T. Snow, eds. 2003. *Arizona bat conservation strategic plan. Nongame and Endangered Wildlife Program Technical Report 213.* Arizona Game and Fish Department. Phoenix, AZ.

Hoffmeister. D. 1986. *Mammals of Arizona.* University of Arizona Press and Arizona Game and Fish Department. Tucson, AZ.

Marquez, Lawrence. 2011. Email correspondence dated July 22, 2011.

Murphy RW, Berry KH, Edwards T, Leviton AE, Lathrop A, Riedle JD (2011) *The dazed and confused identity of Agassiz's land tortoise, Gopherus agassizii (Testudines, Testudinidae) with the description of a new species, and its consequences for conservation*. ZooKeys 113: 39–71.

U.S. Census Bureau. 2000. *Census 2000. DP-3 Profile of Selected Economic Characteristics: 2000: Geographic Area Apache Junction, Arizona*. http://factfinder.census.gov/servlet/QTTable?_bm=y&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-_sse=on&-geo_id=16000US0402830. Accessed August 19, 2011.

_____. 2005 - 2009. *American Community Survey 5-Year Estimates.* http://factfinder.census.gov/servlet/ACSSAFFFacts?_event=&ActiveGeoDiv=geoSelect&pctxt=fph&_lang=en&_sse=on&geo_id=16000US0402830&_state=04000US04 Accessed August 19, 2011.

_____. 2010. *Census 2010.* http://quickfacts.census.gov/qfd/states/04/04021.html. Accessed August 19, 2011.

_____.2011. *State and County QuickFacts*. http://quickfacts.census.gov/qfd/states/04/0402830.html . Accessed August 19, 2011.

U.S. Fish and Wildlife Service (USFWS). 2011a. Arizona counties species lists. http://www.fws.gov/southwest/es/arizona, accessed July 8, 2011.

_____. 2011b. General species information for the bald eagle (*Haliaeetus leucocephalus*).

_____.2010a. Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Tucson Shovel-Nosed Snake (*Chionactis occipitalis klauberi*) as Threatened or Endangered with Critical Habitat. Federal Register 75(61): 16050–16065.

_____.2010b. General species information for the Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*).

Van Devender, T.R., R.C. Averill-Murray, T.C. Esque, P.A. Holm, V.M. Dickinson,C.R. Schwalbe, E.B. Wirt, and S.L. Barrett. 2002. *Grasses, mallow, desert vine, and more: diet of the desert tortoise in Arizona and Sonora. In The Sonoran Desert Tortoise*. Natural History, Biology, and Conservation. Thomas R. Van Devender(ed). The University of Arizona Press. Tucson, Arizona.

U.S. Bureau of Reclamation (Reclamation). 2009. *Categorical Exclusion Checklist – Surplus U.S. Fee Property Sale, Central Arizona Project, North of the Intersection of Houston and Ironwood Roads, Apache Junction, Arizona (Case No. 08-034).*

Verberg, Katherine Ott. 2010. *The Colorado River Documents 2008*. U.S. Department of the Interior, Bureau of Reclamation, Lower Colorado Region.

Water Utilities Community Facilities District (WUCFD). 1997. Water Delivery Letter to Central Arizona Project.

_____. 2010. *2010 Water Policy Assessment.*

_____. 2011. http://www.ajwaterdistrict.org. Accessed August 2011.

APPENDIX A - FIGURES

Figure 1. – General Vicinity Map.

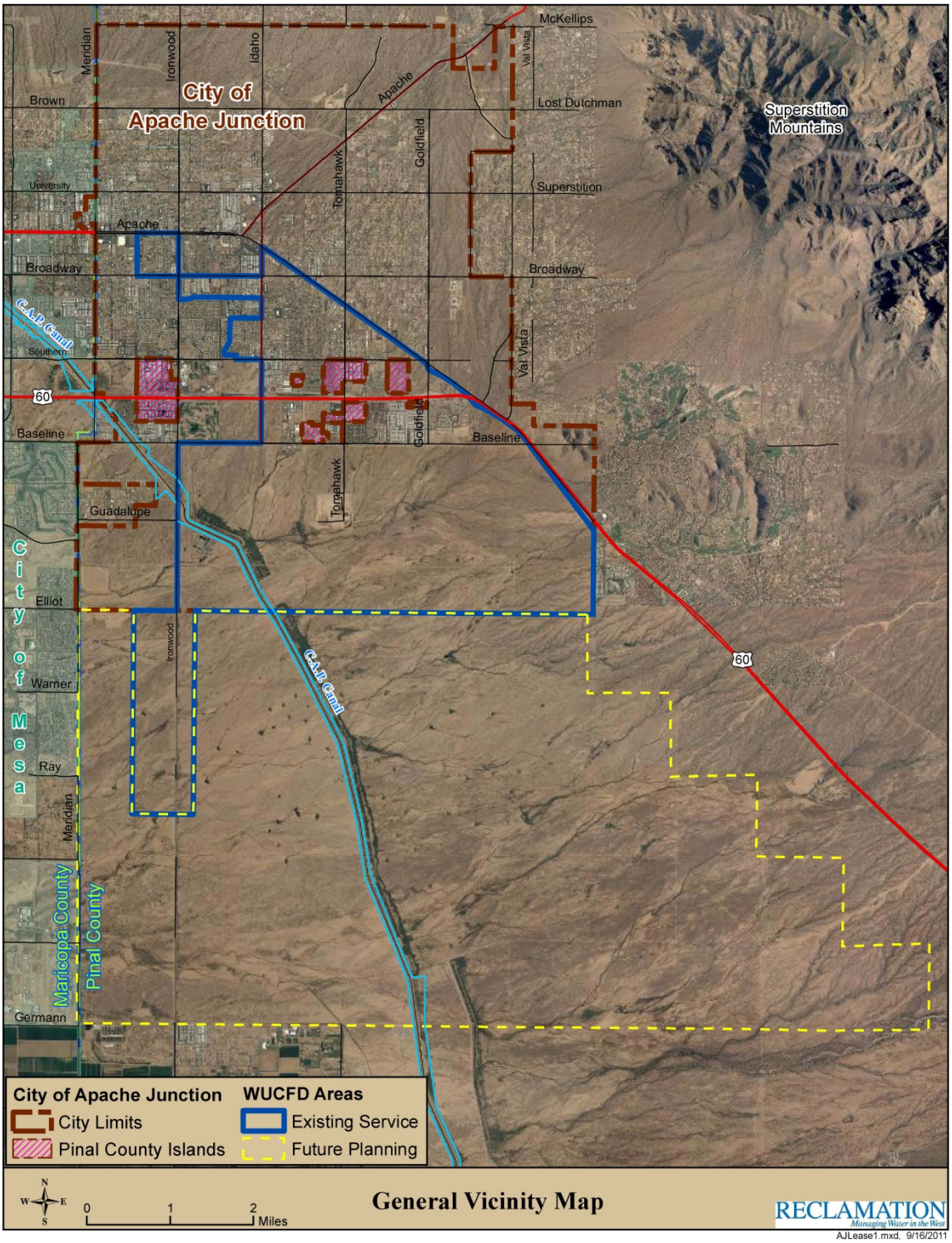

Figure 2. – Direct Delivery Options for WUCFD's Additional CAP Entitlement.

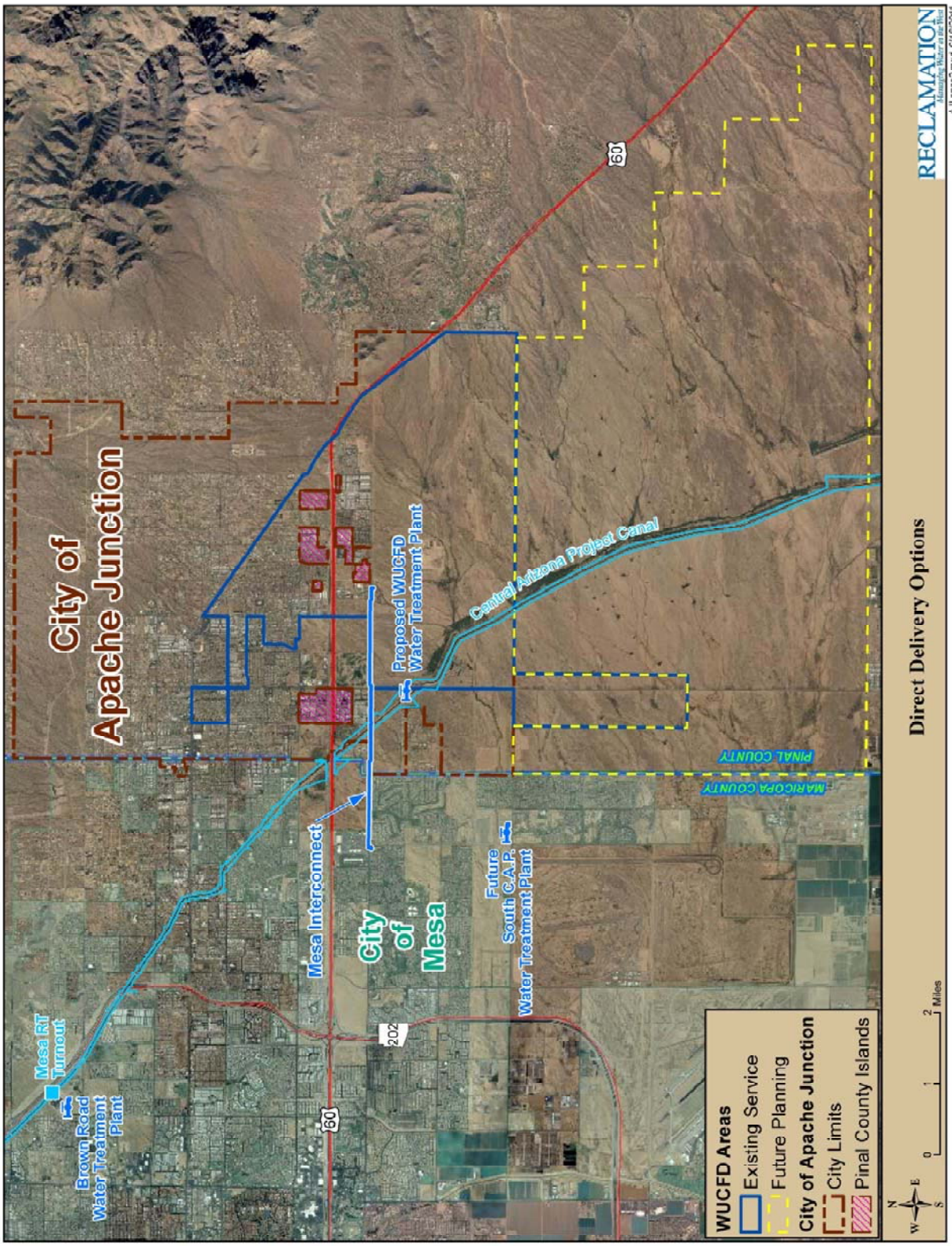

Figure 3. – Recharge Options for WUCFD