

RECLAMATION

Managing Water in the West

Draft Environmental Assessment for

Assignment of Central Arizona Project Municipal & Industrial Priority Subcontract Water Entitlements from Four Water Companies to the Central Arizona Water Conservation District



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

May 2007

**DRAFT ENVIRONMENTAL ASSESSMENT
FOR
ASSIGNMENT OF CENTRAL ARIZONA PROJECT MUNICIPAL & INDUSTRIAL PRIORITY
SUBCONTRACT WATER ENTITLEMENTS FROM FOUR WATER COMPANIES
TO THE
CENTRAL ARIZONA WATER CONSERVATION DISTRICT**

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May 2007

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1 **I. PURPOSE AND NEED**

2 This Environmental Assessment (EA) has been prepared to describe and assess the environmental
3 consequences anticipated to result from the Bureau of Reclamation’s (Reclamation) termination of
4 Central Arizona Project (CAP) water service subcontracts currently held by four water companies, and
5 assignment of 7,746 acre feet annually (afa) of CAP municipal and industrial (M&I) priority water
6 entitlements associated with those subcontracts to the Central Arizona Water Conservation District
7 (CAWCD). As proposed, all of the CAP M&I entitlements held by West End Water Company (WEWC)
8 (157 afa), Sunrise Water Company (Sunrise) (944 afa), and New River Utility Company (NRUC) (1,885
9 afa), along with the remaining 4,760 afa of Litchfield Park Service Company’s (LPSCo) CAP water
10 entitlement¹ would be transferred to CAWCD exclusively for use in meeting the Central Arizona
11 Groundwater Replenishment District’s (CAGRDR) replenishment obligations as defined by Arizona
12 Revised Statutes (ARS), Title 48, Chapter 22, Article 4. CAWCD and Reclamation would execute the
13 “Supplemental Contract Between the United States and the Central Arizona Water Conservation District
14 for Delivery of Central Arizona Project Water” (Supplemental Contract) as an amendment to CAWCD’s
15 master repayment contract with Reclamation (Contract No. 14-06-W-245, Amendment No. 1,
16 Supplement No. 1). The Supplemental Contract would allow CAWCD to deliver the 7,746 afa to meet
17 CAGRDR’s statutory obligations. CAWCD’s use of this water would not be subject to future Federal
18 approvals or environmental reviews. The EA has been prepared in accordance with the National
19 Environmental Policy Act (NEPA), Council on Environmental Quality regulations implementing NEPA
20 (40 CFR 1500-1508), and Reclamation’s Draft NEPA Handbook (Reclamation 2000).

21 **A. Background**

22 CAWCD is a multi-county water conservation district formed under laws of the State of Arizona to serve
23 Maricopa, Pinal, and Pima Counties. CAWCD’s primary responsibilities include: operating, maintaining,
24 repaying and managing the CAP. In 1993, the Arizona Legislature provided CAWCD with additional
25 responsibilities and authorities relating to groundwater replenishment within CAWCD’s three-county
26 service area. These new replenishment authorities are commonly referred to as the CAGRDR. Therefore,
27 although the CAGRDR is not a separate legal entity from CAWCD, for purposes of this EA, the term
28 “CAGRDR” shall mean CAWCD exercising its authority under ARS Title 48, Chapter 22, Article 4.

29 The replenishment authorities assigned to the CAGRDR establish a mechanism for landowners and water
30 providers within the Phoenix, Pinal, and Tucson Active Management Areas (AMAs) to demonstrate they
31 have an assured water supply, which is required under the regulations enforced by the Arizona
32 Department of Water Resources (ADWR), termed the Assured Water Supply Rules (AWS Rules).

33 The AWS Rules became effective in February 1995, and are designed to protect groundwater supplies
34 within each AMA and to ensure that people purchasing or leasing subdivided land within an AMA have a

¹ LPSCo’s original CAP M&I water allocation was 5,580 afa, for which an M&I subcontract was executed on January 10, 1985. Portions of LPSCo’s entitlement were subsequently transferred to the City of Avondale (670 afa) and the City of Goodyear (150 afa).

1 water supply of adequate quality and quantity. There are five basic criteria for proving an assured water
2 supply (AWS). An applicant for an AWS must prove:

- 3 1. Sufficient quantity of water is continuously available to satisfy the water demands of the
4 development or service area for 100 years;
- 5 2. Water source meets water quality standards;
- 6 3. Proposed use of water is consistent with State water conservation standards;
- 7 4. Proposed use is consistent with the state water management goals, and
- 8 5. Applicant is financially capable of installing the necessary water distribution and treatment
9 facilities.

10 In each AMA, every new subdivision must demonstrate the availability of a 100-year assured water
11 supply to the ADWR before sales of parcels within the subdivision can begin. An AWS can be
12 demonstrated in two ways. First, the owner or developer of a proposed subdivision can prove an AWS for
13 the subdivision and receive a Certificate of AWS (CAWS) from ADWR. The CAWS covers only the
14 specific subdivision for which it is issued. Alternatively, a municipal water provider may prove an AWS
15 for its entire service area and receive a Designation of AWS (DAWS) from ADWR. Any subdivisions
16 that are served by the municipal provider are automatically deemed to have a proven AWS by virtue of
17 the provider's DAWS.

18 Membership in the CAGRDR provides a means by which an AWS applicant can satisfy criterion number 4
19 above, which requires that the proposed water use be consistent with the water management goals of the
20 particular AMA. Because the management goals within an AMA limit the quantity of mined groundwater
21 an applicant may use to demonstrate an AWS, new developments may not rely solely on mined
22 groundwater to serve their water demands. However, if a water provider or a landowner has access to
23 groundwater and desires to rely on groundwater to demonstrate a 100-year water supply, it may do so,
24 provided it joins the CAGRDR. As a member of the CAGRDR, the landowner or provider must pay the
25 CAGRDR to replenish any groundwater pumped by the member that exceeds the pumping limitations
26 imposed by the AWS Rules. There are two general types of CAGRDR membership: member lands, and
27 member service areas. Member lands are individual subdivisions enrolled in the CAGRDR to obtain a
28 CAWS. A member service area is the entire service area of a water provider that has enrolled in the
29 CAGRDR to obtain a DAWS.

30 In general, the CAGRDR operates in the following manner. First, a property owner or water provider
31 electing to rely partially or completely on groundwater enrolls its land or service area as a member of the
32 CAGRDR. The landowner or water provider then demonstrates compliance with criterion 1, 2, 3 and 5, as
33 listed above, to the satisfaction of the ADWR. Once this is complete, the ADWR will consider
34 enrollment in the CAGRDR as proof of consistency with the management goals of the AMA (criterion 4),
35 and that proof of an AWS has been established. Each year after enrollment, the water provider must

1 CAWCD for use by CAGR. Reclamation would enter into a supplemental contract with CAWCD
2 regarding the delivery of this CAP water to CAGR. CAGR would use this water to replenish excess
3 groundwater used by its members.

4 CAGR's need for the project is to secure a long-term, economically feasible, right to a renewable water
5 supply that it can use to meet replenishment obligations incurred on behalf of its members. The CAP
6 water entitlements proposed for transfer are currently not being utilized by their subcontract holders and
7 have, to date, been considered to be Excess CAP water. Although CAGR currently has the authority to
8 purchase Excess CAP water, such water is not guaranteed to be available for the long-term, and cannot be
9 relied upon as a permanent supply. The transfer of these CAP entitlements would create a dependable,
10 committed replenishment water source for CAGR. The Proposed Action would protect the groundwater
11 within the geographic area initially envisioned to benefit from the original allocation.

12 **C. Project Location**

13 There are five distinct entities involved in this transfer: WEWC, Sunrise, NRUC, LPSCo (the four water
14 companies that propose to give up their respective CAP M&I water entitlements they are currently not
15 using), and CAGR, the entity that would receive these entitlements. The project areas for the water
16 companies consist of the service areas identified in each of their "Certificate[s] of Convenience and
17 Necessity," as approved by the Arizona Corporation Commission (Figures 1, 2, 3, 4 and 5).

18 CAGR, as discussed previously, is the name by which the replenishment authorities of the CAWCD are
19 commonly referred. CAGR is not technically defined by a "service area" boundary. It is an operational
20 subdivision of CAWCD and, by statute, serves only within Maricopa, Pinal and Pima Counties in
21 Arizona. The operational boundaries of CAGR include three of the Active Management Areas
22 currently identified in statute: Phoenix, Pinal and Tucson AMAs. Therefore, the only lands that are
23 potentially eligible for membership in the CAGR are those located within the Phoenix, Pinal, and
24 Tucson AMAs. Once a subdivision or water service area is enrolled as a member of the CAGR, the
25 corresponding "footprint" of land becomes part of CAGR's service area. Thus, although CAGR is
26 authorized to serve within the boundaries of the Phoenix, Pinal and Tucson AMAs, its service area is
27 technically defined only by the members that have enrolled. Land that is not enrolled in CAGR is not
28 part of CAGR's service area. In addition, the replenishment obligation incurred by the CAGR as a
29 result of use of excess groundwater by members in a particular AMA must be satisfied through
30 replenishment in the same AMA. For purposes of this EA, CAGR's project area potentially includes
31 those member service areas and member lands that are located within the Phoenix Active Management
32 Area (AMA), since the transferred water would most likely be recharged within Maricopa County to
33 replenish excess groundwater used within the Phoenix AMA (Figure 6).

34 Based upon recommendations made by ADWR, under the proposed action, the Supplemental Contract
35 would restrict CAGR's use of the transferred CAP water by requiring that CAGR first use the
36 transferred water to satisfy the annual replenishment obligations for member lands and member service

1 areas⁴ located within the boundaries of the transferring entities. For obligations incurred within the
2 NRUC, Sunrise and WEWC service areas, the corresponding replenishment would have to occur within
3 the area of hydrologic impact of the associated groundwater withdrawals. For obligations incurred within
4 the LPSCo service area, the replenishment must occur within the Phoenix AMA. The CAGRDR currently
5 uses three groundwater recharge facilities that satisfy these provisions: the Agua Fria Recharge Project,
6 the Hieroglyphic Mountains Recharge Project, and the Tonopah Desert Recharge Project. These facilities
7 are briefly described below.

- 8 • Agua Fria Recharge Project (AFRP) - This facility is composed of two components: an in-
9 channel recharge component and a spreading basin component. The spreading basin component
10 includes a conveyance canal and approximately 100 acres of infiltration ponds. The project is
11 located near central Peoria, Arizona, in the northwest valley of the Phoenix metropolitan area in
12 Maricopa County. The site extends from approximately four miles downstream of Waddell Dam
13 on the Agua Fria River to a point just south of Jomax Road. It has a total permitted capacity of
14 100,000 af per year. It is the only recharge project in Arizona that utilizes streambed recharge and
15 infiltration basins at a single facility (CAGRDR 2003).
- 16 • Hieroglyphic Mountains Recharge Project (HMRP) - This facility consists of approximately 38
17 acres of spreading basins adjacent to the north side of the CAP canal. The facility is located in
18 the northwest portion of the Phoenix metropolitan area near the northern boundary of Surprise,
19 Arizona. It is located northwest of Phoenix, approximately one mile west of the intersection of
20 163rd Avenue and the CAP canal. The facility has been permitted to store up to 35,000 af of
21 CAP water per year (CAGRDR 2003).
- 22 • Tonopah Desert Recharge Project (TDRP) – This facility consists of approximately 207 acres of
23 spreading basins immediately south of the CAP canal. The facility is located in the far west
24 portion of the Phoenix Active Management Area, about 40 miles west of Phoenix and seven miles
25 northwest of Tonopah. The facility has been permitted to store an average of 100,000 af of CAP
26 water per year.

27 The restricting provisions proposed to be included in the Supplemental Contract, along with CAGRDR's
28 operating policy to satisfy replenishment obligations using facilities that are located as close to its
29 members' pumping as possible, effectively dictate the use of the AFRP and HMRP for replenishment of
30 the subject CAP water. Therefore, these two groundwater recharge facilities will be considered
31 components of the project location (Figures 1 and 6).

⁴ There are currently no member service areas within the boundaries of the transferring entities; however, there is no prohibition against water providers enrolling their service areas as member service areas in the future.

1 **D. Summary of Scoping Process**

2 Reclamation initiated a 30-day public scoping comment period, with distribution of a scoping mailer to
3 over 100 entities, on October 29, 2003. The public was requested to provide input to Reclamation
4 regarding issues and concerns that should be included in the EA. One letter of comment was received.
5 One point raised in that letter was that Reclamation's request for scoping comments failed to identify
6 another ADWR recommendation that has been included in the proposed Supplemental Contract. This
7 recommendation provides CAGR D with the ability to transfer a portion of the targeted entitlements in the
8 event another entity relieves CAGR D of its replenishment obligations for member lands located within
9 the water service areas of any of the four water companies involved. Another point raised in this letter
10 expressed concern regarding the absence of restrictions on where the LPSCo portion of CAP water could
11 be recharged. The issues raised in this letter have been addressed in the EA.

12

1 **II. PROPOSED ACTION AND ALTERNATIVES**

2
3 **A. No Action Alternative**

4 The No Action alternative describes the conditions that are assumed to exist into the future in the absence
5 of the Federal action, and provides a basis for comparison with the Proposed Action. Under the No
6 Action alternative, Reclamation would not approve the proposed assignment of CAP water from WEWC,
7 Sunrise, NRUC, and LPSCo, and would not execute the Supplemental Contract with CAWCD for 7,746
8 afa of CAP water. WEWC, Sunrise, NRUC, and LPSCo would continue to seek to transfer their CAP
9 water entitlements to other entities; unless and until this occurred, the 7,746 afa of CAP water would be
10 available for purchase as Excess CAP water. None of the companies would develop the infrastructure
11 necessary to take, treat and deliver CAP water to their customers, and all four water companies would
12 continue to utilize groundwater to serve their customers. Developers of residential subdivisions within
13 the water service area of these four water companies would continue to enroll their property as member
14 lands of the CAGRDR in order to meet the requirements of the AWS Rules (as outlined in Section I).

15 Under the No Action Alternative, CAGRDR would continue to be responsible for meeting replenishment
16 obligations for groundwater delivered to all of its member service areas and member lands, including any
17 new member lands enrolled within the WEWC, NRUC, Sunrise, and LPSCo water service areas.
18 CAGRDR would continue to purchase Excess CAP water to the degree it remains available, for use in
19 satisfying its replenishment obligations. CAGRDR would continue to pursue acquisition of other short and
20 long-term rights to water supplies to broaden and diversify its water supply portfolio. The supplies
21 acquired for the purpose of satisfying replenishment obligations incurred within the WEWC, NRUC,
22 Sunrise and LPSCo service areas would be stored at the HMRP and AFRP, with the exception of effluent
23 supplies, which would be stored at effluent recharge facilities. The potential water supplies available to
24 the CAGRDR as outlined in its 2004 plan of operation include:

- 25 1. Excess CAP water – Excess CAP water is CAP water that is contracted but not ordered. CAWCD
26 estimates that Excess CAP water will be available at least through 2030. However, there are other
27 CAP customers that rely on Excess CAP water, including non-Indian agricultural (NIA) customers,
28 the Arizona Water Banking Authority (AWBA), municipal water providers, and others. CAWCD
29 estimates that available Excess CAP water will average about 100,000 afa over the next 45 years,
30 ranging from 400,000 af to 0 af in some years.
- 31 2. CAP Indian Leases – Past water rights settlements have authorized Indian communities, tribes, and
32 nations to lease their CAP water for “off-reservation” uses. Indian communities with available CAP
33 water authorized for lease “off-reservation” include: Ak-Chin Indian Community, Gila River Indian
34 Community, San Carlos Apache Tribe, Tohono O’odham Nation, and Fort McDowell Yavapai-
35 Apache Nation. CAWCD estimates approximately 158,000 afa will be available from CAP Indian
36 leases.

- 1 3. CAP NIA Priority Allocation – The Arizona Water Settlement Acts authorizes the reallocation of
2 approximately 96,000 afa of NIA-priority CAP water to non-Indian municipal and industrial (M&I)
3 purposes. The CAGR D is eligible to participate in the reallocation process, to be conducted by
4 ADWR. The first phase of this reallocation process may begin in 2009. The NIA-priority water is
5 the lowest priority within the CAP system and may suffer shortages such that the volume available
6 may be 0 in some years.
- 7 4. Arizona non-CAP Colorado River Supplies – Existing non-CAP Colorado River contractors include
8 irrigation districts, individual water users, and Indian communities. These water users could make
9 water available to the CAGR D through sale, lease, forbearance/fallowing, and conservation savings.
10 Use of water supplies held by Indian communities for use “off-reservation” requires Congressional
11 authorization. CAWCD estimates up to 318,000 afa could be available to the CAGR D from non-
12 CAP Colorado River supplies.
- 13 5. Imported Groundwater – Arizona law authorizes the exportation of groundwater from Butler Valley,
14 Harquahala Valley, and McMullen Valley groundwater basins for use inside the Phoenix, Pinal, and
15 Tucson AMAs. To develop imported groundwater resources, new groundwater well fields,
16 conveyance pipelines, and inlet facilities would be required to deliver imported groundwater to the
17 CAP system. The imported groundwater would then be delivered through the CAP system. At
18 present, plans for such facilities are conceptual. Currently, Federal approval is required to utilize the
19 CAP canal to transport (wheel) non-CAP water and should a specific proposal for wheeling non-CAP
20 water be submitted to Reclamation, compliance with environmental regulations, including NEPA,
21 would be required to develop imported groundwater resources for use by the CAGR D. CAWCD
22 estimates up to 181,000 afa are available to the CAGR D from imported groundwater supplies.
- 23 6. Effluent – Numerous water providers generate effluent that exceeds the amount they can use for their
24 own purposes. Although many of these providers eventually plan to use their effluent, in the near
25 term such effluent could be made available to the CAGR D. CAWCD does not own or operate
26 wastewater treatment plants or effluent underground storage facilities. Further, effluent would not be
27 transported in the CAP system, but would likely be stored at effluent underground storage facilities
28 adjacent to wastewater treatment plants. Rather than construct and operate effluent underground
29 storage facilities itself, CAGR D would likely purchase storage credits developed by others through
30 their operation of effluent treatment and recharge facilities. CAWCD estimates up to 205,000 afa
31 may be available for use by the CAGR D. Effluent supplies are anticipated to be available for the next
32 15 to 30 years; however, after that point it is assumed water providers will fully utilize the effluent for
33 their own uses.

1 **B. Proposed Action**

2 Under the Proposed Action, the following CAP water service subcontractors would transfer their entire
3 entitlements to CAGR D: WEWC (157 afa); Sunrise (944 afa); and NRUC (1,885 afa). LPSCo would
4 transfer its remaining entitlement of 4,760 afa to CAGR D. All four water service subcontracts would be
5 terminated.

6 A Supplemental Contract between Reclamation and CAWCD would be executed for the delivery of 7,746
7 afa of CAP water to CAGR D. The proposed Supplemental Contract requires CAGR D to use the
8 allocated CAP water to first meet replenishment obligations incurred as a result of excess groundwater
9 delivered to CAGR D member lands by the transferring entities. After all annual replenishment
10 obligations for these member lands have been satisfied, any remaining CAP water allocated to CAGR D
11 under the proposed action would then be used to satisfy the replenishment obligations for member lands
12 enrolled as of the date of the Supplemental Contract. According to CAGR D, the most likely scenario is
13 that the remaining CAP water would be recharged within the Phoenix AMA (CAGR D 2006).

14 Consistent with ADWR recommendations,⁵ the Supplemental Contract would require that replenishment
15 of excess groundwater delivered to member lands located within the WEWC, Sunrise and NRUC water
16 service areas occur within the area of hydrologic impact of the excess groundwater withdrawals. Also
17 consistent with ADWR recommendations, for excess groundwater withdrawals associated with member
18 lands located within the LPSCo water service area, replenishment would be required to occur within the
19 Phoenix AMA. In addition, the proposed Supplemental Contract requires that, should another entity
20 relieve CAGR D of its replenishment obligation for any portion of the member lands located within the
21 WEWC, Sunrise, NRUC or LPSCo water service areas, CAGR D would transfer to that entity a prorated
22 share of the transferred CAP water.

23 CAGR D would take delivery of the transferred CAP water through existing infrastructure for recharge at
24 either the AFRP or the HMRP. These existing facilities are of sufficient size and design to allow
25 replenishment of the transferred CAP entitlement, in compliance with existing state laws and the permits
26 issued for the facilities. The receipt and use of this water would not change the size or configuration of
27 the transferring entities' existing systems or service areas. The transferring entities would continue to
28 utilize groundwater to serve their respective water service areas. Therefore, the proposed action would
29 not require construction of additional facilities. Any CAP water left over after satisfying replenishment
30 obligations of member lands located within the water service areas of the four water companies would be

⁵ In developing its recommendations regarding transfer of the entitlements, ADWR complied with the decision guidelines established in its August 23, 1996, Policy Regarding Process for Transfers of Central Arizona Project Municipal and Industrial Water Subcontracts. These decision guidelines determine the priority between competing applications for CAP transfers. Due to the location of the AFRP and HMRP with respect to the WEWC, SWC and NRUC service areas, CAGR D was able to commit to performing replenishment within the area of hydrologic impact (AOHI) of groundwater pumping within these service areas. With this commitment, CAGR D received priority consideration for ADWR's recommended transfer of entitlements from these three subcontractors. The AFRP and HMRP are not located within the AOHI of LPSCo groundwater pumping, thus CAGR D could not make a similar commitment for water received under a transfer from LPSCo. However, CAGR D did commit to replenishing the LPSCo water in the Phoenix AMA to satisfy replenishment obligations resulting from groundwater pumping in the LPSCo service area. With this commitment, CAGR D received a somewhat elevated priority for the LPSCo transfer, resulting in an ADWR recommendation that a portion (4,760 afa) of LPSCo's entitlement be transferred to CAGR D.

1 recharged at existing recharge facilities. It is anticipated this recharge would occur within the Phoenix
2 AMA.

3 The proposed entitlements to be transferred to CAGRDR were originally intended to serve the water
4 demands of the transferring entities' service areas. The proposed action would preserve that intent by
5 making the water available for replenishing excess groundwater delivered by the transferring entities'
6 within their respective service areas.

7 While the Proposed Action provides for a long-term sustainable water supply⁶ for the CAGRDR, it does
8 not change or modify the need for the CAGRDR to pursue and obtain sufficient other water supplies as
9 identified in the No Action alternative. The Proposed Action does provide for the use of CAP water as a
10 replenishment supply for excess groundwater uses for member lands within the service areas of the water
11 providers assigning CAP water to the CAGRDR.

12

13 **C. Alternatives Considered but Eliminated**

14 No other alternatives were considered in depth for WEWC, Sunrise, NRUC, and LPSCo. These entities
15 do not have existing means nor regulatory incentive for taking, treating and delivering CAP water to their
16 customers. However, the potential for a financial incentive to build the necessary infrastructure to accept
17 the CAP water was explored. This alternative, however, would not be economically feasible to any of the
18 entitlement holders. There was also consideration of utilizing a neighboring service provider's
19 infrastructure to convey these entities' entitlements to their respective service areas. Sunrise and NRUC's
20 neighbor, the City of Peoria, has a treatment plant that would be able to treat Sunrise and NRUC's CAP
21 entitlements and deliver the water to them. This alternative was explored but at present the City and the
22 two water companies are unable to reach agreement. LPSCo and WEWC do not have any neighboring
23 entities with water treatment plants that would be able to treat and convey their CAP entitlements.

24 CAGRDR has considered water sources other than those listed in its 2004 Plan of Operation (as described
25 above), to increase its dependable, committed replenishment water supplies. Several reasons have
26 restricted the use of other types of sources. The potential alternative supplies and reasons for elimination
27 from consideration are listed in Table 1.

28 Because the water sources identified in Table 1 are all non-viable from CAGRDR's perspective, they were
29 not further considered as alternatives to the Proposed Action, nor were they considered likely to occur
30 under the No-Action alternative.

⁶ Under the Arizona Water Settlements Act (2004) CAP M&I subcontracts are permanent service contracts. It should be noted that all or some portion of the CAP M&I water to be transferred under the Proposed Action may not be available in years of extreme shortage on the Colorado River. However, water supply firming activities of the Arizona Water Banking Authority are designed to reduce shortages to CAP M&I supplies. The CAP M&I water to be transferred under the Proposed Action could be considered to be a more reliable supply than some of those identified in the No Action alternative (e.g., Excess CAP water and CAP NIA Priority water), but it may be less reliable than others (e.g., higher priority non-CAP Colorado River supplies, imported groundwater and effluent). Regardless of the supplies, CAGRDR has a statutory responsibility to meet all of its replenishment obligations. Therefore, CAGRDR will develop a portfolio of water supplies necessary to comply with Arizona law under both the Proposed Action and No Action alternatives.

Table 1. Alternative Water Sources Considered and Reasons For Their Elimination as Viable Options.	
Potential Water Source for CAGR D's Recharge Use	Reason(s) for Inability of CAGR D to Utilize Water
Active Management Area (AMA) Groundwater Rights	Prohibited by law or current law does not provide for use of water by the CAGR D
Non-Arizona Colorado River Supplies	Prohibited by law or current law does not provide for use of water by the CAGR D
Excess Salt River Project (SRP), Roosevelt Water Conservation District, Maricopa County Municipal Water Conservation District No. 1, or Salt /Gila River Rights	1. Prohibited by law or current law does not provide for use of water by the CAGR D 2. Supply would not qualify for long term storage credits (ARS 45-851.01.B)
Additional Groundwater Basins other than Butler Valley, McMullen Valley and Harquahala Valley	Prohibited by law or current law does not provide for use of water by the CAGR D
Bill Williams River Rights	Prohibited by law or current law does not provide for use of water by the CAGR D
Unused Arizona On-River (Colorado River) Municipal & Industrial Rights	Rights held by Arizona municipal providers cannot be considered because those rights are already earmarked for future development by holder
Colorado River Reserve Water for Use at National Wildlife Refuge	Mitigation costs to complete NEPA compliance would be too high
Colorado River Supplies less than 10,000 afa	Inefficient to negotiate a Colorado River lease or fallowing agreement for that small of an amount of water.
Water Supply Committed Under Existing Contracts or Leases	Water is already committed to other users
Other Surface Water Rights not identified as potentially available in CAGR D's Plan of Operation	1. Prohibited by law or current law does not provide for use of water by the CAGR D 2. Supply would not qualify for long-term storage credits (ARS 45-851.01.B)

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2

1 **III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

2 This section describes the existing affected environment and likely environmental consequences of
3 Reclamation's approval of the assignment of 7,746 afa of CAP water entitlements from WEWC, Sunrise,
4 NRUC, and LPSCo to CAGR. A No Action scenario is also evaluated for the service areas and
5 CAGR to provide a basis for comparison with the Proposed Action. The analysis is focused on the
6 resource areas that may be impacted.

7 The following resource areas are not anticipated to be affected to any measurable degree, and are
8 therefore not included in the analysis: Surface water resources, air resources, recreational resources,
9 geology, and soils.

10 **A. Water Resources**

11 1. Affected Environment

12 The four water companies are located within the Phoenix AMA, in the West Salt River Valley
13 groundwater subbasin. The West Salt River Valley subbasin covers an area of approximately 1,330
14 square miles. The subbasin is a broad alluvial valley that is bounded on the west by the White Tank
15 Mountains; to the south by the Buckeye Hills, Sierra Estrella, and South Mountains; to the east by the
16 Union Hills, Phoenix Mountains, and Papago Buttes; and to the north by the Hieroglyphic Mountains
17 and Hedgepeth Hills.

18 The sediments in the West Salt River Valley subbasin are generally alluvial units that range in
19 thickness from less than 100 feet near the basin margins to over 10,000 feet in the central portions of
20 the basin in the vicinity of Luke Air Force Base. The sediments in the subbasin are composed
21 primarily of unconsolidated sediments of sand, gravel, silt and clays. In general, the sediments form
22 three broad units: the upper alluvial unit, the middle fine-grained unit, and the lower alluvial unit.
23 Groundwater is found in each of the three units, forming a large heterogeneous alluvial aquifer. In
24 general, most groundwater is pumped from the middle fine-grained unit. It is estimated that the West
25 Salt River Valley subbasin aquifer includes more than 8 million acre-feet of groundwater (ADWR
26 1999).

27 Groundwater development in the West Salt River Valley began in the late 1800s with the
28 development of shallow groundwater wells along the Agua Fria, Salt, and Gila Rivers. Currently,
29 groundwater uses include agricultural irrigation, municipal, and industrial water supply purposes.
30 Municipal water providers include WEWC, NRUC, Sunrise, LPSCo, other private water companies,
31 and the cities of Phoenix, Glendale, Peoria, Avondale, Goodyear, and Surprise. As a result of
32 groundwater development, water levels in some portions of the subbasin have declined substantially,
33 creating large cones of depression near Luke Air Force Base and Deer Valley. Groundwater pumping
34 also has resulted in land subsidence and earth fissuring near Luke Air Force Base. Groundwater
35 logging is occurring in the Buckeye and Goodyear areas due to effluent discharge from the 91st
36 Avenue Waste Water Treatment Plant and irrigation practices (ADWR 1999).

1 a. M&I Water Entitlement Holders

2 (1) WEWC

3 The WEWC's service area encompasses approximately 5.81 square miles in the northwestern
4 portion of the West Salt River Valley subbasin, primarily around the town of Wittmann.
5 Depth to groundwater in the vicinity of WEWC ranges from approximately 400 to 500 feet
6 below ground surface (bgs) (ADWR 2002). Water quality in the area is good, with
7 concentrations of total dissolved solids (TDS) generally less than 300 milligrams per liter
8 (mg/L), and low levels of nitrates and fluoride (ADWR 2002, USGS 2003).

9 Several ephemeral washes are located within the service area, and are tributary to the Agua
10 Fria River, which is located approximately 12 miles southeast of the WEWC. Surface water
11 generally flows northwest to southeast; however, the CAP and Beardsley Canals impede
12 surface flow from reaching the Agua Fria River.

13 There are approximately 64 registered wells within the WEWC service area, ranging from
14 approximately 300 to 800 feet in depth bgs. The majority of these wells are small-capacity
15 domestic wells (ADWR 2003). WEWC owns and operates three of these wells. The WEWC
16 wells range from 633 to 800 feet in depth bgs. The wells are used to meet all of its
17 customers' demands. WEWC served 98 af of groundwater to 236 customers in 2005. Water
18 use is primarily for domestic residential purposes.

19 (2) Sunrise

20 Sunrise's service area encompasses approximately 3.92 square miles in the northeastern
21 portion of the West Salt River Valley subbasin, primarily within the City of Peoria corporate
22 limits. Depth to groundwater in the vicinity of Sunrise ranges from approximately 400 to 600
23 feet bgs (ADWR 2002). Water quality in the area is good, with concentrations of TDS
24 generally less than 500 mg/L, and low levels of fluoride, although there have been reports of
25 elevated levels of nitrates and arsenic (ADWR 2002, USGS 2003).

26 Several ephemeral washes are located within the service area that are tributary to New River,
27 which forms the eastern boundary of the service area. Surface water generally flows north to
28 south in the area.

29 There are approximately 46 registered wells within the Sunrise service area, ranging from
30 approximately 200 to 1,200 feet in depth bgs. The majority of these wells are small-capacity
31 domestic wells (ADWR 2003). Sunrise owns and operates five of these wells. The Sunrise
32 wells range in depth from 850 to 1,260 feet in depth bgs. The wells are used to meet all of
33 Sunrise's customer demands. Sunrise served 1,009 af of groundwater to 1,272 customers in
34 2005. Water use is primarily for domestic residential purposes.

1 (3) NRUC

2 NRUC's service area encompasses approximately 1.68 square miles in the northeastern
3 portion of the West Salt River Valley subbasin, primarily within the City of Peoria corporate
4 limits and immediately south of the Sunrise Water Company. Depth to water and water
5 quality are similar to that described above for Sunrise.

6 Several ephemeral washes are also located within the NRUC service area, and are tributary to
7 New River. Like Sunrise, New River forms the eastern boundary of the NRUC service area.

8 There are approximately 13 registered wells within the NRUC service area, ranging from 600
9 to 2,000 feet in depth bgs. NRUC owns and operates six of these wells primarily for
10 domestic residential purposes. The NRUC wells range from 1,200 to 1,977 feet in depth bgs
11 and are used to meet all of its customers' demands. NRUC served 1,877 af of groundwater to
12 2,653 customers in 2005. The majority of the remaining wells are large-capacity irrigation
13 wells (ADWR 2003).

14 (4) LPSCo

15 LPSCo's service area encompasses approximately 20.16 square miles in the western portion
16 of the West Salt River Valley subbasin, near the cities of Litchfield Park, Goodyear, and
17 Glendale. Depth to groundwater in the vicinity of LPSCo ranges from approximately 50 feet
18 bgs on the east side of the service area near the Agua Fria River to approximately 300 feet
19 bgs on the west side of the service area, near the regional cone of depression known as the
20 Luke Sink (ADWR 2002). Water quality in the area varies widely. Concentrations of TDS
21 can be as low as 200 mg/L; however, the presence of a massive salt body known as the Luke
22 Salt has affected salinity levels in the area, and deeper wells can have concentrations of TDS
23 in excess of 4,000 mg/L. Concentrations of fluoride are generally low, although there have
24 been reports of elevated levels of nitrates and arsenic (ADWR 2002, USGS 2003).

25 The Agua Fria River is located immediately east of the LPSCo service area. Surface water
26 generally flows north to south within the service area. Portions of the Roosevelt Irrigation
27 Canal, Colter Channel, and Airline Canal also pass through the service area.

28 There are approximately 96 registered wells within the LPSCo service area, ranging from
29 approximately 50 to 2,000 feet in depth bgs. LPSCo owns and operates nine of these wells.
30 The LPSCo wells range from 503 to 2,000 feet in depth bgs and are used to serve all of its
31 customers' demands. In 2005, LPSCo served 9,304 af of groundwater to 12,978 customers.
32 Water use is primarily for domestic residential purposes. Approximately one third of the 96
33 registered wells are monitoring wells, and over half are primarily large-capacity irrigation
34 wells (ADWR 2003).

1 b. CAGR D

2 The affected environment for the CAGR D for purposes of this EA includes the member lands and
3 member service areas for which the CAGR D could fulfill replenishment obligations by
4 recharging the 7,746 afa of CAP water that would be transferred to CAGR D by the four water
5 companies. This includes the water service areas of the four water companies, which are
6 described above, and the Phoenix AMA.

7 The Phoenix AMA covers approximately 5,646 square miles and includes seven groundwater
8 subbasins: East Salt River Valley, West Salt River Valley, Rainbow Valley, Hassayampa, Lake
9 Pleasant, Carefree, and Fountain Hills subbasins. Groundwater in the Phoenix AMA generally
10 occurs in broad alluvial aquifers composed of unconsolidated sands, silts, clays and gravels.
11 Groundwater development in the Phoenix AMA began in the late 1800's when shallow
12 groundwater wells were drilled adjacent to streams to supplement surface water supplies for
13 irrigation. Currently, ADWR estimates approximately 2.3 million acre-feet are used annually in
14 the Phoenix AMA with 1.4 million acre-feet provided from renewable supplies (CAP and SRP
15 water) and approximately 900,000 acre-feet from groundwater (ADWR 2004). Additionally,
16 ADWR estimates approximately 250,000 acre-feet of effluent are reused in the Phoenix AMA.
17 At present, groundwater levels are generally stable or rising in the East Salt River Valley
18 subbasin due to reduction in agricultural uses, increases in artificial recharge, and increased
19 natural recharge from recent floods along the Salt River stream bed. Depth to groundwater
20 ranges from 150' to 600' bgs. In the western subbasins (West Salt River, Hassayampa, and
21 Rainbow Valley) groundwater levels are generally stable, with some areas suffering from water
22 logging conditions. In general, depth to groundwater ranges from 10 feet (water logged areas
23 near Buckeye) to 600 feet bgs. However, several large cones of depression do occur including:
24 the Luke cone and Palo Verde cone. The remaining subbasins (Lake Pleasant, Carefree, and
25 Fountain Hills) are isolated alluvial pockets with relatively thin alluvial aquifers. Groundwater
26 levels are generally stable due to limited development and importation of renewable supplies
27 (ADWR 2004).

28 The CAGR D currently uses two groundwater recharge facilities that are located in the West Salt
29 River Valley subbasin (where the four water companies' service areas are located): the Agua Fria
30 Recharge Project and the Hieroglyphic Mountains Recharge Project (Figure 7). Prior to initiating
31 recharge operations, depth to water in the vicinity of the HMRP and AFRP were approximately
32 460 feet and 300 feet bgs, respectively. Currently, depth to groundwater is approximately 300
33 feet bgs at the HMRP and approximately 250 feet bgs at the AFRP. Water quality in these areas
34 is good, with concentrations of TDS generally being less than 500 mg/L, and generally having
35 low levels of arsenic, fluoride, and nitrate⁷ (ADWR 2002, USGS 2003).

⁷ On October 26, 2006, after nearly four years of operating the HMRP, a water quality sample taken from a monitor well located south of the facility exceeded the drinking water standard for nitrate. A subsequent sample also exceeded the nitrate standard. CAWCD has ascertained that the exceedance was likely associated with the dissolving of in-situ salts as water

1 2. Environmental Consequences

2 a. No Action

3 Under the No Action alternative, the transfers would not occur and WEWC, Sunrise, NRUC, and
4 LPSCo would continue to pump groundwater to meet their supply needs. It is anticipated by
5 2035, approximately 15,000 afa of groundwater would be pumped to supply the water demands
6 within the service areas of the four water companies (CAGR D 2004). They would not be
7 expected to utilize any portion of their CAP entitlements.

8 Under this alternative, WEWC, Sunrise, NRUC, and LPSCo would continue to seek to transfer
9 their CAP water entitlements to other entities; unless and until this occurred, the 7,746 afa of
10 CAP water would be available for purchase as Excess CAP water. As long as the water remains
11 in the Excess CAP pool and is not used by higher priority users,⁸ it could be purchased and
12 recharged by CAGR D to fulfill the replenishment obligations associated with member lands
13 located within the water service areas of the four water companies. The availability of Excess
14 CAP water will generally decline as contractors and subcontractors increase the use of their
15 entitlements. To the extent that Excess CAP water is not available, CAGR D would use another
16 source of water to meet its replenishment obligations, as described in Section II above. Because
17 subdivisions within the service areas of the four water providers have already obtained CAWS,
18 whether the proposed action is approved or not has no bearing on the anticipated volume of
19 replenishment obligations that CAGR D will incur as a result of excess groundwater pumping by
20 the transferring entities. However the mix of water supplies used to meet the obligations, as
21 described previously, must approximate the reliability of CAP M&I priority water supplies in
22 order that CAGR D may meet its replenishment obligations within the three-year time frame
23 defined by Arizona statute.

24 Arizona statutes require CAGR D to satisfy replenishment obligations incurred from these four
25 services areas by recharging in the west portion of the Phoenix AMA “to the extent reasonably
26 feasible” (ARS § 48-3772.I). Therefore, CAGR D could meet its obligations by replenishing
27 anywhere in the west portion of the Phoenix AMA. Because CAWCD currently operates two
28 recharge projects within the West Salt River Subbasin (AFRP and HMRP), it is likely that
29 CAGR D would maximize the amount of water that it replenishes in these two projects regardless
30 of whether or not the proposed action is approved. However, it is possible that CAGR D’s water
31 supply portfolio under the No Action alternative could include a larger volume of effluent
32 supplies. If this occurs, a portion of the replenishment associated with these four service areas

that had been recharged at the HMRP flushed out the vadose zone. CAWCD has developed an action plan to increase area groundwater monitoring activities and to protect nearby landowners until nitrate levels come back within compliance. CAWCD believes that aggressive operation of the project to facilitate the flushing of nitrates through the aquifer system will rectify the problem and will do so with approval and oversight from ADWR and the Arizona Department of Environmental Quality.

⁸ As part of the settlement of Indian water rights claims and CAP repayment negotiations with the United States, CAWCD has adopted a policy providing NIA users with first priority for use of excess CAP water through 2030. Under the policy, NIA users have priority to 400,000 AF/year of excess CAP water through 2016; 300,000 af /year from 2017 through 2023; and 225,000 AF/year from 2024 through 2030.

1 may not occur within the West Salt River Subbasin. This is because effluent cannot be stored at
2 the AFRP or HMRP and there may be a limit on the capacity available in effluent recharge
3 projects located within the West Salt River Subbasin.

4 b. Proposed Action

5 Under the Proposed Action, entitlement to 7,746 afa of CAP M&I water, currently allocated to
6 the four water companies, would be transferred to CAGRDR, thus providing CAGRDR with a
7 permanent supply that is extremely reliable. CAGRDR would incur the same replenishment
8 obligation for the four water companies' service areas and would replenish the same volume of
9 water under both alternatives. As with the No Action Alternative, groundwater would be used to
10 supply future water demands within the water service areas associated with these four water
11 companies, and CAGRDR would be responsible for replenishing the excess groundwater used by
12 the member lands located within the water service areas of the four water companies. Under the
13 Proposed Action, the Supplemental Contract would require that replenishment on behalf of
14 member lands in the NRUC, Sunrise and WEWC service areas be accomplished within the area
15 of hydrologic impact of the associated groundwater withdrawals. To satisfy the replenishment
16 obligations incurred as a result of groundwater pumping within the WEWC water service area,
17 CAP water obtained by CAGRDR under the proposed action would be replenished at the HMRP.
18 For obligations incurred as a result of groundwater pumping within the Sunrise and NRUC water
19 service areas, CAP water would be recharged into the AFRP.

20 The Supplemental Contract would require that replenishment on behalf of member lands in the
21 LPSCo service area be accomplished within the Phoenix AMA. It is CAGRDR's intent that CAP
22 water transferred from the LPSCo water service subcontract to CAGRDR would be replenished at
23 the AFRP. While this facility is not within the area of hydrologic impact of groundwater
24 pumping in the LPSCo service area, it is located in the western portion of the Phoenix AMA and
25 therefore complies with the State's AWS rules as well as the provisions of the proposed
26 Supplemental Contract.

27 In accordance with the proposed Supplemental Contract, any transferred CAP water that is "left-
28 over" after fulfilling the replenishment obligations of the member lands located within the water
29 service areas of the four water companies may be used to satisfy annual replenishment obligations
30 for member lands enrolled as of the effective date of Exhibit A of the Supplemental Contract.
31 More than 85% of CAGRDR's total replenishment obligations for member lands is projected to be
32 incurred in the Phoenix AMA (CAGRDR, 2004), translating to large volumes of water needed to
33 meet replenishment obligations for member lands in the Phoenix AMA. Therefore, CAGRDR
34 would, in all likelihood, replenish any of the left-over CAP water within the Phoenix AMA, and
35 probably at the AFRP or HMRP. However, CAGRDR estimates that the total annual
36 replenishment obligations for member lands within the four water companies' service areas will
37 exceed 7,746 AF by 2020 (CAGRDR 2004), so left-over water would not be a long-term issue
38 (Table 2).

Service Area (annual amount to be transferred)	2008	2009	2010	2015	2020
WEWC (157)	10	11	13	322	626
Sunrise (944)	244	268	292	347	682
NRUC (1,885)	1,333	1,407	1,481	811	2,219
LPSCo (4,760)	3,989	4,317	4,644	4,252	10,166
Total (7,746)	5,576	6,003	6,430	5,732	13,693

2

3 CAGR D may replenish more water at these two facilities under the Proposed Action, as
4 compared to what may occur under the No Action alternative. This possibility exists because, as
5 discussed above, CAGR D may increase its reliance on effluent under the No Action alternative,
6 thereby reducing the volume of water available to CAGR D for replenishment at the AFRP and
7 HMRP. However, this possible increase in use of the facilities by CAGR D would not result in
8 changes to the operating procedures at these two facilities.

9

10 B. Land Use

11 1. Affected Environment

12 a. M&I Water Entitlement Holders

13 (1) WEWC

14 WEWC's service area encompasses approximately 3,720 acres of land. Approximately 25-
15 40% is developed, consisting mainly of sparsely distributed residential developments with
16 some commercial businesses. The town of Wittmann is located within the service area; the
17 remainder falls within an unincorporated area of Maricopa County. Much of the service area
18 consists of native desert, particularly in the northern, southern, and eastern portions.

19 (2) Sunrise

20 Sunrise's service area is approximately 2,506 acres in size, and includes unincorporated
21 Maricopa County land, a portion of the city of Peoria, and about 160 acres of State land.
22 About 25% of the service area, including the State land, is native desert. The remainder of
23 the service area consists of medium- to high-density residential neighborhood clusters that
24 have been constructed or are planned for construction. There are also several commercial
25 areas.

1 (3) NRUC

2 NRUC's water service area is approximately 1,077 acres in size and is entirely located within
3 the limits of the city of Peoria. Although there may be some small vacant parcels scattered
4 within the service area, the entire service area is essentially fully developed with the
5 exception of the New River corridor.

6 (4) LPSCo

7 The LPSCo service area is the largest of the four water service areas involved in the proposed
8 transfer, encompassing approximately 13,214 acres. Portions of the service area fall within
9 Litchfield Park, Goodyear, and Avondale city limits. The service area also includes
10 unincorporated Maricopa County land. The area has been experiencing rapid conversion
11 from agriculture to high-density residential development over the past several years.
12 Approximately 70% of the LPSCo service area is already developed or planned for
13 development. Several golf courses are also located within the service area boundaries.

14 Approximately 3,000 acres consist of irrigated agricultural fields. These are located in the
15 extreme western portion of the service area. About half of these acres are located within
16 Luke Air Force Base's outermost noise contour. There are also about 1,350 acres of
17 undeveloped desert in two distinct parcels within the service area. One parcel is located in
18 the extreme northeast portion of the service area that extends east of El Mirage Road. The
19 other is just southeast of Luke Air Force Base. Both parcels are located in unincorporated
20 Maricopa County.

21
22 b. CAGR D

23 Member Lands - As of December 31, 2005, a total of 647 subdivisions have enrolled as member
24 lands of the CAGR D in the Phoenix AMA. These 647 subdivisions represent approximately
25 115,600 homes. Of these 647 subdivisions, 420 are located in the west portion of the Phoenix
26 AMA (representing about 84,200 homes) and 227 are located in the east portion of the Phoenix
27 AMA (representing about 31,400 homes).⁹

28 Member Service Areas - As of December 31, 2005, a total of nine municipal water providers
29 have enrolled their water service areas as member service areas of the CAGR D in the Phoenix
30 AMA. Of these, five are in the west portion of the AMA and four are in the east portion, as
31 indicated below.

32

⁹ CAGR D will not incur parcel replenishment obligations for thirteen of these member land subdivisions (ten in the west portion of the Phoenix AMA and three in the east portion) because the municipal water providers serving the subdivisions (City of El Mirage, City of Surprise and Johnson Utilities, LLC) enrolled their service areas as member service areas of the CAGR D after the member lands were enrolled. Therefore, the 3,876 homes within these thirteen subdivisions are not included in the figures provided herein.

1 at its current rate. Table 3 provides a summary of the projected growth in the number of
2 housing units within each of the four service areas through 2030 (CAP & MAG 2004).

3

Service Area Name	2007	2010	2015	2020	2025	2030
WEWC	395	413	1,476	2,535	3,379	4,264
Sunrise	1,299	1,446	1,701	1,952	2,165	2,394
NRUC	2,972	3,521	3,522	3,522	3,523	3,523
LPSCo	13,242	15,294	19,960	24,602	25,867	27,496
Total	17,908	20,674	26,659	32,611	34,934	37,677

4
5 WEWC, Sunrise, NRUC, and LPSCo would continue to seek to transfer their CAP water
6 entitlements to other entities; unless and until this occurred, the 7,746 afa of CAP water
7 would be available for purchase as Excess CAP water. However, a possible occurrence under
8 the No Action alternative is that the entitlements held by the four water companies could be
9 transferred to one or more other water providers that are not members of the CAGR, D,
10 thereby increasing those providers' portfolios of renewable water supplies. With an increase
11 of available renewable supplies, State law would allow additional development (i.e.,
12 construction and land disturbance) to occur on lands located within those water providers'
13 service areas.

14 b. Proposed Action

15 Under the Proposed Action, CAGR, D would receive a CAP water entitlement of 7,746 af
16 annually. This water would be used to fulfill replenishment obligations of member lands
17 located within the water service areas of WEWC, Sunrise, NRUC, and LPSCo. Transferred
18 water entitlements from Sunrise and New River would be used for recharge at the AFRP and
19 WEWC's entitlement would be recharged at the HMRP. LPSCo's transferred entitlement
20 would likely be used for recharge at AFRP, although legally it could be recharged at various
21 recharge locations within the Phoenix AMA. The Proposed Action would potentially
22 increase the volume of storage at HMRP and AFRP over that contemplated in the No Action
23 alternative, if the No Action alternative includes the use of effluent storage.

24 Because all currently undeveloped land within the service areas of the four water companies
25 are eligible to be enrolled in CAGR, D, it is assumed that land development under the
26 Proposed Action would occur as it would be anticipated to occur under the No Action
27 Alternative. There would be no difference in the impacts to land ownership or land
28 development within the defined Project area between the two alternatives. However, the

1 Proposed Action could result in less development on lands located outside of the defined
2 Project. This would occur because, under the Proposed Action, the CAP entitlements
3 proposed for transfer would not be available to other water providers that are not members of
4 the CAGR, thereby limiting the ability for additional lands to be developed in those service
5 areas.

6 **C. Socioeconomic Resources**

7 1. Affected Environment

8 a. M&I Water Entitlement Holders

9 These water providers' service areas fall within the political boundaries of several entities,
10 including the cities of Peoria, Litchfield Park, Goodyear, and Avondale, smaller towns like
11 Wittmann, and unincorporated Maricopa County land. Analysis was conducted through the
12 evaluation of Census tracts. A Census tract is a geographically smaller area that documents the
13 same type of demographic, racial, and economic statistics as larger areas such as counties and
14 states. Service areas were compared with Maricopa County data to determine whether or not
15 service areas were demonstrating the same trends as the county as a whole.

16 (1) WEWC

17 The entire WEWC service area is located in one census tract, Tract 405.09. This tract is
18 actually larger than WEWC's water service area. According to the Census 2000, Census
19 Tract 405.09 consists of a smaller percentage of a non-white population, unemployment rate,
20 and a lower 1999 Median Household Income when compared to Maricopa County, Arizona
21 (Table 4). Also shown in Table 4, the occupational category with the greatest number of jobs
22 in Census Tract 405.09 was the Sales and Office category while the majority of employees in
23 Maricopa County were in the Management and Professional employment fields.

24 (2) Sunrise

25 The Sunrise service area is located in portions of three census tracts, Tract 303.71, 303.73,
26 and 303.75. According to the Census 2000, these three census tracts consist of smaller
27 percentages of non-white populations when compared to Maricopa County, Arizona. These
28 census tracts also consisted of higher 1999 Median Household Incomes. Two of the three
29 tracts had lower unemployment rates (2000) than the County (Table 5). When occupation
30 types were compared, the largest job category in these three census tracts was the same as the
31 County; most employees were categorized as working in Management and Professional
32 fields.
33

1

	WEWC Census Tract Census Tract 405.09	Maricopa County
<i>Population Characteristics</i>		
Population	15,675	3,072,149
% White of population	88%	77.4%
% Non-White of population	12%	22.6%
<i>Economic Characteristics</i>		
Median Household 1999 Income	\$32,254	\$45,358
% Unemployment (2000)	1.9%	3.0%
<i>Employment</i>		
No. Employed (over Age of 16)	4,474 (29% of population)	1,427,292 (46%)
<i>Occupation</i>		
Management, Professional	21.5%	33.9%
Service	21.7%	14.6%
Sales and Office	25.5%	29.7%
Farming, Fishing, Forestry	2.7%	0.4%
Construction and Maintenance	14.7%	10.5%
Production and Transportation	13.9%	11.0%

2

3

	Sunrise Census Tracts			Maricopa County
	303.75	303.71	303.73	
<i>Population Characteristics</i>				
Population (persons)	2,258	12,306	2,942	3,072,149
% White of population	95.3%	92.8%	90.9%	77.4%
% Non-White of population	4.7%	7.2%	9.1%	22.6%
<i>Economic Characteristics</i>				
Median Household 1999 Income	\$81,976	\$57,103	\$74,073	\$45,358
% Unemployed (2000)	1%	1.6%	5%	3%
<i>Employment</i>				
No. Employed (over Age of 16)	1,188 (53%)	5,459 (44%)	1,491 (51%)	1,427,292 (46%)
<i>Occupation</i>				
Management, Professional	32.7%	37.6%	45.8%	33.9%
Service	10%	12.7%	12%	14.6%
Sales and Office	32.5%	32.4%	29.5%	29.7%
Farming, Fishing, Forestry	0.7%	0%	0%	0.4%
Construction and Maintenance	14.1%	9.8%	8.5%	10.5%
Production and Transportation	9.9%	7.5%	4.2%	11.0%

4

1 (3) NRUC

2 The NRUC service area is located in portions of three census tracts, Tract 303.68, 303.71,
 3 and 303.73. Two of these tracts, 303.71 and 303.73, also contain portions of the Sunrise
 4 service area. According to the Census 2000, all three census tracts consist of smaller
 5 percentages of non-white populations when compared to Maricopa County, Arizona. These
 6 census tracts also consisted of higher 1999 Median Household Incomes. Two of the three
 7 tracts consisted of lower unemployment rates (2000) than the County (Table 6). When
 8 occupation types were compared, the greatest amount of jobs for people living within the
 9 census tracts was the same type as the County; most employees were categorized as working
 10 in Management and Professional fields.

11

Table 6. Population, Economic, and Employment Characteristics for Census Tract Related to NRUC and Maricopa County				
	New River Census Tracts			Maricopa County
	303.71	303.73	303.68	
<i>Population Characteristics</i>				
Population (persons)	12,306	2,942	2,738	3,072,149
% White of population	92.8%	90.9%	98.4%	77.4%
% Non-White of population	7.2%	9.1%	1.6%	22.6%
<i>Economic Characteristics</i>				
Median Household 1999 Income	\$57,103	\$74,073	\$54,559	\$45,358
Unemployment (2000)	1.6%	5%	2.1%	3.0%
<i>Employment</i>				
No. Employed (over Age of 16)	5,459 (44%)	1,491 (51%)	751 (27%)	1,427,292 (46%)
<i>Occupation</i>				
Management, Professional	37.6%	45.8%	53.3%	33.9%
Service	12.7%	12%	2.8%	14.6%
Sales and Office	32.4%	29.5%	34%	29.7%
Farming, Fishing, Forestry	0%	0%	0%	0.4%
Construction and Maintenance	9.8%	8.5%	3.5%	10.5%
Production and Transportation	7.5%	4.2%	6.4%	11.0%

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14 (4) LPSCo

15 The LPSCo service area is located in portions of five census tracts, Tract 610.05, 610.09,
 16 610.02, 610.03, and 610.06. According to the Census 2000, all five census tracts consisted of
 17 about the same or smaller percentages of non-white populations when compared to Maricopa
 18 County, Arizona. All five census tracts consisted of higher 1999 Median Household Incomes
 19 and lower unemployment rates (2000) than the County (Table 7). When occupation types
 20 were compared, in four of the five census tracts most employees were categorized as working
 21 in Management and Professional fields, which is the same as for the County. In the fifth

1 census tract, the greatest number of employees fell into the sales and office industries
 2 category.

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Table 7. Population, Economic, and Employment Characteristics for Census Tract related to LPSCo and Maricopa County						
	Litchfield Park Service Co. Census Tracts					Maricopa County
	610.05	610.09	610.02	610.03	610.06	
<i>Population Characteristics</i>						
Population	6,458	87	4,104	10,395	8,072	3,072,149
% White of population	79.4%	100%	91.7%	77%	79.2%	77.4%
% Non-White of population	20.6%	0%	8.3%	23%	20.8%	22.6%
<i>Economic Characteristics</i>						
Median Household 1999 Income	50,861	51,250	74,125	62,698	46,210	\$45,358
Unemployment (2000)	0.9%	0%	2.6%	1.8%	1.9%	3.0%
<i>Employment</i>						
No. Employed	1,536 (24%)	45 (52%)	1,805 (44%)	5,260 (51%)	3,689 (46%)	1,427,292 (46%)
<i>Occupation</i>						
Management, Professional	29.6%	31.1%	47.5%	36.9%	27.9%	33.9%
Service	16.1%	0%	12.7%	10.4%	19.1%	14.6%
Sales and Office	28.4%	42.2%	23.4%	32.3%	24.2%	29.7%
Farming, Fishing, Forestry	2.1%	0%	0.2%	0.4%	3.7%	0.4%
Construction and Maintenance	9.5%	11.1%	6%	8.3%	12.1%	10.5%
Production and Transportation	14.3%	15.6%	10%	11.8%	13%	11.0%

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7 **b. CAGR D**

8 Those portions of CAGR D’s service area that are most directly impacted by the Proposed Action
 9 are the member lands located within the four water companies’ service areas. The demographic,
 10 racial, and economic statistics for these areas are provided in Tables 4-7 above. Due to the
 11 expansive and non-contiguous nature of CAGR D’s remaining membership in the Phoenix AMA
 12 (which makes up the project area), such statistics are not readily available. Therefore, the
 13 Maricopa County data provided in Tables 4-7 above are assumed to be representative of the
 14 remaining CAGR D membership in the Phoenix AMA as a whole. Maricopa County data as
 15 compared to the entire state of Arizona are provided below in Table 8.

16

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Table 8. Population, Economic, and Employment Characteristics for Maricopa County and State of Arizona (U.S. Census Bureau)		
	Maricopa County	Arizona
<i>Population Characteristics</i>		
Population	3,072,149	5,130,632
% White of population	77.4%	75%
% Non-White of population	22.6%	25%
<i>Economic Characteristics</i>		
Median Household 1999 Income	\$45,358	\$40,558
% Unemployment (2000)	3.0%	3.4%
<i>Employment</i>		
No. Employed (over Age of 16)	1,427,292 (46%)	2,233,004 (43.5%)
<i>Occupation</i>		
Management, Professional	33.9%	32.7%
Service	14.6%	16.2%
Sales and Office	29.7%	28.5%
Farming, Fishing, Forestry	0.4%	0.6%
Construction and Maintenance	10.5%	11.0%
Production and Transportation	11.0%	10.9%

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2. Environmental Consequences

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a. No Action

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(1) M&I Water Entitlement Holders

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Under the No Action alternative, all four water companies would continue to seek to transfer their CAP water entitlements to other entities; unless and until this occurred, the 7,746 afa of CAP water would be available for purchase as Excess CAP water and the four water companies would continue to be responsible for the annual capital payments associated with the entitlements.¹⁰ The providers would continue to serve water to their respective service area. Lands served by these providers would continue to be developed under the No Action alternative. These water providers would continue to pump groundwater to serve both existing and future customers. Future customers would be enrolled as member lands of the CAGR in order to comply with Arizona’s Assured Water Supply Rules. Those customers whose lands are enrolled as member lands would pay annual replenishment assessments based on the amount of excess groundwater delivered to their property. Since these four water companies have never utilized the water proposed to be transferred, there would be no

¹⁰ Under existing CAP M&I subcontracts, the subcontractor is responsible for paying an annual capital charge to CAWCD regardless of whether the CAP water is ordered or not.

1 change in the water service provided. Future rates for water supplied by CAGR D to offset
2 groundwater pumping by the water companies is discussed under “CAGR D” below.

3 No change in the lifestyle or social well-being of the populations serviced by any of these
4 water companies is anticipated as a result of their continued reliance on these sources.

5 (2) CAGR D

6 Under the No Action alternative, CAGR D would continue to enroll member lands within the
7 four water companies’ service areas as provided by State law. CAGR D would be required to
8 continue to satisfy all of its replenishment obligations through recharge in the Phoenix AMA.
9 CAGR D would continue using available excess CAP water for replenishment and would
10 continue to use the AFRP and HMRP. Under the No Action alternative, if there is
11 insufficient excess CAP water available, CAGR D would secure additional water supplies
12 from the sources described in Section II above and CAGR D rates would be set based on the
13 cost of securing and replenishing whatever water supplies CAGR D obtains. CAGR D rates
14 are calculated on an AMA-wide basis; therefore, the costs associated with securing and
15 replenishing water to meet replenishment obligations in the Phoenix AMA would be “spread”
16 over CAGR D’s entire Phoenix AMA membership.

17 There are no residences located within the AFRP and HMRP. CAWCD operates the facilities
18 to maximize hydrologic and economic efficiency regarding recharge. CAGR D uses the
19 facilities to meet replenishment obligations in the Phoenix AMA using its available water
20 supplies. To the maximum extent possible, CAGR D would use these facilities to offset
21 replenishment obligations incurred as a result of pumping within the WEWC, Sunrise,
22 NRUC, and LPSCo service areas.

23 24 b. Proposed Action

25 (1) M&I Water Entitlement Holders

26 Many conditions under this alternative would be identical to those under the No Action
27 alternative. All four water companies would transfer their unused CAP water entitlements
28 and would no longer be responsible for the entitlements’ annual capital payments. Lands
29 served by these providers would continue to be developed and the providers would continue
30 to serve their respective service areas through groundwater pumping. Future customers
31 within the water companies’ service areas would be enrolled as member lands of the CAGR D
32 in order to comply with Arizona’s Assured Water Supply Rules and those customers would
33 pay annual replenishment assessments based on the amount of excess groundwater delivered
34 to their property. These four water companies have never utilized the water that is proposed
35 to be transferred, and there is no infrastructure in place for them to do so; therefore, under the
36 Proposed Action there would be no change in the water service provided to the residents
37 served by WEWC, Sunrise, NRUC, or LPSCo.

1 The only anticipated impact to socioeconomic conditions within the four water companies’
2 service areas relates to the difference in CAGR D assessment rates paid by members under the
3 Proposed Action compared to the No Action alternative. As discussed above, the Proposed
4 Action provides CAGR D with a reliable water supply that can be used to meet replenishment
5 obligations. Under the No Action alternative, CAGR D would need to secure an equally
6 reliable supply to meet its replenishment obligations and any difference in the costs (higher or
7 lower) of securing and replenishing such supplies would be borne by CAGR D members.
8 Further discussion of CAGR D rates is provided in the next paragraph.
9

10 (2) CAGR D

11 Under the Proposed Action alternative, CAGR D would incur essentially the same
12 replenishment obligations as it would under the No Action alternative. CAGR D would have
13 the ability to use the transferred 7,746 af of CAP subcontract water to meet its replenishment
14 obligations in the Phoenix AMA. As indicated above, there could be some impact on
15 CAGR D members’ assessment rates depending on the cost of the CAP water to be transferred
16 when compared to an alternative supply; however, the impact would likely be insignificant.
17 This is because CAGR D rates are calculated on an AMA-wide basis and the volume of water
18 to be transferred under the Proposed Action is relatively small compared to CAGR D’s
19 projected overall replenishment obligations for the Phoenix AMA.¹¹ Based on these
20 projected replenishment obligations, it is anticipated that every \$10/af incremental change
21 (higher or lower) in CAGR D’s cost of purchasing and replenishing water would result in a
22 corresponding change of about \$0.20 in the average member land homeowner’s annual
23 replenishment assessment over the long-term. Thus, it would take a large difference between
24 the cost of the Proposed Action and the No Action alternative to have any significant
25 economic effect on CAGR D members.
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29 **D. Biological Resources**

30 1. Affected Environment

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33 Table 9 lists the federally listed and candidate species identified by the United States Fish and
34 Wildlife Service (FWS) as potentially occurring in Maricopa County, Arizona.
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36
37

¹¹ CAGR D’s annual replenishment obligations for the Phoenix AMA are projected to reach 138,200 AF by 2020 and 186,700 AF by 2035 (CAGR D 2004).

Table 9. Summary of federally listed and candidate species and their habitat needs		
Species	Status	Known Distribution and Habitat Needs
Arizona agave <i>Agave arizonica</i>	E	Transition zone of oak-juniper woodland and mountain mahogany-oak scrub, usually steep rocky slopes from 3,000 to 6,000 feet (AGFD 1997)
Arizona cliffrose <i>Purshia subintegra</i>	E	Rolling limestone hills within Sonoran desertscrub from 2,500 to 4,000 feet (AGFD 2001a)
Bald eagle <i>Haliaeetus leucocephalus</i>	T	Large trees or cliffs near creeks, lakes, and rivers with abundant prey, i.e., fish (AGFD 1996)
California brown pelican <i>Pelecanus occidentalis californicus</i>	E	Shore bird usually found near sandy beaches and lagoons. Nests along coastal islands with shrubby vegetation and small trees. In AZ, this species can be found at large inland lakes (Monson, G., and A.R. Phillips 1981)
Desert pupfish <i>Cyprinodon macularius macularius</i> and <i>eremus</i>	E	Permanent water in shallow springs, streams, and marshes (AGFD 2001b)
Gila topminnow <i>Poeciliopsis occidentalis occidentalis</i>	E	Permanent water in small streams, springs, and cienegas (AGFD 2001c)
Lesser long-nosed bat <i>Leptonycteris curasoae yerbabuena</i>	E	Desert scrub with agave and columnar cacti. Caves or abandoned tunnels for roosts at elevations of 6,000 feet or less (AGFD 1998)
Mexican spotted owl <i>Strix occidentalis lucida</i>	T	Canyons and dense forests above 4,100 feet in elevation (USFWS 1995)
Razorback sucker <i>Xyrauchen texanus</i>	E	Slow backwaters of medium and large streams and rivers (AGFD 2001d)
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	E	Dense cottonwood/willow & tamarisk vegetation communities along rivers & streams (AGFD 1996)
Sonoran pronghorn <i>Antilocapra americana sonoriensis</i>	E	Sonoran desert plains with wide alluvial basins and desert grassland (AGFD 1996)
Yuma clapper rail <i>Rallus longirostris yumanensis</i>	E	Freshwater or brackish stream-sides and marshes with dense vegetation, especially cattail/bulrush (AGFD 2001e)
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	C	Broadleaf deciduous riparian forest habitats and tamarisk woodlands adjacent to surface water (AGFD 1996)
Gila chub <i>Gila intermedia</i>	E	Small headwater streams, springs, cienegas, and marshes of the Gila River basin (AGFD 2001f)
USFWS categories: Endangered (E) – Taxa in danger of extinction throughout all or a significant portion of its range; Threatened (T) - Taxa likely to become endangered within the foreseeable future throughout all or a significant portion of its range; Candidate (C) - Taxa whose protection under the Endangered Species Act has been found to be warranted, but precluded by higher priority listing activities at this time.		

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a. M&I Water Entitlement Holders

The biological resource observations described in this section are based largely on field reconnaissance investigations conducted by SWCA, Inc. on September 26, 2003. SWCA's findings are documented in biological report memoranda provided in Appendix D.

1 (1) WEWC

2 This 3,720-acre service area is located in the Lower Colorado River Valley subdivision of
3 Sonoran desertscrub biotic community, as defined by Brown (1994). Approximately 25-40%
4 of the service area is developed. The vegetation present in the natural undisturbed portions of
5 the project area consist mainly of native desert vegetation typical of the Lower Colorado
6 River Valley subdivision of the Sonoran desertscrub biotic community. The dominant
7 vegetation species present within the project area include the following: creosotebush
8 (*Larrea tridentata*), blue paloverde (*Parkinsonia florida*), saguaro (*Carnegiea gigantea*),
9 velvet mesquite (*Prosopis velutina*), triangle-leaf bursage (*Ambrosia deltoidea*), canyon
10 ragweed (*Ambrosia ambrosioides*), desert ironwood (*Olneya tesota*), and grasses. Protected
11 native plants classified under the Arizona Native Plant Law (ARS §3-904) are also present in
12 the project area.

13
14 Federally Endangered and Threatened Species. All 14 federally listed and candidate species
15 were eliminated from further consideration because their known geographic ranges are distant
16 from the project area and/or the project area does not contain habitat known to be necessary
17 to support these species (Table 9).

18
19 State Special Status Species. The Arizona Game and Fish Department (AGFD) also maintains
20 a statewide database, known as the Heritage Data Management System (HDMS), which
21 tracks records for federally listed species or other species of special concern. AGFD searched
22 this database for occurrence records of special status species within a five-mile radius of the
23 WEWC service area. The AGFD response letter indicated that there are no records of any
24 special status species within five miles of the project area (Appendix B).

25
26 (2) Sunrise

27 This 2,506-acre service area is located in the Lower Colorado River Valley subdivision of
28 Sonoran desertscrub biotic community, as defined by Brown (1994). Approximately 25% of
29 the service area is native desert, with the remainder consisting of residential neighborhood
30 clusters that have been constructed or are planned for construction, and several commercial
31 areas. The vegetation present in the natural undisturbed areas includes the following:
32 creosotebush, blue paloverde, saguaro, triangle-leaf bursage, chainfruit cholla (*Opuntia*
33 *fulgida*), and desert ironwood. New River is also located within the project area and the
34 following vegetation was observed along the river: catclaw acacia (*Acacia greggii*), desert
35 broom (*Baccharis sarothroides*), blue paloverde, desert willow (*Chilopsis linearis*), and
36 burrobrush (*Hymenoclea salsola*). New River Dam is located about 1 mile upstream of the
37 water service area. The New River is ephemeral within the project area, and about ¼ mile of
38 the river has been channelized in the southernmost portion of the water service area.
39 Protected native plants classified under the Arizona Native Plant Law (ARS §3-904) are also
40 present in the project area.

1 Federally Endangered and Threatened Species. All 14 federally listed and candidate species
2 were eliminated from further consideration because their known geographic ranges are distant
3 from the project area and/or the project area does not contain habitat known to be necessary
4 to support these species (Table 9).

5
6 State Special Status Species. AGFD searched the HDMS database for occurrence records of
7 special status species within a three-mile radius of the Sunrise service area. These species are
8 the desert tortoise (*Gopherus agassizii*), California leaf-nosed bat (*Macrotus californicus*),
9 and the cave myotis (*Myotis velifer*). No known occurrences are from within the service area
10 proper. Although these species have status listings, these listings do not afford the species
11 any statutory protection under the Endangered Species Act. A copy of the request letter and
12 the AGFD response letter is included in Appendix B.

13
14 The Sonoran desert population of the desert tortoise is listed as a Wildlife of Special Concern
15 in Arizona (WSCA) by the AGFD. They are found above the flats on rocky bajadas and
16 hillsides. Because of the flat topography of the Sunrise service area and the fragmented
17 nature of the remaining undisturbed desert, it is unlikely that this species is present.

18
19 The California leaf-nosed bat is listed as a WSCA by the AGFD. This bat is found primarily
20 south of the Mogollon Plateau in Sonoran and Mohave desertscrub and occasionally in
21 Chihuahuan and Great Basin desertscrub. Roost sites include mines, caves, and rock shelters.
22 Foraging could occur over remnant desertscrub within the project area, but it is more likely
23 that the species would be transient from roosting sites to larger patches of undisturbed desert
24 habitat.

25
26 The cave myotis can be found south of the Mogollon Plateau from Lake Mohave, Burro
27 Creek, Montezuma Well, the San Carlos Apache Reservation and the Chiricahua Mountains
28 south to Mexico. It is predominantly found in desertscrub of creosote, brittlebush, paloverde
29 and cacti, but sometimes up to pine-oak communities. Roosts include mines, caves, or rock
30 shelters. As with the California leaf-nosed bat above, foraging could occur over remnant
31 desertscrub within the project area, but it is more likely that the species would be transient
32 from roosting sites to larger patches of undisturbed desert habitat.

33
34 (3) NRUC

35 This 1,077-acre service area is located in the Lower Colorado River Valley subdivision of
36 Sonoran desertscrub biotic community, as defined by Brown (1994). Although there are
37 some small vacant parcels scattered within the service area, the entire service area is
38 essentially fully developed with the exception of a small portion of the New River corridor,
39 which is located within the southern part of the water service area. The New River is
40 ephemeral in the project area and has been channelized. The dominant vegetation species

1 present within natural undisturbed portions of the project area include the following:
2 creosotebush, blue paloverde, desert broom, and velvet mesquite. The following vegetation
3 was observed along New River: desert broom, blue paloverde, and singlewhorl burrobush
4 (*Hymenoclea monogyra*). Protected native plants classified under the Arizona Native Plant
5 Law (ARS §3-904) are also present in the project area.

6
7 Federally Endangered and Threatened Species. All federally listed species and candidate
8 endangered species (a total of 14 species) were eliminated from further consideration because
9 their known geographic ranges are distant from the project area and/or the project area does
10 not contain conditions similar to those known to be necessary to support these species (Table
11 9).

12
13 State Special Status Species. AGFD searched the HDMS database for occurrence records of
14 the following special status species within a three-mile radius of the Sunrise service area: the
15 Western burrowing owl (*Athene cunicularia hypugaea*), California leaf-nosed bat, and the
16 cave myotis. No known occurrences are from within the service area proper.

17
18 Burrowing owls are associated with very sparse vegetation that allows long vistas over which
19 danger can be detected. The best areas to observe these owls in Maricopa County are in the
20 creosotebush-bursage associations adjacent to agricultural lands (Glinski 1998). Although we
21 know of no records of the burrowing owl from the service area, it is possible that small,
22 isolated populations may exist within the vicinity of the New River where habitat
23 requirements are met and the soil substrate supports animal burrows suitable for nesting.

24
25 The two bats species are most likely transient over the service area, moving from roosts to
26 suitable foraging areas and back.

27
28 (4) LPSCo

29 This 13,214-acre service area is located in the Lower Colorado River Valley subdivision of
30 Sonoran desertscrub biotic community, as defined by Brown (1994). Only about 10% of the
31 service area is undeveloped or undisturbed. The remaining portion consists of constructed (or
32 planned) residential and commercial developments, golf courses and irrigated agriculture.
33 The vegetation present in the undisturbed natural portions of the project area consists mainly
34 of native desert vegetation typical of the Lower Colorado River Valley subdivision of the
35 Sonoran desertscrub biotic community. The dominant vegetation species present within the
36 project area include the following: Creosotebush, velvet mesquite, and saltbush (*Atriplex*
37 spp.). Protected native plants classified under the Arizona Native Plant Law (ARS §3-904)
38 are also present in the project area.

1 Federally Endangered and Threatened Species. All federally listed and candidate species (a
2 total of 14 species) were eliminated from further consideration because their known
3 geographic ranges are distant from the project area and/or the project area does not contain
4 conditions similar to those known to be necessary to support these species (Table 9).
5

6 State Special Status Species. TAGFD searched the HDMS database for occurrence records
7 of special status species within a four-mile radius of the WEWC service area. The AGFD
8 response letter indicated that there are no records of any special status species within four
9 miles of the project area (Appendix B).
10

11 b. CAGR D

12 As discussed in section I.C., for purposes of this EA, CAGR D's project area includes those
13 member service areas and member lands that are located within the Phoenix AMA. This area
14 includes several ecological communities, but most of this region is within the Sonoran
15 Desertscrub Biome as defined by Brown (1994). The majority of the lands within CAGR D's
16 project area are, or will be, fully urbanized.
17

18 The AFRP is located within the Arizona upland subdivision of the Sonoran desertscrub biotic
19 community, as defined by Brown (1994). This portion of the Agua Fria River and its floodplain
20 contain xeroriparian vegetation. Hills and mountains are located to the west of the area. The
21 HMRP is located within the lower Colorado River Valley subdivision of the Sonoran
22 desertscrub biotic community, as defined by Brown (1994). Most of the native desert vegetation
23 has been disturbed in this area, but undisturbed portions contain upland and xeroriparian
24 vegetation.
25

26 The areas utilized by both recharge facilities (at each location) were surveyed for biological
27 resources prior to the time of construction and use. Local and federal organizations were also
28 consulted to determine how these replenishment facilities would affect the environment and what
29 could be done to minimize those effects. Through planning and mitigation, AFRP and HMRP
30 were permitted and developed with appropriate mitigation completed for each project.
31
32

33 2. Environmental Consequences

34 a. No Action

35 (1) M&I Water Entitlement Holders

36 (a) WEWC

37 Continued groundwater pumping in the WEWC service area is not anticipated to affect
38 local biological resources. There are no perennial streams, wetlands, riparian areas, or
39 other special aquatic habitats in the service area that provide wildlife values which could

1 be impacted by a continued use of groundwater. Through eventual development in the
2 area, there is a potential that the entire service area would be developed, resulting in the
3 removal of between approximately 2,200 to 2,800 acres of Sonoran Desertscrub
4 vegetation. The service area, however, does not contain any habitat for federally listed or
5 candidate species, or any State special status species; therefore, none would be adversely
6 affected under the No Action alternative. There would, however, be local loss of small
7 mammals, reptiles, and avian habitat from more common species typically associated
8 with Sonoran desertscrub vegetation. Arizona Department of Agriculture (ADA)
9 protected native plants are located within the project area.
10

11 (b) Sunrise

12 Continued groundwater pumping in the Sunrise service area is not anticipated to affect
13 local biological resources. There are no perennial streams, wetlands, riparian areas, or
14 other special aquatic habitats in the service area that provide wildlife values that could be
15 impacted by a continued use of groundwater. Through eventual development in the area,
16 there is a potential that the entire service area would be developed, disturbing
17 approximately 750 to 1,000 acres of undeveloped land indirectly under the No Action
18 alternative, and vegetation removal would occur. The service area, however, does not
19 contain any habitat for federally listed or candidate species, or any State special status
20 species; therefore, none would be adversely affected under the No Action alternative.
21 With regard to WSCA including the desert tortoise, California leaf-nosed bat, and the
22 cave myotis, vegetation removal is not expected to significantly effect the foraging,
23 breeding, or roosting activities of these species. There would, however, be local loss of
24 small mammals, reptiles, and avian habitat from more common species typically
25 associated with Sonoran desertscrub vegetation. ADA protected native plants are located
26 within the project area.
27

28 (c) NRUC

29 Continued groundwater pumping in the NRUC service area is not anticipated to affect
30 local biological resources. Although there is a small portion of the New River within the
31 service area, this portion is ephemeral. Except for this small portion of the New River
32 corridor, this entire service area has been developed (or construction is underway). The
33 service area does not contain any habitat for federally listed or candidate, species;
34 therefore, none would be adversely affected under the No Action alternative. ADA-
35 protected native plants are located within the project area.
36

37 (d) LPSCo

38 Continued groundwater pumping in the LPSCo service area is not anticipated to affect
39 local biological resources. There are no perennial streams, wetlands, riparian areas, or
40 other special aquatic habitats in the service area that provide wildlife values that could be

1 impacted by a continued use of groundwater. Through eventual growth in the area, there
2 is a potential that the entire service area would be developed, resulting in the removal of
3 between approximately 1,300 to 3,300 acres of Sonoran Desertscrub vegetation under the
4 No Action alternative. The service area, however, does not contain any habitat for
5 federally listed or candidate species, or any WSCA. There would, however, be local loss
6 of small mammals, reptiles, and avian habitat from more common species typically
7 associated with Sonoran desertscrub vegetation. ADA-protected native plants are located
8 within the project area.
9

10 (2) CAGR D

11 As provided under current Arizona statutes, CAGR D will continue to enroll new members
12 under the No Action alternative.¹² Although CAGR D will not initiate any construction itself,
13 new developments within new and existing member lands and member service areas will
14 result in additional construction and ground disturbance in locations scattered throughout
15 CAGR D's three-county service area.
16

17 Under the No Action alternative, the four water companies would continue to seek to transfer
18 their CAP water entitlements to other entities; unless and until this occurred, the 7,746 afa of
19 CAP water would be available for purchase as Excess CAP water. However, a possible
20 occurrence under the No Action alternative is that the entitlements held by the four water
21 companies could be transferred to one or more other water providers that are not members of
22 the CAGR D, thereby increasing those providers' portfolios of renewable water supplies.
23 With an increase of available renewable supplies, state law would allow additional
24 development (i.e., construction and land disturbance) to occur within those water providers'
25 service areas.
26

27 Operations of the AFRP and the HMRP recharge facilities would continue to occur under the
28 No Action alternative. The facilities would not require any additional infrastructure or
29 facilities to accommodate the water it receives or recharges under the No Action alternative.
30 Therefore, no ground disturbance would occur. There would be no adverse effect to any
31 species utilizing the area, including federally listed, candidate, or proposed endangered
32 species.
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¹² Current statutes do not allow CAGR D to deny enrollment of a member land or member service area if the applicant meets all of the qualifications listed in Arizona Revised Statutes Title 48, Chapter 22, Article 4.

1 b. Proposed Action

2 (1) M&I Water Entitlement Holders (WEWC, Sunrise, NRUC, and LPSCo)

3 Impacts to local biological resources or their water resources in each of the service areas from
4 implementation of the Proposed Action would be the same as is described and anticipated to
5 occur under the No Action alternative. There would be no additional environmental
6 consequences to biological resources under the Proposed Action as compared to the No
7 Action alternative. Each of the four water companies' CAP entitlements would be transferred
8 to CAGR D and CAGR D would take possession of the water through the existing
9 infrastructure. The proposed water transfers, therefore, would not result in any additional,
10 transfer-related land disturbing or vegetation removal activities

11
12 (2) CAGR D

13 Impacts to local biological resources or their water resources from implementation of the
14 Proposed Action would be the same as is described and anticipated to occur under the No
15 Action alternative within the defined project area. There would be no additional
16 environmental consequences to biological resources under the Proposed Action as compared
17 to the No Action alternative. The Proposed Action would not result in the enrollment of more
18 members in the CAGR D than would occur under the No Action alternative. CAP
19 entitlements would be transferred to CAGR D and CAGR D would take possession of the
20 water through existing infrastructure. Therefore the proposed water transfer would not result
21 in any additional transfer-related land disturbing activities. In fact, the Proposed Action
22 could result in less land-disturbing development on lands located outside of the defined
23 project area. This would occur because, under the No Action alternative, the CAP
24 entitlements proposed for transfer could be transferred to other water providers that do not
25 serve member lands or member service areas of the CAGR D. With the increased availability
26 of renewable water supplies, these water providers could prove an increased ability to serve
27 new growth in their service areas under Arizona's existing AWS regulations.

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29
30
31 **E. Cultural Resources**

32 1. Affected Environment/Existing Conditions

33 a. M&I Water Entitlement Holders

34 For each service area, SWCA Environmental Consultants, Inc. (SWCA) conducted a site file
35 search in October 2003 (Appendix C). This search consisted of review of the AZSite online
36 database that contains archaeological survey and site information from previous studies.
37 Additionally, archaeological site files were examined at the Arizona State Historic Preservation
38 Office (SHPO), the Arizona State Museum (ASM), Arizona State University (ASU), and the
39 BLM Phoenix Area Office. The General Land Office (GLO) survey plat maps of the region,

1 which show historic roads and buildings, were examined at the BLM office in Phoenix. National,
2 state, and local Register[s] of Historic Places were also checked for historic properties and
3 districts.

4 (1) WEWC

5 The Class I site file search of this service area indicates seven archaeological sites have been
6 previously identified within the WEWC service area: Three sites are considered eligible for
7 inclusion on the National Register of Historic Places (NRHP); three are considered to be not
8 eligible for inclusion on the NRHP, and the eligibility of one site, which is prehistoric in
9 nature, is unknown. The General Land Office plat map indicates that within the service area
10 there are two segments of historic roads (US 60 and US 89), a historic rail way line (the Santa
11 Fe-Prescott-Phoenix Rail Road), and a telegraph line that is directly adjacent to the rail way
12 line. Additionally, mapping from 1919 shows a “flag station” within the service area.
13 Records show that 11 archaeological surveys have been conducted within this service area.

14 (2) Sunrise

15 The Class I site file search of this service area indicates 18 archaeological sites have been
16 previously identified within the Sunrise service area: Two sites are considered eligible for
17 inclusion on the NRHP; eight have been determined to be not eligible for inclusion on the
18 NRHP; and the eligibility of eight sites is unknown. Of these 18 sites, 11 have been
19 identified as “prehistoric” (see Appendix C). Records also indicated that nine archaeological
20 surveys have been conducted within this service area. The New River Dam Archaeological
21 District lies north of the Sunrise parcel. There are abundant resources for tool making and
22 lithic production in the district. Records show that six archaeological surveys have been
23 conducted within this service area.

24 Historically, several mining claim patents were issued on March 3, 1904, for areas just north
25 of this water service area. As of 1916, several buildings were reported to exist atop and along
26 the southern base of the Sunrise Mountains, including a dining room, cook house, bunk
27 house, company office, store house, cyanide plant, assay office, water tank, and mill.
28 Descriptions of historical findings include the identification of historic artifact scatters
29 possibly associated with mining as well as a possible temporary mining camp with a possible
30 trail to rock/wall alignments and enclosures.

31 (3) NRUC

32 The Class I site file search of this service area indicates seven archaeological sites have been
33 previously identified within the 1,077-acre NRUC water service area; however all seven were
34 recorded by avocational archaeologist Frank Midvale during the 1940s and 1950s and no
35 information is available on these sites. Records also indicate that seven archaeological
36 surveys have been conducted within the service area. No historic resources were identified as
37 occurring within the service area.

1 (4) LPSCo

2 The Class I site file search of this service area indicates seven archaeological sites have been
3 previously identified within the service area: Four of these sites are considered eligible for
4 inclusion on the NRHP; one site is considered to be not eligible for inclusion on the NRHP;
5 and the eligibility of two sites is unknown. Two sites have been identified as “prehistoric”
6 and one site has been identified as both prehistoric and historic. Records also indicate that 23
7 archaeological surveys have been conducted.

8 b. CAGR D

9 Member Lands and Service Areas. CAGR D’s project area (the member lands and member
10 service areas within the Phoenix AMA) contains a variety of landscapes from highly urbanized to
11 native desert. In spite of more than 100 years of often-intensive development, intact cultural
12 resources are present beneath the veneer of twentieth-century urbanization. In rural areas where
13 development has been less intrusive and perhaps more localized, the chances for finding intact,
14 relatively undisturbed cultural resources are obviously greater.

15 2. Environmental Consequences

16 a. No Action

17 (1) M&I Water Entitlement Holders (WEWC, Sunrise, NRUC, LPSCo)

18 Under the No Action alternative, each water service company would continue to seek to
19 transfer its CAP water entitlements to other entities and would continue to use its existing
20 wells and distribution system to serve its respective water service area. It is anticipated
21 undeveloped areas within each service area would be developed subject to the local
22 jurisdiction’s future planning and zoning decisions, and market conditions for private
23 development. If cultural sites do exist, they may be impacted by such future development.
24 Mitigation of cultural resources due to urban expansion would be determined by local
25 jurisdictions and development of applicable permit requirements.

26 (2) CAGR D

27 Member Lands and Member Service Areas. There would be no new construction required in
28 order for CAGR D to recharge the transferred CAP water entitlements.

29 CAGR D would continue to enroll new member lands and member service areas throughout
30 its three-county service area as provided by State law. Development within existing member
31 lands and member service areas would occur subject to the local jurisdiction’s future planning
32 and zoning decisions and market conditions for private development. If cultural sites do
33 exist, they may be impacted by such future development. Mitigation of cultural resources
34 due to urban expansion would be determined by local jurisdictions and compliance with
35 applicable permit requirements. The 160 acres of State land located within the Sunrise water
36 service area would need to be surveyed for cultural resources prior to sale for development.

1 Recharge Facilities. AFRP and HMRP operations into the future would not change and no
2 additional infrastructure or facilities would be needed under the No Action alternative;
3 therefore, no ground disturbance would occur. It is therefore expected that cultural resources,
4 if present, would not be impacted. There would be no adverse effect to any archaeological or
5 historic resources within the recharge areas.

6 b. Proposed Action

7 (1) M&I Water Entitlement Holders (WEWC, Sunrise, NRUC, and LPSCo)

8 Under the Proposed Action, currently undeveloped properties would be developed consistent
9 with what is expected to occur under the No Action alternative. There would be no additional
10 effect to archaeological sites or historic properties directly attributable to implementation of
11 the Proposed Action.

12 (2) CAGR D

13 Under the Proposed Action, currently undeveloped properties within the three-county area
14 would be developed consistent with what is expected to occur under the No Action
15 alternative. There would be no additional effect to archaeological sites or historic properties
16 directly attributable to implementation of the Proposed Action. The transferred CAP water
17 would be delivered and used by CAGR D utilizing existing facilities; no new facilities would
18 need to be constructed. Currently undeveloped properties that become members of CAGR D
19 would be developed consistent with what is expected to occur under the No Action
20 alternative and impacts to cultural resources would be the same as described under the No
21 Action alternative.

22
23 **F. Indian Trust Assets**

24 1. Affected Environment/Existing Conditions

25 Indian Trust Assets (ITAs) are legal assets associated with rights or property held in trust by the
26 United States for the benefit of federally recognized Indian Tribes or individuals. The United States
27 is responsible for protecting and maintaining rights reserved by, or granted to, Indian Tribes or
28 individuals by treaties, statutes, and executive orders. ITAs include property in which a Tribe has
29 legal interest. While most ITAs are located on a reservation, they can also be located off-reservation.
30 Examples of ITAs include lands, minerals, water rights, and hunting and fishing rights. Tribal lands
31 within the general project area include the Salt River Pima Maricopa Indian Community (SRPMIC)
32 and the Gila River Indian Community.

33 a. M&I Water Entitlement Holders

34 (1) WEWC

35 There are no tribal lands within several miles of this service area; however, two tribal lands
36 are located within a reasonably close proximity; they are the SRPMIC and the Gila River

1 Indian Community. The Gila River Indian Community is the closest reservation located
2 approximately 28 miles southeast of the WEWC service area boundary. The SRPMIC is
3 located approximately 37.5 miles east of the service area. No ITAs have been identified
4 during the cultural resource site file search conducted on this service area as being located
5 within the WEWC service area.

6 (2) Sunrise

7 There are no tribal lands within several miles of this service area however, two tribal lands
8 are located within a reasonably close proximity to the metropolitan Phoenix area; they are the
9 SRPMIC and the Gila River Indian Community. The Gila River Indian Community and
10 SRPMIC are both located approximately 21 miles from the Sunrise service area. No ITAs
11 have been identified as being located within the Sunrise service area.

12 (3) NRUC

13 There are no tribal lands within several miles of this service area, however two tribal lands
14 are located within a reasonably close proximity to the metropolitan Phoenix area; they are the
15 SRPMIC and the Gila River Indian Community. The Gila River Indian Community is the
16 closest reservation located approximately 18 miles southwest of the NRUC service area
17 boundary. The SRPMIC is located approximately 20.5 miles east of this service area. No
18 ITAs have been identified as being located within the NRUC service area during the site file
19 search conducted on this service area.

20 (4) LPSCo

21 There are no tribal lands within several miles of this service area. However, two tribal lands
22 are located within a reasonably close proximity to the metropolitan Phoenix area. They are
23 the SRPMIC and the Gila River Indian Community. The Gila River Indian Community is the
24 closest reservation located approximately 6 miles south of the LPSCo service area boundary.
25 The SRPMIC is located approximately 24 miles east of this service area. No ITAs were
26 identified as being located within the LPSCo service area during the cultural resource work
27 conducted for this service area.

28 b. CAGR D

29 By law, CAGR D member lands and member service areas cannot be located on tribal lands;
30 however, there are portions of three tribal communities located within the boundaries of the
31 Phoenix AMA. These are the SRPMIC, the Gila River Indian Community and the Fort
32 McDowell Indian Community.

33 There are no tribal lands within several miles of the two recharge facilities, however, two tribal
34 communities are located within a reasonable distance. These are the SRPMIC and the Gila River
35 Indian Community. The SRPMIC is located approximately 28 and 34 miles away from the

1 AFRP and HMRP, respectively. The Gila River Indian Community is located approximately 29
2 and 27 miles away from the AFRP and HMRP, respectively. These recharge facilities are already
3 constructed. ITAs were considered prior to the construction of the HMRP as part of
4 Reclamation's NEPA process; however, there was no Federal nexus to the construction of AFRP,
5 thus impacts to ITAs were not required to be considered.

6 2. Environmental Consequences

7 a. No Action

8 (1) M&I Water Entitlement Holders (WEWC, Sunrise, NRUC, and LPSCo)

9 Under the No Action alternative, WEWC, Sunrise, NRUC, and LPSCo would not utilize their
10 CAP entitlements and would continue to seek to transfer them to other entities. Since there
11 are undeveloped areas within each of their service areas, future development and ground
12 disturbance could occur. Due to the fact that there are no known ITAs identified and the two
13 Tribes closest to these service areas have not raised any ITA issues, it is unlikely that ITAs
14 would be impacted or that the No Action alternative would affect any known resources that
15 could potentially be related to ITAs.

16 (2) CAGR D

17 Under the No Action alternative, CAGR D would not receive any of the four water
18 companies' CAP entitlements. However, prior to the date when the water companies
19 successfully transfer their entitlements to other entities, the 7,746 afa of CAP water would be
20 available for purchase as Excess CAP water. Both recharge areas, AFRP and HMRP, would
21 continue to operate within their existing footprint with no new land disturbance. These areas
22 will have no further development, therefore, it is not expected that ITAs would be impacted.

23 As discussed in Section II above, CAGR D will pursue acquisition of short and long-term
24 rights to water supplies to broaden and diversify its water supply portfolio in order to meet its
25 replenishment obligations. One potential water supply that CAGR D may seek to acquire is
26 CAP Indian priority water through one or more lease arrangements with tribal communities
27 that hold such entitlements. CAP water made available through such a lease arrangement
28 would be considered use of an ITA, but it would be used only with the approval and
29 concurrence of the impacted tribe(s), which would result in a financial benefit to the tribe(s).

30 b. Proposed Action

31 (1) M&I Water Entitlement Holders

32 No land disturbing activities would occur with implementation of the Proposed Action.
33 Impacts to ITAs from implementation of the Proposed Action would be the same as is
34 described and anticipated to occur under the No Action alternative. There would be no
35 additional effect to ITAs directly attributable to implementation of the Proposed Action.

1 (2) CAGR

2 Under the Proposed Action alternative, CAGR would receive the four water providers'
3 CAP entitlements. Both recharge areas, AFRP and HMRP, would continue to operate within
4 their existing footprint with no new land disturbance. These areas would not have any further
5 development. Impacts to ITAs from implementation of the Proposed Action would be the
6 same as is described and anticipated to occur under the No Action alternative, except possibly
7 with respect to leases of tribal CAP water. It is possible that the annual volume leased from
8 the tribes by CAGR would be less under the Proposed Action than it would under the No
9 Action alternative. Therefore, the magnitude of the impacts to ITAs could be less under the
10 Proposed Action. However, under both alternatives, ITAs would only be used with the
11 approval and concurrence of the impacted tribe(s), which would benefit financially.

12

1 **IV. SELECTED RELATED ENVIRONMENTAL LAWS/DIRECTIVES**

2
3 The following is a summary of selected Federal laws, regulations and Executive Orders that provide
4 information relevant to this EA.

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

6 This law requires Federal agencies to evaluate the potential environmental consequences of major
7 Federal actions. NEPA also requires full public disclosure about the proposed action, accompanying
8 alternatives, impacts, and mitigation.

9 This EA was prepared in accordance with the requirements of NEPA. Reclamation initiated a 30-day
10 public scoping comment period with distribution of a scoping mailer on October 29, 2003, to over
11 100 entities. One comment letter was received; relevant issues identified in that letter have been
12 addressed in this EA. Although a substantial amount of time has elapsed between the scoping period
13 and issuance of this draft EA, the relevant conditions and policies have not changed; therefore,
14 Reclamation believes another scoping period is not necessary.

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

16 This Act requires coordination with Federal and state wildlife agencies (FWS and AGFD) for the
17 purpose of mitigating project-caused losses to wildlife resources from water development projects.
18 This proposed project would not impound or divert surface waters in any of the service areas.
19 Reclamation believes the consultation requirements of NEPA and the ESA are sufficient to also meet
20 the requirements for consultation under the Fish and Wildlife Coordination Act. The FWS will
21 receive a copy of the draft EA for review and comment.

22 **C. Endangered Species Act of 1973 (P.L. 93-205)**

23 Section 7 of the ESA requires Federal agencies to consult with the FWS to ensure that undertaking,
24 funding, permitting, or authorizing an action is not likely to jeopardize the continued existence of
25 listed species or destroy or adversely modify designated critical habitat. There are no federally listed
26 or candidate species or critical habitat that would be adversely affected by the proposed project.

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

28 This Act designated the initial components of the National Wild and Scenic River System, and
29 established procedures for including other rivers or reaches of rivers that possess outstandingly
30 remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values
31 and preserving them in a free-flowing condition. There are no rivers designated or proposed for
32 designation as wild or scenic within or near the project area.

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

34 This Act established the National Wilderness Preservation System to preserve certain Federal lands
35 for the public purposes of recreation, scenic, scientific, educational, conservation, and historical use

1 by current and future generations of Americans. There are no areas designated or proposed for
2 designation as wilderness areas within or near the project area.

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

4 The CWA strives to restore and maintain the chemical, physical, and biological integrity of the
5 nation's waters by controlling discharge of pollutants. The basic means to achieve the goals of the
6 CWA is through a system of water quality standards, discharge limitations, and permits. Section 404
7 of the CWA identifies conditions under which a permit is required for actions that result in placement
8 of fill or dredged material into waters of the United States (U.S.). In addition, a 401 water
9 certification and 402 National Pollutant Discharge Elimination System permit are required for
10 activities that discharge pollutants to waters of the U.S. There would be no construction directly
11 related to the proposed action that would require either a Clean Water Act 402 or 404 permit. Since
12 these permits are not limited to Federal projects, private developers would be required to obtain any
13 applicable permits under the Clean Water Act for their projects.

14 **G. National Historic Preservation Act (P.L. 89-665)**

15 This Act establishes as Federal policy the protection of historic sites and values in cooperation with
16 States, tribes, and local governments. Because the proposed project does not involve land disturbing
17 activities, it does not have the potential to cause effects to historic properties. The State Historic
18 Preservation Office concurs with this determination (personal communication, Ms. Joanne Medley,
19 March 21, 2007).

20 The following tribes were each sent a copy of the scoping mailer regarding the proposed action on
21 October 29, 2003: Hopi Tribe, Yavapai Prescott Indian Tribe, Salt River Pima-Maricopa Indian
22 Community, Ak-Chin Indian Community, Tohono O'odham Nation, Gila River Indian Community,
23 Fort McDowell Yavapai Nation, and Yavapai Apache Community Council. No comments were
24 received from any of these tribes. Each tribe is also being provided a copy of the draft EA.
25 Consultation with appropriate tribes and the Bureau of Indian Affairs would be undertaken should
26 any of the tribes indicate a concern regarding effects to traditional cultural properties.

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

28 This Act requires identification of proposed actions that would adversely affect any lands classified as
29 prime and unique farmlands, to minimize the unnecessary and irreversible conversion of farmland to
30 nonagricultural uses. The U.S. Department of Agriculture's Natural Resources and Conservation
31 Service administers this Act. The proposed action would not directly impact any lands classified as
32 prime and unique farmlands. Agricultural land within the water service areas, some of which is
33 classified as prime and unique, would continue to be developed based upon the demand for residential
34 and commercial development and market conditions. It is anticipated the development patterns
35 would be the same under either the No Action alternative or Proposed Action.

1 **I. Executive Order 11988 (Floodplain Management)**

2 This Presidential directive encourages Federal agencies to avoid, where practicable alternatives exist,
3 the short- and long-term adverse impacts associated with floodplain development. Federal agencies
4 are required to reduce the risk of flood loss, minimize the impacts of floods on human safety, health
5 and welfare, and restore and preserve the natural and beneficial values served by floodplains in
6 carrying out agency responsibility. The Sunrise and NRUC water service areas contain small portions
7 of the New River floodplain, and the eastern boundary of the LPSCo water service area abuts the
8 Agua Fria River floodplain. The Proposed Action does not directly affect any floodplains.

9 **J. Executive Order 12898 (Environmental Justice)**

10 Executive Order 12898 requires Federal agencies to identify and address, as appropriate,
11 disproportionately high and adverse human health or environmental effects of Federal actions on
12 minority populations and low-income populations. Low-income populations include communities or
13 individuals living in close geographic proximity to one another, identified by U.S. Census Bureau
14 statistical thresholds for poverty. Minority populations are identified where the percentage of
15 minorities in the affected area exceeds 50 percent, or where the minority population percentage of the
16 affected area is meaningfully greater than the minority population percentage of a much broader area.
17 Neither of these conditions exists within either Maricopa County or the water service areas of the four
18 water companies. No disproportionately high and adverse human health or environmental effects on
19 minority populations and low-income populations would result from the proposed project.

20 **K. Executive Order 11990 (Wetlands)**

21 Executive Order 11990 requires Federal agencies, in carrying out their land management
22 responsibilities, to take action that will minimize the destruction, loss, or degradation of wetlands, and
23 take action to preserve and enhance the natural and beneficial values of wetlands. There are no
24 wetlands in the project area that would be affected.

25 **L. Department of Interior, Secretarial Order, Indian Trust Assets (ITAs)**

26 ITAs are legal interests in assets held in trust by the U.S. Government for Indian tribes or individual
27 Indians. These assets can be real property or intangible rights, including lands, minerals, water rights,
28 hunting rights, money, and other natural resources. The trust responsibility requires that all Federal
29 agencies take actions reasonably necessary to protect ITAs. No ITAs are currently known to be
30 present within the project area or that could be affected by implementation of the proposed action.

31

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