Appendix C

Allocation Model and Alternative Distribution Model Documentation

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Attachment

Acronyms and Abbreviations

Acronym or Abbreviation	Full Phrase
2007 FEIS	2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead Final Environmental Impact Statement
2007 ROD	Record of Decision for the adoption of Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead
2019 DCP	2019 Lower Basin Drought Contingency Plan
2024 FSEIS	2024 Near-term Colorado River Operations Final Supplemental Environmental Impact Statement
ADWR	Arizona Department of Water Resources
af/af	acre-foot/feet
afy	acre-feet per year
AOP	Annual Operating Plan
AWSA	2004 Arizona Water Settlements Act
CAP	Central Arizona Project
CAP Master Repayment Contract	Contract Between the United States and the Central Arizona Water Conservation District for Delivery of Water and Repayment of Costs of the Central Arizona Project, Contract No. 14-06-W-245, as further amended and supplemented.
CAWCD	Central Arizona Water Conservation District
CRBPA	Colorado River Basin Project Act of 1968
CRSS	Colorado River Simulation System
CU	Consumptive Use
CVWD	Coachella Valley Water District
EIS	Environmental Impact Statement
ICS	Intentionally Created Surplus
Interim Guidelines	2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead
kaf	thousand acre-feet
LCWSP	Lower Colorado Water Supply Project
LMNRA	Lake Mead National Recreation Area
Lower Division States	Arizona, California, and Nevada

M&I	Municipal and Industrial (priority)
maf	million acre-feet
MWD	The Metropolitan Water District of Southern California
NIA	Non-Indian Agricultural (priority)
PABCO	Pacific Coast Building Products, Inc.
PPR	Present Perfected Right
QSA	Quantification Settlement Agreement
Reclamation	Bureau of Reclamation
Secretary	Secretary of the Interior
SEIS	Supplemental Environmental Impact Statement
SNWA	Southern Nevada Water Authority

Appendix C. Shortage Allocation Model and Alternative Distribution Model Documentation

This appendix describes the Shortage Allocation Models and Alternative Distribution Models that were used to estimate the results of different concepts or sets of assumptions for the distribution of water during shortages to water users in the States of Arizona, California, and Nevada (Lower Division States) as part of the analysis of alternatives in this Draft Environmental Impact Statement (EIS). Similar material was contained within the following documents:

- Appendix G, Shortage Allocation Model Documentation, to the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead - Final Environmental Impact Statement (2007 FEIS).
- Appendix E, Shortage Allocation Model Documentation, to the 2024 Near-term Colorado River Operations - Final Supplemental Environmental Impact Statement (2024 FSEIS).

C.1 Introduction

To help assess the general effects of changes in the quantity of Colorado River water supplies available to water users in the Lower Division States[1] under alternatives analyzed in this Draft EIS and proposals requested to be evaluated as a sensitivity analysis, the Bureau of Reclamation developed Shortage Allocation Models and Alternative Distribution Models and documented the specific modeling assumptions in this appendix. The results inform analyses described in the Water Deliveries, Socioeconomics, Land Use, and Indian Trust Assets sections of Chapter 3 the Draft EIS.

C.2 Background and Purpose

The Shortage Allocation Model was created in 2007 to estimate the quantity of Colorado River water that would be available to water entitlement holders or water users under Shortage Conditions on the mainstream lower Colorado River over a specified range of shortage volumes. A Shortage Condition exists during a year when the Secretary of the Department of the Interior (Secretary), as documented in the Annual Operating Plan (AOP), determines that there is less than 7.5 million acre-feet (maf) of lower Colorado River water available for consumptive use within the Lower Division States.

[1] The U.S. will conduct all necessary and appropriate discussions regarding the proposed federal action and implementation of the 1944 Water Treaty with Mexico through the International Boundary and Water Commission in consultation with the Department of State. Total shortage volumes portrayed in Shortage Allocation Models and Alternative Distribution Models include an assumed component for Mexico, as described for each model.

For this Draft EIS, Reclamation further developed what are referred to as Shortage Allocation Models or Alternative Distribution Models. The Shortage Allocation Models and Alternative Distribution Models were developed in parallel with the alternatives development phase of the Draft EIS, in advance of having certainty about formulation of the alternatives and the depths of shortage resulting from their reservoir operating parameters. Stakeholders requested that Reclamation prepare a wide range of models demonstrating the effects of different assumptions for the distribution of water, which could support analyses of alternatives or potential agreements arising among water users in response to reservoir operating guidelines proposed by this Draft EIS.

While this appendix uses the word shortage loosely to mean any modeled reduction to the ability of an entitlement holder[2] to exercise an entitlement as described in the assumptions of the model, reductions arising from voluntary arrangements may not be a Shortage Condition as defined in Article II.B.3 of the Consolidated Decree in *Arizona v. California*, 547 U.S. 150 (2006). The models themselves are not intended to achieve environmental compliance for the depths of shortage the models are capable of calculating, and the models do not themselves imply Federal action at any specific modeled volume; please see Chapter 3 of the Draft EIS for the resource analysis associated with the alternatives. Additionally, these models are not, and are not intended to be, used by Reclamation as implementation tools. The models should only be used for decision support as part of this Draft EIS.

There are eight models documented in this appendix, described briefly in the following paragraphs; please see **Chapter 2** for a crosswalk between the alternatives and the models.

The Priority Shortage Allocation Model simulates shortage allocations and adjusts deliveries of Colorado River water in accordance with the priority of entitlements within each of the Lower Division States' apportionments.

The Continuing Current Strategies Shortage Allocation Model is an adaptation of the Priority Shortage Allocation Model; it distributes available water first among the Lower Division States based on the 2007 Record of Decision for the adoption of Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead (2007 ROD) and the 2019 Lower Basin Drought Contingency Plan (2019 DCP) and then among the entitlement holders within each Lower Division State based on priority or as otherwise provided by the 2019 DCP.

The Lower Basin Priority Shortage Allocation Model is an adaptation of the Priority Shortage Allocation Model that uses a different state-level shortage distribution, as specified in the Lower Division States proposal submitted on March 6, 2024.

The other models are referred to as Alternative Distribution Models. These present variations on ways to distribute shortage outside the priority system, which would involve modifications to certain laws, contracts, agreements, and other authorities that are part of the Colorado River legal and

[2] Entitlement holders are all persons or entities authorized to beneficially use Colorado River water pursuant to: 1) a right decreed by the United States Supreme Court, 2) a contract for the delivery of Colorado River water through the Secretary, or 3) a Secretarial reservation. For a current list of each Lower Division State's Colorado River water entitlement holders, please see: https://www.usbr.gov/lc/region/g4000/contracts/entitlements.html.

contractual framework referred to as Law of the River. The Alternative Distribution Models include distributing shortages in a fully pro rata approach, a pro rata approach using the March 6, 2024, Lower Division States proposed state distribution, variations of the priority and pro rata approaches without shortage to tribes, and a variation of the pro rata approach without shortage to tribal PPR entitlements.

This appendix does not describe possible modifications to Law of the River, as any modifications may be informed by potential agreements arising among water users and would reflect the shortage distribution variation pursued. Certain Shortage Allocation Model and Alternative Distribution Model assumptions analyze distributions of water in ways that diverge from provisions in the Consolidated Decree and other applicable Federal law. Reclamation has determined that, based on public input received during the scoping and alternative development phases of the NEPA process, analysis of these distributions will present a broader range of impacts for agency and stakeholder consideration, review, and input, and will foster meaningful and informed decision-making among Reclamation and Colorado River Basin stakeholders. Such proposals may ultimately not be implementable. Input from stakeholders on distribution variations, including from Colorado River Basin Tribes, is being identified and considered in the EIS and will help inform any final decision. Reclamation also recognizes that the Supreme Court retains jurisdiction in *Arizona v. California* for the purpose of any order, direction, or modification of the Consolidated Decree, or any supplementary Decree, that may at any time be deemed proper in relation to the subject matter in controversy, or for further amendment or relief. As in the 2001 and 2007 Guidelines, the Secretary anticipates retaining all applicable authority including to respond to emergency conditions in any decision.

Table C-1 on the following page presents a comparison of the results of each Shortage Allocation Model and Alternative Distribution Model at certain volumes of total shortage, all in acre-feet per year. The table is presented in three panels, tribal, Domestic, and Irrigation, consistent with the summary tables for each model that appear at the end of each section of this appendix. Shading indicates the severity of shortage relative to the entitlements associated with each general category of entitlement holder, and is provided for the purpose of enabling a comparison of the effects of different proposals for the distribution of shortage. The following sections explain the assumptions associated with each Shortage Allocation Model and Alternative Distribution Model, which are a combination of universally applied assumptions and those unique to different models.

As described in the following **Section C.3**, model results are presented in this appendix for the levels of total shortage shown on **Table C-1**, all in acre-feet per year, only for the purpose of comparing the effects of the modeled distributions; these volumes were chosen based on points of interest in one or more models, or to provide granularity in the results over a range of volumes of interest. Total shortage volumes include an assumed component for Mexico, as described in the sections of this appendix pertaining to each model, and will not sum across panels.

Table C-1
Heatmap Visualizations for All Shortage Allocation Models and Alternative Distribution Models

Tribal Shortage Impacts	Total Shortage Volume (kaf)										
Modeling Approach	600	1,000	1,500	1,800	2,000	2,100	2,300	3,000	3,500	4,000	5,000
Priority	241	351	489	550	551	552	555	567	576	585	601
Continuing Current Strategies*	261	305	305	463	463	546	551	563	572	582	601
LB Priority	209	269	346	431	483	510	550	561	571	582	601
Priority w/No Tribal Shortage	0	0	0	0	0	0	0	0	0	0	0
Pro Rata	76	126	189	227	252	264	289	378	441	503	629
LB Pro Rata	139	207	291	324	346	357	380	458	514	569	681
Pro Rata w/No Tribal PPR Shortage	45	75	113	135	150	158	173	225	263	300	376
Pro Rata w/No Tribal Shortage	0	0	0	0	0	0	0	0	0	0	0

Domestic Shortage Impacts	Total Shortage Volume (kaf)										
Modeling Approach	600	1,000	1,500	1,800	2,000	2,100	2,300	3,000	3,500	4,000	5,000
Priority	277	488	752	876	1,032	1,102	1,224	1,425	1,472	1,518	1,602
Continuing Current Strategies*	297	563	563	1,009	1,009	1,171	1,258	1,390	1,446	1,501	1,602
LB Priority	313	579	858	1,024	1,125	1,179	1,263	1,390	1,446	1,501	1,602
Priority w/No Tribal Shortage	492	810	1,157	1,344	1,377	1,387	1,408	1,480	1,532	1,583	1,600
Pro Rata	109	182	273	327	364	382	418	546	637	728	910
LB Pro Rata	155	240	346	397	432	449	483	604	689	775	947
Pro Rata w/No Tribal PPR Shortage	117	195	292	351	390	409	448	585	682	780	975
Pro Rata w/No Tribal Shortage	129	214	321	386	429	450	493	643	750	857	1,071

Irrigation Shortage Impacts	Total Shortage Volume (kaf)										
Modeling Approach	600	1,000	1,500	1,800	2,000	2,100	2,300	3,000	3,500	4,000	5,000
Priority	6	19	34	44	44	56	98	467	829	1,191	1,924
Continuing Current Strategies*	8	27	46	56	62	65	69	508	859	1,210	1,924
LB Priority	2	9	70	79	85	88	95	509	860	1,211	1,924
Priority w/No Tribal Shortage	23	39	80	143	277	350	496	1,007	1,372	1,737	2,554
Pro Rata	316	526	789	947	1,052	1,105	1,210	1,578	1,841	2,104	2,630
LB Pro Rata	206	387	613	778	889	944	1,054	1,439	1,714	1,989	2,539
Pro Rata w/No Tribal PPR Shortage	338	564	846	1,015	1,127	1,184	1,297	1,691	1,973	2,255	2,819
Pro Rata w/No Tribal Shortage	372	620	929	1,115	1,239	1,301	1,425	1,859	2,168	2,478	3,098

*Continuing Current Strategies results are of limited comparability due to their fixed shortage volumes; shortages shown for 600 kafy and 1.0 mafy in total shortage are associated with 613 kafy and 1,013 kafy of total shortage in the Continuing Current Strategies Shortage Allocation Model.

Notes:

Total shortage volumes include an assumed component for Mexico and will not sum across panels.

The tribal results panel is shaded on a gradient with zero in white and 1,103.88 kaf in orange. The Domestic results panel is shaded on a gradient with zero in white and 1,606.33 kaf in orange. The Irrigation results panel is shaded on a gradient with zero in white and 4,749.94 kaf in orange. The maximum values are a total of the Consumptive Use or equivalent entitlements assigned to each category.

The color gradient indicates the percentage reduction, with the darkest orange representing 100 percent reduction:

C.3 Assumptions Common to All Shortage Allocation Models and Alternative Distribution Models

Shortage Allocation Models and Alternative Distribution Models are Excel workbooks. Model results are presented in this appendix for the following levels of total shortage, all in acre-feet per year, only for the purpose of comparing the effects of the modeled distributions; these volumes were chosen based on points of interest in one or more models, or to provide granularity in the results over a range of volumes of interest:

- 600,000 (613,000 for the Continuing Current Strategies Shortage Allocation Model)
- 1,000,000 (1,013,000 for the Continuing Current Strategies Shortage Allocation Model)
- 1,500,000
- 1,800,000
- 2,000,000
- 2,100,000
- 2,300,000
- 3,000,000
- 3,500,000
- 4,000,000
- 5,000,000

In all models, volumes of shortage are distributed according to the assumptions of the model without regard to any proposed events causing those volumes of shortage, which are described as part of the alternatives analyzed in this Draft EIS, or the frequency with which certain operational conditions may occur.

For the purpose of consistency with hydrologic modeling results and for comparison across models, total shortage volumes are presented in terms of the Lower Basin as a whole, including Mexico. No opinion on binational negotiations or potential shortages to Mexico under the 1944 Water Treaty or any future minutes is expressed or should be implied, and no attempt is made to further characterize the distribution of shortage within Mexico.

The Shortage Allocation Models and Alternative Distribution Models require certain modeling assumptions with regard to how shortages may be allocated. Reclamation acknowledges there may be other variations of how shortages could be distributed. These modeling assumptions are not intended to represent current or future policy with respect to shortage sharing or to limit Secretarial discretion to distribute shortages. A Shortage Allocation Model or Alternative Distribution Model is not a substitute for the annual process of reviewing water orders and determining annual water availability for each water entitlement holder on the lower Colorado River and, as such, cannot replicate the precision required for that process. While individual entitlement holders may find the results informative, these models are not intended to analyze and do not reflect any entitlement

holder's individual drought preparedness or mitigation plans and may not fully represent actual impacts.

The Shortage Allocation Models and Alternative Distribution Models developed for this Draft EIS cannot represent the effects of any physical limitations on water access due to low river stage. The models thus assume there are no physical limitations on access to the distributed volume.

Central Arizona Project (CAP) excess water contracts and mainstream unused apportionment or surplus entitlements are not intended to confer reliable long-term access to Colorado River water, and under the assumptions of the Shortage Allocation Models and Alternative Distribution Models, water is not available to fulfill them; therefore, they are not itemized in modeling results.

Each state is assumed to be using its entire apportionment each year, and each entitlement holder is assumed to be using its entire entitlement each year. Entitlements are used as the basis for distributing the available water supply to individual users. These assumptions facilitate measuring shortage impacts as a loss of water supply relative to entitlements (estimated or otherwise), or how shortage affects the ability of a water user to exercise an entitlement. The results can be characterized economically as an opportunity cost. Shortage to an entitlement may involve loss of a wet water supply that is currently in use, loss of a supply currently being used for system conservation or ICS, and/or loss of a future use. For long-range planning, losses to future uses have a cost through foregone opportunities. Accordingly, the Shortage Allocation Models and Alternative Distribution Models do not reflect contractual provisions that provide for unordered water to be made available to other contractors or subcontractors within a priority, or unordered water from one priority to be made available to another. These assumptions are consistent with a reasonably foreseeable long-term steady state for lower Colorado River water use.

Shortage to individual entitlements is measured in terms of consumptive use for a common basis of comparison to state apportionments and volumes of total shortage. Unquantified and diversionary entitlements were estimated in terms of an equivalent consumptive use. Historical water accounting data were used to estimate average consumptive use/diversion ratios as part of development of the Colorado River Simulation System (CRSS) hydrologic modeling dataset for this Draft EIS[3]. For purposes of modeling, these values are assumed to be generally representative of future return flow conditions for the specified users, and are used in the Shortage Allocation Models, Alternative Distribution Models, and CRSS. Those ratios were used to estimate the consumptive use equivalent of diversion entitlements, and the dataset was also used to estimate unquantified entitlements on the basis of maximum recent historical use; these estimates should not be taken as a limit on the future exercise of those entitlements. Shortages quantified in terms of consumptive use may equate to greater reductions on a diversion basis, depending on a user's CU/diversion ratio.

[3] See the section below entitled Relationship Between CRSS and the Shortage Allocation Models and Alternative Distribution Models; where an entitlement is specified by the Consolidated Decree or other authority in terms of both diversion and CU, the Shortage Allocation Models and Alternative Distribution Models use those specified values, regardless of any other historic relationship between diversion and CU for that user.

Mechanisms similar to current and/or future paybacks of overruns or underruns under the Inadvertent Overrun and Payback Policy, creation or use of Intentionally Created Surplus (ICS), or storage and interstate release agreements under 43 CFR Part 414 are not modeled.

Individual entitlements are assigned to one of three categories (domestic, irrigation, or tribal) by their primary use or intended benefit, for the purpose of generalizing shortage impacts. No attempt is made to pro-rate shared irrigation and domestic entitlements by actual use. The historical proportions of irrigation and domestic use of these entitlements may change in a Shortage Condition due to contract-specific terms and conditions and/or the discretion of the entitlement holder.

C.3.1 Relationship Between CRSS and the Shortage Allocation Models and Alternative Distribution Models

CRSS was used to model a variety of river and reservoir parameters in the Colorado River Basin, including reservoir elevations and river flows, primarily for use in decision support related to the physical sciences (see **Appendix A**, CRSS Model Documentation). The Shortage Allocation Models and Alternative Distribution Models provide a more detailed allocation of shortages to entitlement holders in the Lower Division States, particularly small users and Central Arizona Project (CAP) contractors and subcontractors, for the purpose of decision support related to the social sciences. This section acknowledges known differences between the models that arise from their different modeling platforms, purposes, and assumptions.

A Shortage Allocation Model or Alternative Distribution Model:

- Does not attempt to represent the effect of any physical limitations on access to water due to low river stage
- Does not distinguish between any reasons for reduced deliveries to users (for example by policy, by mutual agreement, or due to operational constraints) but merely emulates an allocation of a shortfall in deliveries from Lake Mead
- Does not account for the creation, delivery, or conversion of ICS
- Has no temporal component and no annual delivery schedules, instead representing a full-use steady state
- Uses most of the same CU equivalent entitlements developed for CRSS, except for the following:
    - CRSS models the Hopi Tribe P4(i) entitlement as fully consumptive by 2040, while the Shortage Allocation Models and Alternative Distribution Models retain the initial assumption of a 3,037 af consumptive use equivalent entitlement based on a CU/diversion ratio of 0.71.
    - Unallocated P4(i) water is shown as 9,870 af in CRSS and 10,230 af in the Shortage Allocation Models and Alternative Distribution Models.
    - Town of Queen Creek's 2,033.01 af entitlement is identified by name in the Shortage Allocation Models and Alternative Distribution Models, while CRSS models it as part of the CAP diversion.

  - For Imperial and Havasu National Wildlife Refuges, the Shortage Allocation Models and Alternative Distribution Models use the decreed CU entitlements, while CRSS uses a constrained CU based on past water accounting data.
  - The California P2 entitlement for Bard Water District is shown as 7,294 af in the Shortage Allocation Models and Alternative Distribution Models versus 2,294 af in CRSS, where demand was adjusted by 5.0 kaf to represent the effect of the Bard seasonal fallowing program.
  - The Shortage Allocation Models and Alternative Distribution Models reflect the decreed CU entitlement for the Lake Mead National Recreation Area PPR of 300 af, while CRSS assumes full consumption of the decreed diversionary entitlement of 500 af.
- Distributes water by priority similarly to CRSS, except for the following:
  - In the Arizona P4(i) pool, the priority-based Shortage Allocation Models and Alternative Distribution Models distribute shortage in proportion to entitlements, which are quantified on a diversion basis. CRSS distributes shortage in proportion to the CU equivalent of the entitlements, resulting in slightly different ratios between the models.
  - An Arizona entitlement in the name of Desert Lawn, for 248.40 afy, is modeled in the P4(i) pool in CRSS and the P3 pool in the Shortage Allocation Models and Alternative Distribution Models. Its priority and status were being re-evaluated at the time modeling assumptions were developed, and this inconsistency is expected to be resolved in future modeling iterations.
  - Arizona P2 and P3 are modeled as co-equal in the Shortage Allocation Models and Alternative Distribution Models, while CRSS fills them sequentially.
  - The Shortage Allocation Models' and Alternative Distribution Models' PPR fill order shorts each PPR entitlement individually and sequentially, according to an assumed fill order, while CRSS models similarly-situated PPR entitlements together.
  - CRSS models California's QSAs-related transfers as demand for the receiving entity (for example as use by Metropolitan Water District of Southern California) while maintaining the priority of the water in priority-based model runs. As described for the Priority Shortage Allocation Model, QSA transfers and exchanges were not modeled independent of the underlying entitlements in the Shortage Allocation Models or Alternative Distribution Models.
  - The Shortage Allocation Models and Alternative Distribution Models treat Nevada's P8 "Balance and Surplus" as a separate priority category that is reduced to zero before Laughlin and the quantified Robert B. Griffith Project P8 allocations are shorted, and reduces P8 in full before shortage begins to P7. CRSS sets all Nevada P8 use as co-equal, and models P3, P4, P5, and P6 with P8.
  - Minor differences in shortage attributed to Mexico result from different applications of rounding.

Table C-2 and **Table C-3** below present a comparison of results between the Priority Shortage Allocation Model and CRSS, and the Pro Rata Alternative Distribution Model and CRSS, at the 1.5 mafy volume of shortage. The CRSS results are taken from the 2040 timestep where full-use assumptions are most comparable to the Shortage Allocation Models and Alternative Distribution Models.

Table C-2
Comparison of Shortage Volume Results Between CRSS in 2040 and the Priority Shortage Allocation Model at the 1.5 mafy Volume of Shortage

User	Shortage Allocation Model Results (afy)	CRSS Results (afy)	Difference (Shortage Allocation Model – CRSS) (afy)
Mexico	250,000	250,050	-50
Nevada	88,982	82,820	6,161
8th Priority (SNWA & Big Bend)	88,982	82,820	6,161
7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	0	0	0
6th Priority (Las Vegas Valley Water District)	0	Modeled in 8th Priority	Modeled in 8th Priority
5th Priority (PABCO)	0	Modeled in 8th Priority	Modeled in 8th Priority
4th Priority (Henderson & Basic)	0	Modeled in 8th Priority	Modeled in 8th Priority
3rd Priority (Boulder City)	0	Modeled in 8th Priority	Modeled in 8th Priority
2nd Priority (Lake Mead National Rec Area)	0	0	0
1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	0	0	0
California	0	0	0
4th Priority (MWD)	0	0	0
3rd Priority (IID, CVWD, PVID)	0	0	0
2nd Priority (Yuma Project Reservation Division)	0	0	0
1st Priority (PVID)	0	0	0
Present Perfected Rights (PPRs)	0	0	0
Arizona	1,161,018	1,167,130	-6,112
4th Priority	1,161,018	1,167,130	-6,112
2nd and 3rd Priorities	0	0	0
1st Priority (Present Perfected Rights)	0	0	0

Table C-3
Comparison of Shortage Volume Results Between CRSS in 2040 and the Pro Rata Alternative Distribution Model at the 1.5 mafy Volume of Shortage

User	Shortage Allocation Model Results (afy)	CRSS Results (afy)	Difference (Shortage Allocation Model – CRSS) (afy)
Mexico	249,365	250,000	-635
Nevada	49,873	50,000	-127
8th Priority (SNWA & Big Bend)	42,508	48,263	-460
7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	375	4	371
6th Priority (Las Vegas Valley Water District)	1,332	Modeled in 8th Priority	Modeled in 8th Priority
5th Priority (PABCO)	80	Modeled in 8th Priority	Modeled in 8th Priority
4th Priority (Henderson & Basic)	3,375	Modeled in 8th Priority	Modeled in 8th Priority
3rd Priority (Boulder City)	508	Modeled in 8th Priority	Modeled in 8th Priority
2nd Priority (Lake Mead National Rec Area)	249	250	-1
1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	1,446	1,483	-37
California	731,471	733,333	-1,862
4th Priority (MWD)	64,503	50,450	14,053
3rd Priority (IID, CVWD, PVID)	138,813	155,917	-17,103
2nd Priority (Yuma Project Reservation Division)	1,213	382	830
1st Priority (PVID)	61,240	61,396	-156
Present Perfected Rights (PPRs)	465,702	465,188	514
Arizona	469,290	466,666	2,624
4th Priority	237,236	240,430	-3,194
2nd and 3rd Priorities	132,672	126,623	6,049
1st Priority (Present Perfected Rights)	99,382	99,613	-230

C.4 Priority Shortage Allocation Model Assumptions

The Priority Shortage Allocation Model, similar to the Shortage Allocation Model developed for the 2007 FEIS, represents an interpretation of the lower Colorado River priority systems among and within the Lower Division States. As discussed in this section, the Priority Shortage Allocation Model, given a volume of total shortage to the Lower Basin, distributes available water first among the states, and subsequently within each state among the entitlement holders based on priority.

For each level of modeled shortage, the Priority Shortage Allocation Model calculates a percentage reduction to the Lower Division States and applies the same percentage reduction to Mexico's 1,500,000 acre-foot per year allotment.

The Excel workbook contains formulas extending into deep shortage levels as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS and is included for informational purposes.

C.4.1 Present Perfected Rights Assumptions for the Priority Shortage Allocation Model

Present Perfected Rights (PPRs), defined to mean perfected rights existing as of June 25, 1929, the effective date of the Boulder Canyon Project Act (see Article I.(H) of the Consolidated Decree in *Arizona v. California*, 547 U.S. 150 (2006)), are an integral part of the priority system in the lower Colorado River Basin.

Article III(a) of the Colorado River Compact of 1922 provides, quoted in pertinent part to PPRs: "There is hereby apportioned from the Colorado River System in perpetuity to… the Lower Basin… 7,500,000 acre feet of water per annum, which shall include all water necessary for the supply of any rights which may now exist." Article VIII further provides that "Present perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact." Section 6 of the Boulder Canyon Project Act also provides that: "the dam and reservoir . . . shall be used: . . . second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of said Colorado River compact."

After enumerating and quantifying the PPRs through the *Arizona v. California* litigation (see, e.g., 439 U.S. 419 (1979)), the Supreme Court provides in the Consolidated Decree in *Arizona v. California*, Article II, "The United States, its officers, attorneys, agents and employees be and they are hereby severally enjoined:…

> (B) From releasing water controlled by the United States for irrigation and domestic use in the States of Arizona, California, and Nevada, except as follows:…
>
> (3) If insufficient mainstream water is available for release, as determined by the Secretary of the Interior, to satisfy annual consumptive use of 7,500,000 acre-feet in the aforesaid three States, then the Secretary of the Interior, after providing for satisfaction of present perfected rights in the order of their priority dates without regard to state lines and after consultation with the parties to major delivery contracts and such representatives as the respective States may designate, may apportion the amount remaining available for consumptive use in such manner as is consistent with the Boulder Canyon Project Act as interpreted by the opinion of this Court herein, and with other applicable federal statutes…" (Emphasis added.)

Additionally, Article III of the Consolidated Decree provides that:

> "III. The States of Arizona, California, and Nevada, Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley Water District, the Metropolitan Water District of Southern California, City of Los Angeles, City of San Diego, and County of San Diego, and all other users of water from the mainstream in said States, their officers, attorneys, agents, and employees, be and they are hereby severally enjoined:…
>
> (B) From interfering with or purporting to authorize the interference with releases and deliveries, in conformity with Article II of this decree, of water controlled by the United States;"

Finally, Paragraph (5) of the Appendix to the Consolidated Decree provides:

> "In the event of a determination of insufficient mainstream water to satisfy present perfected rights pursuant to Article II(B)(3) of this decree, the Secretary of the Interior shall, before providing for the satisfaction of any of the other present perfected rights except for those listed herein as "MISCELLANEOUS PRESENT PERFECTED RIGHTS" (rights numbered 7–21 and 29–80 below) in the order of their priority dates without regard to state lines, first provide for the satisfaction in full of all rights of the Chemehuevi Indian Reservation, Cocopah Indian Reservation, Fort Yuma Indian Reservation, Colorado River Indian Reservation, and the Fort Mojave Indian Reservation as set forth in Article II(D)(1)–(5) of this decree...."

In the Priority Shortage Allocation Model, PPRs are assumed to be satisfied according to the assumed fill order provided on the following page in **Table C-4** (bottom up), derived from Paragraph 5 of the Appendix to the Consolidated Decree. In order to model this fill order and other elements of the priority system, the Priority Shortage Allocation Model distinguishes PPRs from other priorities of water held by a single entitlement holder. PPRs are assumed to be fully filled before any post-PPR entitlements receive water. Individual PPRs are enumerated in summary tables alongside other entitlements.

The documents cited in this section also underlie the modeled relationship between PPRs and the state-level distribution of shortage (which is further discussed in the next section).

Table C-4
Present Perfected Right Summary and Assumed Fill Order

Entitlements

Arizona, California, and Nevada Summary	CU Equivalent (af)	Diversion (af)
Arizona Total	597,811	1,077,971
California Total	2,801,326	3,019,573
Nevada Total	8,698	13,034
Total	3,407,835	4,110,578

Entitlement Holders	CU Equivalent (af)	Diversion (af)	PPR No.	Date	State	Category	Cumulative Consumptive Use Equivalent (af)
Lake Mead National Recreation Area (Overton Area, EO 5105)	300	500	82	1929	NV	Federal Establishments & Water Projects	3,407,835
Molina	318[†]	318	15	1928	AZ	Miscellaneous	3,407,535
Sonny Gowan (Grannis)	115[†]	180	32	1928	CA	Miscellaneous	3,407,217
Diehl	0.6	1	59	1928	CA	Miscellaneous	3,407,102
Stallard	0.6	1	66	1928	CA	Miscellaneous	3,407,101
Estrada	0.6	1	77	1928	CA	Miscellaneous	3,407,101
Corrington	0.6	1	79	1928	CA	Miscellaneous	3,407,100
Tolliver	0.6	1	80	1928	CA	Miscellaneous	3,407,100
Randolph	0.6	1	65	1926	CA	Miscellaneous	3,407,099
Keefe	0.6	1	67	1926	CA	Miscellaneous	3,407,098
Sturges (Gila Monster Farms, Inc.)	445[†]	780	16	1925	AZ	Miscellaneous	3,407,098
Chagnon	77[†]	120	41	1925	CA	Miscellaneous	3,406,653
Faubion	0.6	1	48	1925	CA	Miscellaneous	3,406,576
Earle	0.6	1	58	1925	CA	Miscellaneous	3,406,576
Whittle	0.6	1	78	1925	CA	Miscellaneous	3,406,575
Beauchamp	0.6	1	51	1924	CA	Miscellaneous	3,406,575
McGee	0.6	1	63	1924	CA	Miscellaneous	3,406,574
Stallard	0.6	1	64	1924	CA	Miscellaneous	3,406,573
Hadlock	0.6	1	72	1924	CA	Miscellaneous	3,406,573
Stephenson	154[†]	240	30	1923	CA	Miscellaneous	3,406,572
Draper, G.	0.6	1	46	1923	CA	Miscellaneous	3,406,419
Dudley	0.6	1	49	1922	CA	Miscellaneous	3,406,418
Colorado River Sportsmen's League	61[†]	96	36	1921	CA	Miscellaneous	3,406,417
Andrade	42[†]	66	38	1921	CA	Miscellaneous	3,406,356
Conger	0.6	1	45	1921	CA	Miscellaneous	3,406,314
Vaulin	0.6	1	70	1920	CA	Miscellaneous	3,406,313
Salisbury	0.6	1	71	1920	CA	Miscellaneous	3,406,313
McDonough	0.6	1	47	1919	CA	Miscellaneous	3,406,312
Cate	0.6	1	62	1919	CA	Miscellaneous	3,406,311
Milpitas	69[†]	108	34	1918	CA	Miscellaneous	3,406,311
Yuma Auxiliary Project, Unit B	4,352[†]	6,800	5	1905	AZ	Federal Establishments & Water Projects	3,406,242
North Gila Valley Unit, Yuma Mesa Division, Gila Project	6,125[†]	24,500	6	1905	AZ	Federal Establishments & Water Projects	3,401,890

Entitlement Holders	CU Equivalent (af)	Diversion (af)	PPR No.	Date	State	Category	Cumulative Consumptive Use Equivalent (af)
Reservation Division/Yuma Project (non-Indian portion)	19,518[†]	38,270	28	1905	CA	Federal Establishments & Water Projects	3,395,765
Valley Division, Yuma Project (Yuma County Water Users' Association)	170,314[†]	254,200	4	1901	AZ	Federal Establishments & Water Projects	3,376,247
Imperial Irrigation District & CVWD lands	2,600,000[†]	2,600,000	27	1901	CA	Federal Establishments & Water Projects	3,205,933
Palo Verde Irrigation District	94,505[†]	219,780	26	1877	CA	Federal Establishments & Water Projects	605,933
Cocopah Indian Reservation	5,146[†]	7,681	1	1917	AZ	Indian Reservations	511,428
Schneider	0.6	1	56	1917	CA	Miscellaneous	506,281
Douglas	0.6	1	50	1916	CA	Miscellaneous	506,281
Clark	0.6	1	52	1916	CA	Miscellaneous	506,280
Graham	0.6	1	61	1916	CA	Miscellaneous	506,279
Powers	624[†]	960	7	1915	AZ	Miscellaneous	506,279
United States (Cocopah Indian Tribe)	764[†]	1,140	8	1915	AZ	Miscellaneous	505,655
Lawrence	77[†]	120	42	1915	CA	Miscellaneous	504,891
Lawrence	0.6	1	53	1915	CA	Miscellaneous	504,814
Milpitas	44[†]	69	37	1914	CA	Miscellaneous	504,814
Graham, J.	0.6	1	54	1914	CA	Miscellaneous	504,770
Morgan	96[†]	150	33	1913	CA	Miscellaneous	504,769
Zozaya (MVIDD)	389[†]	720	17	1912	AZ	Miscellaneous	504,673
Reid	0.6	1	60	1912	CA	Miscellaneous	504,284
Fitz	0.6	1	75	1912	CA	Miscellaneous	504,284
EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	238[†]	360	9	1910	AZ	Miscellaneous	504,283
Geiger	0.6	1	55	1910	CA	Miscellaneous	504,045
Williams	0.6	1	76	1909	CA	Miscellaneous	504,045
Chemehuevi Indian Reservation	6,124[†]	11,340	22	1907	CA	Indian Reservations	504,044
Parker, City of	400	630	20	1905	AZ	Miscellaneous	497,921
Cooper	38[†]	60	40	1905	CA	Miscellaneous	497,521
Reynolds	23[†]	36	39	1904	CA	Miscellaneous	497,482
Ferguson, C.	0.6	1	68	1903	CA	Miscellaneous	497,459
Ferguson, W.	0.6	1	69	1903	CA	Miscellaneous	497,458
Streeter	0.6	1	73	1903	CA	Miscellaneous	497,458
Draper, J.	0.6	1	74	1903	CA	Miscellaneous	497,457
Hulet (MVIDD)	583[†]	1,080	10	1902	AZ	Miscellaneous	497,457
Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	567[†]	1,050	11	1902	AZ	Miscellaneous	496,873
Miller (MVIDD)	130[†]	240	12	1902	AZ	Miscellaneous	496,306
McKellips and Granite Reef Farms (MVIDD)	437[†]	810	13	1902	AZ	Miscellaneous	496,177
Sherrill & Lafollette (MVIDD)	583[†]	1,080	14	1902	AZ	Miscellaneous	495,739
Swan (MVIDD)	518[†]	960	18	1902	AZ	Miscellaneous	495,156
Phillips, Milton and Jean	42[†]	42	19	1900	AZ	Miscellaneous	494,638
City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	273[†]	1,260	44	1896	CA	Miscellaneous	494,596
Martinez	0.6	1	57	1895	CA	Miscellaneous	494,323
Yuma, City of	1,478	2,333	21	1893	AZ	Miscellaneous	494,322
Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	77[†]	120	31	1893	CA	Miscellaneous	492,844
Fort Mojave Indian Reservation	40,806[†]	75,566	3	1890	AZ	Indian Reservations	492,767
Fort Mojave Indian Reservation	15,103[†]	27,969	3	1890	AZ	Indian Reservations	451,962
Fort Mojave Indian Reservation	9,029[†]	16,720	25	1890	CA	Indian Reservations	436,859

Entitlement Holders	CU Equivalent (af)	Diversion (af)	PPR No.	Date	State	Category	Cumulative Consumptive Use Equivalent (af)
Fort Mojave Indian Reservation	8,398[†]	12,534	81	1890	NV	Indian Reservations	427,830
Simons	38[†]	60	35	1889	CA	Miscellaneous	419,432
City of Needles	950	1,500	43	1885	CA	Miscellaneous	419,394
Fort Yuma Indian Reservation	36,524[†]	71,616	23	1884	CA	Indian Reservations	418,444
Fort Yuma Indian Reservation	4,001[†]	6,350	3a	1884	AZ	Indian Reservations	381,919
Colorado River Indian Reservation	3,399[†]	5,860	24	1876	CA	Indian Reservations	377,919
Colorado River Indian Reservation	27,033[†]	51,986	2	1874	AZ	Indian Reservations	374,520
Colorado River Indian Reservation	23,340[†]	40,241	24	1874	CA	Indian Reservations	347,487
Colorado River Indian Reservation	131,048[†]	252,016	2	1873	AZ	Indian Reservations	324,148
Colorado River Indian Reservation	6,232[†]	10,745	24	1873	CA	Indian Reservations	193,099
Colorado River Indian Reservation	186,368[†]	358,400	2	1865	AZ	Indian Reservations	186,867
Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	499[†]	780	29	1856	CA	Miscellaneous	499
Total	**3,407,835**	**4,110,578**					

[†]Calculated consumptive use equivalent. Historical Decree Accounting data were used to estimate average CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS. For purposes of modeling, these values are assumed to be generally representative of return flow conditions for the specified users, and match CRSS inputs. Those ratios were used to estimate the consumptive use equivalent of diversion entitlements. In CA, miscellaneous PPRs were assumed to have a CU/Div ratio of .64. For IID, consumptive use was assumed to equal diversion since the CU/diversion ratio based on average historical efficiency was 0.996. In AZ, with limited supporting data about miscellaneous PPRs, they were assumed to be fully consumptive. Where an entitlement was quantified on the basis of CU by the Consolidated Decree, those values are used. The Cumulative Consumptive Use Equivalent column is included as a reference for the estimated amount of water that would need to be available to PPRs to fulfill a given entitlement on this table.

C.4.2 Distribution Among States for the Priority Shortage Allocation Model

With regard to distribution of available water among the Lower Division States, the Priority Shortage Allocation Model assumes their apportionments[4] as coequal, with exceptions relating to PPRs and to the Colorado River Basin Project Act of 1968 (CRBPA).

First, with respect to PPRs, the 1963 Opinion in *Arizona v. California*, 373 U.S. 546, 592-93 in Article III. Apportionment and Contracts in Time of Shortage, provides, in part:

> "There remains the question of what shall be done in time of shortage. The Master, while declining to make any findings as to what future supply might be expected, nevertheless decided that the Project Act and the Secretary's contracts require the Secretary in case of shortage to divide the burden among the three States in this proportion: California 4.4/7.5; Arizona 2.8/7.5; Nevada .3/7.5. While pro rata sharing of water shortages seems equitable on its face, [] more considered judgment may demonstrate quite the contrary. Certainly we should not bind the Secretary to this formula. We have held that the Secretary is vested with considerable control over the apportionment of Colorado River waters. And neither the Project Act nor the water contracts require the use of any particular formula for apportioning shortages. While the Secretary must follow the standards set out in the Act, he nevertheless is free to choose among the recognized methods of apportionment or to devise reasonable methods of his own. This choice, as we see it, is primarily his, not the Master's or even ours. And the Secretary may or may not conclude that a pro rata division is the best solution. . . ." (Footnote omitted.)
>
> None of this is to say that in case of shortage, the Secretary cannot adopt a method of proration or that he may not lay stress upon priority of use, local laws and customs, or any other factors that might be helpful in reaching an informed judgment in harmony with the Act, the best interests of the Basin States, and the welfare of the Nation. It will be time enough for the courts to intervene when and if the Secretary, in making apportionments or contracts, deviates from the standards Congress has set for him to follow, including his obligation to respect "present perfected rights" as of the date the Act was passed. . . . Finally, as the Master pointed out, Congress still has broad powers over this navigable international stream. Congress can undoubtedly reduce or enlarge the Secretary's power if it wishes. Unless and until it does, we leave in the hands of the Secretary, where Congress placed it, full power to control, manage, and operate the Government's Colorado River works and to make contracts for the sale and delivery of water on such terms as are not prohibited by the Project Act."

Consistent with the 1963 Opinion and Article II(B)(3) of the Consolidated Decree, the state distribution for the Priority Shortage Allocation Model provides first for the satisfaction of PPRs in full, before apportioning the amount remaining available for consumptive use among the Lower

[4] 2,800,000 afy to Arizona, 4,400,000 afy to California, and 300,000 afy to Nevada on a consumptive use basis. See Section 4 of the Boulder Canyon Project Act and Article II(B) of the Consolidated Decree in Arizona v. California.

Division States. The ratios used for that apportionment are further described in the following **Section C.4.2.1**, Stage 1 and 2 Shortage Assumptions.

Second, with respect to the CRBPA, Section 301(b) provides, in part:

> "in any year in which, as determined by the Secretary, there is insufficient main stream Colorado River water available for release to satisfy annual consumptive use of seven million five hundred thousand acre-feet in Arizona, California, and Nevada, diversions from the main stream for the Central Arizona Project shall be so limited as to assure the availability of water in quantities sufficient to provide for the aggregate annual consumptive use by holders of present perfected rights, by other users in the State of California served under existing contracts with the United States by diversion works heretofore constructed, and by other existing Federal reservations in that State, of four million four hundred thousand acre-feet of mainstream water, and by users of the same character in Arizona and Nevada. Water users in the State of Nevada shall not be required to bear shortages in any proportion greater than would have been imposed in the absence of this subsection 301(b)."

Additionally, the language of the Arizona priority system as contained in the CAP "Master Repayment Contract"[5] and other Arizona fourth priority Colorado River water delivery contracts provides that CAP and other post-1968 fourth priority contracts in Arizona are coequal in priority. For the purpose of the Priority Shortage Allocation Model, these provisions are assumed to reduce CAP and other Arizona fourth priority Colorado River water uses completely before water available to California is reduced below 4,400,000 acre-feet per year (afy). Mathematically, modeled shortage to Nevada is unaffected by assumptions relating to Section 301(b) of the CRBPA.

The formulation of ratios associated with these assumptions is further described in the subsection immediately below.

C.4.2.1 Stage 1 and 2 Shortage Assumptions

As in the Shortage Allocation Models for the 2007 FEIS and the 2024 FSEIS, the initial shortages to the Lower Division States in this Priority Shortage Allocation Model are characterized by two stages, Stage 1 and Stage 2. In Stage 1, shortages are imposed only upon Arizona and Nevada, continuing until the deliveries to the post-1968 water entitlement holders in Arizona (including the CAP) are reduced to zero. The maximum amount of Stage 1 shortage during the period of analysis is dependent on estimated water availability for the post-1968 water entitlement holders in Arizona.[6]

[5] Contract Between the United States and the Central Arizona Water Conservation District for Delivery of Water and Repayment of Costs of the Central Arizona Project, Contract No. 14-06-W-245, Amendment No. 1, dated December 1, 1988, as further amended and supplemented.

[6] The breakpoint between Stage 1 and Stage 2, when California begins to share in shortage, is a precise point at which no Arizona fourth priority Colorado River water is available. In the short run, this breakpoint is non-stationary and varies annually based on use by Arizona priorities one through three. For the Priority Shortage Allocation Model, a shortage volume of 1,404,130 af to the State of Arizona is used as the volume that reduces Arizona fourth priority Colorado River water availability to zero, based on assumed full use of Arizona priority one through three entitlements. The total volume of Stage 1 shortage is dependent on this assumption, as are the state ratios for distribution of Stage 2 shortage.

Stage 1 shortage in this Priority Shortage Allocation Model is consistent with the guiding documents cited in the previous subsections, but the ratios differ from those used in the 2007 FEIS and the 2024 FSEIS because those Shortage Allocation Models deliberately aligned with policy alternatives that did not consider shortages large enough to impact PPRs. At deeper shortages to the Lower Basin, such as 5.0 maf, the distribution of water among the Lower Division States using an unmodified extension of the 2007 methodology (distributing shortage in proportion to state apportionments) could create inconsistencies with obligations cited in **Section C.3.1** above because it may not provide sufficient water to fill all PPRs in every state, resulting in a mix of shortages to PPR entitlements and water available to non-PPR entitlements.[7]

The approach employed in the Priority Shortage Allocation Model for distributing shortage among the Lower Division States ensures that PPRs can be satisfied (or reduced) in the prescribed order as a Basin-wide senior priority group. Instead of setting the entire volume of each state's apportionment as coequal to the others, only state apportionments in excess of PPRs are treated as coequal (but maintaining the assumption that Arizona bears California's share of shortage until the Arizona fourth priority is exhausted). In developing the Stage 1 and Stage 2 percentages for the sharing of shortage among the Lower Division States, the consumptive use (or equivalent) of PPR entitlements was removed from each state's apportionment volumes, as detailed below. The Stage 2 distribution of water among the Lower Division States ends at the volume of total shortage where reductions to PPRs are necessary and all non-PPR entitlements have been fully reduced in each state; at that point, water available to each state equals the consumptive use (or equivalent) of PPR entitlements within the state. The distribution of water among PPRs is characterized as a Stage 3, where water available to each state is an aggregation of the PPR volumes within the state that could be filled at a given level of shortage.

The Stage 1 shortage sharing percentages for the Priority Shortage Allocation Model are computed as follows[8]:

- Nevada bears a reduction of about 7 percent of the total Lower Division States shortage volume, computed as a ratio of Nevada's apportionment less PPR consumptive use (or equivalent) entitlements within Nevada over the sum of the apportionments of the Lower Division States less all PPR consumptive use (or equivalent) entitlements
    - (0.3 maf – NV PPRs) / (7.5 maf -total PPRs) = 7.12 percent, or
        - (0.3 maf – 8,698 af) / (7.5 maf – 3,407,835 af) = 7.12 percent
- Arizona bears the remainder of the total Lower Division States shortage volume (approximately 93 percent), computed as a ratio of Arizona's and California's apportionments less PPR consumptive use (or equivalent) in both states over the sum of the

[7] See pages 306 through 312 of Special Master Simon Rifkind's 1960 Report to the Supreme Court in *Arizona v. California*, 364 U.S. 940 (1961), where the Special Master reaches the same conclusion and describes another potential methodology for responding to it.
[8] Note that these ratios distribute shortage volumes, and the available water is calculated as a remainder.

apportionments of the Lower Division States less all PPR consumptive use (or equivalent) entitlements

- (2.8 maf – AZ PPRs + 4.4 maf – CA PPRs) / (7.5 maf – total PPRs) = 92.88 percent, or
  - (2.8 maf – 597,811 af + 4.4 maf – 2,801,326 af) / (7.5 maf – 3,407,835 af) = 92.88 percent

As in the original Shortage Allocation Model, after deliveries to the fourth priority entitlements within Arizona are expected to be reduced to zero, any additional shortage is shared among Arizona, California, and Nevada. This additional shortage is Stage 2 and is in addition to the Stage 1 shortage volume; the Stage 2 shortage is distributed according to the Stage 2 ratios.

The Stage 2 shortage sharing percentages are computed as follows, with the PPR volumes the same as in the Stage 1 ratios.

- Nevada bears about 7 percent of the Stage 2 shortage in addition to its Stage 1 shortage, computed as a ratio of Nevada's apportionment less PPRs less the amount of shortage applied to Nevada under Stage 1, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to users under Stage 1
  - (0.3 maf – NV PPRs – Nevada Stage 1 shortage) / (7.5 maf – total PPRs – total Stage 1 shortage) = 7.12 percent, or
    - (300,000 - 8,698 - 107,540) / (7,500,000 - 3,407,835 - 1,511,744) = 7.12 percent
- Arizona bears about 31 percent of the Stage 2 shortage in addition to its Stage 1 shortage, computed as a ratio of Arizona's apportionment less PPRs less the amount of shortage applied to Arizona under Stage 1, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to users under Stage 1
  - (2.8 maf – AZ PPRs – Arizona Stage 1 shortage) / (7.5 maf – total PPRs – total Stage 1 shortage) = 30.93 percent, or
    - (2,800,000 - 597,811 - 1,404,130) / (7,500,000 - 3,407,835 - 1,511,744) = 30.93 percent

- California bears about 62 percent of the Stage 2 shortage, computed as a ratio of California's apportionment less PPRs, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to users under Stage 1
    - (4.4 maf – CA PPRs) / (7.5 maf – total PPRs – total Stage 1 shortage) = 61.95 percent, or
        - (4,400,000 - 2,801,326) / (7,500,000 - 3,407,835 - 1,511,744) = 61.95 percent

This method represents one possible way to distribute deep shortages among the Lower Division States in a way that does not reduce PPR water deliveries in one state while fulfilling non-PPR water deliveries in another state. Below Stage 2, water available to each state is calculated as the sum of the PPR volumes within the state that could be filled at a given level of shortage.

Table C-5 below summarizes the distribution of shortage and available water to the Lower Division States under the Priority Shortage Allocation Model. Total shortage volumes include an assumed component for Mexico, as described in the sections that follow, and will not sum across rows.

Table C-5
Summary of Shortage Volumes and Available Water by Lower Division State Under the Priority Shortage Allocation Model (af)

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
0	0	2,800,000	0	4,400,000	0	300,000
(10,000)	(7,740)	2,792,260	0	4,400,000	(593)	299,407
(40,000)	(30,960)	2,769,040	0	4,400,000	(2,373)	297,627
(50,000)	(38,701)	2,761,299	0	4,400,000	(2,966)	297,034
(70,000)	(54,181)	2,745,819	0	4,400,000	(4,152)	295,848
(100,000)	(77,401)	2,722,599	0	4,400,000	(5,932)	294,068
(120,000)	(92,881)	2,707,119	0	4,400,000	(7,119)	292,881
(140,000)	(108,362)	2,691,638	0	4,400,000	(8,305)	291,695
(200,000)	(154,802)	2,645,198	0	4,400,000	(11,864)	288,136
(240,000)	(185,763)	2,614,237	0	4,400,000	(14,237)	285,763
(360,000)	(278,644)	2,521,356	0	4,400,000	(21,356)	278,644
(399,600)	(309,295)	2,490,705	0	4,400,000	(23,705)	276,295
(400,000)	(309,605)	2,490,395	0	4,400,000	(23,728)	276,272
(480,000)	(371,526)	2,428,474	0	4,400,000	(28,474)	271,526
(500,400)	(387,316)	2,412,684	0	4,400,000	(29,684)	270,316
(600,000)	(464,407)	2,335,593	0	4,400,000	(35,593)	264,407
(720,000)	(557,289)	2,242,711	0	4,400,000	(42,711)	257,289
(700,000)	(541,809)	2,258,191	0	4,400,000	(41,525)	258,475
(800,000)	(619,210)	2,180,790	0	4,400,000	(47,457)	252,543
(840,000)	(650,170)	2,149,830	0	4,400,000	(49,830)	250,170

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(900,000)	(696,611)	2,103,389	0	4,400,000	(53,389)	246,611
(960,000)	(743,052)	2,056,948	0	4,400,000	(56,948)	243,052
(1,000,000)	(774,012)	2,025,988	0	4,400,000	(59,321)	240,679
(1,075,000)	(832,063)	1,967,937	0	4,400,000	(63,770)	236,230
(1,080,000)	(835,933)	1,964,067	0	4,400,000	(64,067)	235,933
(1,090,000)	(843,673)	1,956,327	0	4,400,000	(64,660)	235,340
(1,100,000)	(851,413)	1,948,587	0	4,400,000	(65,253)	234,747
(1,200,000)	(928,815)	1,871,185	0	4,400,000	(71,185)	228,815
(1,320,000)	(1,021,696)	1,778,304	0	4,400,000	(78,304)	221,696
(1,365,000)	(1,056,527)	1,743,473	0	4,400,000	(80,973)	219,027
(1,440,000)	(1,114,578)	1,685,422	0	4,400,000	(85,422)	214,578
(1,480,000)	(1,145,538)	1,654,462	0	4,400,000	(87,795)	212,205
(1,490,000)	(1,153,278)	1,646,722	0	4,400,000	(88,388)	211,612
(1,500,000)	(1,161,018)	1,638,982	0	4,400,000	(88,982)	211,018
(1,560,000)	(1,207,459)	1,592,541	0	4,400,000	(92,541)	207,459
(1,600,000)	(1,238,420)	1,561,580	0	4,400,000	(94,914)	205,086
(1,680,000)	(1,300,340)	1,499,660	0	4,400,000	(99,660)	200,340
(1,800,000)	(1,393,222)	1,406,778	0	4,400,000	(106,778)	193,222
(1,814,093)	(1,404,130)	1,395,870	0	4,400,000	(107,614)	192,386
(1,920,000)	(1,431,425)	1,368,575	(54,678)	4,345,322	(113,897)	186,103
(1,940,000)	(1,436,580)	1,363,420	(65,004)	4,334,996	(115,083)	184,917
(2,000,000)	(1,452,044)	1,347,956	(95,981)	4,304,019	(118,642)	181,358
(2,040,000)	(1,462,353)	1,337,647	(116,632)	4,283,368	(121,015)	178,985
(2,100,000)	(1,477,817)	1,322,183	(147,609)	4,252,391	(124,574)	175,426
(2,160,000)	(1,493,280)	1,306,720	(178,586)	4,221,414	(128,134)	171,866
(2,280,000)	(1,524,208)	1,275,792	(240,540)	4,159,460	(135,252)	164,748
(2,300,000)	(1,529,362)	1,270,638	(250,866)	4,149,134	(136,439)	163,561
(2,400,000)	(1,555,135)	1,244,865	(302,494)	4,097,506	(142,371)	157,629
(2,420,000)	(1,560,290)	1,239,710	(312,820)	4,087,180	(143,557)	156,443
(2,450,000)	(1,568,022)	1,231,978	(328,308)	4,071,692	(145,337)	154,663
(2,640,000)	(1,616,990)	1,183,010	(426,402)	3,973,598	(156,608)	143,392
(2,760,000)	(1,647,918)	1,152,082	(488,356)	3,911,644	(163,726)	136,274
(2,880,000)	(1,678,845)	1,121,155	(550,310)	3,849,690	(170,845)	129,155
(3,000,000)	(1,709,773)	1,090,227	(612,264)	3,787,736	(177,963)	122,037
(3,120,000)	(1,740,700)	1,059,300	(674,218)	3,725,782	(185,082)	114,918
(3,240,000)	(1,771,627)	1,028,373	(736,172)	3,663,828	(192,200)	107,800
(3,360,000)	(1,802,555)	997,445	(798,126)	3,601,874	(199,319)	100,681
(3,480,000)	(1,833,482)	966,518	(860,080)	3,539,920	(206,438)	93,562
(3,500,000)	(1,838,637)	961,363	(870,406)	3,529,594	(207,624)	92,376
(3,600,000)	(1,864,410)	935,590	(922,034)	3,477,966	(213,556)	86,444

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(3,720,000)	(1,895,337)	904,663	(983,988)	3,416,012	(220,675)	79,325
(3,840,000)	(1,926,265)	873,735	(1,045,942)	3,354,058	(227,793)	72,207
(3,960,000)	(1,957,192)	842,808	(1,107,896)	3,292,104	(234,912)	65,088
(4,000,000)	(1,967,501)	832,499	(1,128,547)	3,271,453	(237,285)	62,715
(4,080,000)	(1,988,120)	811,880	(1,169,850)	3,230,150	(242,030)	57,970
(4,200,000)	(2,019,047)	780,953	(1,231,804)	3,168,196	(249,149)	50,851
(4,320,000)	(2,049,975)	750,025	(1,293,758)	3,106,242	(256,267)	43,733
(4,440,000)	(2,080,902)	719,098	(1,355,712)	3,044,288	(263,386)	36,614
(4,560,000)	(2,111,830)	688,170	(1,417,666)	2,982,334	(270,504)	29,496
(4,610,000)	(2,124,716)	675,284	(1,443,480)	2,956,520	(273,470)	26,530
(4,680,000)	(2,142,757)	657,243	(1,479,620)	2,920,380	(277,623)	22,377
(4,755,000)	(2,162,087)	637,913	(1,518,341)	2,881,659	(282,072)	17,928
(4,800,000)	(2,173,684)	626,316	(1,541,574)	2,858,426	(284,741)	15,259
(4,840,000)	(2,183,994)	616,006	(1,562,225)	2,837,775	(287,114)	12,886
(4,900,000)	(2,199,457)	600,543	(1,593,202)	2,806,798	(290,674)	9,326
(4,910,598)	(2,202,189)	597,811	(1,598,674)	2,801,326	(291,302)	8,698
(5,000,000)	(2,256,342)	543,658	(1,618,723)	2,781,277	(291,602)	8,398
(6,000,000)	(2,383,742)	416,258	(2,324,655)	2,075,345	(291,602)	8,398
(7,000,000)	(2,383,742)	416,258	(3,157,989)	1,242,011	(291,602)	8,398
(7,500,000)	(2,383,742)	416,258	(3,574,655)	825,345	(291,602)	8,398
(9,000,000)	(2,800,000)	0	(4,400,000)	0	(300,000)	0

C.4.3 Distribution Within States for the Priority Shortage Allocation Model

C.4.3.1 Introduction

In accordance with Article II(B)(3) of the Consolidated Decree and Section 301(b) of the CRBPA, the Secretary has the authority to declare and allocate shortages to the Lower Division States. Some explicit guidance is given by the Supreme Court and Congress with regard to how shortages would be allocated according to priority, and additional detail is based on intra-state priority systems including as established by law and contract, and federal water delivery contracts executed pursuant to Section 5 of the Boulder Canyon Project Act.

To estimate the impacts of given levels of shortage, assumptions were made with regard to how shortages might be shared. These assumptions are made to facilitate analysis of potential impacts and are not intended to represent current or future policy with respect to shortage allocation. The Shortage Allocation Model is not designed to replicate some of the annual processes that must be undertaken in determining the quantity of water that can be approved for diversion by specific users.

C.4.3.2 General State Assumptions

Entitlement holders with multiple priorities are assumed to divert their highest-priority water first, until it is fully utilized, regardless of whether specific geographic restrictions may exist for the actual use of various priorities.

With the exception of PPRs, entitlement holders within a priority or sub-priority share in a pro rata distribution of available water on the basis of entitlement, unless another distribution is prescribed by contract or other determination. Within priorities other than PPRs, priority dates are not considered except as they pertain to grouping entitlements by priority.

PPRs (on a consumptive use or equivalent basis) are not included in the distribution of shortage within each state; they are subtracted from the water calculated to be available to each state, which water is then distributed in satisfaction of non-PPR entitlements, and the PPRs are accounted for in a separate PPR worksheet. A fill order is assumed for PPRs (see **Section C.4.1**).

C.4.3.3 Nevada Assumptions

Nevada has eight water delivery priorities as established in the Robert B. Griffith Water Project Contract No. 7-07-30-W0004, as amended, for delivery of Colorado River water between the U.S. and the State of Nevada; the contract also provides for the Southern Nevada Water Authority (SNWA) to divert the balance of any remaining un-allocated, unused, and surplus water in Nevada. **Table C-6** on the following page summarizes that priority system, which is also available at https://www.usbr.gov/lc/region/g4000/contracts/entitlements.html.

Deliveries to Nevada are no longer assumed to be constrained by Lake Mead surface elevation as assumed in the 2007 FEIS; however, the Shortage Allocation Model does not reflect the effect of potential system shortages or physical limitations on access to water.

The Shortage Allocation Model does not reflect any arrangements by the SNWA member agencies that may exist regarding the distribution of water amongst themselves during a Shortage Condition.

Table C-6
Framework for Priority-Based Distribution of Available Water Within Nevada

Priority	Entitlement Holder	Contract No.	Priority Date	Use	Entitlements		
					Diversion (afy)	CU or Estimated Equivalent (afy)[1]	Cumulative CU (afy)
9th	Any contracts dated after 3-2-1992, SNWA Contract	-	-	-	-	-	-
8th – Balance & Surplus	Southern Nevada Water Authority	2-07-30-W0266	3/2/1992	Domestic	balance + surplus	92,717	
	TOTAL	-	-	-	-	92,717	291,302
8th	Big Bend Water District	2-07-30-W0269	3/2/1992	Domestic	10,000	4,900	
	Robert B. Griffith Project Sub. to City of Boulder City (8,918 af) Sub. to City Henderson (27,021 af) Sub. to City of North Las Vegas (26,635 af) Sub. to Las Vegas Valley Water District (232,426 af)	7-07-30-W0004	3/2/1992	Domestic	304,000	158,080	
	TOTAL	-	-	-	**314,000**	162,980	198,586
7th	Southern Nevada Water Authority (Formerly Boy Scouts of America)	9-07-30-W0011	11/8/1978	Domestic	10	5	
	Bureau of Reclamation (includes Sportsman Park)	Secretarial Res.	11/9/1998	Domestic	300	147	
	Nevada Dept. of Wildlife (formerly Nevada Dept. of Fish & Game)	14-06-300-2405	10/18/1972	Domestic		25	
	US Air Force (4.0 kaf) (Delivery from SNWA)	F26600-78-DOO11, amended by F-26600-01-D-A111 (Included in 07-07-30-W0004 in P8)	1/23/1978, amended 5/1/2000	-	4,000	2,080	
	TOTAL	-	-	-	**4,310**	2,257	35,606
6th	Las Vegas Valley Water District	14-06-300-2130	9/22/1969	Domestic	15,407	8,012	
	TOTAL	-	-	-	**15,407**	8,012	33,348
5th	Lakeview Company (Hacienda Casino)	14-06-300-1523	2/12/1965	Domestic	0	0	
	Pacific Coast Building Products, Inc. (PABCO)	5-07-30-W0089	6/19/1985	Domestic	928	483	
	TOTAL	-	-	-	**928**	483	25,337

Priority	Entitlement Holder	Contract No.	Priority Date	Use	Entitlements		
					Diversion (afy)	CU or Estimated Equivalent (afy)[1]	Cumulative CU (afy)
4th	Henderson Water Company (formerly BMI/Basic Water Company)	14-06-300-2083	9/18/1969	Domestic	8,208	4,268	
	City of Henderson	0-07-30-W0246	9/18/1969	Domestic	15,878	8,257	
	Southern Nevada Water Authority (From Basic Water Company)	2-07-30-W0266	9/18/1969	Domestic	14,950	7,774	
	TOTAL	-	-	-	**39,036**	20,299	24,854
3rd	Boulder City[2]	14-06-300-978	5/15/1931	Domestic	5,876	3,056	
	TOTAL	-	-	-	5,876	3,056	4,556
2nd	Lake Mead National Recreation Area, Executive Order No. 5339	1964 Decree	4/25/1930	Domestic	Unquantified, estimated ~1,500	1,500	
	TOTAL	-	-	-	**1,500**	1,500	1,500
NEVADA TOTALS	-	-	-	-	381,057	291,302	-

Note: CU means Consumptive Use. All units are in acre-feet per year. The Cumulative CU column is included as a reference for the estimated amount of water that would need to be available to Nevada priorities two through eight to fulfill a given priority on this table.
Subcontracts are displayed below the Entitlement Holder and indented five spaces.
In a shortage, PPRs are delivered water in order of priority date regardless of state lines. PPRs are not included in this table, and they are accounted for in a separate PPR worksheet.
[1]Historical Decree Accounting data were used to estimate average CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS. For purposes of modeling, these values are assumed to be generally representative of return flow conditions for the specified users, and match CRSS inputs; these values were used to estimate the consumptive use equivalent of diversion entitlements.
[2]Boulder City's entitlement is delivered through the Robert B. Griffith Project; historically there have been no return flows from Boulder City, but proposals are under review to begin generating return flows. It will be considered reasonably foreseeable for this to occur over the period of analysis, therefore Boulder City's CU/Div ratio is assumed to be the same as for the Southern Nevada Water Authority as a whole.

C.4.3.4 California Assumptions

Entitlements shown on the following page in **Table C-7** for California priorities one through three exclude the full volume of PPR entitlements held by those same parties, which are subject to a separate priority system (see **Section C.4.1**).

Reclamation recognizes that the Quantification Settlement Agreement (QSA) and related agreements help California parties meet the water needs of PPRs by agreeing that certain parties to the Seven Party Agreement would make water available to satisfy the requirements of the PPR holders while keeping the priorities within the Seven Party Agreement intact. In addition, the QSA helped quantify entitlements in the Seven Party Agreement, which is necessary to model shortages.

- The quantified entitlements in the QSA for Imperial Irrigation District and Coachella Valley Water District were modeled in the Shortage Allocation Model.
- Within priority 3a, Coachella Valley Water District's entitlement is modeled as subordinate to Imperial Irrigation District's entitlement in accordance with the February 14, 1934 Agreement of Compromise; however, no opinion is expressed or implied on the part of the United States or the non-Federal parties as to how administration of that agreement during a Shortage Condition may affect the parties' rights pursuant to various arrangements.
- QSA transfers and exchanges were not modeled in the Shortage Allocation Model, as the relevant agreements do not provide sufficient detail to model a system of priority among the transfers. This is also consistent with assumptions for the Shortage Allocation Model as a whole, which models shortage at the entitlement level.

Although the Metropolitan Water District of Southern California (MWD) has a fourth priority Seven Party Agreement entitlement of 550 kaf, MWD's consumptive use equivalent entitlement is calculated (for modeling purposes) to equal the balance of California's apportionment after full use of higher priority entitlements. During a shortage, MWD may acquire water supplies from other sources, and those arrangements are not modeled in the Shortage Allocation Model.

Entitlements associated with each California entitlement holder are available at: https://www.usbr.gov/lc/region/g4000/contracts/entitlements.html.

Table C-7
Framework for Priority-Based Distribution of Available Water Within California

Priority[1]	Entitlement Holder	Contract No.	Priority Date	Use	Diversion Entitlement (afy)	CU Entitlement (afy)	Estimated Use	
							CU or Estimated Equivalent (afy)[2]	Cumulative CU (afy)
4th	The Metropolitan Water District of Southern California (MWD) (4)	I1r-645	1930, 1931	Domestic	-	550,000	388,002	-
	TOTAL	-	-	-	**0**	**550,000**	**388,002**	**1,598,674**
3rd	Palo Verde Irrigation District (3b) – Lower Palo Verde Mesa Lands[3]	PVID20733C_P5	1933	Irrigation	≤16,000 acres	Unquantified	5,000	
	Coachella Valley Water District (CVWD) (3a)[4]	I1r-781	1934	Irrigation	-	330,000	330,000	
	Imperial Irrigation District (IID) (3a)[5]	I1r-747	1932	Irrigation	-	500,000	500,000	
	TOTAL[3]	-	-	-	-	-	**835,000**	**1,210,672**
2nd	Yuma Project, Reservation Division (Bard Unit Only – Indian Unit Under PPRs)[6]	Water Certificates	1905	Irrigation	≤25,000 acres	-	7,294	
	TOTAL	-	-	-	-	-	**7,294**	**375,672**
1st	Palo Verde Irrigation District – Valley Lands (1)	PVID20733C_P2	1933	Irrigation	≤104,500 acres	Unquantified	368,378	
	TOTAL	-	-	-	-	-	**368,378**	**368,378**
-	**CALIFORNIA TOTALS**	-	-	-	-	-	**1,598,674**	-

Notes: CU means Consumptive Use; all units are in afy (acre feet per year). The Cumulative CU column is included as a reference for the estimated amount of water that would need to be available to California priorities one through four to fulfill a given priority on this table.

[1]Priorities are based on the California Seven Party Agreement, modified for the PPRs identified by the Consolidated Decree (which are accounted for in the PPRs table).

[2]Historical Decree Accounting data were used to estimate average CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS, including estimating the consumptive use equivalent of diversion entitlements. Unless otherwise noted, modeled entitlements match CRSS.

[3]PVID's P3(b) entitlement for the Lower Palo Verde Mesa Lands is unquantified. For modeling purposes, an estimated CU equivalent of 5.0 kaf was assumed based on conversations with PVID.

[4]QSA transfers and exchanges are not modeled in the Shortage Allocation Model, a difference from CRSS. For modeling purposes, CVWD P3(a) was shorted before IID P3(a) based on the 1934 Agreement of Compromise; no interpretation of the agreement is intended by this modeling assumption.

[5]Non-Colorado River water is pumped from the Lower Colorado Water Supply Project (LCWSP) wellfield and discharged into the All-American Canal for delivery to IID. IID forbears the consumptive use of an equivalent amount of Colorado River, up to a maximum of 10.0 kaf per year, to make such water available, via exchange, to the LCWSP beneficiaries (includes MWD and the City of Needles and its subcontractors). For purposes of the shortage allocation model, the 10.0 kaf is included in IID's estimated CU equivalent; if the exchange could not be completed in a given year, it is assumed that IID would divert this amount from the Colorado River.

[6]The Yuma Project CU Estimated Equivalent is based on historical consumptive use of the Bard Unit, minus the CU from PPR 28, which is accounted for in the PPRs table. The Yuma Project Reservation Division Indian Unit is not accounted for here since it is covered by PPR 23, also listed in the PPRs table. This estimated CU equivalent differs from CRSS by 5.0 kaf due to CRSS modeling a seasonal fallowing program.

C.4.3.5 Arizona Assumptions

Entitlements associated with each Arizona entitlement holder are available at: https://www.usbr.gov/lc/region/g4000/contracts/entitlements.html.

Water available to entitlement holders in Arizona is distributed through each priority according to the following assumptions. These assumptions do not necessarily reflect operational procedure, but they are necessary to produce a general approximation of the effect of shortages on specific priorities and entitlements for this Draft EIS.

C.4.3.5.1 Arizona Priority Two and Three Assumptions

Arizona priority two is for Secretarial Reservations and Perfected Rights established or effective prior to September 30, 1968. Arizona priority three is for entitlements pursuant to contracts between the U.S. and water users in the State of Arizona executed on or before September 30, 1968. The second and third priorities are coequal.

The available supply to Arizona priorities two and three is calculated as the available supply to Arizona minus the sum (597,811 af) of Arizona's first priority (PPR) entitlements on a consumptive use (or estimated equivalent) basis. That supply is divided between priorities two and three in proportion to the sum of the consumptive use (or equivalent) entitlements within each priority: about 10 percent to priority two and about 90 percent to priority three. The following assumptions for distribution within those priorities consider contract-specific priority language.

Water available to priority two is distributed among its five entitlements in proportion to their consumptive use (or equivalent) entitlement relative to the total for priority two.

Water available to priority three is distributed among its 28 entitlements[9] in six groups according to project and/or division or pertinent contract terms. The alphanumeric sub-priority naming conventions for the six groups (shown in **Table C-8** on the following page) are not operational or contractual designations, and they are only used as an organizational tool specific to this analysis. Five of the six groups are assumed to be coequal within priority three, and they are distributed water in proportion to the sum of the consumptive use (or equivalent) entitlements within each group, relative to the total for all five groups. They are discussed in detail in the sections that follow.

[9] As of February 7, 2025.

Table C-8
Framework for Priority-Based Distribution of Available Water Within Arizona Priorities 2 and 3

Priority	Water Allocation % by Priority	Sub-Priority*	Project	Division	Water Allocation % by Project/Division	Entitlement Holder	Contract No.	Priority Date	Use	Entitlements: Diversion (AFY)	Entitlements: CU or *Estimated Equivalent* (AFY)
2	9.72%	N/A	N/A	N/A	N/A	Cibola National Wildlife Refuge[5]	Secretarial Res.	8/21/1964	Domestic	27,000	16,793
						Lake Mead National Recreation Area	Consolidated Decree	4/25/1930	Domestic	unquantified	*343*
						Bureau of Reclamation - Davis Dam	Secretarial Res.	4/26/1941	Domestic	100	*7*
						Imperial National Wildlife Refuge	Consolidated Decree	2/14/1941	Domestic	28,000	23,000
						Havasu Lake National Wildlife Refuge	Consolidated Decree	1/22/1941	Domestic	41,839	37,399
										P2 Total	**77,542**
3	90.28%	3b	Boulder Canyon		Remainder	City of Yuma	14-06-W-106	11/12/1959	Domestic		48,522
											Project/Division Subtotal **48,522**
		3a5 Subordinate	Gila	Yuma Mesa	32.66%	Union Pacific Railroad (formerly Southern Pacific Co.)	14-06-303-1524	12/21/1959	Domestic	48	*25*
						Kaman, Inc.	14-06-303-1555	12/2/1959	Domestic	2	*2*
						Department of the Navy, MCAS	14-06-300-937	1/1/1959	Domestic	3,000	*3,000*
						City of Yuma (cemetery)	14-06-303-1078	5/1/1956	Domestic	60	*60*
						Yuma Mesa Fruit Growers' Association	14-06-303-1196	10/1/1956	Domestic	15	*15*
						Desert Lawn Memorial Park Association	14-06-300-1079	5/1/1956	Domestic	200	*138*
						Sturges, Harold	I76R-733	1/1/1952	Irrig.	335	*335*
						Sturges, Irma	I76R-735	1/1/1952	Irrig.	385	*385*
		3a5				**Yuma Mesa Irrigation & Drainage District (10,000af M&I)**	5-07-30-W0095	5/26/1956	Both		141,519
						Yuma Irrigation District (5,000af M&I)	5-07-30-W0093	7/23/1962	Both		67,278
						North Gila Valley Irrigation and Drainage District (2,500af M&I)	5-07-30-W0094	5/12/1953	Both		*6,731*
											219,488
		3a4	Gila	Wellton-Mohawk	41.37%	**Wellton-Mohawk Irrigation and Drainage District (12,000af M&I)**	1-07-30-W0021	3/4/1952	Both		278,000
											278,000
		3a3	Various		11.42%	Ak-Chin Indian Community[3]	1985 Settlement Contract	1/1/1956	Both	50,000	*50,000*
						Chandler (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0235	3/4/1952	Domestic	4,278	*4,278*
						Gilbert (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0241	3/4/1952	Domestic	6,762	*6,762*
						Glendale (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0236	3/4/1952	Domestic	3,000	*3,000*
						Mesa (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0239	3/4/1952	Domestic	2,760	*2,760*
						Phoenix (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0240	3/4/1952	Domestic	5,000	*5,000*
						Scottsdale (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0237	3/4/1952	Domestic	100	*100*
						Tempe (Salt River Pima-Maricopa Exchange)[3]	9-07-30-W0238	3/4/1952	Domestic	100	*100*
						Department of the Army - Yuma Proving Ground	I76r-696	6/12/1951	Domestic	1,129	*1,129*
						Gila Monster Farms (formerly Sturges)	6-07-30-W0337	1/1/1952	Irrig.	6,285	*3,582*
											76,711
		3a2 Subordinate	Yuma	Valley	11.82%	Yuma Union High School District	14-06-303-179	1/1/1953	Domestic	200	*148*
		3a2				**Yuma County Water Users' Association (14,701af M&I includes YA**	14-06-300-621 & Certificates	4/1/1957	Both	unquantified	*79,304*
											79,452
		3a1 Subordinate	Yuma Auxiliary		2.73%	University of Arizona	14-06-300-144	1/1/1954	Irrig.	1,088	*1,088*
						Desert Lawn Memorial Park Association, Inc.[4]	14-06-300-2587	5/30/1975	Domestic	360	*248*
						Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	14-06-303-528	12/23/1953	Irrig.	120	*120*
		3a1				**Unit B Irrigation & Drainage District**	14-06-300-44	12/22/1952	Irrig.	unquantified	*16,886*
Grand Total	**100.00%**										**18,343**

P3a Total **671,995**
P3 Total **720,517**
P 2 & 3 Grand Total **798,059**

The Yuma Mesa Division of the Gila Project

Approximately 33 percent of the available priority three water, up to the limit of the sum of the consumptive use (or equivalent) entitlements within the Division, is distributed among the Division's 11 entitlements. That water is first made available to Yuma Mesa Irrigation and Drainage District, Yuma Irrigation District, and North Gila Valley Irrigation and Drainage District coequally in proportion to their consumptive use entitlements.[10]

Any water remaining for the Division after satisfaction of the district contracts is made available to Union Pacific Railroad, Kaman, Department of the Navy (Marine Corps Air Station), City of Yuma (Cemetery), Yuma Mesa Fruit Growers Association, Desert Lawn Memorial Park Association, Harold Sturges, and Irma Sturges, coequally in proportion to their consumptive use equivalent entitlements.[11]

The Wellton-Mohawk Division of the Gila Project

Approximately 43 percent of the available priority three water, up to the limit of Wellton-Mohawk Irrigation and Drainage District's consumptive use entitlement, is made available to the District.[10]

The Yuma Project

Approximately 11 percent of the available priority three water is first made available to the Yuma County Water Users Association up to the limit of its consumptive use equivalent entitlement. Any water remaining for the Yuma Project after satisfaction of the Association contract is made available to Yuma Union High School District.[11]

The Yuma Auxiliary Project

Approximately 2.0 percent of the available priority three water, up to the limit of the sum of the consumptive use equivalent entitlements within the Yuma Auxiliary Project, is distributed among the Yuma Auxiliary Project's three entitlements. That water is first made available to Unit B Irrigation and Drainage District up to the limit of its consumptive use equivalent entitlement. Any water remaining for the Yuma Auxiliary Project after satisfaction of the District contract is made available to the University of Arizona, the successor to Camille Allec, Jr., and Desert Lawn Memorial Park Association (for Contract No. 14-06-300-2587).[11]

Various Entitlements

A group of 10 entitlements established under various authorities shares approximately 12 percent of the available priority three water, up to the limit of the sum of the consumptive use (or equivalent) entitlements within the group. Water is distributed to the Ak-Chin Indian Community; the Arizona cities of Chandler, Gilbert, Glendale, Mesa, Phoenix, Scottsdale, and Tempe; the Department of the Army (Yuma Proving Ground); and Gila Monster Farms coequally in proportion to their consumptive use (or equivalent) entitlements. The distribution of water is stated in terms of

[10] Domestic use within each district's entitlement is assumed to be subordinated to irrigation use in the district but is not itemized separately.

[11] Water use is subject to availability and is assumed not to be detrimental to water service for the project or prior appropriators.

quantities available at the mainstream point of diversion, and no assumptions are made about the further distribution of priority three water delivered through the CAP.

The City of Yuma

The City of Yuma receives all remaining priority three water, up to the limit of its consumptive use entitlement (minus a portion assumed to be satisfied by PPR No. 21), reflecting that water delivery under its Contract No. 14-06-W-106 is subject to the prior fulfillment of contracts for the diversion of Colorado River water at Imperial Dam and for the delivery of such water through the Gila Gravity Main Canal or the All-American Canal for the irrigation of lands in the State of Arizona.

C.4.3.5.2 Arizona Priority Four Assumptions

For calendar years 2022 through 2026, Reclamation implemented[12] the State of Arizona's August 6, 2009, Arizona Shortage Sharing Recommendation and the "pool" approach described by letter dated January 25, 2021, to inform approval of fourth priority water orders, consistent with contracts providing that the fourth priority Colorado River water entitlements of the P4(i) or 'mainstream' users and the CAP (P4(ii)) are coequal.

The Priority Shortage Allocation Model uses a simplified version of the fourth priority shortage sharing procedure that is consistent with other assumptions for shortage modeling under long-term steady state conditions. It subtracts the sum of Arizona priority 1 through 3 entitlements (on a consumptive use basis) and the Arizona shortage volume from Arizona's Colorado River water apportionment to derive the fourth priority supply on a consumptive use basis. The P4(i) available supply is calculated as 10 percent[13] of the fourth priority supply on a consumptive use basis, not to exceed the total of the consumptive use equivalents of entitlements in the P4(i) pool (108,958 afy as modeled). The remainder of the fourth priority supply is available for diversion as fourth priority water by the CAP to fulfill CAP contracts and subcontracts.

C.4.3.5.3 P4(i) (Mainstream) Framework and Assumptions

The P4(i) pool is quantified in terms of 164,652 afy of diversions from the Colorado River, which for modeling purposes is converted to a consumptive use total of 108,958 afy with historical Decree Accounting data used to estimate CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS. Shortage to the P4(i) is calculated as the difference between the P4(i) available supply and the total of the consumptive use equivalents of entitlements in the P4(i) pool (108,958 afy as modeled). Shortage to each entitlement within the P4(i) pool is

[12] For example: Reclamation's September 14, 2022, letter notifying interested parties of a Tier 2 Shortage Condition and required DCP contributions in calendar year 2023, and Reclamation's September 28, 2022, letter to the Central Arizona Water Conservation District announcing the calendar year 2023 Available CAP Supply.

[13] Based on the relative volumes of the P4(i) and P4(ii) contracting pools.

borne in proportion to its entitlement[14] relative to the entire pool as quantified by contracts. For purposes of the Priority Shortage Allocation Model, the P4(i) pool includes two outstanding ADWR recommendations that have not yet been placed under contract, the 3.5 kafy quantified and reserved for use in a future Navajo-Hopi Indian water rights settlement in accordance with subsection 11.3 of the 2006 Arizona Water Settlement Agreement, and the quantified remainder of the pool which is available for contracting by the Secretary to satisfy current or future tribal and other water needs. (See **Table C-9** below)

Contracts and subcontracts are itemized separately, meaning an entity's total modeled supply may be the sum of multiple distributions.

Table C-9
Framework for Priority-Based Distribution of Available Water Within Arizona P4(i) (Mainstream)

P4(i) Entitlement Holders	Contract Number(s)	Date	Type of Use	Diversion Entitlement in afy	Divided By	Sum of Entitlements in afy (Div. or Equiv.)	Equals	Proportionate Share of P4(i) Pool
Arizona Game and Fish Commission	07-XX-30-W0509	2007	Irrigation	2,838.00	/	164,652	=	1.724%
Arizona State Land Department	4-07-30-W0317	1999	Irrigation	6,607.00	/	164,652	=	4.013%
Beattie Farms, Southwest	05-XX-30-W0446	2006	Irrigation	1,110.00	/	164,652	=	0.674%
Bishop, Alfred F. and Erma Jean Family Trust	21-XX-30-W0718	1983	Irrigation	420.00	/	164,652	=	0.255%
Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	21-XX-30-W0719	1983	Irrigation	126.00	/	164,652	=	0.077%
Perricone Arizona Properties, LLC and Meyer Farms, LLC	09-XX-30-W0539	2009	Irrigation	2,100.00	/	164,652	=	1.275%
Cibola Sportsman's Club, Inc.	21-XX-30-W0717	1983	Irrigation	216.00	/	164,652	=	0.131%
Cibola Valley Irrigation and Drainage District	2-07-30-W0028	1983	Both	7,442.52	/	164,652	=	4.520%
Cocopah Indian Reservation	Consolidated Decree in AZ v. CA	1974	Both	2,026.00	/	164,652	=	1.230%
Curtis, Armon	3-07-30-W0037	1983	Irrigation	300.00	/	164,652	=	0.182%
Gila Monster Farms, Inc.	6-07-30-W0337	1997	Irrigation	1,435.00	/	164,652	=	0.872%
Matador Farms, LLC	17-XX-30-W0628	2018	Irrigation	4,500.00	/	164,652	=	2.733%
Hopi Tribe	04-XX-30-W0432	2004	Irrigation	4,278.00	/	164,652	=	2.598%
JRJ Partners, L.L.C.	06-XX-30-W0448	2007	Irrigation	1,080.00	/	164,652	=	0.656%
Mohave Valley Irrigation and Drainage District	14-06-W-204	1968	Both	35,060.00	/	164,652	=	21.293%
North Baja Pipeline, LLC	04-XX-30-W0433	2005	Both	480.00	/	164,652	=	0.292%
Ogram Boys Enterprises, Inc.	01-XX-30-W0402	2005	Irrigation	924.00	/	164,652	=	0.561%
Ott, Larry and Gina, and Lee C. and Candace M.	18-XX-30-W0639	2018	Irrigation	480.00	/	164,652	=	0.292%
Pasquinelli, Gary J. and Barbara J.	5-07-30-W0065	1986	Irrigation	486.00	/	164,652	=	0.295%
Phillips, Milton and Jean	Recommendation		Irrigation	60.00	/	164,652	=	0.036%
Red River Land Company, LLC	17-XX-30-W0630	2018	Irrigation	300.00	/	164,652	=	0.182%
Western Water, LLC	16-XX-30-W0619	2018	Irrigation	536.48	/	164,652	=	0.326%
Arizona State Land Department	7-07-30-W0358	2004	Domestic	1,534.00	/	164,652	=	0.932%
Arizona State Parks Board - Windsor Beach	7-07-30-W0364	1998	Domestic	90.00	/	164,652	=	0.055%
B&F Investment, LLC	06-XX-30-W0453	2006	Domestic	60.00	/	164,652	=	0.036%
Bullhead City	2-07-30-W0273	1994	Domestic	15,210.00	/	164,652	=	9.238%
Bullhead City (MCWA Subcontract)	Subcontract to 04-XX-30-W0431	2004	Domestic	2,139.00	/	164,652	=	1.299%
Bullhead City (MCWA Subcontract)	Subcontract No. 95-102 to 5-07-30-W0320	1995	Domestic	7,000.00	/	164,652	=	4.251%
Bureau of Land Management (diversion equivalent)	8-07-30-W0373	2000	Domestic	6,169.00	/	164,652	=	3.747%

[14] Historically Arizona P4(i) entitlements have been quantified on a diversion basis. More recently, the Bureau of Land Management's and Town of Queen Creek's Arizona P4(i) entitlements have specified consumptive use volumes (consumptive use = diversions minus return flows). These entitlements are shown in **Table C-5** as their diversion equivalents (consumptive use + historical or current return flows = diversion equivalent) for modeling purposes because distribution during shortage within the Arizona P4(i) pool is assumed to be administered in proportion to all users' diversion volumes, not in proportion to consumptive use volumes, for uniformity and consistency. The diversion equivalency volumes listed in **Table C-9** are necessary to analyze the distribution of the Arizona P4(i) entitlements with a uniform metric, do not modify the entitlements, and are consistent with applicable contracts and agency decision documents.

P4(i) Entitlement Holders	Contract Number(s)	Date	Type of Use	Diversion Entitlement in afy	Divided By	Sum of Entitlements in afy (Div. or Equiv.)	Equals	Proportionate Share of P4(i) Pool
Crystal Beach Water Conservation District	6-07-30-W0352	1997	Domestic	132.00	/	164,652	=	0.080%
Ehrenburg Improvement District	8-07-30-W0006	1977	Domestic	735.00	/	164,652	=	0.446%
EPCOR Water Arizona Inc.	20-XX-30-W0690	2021	Domestic	1,874.00	/	164,652	=	1.138%
Fisher's Landing Water and Sewer Works, L.L.C.	06-XX-30-W0450	2006	Domestic	53.00	/	164,652	=	0.032%
Frontier Communications West Coast Inc.	14-06-300-2506	1974	Domestic	1.00	/	164,652	=	0.001%
Gold Dome Mining Corporation	0-07-30-W0250	1990	Domestic	7.00	/	164,652	=	0.004%
Golden Shores Water Conservation District	9-07-30-W0203	1989	Domestic	2,000.00	/	164,652	=	1.215%
GSC Farm, LLC	13-XX-30-W0571	2013	Domestic	69.93	/	164,652	=	0.042%
Hillcrest Water Company	5-07-30-W0078	1985	Domestic	84.00	/	164,652	=	0.051%
Lake Havasu City	3-07-30-W0039	1995	Domestic	19,192.70	/	164,652	=	11.657%
Lake Havasu City (MCWA Subcontract)	Subcontract to 04-XX-30-W0431	2004	Domestic	2,139.00	/	164,652	=	1.299%
Lake Havasu City (MCWA Subcontract)	Subcontract No. 95-101 to 5-07-30-W0320	1995	Domestic	7,250.00	/	164,652	=	4.403%
La Paz County	08-XX-30-W0530	2008	Domestic	350.00	/	164,652	=	0.213%
Martinez Lake Cabin Sites	Recommendation		Domestic	23.00	/	164,652	=	0.014%
McAlister Family Trust	7-07-30-W0355	1998	Domestic	40.00	/	164,652	=	0.024%
Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Subcontract No. 09-101 to 5-07-30-W0320	1995	Domestic	1,250.00	/	164,652	=	0.759%
Mohave Water Conservation District	9-07-30-W0012	1979	Domestic	1,800.00	/	164,652	=	1.093%
Mohave Water Conservation District (MCWA Subcontract)	Subcontract No. 95-103 to 5-07-30-W0320	1995	Domestic	3,000.00	/	164,652	=	1.822%
Parker, Town of	2-07-30-W0025	1982	Domestic	1,030.00	/	164,652	=	0.626%
Quartzsite, Town of	7-07-30-W0353	1999	Domestic	1,070.00	/	164,652	=	0.650%
Queen Creek, Town of (mainstream diversion equivalent)	20-XX-30-W0689	2023	Domestic	2,843.37	/	164,652	=	1.727%
Roy, Estates of Anna R. and Edward P.	6-07-30-W0124	1986	Domestic	1.00	/	164,652	=	0.001%
Shepard Water Company, Incorporated	08-XX-30-W0535	2009	Domestic	50.00	/	164,652	=	0.030%
Somerton, City of	03-XX-30-W0419	2006	Domestic	750.00	/	164,652	=	0.456%
Springs Del Sol Domestic Water Improvement District	08-XX-30-W0524	2008	Domestic	100.00	/	164,652	=	0.061%
TV Marble Canyon AZ, LLC	5-07-30-W0322	1996	Domestic	70.00	/	164,652	=	0.043%
Water Reserved by the Secretary for a Navajo-Hopi Settlement	-	-	-	3,500.00	/	164,652	=	2.126%
Unallocated 4th Priority Mainstream Water	-	-	-	10,230.00	/	164,652	=	6.213%
Total	-	-	-	**164,652**	-	-	-	**100%**

Notes:
The Town of Queen Creek's "mainstream diversion equivalent" is calculated using GSC Farm, LLC's historical CU/Diversion ratio of 0.715; available water on a mainstream diversion equivalent basis would be converted back to CU for conveyance through the Central Arizona Project as provided in the related contracts, but this table does not make the calculation of water available for diversion. Bureau of Land Management's diversion equivalent is calculated with historical Decree Accounting data used to estimate average CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS.
With the exception of Bureau of Land Management and Town of Queen Creek, water is contracted in this pool on a diversion basis, but CU shortage impacts are calculated for the purpose of analysis.
See Arizona Third Priority for Desert Lawn Memorial Park Association, Inc., Contract No. 14-06-300-2587.

For simplicity and transparency in avoiding repeated conversions between diversion and consumptive use, the Priority Shortage Allocation Model calculates each entitlement's shortage by multiplying its proportionate share of the pool on a diversionary basis by the P4(i) shortage in terms of consumptive use.

C.4.3.5.4 CAP Framework and Assumptions

In the Priority Shortage Allocation Model, Arizona priority three Colorado River water entitlements delivered through the CAP are assumed to be satisfied consistent with their Colorado River third priority, and Arizona P4(i) water transported through the CAP is assumed to be satisfied according to its priority.

The CAP Master Repayment Contract (Contract No. 14-06-W-245, Amendment No. 2, dated November 30, 2007) defines the Available CAP Supply as all fourth priority water available for delivery through the CAP, water available from CAP dams and reservoirs other than Modified Roosevelt Dam, and return flows captured by the Secretary for CAP use. Available CAP Supply is used in contractual determinations related to a CAP Time of Shortage and the distribution of water

among CAP contractors and subcontractors. For the purpose of the Priority Shortage Allocation Model, fourth priority water available to CAP for diversion from the mainstream, calculated as described above in **Section C.4.3.5.2**, is converted to Available CAP Supply through the addition of 7,143 afy of water estimated to be available from the CAP dam and reservoir (New Waddell Dam and Lake Pleasant) and the subtraction of 71.4 kafy representing estimated CAP system loss associated with the conveyance of P4(ii) water; CAP return flows are not currently captured.

Terms and conditions for priority in case of shortage to the Available CAP Supply relate only to CAP fourth priority water (P4(ii)) and the other two supplies listed in the previous paragraph. Certain third priority water transported through the CAP (described in **Section C.4.3.5.1** as being diverted on behalf of the Ak-Chin Indian Community and the Arizona cities of Chandler, Gilbert, Glendale, Mesa, Phoenix, Scottsdale, and Tempe),[15] and any other non-Project water diverted by the CAP from the Colorado River, has separate shortage protocols established by statute and contract. The Priority Shortage Allocation Model attempts to reflect the legislative and contractual terms and conditions applicable to a CAP Time of Shortage, which shortage would impact the distribution of water to CAP contractors and subcontractors. The CAP long-term contractors and subcontractors that receive Available CAP Supply are classified in one of three CAP priority pools: Indian Priority, Municipal & Industrial (M&I) Priority, and Non-Indian Agricultural (NIA) Priority. Modeling assumptions for these CAP priorities integrate the shortage-related provisions of a body of contracts and Secretarial determinations dating from the 1980s through the present, as codified by Congress including through Indian water rights settlement legislation. However, levels of shortage to date have not required the implementation of shortage provisions in all CAP contracts and subcontracts, and their modeling should be understood as theoretical.

Available CAP Supply is first made available to Indian Priority and M&I Priority long-term contracts and subcontracts; at or above an Available CAP Supply of 981,902 af, all Indian Priority allocations (343,079 af total) and M&I Priority allocations (638,823 af total) can be satisfied. Any Available CAP Supply in excess of 981,902 af becomes available to NIA Priority long-term contracts and subcontracts. After all long-term CAP contracts and subcontracts are fulfilled[16], the remaining available water could be ordered under one-year excess contracts; however, under the assumptions of the model regarding full use by Arizona Priorities 1 through 3, there is no remaining water available for excess contracts.

An Available CAP Supply less than 981,902 af is a contractually defined Time of Shortage for the CAP, affecting the Indian Priority and M&I Priority pools. Under that condition, the Available CAP Supply is distributed to the Indian Priority pool as set forth by Article 8.11(c) of the CAP Master Repayment Contract, with the M&I Priority pool receiving the remainder.[17] Then, those volumes

[15] See, e.g., Ak-Chin Water Rights Settlement Act of 1978 (Public Law 95-328), as amended; Salt River Pima-Maricopa Indian Community Water Rights Settlement Act of 1988 (Public Law 100-512), as may be amended.
[16] Under Article 3.(b) of the 1985 Contract Between the United States and the Ak-Chin Indian Community to Provide Permanent Water and Settle Interim Water Rights, in any year in which sufficient surface water is available, the Secretary shall deliver certain additional water to the Ak-Chin Indian Community. Such water is assumed to be available if there is unused CAP water after CAP orders under long-term contracts and subcontracts are fulfilled; however, that does not occur under the assumptions of the Shortage Allocation Models or Alternative Distribution Models.
[17] See also the Arizona Water Settlements Act of 2004, Public Law 108-451, section 104(d).

must be used to satisfy the contractors and subcontractors in the priority pool. The Indian Priority supply must be used to satisfy all of the Indian Priority contracts, and is assumed to be controlled by and calculated in accordance with the CAP Master Repayment Contract. Likewise for the M&I Priority supply.

A range of Available CAP Supply from zero to 1,255,317 af, in rounded 10 kaf increments except at pivotal quantities, is presented in **Table C-10** below, showing the distribution of Indian Priority supply, M&I Priority supply, and NIA Priority supply for discrete levels of Available CAP Supply contained within the Priority Shortage Allocation Model.

Table C-10
Discrete Levels and Distribution of Available CAP Supply Modeled in the Shortage Allocation Model

Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	M&I Priority Supply (af)	NIA Priority Supply (af)
1,255,317	Full Supply	343,079	638,823	273,415
1,250,000	Full Supply	343,079	638,823	268,098
1,240,000	Full Supply	343,079	638,823	258,098
1,230,000	Full Supply	343,079	638,823	248,098
1,220,000	Full Supply	343,079	638,823	238,098
1,210,000	Full Supply	343,079	638,823	228,098
1,200,000	Full Supply	343,079	638,823	218,098
1,190,000	Full Supply	343,079	638,823	208,098
1,180,000	Full Supply	343,079	638,823	198,098
1,170,000	Full Supply	343,079	638,823	188,098
1,160,000	Full Supply	343,079	638,823	178,098
1,150,000	Full Supply	343,079	638,823	168,098
1,140,000	Full Supply	343,079	638,823	158,098
1,130,000	Full Supply	343,079	638,823	148,098
1,120,000	Full Supply	343,079	638,823	138,098
1,110,000	Full Supply	343,079	638,823	128,098
1,100,000	Full Supply	343,079	638,823	118,098
1,090,000	Full Supply	343,079	638,823	108,098
1,080,000	Full Supply	343,079	638,823	98,098
1,070,000	Full Supply	343,079	638,823	88,098
1,060,000	Full Supply	343,079	638,823	78,098
1,050,000	Full Supply	343,079	638,823	68,098
1,040,000	Full Supply	343,079	638,823	58,098
1,030,000	Full Supply	343,079	638,823	48,098
1,020,000	Full Supply	343,079	638,823	38,098
1,010,000	Full Supply	343,079	638,823	28,098
1,000,000	Full Supply	343,079	638,823	18,098
990,000	Full Supply	343,079	638,823	8,098
981,902	Formula	343,079	638,823	-
980,000	Formula	342,595	637,405	-
970,000	Formula	340,051	629,949	-

Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	M&I Priority Supply (af)	NIA Priority Supply (af)
960,000	Formula	337,508	622,492	-
950,000	Formula	334,964	615,036	-
940,000	Formula	332,420	607,580	-
930,000	Formula	329,876	600,124	-
920,000	Formula	327,332	592,668	-
910,000	Formula	324,789	585,211	-
900,000	Formula	322,245	577,755	-
890,000	Formula	319,701	570,299	-
880,000	Formula	317,157	562,843	-
870,000	Formula	314,613	555,387	-
860,000	Formula	312,070	547,930	-
853,079	36.37518%	310,309	542,770	-
850,000	36.37518%	309,189	540,811	-
840,000	36.37518%	305,552	534,448	-
830,000	36.37518%	301,914	528,086	-
820,000	36.37518%	298,276	521,724	-
819,828	36.37518%	298,214	521,614	-
810,000	36.37518%	294,639	515,361	-
801,574	36.37518%	291,574	510,000	-
800,000	36.37518%	291,001	508,999	-
790,000	36.37518%	287,364	502,636	-
780,000	36.37518%	283,726	496,274	-
770,000	36.37518%	280,089	489,911	-
760,000	36.37518%	276,451	483,549	-
750,000	36.37518%	272,814	477,186	-
740,000	36.37518%	269,176	470,824	-
730,000	36.37518%	265,539	464,461	-
720,000	36.37518%	261,901	458,099	-
710,000	36.37518%	258,264	451,736	-
700,000	36.37518%	254,626	445,374	-
690,000	36.37518%	250,989	439,011	-
680,000	36.37518%	247,351	432,649	-
670,000	36.37518%	243,714	426,286	-
660,000	36.37518%	240,076	419,924	-
650,000	36.37518%	236,439	413,561	-
640,000	36.37518%	232,801	407,199	-
630,000	36.37518%	229,164	400,836	-
620,000	36.37518%	225,526	394,474	-
610,000	36.37518%	221,889	388,111	-
600,000	36.37518%	218,251	381,749	-
590,000	36.37518%	214,614	375,386	-
580,000	36.37518%	210,976	369,024	-
570,000	36.37518%	207,339	362,661	-
560,000	36.37518%	203,701	356,299	-
550,000	36.37518%	200,064	349,936	-
540,000	36.37518%	196,426	343,574	-

Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	M&I Priority Supply (af)	NIA Priority Supply (af)
530,000	36.37518%	192,788	337,212	-
520,000	36.37518%	189,151	330,849	-
510,000	36.37518%	185,513	324,487	-
500,000	36.37518%	181,876	318,124	-
490,000	36.37518%	178,238	311,762	-
480,000	36.37518%	174,601	305,399	-
470,000	36.37518%	170,963	299,037	-
460,000	36.37518%	167,326	292,674	-
450,000	36.37518%	163,688	286,312	-
440,000	36.37518%	160,051	279,949	-
430,000	36.37518%	156,413	273,587	-
420,000	36.37518%	152,776	267,224	-
410,000	36.37518%	149,138	260,862	-
400,000	36.37518%	145,501	254,499	-
390,000	36.37518%	141,863	248,137	-
380,000	36.37518%	138,226	241,774	-
370,000	36.37518%	134,588	235,412	-
360,000	36.37518%	130,951	229,049	-
350,000	36.37518%	127,313	222,687	-
340,000	36.37518%	123,676	216,324	-
330,000	36.37518%	120,038	209,962	-
320,000	36.37518%	116,401	203,599	-
310,000	36.37518%	112,763	197,237	-
300,000	36.37518%	109,126	190,874	-
290,000	36.37518%	105,488	184,512	-
280,000	36.37518%	101,851	178,149	-
270,000	36.37518%	98,213	171,787	-
260,000	36.37518%	94,575	165,425	-
250,000	36.37518%	90,938	159,062	-
240,000	36.37518%	87,300	152,700	-
230,000	36.37518%	83,663	146,337	-
220,000	36.37518%	80,025	139,975	-
210,000	36.37518%	76,388	133,612	-
200,000	36.37518%	72,750	127,250	-
190,000	36.37518%	69,113	120,887	-
180,000	36.37518%	65,475	114,525	-
170,000	36.37518%	61,838	108,162	-
160,000	36.37518%	58,200	101,800	-
150,000	36.37518%	54,563	95,437	-
140,000	36.37518%	50,925	89,075	-
130,000	36.37518%	47,288	82,712	-
120,000	36.37518%	43,650	76,350	-
110,000	36.37518%	40,013	69,987	-
100,000	36.37518%	36,375	63,625	-
90,000	36.37518%	32,738	57,262	-
80,000	36.37518%	29,100	50,900	-

Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	M&I Priority Supply (af)	NIA Priority Supply (af)
70,000	36.37518%	25,463	44,537	-
60,000	36.37518%	21,825	38,175	-
50,000	36.37518%	18,188	31,812	-
40,000	36.37518%	14,550	25,450	-
30,000	36.37518%	10,913	19,087	-
20,000	36.37518%	7,275	12,725	-
10,000	36.37518%	3,638	6,362	-
-	36.37518%	-	-	-

Through term-limited or temporary arrangements, to the extent that such arrangements may be allowed under specific long-term CAP contracts or other legal authority, CAP contractors and subcontractors may make their water available for end use by others. The Shortage Allocation Model does not replicate those arrangements, and it only provides approximate estimates at the contract or subcontract allocation level that interested parties could then consider in planning for administering their respective arrangements during Shortage Conditions. The CAP contractor, subcontractor, and/or parties to those arrangements would have specific decisions to make during Shortage Conditions to administer those arrangements that Reclamation cannot predict with sufficient certainty to analyze in this Draft EIS.

Unallocated water or water not yet placed under contract (including the Secretary's retention of CAP NIA Priority water consistent with the Arizona Water Settlements Act of 2004, section 104(a)) is not reflected in the distribution of available water and is not shown as bearing shortage. These modeling assumptions reflect only that it cannot be speculated when or whether such water or volumes may be allocated or placed under contract but are not intended to preclude allocations or the entry of contracts consistent with applicable law and authority.

CAP Indian Priority Assumptions

The overall deliverable quantity of Indian Priority supply is calculated as authorized in the 2004 Arizona Water Settlements Act (AWSA) (Public Law 108-451) section 104(d), as reflected in the CAP Master Repayment Contract and described in the previous section. The available Indian Priority supply is then distributed as described in applicable law, contracts, and subcontracts and as noted below.

Shortage to the Ak-Chin Indian Community's Indian Priority irrigation allocation is shown at the allocation level, and it does not reflect the conditional entitlement to a portion of that allocation that is held by the San Carlos Apache Tribe. In addition, the shortages attributed to Indian Priority allocations, pursuant to the internal priority system of the Indian Priority pool, do not account for the existence of external arrangements and commitments that would affect the ultimate impacts of shortage. For example, the ultimate impact of shortage may fall in whole or in part on a lessor who has leased a portion of a contractor's Indian Priority water, but the terms and duration of such leasing arrangements are varied, and the arrangement does not change the underlying allocation-holder. Shortages attributed to Indian Priority allocations form the basis for operational

determinations on a case-by-case basis as necessary to administer shortage consistent with applicable contracts and subcontracts.

Further, the Shortage Allocation Model does not analyze any applicable Secretarial obligations to deliver certain contractors or subcontractors other sources of water in any given year, which might have the effect of offsetting or negating the numerical impacts shown to specific Indian Priority pool allocations and could appear to understate the regional effect of a Colorado River shortage unless the other source(s) of water can be definitively identified and the shortage volume attributed to them. Reclamation declines to speculate about the acquisition of alternative sources of water in this Appendix. This Draft EIS presents the worst-case impacts of a regional loss of supply relative to the quantified volumes of Colorado River water the Secretary has allocated and contracted for and actively administers, rather than attempting to analyze and monetize the loss relative to all sources of water supply any given water user may have available.

For the purpose of calculating water available to individual Indian Priority allocations, the Indian Priority supply is distributed under a set of assumptions consistent with the contracts and relevant Secretarial Decisions, including as published in the Federal Register on March 24, 1983 (1983 ROD), as codified by AWSA section 104(d), yielding the approach described in Exhibit 5.3.4.1 to the Tohono O'odham Settlement Agreement[18], *Secretary's Approach for Determining the Amount of Water Available to the Nation During a Time of Shortage Under 1980 Contract*.

In these calculations, CAP Indian Priority contractors are grouped by "Post-AWSA Contracts" and "Pre-AWSA Contracts" (see **Table C-11** on the following pages), each group with its own calculation of the Indian Priority supply for the purpose of calculating water supply available to individual contractors, reflecting that some shortage-related provisions incorporated into Post-AWSA Contracts do not yet apply to all Indian Priority contracts. The AWSA and related actions provided for a framework that enables consistent administration of both groups of contracts, as described below.

Post-AWSA Contracts are modeled to recognize a shared first priority between all homeland and remaining Indian irrigation allocations in accordance with the 1983 ROD.[19] Pre-AWSA Contracts are modeled to recognize the increase in Gila River Indian Community's irrigation reductions from 10 percent to 25 percent as reflected in the 1983 ROD and later contracts/settlements, and the 1993 Fort McDowell Yavapai Nation settlement's authorized increase in the total Indian Priority allocations from 309,828 af to 343,079 af. All Indian Priority entitlements are assumed to have been fully used on Indian lands, as necessary, during the most recent calendar year which was not a Time of Shortage.

Three stages of implementation of CAP Time of Shortage result from these assumptions, with pivot points at 981,902 af, 853,079 af, and 801,574 af of Available CAP Supply. Formulas for the distribution of available Indian Priority supply to individual allocations over each of these stages are contained within the Excel workbooks of the Priority Shortage Allocation Model. These formulas

[18] **Attachment C-1** to this **Appendix C**

[19] The terms "homeland" and "irrigation" are historic labels relating to the administration of shortage within the Indian Priority pool and do not represent type of use restrictions where Federal law provides otherwise.

yield the distribution of available Indian Priority water shown in **Table C-11** below for a range of discrete Available CAP Supplies.

Table C-11
Distribution of CAP Indian Priority Supply

	Post-AWSA Contracts						Pre-AWSA Contracts									
Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	Distribution to Contractors (af)				Indian Priority Share	Indian Priority Supply (af)	Distribution to Contractors (af)							
			Gila River Indian Community	Tohono O'odham Nation (SX & ST)	White Mountain Apache Tribe	Scottsdale (Yavapai Prescott Indian Tribe)			Ak-Chin Indian Community	Fort McDowell Yavapai Nation	Pascua Yaqui Tribe	San Carlos Apache Tribe	Salt River Pima-Maricopa Indian Community	Sif Oidak District	Tonto Apache Tribe	Yavapai Apache Nation
990,000	Full Supply	343,079	191,200	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
981,902	Formula	343,079	191,200	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
980,000	Formula	342,595	190,716	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
970,000	Formula	340,051	188,172	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
960,000	Formula	337,508	185,629	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
950,000	Formula	334,964	183,085	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
940,000	Formula	332,420	180,541	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
930,000	Formula	329,876	177,997	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
920,000	Formula	327,332	175,453	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
910,000	Formula	324,789	172,910	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
900,000	Formula	322,245	170,366	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
890,000	Formula	319,701	167,822	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
880,000	Formula	317,157	165,278	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
870,000	Formula	314,613	162,734	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
860,000	Formula	312,070	160,191	37,800	1,218	500	Full Supply	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
853,079	36.37518%	310,309	158,430	37,800	1,218	500	Imputed	343,079	58,300	18,233	500	12,700	13,300	8,000	128	1,200
850,000	36.37518%	309,189	157,802	37,800	1,218	500	Imputed	340,000	57,951	18,233	500	12,684	13,220	7,952	128	1,200
840,000	36.37518%	305,552	155,762	37,800	1,218	500	Imputed	330,000	56,820	18,233	500	12,631	12,962	7,797	128	1,200
830,000	36.37518%	301,914	153,723	37,800	1,218	500	Imputed	320,000	55,688	18,233	500	12,579	12,704	7,642	128	1,200
820,000	36.37518%	298,276	151,683	37,800	1,218	500	Imputed	310,000	54,556	18,233	500	12,527	12,446	7,486	128	1,200
819,828	36.37518%	298,214	151,648	37,800	1,218	500	Imputed	309,828	54,536	18,233	500	12,526	12,441	7,484	128	1,200
810,000	36.37518%	294,639	149,644	37,800	1,218	500	Imputed	300,000	53,424	18,233	500	12,474	12,188	7,331	128	1,200
801,574	36.37518%	291,574	147,925	37,800	1,218	500	Either	291,574	52,470	18,233	500	12,430	11,970	7,200	128	1,200
800,000	36.37518%	291,001	147,635	37,726	1,216	499	36.37518%	291,001	52,367	18,197	499	12,406	11,946	7,186	128	1,198
790,000	36.37518%	287,364	145,789	37,254	1,200	493	36.37518%	287,364	51,712	17,970	493	12,251	11,797	7,096	126	1,183
780,000	36.37518%	283,726	143,944	36,783	1,185	487	36.37518%	283,726	51,058	17,742	487	12,095	11,648	7,006	125	1,168
770,000	36.37518%	280,089	142,098	36,311	1,170	480	36.37518%	280,089	50,403	17,515	480	11,940	11,499	6,916	123	1,153
760,000	36.37518%	276,451	140,253	35,839	1,155	474	36.37518%	276,451	49,749	17,287	474	11,785	11,349	6,827	121	1,138
750,000	36.37518%	272,814	138,407	35,368	1,140	468	36.37518%	272,814	49,094	17,060	468	11,630	11,200	6,737	120	1,123
740,000	36.37518%	269,176	136,562	34,896	1,124	462	36.37518%	269,176	48,439	16,832	462	11,475	11,051	6,647	118	1,108
730,000	36.37518%	265,539	134,717	34,425	1,109	455	36.37518%	265,539	47,785	16,605	455	11,320	10,901	6,557	117	1,093
720,000	36.37518%	261,901	132,871	33,953	1,094	449	36.37518%	261,901	47,130	16,377	449	11,165	10,752	6,467	115	1,078
710,000	36.37518%	258,264	131,026	33,482	1,079	443	36.37518%	258,264	46,476	16,150	443	11,010	10,603	6,377	113	1,063
700,000	36.37518%	254,626	129,180	33,010	1,064	437	36.37518%	254,626	45,821	15,923	437	10,855	10,453	6,288	112	1,048

	Post-AWSA Contracts						Pre-AWSA Contracts									
			Distribution to Contractors (af)						Distribution to Contractors (af)							
Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	Gila River Indian Community	Tohono O'odham Nation (SX & ST)	White Mountain Apache Tribe	Scottsdale (Yavapai Prescott Indian Tribe)	Indian Priority Share	Indian Priority Supply (af)	Ak-Chin Indian Community	Fort McDowell Yavapai Nation	Pascua Yaqui Tribe	San Carlos Apache Tribe	Salt River Pima-Maricopa Indian Community	Sif Oidak District	Tonto Apache Tribe	Yavapai Apache Nation
690,000	36.37518%	250,989	127,335	32,538	1,048	430	36.37518%	250,989	45,167	15,695	430	10,700	10,304	6,198	110	1,033
680,000	36.37518%	247,351	125,489	32,067	1,033	424	36.37518%	247,351	44,512	15,468	424	10,545	10,155	6,108	109	1,018
670,000	36.37518%	243,714	123,644	31,595	1,018	418	36.37518%	243,714	43,857	15,240	418	10,390	10,005	6,018	107	1,003
660,000	36.37518%	240,076	121,798	31,124	1,003	412	36.37518%	240,076	43,203	15,013	412	10,235	9,856	5,928	105	988
650,000	36.37518%	236,439	119,953	30,652	988	405	36.37518%	236,439	42,548	14,785	405	10,080	9,707	5,839	104	973
640,000	36.37518%	232,801	118,108	30,181	972	399	36.37518%	232,801	41,894	14,558	399	9,924	9,557	5,749	102	958
630,000	36.37518%	229,164	116,262	29,709	957	393	36.37518%	229,164	41,239	14,330	393	9,769	9,408	5,659	101	943
620,000	36.37518%	225,526	114,417	29,237	942	387	36.37518%	225,526	40,584	14,103	387	9,614	9,259	5,569	99	928
610,000	36.37518%	221,889	112,571	28,766	927	381	36.37518%	221,889	39,930	13,875	381	9,459	9,109	5,479	97	913
600,000	36.37518%	218,251	110,726	28,294	912	374	36.37518%	218,251	39,275	13,648	374	9,304	8,960	5,389	96	898
590,000	36.37518%	214,614	108,880	27,823	897	368	36.37518%	214,614	38,621	13,420	368	9,149	8,811	5,300	94	883
580,000	36.37518%	210,976	107,035	27,351	881	362	36.37518%	210,976	37,966	13,193	362	8,994	8,661	5,210	93	868
570,000	36.37518%	207,339	105,190	26,880	866	356	36.37518%	207,339	37,311	12,966	356	8,839	8,512	5,120	91	853
560,000	36.37518%	203,701	103,344	26,408	851	349	36.37518%	203,701	36,657	12,738	349	8,684	8,363	5,030	89	838
550,000	36.37518%	200,064	101,499	25,936	836	343	36.37518%	200,064	36,002	12,511	343	8,529	8,213	4,940	88	823
540,000	36.37518%	196,426	99,653	25,465	821	337	36.37518%	196,426	35,348	12,283	337	8,374	8,064	4,850	86	808
530,000	36.37518%	192,788	97,808	24,993	805	331	36.37518%	192,788	34,693	12,056	331	8,219	7,915	4,761	85	793
520,000	36.37518%	189,151	95,962	24,522	790	324	36.37518%	189,151	34,039	11,828	324	8,064	7,765	4,671	83	778
510,000	36.37518%	185,513	94,117	24,050	775	318	36.37518%	185,513	33,384	11,601	318	7,909	7,616	4,581	81	763
500,000	36.37518%	181,876	92,272	23,579	760	312	36.37518%	181,876	32,729	11,373	312	7,753	7,467	4,491	80	749
490,000	36.37518%	178,238	90,426	23,107	745	306	36.37518%	178,238	32,075	11,146	306	7,598	7,317	4,401	78	734
480,000	36.37518%	174,601	88,581	22,635	729	299	36.37518%	174,601	31,420	10,918	299	7,443	7,168	4,312	77	719
470,000	36.37518%	170,963	86,735	22,164	714	293	36.37518%	170,963	30,766	10,691	293	7,288	7,019	4,222	75	704
460,000	36.37518%	167,326	84,890	21,692	699	287	36.37518%	167,326	30,111	10,463	287	7,133	6,869	4,132	73	689
450,000	36.37518%	163,688	83,044	21,221	684	281	36.37518%	163,688	29,456	10,236	281	6,978	6,720	4,042	72	674
440,000	36.37518%	160,051	81,199	20,749	669	274	36.37518%	160,051	28,802	10,008	274	6,823	6,571	3,952	70	659
430,000	36.37518%	156,413	79,354	20,278	653	268	36.37518%	156,413	28,147	9,781	268	6,668	6,421	3,862	69	644
420,000	36.37518%	152,776	77,508	19,806	638	262	36.37518%	152,776	27,493	9,554	262	6,513	6,272	3,773	67	629
410,000	36.37518%	149,138	75,663	19,334	623	256	36.37518%	149,138	26,838	9,326	256	6,358	6,123	3,683	65	614
400,000	36.37518%	145,501	73,817	18,863	608	250	36.37518%	145,501	26,183	9,099	250	6,203	5,973	3,593	64	599
390,000	36.37518%	141,863	71,972	18,391	593	243	36.37518%	141,863	25,529	8,871	243	6,048	5,824	3,503	62	584
380,000	36.37518%	138,226	70,126	17,920	577	237	36.37518%	138,226	24,874	8,644	237	5,893	5,675	3,413	61	569
370,000	36.37518%	134,588	68,281	17,448	562	231	36.37518%	134,588	24,220	8,416	231	5,738	5,525	3,323	59	554
360,000	36.37518%	130,951	66,436	16,977	547	225	36.37518%	130,951	23,565	8,189	225	5,583	5,376	3,234	57	539
350,000	36.37518%	127,313	64,590	16,505	532	218	36.37518%	127,313	22,911	7,961	218	5,427	5,227	3,144	56	524
340,000	36.37518%	123,676	62,745	16,033	517	212	36.37518%	123,676	22,256	7,734	212	5,272	5,077	3,054	54	509
330,000	36.37518%	120,038	60,899	15,562	501	206	36.37518%	120,038	21,601	7,506	206	5,117	4,928	2,964	53	494
320,000	36.37518%	116,401	59,054	15,090	486	200	36.37518%	116,401	20,947	7,279	200	4,962	4,779	2,874	51	479
310,000	36.37518%	112,763	57,208	14,619	471	193	36.37518%	112,763	20,292	7,051	193	4,807	4,629	2,785	50	464

	Post-AWSA Contracts						Pre-AWSA Contracts									
Available CAP Supply (af)	Indian Priority Share	Indian Priority Supply (af)	Distribution to Contractors (af)				Indian Priority Share	Indian Priority Supply (af)	Distribution to Contractors (af)							
			Gila River Indian Community	Tohono O'odham Nation (SX & ST)	White Mountain Apache Tribe	Scottsdale (Yavapai Prescott Indian Tribe)			Ak-Chin Indian Community	Fort McDowell Yavapai Nation	Pascua Yaqui Tribe	San Carlos Apache Tribe	Salt River Pima-Maricopa Indian Community	Sif Oidak District	Tonto Apache Tribe	Yavapai Apache Nation
300,000	36.37518%	109,126	55,363	14,147	456	187	36.37518%	109,126	19,638	6,824	187	4,652	4,480	2,695	48	449
290,000	36.37518%	105,488	53,518	13,676	441	181	36.37518%	105,488	18,983	6,596	181	4,497	4,331	2,605	46	434
280,000	36.37518%	101,851	51,672	13,204	425	175	36.37518%	101,851	18,328	6,369	175	4,342	4,181	2,515	45	419
270,000	36.37518%	98,213	49,827	12,732	410	168	36.37518%	98,213	17,674	6,142	168	4,187	4,032	2,425	43	404
260,000	36.37518%	94,575	47,981	12,261	395	162	36.37518%	94,575	17,019	5,914	162	4,032	3,883	2,335	42	389
250,000	36.37518%	90,938	46,136	11,789	380	156	36.37518%	90,938	16,365	5,687	156	3,877	3,733	2,246	40	374
240,000	36.37518%	87,300	44,290	11,318	365	150	36.37518%	87,300	15,710	5,459	150	3,722	3,584	2,156	38	359
230,000	36.37518%	83,663	42,445	10,846	349	143	36.37518%	83,663	15,056	5,232	143	3,567	3,435	2,066	37	344
220,000	36.37518%	80,025	40,599	10,375	334	137	36.37518%	80,025	14,401	5,004	137	3,412	3,285	1,976	35	329
210,000	36.37518%	76,388	38,754	9,903	319	131	36.37518%	76,388	13,746	4,777	131	3,256	3,136	1,886	34	314
200,000	36.37518%	72,750	36,909	9,431	304	125	36.37518%	72,750	13,092	4,549	125	3,101	2,987	1,796	32	299
190,000	36.37518%	69,113	35,063	8,960	289	119	36.37518%	69,113	12,437	4,322	119	2,946	2,837	1,707	30	284
180,000	36.37518%	65,475	33,218	8,488	274	112	36.37518%	65,475	11,783	4,094	112	2,791	2,688	1,617	29	269
170,000	36.37518%	61,838	31,372	8,017	258	106	36.37518%	61,838	11,128	3,867	106	2,636	2,539	1,527	27	254
160,000	36.37518%	58,200	29,527	7,545	243	100	36.37518%	58,200	10,473	3,639	100	2,481	2,389	1,437	26	240
150,000	36.37518%	54,563	27,681	7,074	228	94	36.37518%	54,563	9,819	3,412	94	2,326	2,240	1,347	24	225
140,000	36.37518%	50,925	25,836	6,602	213	87	36.37518%	50,925	9,164	3,185	87	2,171	2,091	1,258	22	210
130,000	36.37518%	47,288	23,991	6,130	198	81	36.37518%	47,288	8,510	2,957	81	2,016	1,941	1,168	21	195
120,000	36.37518%	43,650	22,145	5,659	182	75	36.37518%	43,650	7,855	2,730	75	1,861	1,792	1,078	19	180
110,000	36.37518%	40,013	20,300	5,187	167	69	36.37518%	40,013	7,200	2,502	69	1,706	1,643	988	18	165
100,000	36.37518%	36,375	18,454	4,716	152	62	36.37518%	36,375	6,546	2,275	62	1,551	1,493	898	16	150
90,000	36.37518%	32,738	16,609	4,244	137	56	36.37518%	32,738	5,891	2,047	56	1,396	1,344	808	14	135
80,000	36.37518%	29,100	14,763	3,773	122	50	36.37518%	29,100	5,237	1,820	50	1,241	1,195	719	13	120
70,000	36.37518%	25,463	12,918	3,301	106	44	36.37518%	25,463	4,582	1,592	44	1,085	1,045	629	11	105
60,000	36.37518%	21,825	11,073	2,829	91	37	36.37518%	21,825	3,928	1,365	37	930	896	539	10	90
50,000	36.37518%	18,188	9,227	2,358	76	31	36.37518%	18,188	3,273	1,137	31	775	747	449	8	75
40,000	36.37518%	14,550	7,382	1,886	61	25	36.37518%	14,550	2,618	910	25	620	597	359	6	60
30,000	36.37518%	10,913	5,536	1,415	46	19	36.37518%	10,913	1,964	682	19	465	448	269	5	45
20,000	36.37518%	7,275	3,691	943	30	12	36.37518%	7,275	1,309	455	12	310	299	180	3	30
10,000	36.37518%	3,638	1,845	472	15	6	36.37518%	3,638	655	227	6	155	149	90	2	15
-	36.37518%	-	-	-	-	-	36.37518%	-	-	-	-	-	-	-	-	-

CAP M&I Priority Assumptions

The M&I Priority supply is calculated as the remainder of Available CAP Supply (up to 981,902 af) after the Indian Priority supply is calculated. When Available CAP Supply equals or exceeds 981,902 af, the Indian and M&I Priorities both receive a full supply.

The available M&I Priority supply is distributed to each allocation proportionally, relative to all allocations of M&I Priority water. [20] (The proportions are shown below in **Table C-12**).

Table C-12
Distribution of CAP M&I Priority Water in Proportion to Allocations

M&I Contractor or Subcontractor	Allocation (af)	Percentage of M&I Allocations
San Carlos Apache Tribe	18,145	2.84%
ASARCO	21,000	3.29%
Avondale	5,416	0.85%
AZSLD	28,176	4.41%
AZWC, Casa Grande	8,884	1.39%
AZWC, Coolidge	2,000	0.31%
AZWC, Superstition	6,285	0.98%
AZWC, White Tank	968	0.15%
Buckeye	68	0.01%
CAGRD	6,426	1.01%
Carefree WC	1,678	0.26%
Cave Creek	2,228	0.35%
Chandler	8,654	1.35%
Chaparral City WC	8,909	1.39%
Circle City	3,932	0.62%
El Mirage	508	0.08%
Eloy	2,171	0.34%
EPCOR, af	11,093	1.74%
EPCOR, PV	3,231	0.51%
EPCOR, SC	4,189	0.66%
EPCOR, SCW	2,372	0.37%
Florence	2,048	0.32%
Freeport-Miami	2,906	0.45%
FWID	2,854	0.45%
Gilbert	7,235	1.13%
Glendale	17,236	2.70%
Goodyear	10,742	1.68%
Greater Tonopah, Water Utility	64	0.01%
Green Valley CWC	2,858	0.45%
Green Valley DWID	1,900	0.30%
Marana	2,336	0.37%

[20] As a result of a joint consultation undertaken by Reclamation and the Central Arizona Water Conservation District (CAWCD) with M&I Priority water users in 2022, documented by Letter Agreement No. 22-XX-30-W0743LA between Reclamation and CAWCD, dated May 15, 2023, the operational method of distributing M&I Priority water is a pro rata distribution on the basis of water scheduled for delivery. The results are currently consistent for most water users, and are expected to become more consistent over the long term.

M&I Contractor or Subcontractor	Allocation (af)	Percentage of M&I Allocations
Maricopa Cty P&R	665	0.10%
Mesa	43,503	6.81%
Metro DWID	13,460	2.11%
Oro Valley	10,305	1.61%
Peoria	27,121	4.25%
Phoenix	126,104	19.74%
Pine	161	0.03%
Queen Creek	495	0.08%
Rio Verde Utilities	812	0.13%
San Tan ID	236	0.04%
Scottsdale	52,810	8.27%
Spanish Trail WC	3,037	0.48%
Surprise	10,249	1.60%
Tempe	4,315	0.68%
Tonto Hills DWID	71	0.01%
Tucson	144,191	22.57%
Vail WC	1,857	0.29%
WUCFD, Apache Junction	2,919	0.46%
TOTAL	**638,823**	**100.00%**

CAP NIA Priority Assumptions

Only when Available CAP Supply is calculated to be greater than 981,902 af, the NIA Priority supply is calculated as the difference between Available CAP Supply and the sum of the Indian and M&I Priority entitlements. NIA Priority supply is assumed not to be available when Available CAP Supply is less than 981,902 af.

The Shortage Allocation Model does not contain data for CAP water use in the most recent year that a full NIA Priority supply (inclusive of NIA-A and NIA-B) was available. However, in this modeling, available water is distributed first to NIA Priority contractors and subcontractors assumed to have used CAP NIA Priority Water in the last year in which the Available CAP Supply was sufficient to fill all orders for CAP NIA Priority Water (NIA-A) (**Table C-13**), before available water is distributed to the other NIA Priority contracts and subcontracts (NIA-B) (**Table C-14**).[21] Within each sub-priority, available water is modeled as being distributed to each allocation proportionally, relative to total allocations for the sub-priority.

[21] The CAP NIA Priority Water is distributed in accordance with the CAP NIA Priority Water subcontracts, in particular paragraph 4.7(b)-(c) of such subcontracts, and the settlement agreements with the Gila River Indian Community and the Tohono O'odham Nation. The Hualapai Tribe's CAP NIA Priority water will be distributed in accordance with its settlement agreement (pending enforceability) and the Hualapai Tribe Water Rights Settlement Act of 2022, in particular section 13. In continuing to model the existence of separate NIA-A and NIA-B priority pools, no opinion is expressed or implied by the United States about the likelihood of a future year in which Available CAP Supply will be sufficient to fill all orders for CAP NIA Priority Water.

Table C-13
Distribution of CAP NIA-A Priority Water in Proportion to Allocations

NIA A Priority Contractor or Subcontractor	Allocation (af)	Percentage of NIA-A Allocations
Gila River Indian Community	120,600	58.80%
Tohono O'odham - Schuk Toak & San Xavier	28,200	13.75%
Hualapai Tribe	4,000	1.95%
Phoenix (HIDD, NIA-2043)	36,144	17.62%
Phoenix (SRPMIC)	1,136	0.55%
Chandler (HIDD, NIA-2043)	2,952	1.44%
Chandler (SRPMIC)	972	0.47%
Gilbert (SRPMIC)	1,537	0.75%
Glendale (SRPMIC)	682	0.33%
Mesa (HIDD, NIA-2043)	4,924	2.40%
Mesa (SRPMIC)	627	0.31%
Scottsdale (HIDD, NIA-2043)	3,283	1.60%
Scottsdale (SRPMIC)	23	0.01%
Tempe (SRPMIC)	23	0.01%
TOTAL	**205,103**	**100.00%**

Table C-14
Distribution of CAP NIA-B Priority Water in Proportion to Allocations

NIA B Priority Contractor or Subcontractor	Allocation (af)	Percentage of NIA-B Allocations
White Mountain Apache Tribe	23,782	34.81%
Buckeye	2,786	4.08%
CAGRD	18,185	26.62%
Carefree WC	112	0.16%
Cave Creek	386	0.57%
El Mirage	1,318	1.93%
EPCOR, San Tan (ST)	3,217	4.71%
Freeport	5,678	8.31%
Gilbert	1,832	2.68%
Marana	515	0.75%
Queen Creek	4,162	6.09%
Resolution Copper	2,238	3.28%
Rosemont Copper	1,124	1.65%
SRP	2,160	3.16%
WUCFD, Apache Junction	817	1.20%
TOTAL	**68,312**	**100.00%**

C.4.4 Priority Shortage Allocation Model Results

The tables in this section present the results of the Priority Shortage Allocation Model over a range of total shortages to the Lower Basin including Mexico.

Table C-15, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-16, the Tribal Summary, presents the shortage impacts on tribes.

Table C-17, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-18, the Domestic Summary, presents the shortage impacts on domestic users.

Table C-15
Priority Shortage Allocation Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-	-	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
Arizona	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion	449,422	728,066	1,076,371	1,285,355	1,295,172	1,295,540	1,295,172	1,295,172	1,295,172	1,295,172	1,295,172
-	NIA Priority[2]	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415
-	M&I Priority[2]	141,599	318,886	540,495	638,823	638,823	638,823	638,823	638,823	638,823	638,823	638,823
-	Indian Priority[2]	58,810	160,167	286,864	343,079	343,079	343,079	343,079	343,079	343,079	343,079	343,079
-	4th Priority i (Mainstream)	14,986	45,946	84,647	107,867	108,958	108,958	108,958	108,958	108,958	108,958	108,958
-	2nd & 3rd Priorities	0	0	0	0	47,914	73,318	125,232	305,643	434,507	563,371	798,059
-	1st Priority (Present Perfected Rights)	0	0	0	0	0	0	0	0	0	0	54,153
-	**Subtotal**	**464,407**	**774,012**	**1,161,018**	**1,393,222**	**1,452,044**	**1,477,817**	**1,529,362**	**1,709,773**	**1,838,637**	**1,967,501**	**2,256,342**
California	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	0	0	0	0	95,981	147,609	250,866	388,002	388,002	388,002	388,002
-	3rd Priority (IID, CVWD, PVID)	0	0	0	0	0	0	0	224,262	482,404	740,546	835,000
-	2nd Priority (Yuma Project Reservation Division)	0	0	0	0	0	0	0	0	0	0	7,294
-	1st Priority (PVID)	0	0	0	0	0	0	0	0	0	0	368,378
-	Present Perfected Rights (PPRs)	0	0	0	0	0	0	0	0	0	0	20,049
-	**Subtotal**	**0**	**0**	**0**	**0**	**95,981**	**147,609**	**250,866**	**612,264**	**870,406**	**1,128,547**	**1,618,723**
Nevada	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	35,593	59,321	88,982	92,717	92,717	92,717	92,717	92,717	92,717	92,717	92,717
-	8th Priority (SNWA & Big Bend)	0	0	0	14,061	25,926	31,858	43,722	85,247	114,907	144,568	162,980
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	0	0	0	0	0	0	0	0	0	0	2,257
-	6th Priority (Las Vegas Valley Water District)	0	0	0	0	0	0	0	0	0	0	8,012
-	5th Priority (PABCO)	0	0	0	0	0	0	0	0	0	0	483
-	4th Priority (Henderson & Basic)	0	0	0	0	0	0	0	0	0	0	20,299
-	3rd Priority (Boulder City)	0	0	0	0	0	0	0	0	0	0	3,056
-	2nd Priority (Lake Mead National Rec Area)	0	0	0	0	0	0	0	0	0	0	1,500
-	1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	0	0	0	0	0	0	0	0	0	0	300
-	**Subtotal**	**35,593**	**59,321**	**88,982**	**106,778**	**118,642**	**124,574**	**136,439**	**177,963**	**207,624**	**237,285**	**291,602**
-	**Lower Division States Subtotal**	**500,000**	**833,333**	**1,250,000**	**1,500,000**	**1,666,667**	**1,750,000**	**1,916,667**	**2,500,000**	**2,916,667**	**3,333,333**	**4,166,667**
Mexico	**Mexico Subtotal**	**100,000**	**166,667**	**250,000**	**300,000**	**333,333**	**350,000**	**383,333**	**500,000**	**583,333**	**666,667**	**833,333**
-	**Total**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here.
[2]These estimated shortages to priorities within the CAP reflect the effect of CAP system loss, and do not total to CAP shortage at the point of diversion

Disclaimer: These modeling results for the Priority Shortage Allocation Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and they are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and it cannot replicate the precision required for that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced to zero.

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Table C-16
Priority Shortage Allocation Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona													
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	46,981	98,403	162,680	191,200	191,200	191,200	191,200	191,200	191,200	191,200	191,200
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	947	14,087	30,512	37,800	37,800	37,800	37,800	37,800	37,800	37,800	37,800
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	31	454	983	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	7,144	25,384	48,184	58,300	58,300	58,300	58,300	58,300	58,300	58,300	58,300
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	457	6,795	14,718	18,233	18,233	18,233	18,233	18,233	18,233	18,233	18,233
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	13	186	404	500	500	500	500	500	500	500	500
CAP Indian Priority	San Carlos Apache Tribe	Gila County	581	4,902	10,304	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	1,630	5,791	10,992	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	980	3,483	6,612	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
CAP Indian Priority	Tonto Apache Tribe	Gila County	3	48	103	128	128	128	128	128	128	128	128
CAP Indian Priority	Yavapai Apache Nation	Gila County	30	447	969	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
CAP M&I Priority	San Carlos Apache Tribe	Gila County	4,022	9,058	15,352	18,145	18,145	18,145	18,145	18,145	18,145	18,145	18,145
4(i)	Hopi Tribe[1]	La Paz County	389	1,194	2,199	2,803	2,831	2,831	2,831	2,831	2,831	2,831	2,831
4(i)	Cocopah Indian Reservation	Yuma County	184	565	1,042	1,327	1,341	1,341	1,341	1,341	1,341	1,341	1,341

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	319	977	1,799	2,293	2,316	2,316	2,316	2,316	2,316	2,316	2,316
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	931	2,855	5,259	6,702	6,770	6,770	6,770	6,770	6,770	6,770	6,770
3	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	1,340	4,802	16,922	25,578	34,235	50,000
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**241,224**	**351,211**	**488,694**	**550,431**	**550,563**	**551,903**	**555,366**	**567,485**	**576,142**	**584,798**	**600,563**
California			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	**-**	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**241,224**	**351,211**	**488,694**	**550,431**	**550,563**	**551,903**	**555,366**	**567,485**	**576,142**	**584,798**	**600,563**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0.83	2,106	2,326	2,600	2,764	2,772	2,772	2,772	2,772	2,772	2,772	2,772
-	Gila County	4.67	12,574	22,533	34,983	40,506	40,506	40,506	40,506	40,506	40,506	40,506	40,506
-	La Paz County	4	389	1,194	2,199	2,803	2,831	2,831	2,831	2,831	2,831	2,831	2,831
-	Maricopa County	2.6	52,361	78,287	110,694	125,073	125,073	125,073	125,073	125,073	125,073	125,073	125,073
-	Mohave County	2.5	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-	Pima County	3	29,159	42,473	59,116	66,500	66,500	66,500	66,500	66,500	66,500	66,500	66,500
-	Pinal County	4.40	125,431	182,169	253,092	284,560	284,560	285,900	289,362	301,482	310,138	318,795	334,560
-	Yuma County	5	1,115	3,420	6,301	8,029	8,110	8,110	8,110	8,110	8,110	8,110	8,110
-	Apache County	1.00	8,044	8,404	8,855	9,098	9,105	9,105	9,105	9,105	9,105	9,105	9,105
-	Navajo County	1.00	8,044	8,404	8,855	9,098	9,105	9,105	9,105	9,105	9,105	9,105	9,105
-	**Subtotal Arizona Tribal**	**29**	**241,224**	**351,211**	**488,694**	**550,431**	**550,563**	**551,903**	**555,366**	**567,485**	**576,142**	**584,798**	**600,563**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	San Bernardino	2.5	0	0	0	0	0	0	0	0	0	0	0
-	Riverside	0.50	0	0	0	0	0	0	0	0	0	0	0
-	Imperial	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal California Tribal**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal Nevada Tribal**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and Tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Disclaimer: These modeling results for the Priority Shortage Allocation Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced to zero.

Table C-17
Priority Shortage Allocation Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	258	792	1,459	1,859	1,878	1,878	1,878	1,878	1,878	1,878	1,878
4(i)	Arizona State Land Department	Yuma County	601	1,844	3,397	4,328	4,372	4,372	4,372	4,372	4,372	4,372	4,372
4(i)	Beattie Farms, Southwest	Yuma County	101	310	571	727	735	735	735	735	735	735	735
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	38	117	216	275	278	278	278	278	278	278	278
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	11	35	65	83	83	83	83	83	83	83	83
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	191	586	1,080	1,376	1,390	1,390	1,390	1,390	1,390	1,390	1,390
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	20	60	111	142	143	143	143	143	143	143	143
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	677	2,077	3,826	4,876	4,925	4,925	4,925	4,925	4,925	4,925	4,925
4(i)	Curtis, Armon	Yuma County	27	84	154	197	199	199	199	199	199	199	199
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	131	400	738	940	950	950	950	950	950	950	950
4(i)	Matador Farms, LLC	La Paz County	410	1,256	2,313	2,948	2,978	2,978	2,978	2,978	2,978	2,978	2,978
4(i)	JRJ Partners, L.L.C.	Yuma County	98	301	555	708	715	715	715	715	715	715	715
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	3,191	9,784	18,024	22,969	23,201	23,201	23,201	23,201	23,201	23,201	23,201
4(i)	North Baja Pipeline, LLC[2]	La Paz County	44	134	247	314	318	318	318	318	318	318	318
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	84	258	475	605	611	611	611	611	611	611	611
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	44	134	247	314	318	318	318	318	318	318	318
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	44	136	250	318	322	322	322	322	322	322	322
4(i)	Red River Land Company, LLC	La Paz County	27	84	154	197	199	199	199	199	199	199	199

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Phillips, Milton and Jean	Yuma County	5	17	31	39	40	40	40	40	40	40	40
4(i)	Western Water, LLC	La Paz County	49	150	276	351	355	355	355	355	355	355	355
3	Sturges, Harold	Yuma County	0	0	0	0	0	335	335	335	335	335	335
3	Sturges, Irma	Yuma County	0	0	0	0	0	385	385	385	385	385	385
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	1,261	11,242	46,174	71,126	96,077	141,519
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	599	5,344	21,951	33,813	45,675	67,278
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	0	0	0	0	0	60	535	2,196	3,383	4,570	6,731
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	7,449	26,701	94,084	142,214	190,345	278,000
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	0	0	0	0	0	96	344	1,212	1,833	2,453	3,582
3	Yuma County Water Users' Association (14,701 af M&I includes YAO's 489.95 af conversion)[2,3]	Yuma County	0	0	0	0	0	1,981	7,483	26,741	40,497	54,252	79,304
3	University of Arizona	Yuma County	0	0	0	0	0	123	1,088	1,088	1,088	1,088	1,088
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	0	0	0	0	0	0	120	120	120	120	120
3	Unit B Irrigation & Drainage District[3]	Yuma County	0	0	0	0	0	0	305	4,751	7,927	11,102	16,886
1	PPR No. 15, Molina	Yuma County	0	0	0	0	0	0	0	0	0	0	318
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	0	0	0	0	0	0	0	0	0	0	445
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	0	0	0	0	0	0	0	0	0	0	4,352
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	0	0	0	0	0	0	0	0	0	0	6,125
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	0	0	0	0	0	0	0	0	0	0	42,914
1	PPR No. 7, Powers	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 10, Hulet (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 12, Miller (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 18, Swan (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**6,053**	**18,557**	**34,188**	**43,566**	**44,007**	**56,296**	**97,889**	**243,044**	**346,727**	**450,409**	**693,389**
California			**-**	-	-	-	-	-	-	-	-	-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	0	0	0	0	0	0	0	1,343	2,889	4,434	5,000
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	0	0	0	0	0	0	0	222,919	330,000	330,000	330,000
3	Imperial Irrigation District (IID) (3a)	Imperial County	0	0	0	0	0	0	0	0	149,515	406,111	500,000
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	0	0	0	0	0	0	0	0	0	0	7,294
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	368,378
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	0	0	0	0	0	0	0	0	0	0	115
PPR	PPR No. 41, Chagnon	San Bernardino	0	0	0	0	0	0	0	0	0	0	77
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	0	0	0	0	0	0	0	0	0	0	61
PPR	PPR No. 34, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	69
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	0	0	0	0	0	0	0	0	0	0	19,518
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 42, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 37, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 33, Morgan	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 35, Simons	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**224,262**	**482,404**	**740,546**	**1,230,512**
Nevada			-	-	-	-	-	-	-	-	-	-	-
None	None	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**6,053**	**18,557**	**34,188**	**43,566**	**44,007**	**56,296**	**97,889**	**467,306**	**829,131**	**1,190,955**	**1,923,901**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	1,534	4,705	8,667	11,045	11,156	11,156	11,156	11,156	11,156	11,156	11,156
-	Mohave County	8	3,191	9,784	18,024	22,969	23,201	23,201	23,201	23,201	23,201	23,201	23,201
-	Yuma County	28	1,327	4,069	7,497	9,553	9,650	21,938	63,531	208,687	312,370	416,052	659,032
-	**Subtotal Arizona Irrigation**	**45**	**6,053**	**18,557**	**34,188**	**43,566**	**44,007**	**56,296**	**97,889**	**243,044**	**346,727**	**450,409**	**693,389**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Riverside County	3	0	0	0	0	0	0	0	224,262	332,889	334,434	519,189
-	Imperial County	10	0	0	0	0	0	0	0	0	149,515	406,111	711,185
-	San Bernardino	3	0	0	0	0	0	0	0	0	0	0	138
-	**Subtotal California Irrigation**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**224,262**	**482,404**	**740,546**	**1,230,512**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement, which is not affected at these levels of shortages, and it was not included here.
Note: PPR entitlements are not affected at these levels of shortage.
Note: Orange highlights indicate the level at which available water for a user under this priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

Disclaimer: These modeling results from the Shortage Allocation Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this Draft EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and they are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and it cannot replicate the precision required for that process.

Table C-18
Priority Shortage Allocation Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185
CAP NIA-B	Carefree Water Company	Maricopa County	112	112	112	112	112	112	112	112	112	112	112
CAP NIA-B	Cave Creek	Maricopa County	386	386	386	386	386	386	386	386	386	386	386
CAP NIA-B	El Mirage	Maricopa County	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217
CAP NIA-B	Freeport	Pima County	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678
CAP NIA-B	Gilbert	Maricopa County	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
CAP NIA-B	Marana	Pima County	515	515	515	515	515	515	515	515	515	515	515
CAP NIA-B	Queen Creek	Maricopa County	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162
CAP NIA-B	Resolution Copper	Maricopa County	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238
CAP NIA-B	Rosemont Copper	Pima County	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124
CAP NIA-B	SRP	Maricopa County	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	817	817	817	817	817	817	817	817	817	817	817
CAP NIA-A	Phoenix	Maricopa County	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280
CAP NIA-A	Chandler	Maricopa County	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924
CAP NIA-A	Gilbert	Maricopa County	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537
CAP NIA-A	Glendale	Maricopa County	682	682	682	682	682	682	682	682	682	682	682
CAP NIA-A	Mesa	Maricopa County	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Scottsdale	Maricopa County	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306
CAP NIA-A	Tempe	Maricopa County	23	23	23	23	23	23	23	23	23	23	23
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	13	186	404	500	500	500	500	500	500	500	500
CAP M&I	ASARCO	Pima County	4,655	10,483	17,768	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000
CAP M&I	Avondale	Maricopa County	1,200	2,704	4,582	5,416	5,416	5,416	5,416	5,416	5,416	5,416	5,416
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	6,245	14,065	23,839	28,176	28,176	28,176	28,176	28,176	28,176	28,176	28,176
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	1,969	4,435	7,517	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884
CAP M&I	Arizona Water Company, Coolidge	Pinal County	443	998	1,692	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
CAP M&I	Arizona Water Company, Superstition	Pinal County	1,393	3,137	5,318	6,285	6,285	6,285	6,285	6,285	6,285	6,285	6,285
CAP M&I	Arizona Water Company, White Tank	Maricopa County	215	483	819	968	968	968	968	968	968	968	968
CAP M&I	Buckeye	Maricopa County	15	34	58	68	68	68	68	68	68	68	68
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	1,424	3,208	5,437	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426
CAP M&I	Carefree Water Company	Maricopa County	372	838	1,420	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
CAP M&I	Cave Creek	Maricopa County	494	1,112	1,885	2,228	2,228	2,228	2,228	2,228	2,228	2,228	2,228
CAP M&I	Chandler	Maricopa County	1,918	4,320	7,322	8,654	8,654	8,654	8,654	8,654	8,654	8,654	8,654
CAP M&I	Chaparral City Water Company	Maricopa County	1,975	4,447	7,538	8,909	8,909	8,909	8,909	8,909	8,909	8,909	8,909
CAP M&I	Circle City	Maricopa County	872	1,963	3,327	3,932	3,932	3,932	3,932	3,932	3,932	3,932	3,932
CAP M&I	El Mirage	Maricopa County	113	254	430	508	508	508	508	508	508	508	508
CAP M&I	Eloy	Pinal County	481	1,084	1,837	2,171	2,171	2,171	2,171	2,171	2,171	2,171	2,171
CAP M&I	EPCOR, Agua Fria	Maricopa County	2,459	5,537	9,386	11,093	11,093	11,093	11,093	11,093	11,093	11,093	11,093
CAP M&I	EPCOR, Paradise Valley	Maricopa County	716	1,613	2,734	3,231	3,231	3,231	3,231	3,231	3,231	3,231	3,231
CAP M&I	EPCOR, Sun City	Maricopa County	929	2,091	3,544	4,189	4,189	4,189	4,189	4,189	4,189	4,189	4,189

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	EPCOR, Sun City West	Maricopa County	526	1,184	2,007	2,372	2,372	2,372	2,372	2,372	2,372	2,372	2,372
CAP M&I	Florence	Pinal County	454	1,022	1,733	2,048	2,048	2,048	2,048	2,048	2,048	2,048	2,048
CAP M&I	Freeport-Miami	Gila County	644	1,451	2,459	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	633	1,425	2,415	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
CAP M&I	Gilbert	Maricopa County	1,604	3,612	6,121	7,235	7,235	7,235	7,235	7,235	7,235	7,235	7,235
CAP M&I	Glendale	Maricopa County	3,820	8,604	14,583	17,236	17,236	17,236	17,236	17,236	17,236	17,236	17,236
CAP M&I	Goodyear	Maricopa County	2,381	5,362	9,089	10,742	10,742	10,742	10,742	10,742	10,742	10,742	10,742
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	14	32	54	64	64	64	64	64	64	64	64
CAP M&I	Green Valley Community Water Company	Pima County	633	1,427	2,418	2,858	2,858	2,858	2,858	2,858	2,858	2,858	2,858
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	421	948	1,608	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
CAP M&I	Marana	Pima County	518	1,166	1,976	2,336	2,336	2,336	2,336	2,336	2,336	2,336	2,336
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	147	332	563	665	665	665	665	665	665	665	665
CAP M&I	Mesa	Maricopa County	9,643	21,716	36,807	43,503	43,503	43,503	43,503	43,503	43,503	43,503	43,503
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	2,984	6,719	11,388	13,460	13,460	13,460	13,460	13,460	13,460	13,460	13,460
CAP M&I	Oro Valley	Pima County	2,284	5,144	8,719	10,305	10,305	10,305	10,305	10,305	10,305	10,305	10,305
CAP M&I	Peoria	Maricopa County	6,012	13,538	22,947	27,121	27,121	27,121	27,121	27,121	27,121	27,121	27,121
CAP M&I	Phoenix	Maricopa County	27,952	62,948	106,694	126,104	126,104	126,104	126,104	126,104	126,104	126,104	126,104
CAP M&I	Pine	Gila County	36	80	136	161	161	161	161	161	161	161	161
CAP M&I	Queen Creek	Maricopa County	110	247	419	495	495	495	495	495	495	495	495
CAP M&I	Rio Verde Utilities	Maricopa County	180	405	687	812	812	812	812	812	812	812	812
CAP M&I	San Tan Irrigation District	Maricopa County	52	118	200	236	236	236	236	236	236	236	236
CAP M&I	Scottsdale	Maricopa County	11,706	26,362	44,681	52,810	52,810	52,810	52,810	52,810	52,810	52,810	52,810
CAP M&I	Spanish Trail Water Company	Pima County	673	1,516	2,570	3,037	3,037	3,037	3,037	3,037	3,037	3,037	3,037

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Surprise	Maricopa County	2,272	5,116	8,671	10,249	10,249	10,249	10,249	10,249	10,249	10,249	10,249
CAP M&I	Tempe	Maricopa County	956	2,154	3,651	4,315	4,315	4,315	4,315	4,315	4,315	4,315	4,315
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	16	35	60	71	71	71	71	71	71	71	71
CAP M&I	Tucson	Pima County	31,961	71,977	121,997	144,191	144,191	144,191	144,191	144,191	144,191	144,191	144,191
CAP M&I	Vail Water Company	Pima County	412	927	1,571	1,857	1,857	1,857	1,857	1,857	1,857	1,857	1,857
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	647	1,457	2,470	2,919	2,919	2,919	2,919	2,919	2,919	2,919	2,919
4(i)	Arizona State Land Department	Yuma County	140	428	789	1,005	1,015	1,015	1,015	1,015	1,015	1,015	1,015
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	8	25	46	59	60	60	60	60	60	60	60
4(i)	B&F Investment, LLC	La Paz County	5	17	31	39	40	40	40	40	40	40	40
4(i)	Bullhead City	Mohave County	1,384	4,244	7,819	9,964	10,065	10,065	10,065	10,065	10,065	10,065	10,065
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	195	597	1,100	1,401	1,415	1,415	1,415	1,415	1,415	1,415	1,415
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	637	1,953	3,599	4,586	4,632	4,632	4,632	4,632	4,632	4,632	4,632
4(i)	Bureau of Land Management	La Paz County	561	1,721	3,171	4,041	4,082	4,082	4,082	4,082	4,082	4,082	4,082
4(i)	Crystal Beach Water Conservation District	Mohave County	12	37	68	86	87	87	87	87	87	87	87
4(i)	Ehrenburg Improvement District	La Paz County	67	205	378	482	486	486	486	486	486	486	486
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	171	523	963	1,228	1,240	1,240	1,240	1,240	1,240	1,240	1,240
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	5	15	27	35	35	35	35	35	35	35	35
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	1	1	1	1	1	1	1	1	1
4(i)	Gold Dome Mining Corporation	Yuma County	1	2	4	5	5	5	5	5	5	5	5
4(i)	Golden Shores Water Conservation District	Mohave County	182	558	1,028	1,310	1,323	1,323	1,323	1,323	1,323	1,323	1,323
4(i)	GSC Farm, LLC	La Paz County	6	20	36	46	46	46	46	46	46	46	46
4(i)	Hillcrest Water Company	La Paz County	8	23	43	55	56	56	56	56	56	56	56
4(i)	Lake Havasu City	Mohave County	1,747	5,356	9,867	12,574	12,701	12,701	12,701	12,701	12,701	12,701	12,701

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	195	597	1,100	1,401	1,415	1,415	1,415	1,415	1,415	1,415	1,415
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	660	2,023	3,727	4,750	4,798	4,798	4,798	4,798	4,798	4,798	4,798
4(i)	La Paz County	La Paz County	32	98	180	229	232	232	232	232	232	232	232
4(i)	Martinez Lake Cabin Sites	Yuma County	2	6	12	15	15	15	15	15	15	15	15
4(i)	McAlister Family Trust	Mohave County	4	11	21	26	26	26	26	26	26	26	26
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	114	349	643	819	827	827	827	827	827	827	827
4(i)	Mohave Water Conservation District	Mohave County	164	502	925	1,179	1,191	1,191	1,191	1,191	1,191	1,191	1,191
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	273	837	1,542	1,965	1,985	1,985	1,985	1,985	1,985	1,985	1,985
4(i)	Parker, Town of[1]	La Paz County	94	287	530	675	682	682	682	682	682	682	682
4(i)	Quartzsite, Town of	La Paz County	97	299	550	701	708	708	708	708	708	708	708
4(i)	Queen Creek, Town of	Maricopa County	259	793	1,462	1,863	1,882	1,882	1,882	1,882	1,882	1,882	1,882
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	1	1	1	1	1	1	1	1	1
4(i)	Shepard Water Company, Incorporated	Yuma County	5	14	26	33	33	33	33	33	33	33	33
4(i)	Somerton, City of	Yuma County	68	209	386	491	496	496	496	496	496	496	496
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	9	28	51	66	66	66	66	66	66	66	66
4(i)	TV Marble Canyon AZ, LLC	Coconino County	6	20	36	46	46	46	46	46	46	46	46
3	City of Yuma[1]	Yuma County	0	0	0	0	43,258	48,522	48,522	48,522	48,522	48,522	48,522
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	0	0	0	0	0	25	25	25	25	25	25
3	Kaman, Inc.	Yuma County	0	0	0	0	0	2	2	2	2	2	2
3	Department of the Navy, MCAS	Yuma County	0	0	0	0	0	3,000	3,000	3,000	3,000	3,000	3,000
3	City of Yuma (cemetery)	Yuma County	0	0	0	0	0	60	60	60	60	60	60
3	Yuma Mesa Fruit Growers' Association	Yuma County	0	0	0	0	0	15	15	15	15	15	15

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Desert Lawn Memorial Park Association	Yuma County	0	0	0	0	0	138	138	138	138	138	138
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	115	411	1,448	2,188	2,929	4,278
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	181	649	2,288	3,459	4,630	6,762
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	80	288	1,015	1,535	2,054	3,000
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	74	265	934	1,412	1,890	2,760
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	134	480	1,692	2,558	3,423	5,000
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	3	10	34	51	68	100
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	3	10	34	51	68	100
3	Department of the Army - Yuma Proving Ground	Yuma County	0	0	0	0	0	30	108	382	578	773	1,129
3	Yuma Union High School District	Yuma County	0	0	0	0	0	148	148	148	148	148	148
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	0	0	0	0	0	0	248	248	248	248	248
2	Cibola National Wildlife Refuge	La Paz County	0	0	0	0	1,008	1,551	2,635	6,431	9,143	11,855	16,793
2	Lake Mead National Recreation Area	Mohave County	0	0	0	0	21	32	54	131	187	242	343
2	Bureau of Reclamation - Davis Dam	Mohave County	0	0	0	0	0	1	1	3	4	5	7
2	Imperial National Wildlife Refuge	La Paz County	0	0	0	0	1,381	2,124	3,609	8,809	12,522	16,236	23,000
2	Havasu Lake National Wildlife Refuge	Mohave County	0	0	0	0	2,245	3,453	5,869	14,323	20,362	26,401	37,399
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 20, Parker, City of	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 21, Yuma, City of	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**241,533**	**428,647**	**662,539**	**769,187**	**817,618**	**829,394**	**836,253**	**859,388**	**875,914**	**892,439**	**922,535**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	0	0	0	0	95,981	147,609	250,866	388,002	388,002	388,002	388,002
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 30, Stephenson	San Bernardino	0	0	0	0	0	0	0	0	0	0	154
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 38, Andrade	San Bernardino	0	0	0	0	0	0	0	0	0	0	42

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 39, Reynolds	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 43, City of Needles	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**95,981**	**147,609**	**250,866**	**388,002**	**388,002**	**388,002**	**388,210**
Nevada			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	**-**	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	35,593	59,321	88,982	92,717	92,717	92,717	92,717	92,717	92,717	92,717	92,717
8	Big Bend Water District	Clark	0	0	0	423	779	958	1,315	2,563	3,455	4,346	4,900
8	Robert B. Griffith Project	Clark	0	0	0	13,639	25,146	30,900	42,408	82,684	111,453	140,222	158,080
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	0	0	0	0	0	0	0	0	0	5
7	Bureau of Reclamation (includes Sportsman Park)	Clark	0	0	0	0	0	0	0	0	0	0	147
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	0	0	0	0	0	0	0	0	0	0	25
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	0	0	0	0	0	0	0	0	0	0	2,080
6	Las Vegas Valley Water District	Clark	0	0	0	0	0	0	0	0	0	0	8,012
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	0	0	0	0	0	0	0	0	0	0	483
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	0	4,268
4	City of Henderson	Clark	0	0	0	0	0	0	0	0	0	0	8,257
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	0	7,774
3	Boulder City	Clark	0	0	0	0	0	0	0	0	0	0	3,056

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	0	0	0	0	0	0	0	0	0	0	1,500
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	0	0	0	0	0	0	0	0	0	0	300
-	-	**Subtotal**	**35,593**	**59,321**	**88,982**	**106,778**	**118,642**	**124,574**	**136,439**	**177,963**	**207,624**	**237,285**	**291,602**
-	-	**Total**	**277,126**	**487,968**	**751,521**	**875,965**	**1,032,241**	**1,101,578**	**1,223,557**	**1,425,354**	**1,471,539**	**1,517,725**	**1,602,347**
	Summary by County												
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	6	20	36	46	46	46	46	46	46	46	46.3223
-	Gila County	2	680	1,531	2,595	3,067	3,067	3,067	3,067	3,067	3,067	3,067	3,067
-	La Paz County	14	880	2,698	4,971	6,334	8,787	10,073	12,643	21,638	28,064	34,489	46,191
-	Maricopa County	55	172,090	280,895	416,901	477,351	477,370	477,959	479,483	484,815	488,624	492,433	499,370
-	Mohave County	17	5,745	17,613	32,448	41,349	44,034	45,253	47,691	56,225	62,320	68,415	79,516
-	Pima County	13	52,490	109,048	179,746	211,115	211,115	211,115	211,115	211,115	211,115	211,115	211,115
-	Pinal County	8	9,422	16,168	24,600	28,341	28,341	28,341	28,341	28,341	28,341	28,341	28,341
-	Yuma County	18	220	675	1,243	1,584	44,858	53,541	53,867	54,141	54,336	54,532	54,888
-	**Subtotal Arizona Domestic**	**128**	**241,533**	**428,647**	**662,539**	**769,187**	**817,618**	**829,394**	**836,253**	**859,388**	**875,914**	**892,439**	**922,535**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	0	0	0	0	95,981	147,609	250,866	388,002	388,002	388,002	388,002
-	Imperial County	32	0	0	0	0	0	0	0	0	0	0	11
-	Riverside County	5	0	0	0	0	0	0	0	0	0	0	1
-	San Bernardino	7	0	0	0	0	0	0	0	0	0	0	196
-	**Subtotal California Domestic**	**45**	**0**	**0**	**0**	**0**	**95,981**	**147,609**	**250,866**	**388,002**	**388,002**	**388,002**	**388,210**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin by Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	35,593	59,321	88,982	106,778	118,642	124,574	136,439	177,963	207,624	237,285	291,602
-	**Subtotal Nevada Domestic**	**15**	**35,593**	**59,321**	**88,982**	**106,778**	**118,642**	**124,574**	**136,439**	**177,963**	**207,624**	**237,285**	**291,602**

[1]This user also holds a PPR entitlement.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

Disclaimer: These modeling results from the Shortage Allocation Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and it cannot replicate the precision required for that process.

C.5 Continuing Current Strategies Shortage Allocation Model Assumptions

The Continuing Current Strategies Shortage Allocation Model describes the continued implementation of existing agreements that control operations of Glen Canyon and Hoover Dams. These include the 2007 Interim Guidelines and the 2019 DCP. The Continuing Current Strategies Shortage Allocation Model simulates shortages and distributes available water first among the Lower Division States based on the 2007 ROD and 2019 DCP and then among the entitlement holders within each state based on priority or as otherwise provided by the 2019 DCP.

The discrete volumes of total shortage to the Lower Division States considered in the Shortage Allocation Model comprise the 2007 Interim Guidelines shortage reductions and 2019 DCP water savings contributions, based on Lake Mead elevations.

This model exists as a comparative baseline, reflecting recent operations that water users in the Lower Basin are familiar with. The Excel workbook contains formulas to extend Continuing Current Strategies to deeper shortage levels as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

For each level of modeled shortage that exceeds the shortages and contributions prescribed by the 2007 ROD and 2019 DCP, the Continuing Current Strategies Shortage Allocation Model calculates a percentage reduction to the Lower Division States and applies the same percentage reduction to Mexico's 1,500,000 acre-foot per year allotment.

C.5.1 Present Perfected Rights Assumptions for the Continuing Current Strategies Shortage Allocation Model

See **Section C.4.1** for a discussion on the PPR assumptions in the Priority Shortage Allocation Model. The Continuing Current Strategies Shortage Allocation Model has no unique assumptions with respect to PPRs.

C.5.2 Distribution Among States for the Continuing Current Strategies Shortage Allocation Model

The Continuing Current Strategies Shortage Allocation Model distributes shortages among states based on state reductions specified in the 2007 Interim Guidelines. This Shortage Allocation Model also simulates water savings contributions that were distributed among states as agreed to in the 2019 DCP. For the purpose of analyzing the impacts of alternatives considered in this Draft EIS, DCP contributions are assumed to represent reductions in deliveries, although parties retain flexibility in how to meet those contribution commitments.

Table C-19 on the following page shows a distribution of shortage among the Lower Division States (which includes both 2007 Interim Guidelines shortages and 2019 DCP water savings contributions) and corresponding volumes of water available to each Lower Division State. Total shortage volumes include an assumed component for Mexico, as described in the sections that follow, and will not sum across rows.

Table C-19
Summary of Shortage Volumes and Available Water by Lower Division State Under the Continuing Current Strategies Shortage Allocation Model (af)

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
0	0	2,800,000	0	4,400,000	0	300,000
(241,000)	(192,000)	2,608,000	0	4,400,000	(8,000)	292,000
(613,000)	(512,000)	2,288,000	0	4,400,000	(21,000)	279,000
(721,000)	(592,000)	2,208,000	0	4,400,000	(25,000)	275,000
(1,013,000)	(640,000)	2,160,000	(200,000)	4,200,000	(27,000)	273,000
(1,071,000)	(640,000)	2,160,000	(250,000)	4,150,000	(27,000)	273,000
(1,129,000)	(640,000)	2,160,000	(300,000)	4,100,000	(27,000)	273,000
(1,188,000)	(640,000)	2,160,000	(350,000)	4,050,000	(27,000)	273,000
(1,375,000)	(720,000)	2,080,000	(350,000)	4,050,000	(30,000)	270,000
(1,440,000)	(811,267)	1,988,733	(350,000)	4,050,000	(38,733)	261,267
(1,500,000)	(856,901)	1,943,099	(350,000)	4,050,000	(43,099)	256,901
(1,680,000)	(993,801)	1,806,199	(350,000)	4,050,000	(56,199)	243,801
(1,800,000)	(1,085,068)	1,714,932	(350,000)	4,050,000	(64,932)	235,068
(1,920,000)	(1,176,336)	1,623,664	(350,000)	4,050,000	(73,664)	226,336
(2,000,000)	(1,237,180)	1,562,820	(350,000)	4,050,000	(79,486)	220,514
(2,100,000)	(1,313,236)	1,486,764	(350,000)	4,050,000	(86,764)	213,236
(2,160,000)	(1,358,870)	1,441,130	(350,000)	4,050,000	(91,130)	208,870
(2,219,509)	(1,404,130)	1,395,870	(350,000)	4,050,000	(95,461)	204,539
(2,280,000)	(1,422,069)	1,377,931	(378,068)	4,021,932	(99,863)	200,137
(2,300,000)	(1,428,000)	1,372,000	(387,348)	4,012,652	(101,319)	198,681
(2,400,000)	(1,457,656)	1,342,344	(433,748)	3,966,252	(108,596)	191,404
(2,520,000)	(1,493,242)	1,306,758	(489,429)	3,910,571	(117,329)	182,671
(2,640,000)	(1,528,829)	1,271,171	(545,109)	3,854,891	(126,062)	173,938
(2,760,000)	(1,564,416)	1,235,584	(600,790)	3,799,210	(134,795)	165,205
(2,880,000)	(1,600,003)	1,199,997	(656,470)	3,743,530	(143,527)	156,473
(3,000,000)	(1,635,589)	1,164,411	(712,150)	3,687,850	(152,260)	147,740
(3,120,000)	(1,671,176)	1,128,824	(767,831)	3,632,169	(160,993)	139,007
(3,240,000)	(1,706,763)	1,093,237	(823,511)	3,576,489	(169,726)	130,274
(3,360,000)	(1,742,350)	1,057,650	(879,191)	3,520,809	(178,459)	121,541
(3,480,000)	(1,777,936)	1,022,064	(934,872)	3,465,128	(187,192)	112,808

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(3,500,000)	(1,783,867)	1,016,133	(944,152)	3,455,848	(188,647)	111,353
(3,600,000)	(1,813,523)	986,477	(990,552)	3,409,448	(195,925)	104,075
(3,720,000)	(1,849,110)	950,890	(1,046,233)	3,353,767	(204,658)	95,342
(3,840,000)	(1,884,696)	915,304	(1,101,913)	3,298,087	(213,391)	86,609
(4,000,000)	(1,932,145)	867,855	(1,176,154)	3,223,846	(225,034)	74,966
(4,080,000)	(1,955,870)	844,130	(1,213,274)	3,186,726	(230,856)	69,144
(4,200,000)	(1,991,457)	808,543	(1,268,954)	3,131,046	(239,589)	60,411
(4,320,000)	(2,027,043)	772,957	(1,324,635)	3,075,365	(248,322)	51,678
(4,440,000)	(2,062,630)	737,370	(1,380,315)	3,019,685	(257,055)	42,945
(4,560,000)	(2,098,217)	701,783	(1,435,995)	2,964,005	(265,788)	34,212
(4,680,000)	(2,133,804)	666,196	(1,491,676)	2,908,324	(274,521)	25,479
(4,800,000)	(2,169,390)	630,610	(1,547,356)	2,852,644	(283,254)	16,746
(4,910,598)	(2,202,189)	597,811	(1,598,674)	2,801,326	(291,302)	8,698
(5,000,000)	(2,256,342)	543,658	(1,618,723)	2,781,277	(291,602)	8,398
(6,000,000)	(2,383,742)	416,258	(2,324,655)	2,075,345	(291,602)	8,398
(7,000,000)	(2,383,742)	416,258	(3,157,989)	1,242,011	(291,602)	8,398
(7,500,000)	(2,383,742)	416,258	(3,574,655)	825,345	(291,602)	8,398
(9,000,000)	(2,800,000)	0	(4,400,000)	0	(300,000)	0

The maximum shortage volume applied from the 2007 Interim Guidelines and 2019 DCP volumes to the Lower Division States is 1.1 maf, or 1.375 maf including Mexico.

C.5.2.1 Stage 1, 2, and 3 Shortage Assumptions

As in the Priority Shortage Allocation Model, the initial shortages to the Lower Division States are characterized by stages. In the Continuing Current Strategies Shortage Allocation Model, Stage 1 represented shortage volumes from the 2007 Interim Guidelines and the 2019 DCP. In the modeled Stage 2, additional shortages beyond Stage 1 are imposed only upon Arizona and Nevada and continue until the deliveries to the post-1968 water entitlement holders in Arizona (including the CAP) are reduced to zero. After deliveries to the fourth priority entitlements within Arizona are expected to be reduced to zero, any additional shortages are applied to Arizona, California, and Nevada in Stage 3. As with the Priority Shortage Allocation Model, the Continuing Current Strategies Shortage Allocation Model distributes shortage among the Lower Division States in a way that ensures PPRs can be satisfied (or reduced) in the prescribed order as a Basin-wide senior priority group. Instead of setting the entire volume of each state's apportionment as coequal to the others, only state apportionments in excess of PPRs are treated as coequal (but maintaining the assumption that Arizona bears California's share of shortage until the Arizona fourth priority is exhausted). In developing the Stage 2 and Stage 3 percentages for the sharing of shortage among the Lower Division States, the consumptive use (or equivalent) of PPR entitlements are removed from the apportionment volumes in each ratio, as detailed below.

The Stage 1 shortage volumes for the Continuing Current Strategies Shortage Allocation Model are fixed volumes and are shown above in **Table C-19**.

The Stage 2 shortage sharing percentages for the Continuing Current Strategies Shortage Allocation Model are computed as follows[22]:

- Nevada bears a reduction of about 9 percent of the total Lower Division States shortage volume, computed as a ratio of Nevada's apportionment less PPR consumptive use (or equivalent) entitlements within Nevada less the amount of shortage applied to Nevada under Stage 1, over the sum of the apportionments of the Lower Division States less all PPR consumptive use (or equivalent) entitlements less the total amount shorted to users under Stage 1
    - (300.0 kaf – NV PPRs – 30.0 kaf) / 7.5 maf – total PPRs – 1.1 maf) = 8.73 percent, or
        - (300.0 kaf – 8,698 af – 30.0 kaf) / (7.5 maf – 3,408,035 af – 1.1 maf) = 8.73 percent
- Arizona bears the remainder of the total Lower Division States shortage volume (approximately 91 percent), computed as a ratio of Arizona's and California's apportionments less PPR consumptive use (or equivalent) in both states less the amount of shortage applied to both states under Stage 1, over the sum of the apportionments of the Lower Division States less all PPR consumptive use (or equivalent) entitlements less the total amount shorted to users under Stage 1
    - (2.8 maf – AZ PPRs – 720 kaf + 4.4 maf – CA PPRs – 350 kaf) / (7.5 maf – total PPRs – 1.1 maf) = 91.27 percent, or
        - (2.8 maf – 597,811 af – 720 kaf + 4.4 maf – 2,801,326 af – 350 kaf) / (7.5 maf – 3,408,035 af – 1.1 maf) = 91.27 percent

As in the Priority Shortage Allocation Model, after deliveries to the fourth priority entitlements within Arizona are expected to be reduced to zero, any additional shortages are applied to Arizona, California, and Nevada. This Stage 3 shortage is the amount of additional shortage above the Stage 1 and Stage 2 shortage volumes, and the additional shortage is distributed according to the Stage 3 ratios.

The Stage 3 shortage sharing percentages are computed as follows, with the PPR volumes the same as in the Stage 2 ratios.

- Nevada bears about 9 percent of the Stage 3 shortage in addition to its Stage 1 and Stage 2 shortage, computed as a ratio of Nevada's apportionment less PPRs less the amount of

[22] Note that these ratios distribute shortage volumes, and the available water is calculated as a remainder.

shortage applied to Nevada under Stage 1 and 2, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to users under Stage 1 and 2

- (300,000 – NV PPRs – Nevada Stage 1 and 2 shortage) / (7.5 maf – total PPRs – total Stage 1 and 2 shortage) = 8.73 percent, or
  - (300 kaf – 8,698 af – 95,461 af) / (7.5 maf – 3,407,835 af – 1,849,591 af) = 8.73 percent

- Arizona bears about 35.6 percent of the Stage 3 shortage in addition to its Stage 1 and 2 shortage, computed as a ratio of Arizona's apportionment less PPRs less the amount of shortage applied to Arizona under Stage 1 and 2, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to users under Stage 1 and 2
  - (2.8 maf – AZ PPRs – Arizona Stage 1 and 2 shortage) / (7.5 maf – total PPRs – total Stage 1 and 2 shortage) = 35.59 percent, or
    - (2.8 maf – 597,811 af – 1,404,130 af) / (7.5 maf – 3,407,835 af – 1,849,591 af) = 35.59 percent

- California bears about 55.7 percent of the Stage 3 shortage, computed as a ratio of California's apportionment less PPRs less the amount of shortage applied to California under Stage 1, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to users under Stage 1 and 2
  - (4.4 maf – CA PPRs – California Stage 1 shortage) / (7.5 maf – total PPRs – total Stage 1 and 2 shortage) = 55.68 percent, or
    - (4.4 maf – 2,801,326 af – 350 kaf) / (7.5 maf – 3,407,835 af – 1,849,591 af) = 55.68 percent

This method represents one possible way to distribute deep shortages among the Lower Division States in a way that does not reduce PPR water deliveries in one state while fulfilling non-PPR water deliveries in another state.

C.5.3 Distribution Within States for the Continuing Current Strategies Shortage Allocation Model

C.5.3.1 Introduction

To estimate the impacts of given levels of shortage, assumptions were made with regard to how shortages might be shared. These assumptions are made to facilitate analysis of the potential impacts and they are not intended to represent current or future policy with respect to shortage allocation. The Continuing Current Strategies Shortage Allocation Model is not designed to replicate some of the annual processes that must be undertaken in determining the quantity of water that can be approved for diversion by specific users.

Modeling assumptions are consistent with the Priority Shortage Allocation Model unless described otherwise in the sections that follow.

C.5.3.2 General State Assumptions

For the purpose of analyzing the impacts of alternatives considered in this Draft EIS, DCP contributions are assumed to represent reductions in deliveries, although parties retain flexibility in how to meet those contribution commitments.

C.5.3.3 Nevada Assumptions

The first 10 kaf shorted to Nevada is considered a DCP contribution. The Continuing Current Strategies Shortage Allocation Model does not treat Shortages and DCP contributions differently for the purpose of this EIS.

C.5.3.4 California Assumptions

The Shortage Allocation Model described in this Appendix E attributes 7 percent of California's DCP contributions to Coachella Valley Water District pursuant to the May 20, 2019, Drought Contingency Plan Implementation Agreement Between Metropolitan Water District of Southern California and Coachella Valley Water District.

The first 325.5 kaf shorted to MWD is considered a DCP contribution, as is the first 24.5 kaf shorted to CVWD. The Continuing Current Strategies Shortage Allocation Model does not treat Shortages and DCP contributions differently for the purpose of this EIS.

C.5.3.5 Arizona Assumptions

The first 240 kaf shorted to Arizona is considered a DCP contribution. The Continuing Current Strategies Shortage Allocation Model does not treat Shortages and DCP contributions differently for the purpose of this EIS.

C.5.4 Continuing Current Strategies Shortage Allocation Model Results

The tables in this section present the results of the Continuing Current Strategies Shortage Allocation Model over a range of total shortages to the Lower Basin including Mexico.

Table C-20, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-21, the Tribal Summary, presents the shortage impacts on tribes.

Table C-22, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-23, the Domestic Summary, presents the shortage impacts on domestic users.

Table C-20
Continuing Current Strategies Shortage Allocation Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies										
-	-	**613,000**	**1,013,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
Arizona	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion	492,255	607,455	802,666	1,008,017	1,144,917	1,213,368	1,295,172	1,295,172	1,295,172	1,295,172	1,295,172
-	NIA Priority[2]	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415
-	M&I Priority[2]	174,362	244,349	371,599	498,848	587,923	632,461	638,823	638,823	638,823	638,823	638,823
-	Indian Priority[2]	77,540	117,553	190,303	263,054	313,979	339,441	343,079	343,079	343,079	343,079	343,079
-	4th Priority i (Mainstream)	19,745	32,545	54,235	77,052	92,263	99,869	108,958	108,958	108,958	108,958	108,958
-	2nd & 3rd Priorities	0	0	0	0	0	0	23,870	231,459	379,737	528,015	798,059
-	1st Priority (Present Perfected Rights)	0	0	0	0	0	0	0	0	0	0	54,153
-	**Subtotal**	**512,000**	**640,000**	**856,901**	**1,085,068**	**1,237,180**	**1,313,236**	**1,428,000**	**1,635,589**	**1,783,867**	**1,932,145**	**2,256,342**
California	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	0	186,000	325,500	325,500	325,500	325,500	362,848	388,002	388,002	388,002	388,002
-	3rd Priority (IID, CVWD, PVID)	0	14,000	24,500	24,500	24,500	24,500	24,500	324,148	556,150	788,152	835,000
-	2nd Priority (Yuma Project Reservation Division)	0	0	0	0	0	0	0	0	0	0	7,294
-	1st Priority (PVID)	0	0	0	0	0	0	0	0	0	0	368,378
-	Present Perfected Rights (PPRs)	0	0	0	0	0	0	0	0	0	0	20,049
-	**Subtotal**	**0**	**200,000**	**350,000**	**350,000**	**350,000**	**350,000**	**387,348**	**712,150**	**944,152**	**1,176,154**	**1,618,723**
Nevada	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	21,000	27,000	43,099	64,932	79,486	86,764	92,717	92,717	92,717	92,717	92,717
-	8th Priority (SNWA & Big Bend)	0	0	0	0	0	0	8,602	59,544	95,931	132,318	162,980
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	0	0	0	0	0	0	0	0	0	0	2,257
-	6th Priority (Las Vegas Valley Water District)	0	0	0	0	0	0	0	0	0	0	8,012
-	5th Priority (PABCO)	0	0	0	0	0	0	0	0	0	0	483

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies										
-	-	**613,000**	**1,013,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
-	4th Priority (Henderson & Basic)	0	0	0	0	0	0	0	0	0	0	20,299
-	3rd Priority (Boulder City)	0	0	0	0	0	0	0	0	0	0	3,056
-	2nd Priority (Lake Mead National Rec Area)	0	0	0	0	0	0	0	0	0	0	1,500
-	1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	0	0	0	0	0	0	0	0	0	0	300
-	**Subtotal**	**21,000**	**27,000**	**43,099**	**64,932**	**79,486**	**86,764**	**101,319**	**152,260**	**188,647**	**225,034**	**291,602**
-	**Lower Division States Subtotal**	**533,000**	**867,000**	**1,250,000**	**1,500,000**	**1,666,667**	**1,750,000**	**1,916,667**	**2,500,000**	**2,916,667**	**3,333,333**	**4,166,667**
Mexico	**Mexico Subtotal**	**80,000**	**146,000**	**250,000**	**300,000**	**333,333**	**350,000**	**383,333**	**500,000**	**583,333**	**666,667**	**833,333**
-	**Total**	**613,000**	**1,013,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

Disclaimer: These modeling results for the Continued Current Strategies Alternative should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled and cannot replicate the precision required of that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here
[2]These estimated shortages to priorities within the CAP reflect the effect of CAP system loss, and do not total to CAP shortage at the point of diversion.

Table C-21
Continuing Current Strategies Shortage Allocation Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	56,483	76,783	113,692	150,601	176,437	189,355	191,200	191,200	191,200	191,200	191,200
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	3,375	8,563	17,994	27,425	34,027	37,328	37,800	37,800	37,800	37,800	37,800
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	109	276	580	884	1,096	1,203	1,218	1,218	1,218	1,218	1,218
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	10,515	17,716	30,807	43,899	53,063	57,645	58,300	58,300	58,300	58,300	58,300
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	1,628	4,130	8,679	13,229	16,413	18,006	18,233	18,233	18,233	18,233	18,233
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	45	113	238	363	450	494	500	500	500	500	500
CAP Indian Priority	San Carlos Apache Tribe	Gila County	1,380	3,086	6,187	9,288	11,459	12,545	12,700	12,700	12,700	12,700	12,700
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	2,399	4,041	7,028	10,015	12,105	13,151	13,300	13,300	13,300	13,300	13,300
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	1,443	2,431	4,227	6,024	7,281	7,910	8,000	8,000	8,000	8,000	8,000
CAP Indian Priority	Tonto Apache Tribe	Gila County	11	29	61	93	115	126	128	128	128	128	128
CAP Indian Priority	Yavapai Apache Nation	Gila County	107	272	571	871	1,080	1,185	1,200	1,200	1,200	1,200	1,200
CAP M&I Priority	San Carlos Apache Tribe	Gila County	4,953	6,940	10,555	14,169	16,699	17,964	18,145	18,145	18,145	18,145	18,145
4(i)	Hopi Tribe[1]	La Paz County	513	846	1,409	2,002	2,397	2,595	2,831	2,831	2,831	2,831	2,831
4(i)	Cocopah Indian Reservation	Yuma County	243	400	667	948	1,135	1,229	1,341	1,341	1,341	1,341	1,341
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	420	692	1,153	1,638	1,961	2,123	2,316	2,316	2,316	2,316	2,316
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	1,227	2,022	3,370	4,787	5,732	6,205	6,770	6,770	6,770	6,770	6,770

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	0	0	11,938	21,899	31,860	50,000
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**261,433**	**304,922**	**383,801**	**462,817**	**518,036**	**545,646**	**550,563**	**562,502**	**572,462**	**582,423**	**600,563**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**261,433**	**304,922**	**383,801**	**462,817**	**518,036**	**545,646**	**550,563**	**562,502**	**572,462**	**582,423**	**600,563**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies										
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	Coconino County	0.83	2,140	2,231	2,384	2,546	2,654	2,708	2,772	2,772	2,772	2,772	2,772
-	Gila County	4.67	14,415	18,346	25,495	32,643	37,647	40,149	40,506	40,506	40,506	40,506	40,506
-	La Paz County	4	513	846	1,409	2,002	2,397	2,595	2,831	2,831	2,831	2,831	2,831
-	Maricopa County	2.6	57,152	67,387	85,995	104,604	117,630	124,143	125,073	125,073	125,073	125,073	125,073
-	Mohave County	2.5	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
-	Pima County	3	31,620	36,876	46,432	55,988	62,678	66,022	66,500	66,500	66,500	66,500	66,500
-	Pinal County	4.40	135,916	158,315	199,039	239,763	268,270	282,524	284,560	296,498	306,459	316,420	334,560
-	Yuma County	5	1,470	2,423	4,037	5,735	6,868	7,434	8,110	8,110	8,110	8,110	8,110
-	Apache County	1.00	8,103	8,250	8,505	8,768	8,947	9,036	9,105	9,105	9,105	9,105	9,105
-	Navajo County	1.00	8,103	8,250	8,505	8,768	8,947	9,036	9,105	9,105	9,105	9,105	9,105
-	**Subtotal Arizona Tribal**	**29**	**261,433**	**304,922**	**383,801**	**462,817**	**518,036**	**545,646**	**550,563**	**562,502**	**572,462**	**582,423**	**600,563**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	San Bernardino	2.5	0	0	0	0	0	0	0	0	0	0	0
-	Riverside	0.50	0	0	0	0	0	0	0	0	0	0	0
-	Imperial	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal California Tribal**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal Nevada Tribal**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Disclaimer: These modeling results for the Continued Current Strategies Alternative should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Table C-22
Continuing Current Strategies Shortage Allocation Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	340	561	935	1,328	1,590	1,721	1,878	1,878	1,878	1,878	1,878
4(i)	Arizona State Land Department	Yuma County	792	1,306	2,176	3,092	3,702	4,007	4,372	4,372	4,372	4,372	4,372
4(i)	Beattie Farms, Southwest	Yuma County	133	219	366	519	622	673	735	735	735	735	735
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	50	83	138	197	235	255	278	278	278	278	278
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	15	25	42	59	71	76	83	83	83	83	83
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	252	415	692	983	1,177	1,274	1,390	1,390	1,390	1,390	1,390
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	26	43	71	101	121	131	143	143	143	143	143
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	893	1,471	2,452	3,483	4,170	4,514	4,925	4,925	4,925	4,925	4,925
4(i)	Curtis, Armon	Yuma County	36	59	99	140	168	182	199	199	199	199	199
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	172	284	473	672	804	870	950	950	950	950	950
4(i)	Matador Farms, LLC	La Paz County	540	889	1,482	2,106	2,522	2,729	2,978	2,978	2,978	2,978	2,978
4(i)	JRJ Partners, L.L.C.	Yuma County	130	213	356	505	605	655	715	715	715	715	715
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	4,204	6,930	11,548	16,407	19,646	21,265	23,201	23,201	23,201	23,201	23,201
4(i)	North Baja Pipeline, LLC[2]	La Paz County	58	95	158	225	269	291	318	318	318	318	318
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	111	183	304	432	518	560	611	611	611	611	611
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	58	95	158	225	269	291	318	318	318	318	318
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	58	96	160	227	272	295	322	322	322	322	322
4(i)	Red River Land Company, LLC	La Paz County	36	59	99	140	168	182	199	199	199	199	199
4(i)	Phillips, Milton and Jean	Yuma County	7	12	20	28	34	36	40	40	40	40	40
4(i)	Western Water, LLC	La Paz County	64	106	177	251	301	325	355	355	355	355	355
3	Sturges, Harold	Yuma County	0	0	0	0	0	0	0	335	335	335	335
3	Sturges, Irma	Yuma County	0	0	0	0	0	0	0	385	385	385	385

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	0	0	31,810	60,521	89,231	141,519
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	0	0	15,122	28,771	42,420	67,278
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	0	0	0	0	0	0	0	1,513	2,879	4,244	6,731
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	0	0	66,376	121,758	177,139	278,000
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	0	0	0	0	0	0	0	855	1,569	2,283	3,582
3	Yuma County Water Users' Association (14,701 af M&I includes YAO's 489.95 af conversion)[2,3]	Yuma County	0	0	0	0	0	0	0	18,822	34,650	50,478	79,304
3	University of Arizona	Yuma County	0	0	0	0	0	0	0	1,088	1,088	1,088	1,088
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	0	0	0	0	0	0	0	120	120	120	120
3	Unit B Irrigation & Drainage District[3]	Yuma County	0	0	0	0	0	0	0	2,923	6,577	10,231	16,886
1	PPR No. 15, Molina	Yuma County	0	0	0	0	0	0	0	0	0	0	318
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	0	0	0	0	0	0	0	0	0	0	445
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	0	0	0	0	0	0	0	0	0	0	4,352
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	0	0	0	0	0	0	0	0	0	0	6,125
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	0	0	0	0	0	0	0	0	0	0	42,914
1	PPR No. 7, Powers	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 10, Hulet (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 12, Miller (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 18, Swan (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**7,975**	**13,145**	**21,905**	**31,120**	**37,264**	**40,336**	**44,007**	**183,357**	**302,660**	**421,963**	**693,389**
California			-	-	-	-	-	-	-	-		-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	0	0	0	0	0	0	147	1,941	3,330	4,719	5,000
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	0	14,000	24,500	24,500	24,500	24,500	24,353	322,207	330,000	330,000	330,000
3	Imperial Irrigation District (IID) (3a)	Imperial County	0	0	0	0	0	0	0	0	222,820	453,432	500,000
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	0	0	0	0	0	0	0	0	0	0	7,294
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	368,378
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	0	0	0	0	0	0	0	0	0	0	115
PPR	PPR No. 41, Chagnon	San Bernardino	0	0	0	0	0	0	0	0	0	0	77
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	0	0	0	0	0	0	0	0	0	0	61
PPR	PPR No. 34, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	69
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	0	0	0	0	0	0	0	0	0	0	19,518
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 42, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 37, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 33, Morgan	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 35, Simons	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**14,000**	**24,500**	**24,500**	**24,500**	**24,500**	**24,500**	**324,148**	**556,150**	**788,152**	**1,230,512**
Nevada			-	-	-	-	-	-	-	-		-	-
None	None	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**7,975**	**27,145**	**46,405**	**55,620**	**61,764**	**64,836**	**68,507**	**507,506**	**858,810**	**1,210,114**	**1,923,901**
	Summary by County												
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	2,022	3,332	5,553	7,889	9,447	10,226	11,156	11,156	11,156	11,156	11,156
-	Mohave County	8	4,204	6,930	11,548	16,407	19,646	21,265	23,201	23,201	23,201	23,201	23,201
-	Yuma County	28	1,749	2,882	4,803	6,824	8,171	8,845	9,650	149,000	268,303	387,605	659,032
-	**Subtotal Arizona Irrigation**	**45**	**7,975**	**13,145**	**21,905**	**31,120**	**37,264**	**40,336**	**44,007**	**183,357**	**302,660**	**421,963**	**693,389**
-	**California**	-	-	-	-	-	-	-		-	-	-	-
-	Riverside County	3	0	14,000	24,500	24,500	24,500	24,500	24,500	324,148	333,330	334,719	519,189
-	Imperial County	10	0	0	0	0	0	0	0	0	222,820	453,432	711,185
-	San Bernardino	3	0	0	0	0	0	0	0	0	0	0	138
-	**Subtotal California Irrigation**	**16**	**0**	**14,000**	**24,500**	**24,500**	**24,500**	**24,500**	**24,500**	**324,148**	**556,150**	**788,152**	**1,230,512**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

Disclaimer: These modeling results for the Continued Current Strategies Alternative should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement.

Table C-23
Continuing Current Strategies Shortage Allocation Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185
CAP NIA-B	Carefree Water Company	Maricopa County	112	112	112	112	112	112	112	112	112	112	112
CAP NIA-B	Cave Creek	Maricopa County	386	386	386	386	386	386	386	386	386	386	386
CAP NIA-B	El Mirage	Maricopa County	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217
CAP NIA-B	Freeport	Pima County	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678
CAP NIA-B	Gilbert	Maricopa County	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
CAP NIA-B	Marana	Pima County	515	515	515	515	515	515	515	515	515	515	515
CAP NIA-B	Queen Creek	Maricopa County	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162
CAP NIA-B	Resolution Copper	Maricopa County	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238
CAP NIA-B	Rosemont Copper	Pima County	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124
CAP NIA-B	SRP	Maricopa County	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	817	817	817	817	817	817	817	817	817	817	817
CAP NIA-A	Phoenix	Maricopa County	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280
CAP NIA-A	Chandler	Maricopa County	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924
CAP NIA-A	Gilbert	Maricopa County	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537
CAP NIA-A	Glendale	Maricopa County	682	682	682	682	682	682	682	682	682	682	682
CAP NIA-A	Mesa	Maricopa County	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551
CAP NIA-A	Scottsdale	Maricopa County	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306
CAP NIA-A	Tempe	Maricopa County	23	23	23	23	23	23	23	23	23	23	23
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	45	113	238	363	450	494	500	500	500	500	500
CAP M&I	ASARCO	Pima County	5,732	8,032	12,216	16,399	19,327	20,791	21,000	21,000	21,000	21,000	21,000
CAP M&I	Avondale	Maricopa County	1,478	2,072	3,150	4,229	4,984	5,362	5,416	5,416	5,416	5,416	5,416
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	7,690	10,777	16,390	22,002	25,931	27,895	28,176	28,176	28,176	28,176	28,176

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	2,425	3,398	5,168	6,937	8,176	8,796	8,884	8,884	8,884	8,884	8,884
CAP M&I	Arizona Water Company, Coolidge	Pinal County	546	765	1,163	1,562	1,841	1,980	2,000	2,000	2,000	2,000	2,000
CAP M&I	Arizona Water Company, Superstition	Pinal County	1,715	2,404	3,656	4,908	5,784	6,222	6,285	6,285	6,285	6,285	6,285
CAP M&I	Arizona Water Company, White Tank	Maricopa County	264	370	563	756	891	958	968	968	968	968	968
CAP M&I	Buckeye	Maricopa County	19	26	40	53	63	67	68	68	68	68	68
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	1,754	2,458	3,738	5,018	5,914	6,362	6,426	6,426	6,426	6,426	6,426
CAP M&I	Carefree Water Company	Maricopa County	458	642	976	1,310	1,544	1,661	1,678	1,678	1,678	1,678	1,678
CAP M&I	Cave Creek	Maricopa County	608	852	1,296	1,740	2,050	2,206	2,228	2,228	2,228	2,228	2,228
CAP M&I	Chandler	Maricopa County	2,362	3,310	5,034	6,758	7,964	8,568	8,654	8,654	8,654	8,654	8,654
CAP M&I	Chaparral City Water Company	Maricopa County	2,432	3,408	5,182	6,957	8,199	8,820	8,909	8,909	8,909	8,909	8,909
CAP M&I	Circle City	Maricopa County	1,073	1,504	2,287	3,070	3,619	3,893	3,932	3,932	3,932	3,932	3,932
CAP M&I	El Mirage	Maricopa County	139	194	295	397	468	503	508	508	508	508	508
CAP M&I	Eloy	Pinal County	593	830	1,263	1,695	1,998	2,149	2,171	2,171	2,171	2,171	2,171
CAP M&I	EPCOR, Agua Fria	Maricopa County	3,028	4,243	6,453	8,662	10,209	10,983	11,093	11,093	11,093	11,093	11,093
CAP M&I	EPCOR, Paradise Valley	Maricopa County	882	1,236	1,879	2,523	2,974	3,199	3,231	3,231	3,231	3,231	3,231
CAP M&I	EPCOR, Sun City	Maricopa County	1,143	1,602	2,437	3,271	3,855	4,147	4,189	4,189	4,189	4,189	4,189
CAP M&I	EPCOR, Sun City West	Maricopa County	647	907	1,380	1,852	2,183	2,348	2,372	2,372	2,372	2,372	2,372
CAP M&I	Florence	Pinal County	559	783	1,191	1,599	1,885	2,028	2,048	2,048	2,048	2,048	2,048
CAP M&I	Freeport-Miami	Gila County	793	1,112	1,690	2,269	2,674	2,877	2,906	2,906	2,906	2,906	2,906
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	779	1,092	1,660	2,229	2,627	2,826	2,854	2,854	2,854	2,854	2,854
CAP M&I	Gilbert	Maricopa County	1,975	2,767	4,209	5,650	6,659	7,163	7,235	7,235	7,235	7,235	7,235
CAP M&I	Glendale	Maricopa County	4,704	6,593	10,026	13,459	15,863	17,064	17,236	17,236	17,236	17,236	17,236
CAP M&I	Goodyear	Maricopa County	2,932	4,109	6,249	8,388	9,886	10,635	10,742	10,742	10,742	10,742	10,742
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	17	24	37	50	59	63	64	64	64	64	64
CAP M&I	Green Valley Community Water Company	Pima County	780	1,093	1,662	2,232	2,630	2,830	2,858	2,858	2,858	2,858	2,858
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	519	727	1,105	1,484	1,749	1,881	1,900	1,900	1,900	1,900	1,900
CAP M&I	Marana	Pima County	638	894	1,359	1,824	2,150	2,313	2,336	2,336	2,336	2,336	2,336
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	182	254	387	519	612	658	665	665	665	665	665
CAP M&I	Mesa	Maricopa County	11,874	16,640	25,305	33,971	40,037	43,070	43,503	43,503	43,503	43,503	43,503

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	3,674	5,148	7,830	10,511	12,388	13,326	13,460	13,460	13,460	13,460	13,460
CAP M&I	Oro Valley	Pima County	2,813	3,942	5,994	8,047	9,484	10,202	10,305	10,305	10,305	10,305	10,305
CAP M&I	Peoria	Maricopa County	7,402	10,374	15,776	21,178	24,960	26,851	27,121	27,121	27,121	27,121	27,121
CAP M&I	Phoenix	Maricopa County	34,419	48,235	73,354	98,473	116,056	124,848	126,104	126,104	126,104	126,104	126,104
CAP M&I	Pine	Gila County	44	62	94	126	148	159	161	161	161	161	161
CAP M&I	Queen Creek	Maricopa County	135	189	288	387	456	490	495	495	495	495	495
CAP M&I	Rio Verde Utilities	Maricopa County	222	311	472	634	747	804	812	812	812	812	812
CAP M&I	San Tan Irrigation District	Maricopa County	64	90	137	184	217	234	236	236	236	236	236
CAP M&I	Scottsdale	Maricopa County	14,414	20,200	30,719	41,239	48,602	52,284	52,810	52,810	52,810	52,810	52,810
CAP M&I	Spanish Trail Water Company	Pima County	829	1,162	1,767	2,372	2,795	3,007	3,037	3,037	3,037	3,037	3,037
CAP M&I	Surprise	Maricopa County	2,797	3,920	5,962	8,003	9,432	10,147	10,249	10,249	10,249	10,249	10,249
CAP M&I	Tempe	Maricopa County	1,178	1,650	2,510	3,370	3,971	4,272	4,315	4,315	4,315	4,315	4,315
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	19	27	41	55	65	70	71	71	71	71	71
CAP M&I	Tucson	Pima County	39,356	55,153	83,875	112,597	132,702	142,755	144,191	144,191	144,191	144,191	144,191
CAP M&I	Vail Water Company	Pima County	507	710	1,080	1,450	1,709	1,839	1,857	1,857	1,857	1,857	1,857
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	797	1,117	1,698	2,279	2,686	2,890	2,919	2,919	2,919	2,919	2,919
4(i)	Arizona State Land Department	Yuma County	184	303	505	718	860	930	1,015	1,015	1,015	1,015	1,015
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	11	18	30	42	50	55	60	60	60	60	60
4(i)	B&F Investment, LLC	La Paz County	7	12	20	28	34	36	40	40	40	40	40
4(i)	Bullhead City	Mohave County	1,824	3,006	5,010	7,118	8,523	9,226	10,065	10,065	10,065	10,065	10,065
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	257	423	705	1,001	1,199	1,297	1,415	1,415	1,415	1,415	1,415
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	839	1,384	2,306	3,276	3,922	4,246	4,632	4,632	4,632	4,632	4,632
4(i)	Bureau of Land Management	La Paz County	740	1,219	2,032	2,887	3,457	3,742	4,082	4,082	4,082	4,082	4,082
4(i)	Crystal Beach Water Conservation District	Mohave County	16	26	43	62	74	80	87	87	87	87	87
4(i)	Ehrenburg Improvement District	La Paz County	88	145	242	344	412	446	486	486	486	486	486
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	225	370	617	877	1,050	1,137	1,240	1,240	1,240	1,240	1,240
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	6	10	17	25	30	32	35	35	35	35	35
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	0	0	1	1	1	1	1	1	1
4(i)	Gold Dome Mining Corporation	Yuma County	1	1	2	3	4	4	5	5	5	5	5

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Golden Shores Water Conservation District	Mohave County	240	395	659	936	1,121	1,213	1,323	1,323	1,323	1,323	1,323
4(i)	GSC Farm, LLC	La Paz County	8	14	23	33	39	42	46	46	46	46	46
4(i)	Hillcrest Water Company	La Paz County	10	17	28	39	47	51	56	56	56	56	56
4(i)	Lake Havasu City	Mohave County	2,302	3,794	6,322	8,982	10,755	11,641	12,701	12,701	12,701	12,701	12,701
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	257	423	705	1,001	1,199	1,297	1,415	1,415	1,415	1,415	1,415
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	869	1,433	2,388	3,393	4,063	4,397	4,798	4,798	4,798	4,798	4,798
4(i)	La Paz County	La Paz County	42	69	115	164	196	212	232	232	232	232	232
4(i)	Martinez Lake Cabin Sites	Yuma County	3	5	8	11	13	14	15	15	15	15	15
4(i)	McAlister Family Trust	Mohave County	5	8	13	19	22	24	26	26	26	26	26
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	150	247	412	585	700	758	827	827	827	827	827
4(i)	Mohave Water Conservation District	Mohave County	216	356	593	842	1,009	1,092	1,191	1,191	1,191	1,191	1,191
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	360	593	988	1,404	1,681	1,820	1,985	1,985	1,985	1,985	1,985
4(i)	Parker, Town of[1]	La Paz County	124	204	339	482	577	625	682	682	682	682	682
4(i)	Quartzsite, Town of	La Paz County	128	211	352	501	600	649	708	708	708	708	708
4(i)	Queen Creek, Town of	Maricopa County	341	562	937	1,331	1,593	1,725	1,882	1,882	1,882	1,882	1,882
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	0	0	1	1	1	1	1	1	1
4(i)	Shepard Water Company, Incorporated	Yuma County	6	10	16	23	28	30	33	33	33	33	33
4(i)	Somerton, City of	Yuma County	90	148	247	351	420	455	496	496	496	496	496
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	12	20	33	47	56	61	66	66	66	66	66
4(i)	TV Marble Canyon AZ, LLC	Coconino County	8	14	23	33	39	42	46	46	46	46	46
3	City of Yuma[1]	Yuma County	0	0	0	0	0	0	21,551	48,522	48,522	48,522	48,522
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	0	0	0	0	0	0	0	25	25	25	25
3	Kaman, Inc.	Yuma County	0	0	0	0	0	0	0	2	2	2	2
3	Department of the Navy, MCAS	Yuma County	0	0	0	0	0	0	0	3,000	3,000	3,000	3,000
3	City of Yuma (cemetery)	Yuma County	0	0	0	0	0	0	0	60	60	60	60
3	Yuma Mesa Fruit Growers' Association	Yuma County	0	0	0	0	0	0	0	15	15	15	15
3	Desert Lawn Memorial Park Association	Yuma County	0	0	0	0	0	0	0	138	138	138	138
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	1,021	1,874	2,726	4,278
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	1,615	2,962	4,309	6,762

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	716	1,314	1,912	3,000
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	659	1,209	1,759	2,760
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	1,194	2,190	3,186	5,000
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	24	44	64	100
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	24	44	64	100
3	Department of the Army - Yuma Proving Ground	Yuma County	0	0	0	0	0	0	0	270	494	719	1,129
3	Yuma Union High School District	Yuma County	0	0	0	0	0	0	0	148	148	148	148
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	0	0	0	0	0	0	0	248	248	248	248
2	Cibola National Wildlife Refuge	La Paz County	0	0	0	0	0	0	502	4,870	7,991	11,111	16,793
2	Lake Mead National Recreation Area	Mohave County	0	0	0	0	0	0	10	99	163	227	343
2	Bureau of Reclamation - Davis Dam	Mohave County	0	0	0	0	0	0	0	2	3	5	7
2	Imperial National Wildlife Refuge	La Paz County	0	0	0	0	0	0	688	6,671	10,944	15,217	23,000
2	Havasu Lake National Wildlife Refuge	Mohave County	0	0	0	0	0	0	1,119	10,847	17,795	24,744	37,399
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 20, Parker, City of	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 21, Yuma, City of	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**275,655**	**349,796**	**483,846**	**618,431**	**712,280**	**759,204**	**793,575**	**849,875**	**868,890**	**887,905**	**922,535**
California			-	-	-	-	-	-	-	-		-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	0	186,000	325,500	325,500	325,500	325,500	362,848	388,002	388,002	388,002	388,002
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	1

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 30, Stephenson	San Bernardino	0	0	0	0	0	0	0	0	0	0	154
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 38, Andrade	San Bernardino	0	0	0	0	0	0	0	0	0	0	42
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 39, Reynolds	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies									
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 43, City of Needles	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**186,000**	**325,500**	**325,500**	**325,500**	**325,500**	**362,848**	**388,002**	**388,002**	**388,002**	**388,210**
Nevada			-	-	-	-	-	-	-	-		-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	21,000	27,000	43,099	64,932	79,486	86,764	92,717	92,717	92,717	92,717	92,717
8	Big Bend Water District	Clark	0	0	0	0	0	0	259	1,790	2,884	3,978	4,900
8	Robert B. Griffith Project	Clark	0	0	0	0	0	0	8,343	57,754	93,047	128,340	158,080
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	0	0	0	0	0	0	0	0	0	5
7	Bureau of Reclamation (includes Sportsman Park)	Clark	0	0	0	0	0	0	0	0	0	0	147
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	0	0	0	0	0	0	0	0	0	0	25
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	0	0	0	0	0	0	0	0	0	0	2,080
6	Las Vegas Valley Water District	Clark	0	0	0	0	0	0	0	0	0	0	8,012
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	0	0	0	0	0	0	0	0	0	0	483
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	0	4,268
4	City of Henderson	Clark	0	0	0	0	0	0	0	0	0	0	8,257
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	0	7,774
3	Boulder City	Clark	0	0	0	0	0	0	0	0	0	0	3,056
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	0	0	0	0	0	0	0	0	0	0	1,500
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	0	0	0	0	0	0	0	0	0	0	300
-	-	**Subtotal**	**21,000**	**27,000**	**43,099**	**64,932**	**79,486**	**86,764**	**101,319**	**152,260**	**188,647**	**225,034**	**291,602**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Continuing Current Strategies										
-			613,000	1,013,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	-	**Total**	**296,655**	**562,796**	**852,445**	**1,008,863**	**1,117,266**	**1,171,468**	**1,257,741**	**1,390,137**	**1,445,539**	**1,500,941**	**1,602,347**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	8	14	23	33	39	42	46	46	46	46	46.3223
-	Gila County	2	837	1,173	1,784	2,395	2,823	3,036	3,067	3,067	3,067	3,067	3,067
-	La Paz County	14	1,159	1,911	3,185	4,525	5,418	5,865	7,589	17,939	25,333	32,726	46,191
-	Maricopa County	55	192,180	235,143	313,229	391,335	445,997	473,327	477,370	482,622	487,005	491,388	499,370
-	Mohave County	17	7,569	12,476	20,790	29,537	35,368	38,283	42,896	52,716	59,729	66,743	79,516
-	Pima County	13	62,942	85,270	125,865	166,460	194,877	209,085	211,115	211,115	211,115	211,115	211,115
-	Pinal County	8	10,668	13,331	18,173	23,015	26,404	28,099	28,341	28,341	28,341	28,341	28,341
-	Yuma County	18	290	478	796	1,132	1,355	1,467	23,151	54,029	54,253	54,478	54,888
-	**Subtotal Arizona Domestic**	**128**	**275,655**	**349,796**	**483,846**	**618,431**	**712,280**	**759,204**	**793,575**	**849,875**	**868,890**	**887,905**	**922,535**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	0	186,000	325,500	325,500	325,500	325,500	362,848	388,002	388,002	388,002	388,002
-	Imperial County	32	0	0	0	0	0	0	0	0	0	0	11
-	Riverside County	5	0	0	0	0	0	0	0	0	0	0	1
-	San Bernardino	7	0	0	0	0	0	0	0	0	0	0	196
-	**Subtotal California Domestic**	**45**	**0**	**186,000**	**325,500**	**325,500**	**325,500**	**325,500**	**362,848**	**388,002**	**388,002**	**388,002**	**388,210**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	21,000	27,000	43,099	64,932	79,486	86,764	101,319	152,260	188,647	225,034	291,602
-	**Subtotal Nevada Domestic**	**15**	**21,000**	**27,000**	**43,099**	**64,932**	**79,486**	**86,764**	**101,319**	**152,260**	**188,647**	**225,034**	**291,602**

Disclaimer: These modeling results for the Continued Current Strategies Alternative should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]This user also holds a PPR entitlement.

C.6 Lower Basin Priority Shortage Allocation Model

The Lower Basin Priority Shortage Allocation Model represents the shortage distribution specified in the Lower Division States proposal submitted on March 6, 2024. It simulates shortages and distributes available water first among the Lower Division States based on the proposed distribution, and then among the entitlement holders within each state based on priority. The Excel workbook contains formulas to extend the proposed distribution to deeper shortage levels (based on priority) as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

C.6.1 Present Perfected Rights Assumptions for the Lower Basin Priority Shortage Allocation Model

(See **Section C.3.1** for a discussion on the PPR assumptions in the Priority Shortage Allocation Model.) That discussion is largely applicable to PPR assumptions in the Lower Basin Priority Shortage Allocation Model, but would only be relevant at volumes of shortage that are deeper than proposed by the Lower Division States.

C.6.2 Distribution Among States for the Lower Basin Priority Shortage Allocation Model

The Lower Basin Priority Shortage Allocation Model distributes shortages up to 1.5 maf among states based on state reductions specified in the Lower Division States proposal submitted on March 6, 2024. This includes an Initial Reduction Zone and a Static Reduction Zone, with a Basin-wide Reduction Zone modeled for shortages exceeding 1.5 maf.

C.6.2.1 Shortage Reduction Zone Assumptions

The Initial Reduction zone distributes shortages to the States based on the ratios in the Lower Division States proposal. In the First Initial Reduction Zone of the Lower Basin Priority Shortage Allocation Model, up to 300 kaf of shortages were distributed proportionally between Arizona (80 percent), Nevada (3.33 percent), and Mexico (16.67 percent). In the Second Initial Reduction Zone of the Lower Basin Priority Shortage Allocation Model, total shortages between 300 kaf and 1.5 maf were distributed proportionally between Arizona (43.33 percent), California (36.67 percent), Nevada (3.33 percent), and Mexico (16.67 percent).

The Initial Reduction Zone ramps up to 1.5 maf of shortages, which is distributed in a Static Reduction Zone. In the Static Reduction Zone of 1.5 maf of total shortage, 760 kaf of shortage is distributed to Arizona, 440 kaf of shortage is distributed to California, 50 kaf of shortage is distributed to Nevada, and 250 kaf is distributed to Mexico.

Shortages above 1.5 maf are distributed in the Lower Basin in a Basin-wide[23] Reduction Zone. This zone was split into an Initial Basin-wide Reduction Zone and a Secondary Basin-wide Reduction Zone. In the Initial Basin-wide Reduction Zone, additional shortages beyond the Static Zone are imposed only upon Arizona and Nevada and continue until the deliveries to the post-1968 water entitlement holders in Arizona (including the CAP) are reduced to zero. After deliveries to the fourth priority entitlements within Arizona are expected to be reduced to zero, any additional shortages are applied to Arizona, California, and Nevada in the Secondary Basin-wide Reduction Zone. As with the Priority and Continuing Current Strategies Shortage Allocation Models, the Lower Basin Priority Shortage Allocation Model distributes shortages in excess of 1.5 maf among the Lower Division States in a way that ensures PPRs can be satisfied (or reduced) in the prescribed order as a Basin-wide senior priority group. Instead of setting the entire volume of each state's apportionment as coequal to the others in the Basin-wide reduction zone, only state apportionments in excess of PPRs are treated as coequal (but maintaining the assumption that Arizona bears California's share of shortage until the Arizona fourth priority is exhausted). In developing the Basin-wide Reduction Zone, percentages for the sharing of shortage among the Lower Division States, the consumptive use (or equivalent) of PPR entitlements are removed from the apportionment volumes in each ratio, as detailed below.

The Initial Basin-wide Reduction Zone shortage sharing percentages for the Lower Basin Priority Shortage Allocation Model are computed as follows[24]:

- Nevada bears a reduction of about 8.5 percent of the total Lower Division States shortage volume in the Initial Basin-wide Reduction Zone, computed as a ratio of Nevada's apportionment less PPR consumptive use (or equivalent) entitlements within Nevada less the amount of shortage applied to Nevada under the Static Reduction Zone, over the sum of the apportionments of the Lower Division States less all PPR consumptive use (or equivalent) entitlements less the total amount shorted to the Lower Division States under the Static Reduction Zone
    - (300 kaf – NV PPRs – NV Static Reduction) / (7.5 maf – total PPRs – Lower Division States Static Reduction) = 8.49 percent, or
        - (300 kaf – 8,698 af – 50 kaf) / (7.5 maf – 3,407,835 af – 1.25 maf) = 8.49 percent
- Arizona bears the remainder of the total Lower Division States shortage volume (91.51 percent)

[23] The terminology used for this model is based on the March 6, 2024 proposal, but that proposal did not specify a distribution of the Lower Basin shortage in this zone. Additionally, Reclamation makes no assumption about Upper Basin reductions, and none are included, in the Shortage Allocation Models or Alternative Distribution Models.
[24] Note that these ratios distribute shortage volumes, and the available water is calculated as a remainder.

The Secondary Basin-wide Reduction Zone shortage sharing percentages are computed as follows, with the PPR volumes the same as in the Stage 2 ratios.

- Nevada bears about 8.5 percent of the Secondary Basin-wide Reduction Zone shortage volume in addition to its Static and Initial Basin-wide Reduction Zone shortage, computed as a ratio of Nevada's apportionment less PPR consumptive use (or equivalent) entitlements within Nevada less the amount of shortage applied to Nevada under the Static and Initial Basin-wide Reduction Zone, over the sum of the apportionments of the Lower Division States less all PPR consumptive use (or equivalent) entitlements less the total amount shorted to the Lower Division States under the Static and Initial Basin-wide Reduction Zones
    - (300 kaf – NV PPRs – NV Static Reduction - NV Initial Basin-wide Reduction) / (7.5 maf – total PPRs – Lower Division States Static and Initial Basin-wide Reductions)
        - (300 kaf – 8,698 af – 50 kaf – 59.76 kaf) / (7.5 maf – 3,407,835 af – 1.95 maf) = 8.49 percent
- Arizona bears about 37.3 percent of the Secondary Basin-wide Reduction Zone shortage in addition to its Static and Initial Basin-wide Reduction Zone shortage, computed as a ratio of Arizona's apportionment less PPRs less the amount of shortage applied to Arizona under the Static and Initial Basin-wide Reduction Zone, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to the Lower Division States under the Static and Initial Basin-wide Reduction Zones
    - (2.8 maf – AZ PPRs – AZ Static Reduction - AZ Initial Basin-wide Reduction) / (7.5 maf – total PPRs – Lower Division States Static and Initial Basin-wide Reductions)
        - (2.8 maf - 597,811 af - 760 kaf - 644,130 af) / (7.5 maf - 3,407,835 af - 1,953,891 af) = 37.32 percent
- California bears about 54.2 percent of the Secondary Basin-wide Reduction Zone shortage, computed as a ratio of California's apportionment less PPRs less the amount of shortage applied to California under the Static Reduction Zone, over the sum of the apportionments of the Lower Division States less PPRs less the total amount shorted to the Lower Division States under the Static and Initial Basin-wide Reduction Zones
    - (4.4 maf – CA PPRs – CA Static Reduction) / (7.5 maf – total PPRs – Lower Division States Static and Initial Basin-wide Reductions)
        - (4.4 maf - 2,801,326 af - 440 kaf) / (7.5 maf - 3,407,835 af - 1,953,891 af) = 54.19 percent

For each level of modeled shortage that exceeds the reductions specified in the Lower Division States proposal, the Lower Basin Priority Shortage Allocation Model calculates a percentage

reduction to the Lower Division States and applies the same percentage reduction to Mexico's 1,500,000 acre-foot per year allotment.

Table C-24 below shows a distribution of shortage among the Lower Division States and corresponding volumes of water available to each Lower Division State under the Lower Basin Priority Shortage Allocation Model. Total shortage volumes include an assumed component for Mexico, as described in the sections that follow, and will not sum across rows.

Table C-24
Summary of Shortage Volumes and Available Water by Lower Division State Under the Lower Basin Priority Shortage Allocation Model (af)

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
0	0	2,800,000	0	4,400,000	0	300,000
(10,000)	(8,000)	2,792,000	0	4,400,000	(333)	299,667
(30,000)	(24,000)	2,776,000	0	4,400,000	(1,000)	299,000
(50,000)	(40,000)	2,760,000	0	4,400,000	(1,667)	298,333
(100,000)	(80,000)	2,720,000	0	4,400,000	(3,333)	296,667
(102,500)	(82,000)	2,718,000	0	4,400,000	(3,417)	296,583
(105,000)	(84,000)	2,716,000	0	4,400,000	(3,500)	296,500
(125,000)	(100,000)	2,700,000	0	4,400,000	(4,167)	295,833
(170,000)	(136,000)	2,664,000	0	4,400,000	(5,667)	294,333
(200,000)	(160,000)	2,640,000	0	4,400,000	(6,667)	293,333
(245,000)	(196,000)	2,604,000	0	4,400,000	(8,167)	291,833
(300,000)	(240,000)	2,560,000	0	4,400,000	(10,000)	290,000
(400,000)	(283,333)	2,516,667	(36,667)	4,363,333	(13,333)	286,667
(500,000)	(326,667)	2,473,333	(73,333)	4,326,667	(16,667)	283,333
(510,000)	(331,000)	2,469,000	(77,000)	4,323,000	(17,000)	283,000
(600,000)	(370,000)	2,430,000	(110,000)	4,290,000	(20,000)	280,000
(700,000)	(413,333)	2,386,667	(146,667)	4,253,333	(23,333)	276,667
(800,000)	(456,667)	2,343,333	(183,333)	4,216,667	(26,667)	273,333
(900,000)	(500,000)	2,300,000	(220,000)	4,180,000	(30,000)	270,000
(1,000,000)	(543,333)	2,256,667	(256,667)	4,143,333	(33,333)	266,667
(1,100,000)	(586,667)	2,213,333	(293,333)	4,106,667	(36,667)	263,333
(1,200,000)	(630,000)	2,170,000	(330,000)	4,070,000	(40,000)	260,000
(1,300,000)	(673,333)	2,126,667	(366,667)	4,033,333	(43,333)	256,667
(1,400,000)	(716,667)	2,083,333	(403,333)	3,996,667	(46,667)	253,333
(1,500,000)	(760,000)	2,040,000	(440,000)	3,960,000	(50,000)	250,000
(1,600,000)	(836,258)	1,963,742	(440,000)	3,960,000	(57,075)	242,925
(1,720,000)	(927,768)	1,872,232	(440,000)	3,960,000	(65,565)	234,435
(1,800,000)	(988,775)	1,811,225	(440,000)	3,960,000	(71,225)	228,775

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(1,840,000)	(1,019,278)	1,780,722	(440,000)	3,960,000	(74,055)	225,945
(2,000,000)	(1,141,291)	1,658,709	(440,000)	3,960,000	(85,375)	214,625
(2,080,000)	(1,202,298)	1,597,702	(440,000)	3,960,000	(91,035)	208,965
(2,100,000)	(1,217,550)	1,582,450	(440,000)	3,960,000	(92,450)	207,550
(2,200,000)	(1,293,808)	1,506,192	(440,000)	3,960,000	(99,525)	200,475
(2,300,000)	(1,370,066)	1,429,934	(440,000)	3,960,000	(106,601)	193,399
(2,320,000)	(1,385,318)	1,414,682	(440,000)	3,960,000	(108,016)	191,984
(2,344,669)	(1,404,130)	1,395,870	(440,000)	3,960,000	(109,761)	190,239
(2,400,000)	(1,421,339)	1,378,661	(464,985)	3,935,015	(113,676)	186,324
(2,450,000)	(1,436,890)	1,363,110	(487,563)	3,912,437	(117,213)	182,787
(2,520,000)	(1,458,662)	1,341,338	(519,173)	3,880,827	(122,166)	177,834
(2,600,000)	(1,483,543)	1,316,457	(555,298)	3,844,702	(127,826)	172,174
(2,700,000)	(1,514,646)	1,285,354	(600,454)	3,799,546	(134,901)	165,099
(2,880,000)	(1,570,629)	1,229,371	(681,735)	3,718,265	(147,636)	152,364
(3,000,000)	(1,607,952)	1,192,048	(735,922)	3,664,078	(156,126)	143,874
(3,120,000)	(1,645,274)	1,154,726	(790,109)	3,609,891	(164,616)	135,384
(3,240,000)	(1,682,597)	1,117,403	(844,297)	3,555,703	(173,106)	126,894
(3,360,000)	(1,719,920)	1,080,080	(898,484)	3,501,516	(181,596)	118,404
(3,480,000)	(1,757,242)	1,042,758	(952,671)	3,447,329	(190,086)	109,914
(3,500,000)	(1,763,463)	1,036,537	(961,703)	3,438,297	(191,501)	108,499
(3,600,000)	(1,794,565)	1,005,435	(1,006,859)	3,393,141	(198,576)	101,424
(3,720,000)	(1,831,887)	968,113	(1,061,046)	3,338,954	(207,067)	92,933
(3,840,000)	(1,869,210)	930,790	(1,115,233)	3,284,767	(215,557)	84,443
(4,000,000)	(1,918,973)	881,027	(1,187,483)	3,212,517	(226,877)	73,123
(4,080,000)	(1,943,855)	856,145	(1,223,608)	3,176,392	(232,537)	67,463
(4,200,000)	(1,981,178)	818,822	(1,277,795)	3,122,205	(241,027)	58,973
(4,320,000)	(2,018,500)	781,500	(1,331,983)	3,068,017	(249,517)	50,483
(4,440,000)	(2,055,823)	744,177	(1,386,170)	3,013,830	(258,007)	41,993
(4,530,000)	(2,083,815)	716,185	(1,426,811)	2,973,189	(264,375)	35,625
(4,560,000)	(2,093,145)	706,855	(1,440,358)	2,959,642	(266,497)	33,503
(4,610,000)	(2,108,696)	691,304	(1,462,936)	2,937,064	(270,035)	29,965
(4,680,000)	(2,130,468)	669,532	(1,494,545)	2,905,455	(274,987)	25,013
(4,755,000)	(2,153,794)	646,206	(1,528,412)	2,871,588	(280,294)	19,706
(4,800,000)	(2,167,790)	632,210	(1,548,732)	2,851,268	(283,477)	16,523
(4,900,000)	(2,198,893)	601,107	(1,593,888)	2,806,112	(290,552)	9,448
(4,910,598)	(2,202,189)	597,811	(1,598,674)	2,801,326	(291,302)	8,698
(5,000,000)	(2,256,342)	543,658	(1,618,723)	2,781,277	(291,602)	8,398
(6,000,000)	(2,383,742)	416,258	(2,324,655)	2,075,345	(291,602)	8,398
(7,000,000)	(2,383,742)	416,258	(3,157,989)	1,242,011	(291,602)	8,398

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(7,500,000)	(2,383,742)	416,258	(3,574,655)	825,345	(291,602)	8,398
(9,000,000)	(2,800,000)	0	(4,400,000)	0	(300,000)	0

C.6.3 Distribution Within States for the Lower Basin Priority Shortage Allocation Model

To estimate the impacts of given levels of shortage, assumptions were made with regard to how shortages might be shared. These assumptions are made to facilitate analysis of the potential impacts and they are not intended to represent current or future policy with respect to shortage allocation. The Lower Basin Priority Shortage Allocation Model is not designed to replicate some of the annual processes that must be undertaken in determining the quantity of water that can be approved for diversion by specific users.

Other than the state-level distribution of shortage as described above, modeling assumptions match the Priority Shortage Allocation Model.

C.6.4 Lower Basin Priority Shortage Allocation Model Results

The tables in this section present the results of the Lower Basin Priority Shortage Allocation Model over a range of total shortages to the Lower Basin including Mexico.

Table C-25, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-26, the Tribal Summary, presents the shortage impacts on tribes.

Table C-27, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-28, the Domestic Summary, presents the shortage impacts on domestic users.

Table C-25
Lower Basin Priority Shortage Allocation Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority										
-	-	600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion	364,455	520,455	715,455	921,352	1,058,617	1,127,250	1,264,514	1,295,172	1,295,172	1,295,172	1,295,172
-	NIA Priority[2]	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415	273,415
-	M&I Priority[2]	86,076	186,794	310,863	447,949	530,661	575,198	638,823	638,823	638,823	638,823	638,823
-	Indian Priority[2]	29,366	84,648	155,579	233,953	281,241	306,704	343,079	343,079	343,079	343,079	343,079
-	4th Priority i (Mainstream)	5,545	22,878	44,545	67,423	82,674	90,300	105,552	108,958	108,958	108,958	108,958
-	2nd & 3rd Priorities	0	0	0	0	0	0	0	203,822	359,333	514,843	798,059
-	1st Priority (Present Perfected Rights)	0	0	0	0	0	0	0	0	0	0	54,153
-	**Subtotal**	**370,000**	**543,333**	**760,000**	**988,775**	**1,141,291**	**1,217,550**	**1,370,066**	**1,607,952**	**1,763,463**	**1,918,973**	**2,256,342**
California	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	110,000	256,667	388,002	388,002	388,002	388,002	388,002	388,002	388,002	388,002	388,002
-	3rd Priority (IID, CVWD, PVID)	0	0	51,998	51,998	51,998	51,998	51,998	347,920	573,701	799,481	835,000
-	2nd Priority (Yuma Project Reservation Division)	0	0	0	0	0	0	0	0	0	0	7,294
-	1st Priority (PVID)	0	0	0	0	0	0	0	0	0	0	368,378
-	Present Perfected Rights (PPRs)	0	0	0	0	0	0	0	0	0	0	20,049
-	**Subtotal**	**110,000**	**256,667**	**440,000**	**440,000**	**440,000**	**440,000**	**440,000**	**735,922**	**961,703**	**1,187,483**	**1,618,723**
Nevada	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	20,000	33,333	50,000	71,225	85,375	92,450	92,717	92,717	92,717	92,717	92,717
-	8th Priority (SNWA & Big Bend)	0	0	0	0	0	0	13,884	63,409	98,785	134,160	162,980
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	0	0	0	0	0	0	0	0	0	0	2,257
-	6th Priority (Las Vegas Valley Water District)	0	0	0	0	0	0	0	0	0	0	8,012
-	5th Priority (PABCO)	0	0	0	0	0	0	0	0	0	0	483
-	4th Priority (Henderson & Basic)	0	0	0	0	0	0	0	0	0	0	20,299

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority										
-	**-**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
-	3rd Priority (Boulder City)	0	0	0	0	0	0	0	0	0	0	3,056
-	2nd Priority (Lake Mead National Rec Area)	0	0	0	0	0	0	0	0	0	0	1,500
-	1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	0	0	0	0	0	0	0	0	0	0	300
-	**Subtotal**	**20,000**	**33,333**	**50,000**	**71,225**	**85,375**	**92,450**	**106,601**	**156,126**	**191,501**	**226,877**	**291,602**
-	**Lower Division States Subtotal**	**500,000**	**833,333**	**1,250,000**	**1,500,000**	**1,666,667**	**1,750,000**	**1,916,667**	**2,500,000**	**2,916,667**	**3,333,333**	**4,166,667**
Mexico	**Mexico Subtotal**	**100,000**	**166,667**	**250,000**	**300,000**	**333,333**	**350,000**	**383,333**	**500,000**	**583,333**	**666,667**	**833,333**
-	**Total**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

Disclaimer: These modeling results for the Lower Basin Priority should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Volumes of total shortage include a portion modeled as attributed to Mexico, but that portion is not itemized in summary sheets.
Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here
[2]These estimated shortages to priorities within the CAP reflect the effect of CAP system loss, and do not total to CAP shortage at the point of diversion.

Table C-26
Lower Basin Priority Shortage Allocation Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782	23,782
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200	28,200
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600	120,600
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	29,366	60,089	96,075	135,837	159,828	172,746	191,200	191,200	191,200	191,200	191,200
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	0	4,297	13,492	23,653	29,783	33,084	37,800	37,800	37,800	37,800	37,800
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	0	138	435	762	960	1,066	1,218	1,218	1,218	1,218	1,218
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	0	11,794	24,559	38,662	47,172	51,754	58,300	58,300	58,300	58,300	58,300
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	0	2,073	6,508	11,409	14,366	15,958	18,233	18,233	18,233	18,233	18,233
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	0	57	178	313	394	438	500	500	500	500	500
CAP Indian Priority	San Carlos Apache Tribe	Gila County	0	1,683	4,707	8,048	10,064	11,149	12,700	12,700	12,700	12,700	12,700
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	0	2,691	5,603	8,820	10,761	11,807	13,300	13,300	13,300	13,300	13,300
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	0	1,618	3,370	5,305	6,473	7,102	8,000	8,000	8,000	8,000	8,000
CAP Indian Priority	Tonto Apache Tribe	Gila County	0	15	46	80	101	112	128	128	128	128	128
CAP Indian Priority	Yavapai Apache Nation	Gila County	0	136	428	751	946	1,050	1,200	1,200	1,200	1,200	1,200
CAP M&I Priority	San Carlos Apache Tribe	Gila County	2,445	5,306	8,830	12,723	15,073	16,338	18,145	18,145	18,145	18,145	18,145
4(i)	Hopi Tribe[1]	La Paz County	144	594	1,157	1,752	2,148	2,346	2,742	2,831	2,831	2,831	2,831
4(i)	Cocopah Indian Reservation	Yuma County	68	282	548	830	1,017	1,111	1,299	1,341	1,341	1,341	1,341
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	118	486	947	1,433	1,757	1,920	2,244	2,316	2,316	2,316	2,316
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	345	1,421	2,768	4,189	5,137	5,610	6,558	6,770	6,770	6,770	6,770

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	0	0	10,082	20,528	30,975	50,000
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**209,068**	**269,262**	**346,233**	**431,150**	**482,561**	**510,173**	**550,149**	**560,645**	**571,092**	**581,538**	**600,563**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**209,068**	**269,262**	**346,233**	**431,150**	**482,561**	**510,173**	**550,149**	**560,645**	**571,092**	**581,538**	**600,563**

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
_			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Summary by County													
			-	-	-	-	-	-	-	-	-	-	-
_	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
_	Coconino County	0.83	2,039	2,162	2,316	2,478	2,586	2,640	2,748	2,772	2,772	2,772	2,772
_	Gila County	4.67	10,372	15,113	22,083	29,784	34,430	36,932	40,506	40,506	40,506	40,506	40,506
_	La Paz County	4	144	594	1,157	1,752	2,148	2,346	2,742	2,831	2,831	2,831	2,831
_	Maricopa County	2.6	44,990	58,970	77,113	97,160	109,256	115,769	125,073	125,073	125,073	125,073	125,073
_	Mohave County	2.5	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
_	Pima County	3	28,200	32,554	41,871	52,166	58,377	61,722	66,500	66,500	66,500	66,500	66,500
_	Pinal County	4.40	104,976	139,895	179,601	223,474	249,944	264,198	284,560	294,642	305,088	315,535	334,560
_	Yuma County	5	413	1,703	3,316	5,019	6,154	6,722	7,857	8,110	8,110	8,110	8,110
_	Apache County	1.00	7,967	8,136	8,388	8,659	8,833	8,923	9,081	9,105	9,105	9,105	9,105
_	Navajo County	1.00	7,967	8,136	8,388	8,659	8,833	8,923	9,081	9,105	9,105	9,105	9,105
_	**Subtotal Arizona Tribal**	**29**	**209,068**	**269,262**	**346,233**	**431,150**	**482,561**	**510,173**	**550,149**	**560,645**	**571,092**	**581,538**	**600,563**
_	**California**	-	-	-	-	-	-	-	-	-	-	-	-
_	San Bernardino	2.5	0	0	0	0	0	0	0	0	0	0	0
_	Riverside	0.50	-	-	-	-	-	-	-	-	-	-	-
_	Imperial	1	0	0	0	0	0	0	0	0	0	0	0
_	**Subtotal California Tribal**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
_	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
_	Clark	1	0	0	0	0	0	0	0	0	0	0	0
_	**Subtotal Nevada Tribal**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Disclaimer: These modeling results for the Lower Basin Priority should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Table C-27
Lower Basin Priority Shortage Allocation Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	96	394	768	1,162	1,425	1,556	1,819	1,878	1,878	1,878	1,878
4(i)	Arizona State Land Department	Yuma County	223	918	1,787	2,705	3,317	3,623	4,235	4,372	4,372	4,372	4,372
4(i)	Beattie Farms, Southwest	Yuma County	37	154	300	455	557	609	712	735	735	735	735
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	14	58	114	172	211	230	269	278	278	278	278
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	4	18	34	52	63	69	81	83	83	83	83
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	71	292	568	860	1,054	1,152	1,346	1,390	1,390	1,390	1,390
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	7	30	58	88	108	118	138	143	143	143	143
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	251	1,034	2,014	3,048	3,737	4,082	4,771	4,925	4,925	4,925	4,925
4(i)	Curtis, Armon	Yuma County	10	42	81	123	151	165	192	199	199	199	199
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	48	199	388	588	721	787	920	950	950	950	950
4(i)	Matador Farms, LLC	La Paz County	152	625	1,217	1,843	2,260	2,468	2,885	2,978	2,978	2,978	2,978
4(i)	JRJ Partners, L.L.C.	Yuma County	36	150	292	442	542	592	692	715	715	715	715
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	1,181	4,872	9,485	14,357	17,604	19,228	22,476	23,201	23,201	23,201	23,201
4(i)	North Baja Pipeline, LLC[2]	La Paz County	16	67	130	197	241	263	308	318	318	318	318
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	31	128	250	378	464	507	592	611	611	611	611
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	16	67	130	197	241	263	308	318	318	318	318
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	16	68	131	199	244	267	312	322	322	322	322
4(i)	Red River Land Company, LLC	La Paz County	10	42	81	123	151	165	192	199	199	199	199
4(i)	Phillips, Milton and Jean	Yuma County	2	8	16	25	30	33	38	40	40	40	40
4(i)	Western Water, LLC	La Paz County	18	75	145	220	269	294	344	355	355	355	355
3	Sturges, Harold	Yuma County	0	0	0	0	0	0	0	335	335	335	335
3	Sturges, Irma	Yuma County	0	0	0	0	0	0	0	385	385	385	385
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	0	0	26,459	56,570	86,681	141,519

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	0	0	12,578	26,893	41,208	67,278
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	0	0	0	0	0	0	0	1,258	2,691	4,123	6,731
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	0	0	0	0	0	0	0	56,054	114,137	172,220	278,000
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	0	0	0	0	0	0	0	722	1,471	2,219	3,582
3	Yuma County Water Users' Association (14,701af M&I includes YAO's 489.95 af conversion)[2,3]	Yuma County	0	0	0	0	0	0	0	15,872	32,472	49,072	79,304
3	University of Arizona	Yuma County	0	0	0	0	0	0	0	1,088	1,088	1,088	1,088
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	0	0	0	0	0	0	0	120	120	120	120
3	Unit B Irrigation & Drainage District[3]	Yuma County	0	0	0	0	0	0	0	2,242	6,074	9,906	16,886
1	PPR No. 15, Molina	Yuma County	0	0	0	0	0	0	0	0	0	0	318
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	0	0	0	0	0	0	0	0	0	0	445
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	0	0	0	0	0	0	0	0	0	0	4,352
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	0	0	0	0	0	0	0	0	0	0	6,125
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	0	0	0	0	0	0	0	0	0	0	42,914
1	PPR No. 7, Powers	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 10, Hulet (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 12, Miller (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 18, Swan (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**2,240**	**9,240**	**17,991**	**27,231**	**33,391**	**36,471**	**42,631**	**161,121**	**286,243**	**411,364**	**693,389**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
California			-	-	-	-	-	-	-	-	-	-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	0	0	311	311	311	311	311	2,083	3,435	4,787	5,000
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	0	0	51,687	51,687	51,687	51,687	51,687	330,000	330,000	330,000	330,000
3	Imperial Irrigation District (IID) (3a)	Imperial County	0	0	0	0	0	0	0	15,837	240,265	464,694	500,000
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	0	0	0	0	0	0	0	0	0	0	7,294
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	368,378
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	0	0	0	0	0	0	0	0	0	0	115
PPR	PPR No. 41, Chagnon	San Bernardino	0	0	0	0	0	0	0	0	0	0	77
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	0	0	0	0	0	0	0	0	0	0	61
PPR	PPR No. 34, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	69
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	0	0	0	0	0	0	0	0	0	0	19,518
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 42, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 37, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 33, Morgan	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 35, Simons	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**51,998**	**51,998**	**51,998**	**51,998**	**51,998**	**347,920**	**573,701**	**799,481**	**1,230,512**
Nevada			-	-	-	-	-	-	-	-	-	-	-
None	None	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**2,240**	**9,240**	**69,989**	**79,229**	**85,389**	**88,469**	**94,629**	**509,041**	**859,943**	**1,210,846**	**1,923,901**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Summary by County													
			-	-	-	-	-	-	-	-	-	-	-
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	568	2,343	4,561	6,904	8,465	9,246	10,808	11,156	11,156	11,156	11,156
-	Mohave County	8	1,181	4,872	9,485	14,357	17,604	19,228	22,476	23,201	23,201	23,201	23,201
-	Yuma County	28	491	2,026	3,945	5,971	7,322	7,997	9,348	126,763	251,885	377,007	659,032
-	**Subtotal Arizona Irrigation**	**45**	**2,240**	**9,240**	**17,991**	**27,231**	**33,391**	**36,471**	**42,631**	**161,121**	**286,243**	**411,364**	**693,389**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Riverside County	3	0	0	51,998	51,998	51,998	51,998	51,998	332,083	333,435	334,787	519,189
-	Imperial County	10	0	0	0	0	0	0	0	15,837	240,265	464,694	711,185
-	San Bernardino	3	0	0	0	0	0	0	0	0	0	0	138
-	**Subtotal California Irrigation**	**16**	**0**	**0**	**51,998**	**51,998**	**51,998**	**51,998**	**51,998**	**347,920**	**573,701**	**799,481**	**1,230,512**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

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Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement.

Table C-28
Lower Basin Priority Shortage Allocation Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185
CAP NIA-B	Carefree Water Company	Maricopa County	112	112	112	112	112	112	112	112	112	112	112
CAP NIA-B	Cave Creek	Maricopa County	386	386	386	386	386	386	386	386	386	386	386
CAP NIA-B	El Mirage	Maricopa County	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217
CAP NIA-B	Freeport	Pima County	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678
CAP NIA-B	Gilbert	Maricopa County	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
CAP NIA-B	Marana	Pima County	515	515	515	515	515	515	515	515	515	515	515
CAP NIA-B	Queen Creek	Maricopa County	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162
CAP NIA-B	Resolution Copper	Maricopa County	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238
CAP NIA-B	Rosemont Copper	Pima County	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124
CAP NIA-B	SRP	Maricopa County	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	817	817	817	817	817	817	817	817	817	817	817
CAP NIA-A	Phoenix	Maricopa County	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280
CAP NIA-A	Chandler	Maricopa County	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924
CAP NIA-A	Gilbert	Maricopa County	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537
CAP NIA-A	Glendale	Maricopa County	682	682	682	682	682	682	682	682	682	682	682
CAP NIA-A	Mesa	Maricopa County	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551
CAP NIA-A	Scottsdale	Maricopa County	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Tempe	Maricopa County	23	23	23	23	23	23	23	23	23	23	23
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	0	57	178	313	394	438	500	500	500	500	500
CAP M&I	ASARCO	Pima County	2,830	6,140	10,219	14,725	17,444	18,908	21,000	21,000	21,000	21,000	21,000
CAP M&I	Avondale	Maricopa County	730	1,584	2,636	3,798	4,499	4,877	5,416	5,416	5,416	5,416	5,416
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	3,796	8,239	13,711	19,757	23,405	25,370	28,176	28,176	28,176	28,176	28,176
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	1,197	2,598	4,323	6,230	7,380	7,999	8,884	8,884	8,884	8,884	8,884
CAP M&I	Arizona Water Company, Coolidge	Pinal County	269	585	973	1,402	1,661	1,801	2,000	2,000	2,000	2,000	2,000
CAP M&I	Arizona Water Company, Superstition	Pinal County	847	1,838	3,058	4,407	5,221	5,659	6,285	6,285	6,285	6,285	6,285
CAP M&I	Arizona Water Company, White Tank	Maricopa County	130	283	471	679	804	872	968	968	968	968	968
CAP M&I	Buckeye	Maricopa County	9	20	33	48	56	61	68	68	68	68	68
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	866	1,879	3,127	4,506	5,338	5,786	6,426	6,426	6,426	6,426	6,426
CAP M&I	Carefree Water Company	Maricopa County	226	491	817	1,177	1,394	1,511	1,678	1,678	1,678	1,678	1,678
CAP M&I	Cave Creek	Maricopa County	300	651	1,084	1,562	1,851	2,006	2,228	2,228	2,228	2,228	2,228
CAP M&I	Chandler	Maricopa County	1,166	2,530	4,211	6,068	7,189	7,792	8,654	8,654	8,654	8,654	8,654
CAP M&I	Chaparral City Water Company	Maricopa County	1,200	2,605	4,335	6,247	7,401	8,022	8,909	8,909	8,909	8,909	8,909
CAP M&I	Circle City	Maricopa County	530	1,150	1,913	2,757	3,266	3,540	3,932	3,932	3,932	3,932	3,932
CAP M&I	El Mirage	Maricopa County	68	149	247	356	422	457	508	508	508	508	508
CAP M&I	Eloy	Pinal County	293	635	1,056	1,522	1,803	1,955	2,171	2,171	2,171	2,171	2,171
CAP M&I	EPCOR, Agua Fria	Maricopa County	1,495	3,244	5,398	7,779	9,215	9,988	11,093	11,093	11,093	11,093	11,093
CAP M&I	EPCOR, Paradise Valley	Maricopa County	435	945	1,572	2,266	2,684	2,909	3,231	3,231	3,231	3,231	3,231
CAP M&I	EPCOR, Sun City	Maricopa County	564	1,225	2,038	2,937	3,480	3,772	4,189	4,189	4,189	4,189	4,189
CAP M&I	EPCOR, Sun City West	Maricopa County	320	694	1,154	1,663	1,970	2,136	2,372	2,372	2,372	2,372	2,372
CAP M&I	Florence	Pinal County	276	599	997	1,436	1,701	1,844	2,048	2,048	2,048	2,048	2,048
CAP M&I	Freeport-Miami	Gila County	392	850	1,414	2,038	2,414	2,617	2,906	2,906	2,906	2,906	2,906

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	385	835	1,389	2,001	2,371	2,570	2,854	2,854	2,854	2,854	2,854
CAP M&I	Gilbert	Maricopa County	975	2,116	3,521	5,073	6,010	6,514	7,235	7,235	7,235	7,235	7,235
CAP M&I	Glendale	Maricopa County	2,322	5,040	8,387	12,086	14,318	15,519	17,236	17,236	17,236	17,236	17,236
CAP M&I	Goodyear	Maricopa County	1,447	3,141	5,227	7,532	8,923	9,672	10,742	10,742	10,742	10,742	10,742
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	9	19	31	45	53	58	64	64	64	64	64
CAP M&I	Green Valley Community Water Company	Pima County	385	836	1,391	2,004	2,374	2,573	2,858	2,858	2,858	2,858	2,858
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	256	556	925	1,332	1,578	1,711	1,900	1,900	1,900	1,900	1,900
CAP M&I	Marana	Pima County	315	683	1,137	1,638	1,940	2,103	2,336	2,336	2,336	2,336	2,336
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	90	194	324	466	552	599	665	665	665	665	665
CAP M&I	Mesa	Maricopa County	5,862	12,720	21,169	30,505	36,137	39,170	43,503	43,503	43,503	43,503	43,503
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	1,814	3,936	6,550	9,438	11,181	12,119	13,460	13,460	13,460	13,460	13,460
CAP M&I	Oro Valley	Pima County	1,389	3,013	5,015	7,226	8,560	9,279	10,305	10,305	10,305	10,305	10,305
CAP M&I	Peoria	Maricopa County	3,654	7,930	13,198	19,017	22,529	24,420	27,121	27,121	27,121	27,121	27,121
CAP M&I	Phoenix	Maricopa County	16,991	36,873	61,364	88,425	104,753	113,544	126,104	126,104	126,104	126,104	126,104
CAP M&I	Pine	Gila County	22	47	78	113	134	145	161	161	161	161	161
CAP M&I	Queen Creek	Maricopa County	67	145	241	347	411	446	495	495	495	495	495
CAP M&I	Rio Verde Utilities	Maricopa County	109	237	395	569	675	731	812	812	812	812	812
CAP M&I	San Tan Irrigation District	Maricopa County	32	69	115	165	196	212	236	236	236	236	236
CAP M&I	Scottsdale	Maricopa County	7,116	15,442	25,698	37,031	43,868	47,550	52,810	52,810	52,810	52,810	52,810
CAP M&I	Spanish Trail Water Company	Pima County	409	888	1,478	2,130	2,523	2,735	3,037	3,037	3,037	3,037	3,037
CAP M&I	Surprise	Maricopa County	1,381	2,997	4,987	7,187	8,514	9,228	10,249	10,249	10,249	10,249	10,249
CAP M&I	Tempe	Maricopa County	581	1,262	2,100	3,026	3,584	3,885	4,315	4,315	4,315	4,315	4,315
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	10	21	35	50	59	64	71	71	71	71	71
CAP M&I	Tucson	Pima County	19,428	42,162	70,166	101,108	119,777	129,830	144,191	144,191	144,191	144,191	144,191
CAP M&I	Vail Water Company	Pima County	250	543	904	1,302	1,543	1,672	1,857	1,857	1,857	1,857	1,857

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	393	854	1,420	2,047	2,425	2,628	2,919	2,919	2,919	2,919	2,919
4(i)	Arizona State Land Department	Yuma County	52	213	415	628	770	841	983	1,015	1,015	1,015	1,015
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	3	13	24	37	45	49	58	60	60	60	60
4(i)	B&F Investment, LLC	La Paz County	2	8	16	25	30	33	38	40	40	40	40
4(i)	Bullhead City	Mohave County	512	2,113	4,115	6,228	7,637	8,342	9,751	10,065	10,065	10,065	10,065
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	72	297	579	876	1,074	1,173	1,371	1,415	1,415	1,415	1,415
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	236	973	1,894	2,866	3,515	3,839	4,487	4,632	4,632	4,632	4,632
4(i)	Bureau of Land Management	La Paz County	208	857	1,669	2,526	3,098	3,383	3,955	4,082	4,082	4,082	4,082
4(i)	Crystal Beach Water Conservation District	Mohave County	4	18	36	54	66	72	85	87	87	87	87
4(i)	Ehrenburg Improvement District	La Paz County	25	102	199	301	369	403	471	486	486	486	486
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	63	260	507	767	941	1,028	1,201	1,240	1,240	1,240	1,240
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	2	7	14	22	27	29	34	35	35	35	35
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	0	0	1	1	1	1	1	1	1
4(i)	Gold Dome Mining Corporation	Yuma County	0	1	2	3	4	4	4	5	5	5	5
4(i)	Golden Shores Water Conservation District	Mohave County	67	278	541	819	1,004	1,097	1,282	1,323	1,323	1,323	1,323
4(i)	GSC Farm, LLC	La Paz County	2	10	19	29	35	38	45	46	46	46	46
4(i)	Hillcrest Water Company	La Paz County	3	12	23	34	42	46	54	56	56	56	56
4(i)	Lake Havasu City	Mohave County	646	2,667	5,192	7,859	9,637	10,526	12,304	12,701	12,701	12,701	12,701
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	72	297	579	876	1,074	1,173	1,371	1,415	1,415	1,415	1,415
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	244	1,007	1,961	2,969	3,640	3,976	4,648	4,798	4,798	4,798	4,798
4(i)	La Paz County	La Paz County	12	49	95	143	176	192	224	232	232	232	232
4(i)	Martinez Lake Cabin Sites	Yuma County	1	3	6	9	12	13	15	15	15	15	15

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	McAlister Family Trust	Mohave County	1	6	11	16	20	22	26	26	26	26	26
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	42	174	338	512	628	686	801	827	827	827	827
4(i)	Mohave Water Conservation District	Mohave County	61	250	487	737	904	987	1,154	1,191	1,191	1,191	1,191
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	101	417	812	1,228	1,506	1,645	1,923	1,985	1,985	1,985	1,985
4(i)	Parker, Town of[1]	La Paz County	35	143	279	422	517	565	660	682	682	682	682
4(i)	Quartzsite, Town of	La Paz County	36	149	289	438	537	587	686	708	708	708	708
4(i)	Queen Creek, Town of	Maricopa County	96	395	769	1,164	1,428	1,559	1,823	1,882	1,882	1,882	1,882
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	0	0	1	1	1	1	1	1	1
4(i)	Shepard Water Company, Incorporated	Yuma County	2	7	14	20	25	27	32	33	33	33	33
4(i)	Somerton, City of	Yuma County	25	104	203	307	377	411	481	496	496	496	496
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	3	14	27	41	50	55	64	66	66	66	66
4(i)	TV Marble Canyon AZ, LLC	Coconino County	2	10	19	29	35	38	45	46	46	46	46
3	City of Yuma[1]	Yuma County	0	0	0	0	0	0	0	48,522	48,522	48,522	48,522
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	0	0	0	0	0	0	0	25	25	25	25
3	Kaman, Inc.	Yuma County	0	0	0	0	0	0	0	2	2	2	2
3	Department of the Navy, MCAS	Yuma County	0	0	0	0	0	0	0	3,000	3,000	3,000	3,000
3	City of Yuma (cemetery)	Yuma County	0	0	0	0	0	0	0	60	60	60	60
3	Yuma Mesa Fruit Growers' Association	Yuma County	0	0	0	0	0	0	0	15	15	15	15
3	Desert Lawn Memorial Park Association	Yuma County	0	0	0	0	0	0	0	138	138	138	138
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	863	1,756	2,650	4,278
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	1,363	2,776	4,189	6,762
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	605	1,232	1,858	3,000
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	557	1,133	1,710	2,760

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	1,008	2,053	3,097	5,000
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	20	41	62	100
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	0	0	0	0	0	20	41	62	100
3	Department of the Army - Yuma Proving Ground	Yuma County	0	0	0	0	0	0	0	228	464	699	1,129
3	Yuma Union High School District	Yuma County	0	0	0	0	0	0	0	148	148	148	148
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	0	0	0	0	0	0	0	248	248	248	248
2	Cibola National Wildlife Refuge	La Paz County	0	0	0	0	0	0	0	4,289	7,561	10,833	16,793
2	Lake Mead National Recreation Area	Mohave County	0	0	0	0	0	0	0	88	154	221	343
2	Bureau of Reclamation - Davis Dam	Mohave County	0	0	0	0	0	0	0	2	3	5	7
2	Imperial National Wildlife Refuge	La Paz County	0	0	0	0	0	0	0	5,874	10,356	14,838	23,000
2	Havasu Lake National Wildlife Refuge	Mohave County	0	0	0	0	0	0	0	9,552	16,839	24,127	37,399
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 20, Parker, City of	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 21, Yuma, City of	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**183,095**	**289,233**	**420,178**	**564,359**	**652,039**	**698,973**	**768,089**	**846,331**	**866,273**	**886,216**	**922,535**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	110,000	256,667	388,002	388,002	388,002	388,002	388,002	388,002	388,002	388,002	388,002
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	1

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 30, Stephenson	San Bernardino	0	0	0	0	0	0	0	0	0	0	154
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 38, Andrade	San Bernardino	0	0	0	0	0	0	0	0	0	0	42
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 39, Reynolds	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 43, City of Needles	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**110,000**	**256,667**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,210**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	20,000	33,333	50,000	71,225	85,375	92,450	92,717	92,717	92,717	92,717	92,717
8	Big Bend Water District	Clark	0	0	0	0	0	0	417	1,906	2,970	4,034	4,900

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
8	Robert B. Griffith Project	Clark	0	0	0	0	0	0	13,467	61,503	95,815	130,127	158,080
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	0	0	0	0	0	0	0	0	0	5
7	Bureau of Reclamation (includes Sportsman Park)	Clark	0	0	0	0	0	0	0	0	0	0	147
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	0	0	0	0	0	0	0	0	0	0	25
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	0	0	0	0	0	0	0	0	0	0	2,080
6	Las Vegas Valley Water District	Clark	0	0	0	0	0	0	0	0	0	0	8,012
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	0	0	0	0	0	0	0	0	0	0	483
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	0	4,268
4	City of Henderson	Clark	0	0	0	0	0	0	0	0	0	0	8,257
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	0	7,774
3	Boulder City	Clark	0	0	0	0	0	0	0	0	0	0	3,056
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	0	0	0	0	0	0	0	0	0	0	1,500
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	0	0	0	0	0	0	0	0	0	0	300
-	-	**Subtotal**	**20,000**	**33,333**	**50,000**	**71,225**	**85,375**	**92,450**	**106,601**	**156,126**	**191,501**	**226,877**	**291,602**
-	-	**Total**	**313,095**	**579,233**	**858,180**	**1,023,586**	**1,125,416**	**1,179,425**	**1,262,691**	**1,390,459**	**1,445,777**	**1,501,094**	**1,602,347**
	Summary by County												
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	2	10	19	29	35	38	45	46	46	46	46
-	Gila County	2	413	897	1,492	2,151	2,548	2,762	3,067	3,067	3,067	3,067	3,067
-	La Paz County	14	326	1,343	2,616	3,959	4,855	5,303	6,198	16,561	24,316	32,070	46,191
-	Maricopa County	55	138,060	199,827	275,970	360,084	410,861	438,191	477,311	481,806	486,402	490,998	499,370
-	Mohave County	17	2,126	8,770	17,076	25,845	31,692	34,615	40,462	51,408	58,764	66,120	79,516
-	Pima County	13	34,777	66,908	106,489	150,222	176,609	190,817	211,115	211,115	211,115	211,115	211,115
-	Pinal County	8	7,309	11,141	15,862	21,078	24,225	25,920	28,341	28,341	28,341	28,341	28,341

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Priority										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	Yuma County	18	81	336	654	990	1,214	1,326	1,550	53,987	54,222	54,458	54,888
-	**Subtotal Arizona Domestic**	**128**	**183,095**	**289,233**	**420,178**	**564,359**	**652,039**	**698,973**	**768,089**	**846,331**	**866,273**	**886,216**	**922,535**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	110,000	256,667	388,002	388,002	388,002	388,002	388,002	388,002	388,002	388,002	388,002
-	Imperial County	32	0	0	0	0	0	0	0	0	0	0	11
-	Riverside County	5	0	0	0	0	0	0	0	0	0	0	1
-	San Bernardino	7	0	0	0	0	0	0	0	0	0	0	196
-	**Subtotal California Domestic**	**45**	**110,000**	**256,667**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,210**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	20,000	33,333	50,000	71,225	85,375	92,450	106,601	156,126	191,501	226,877	291,602
-	**Subtotal Nevada Domestic**	**15**	**20,000**	**33,333**	**50,000**	**71,225**	**85,375**	**92,450**	**106,601**	**156,126**	**191,501**	**226,877**	**291,602**

Disclaimer: These modeling results for the Lower Basin Priority should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]This user also holds a PPR entitlement.

C.7 Priority Without Tribal Shortage Alternative Distribution Model

The Priority Without Tribal Shortage Alternative Distribution Model simulates a distribution of water which fully fills all tribal entitlements, distributing shortage among non-tribal entitlements in accordance with elements of the existing priority system. This Alternative Distribution Model reflects a modeling commitment to stakeholders to display a possible distribution of water during shortage that does not short tribal entitlements or allocations; it is not an interpretation of law, contracts, or a legal position.

For each level of modeled shortage, the Priority Without Tribal Shortage Alternative Distribution Model calculates a percentage reduction to the Lower Division States and applies the same percentage reduction to Mexico's 1,500,000 acre-foot per year allotment.

The Excel workbook contains formulas extending into deep shortage levels as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

C.7.1 Entitlements Which are Not Shorted in the Priority Without Tribal Shortage Alternative Distribution Model

For modeling purposes, the entitlements/allocations in **Table C-29** below have been removed from the priorities in which they are situate pursuant to contracts or other documents, and the sizes of those priority pools are adjusted accordingly. The priority of these entitlements is identified in the Excel workbook and the table below for the purpose of cross-reference, but the fulfillment of these entitlements in the Alternative Distribution Model is no longer dictated by priority; the model does not attempt to emulate shortage deep enough to affect them. Note that CAP allocations are shown for modeling purposes as mainstream consumptive use equivalents, with 5 percent for CAP system loss added to the contract volume. All other entitlements are shown as calculated for the Priority Shortage Allocation Model.

Table C-29
Entitlements and Allocations Not Shorted Under Priority Without Tribal Shortage Alternative Distribution Model

State	Priority	Entitlement Holder, Contractor, or Subcontractor	Consumptive Use or Equivalent Entitlement (af)*
Arizona	CAP NIA-B	WMAT	24,971.10
Arizona	CAP NIA-A	Gila River Indian Community	126,630.00
Arizona	CAP NIA-A	Tohono O'odham - Schuk Toak & San Xavier	29,610.00
Arizona	CAP NIA-A	Hualapai Tribe**	4,200.00
Arizona	CAP M&I	San Carlos Apache Tribe	19,052.25

State	Priority	Entitlement Holder, Contractor, or Subcontractor	Consumptive Use or Equivalent Entitlement (af)*
Arizona	CAP Indian	Gila River Indian Community	200,760.00
Arizona	CAP Indian	Tohono O'odham Nation (ST & SX)	39,690.00
Arizona	CAP Indian	White Mountain Apache Tribe	1,278.90
Arizona	CAP Indian	Ak-Chin Indian Community	61,215.00
Arizona	CAP Indian	Fort McDowell Yavapai Nation	19,144.65
Arizona	CAP Indian	Pascua Yaqui Tribe	525.00
Arizona	CAP Indian	San Carlos Apache Tribe	13,335.00
Arizona	CAP Indian	Salt River Pima-Maricopa Indian Community	13,965.00
Arizona	CAP Indian	Tohono O'odham Nation Sif Oidak District	8,400.00
Arizona	CAP Indian	Tonto Apache Tribe	134.40
Arizona	CAP Indian	Yavapai Apache Nation	1,260.00
Arizona	P4(i)	Cocopah Indian Reservation	1,357.42
Arizona	P4(i)	Hopi Tribe	3,037.38
Arizona	P4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	3,500.00
Arizona	P4(i)	Unallocated 4th Priority Mainstream Water	10,230.00
Arizona	P3	Ak-Chin Indian Community	50,000.00
Arizona	PPR	Cocopah Indian Reservation	5,146.27
Arizona	PPR	United States (Cocopah Indian Tribe)	763.80
Arizona	PPR	Fort Mojave Indian Reservation	40,805.64
Arizona	PPR	Fort Mojave Indian Reservation	15,103.26
Arizona	PPR	Fort Yuma Indian Reservation	4,000.50
Arizona	PPR	Colorado River Indian Reservation	27,032.72
Arizona	PPR	Colorado River Indian Reservation	131,048.32
Arizona	PPR	Colorado River Indian Reservation	186,368.00
-	-	**Subtotal**	**1,042,564.61**
California	PPR	Chemehuevi Indian Reservation	6,123.60
California	PPR	Fort Mojave Indian Reservation	9,028.80
California	PPR	Fort Yuma Indian Reservation	36,524.16
California	PPR	Colorado River Indian Reservation	3,398.80
California	PPR	Colorado River Indian Reservation	23,339.78
California	PPR	Colorado River Indian Reservation	6,232.10
-	-	**Subtotal**	**84,647.24**
Nevada	P1 (PPR)	Fort Mojave Indian Reservation	8,397.78
-	-	**Subtotal**	**8,397.78**
-	-	**Total**	**1,135,609.63**

*CAP allocations are shown as mainstream consumptive use equivalents, with 5 percent for CAP system loss added to the Contract volume.

** May at some time be diverted from the Colorado River above Lake Mead.

C.7.2 Present Perfected Rights Assumptions for the Priority Without Tribal Shortage Alternative Distribution Model

The entitlements in **Table C-30** below were removed from the PPR priority system emulated in this Alternative Distribution Model. Otherwise, PPRs are modeled as described for the Priority Shortage Allocation Model; the relative priorities of non-tribal PPRs based on Paragraph (5) of the Appendix to the Consolidated Decree in *Arizona v. California*, 547 U.S. 150 (2006), was not revisited in light of the tribal PPRs no longer being modeled as part of the PPR priority system.

Table C-30
PPRs Not Shorted Under Priority Without Tribal Shortage Alternative Distribution Model

Entitlement Holders	CU Equivalent (af)*	Diversion (af)	PPR No.	Date	Type of Use
Cocopah Indian Reservation	5,146	7,681	1	1917	Tribal
United States (Cocopah Indian Tribe)	764	1,140	8	1915	Tribal
Chemehuevi Indian Reservation	6,124	11,340	22	1907	Tribal
Fort Mojave Indian Reservation	40,806	75,566	3	1890	Tribal
Fort Mojave Indian Reservation	15,103	27,969	3	1890	Tribal
Fort Mojave Indian Reservation	9,029	16,720	25	1890	Tribal
Fort Mojave Indian Reservation	8,398	12,534	81	1890	Tribal
Fort Yuma Indian Reservation	36,524	71,616	23	1884	Tribal
Fort Yuma Indian Reservation	4,001	6,350	3a	1884	Tribal
Colorado River Indian Reservation	3,399	5,860	24	1876	Tribal
Colorado River Indian Reservation	27,033	51,986	2	1874	Tribal
Colorado River Indian Reservation	23,340	40,241	24	1874	Tribal
Colorado River Indian Reservation	131,048	252,016	2	1873	Tribal
Colorado River Indian Reservation	6,232	10,745	24	1873	Tribal
Colorado River Indian Reservation	186,368	358,400	2	1865	Tribal

*Calculated consumptive use equivalents. Historical Decree Accounting data were used to estimate average CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS. For purposes of modeling, these values are assumed to be generally representative of return flow conditions for the specified users, and match CRSS inputs. Those ratios were used to estimate the consumptive use equivalent of diversion entitlements. In CA, miscellaneous PPRs were assumed to have a CU/Div ratio of .64. For IID, consumptive use was assumed to equal diversion since the CU/diversion ratio based on average historical efficiency was 0.996. In AZ, with limited supporting data about miscellaneous PPRs, they were assumed to be fully consumptive. Where an entitlement was quantified on the basis of CU by the Consolidated Decree, those values are used.

Table C-31 on the following page summarizes the non-tribal PPRs remaining in each state, which informs the distribution of water among the Lower Division States as described in the next section.

Table C-31
Summary of Non-Tribal PPRs Remaining in Each State in the Priority Without Tribal Shortage Alternative Distribution Model

State Summary	CU Equivalent Entitlement (af)	Diversion Entitlement (af)
Arizona Total	187,542.80	296,863.00
California Total	2,716,678.90	2,863,051.00
Nevada Total	300.00	500.00
Total	**2,904,521.70**	**3,160,414.00**

C.7.3 Distribution Among States for the Priority Without Tribal Shortage Alternative Distribution Model

The distribution of water among the Lower Division States in this Alternative Distribution Model is similar to the Priority Shortage Allocation Model except as described below.

Generally, state apportionments in excess of PPRs and tribal entitlements are set as co-equal, except that Arizona bears California's share of shortage until the remaining (non-tribal) Arizona Fourth Priority is exhausted.

C.7.3.1 Stage 1, 2, and 3 Shortage Assumptions

In developing the Stage 1 and Stage 2 percentages for the sharing of shortage among the Lower Division States in this Alternative Distribution Model, the consumptive use (or equivalent) of non-tribal PPR entitlements and tribal entitlements were removed from the apportionment volumes in each ratio, as detailed below.

In Stage 1 of this Alternative Distribution Model, shortages are imposed only upon Arizona and Nevada, continuing until the deliveries to non-tribal post-1968 (P4) water entitlement holders in Arizona (including CAP subcontractors) are reduced to zero. Based on modeled full use by P1-3 entitlements in Arizona, and no shortage to Tribes as assumed in this Alternative Distribution Model, approximately 821,834 afy of shortage to Arizona (or 1,978,166 afy of water available to Arizona) exhausts the P4 supply. Stage 1 shortage ends at that point.

The Stage 1 shortage sharing percentages for the Priority Without Tribal Shortage Alternative Distribution Model are computed as follows:

- Nevada bears a reduction of about 8 percent of the total Lower Division States shortage volume, computed as a ratio of Nevada's apportionment less non-tribal PPR and tribal consumptive use (or equivalent) entitlements within Nevada over the sum of the apportionments of the Lower Division States less all non-tribal PPR and tribal consumptive use (or equivalent) entitlements
    - (300 kaf – 300 af - 8,398 af) / (7.5 maf – 1,135,610 af – 2,904,522 af) = 8.42 percent

- Arizona bears the remainder of the total Lower Division States shortage volume (91.58 percent)

The Stage 2 distribution of water among the Lower Division States in this Alternative Distribution Model begins at the end of Stage 1 and ends at the volume of total shortage where reductions to non-tribal PPRs are necessary; at that point, water available to each state equals the consumptive use (or equivalent) of non-tribal PPR entitlements and tribal entitlements within the state.

Stage 2 shortage is the amount of additional shortage above the Stage 1 shortage volume, and the additional shortage is distributed according to the Stage 2 ratios.

The Stage 2 shortage sharing percentages are computed as follows, with the non-tribal PPR and tribal entitlement volumes the same as in the Stage 1 ratios.

- Nevada bears about 8 percent of the Stage 2 shortage in addition to its Stage 1 shortage, computed as a ratio of Nevada's apportionment less non-tribal PPRs and tribal entitlements in Nevada less the amount of shortage applied to Nevada under Stage 1, over the sum of the apportionments of the Lower Division States less total non-tribal PPRs and tribal entitlements less the total amount shorted to users under Stage 1
    - (0.3 maf – NV non-tribal PPRs – NV tribal entitlements - NV Stage 1 shortage) / (7.5 maf – total non-tribal PPRs – total tribal entitlements - total Stage 1 shortage) or
        - (300,000 – 300 - 8,398 – 75,555) / (7,500,000 – 2,904,522 – 1,135,610 – 897,389) = 8.42 percent
- Arizona bears about 29 percent of the Stage 2 shortage in addition to its Stage 1 shortage, computed as a ratio of Arizona's apportionment less non-tribal PPRs and tribal entitlements in Arizona less the amount of shortage applied to Arizona under Stage 1, over the sum of the apportionments of the Lower Division States less total non-tribal PPRs and tribal entitlements less the total amount shorted to users under Stage 1
    - (2.8 maf – AZ non-tribal PPRs – AZ tribal entitlements - AZ Stage 1 shortage) / (7.5 maf – total non-tribal PPRs – total tribal entitlements - total Stage 1 shortage) or
        - (2,800,000 – 187,543 – 1,042,565 – 821,834) / (7,500,000 – 2,716,679 – 1,135,610 – 897,389) = 29.19 percent
- California bears about 62 percent of the Stage 2 shortage, computed as a ratio of California's apportionment less non-tribal PPRs and tribal entitlements in California, over the sum of the

apportionments of the Lower Division States less total non-tribal PPRs and tribal entitlements less the total amount shorted to users under Stage 1

- (4.4 maf – CA non-tribal PPRs – CA tribal entitlements) / (7.5 maf – total non-tribal PPRs – total tribal entitlements - total Stage 1 shortage) or
  - (4,400,000 – 2,716,679 – 84,647) / (7,500,000 - 2,716,679 – 1,135,610 – 897,389) = 62.39 percent

The distribution of water among non-tribal PPRs is characterized as Stage 3, where water available to each state is an aggregation of the non-tribal PPR volumes within the state that could be filled at a given level of shortage, and tribal entitlements within the states.

Table C-32 below summarizes the distribution of shortage and available water to the Lower Division States under the Priority Without Tribal Shortage Alternative Distribution Model. Total shortage volumes include an assumed component for Mexico, as described in the sections that follow, and will not sum across rows.

Table C-32
Summary of Shortage Volumes and Available Water by Lower Division State Under the Priority Without Tribal Shortage Alternative Distribution Model (af)

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
0	0	2,800,000	0	4,400,000	0	300,000
(10,000)	(7,632)	2,792,368	0	4,400,000	(702)	299,298
(35,000)	(26,711)	2,773,289	0	4,400,000	(2,456)	297,544
(65,000)	(49,606)	2,750,394	0	4,400,000	(4,561)	295,439
(80,000)	(61,054)	2,738,946	0	4,400,000	(5,613)	294,387
(100,000)	(76,317)	2,723,683	0	4,400,000	(7,016)	292,984
(140,000)	(106,844)	2,693,156	0	4,400,000	(9,823)	290,177
(200,000)	(152,634)	2,647,366	0	4,400,000	(14,032)	285,968
(300,000)	(228,951)	2,571,049	0	4,400,000	(21,049)	278,951
(360,000)	(274,742)	2,525,258	0	4,400,000	(25,258)	274,742
(399,600)	(304,963)	2,495,037	0	4,400,000	(28,037)	271,963
(400,000)	(305,268)	2,494,732	0	4,400,000	(28,065)	271,935
(480,000)	(366,322)	2,433,678	0	4,400,000	(33,678)	266,322
(500,400)	(381,891)	2,418,109	0	4,400,000	(35,109)	264,891
(600,000)	(457,903)	2,342,097	0	4,400,000	(42,097)	257,903
(720,000)	(549,483)	2,250,517	0	4,400,000	(50,517)	249,483
(700,000)	(534,220)	2,265,780	0	4,400,000	(49,114)	250,886
(800,000)	(610,537)	2,189,463	0	4,400,000	(56,130)	243,870
(840,000)	(641,064)	2,158,936	0	4,400,000	(58,936)	241,064

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(900,000)	(686,854)	2,113,146	0	4,400,000	(63,146)	236,854
(960,000)	(732,644)	2,067,356	0	4,400,000	(67,356)	232,644
(1,000,000)	(763,171)	2,036,829	0	4,400,000	(70,162)	229,838
(1,076,867)	(821,834)	1,978,166	0	4,400,000	(75,555)	224,445
(1,100,000)	(827,462)	1,972,538	(12,027)	4,387,973	(77,178)	222,822
(1,200,000)	(851,789)	1,948,211	(64,017)	4,335,983	(84,195)	215,805
(1,230,000)	(859,087)	1,940,913	(79,613)	4,320,387	(86,299)	213,701
(1,320,000)	(880,982)	1,919,018	(126,404)	4,273,596	(92,614)	207,386
(1,375,000)	(894,362)	1,905,638	(154,999)	4,245,001	(96,473)	203,527
(1,440,000)	(910,174)	1,889,826	(188,792)	4,211,208	(101,034)	198,966
(1,500,000)	(924,771)	1,875,229	(219,986)	4,180,014	(105,243)	194,757
(1,530,000)	(932,069)	1,867,931	(235,583)	4,164,417	(107,348)	192,652
(1,600,000)	(949,098)	1,850,902	(271,976)	4,128,024	(112,259)	187,741
(1,680,000)	(968,560)	1,831,440	(313,568)	4,086,432	(117,872)	182,128
(1,800,000)	(997,753)	1,802,247	(375,955)	4,024,045	(126,292)	173,708
(1,920,000)	(1,026,945)	1,773,055	(438,343)	3,961,657	(134,711)	165,289
(2,000,000)	(1,046,407)	1,753,593	(479,935)	3,920,065	(140,324)	159,676
(2,040,000)	(1,056,138)	1,743,862	(500,731)	3,899,269	(143,131)	156,869
(2,100,000)	(1,070,735)	1,729,265	(531,925)	3,868,075	(147,341)	152,659
(2,200,000)	(1,095,062)	1,704,938	(583,915)	3,816,085	(154,357)	145,643
(2,280,000)	(1,114,524)	1,685,476	(625,506)	3,774,494	(159,970)	140,030
(2,300,000)	(1,119,389)	1,680,611	(635,904)	3,764,096	(161,373)	138,627
(2,400,000)	(1,143,717)	1,656,283	(687,894)	3,712,106	(168,389)	131,611
(2,600,000)	(1,192,371)	1,607,629	(791,874)	3,608,126	(182,422)	117,578
(2,700,000)	(1,216,698)	1,583,302	(843,864)	3,556,136	(189,438)	110,562
(2,880,000)	(1,260,488)	1,539,512	(937,445)	3,462,555	(202,067)	97,933
(3,000,000)	(1,289,680)	1,510,320	(999,833)	3,400,167	(210,486)	89,514
(3,120,000)	(1,318,873)	1,481,127	(1,062,221)	3,337,779	(218,906)	81,094
(3,240,000)	(1,348,066)	1,451,934	(1,124,609)	3,275,391	(227,325)	72,675
(3,360,000)	(1,377,259)	1,422,741	(1,186,996)	3,213,004	(235,745)	64,255
(3,480,000)	(1,406,451)	1,393,549	(1,249,384)	3,150,616	(244,164)	55,836
(3,500,000)	(1,411,317)	1,388,683	(1,259,782)	3,140,218	(245,568)	54,432
(3,600,000)	(1,435,644)	1,364,356	(1,311,772)	3,088,228	(252,584)	47,416
(3,720,000)	(1,464,837)	1,335,163	(1,374,160)	3,025,840	(261,003)	38,997
(3,750,000)	(1,472,135)	1,327,865	(1,389,757)	3,010,243	(263,108)	36,892
(3,840,000)	(1,494,030)	1,305,970	(1,436,548)	2,963,452	(269,423)	30,577
(3,850,000)	(1,496,462)	1,303,538	(1,441,747)	2,958,253	(270,124)	29,876
(3,960,000)	(1,523,223)	1,276,777	(1,498,935)	2,901,065	(277,842)	22,158
(4,000,000)	(1,532,953)	1,267,047	(1,519,731)	2,880,269	(280,649)	19,351

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(4,080,000)	(1,552,415)	1,247,585	(1,561,323)	2,838,677	(286,262)	13,738
(4,151,843)	(1,569,893)	1,230,107	(1,598,674)	2,801,326	(291,302)	8,698
(5,000,000)	(1,751,446)	1,048,554	(2,123,618)	2,276,382	(291,602)	8,398
(6,000,000)	(1,751,446)	1,048,554	(2,956,952)	1,443,048	(291,602)	8,398
(7,000,000)	(1,751,446)	1,048,554	(3,790,285)	609,715	(291,602)	8,398
(7,500,000)	(1,751,446)	1,048,554	(4,206,952)	193,048	(291,602)	8,398
(7,637,268)	(1,757,435)	1,042,565	(4,315,353)	84,647	(291,602)	8,398

C.7.4 Distribution Within States for the Priority Without Tribal Shortage Alternative Distribution Model

C.7.4.1 Introduction

The distribution of water within the Lower Division States in this Alternative Distribution Model is consistent with the Priority Shortage Allocation Model except as described below. The differences arise from a need to adjust the priority system so that it functions without the tribal entitlements that are modeled as fully satisfied.

C.7.4.2 General State Assumptions

General state assumptions are as described in the Priority Shortage Allocation Model.

C.7.4.3 Nevada Assumptions

In this Alternative Distribution Model, the Nevada priority system was adjusted to reflect 300 afy of non-tribal PPR entitlements, and 8,398 afy of tribal entitlements, limiting the shortage that could be applied to Nevada to 291,602 afy. This does not represent a functional change to the distribution of water within Nevada in comparison to the Priority Shortage Allocation Model, as the single tribal entitlement was also the highest-priority PPR in the state.

C.7.4.4 California Assumptions

In this Alternative Distribution Model, the California priority system was adjusted to reflect 2,716,679 afy of non-tribal PPR entitlements, and 84,647 afy of tribal entitlements, limiting the shortage that could be applied to California to 4,315,353 afy. This represents a very limited change to the distribution of water within California in comparison to the Priority Shortage Allocation Model, as tribal entitlements in California are all PPRs and mostly senior to the non-tribal PPRs in the state.

C.7.4.5 Arizona Assumptions

In this Alternative Distribution Model, the Arizona priority system was adjusted to reflect 187,543 afy of non-tribal PPR entitlements, and 1,042,565 afy of tribal entitlements, limiting the shortage that could be applied to Arizona to 1,757,435 afy. This represents a significant change to the distribution of water within Arizona in comparison to the Priority Shortage Allocation Model, as

tribal entitlements in Arizona are part of every priority pool in the state, but with limited effect on tribal PPRs which are already mostly senior to the non-tribal PPRs in the state.

C.7.4.5.1 Arizona Priority Two and Three Assumptions

In this Alternative Distribution Model, the Ak-Chin Indian Community's Priority Three entitlement was removed from its position among the "Various Entitlements" as described for the Priority Shortage Allocation Model, changing the ratios for the distribution of water among those entitlements, and changing the size of Priorities Two and Three in total from 798,059 afy to 748,059 afy. This results in a given volume of shortage to Priorities Two and Three being shared across a smaller pool of users.

C.7.4.5.2 Arizona Priority Four Assumptions

The most significant differences in this Alternative Distribution Model in comparison to the Priority Shortage Allocation Model result from adjustments to Priority Four assumptions. The Arizona Fourth Priority shortage sharing procedure was revised to be consistent with other assumptions for this Alternative Distribution Model. It subtracts: 1) tribal entitlements not shorted, 2) non-tribal PPR entitlements, 3) non-tribal Priority Two and Three entitlements, and 4) the Arizona shortage volume (all on a consumptive use basis) from Arizona's Colorado River water apportionment to derive the fourth priority supply on a consumptive use basis.

The P4(i) available supply is calculated as 11 percent[25] of the fourth priority supply on a consumptive use basis, not to exceed the total of the consumptive use equivalents of entitlements in the P4(i) pool (90,833 afy as modeled). The remainder of the fourth priority supply is available for diversion as fourth priority water by the CAP to fulfill CAP subcontracts.

The calculation of Available CAP Supply is adjusted so that system loss associated with the Fourth Priority is given as 5 percent of the subcontract volumes remaining in the intra-CAP priority system, which are filled by the Available CAP Supply.

P4(i) (Mainstream) Framework and Assumptions

In this Alternative Distribution Model, the following modeled entitlements were removed from the P4(i) pool: Cocopah Indian Reservation, Hopi Tribe, Water Reserved by the Secretary for a Navajo-Hopi Settlement, and Unallocated 4th Priority Mainstream Water. This changes the size of the pool on a diversion basis from 164,652 afy to 144,618 afy, thereby changing the ratios for the distribution of water among those entitlements and resulting in a given volume of shortage to P4(i) being shared across a smaller pool of users.

CAP Framework and Assumptions

This Alternative Distribution Model differs from the Priority Shortage Allocation Model in the constituents of the CAP NIA-B, NIA-A, M&I, and Indian Priorities. The differences are so significant as to render the existing intra-CAP priority system inoperable; one possible approach is

[25] Calculated as 90,833 afy divided by 844,745 afy, the ratio of the adjusted P4(i) contracting pool to the sum of the adjusted P4(i) and P4(ii) contracting pools.

reflected in the model so as to complete the modeling exercise, but is not a legal position or proposal.

Eleven modeled entitlements were removed from the CAP Indian Priority pool, leaving a single Indian Priority entitlement of 500 afy (out of 343,079 afy) currently held by a non-tribal entity. One modeled entitlement of 18,145 afy (San Carlos Apache Tribe) was removed from the CAP M&I Priority pool (out of 638,823 afy). Contractual provisions for the distribution of Available CAP Supply between the Indian and M&I Priority pools do not function under these assumptions; accordingly, in recognition of the co-equal nature of the Indian and M&I Priority pools, they were consolidated into a simulated single CAP first priority in this Alternative Distribution Model, totaling 621,178 afy. Water available to this consolidated pool (the first 621,178 afy of Available CAP Supply) is distributed among the subcontractors in proportion to their subcontract volumes relative to the total.

NIA Priority supply is calculated as the remaining Available CAP Supply above the 621,178 afy necessary to fill the consolidated Indian and M&I first priority. White Mountain Apache Tribe's entitlement was removed from the NIA-B pool, and the following three entitlements were removed from the NIA-A pool: Gila River Indian Community, Tohono O'odham - Schuk Toak & San Xavier, and Hualapai Tribe. NIA Priority supply is used to fill the remaining NIA-A subcontracts first, then fills the NIA-B subcontracts if supply allows, each in proportion to the subcontract volumes relative to the adjusted totals.

CAP system loss associated with the tribal entitlements removed from the CAP priority pools is included in relevant calculations as 5 percent added to the contract volume.

C.7.5 Priority Without Tribal Shortage Alternative Distribution Model Results

The tables in this section present the results of the Priority Without Tribal Shortage Alternative Distribution Model over a range of total shortages to the Lower Basin including Mexico.

Table C-33, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-34, the Tribal Summary, presents the shortage impacts on tribes.

Table C-35, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-36, the Domestic Summary, presents the shortage impacts on domestic users

Table C-33
Priority Without Tribal Shortage Alternative Distribution Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-	-	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
Arizona	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion	407,102	678,791	731,287	731,001	731,001	731,001	731,001	731,001	731,001	731,001	731,001
-	NIA Priority[2]	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833	96,833
-	M&I and Indian Priorities[2]	326,037	597,726	621,178	621,178	621,178	621,178	621,178	621,178	621,178	621,178	621,178
-	4th Priority i (Mainstream)	50,801	84,380	90,833	90,833	90,833	90,833	90,833	90,833	90,833	90,833	90,833
-	2nd & 3rd Priorities	0	0	102,650	175,919	224,573	248,901	297,555	467,846	589,483	711,120	748,059
-	1st Priority (Present Perfected Rights)	0	0	0	0	0	0	0	0	0	0	181,554
-	**Subtotal**	**457,903**	**763,171**	**924,771**	**997,753**	**1,046,407**	**1,070,735**	**1,119,389**	**1,289,680**	**1,411,317**	**1,532,953**	**1,751,446**
California	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	0	0	219,986	375,955	388,002	388,002	388,002	388,002	388,002	388,002	388,002
-	3rd Priority (IID, CVWD, PVID)	0	0	0	0	91,933	143,923	247,903	611,831	835,000	835,000	835,000
-	2nd Priority (Yuma Project Reservation Division)	0	0	0	0	0	0	0	0	7,294	7,294	7,294
-	1st Priority (PVID)	0	0	0	0	0	0	0	0	29,486	289,435	368,378
-	Present Perfected Rights (PPRs)	0	0	0	0	0	0	0	0	0	0	524,944
-	**Subtotal**	**0**	**0**	**219,986**	**375,955**	**479,935**	**531,925**	**635,904**	**999,833**	**1,259,782**	**1,519,731**	**2,123,618**
Nevada	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	42,097	70,162	92,717	92,717	92,717	92,717	92,717	92,717	92,717	92,717	92,717
-	8th Priority (SNWA & Big Bend)	0	0	12,527	33,575	47,608	54,624	68,656	117,770	152,851	162,980	162,980
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	0	0	0	0	0	0	0	0	0	2,257	2,257
-	6th Priority (Las Vegas Valley Water District)	0	0	0	0	0	0	0	0	0	8,012	8,012
-	5th Priority (PABCO)	0	0	0	0	0	0	0	0	0	483	483
-	4th Priority (Henderson & Basic)	0	0	0	0	0	0	0	0	0	14,201	20,299
-	3rd Priority (Boulder City)	0	0	0	0	0	0	0	0	0	0	3,056

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-	-	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
-	2nd Priority (Lake Mead National Rec Area)	0	0	0	0	0	0	0	0	0	0	1,500
-	1st Priority (LMNRA PPR)	0	0	0	0	0	0	0	0	0	0	300
-	**Subtotal**	**42,097**	**70,162**	**105,243**	**126,292**	**140,324**	**147,341**	**161,373**	**210,486**	**245,568**	**280,649**	**291,602**
-	**Lower Division States Subtotal**	**500,000**	**833,333**	**1,250,000**	**1,500,000**	**1,666,667**	**1,750,000**	**1,916,667**	**2,500,000**	**2,916,667**	**3,333,333**	**4,166,667**
Mexico	**Mexico Subtotal**	**100,000**	**166,667**	**250,000**	**300,000**	**333,333**	**350,000**	**383,333**	**500,000**	**583,333**	**666,667**	**833,333**
	Total	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here

[2]These estimated shortages to priorities within the CAP reflect the effect of CAP system loss, and do not total to CAP shortage at the point of diversion.

Disclaimer: These modeling results for the Priority (w/o tribal Shortage) Alternative Distribution Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Volumes of total shortage include a portion modeled as attributed to Mexico, but that portion is not itemized in summary sheets.

Table C-34
Priority Without Tribal Shortage Alternative Distribution Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	0	0	0	0	0	0	0	0	0	0	0
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	0	0	0	0	0	0	0	0	0	0	0
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	San Carlos Apache Tribe	Gila County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Tonto Apache Tribe	Gila County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Yavapai Apache Nation	Gila County	0	0	0	0	0	0	0	0	0	0	0
CAP M&I Priority	San Carlos Apache Tribe	Gila County	0	0	0	0	0	0	0	0	0	0	0
4(i)	Hopi Tribe[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
4(i)	Cocopah Indian Reservation	Yuma County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	0	0	0	0	0	0	0	0	0	0	0
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
3	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
California			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	**-**	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0.83	0	0	0	0	0	0	0	0	0	0	0
-	Gila County	4.67	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	4	0	0	0	0	0	0	0	0	0	0	0
-	Maricopa County	2.6	0	0	0	0	0	0	0	0	0	0	0
-	Mohave County	2.5	0	0	0	0	0	0	0	0	0	0	0
-	Pima County	3	0	0	0	0	0	0	0	0	0	0	0
-	Pinal County	4.40	0	0	0	0	0	0	0	0	0	0	0
-	Yuma County	5	0	0	0	0	0	0	0	0	0	0	0
-	Apache County	1.00	0	0	0	0	0	0	0	0	0	0	0
-	Navajo County	1.00	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal Arizona Tribal**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	San Bernardino	2.5	0	0	0	0	0	0	0	0	0	0	0
-	Riverside	0.50	-	-	-	-	-	-	-	-	-	-	-
-	Imperial	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal California Tribal**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal Nevada Tribal**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands).

Disclaimer: These modeling results for the Priority (w/o tribal Shortage) Alternative Distribution Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts. Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

Table C-35
Priority Without Tribal Shortage Alternative Distribution Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	997	1,656	1,783	1,783	1,783	1,783	1,783	1,783	1,783	1,783	1,783
4(i)	Arizona State Land Department	Yuma County	2,321	3,855	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
4(i)	Beattie Farms, Southwest	Yuma County	390	648	697	697	697	697	697	697	697	697	697
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	148	245	264	264	264	264	264	264	264	264	264
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	44	74	79	79	79	79	79	79	79	79	79
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	738	1,225	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	76	126	136	136	136	136	136	136	136	136	136
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	2,614	4,342	4,675	4,675	4,675	4,675	4,675	4,675	4,675	4,675	4,675
4(i)	Curtis, Armon	Yuma County	105	175	188	188	188	188	188	188	188	188	188
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	504	837	901	901	901	901	901	901	901	901	901
4(i)	Matador Farms, LLC	La Paz County	1,581	2,626	2,826	2,826	2,826	2,826	2,826	2,826	2,826	2,826	2,826
4(i)	JRJ Partners, L.L.C.	Yuma County	379	630	678	678	678	678	678	678	678	678	678
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	12,316	20,456	22,021	22,021	22,021	22,021	22,021	22,021	22,021	22,021	22,021
4(i)	North Baja Pipeline, LLC[2]	La Paz County	169	280	301	301	301	301	301	301	301	301	301
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	325	539	580	580	580	580	580	580	580	580	580
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	169	280	301	301	301	301	301	301	301	301	301
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	171	284	305	305	305	305	305	305	305	305	305
4(i)	Red River Land Company, LLC	La Paz County	105	175	188	188	188	188	188	188	188	188	188

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Phillips, Milton and Jean	Yuma County	21	35	38	38	38	38	38	38	38	38	38
4(i)	Western Water, LLC	La Paz County	188	313	337	337	337	337	337	337	337	337	337
3	Sturges, Harold	Yuma County	0	0	335	335	335	335	335	335	335	335	335
3	Sturges, Irma	Yuma County	0	0	385	385	385	385	385	385	385	385	385
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	0	0	7,535	22,693	32,798	37,850	47,955	83,322	108,585	133,847	141,519
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	0	0	3,582	10,788	15,592	17,994	22,798	39,611	51,621	63,631	67,278
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	0	0	358	1,079	1,560	1,800	2,281	3,963	5,165	6,366	6,731
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	0	0	19,552	48,790	68,282	78,028	97,520	165,742	214,471	263,201	278,000
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	0	0	252	629	880	1,006	1,257	2,136	2,764	3,392	3,582
3	Yuma County Water Users' Association (14,701af M&I includes YAO's 489.95af conversion)[2,3]	Yuma County	0	0	5,440	13,796	19,367	22,152	27,723	47,221	61,148	75,075	79,304
3	University of Arizona	Yuma County	0	0	922	1,088	1,088	1,088	1,088	1,088	1,088	1,088	1,088
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	0	0	0	120	120	120	120	120	120	120	120
3	Unit B Irrigation & Drainage District[3]	Yuma County	0	0	0	1,762	3,049	3,692	4,978	9,479	12,694	15,910	16,886
1	PPR No. 15, Molina	Yuma County	0	0	0	0	0	0	0	0	0	0	318
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	0	0	0	0	0	0	0	0	0	0	445
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	0	0	0	0	0	0	0	0	0	0	4,352
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	0	0	0	0	0	0	0	0	0	0	6,125
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	0	0	0	0	0	0	0	0	0	0	170,314
1	PPR No. 7, Powers	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 10, Hulet (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 12, Miller (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 18, Swan (MVIDD)	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**23,360**	**38,801**	**80,130**	**143,234**	**185,224**	**206,218**	**248,208**	**395,171**	**500,145**	**605,119**	**818,551**
California			**-**	-	-	-	-	-	-	-	-	-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	0	0	0	0	550	862	1,484	3,664	5,000	5,000	5,000
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	0	0	0	0	91,383	143,061	246,418	330,000	330,000	330,000	330,000
3	Imperial Irrigation District (IID) (3a)	Imperial County	0	0	0	0	0	0	0	278,168	500,000	500,000	500,000
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	0	0	0	0	0	0	0	0	7,294	7,294	7,294
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	0	0	0	0	0	0	0	0	29,486	289,435	368,378
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	0	0	0	0	0	0	0	0	0	0	115
PPR	PPR No. 41, Chagnon	San Bernardino	0	0	0	0	0	0	0	0	0	0	77
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	0	0	0	0	0	0	0	0	0	0	61
PPR	PPR No. 34, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	69
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	0	0	0	0	0	0	0	0	0	0	19,518
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	0	0	0	0	0	0	0	0	0	0	504,896
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 42, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 37, Milpitas	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 33, Morgan	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 35, Simons	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**91,933**	**143,923**	**247,903**	**611,831**	**871,780**	**1,131,729**	**1,735,408**
Nevada			**-**	-	-	-	-	-	-	-	-	-	-
None	None		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**23,360**	**38,801**	**80,130**	**143,234**	**277,157**	**350,141**	**496,110**	**1,007,002**	**1,371,925**	**1,736,848**	**2,553,959**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	5,922	9,837	10,589	10,589	10,589	10,589	10,589	10,589	10,589	10,589	10,589
-	Mohave County	8	12,316	20,456	22,021	22,021	22,021	22,021	22,021	22,021	22,021	22,021	22,021
-	Yuma County	28	5,122	8,508	47,520	110,624	152,614	173,609	215,598	362,561	467,535	572,509	785,941
-	**Subtotal Arizona Irrigation**	**45**	**23,360**	**38,801**	**80,130**	**143,234**	**185,224**	**206,218**	**248,208**	**395,171**	**500,145**	**605,119**	**818,551**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Riverside County	3	0	0	0	0	91,933	143,923	247,903	333,664	349,743	479,718	519,189
-	Imperial County	10	0	0	0	0	0	0	0	278,168	522,037	652,012	1,216,081
-	San Bernardino	3	0	0	0	0	0	0	0	0	0	0	138
-	**Subtotal California Irrigation**	**16**	**0**	**0**	**0**	**0**	**91,933**	**143,923**	**247,903**	**611,831**	**871,780**	**1,131,729**	**1,735,408**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement.

Disclaimer: These modeling results for the Priority (w/o tribal Shortage) Alternative Distribution Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

Table C-36
Priority Without Tribal Shortage Alternative Distribution Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185	18,185
CAP NIA-B	Carefree Water Company	Maricopa County	112	112	112	112	112	112	112	112	112	112	112
CAP NIA-B	Cave Creek	Maricopa County	386	386	386	386	386	386	386	386	386	386	386
CAP NIA-B	El Mirage	Maricopa County	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217	3,217
CAP NIA-B	Freeport	Pima County	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678	5,678
CAP NIA-B	Gilbert	Maricopa County	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
CAP NIA-B	Marana	Pima County	515	515	515	515	515	515	515	515	515	515	515
CAP NIA-B	Queen Creek	Maricopa County	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162	4,162
CAP NIA-B	Resolution Copper	Maricopa County	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238	2,238
CAP NIA-B	Rosemont Copper	Pima County	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124	1,124
CAP NIA-B	SRP	Maricopa County	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	817	817	817	817	817	817	817	817	817	817	817
CAP NIA-A	Phoenix	Maricopa County	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280	37,280
CAP NIA-A	Chandler	Maricopa County	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924
CAP NIA-A	Gilbert	Maricopa County	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537
CAP NIA-A	Glendale	Maricopa County	682	682	682	682	682	682	682	682	682	682	682
CAP NIA-A	Mesa	Maricopa County	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551	5,551

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Scottsdale	Maricopa County	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306	3,306
CAP NIA-A	Tempe	Maricopa County	23	23	23	23	23	23	23	23	23	23	23
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	262	481	500	500	500	500	500	500	500	500	500
CAP M&I	ASARCO	Pima County	11,022	20,207	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000
CAP M&I	Avondale	Maricopa County	2,843	5,212	5,416	5,416	5,416	5,416	5,416	5,416	5,416	5,416	5,416
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	14,789	27,112	28,176	28,176	28,176	28,176	28,176	28,176	28,176	28,176	28,176
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	4,663	8,549	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884
CAP M&I	Arizona Water Company, Coolidge	Pinal County	1,050	1,924	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
CAP M&I	Arizona Water Company, Superstition	Pinal County	3,299	6,048	6,285	6,285	6,285	6,285	6,285	6,285	6,285	6,285	6,285
CAP M&I	Arizona Water Company, White Tank	Maricopa County	508	931	968	968	968	968	968	968	968	968	968
CAP M&I	Buckeye	Maricopa County	36	65	68	68	68	68	68	68	68	68	68
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	3,373	6,183	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426
CAP M&I	Carefree Water Company	Maricopa County	881	1,615	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
CAP M&I	Cave Creek	Maricopa County	1,169	2,144	2,228	2,228	2,228	2,228	2,228	2,228	2,228	2,228	2,228
CAP M&I	Chandler	Maricopa County	4,542	8,327	8,654	8,654	8,654	8,654	8,654	8,654	8,654	8,654	8,654
CAP M&I	Chaparral City Water Company	Maricopa County	4,676	8,573	8,909	8,909	8,909	8,909	8,909	8,909	8,909	8,909	8,909
CAP M&I	Circle City	Maricopa County	2,064	3,784	3,932	3,932	3,932	3,932	3,932	3,932	3,932	3,932	3,932
CAP M&I	El Mirage	Maricopa County	267	489	508	508	508	508	508	508	508	508	508
CAP M&I	Eloy	Pinal County	1,139	2,089	2,171	2,171	2,171	2,171	2,171	2,171	2,171	2,171	2,171
CAP M&I	EPCOR, Agua Fria	Maricopa County	5,822	10,674	11,093	11,093	11,093	11,093	11,093	11,093	11,093	11,093	11,093
CAP M&I	EPCOR, Paradise Valley	Maricopa County	1,696	3,109	3,231	3,231	3,231	3,231	3,231	3,231	3,231	3,231	3,231
CAP M&I	EPCOR, Sun City	Maricopa County	2,199	4,031	4,189	4,189	4,189	4,189	4,189	4,189	4,189	4,189	4,189

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	EPCOR, Sun City West	Maricopa County	1,245	2,282	2,372	2,372	2,372	2,372	2,372	2,372	2,372	2,372	2,372
CAP M&I	Florence	Pinal County	1,075	1,971	2,048	2,048	2,048	2,048	2,048	2,048	2,048	2,048	2,048
CAP M&I	Freeport-Miami	Gila County	1,525	2,796	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	1,498	2,746	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
CAP M&I	Gilbert	Maricopa County	3,797	6,962	7,235	7,235	7,235	7,235	7,235	7,235	7,235	7,235	7,235
CAP M&I	Glendale	Maricopa County	9,047	16,585	17,236	17,236	17,236	17,236	17,236	17,236	17,236	17,236	17,236
CAP M&I	Goodyear	Maricopa County	5,638	10,336	10,742	10,742	10,742	10,742	10,742	10,742	10,742	10,742	10,742
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	34	62	64	64	64	64	64	64	64	64	64
CAP M&I	Green Valley Community Water Company	Pima County	1,500	2,750	2,858	2,858	2,858	2,858	2,858	2,858	2,858	2,858	2,858
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	997	1,828	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
CAP M&I	Marana	Pima County	1,226	2,248	2,336	2,336	2,336	2,336	2,336	2,336	2,336	2,336	2,336
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	349	640	665	665	665	665	665	665	665	665	665
CAP M&I	Mesa	Maricopa County	22,833	41,861	43,503	43,503	43,503	43,503	43,503	43,503	43,503	43,503	43,503
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	7,065	12,952	13,460	13,460	13,460	13,460	13,460	13,460	13,460	13,460	13,460
CAP M&I	Oro Valley	Pima County	5,409	9,916	10,305	10,305	10,305	10,305	10,305	10,305	10,305	10,305	10,305
CAP M&I	Peoria	Maricopa County	14,235	26,097	27,121	27,121	27,121	27,121	27,121	27,121	27,121	27,121	27,121
CAP M&I	Phoenix	Maricopa County	66,188	121,343	126,104	126,104	126,104	126,104	126,104	126,104	126,104	126,104	126,104
CAP M&I	Pine	Gila County	85	155	161	161	161	161	161	161	161	161	161
CAP M&I	Queen Creek	Maricopa County	260	476	495	495	495	495	495	495	495	495	495
CAP M&I	Rio Verde Utilities	Maricopa County	426	781	812	812	812	812	812	812	812	812	812
CAP M&I	San Tan Irrigation District	Maricopa County	124	227	236	236	236	236	236	236	236	236	236
CAP M&I	Scottsdale	Maricopa County	27,718	50,816	52,810	52,810	52,810	52,810	52,810	52,810	52,810	52,810	52,810
CAP M&I	Spanish Trail Water Company	Pima County	1,594	2,922	3,037	3,037	3,037	3,037	3,037	3,037	3,037	3,037	3,037

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Surprise	Maricopa County	5,379	9,862	10,249	10,249	10,249	10,249	10,249	10,249	10,249	10,249	10,249
CAP M&I	Tempe	Maricopa County	2,265	4,152	4,315	4,315	4,315	4,315	4,315	4,315	4,315	4,315	4,315
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	37	68	71	71	71	71	71	71	71	71	71
CAP M&I	Tucson	Pima County	75,681	138,747	144,191	144,191	144,191	144,191	144,191	144,191	144,191	144,191	144,191
CAP M&I	Vail Water Company	Pima County	975	1,787	1,857	1,857	1,857	1,857	1,857	1,857	1,857	1,857	1,857
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	1,532	2,809	2,919	2,919	2,919	2,919	2,919	2,919	2,919	2,919	2,919
4(i)	Arizona State Land Department	Yuma County	539	895	963	963	963	963	963	963	963	963	963
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	32	53	57	57	57	57	57	57	57	57	57
4(i)	B&F Investment, LLC	La Paz County	21	35	38	38	38	38	38	38	38	38	38
4(i)	Bullhead City	Mohave County	5,343	8,875	9,553	9,553	9,553	9,553	9,553	9,553	9,553	9,553	9,553
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	751	1,248	1,343	1,343	1,343	1,343	1,343	1,343	1,343	1,343	1,343
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	2,459	4,084	4,397	4,397	4,397	4,397	4,397	4,397	4,397	4,397	4,397
4(i)	Bureau of Land Management	La Paz County	2,167	3,599	3,875	3,875	3,875	3,875	3,875	3,875	3,875	3,875	3,875
4(i)	Crystal Beach Water Conservation District	Mohave County	46	77	83	83	83	83	83	83	83	83	83
4(i)	Ehrenburg Improvement District	La Paz County	258	429	462	462	462	462	462	462	462	462	462
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	658	1,093	1,177	1,177	1,177	1,177	1,177	1,177	1,177	1,177	1,177
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	19	31	33	33	33	33	33	33	33	33	33
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	1	1	1	1	1	1	1	1	1	1
4(i)	Gold Dome Mining Corporation	Yuma County	2	4	4	4	4	4	4	4	4	4	4.40
4(i)	Golden Shores Water Conservation District	Mohave County	703	1,167	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4(i)	GSC Farm, LLC	La Paz County	25	41	44	44	44	44	44	44	44	44	44
4(i)	Hillcrest Water Company	La Paz County	30	49	53	53	53	53	53	53	53	53	53

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Lake Havasu City	Mohave County	6,742	11,198	12,055	12,055	12,055	12,055	12,055	12,055	12,055	12,055	12,055
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	751	1,248	1,343	1,343	1,343	1,343	1,343	1,343	1,343	1,343	1,343
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	2,547	4,230	4,554	4,554	4,554	4,554	4,554	4,554	4,554	4,554	4,554
4(i)	La Paz County	La Paz County	123	204	220	220	220	220	220	220	220	220	220
4(i)	Martinez Lake Cabin Sites	Yuma County	8	13	14	14	14	14	14	14	14	14	14
4(i)	McAlister Family Trust	Mohave County	14	23	25	25	25	25	25	25	25	25	25
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	439	729	785	785	785	785	785	785	785	785	785
4(i)	Mohave Water Conservation District	Mohave County	632	1,050	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131	1,131
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	1,054	1,750	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884
4(i)	Parker, Town of[1]	La Paz County	362	601	647	647	647	647	647	647	647	647	647
4(i)	Quartzsite, Town of	La Paz County	376	624	672	672	672	672	672	672	672	672	672
4(i)	Queen Creek, Town of	Maricopa County	999	1,659	1,786	1,786	1,786	1,786	1,786	1,786	1,786	1,786	1,786
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	1	1	1	1	1	1	1	1	1	1
4(i)	Shepard Water Company, Incorporated	Yuma County	18	29	31	31	31	31	31	31	31	31	31
4(i)	Somerton, City of	Yuma County	263	438	471	471	471	471	471	471	471	471	471
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	35	58	63	63	63	63	63	63	63	63	63
4(i)	TV Marble Canyon AZ, LLC	Coconino County	25	41	44	44	44	44	44	44	44	44	44
3	City of Yuma[1]	Yuma County	0	0	48,522	48,522	48,522	48,522	48,522	48,522	48,522	48,522	48,522
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	0	0	25	25	25	25	25	25	25	25	25
3	Kaman, Inc.	Yuma County	0	0	2	2	2	2	2	2	2	2	2
3	Department of the Navy, MCAS	Yuma County	0	0	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
3	City of Yuma (cemetery)	Yuma County	0	0	60	60	60	60	60	60	60	60	60

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Mesa Fruit Growers' Association	Yuma County	0	0	15	15	15	15	15	15	15	15	15
3	Desert Lawn Memorial Park Association	Yuma County	0	0	138	138	138	138	138	138	138	138	138
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	301	751	1,051	1,201	1,501	2,551	3,300	4,050	4,278
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	476	1,187	1,661	1,898	2,372	4,031	5,217	6,402	6,762
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	211	527	737	842	1,052	1,789	2,314	2,840	3,000
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	194	484	678	775	968	1,645	2,129	2,613	2,760
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	352	878	1,228	1,403	1,754	2,981	3,857	4,734	5,000
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	7	18	25	28	35	60	77	95	100
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	0	0	7	18	25	28	35	60	77	95	100
3	Department of the Army - Yuma Proving Ground	Yuma County	0	0	79	198	277	317	396	673	871	1,069	1,129
3	Yuma Union High School District	Yuma County	0	0	148	148	148	148	148	148	148	148	148
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	0	0	82	248	248	248	248	248	248	248	248
2	Cibola National Wildlife Refuge	La Paz County	0	0	2,311	3,949	5,041	5,588	6,680	10,503	13,233	15,964	16,793
2	Lake Mead National Recreation Area	Mohave County	0	0	47	81	103	114	136	215	270	326	343
2	Bureau of Reclamation - Davis Dam	Mohave County	0	0	1	2	2	2	3	4	6	7	7
2	Imperial National Wildlife Refuge	La Paz County	0	0	3,165	5,409	6,905	7,653	9,149	14,385	18,124	21,864	23,000
2	Havasu Lake National Wildlife Refuge	Mohave County	0	0	5,146	8,795	11,227	12,444	14,876	23,390	29,471	35,552	37,399
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 20, Parker, City of	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 21, Yuma, City of	Yuma County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**450,311**	**740,138**	**831,365**	**841,529**	**848,194**	**851,527**	**858,192**	**881,520**	**898,182**	**914,845**	**919,905**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	0	0	219,986	375,955	388,002	388,002	388,002	388,002	388,002	388,002	388,002
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 30, Stephenson	San Bernardino	0	0	0	0	0	0	0	0	0	0	154
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	1

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 38, Andrade	San Bernardino	0	0	0	0	0	0	0	0	0	0	42
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	1
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 39, Reynolds	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 43, City of Needles	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**219,986**	**375,955**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,210**
Nevada			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	**-**	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	42,097	70,162	92,717	92,717	92,717	92,717	92,717	92,717	92,717	92,717	92,717
8	Big Bend Water District	Clark	0	0	377	1,009	1,431	1,642	2,064	3,541	4,595	4,900	4,900
8	Robert B. Griffith Project	Clark	0	0	12,150	32,566	46,176	52,982	66,592	114,229	148,256	158,080	158,080
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	0	0	0	0	0	0	0	0	5	5
7	Bureau of Reclamation (includes Sportsman Park)	Clark	0	0	0	0	0	0	0	0	0	147	147
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	0	0	0	0	0	0	0	0	0	25	25
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	0	0	0	0	0	0	0	0	0	2,080	2,080
6	Las Vegas Valley Water District	Clark	0	0	0	0	0	0	0	0	0	8,012	8,012
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	0	0	0	0	0	0	0	0	0	483	483
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	2,986	4,268
4	City of Henderson	Clark	0	0	0	0	0	0	0	0	0	5,776	8,257
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	0	0	0	0	0	0	0	0	0	5,439	7,774

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for Priority w/o Tribal Shortage									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Boulder City	Clark	0	0	0	0	0	0	0	0	0	0	3,056
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	0	0	0	0	0	0	0	0	0	0	1,500
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	0	0	0	0	0	0	0	0	0	0	300
-	-	**Subtotal**	**42,097**	**70,162**	**105,243**	**126,292**	**140,324**	**147,341**	**161,373**	**210,486**	**245,568**	**280,649**	**291,602**
-	-	**Total**	**492,408**	**810,300**	**1,156,594**	**1,343,776**	**1,376,520**	**1,386,869**	**1,407,567**	**1,480,008**	**1,531,752**	**1,583,496**	**1,599,718**
	Summary by County												
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	25	41	44	44	44	44	44	44	44	44	44
-	Gila County	2	1,610	2,951	3,067	3,067	3,067	3,067	3,067	3,067	3,067	3,067	3,067
-	La Paz County	14	3,396	5,642	11,549	15,431	18,019	19,313	21,901	30,960	37,431	43,901	45,866
-	Maricopa County	55	291,183	462,423	478,821	481,135	482,677	483,449	484,991	490,390	494,246	498,103	499,274
-	Mohave County	17	22,171	36,827	44,837	48,520	50,976	52,203	54,658	63,252	69,390	75,528	77,392
-	Pima County	13	114,284	203,421	211,115	211,115	211,115	211,115	211,115	211,115	211,115	211,115	211,115
-	Pinal County	8	16,792	27,423	28,341	28,341	28,341	28,341	28,341	28,341	28,341	28,341	28,341
-	Yuma County	18	849	1,411	53,590	53,876	53,955	53,994	54,074	54,351	54,549	54,746	54,807
-	**Subtotal Arizona Domestic**	**128**	**450,311**	**740,138**	**831,365**	**841,529**	**848,194**	**851,527**	**858,192**	**881,520**	**898,182**	**914,845**	**919,905**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	0	0	219,986	375,955	388,002	388,002	388,002	388,002	388,002	388,002	388,002
-	Imperial County	32	0	0	0	0	0	0	0	0	0	0	11
-	Riverside County	5	0	0	0	0	0	0	0	0	0	0	1
-	San Bernardino	7	0	0	0	0	0	0	0	0	0	0	196
-	**Subtotal California Domestic**	**45**	**0**	**0**	**219,986**	**375,955**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,002**	**388,210**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	42,097	70,162	105,243	126,292	140,324	147,341	161,373	210,486	245,568	280,649	291,602
-	**Subtotal Nevada Domestic**	**15**	**42,097**	**70,162**	**105,243**	**126,292**	**140,324**	**147,341**	**161,373**	**210,486**	**245,568**	**280,649**	**291,602**

[1]This user also holds a PPR entitlement.

Disclaimer: These modeling results for the Priority (w/o tribal Shortage) Alternative Distribution Model should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

C.8 Pro Rata Alternative Distribution Model

The Pro Rata Alternative Distribution Model represents a distribution of shortages outside the priority system. It simulates shortages and distributes water on a proportional basis (i.e., at the same percentage reduction from each user's entitlement) across all lower Colorado River and CAP water users. This Alternative Distribution Model reflects a modeling commitment to stakeholders to display the results of this distribution of water; it is not an interpretation of law, contracts, or a legal position.

The Excel workbook contains formulas extending into deep shortage levels as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

C.8.1 Distribution Among Water Users

In contrast to the Shortage Allocation Models, which distribute water among the Lower Division States according to a specified state-level distribution, the Pro Rata Alternative Distribution Model distributes water across all lower Colorado River and CAP water users based on their entitlement, without regard to state lines.

Entitlements, as modeled for the Priority Shortage Allocation Model, form the baseline against which shortages are assessed for each water user. Each entitlement's percentage share of the total shortage is calculated as the ratio of the entitlement to the sum of all entitlements, including 1.5 mafy for Mexico. The resulting percentages are multiplied by the volume of total shortage to determine the volume of shortage assigned to each entitlement. At a given level of shortage, as a consequence of how that shortage is distributed as described in this paragraph, all entitlements bear the same percentage reduction. The volume of shortage assigned to a water user with entitlements in different priority categories is the sum across multiple line items in the model; designations of priority do not affect the function of this Alternative Distribution Model but are retained to facilitate comparison of the results between models.

PPRs are not recognized in this Alternative Distribution Model as a basin-wide first priority without regard to state lines, and PPRs are included in the distribution of shortages.

In the Pro Rata Alternative Distribution Model, the internal CAP priority system set forth in the CAP Master Repayment Contract and elsewhere is assumed to be inoperable. Instead, individual long-term CAP contracts and subcontracts (rather than the Master CAP Repayment Contract) are modeled as mainstream consumptive use equivalents, with 5 percent for CAP main system loss added to the contract or subcontract volume; all other entitlements are shown as calculated for the Priority Shortage Allocation Model. As a result, this Alternative Distribution Model does not emulate an Arizona P4 shortage sharing formula and does not calculate an Available CAP Supply or a volume of shortage for CAP at the project level. Note that entitlements within the state of Arizona, as modeled in all models, exceed the state's 2.8 maf annual apportionment. In this Alternative Distribution Model, unlike in priority-based modeling, that causes the proportional

shortage to Arizona's apportionment to slightly exceed (within a single percentage point) the proportional shortage to the apportionments and allocation of California, Nevada, and Mexico, respectively, meaning the Lower Division States and Mexico bear shortage not precisely in proportion to their apportionments or allotment.

C.8.2 Pro Rata Alternative Distribution Model Results

The tables in this section present the results of the Pro Rata Alternative Distribution Model over a range of total shortages to the Lower Basin including Mexico.

Table C-37, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-38, the Tribal Summary, presents the shortage impacts on tribes.

Table C-39, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-40, the Domestic Summary, presents the shortage impacts on domestic users.

Table C-37
Pro Rata Alternative Distribution Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-	-	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
Arizona	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion[2]	-	-	-	-	-	-	-	-	-	-	-
-	NIA Priority	19,090	31,817	47,726	57,271	63,635	66,817	73,180	95,452	111,361	127,270	159,087
-	M&I Priority	44,604	74,340	111,510	133,812	148,680	156,114	170,982	223,020	260,190	297,360	371,701
-	Indian Priority	23,955	39,924	59,886	71,864	79,848	83,841	91,826	119,773	139,735	159,697	199,621
-	4th Priority i (Mainstream)	7,245	12,076	18,114	21,736	24,151	25,359	27,774	36,227	42,265	48,303	60,379
-	2nd & 3rd Priorities	53,069	88,448	132,672	159,206	176,896	185,741	203,430	265,344	309,568	353,792	442,240
-	1st Priority (Present Perfected Rights)	39,753	66,255	99,382	119,259	132,510	139,135	152,386	198,764	231,892	265,019	331,274
-	**Subtotal**	**187,716**	**312,860**	**469,290**	**563,149**	**625,721**	**657,007**	**719,579**	**938,581**	**1,095,011**	**1,251,441**	**1,564,302**
-	-	-	-	-	-	-	-	-	-	-	-	-
California	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	25,801	43,002	64,503	77,403	86,004	90,304	98,904	129,006	150,506	172,007	215,009
-	3rd Priority (IID, CVWD, PVID)	55,525	92,542	138,813	166,576	185,084	194,339	212,847	277,627	323,898	370,169	462,711
-	2nd Priority (Yuma Project Reservation Division)	485	808	1,213	1,455	1,617	1,698	1,859	2,425	2,829	3,234	4,042
-	1st Priority (PVID)	24,496	40,827	61,240	73,489	81,654	85,737	93,902	122,481	142,894	163,308	204,135
-	Present Perfected Rights (PPRs)	186,281	310,468	465,702	558,843	620,936	651,983	714,077	931,404	1,086,638	1,241,872	1,552,341
-	**Subtotal**	**292,589**	**487,648**	**731,471**	**877,766**	**975,295**	**1,024,060**	**1,121,589**	**1,462,943**	**1,706,766**	**1,950,590**	**2,438,238**
Nevada	**Priority**	**-**	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	6,165	10,276	15,414	18,496	20,551	21,579	23,634	30,827	35,965	41,103	51,378
-	8th Priority (SNWA & Big Bend)	10,838	18,063	27,094	32,513	36,126	37,932	41,545	54,189	63,220	72,252	90,315
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	150	250	375	450	500	525	575	750	876	1,001	1,251
-	6th Priority (Las Vegas Valley Water District)	533	888	1,332	1,598	1,776	1,865	2,042	2,664	3,108	3,552	4,440
-	5th Priority (PABCO)	32	53	80	96	107	112	123	160	187	214	267

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-	-	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
-	4th Priority (Henderson & Basic)	1,350	2,250	3,375	4,049	4,499	4,724	5,174	6,749	7,874	8,999	11,248
-	3rd Priority (Boulder City)	203	339	508	610	677	711	779	1,016	1,185	1,355	1,693
-	2nd Priority (Lake Mead National Rec Area)	100	166	249	299	332	349	382	499	582	665	831
-	1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	578	964	1,446	1,735	1,928	2,024	2,217	2,892	3,374	3,856	4,820
-	**Subtotal**	**19,949**	**33,249**	**49,873**	**59,848**	**66,497**	**69,822**	**76,472**	**99,746**	**116,370**	**132,995**	**166,243**
-	**Lower Division States Subtotal**	**500,254**	**833,757**	**1,250,635**	**1,500,762**	**1,667,513**	**1,750,889**	**1,917,640**	**2,501,270**	**2,918,148**	**3,335,026**	**4,168,783**
Mexico	**Mexico Subtotal**	**99,746**	**166,243**	**249,365**	**299,238**	**332,487**	**349,111**	**382,360**	**498,730**	**581,852**	**664,974**	**831,217**
-	**Total**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here.

[2]The CAP priority system is not maintained in the pro rata distribution. CAP contractors and subcontractors are shorted pro rata with non-CAP water users; therefore, there is not an Available CAP Supply calculated for pro rata alternative distribution models, or a shortage volume given for CAP as a whole.

Disclaimer: These modeling results for the pro rata alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).

Table C-38
Pro Rata Alternative Distribution Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	1,661	2,768	4,151	4,982	5,535	5,812	6,365	8,303	9,686	11,070	13,838
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	1,969	3,282	4,922	5,907	6,563	6,891	7,548	9,845	11,486	13,127	16,408
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	8,421	14,034	21,051	25,262	28,069	29,472	32,279	42,103	49,120	56,137	70,171
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	279	465	698	838	931	978	1,071	1,396	1,629	1,862	2,327
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	13,350	22,250	33,375	40,050	44,500	46,725	51,175	66,750	77,875	89,000	111,250
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	2,639	4,399	6,598	7,918	8,798	9,237	10,117	13,196	15,396	17,595	21,994
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	85	142	213	255	283	298	326	425	496	567	709
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	4,071	6,784	10,177	12,212	13,569	14,247	15,604	20,353	23,745	27,138	33,922
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	1,273	2,122	3,183	3,819	4,244	4,456	4,880	6,365	7,426	8,487	10,609
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	35	58	87	105	116	122	134	175	204	233	291
CAP Indian Priority	San Carlos Apache Tribe	Gila County	887	1,478	2,217	2,660	2,956	3,104	3,399	4,434	5,173	5,912	7,390
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	929	1,548	2,322	2,786	3,095	3,250	3,560	4,643	5,417	6,191	7,739
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	559	931	1,396	1,676	1,862	1,955	2,141	2,793	3,258	3,724	4,655
CAP Indian Priority	Tonto Apache Tribe	Gila County	9	15	22	27	30	31	34	45	52	60	74
CAP Indian Priority	Yavapai Apache Nation	Gila County	84	140	209	251	279	293	321	419	489	559	698
CAP M&I Priority	San Carlos Apache Tribe	Gila County	1,267	2,112	3,167	3,801	4,223	4,434	4,857	6,335	7,390	8,446	10,558
4(i)	Hopi Tribe[1]	La Paz County	202	337	505	606	673	707	774	1,010	1,178	1,347	1,683
4(i)	Cocopah Indian Reservation	Yuma County	90	150	226	271	301	316	346	451	527	602	752

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	233	388	582	698	776	815	892	1,164	1,358	1,552	1,940
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	680	1,134	1,701	2,041	2,268	2,381	2,608	3,401	3,968	4,535	5,669
3	Ak-Chin Indian Community[1]	Pinal County	3,325	5,541	8,312	9,975	11,083	11,637	12,745	16,624	19,395	22,166	27,707
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	342	570	856	1,027	1,141	1,198	1,312	1,711	1,996	2,281	2,852
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	51	85	127	152	169	178	195	254	296	339	423
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	2,713	4,522	6,784	8,140	9,045	9,497	10,402	13,567	15,829	18,090	22,612
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	1,004	1,674	2,511	3,013	3,348	3,515	3,850	5,022	5,859	6,696	8,369
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	266	443	665	798	887	931	1,020	1,330	1,552	1,773	2,217
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	1,798	2,996	4,494	5,393	5,992	6,292	6,891	8,988	10,486	11,984	14,980
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	8,714	14,524	21,786	26,143	29,048	30,500	33,405	43,572	50,834	58,096	72,620
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	12,393	20,655	30,982	37,179	41,310	43,375	47,506	61,965	72,292	82,620	103,275
-	-	**Subtotal**	**69,328**	**115,546**	**173,320**	**207,983**	**231,093**	**242,647**	**265,757**	**346,639**	**404,412**	**462,185**	**577,732**
California			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	**-**	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	407	679	1,018	1,222	1,357	1,425	1,561	2,036	2,375	2,715	3,393
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	600	1,001	1,501	1,801	2,001	2,101	2,302	3,002	3,502	4,003	5,003
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	2,429	4,048	6,072	7,286	8,096	8,501	9,310	12,144	14,168	16,192	20,240
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	226	377	565	678	753	791	866	1,130	1,318	1,507	1,883
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	1,552	2,587	3,880	4,656	5,173	5,432	5,949	7,760	9,054	10,347	12,934
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	414	691	1,036	1,243	1,381	1,450	1,589	2,072	2,417	2,763	3,453
-	-	**Subtotal**	**5,629**	**9,381**	**14,072**	**16,886**	**18,763**	**19,701**	**21,577**	**28,144**	**32,835**	**37,525**	**46,907**

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	558	931	1,396	1,675	1,861	1,955	2,141	2,792	3,258	3,723	4,654
-	-	**Subtotal**	**558**	**931**	**1,396**	**1,675**	**1,861**	**1,955**	**2,141**	**2,792**	**3,258**	**3,723**	**4,654**
-	-	**Total**	**75,515**	**125,858**	**188,788**	**226,545**	**251,717**	**264,303**	**289,474**	**377,575**	**440,505**	**503,434**	**629,292**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0.83	217	362	543	652	724	760	833	1,086	1,267	1,448	1,810
-	Gila County	4.67	2,828	4,714	7,071	8,485	9,427	9,899	10,842	14,141	16,498	18,855	23,569
-	La Paz County	4	23,107	38,512	57,767	69,321	77,023	80,874	88,577	115,535	134,790	154,046	192,558
-	Maricopa County	2.6	8,733	14,555	21,832	26,199	29,110	30,565	33,476	43,664	50,942	58,219	72,774
-	Mohave County	2.5	3,857	6,429	9,644	11,572	12,858	13,501	14,787	19,287	22,502	25,716	32,145
-	Pima County	3	4,643	7,739	11,608	13,930	15,477	16,251	17,799	23,216	27,085	30,955	38,693
-	Pinal County	4.40	23,193	38,656	57,984	69,580	77,312	81,177	88,908	115,967	135,295	154,623	193,279
-	Yuma County	5	1,430	2,383	3,574	4,289	4,765	5,003	5,480	7,148	8,339	9,530	11,913
-	Apache County	1.00	659	1,099	1,649	1,978	2,198	2,308	2,528	3,297	3,847	4,396	5,495
-	Navajo County	1.00	659	1,099	1,649	1,978	2,198	2,308	2,528	3,297	3,847	4,396	5,495
-	**Subtotal Arizona Tribal**	**29**	**69,328**	**115,546**	**173,320**	**207,983**	**231,093**	**242,647**	**265,757**	**346,639**	**404,412**	**462,185**	**577,732**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	San Bernardino	2.5	2104	3506	5260	6311	7013	7363	8065	10519	12272	14026	17532
-	Riverside	0.50	1096	1827	2741	3289	3654	3837	4202	5481	6395	7308	9135
-	Imperial	1	2429	4048	6072	7286	8096	8501	9310	12144	14168	16192	20240
-	**Subtotal California Tribal**	**4**	**5629**	**9381**	**14072**	**16886**	**18763**	**19701**	**21577**	**28144**	**32835**	**37525**	**46907**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	1	558	931	1396	1675	1861	1955	2141	2792	3258	3723	4654
-	**Subtotal Nevada Tribal**	**1**	**558**	**931**	**1396**	**1675**	**1861**	**1955**	**2141**	**2792**	**3258**	**3723**	**4654**

[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and Tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Disclaimer: These modeling results for the pro rata alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

Table C-39
Pro Rata Alternative Distribution Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	136	226	340	408	453	476	521	679	793	906	1,132
4(i)	Arizona State Land Department	Yuma County	281	469	703	844	937	984	1,078	1,406	1,640	1,875	2,343
4(i)	Beattie Farms, Southwest	Yuma County	48	80	120	144	160	168	184	240	280	320	400
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	20	33	50	59	66	69	76	99	116	132	165
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	6	10	15	18	20	21	23	30	35	40	50
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	91	151	227	272	303	318	348	454	529	605	756
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	10	17	25	31	34	36	39	51	59	68	85
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	351	586	878	1,054	1,171	1,230	1,347	1,757	2,050	2,343	2,928
4(i)	Curtis, Armon	Yuma County	13	22	32	39	43	45	50	65	76	86	108
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	54	91	136	163	181	190	209	272	317	363	453
4(i)	Matador Farms, LLC	La Paz County	195	324	486	584	648	681	746	973	1,135	1,297	1,621
4(i)	JRJ Partners, L.L.C.	Yuma County	47	78	117	140	156	163	179	233	272	311	389
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	1,259	2,098	3,147	3,777	4,197	4,406	4,826	6,295	7,344	8,393	10,491
4(i)	North Baja Pipeline, LLC[2]	La Paz County	21	35	52	62	69	73	80	104	121	138	173
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	40	67	100	120	133	140	153	200	233	266	333
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	21	35	52	62	69	73	80	104	121	138	173
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	21	35	53	63	70	74	81	105	123	140	175
4(i)	Red River Land Company, LLC	La Paz County	14	24	35	42	47	50	54	71	83	94	118
4(i)	Phillips, Milton and Jean	Yuma County	4	7	10	12	13	14	15	20	23	27	33
4(i)	Western Water, LLC	La Paz County	26	43	64	77	86	90	98	128	150	171	214
3	Sturges, Harold	Yuma County	22	37	56	67	74	78	85	111	130	149	186
3	Sturges, Irma	Yuma County	26	43	64	77	85	90	98	128	149	171	213

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	9,411	15,684	23,527	28,232	31,369	32,937	36,074	47,053	54,895	62,738	78,422
3	Yuma Irrigation District (5 kaf M&I)[1]	Yuma County	4,474	7,456	11,185	13,421	14,913	15,658	17,150	22,369	26,097	29,825	37,282
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	448	746	1,119	1,343	1,492	1,567	1,716	2,238	2,611	2,984	3,730
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	18,486	30,810	46,216	55,459	61,621	64,702	70,864	92,431	107,837	123,242	154,052
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	238	397	596	715	794	834	913	1,191	1,390	1,588	1,985
3	Yuma County Water Users' Association (14,701 kaf M&I includes YAO's 489.95 af conversion)[2,3]	Yuma County	5,274	8,789	13,184	15,821	17,578	18,457	20,215	26,368	30,762	35,157	43,946
3	University of Arizona	Yuma County	72	121	181	217	241	253	277	362	422	483	603
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	8	13	20	24	27	28	31	40	47	53	66
3	Unit B Irrigation & Drainage District[3]	Yuma County	1,123	1,871	2,807	3,369	3,743	3,930	4,304	5,614	6,550	7,486	9,357
1	PPR No. 15, Molina	Yuma County	21	35	53	63	70	74	81	106	123	141	176
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	30	49	74	89	99	103	113	148	172	197	246
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	289	482	723	868	965	1,013	1,109	1,447	1,688	1,929	2,412
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	407	679	1,018	1,222	1,358	1,426	1,561	2,036	2,376	2,715	3,394
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	11,325	18,876	28,314	33,976	37,751	39,639	43,414	56,627	66,065	75,503	94,379
1	PPR No. 7, Powers	Yuma County	41	69	104	124	138	145	159	207	242	277	346
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	26	43	65	78	86	90	99	129	151	172	215
1	PPR No. 10, Hulet (MVIDD)	Mohave County	39	65	97	116	129	136	149	194	226	259	323
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	38	63	94	113	126	132	145	189	220	251	314
1	PPR No. 12, Miller (MVIDD)	Mohave County	9	14	22	26	29	30	33	43	50	57	72
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	29	48	73	87	97	102	111	145	170	194	242
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	39	65	97	116	129	136	149	194	226	259	323
1	PPR No. 18, Swan (MVIDD)	Mohave County	34	57	86	103	115	121	132	172	201	230	287

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	3	5	7	8	9	10	11	14	16	19	23
-	-	**Subtotal**	**54,569**	**90,948**	**136,421**	**163,706**	**181,895**	**190,990**	**209,179**	**272,843**	**318,316**	**363,790**	**454,738**
California			**-**	-	-	-	-	-	-	-	-	-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	332	554	831	997	1,108	1,164	1,275	1,662	1,940	2,217	2,771
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	21,944	36,574	54,860	65,832	73,147	76,804	84,119	109,721	128,007	146,294	182,868
3	Imperial Irrigation District (IID) (3a)	Imperial County	33,249	55,414	83,122	99,746	110,829	116,370	127,453	166,243	193,951	221,658	277,072
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	485	808	1,213	1,455	1,617	1,698	1,859	2,425	2,829	3,234	4,042
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	24,496	40,827	61,240	73,489	81,654	85,737	93,902	122,481	142,894	163,308	204,135
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	8	13	19	23	26	27	29	38	45	51	64
PPR	PPR No. 41, Chagnon	San Bernardino	5	9	13	15	17	18	20	26	30	34	43
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	4	7	10	12	14	14	16	20	24	27	34
PPR	PPR No. 34, Milpitas	Imperial County	5	8	11	14	15	16	18	23	27	31	38
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	1,298	2,163	3,245	3,894	4,326	4,543	4,975	6,489	7,571	8,653	10,816
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	172,893	288,155	432,233	518,680	576,311	605,126	662,757	864,466	1,008,544	1,152,621	1,440,777
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	6,284	10,474	15,711	18,853	20,948	21,995	24,090	31,422	36,659	41,896	52,370
PPR	PPR No. 42, Lawrence	Imperial County	5	9	13	15	17	18	20	26	30	34	43
PPR	PPR No. 37, Milpitas	Imperial County	3	5	7	9	10	10	11	15	17	20	24
PPR	PPR No. 33, Morgan	Imperial County	6	11	16	19	21	22	24	32	37	43	53
PPR	PPR No. 35, Simons	San Bernardino	3	4	6	8	9	9	10	13	15	17	21
-	-	**Subtotal**	**261,020**	**435,034**	**652,551**	**783,061**	**870,068**	**913,571**	**1,000,578**	**1,305,102**	**1,522,619**	**1,740,136**	**2,175,170**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Nevada			-	-	-	-	-	-	-	-	-	-	-
None	None	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**315,589**	**525,982**	**788,972**	**946,767**	**1,051,963**	**1,104,561**	**1,209,758**	**1,577,945**	**1,840,935**	**2,103,926**	**2,629,908**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	778	1,297	1,946	2,335	2,594	2,724	2,984	3,892	4,540	5,189	6,486
-	Mohave County	8	1,472	2,454	3,681	4,417	4,908	5,153	5,644	7,361	8,588	9,815	12,269
-	Yuma County	28	52,318	87,197	130,795	156,954	174,393	183,113	200,552	261,590	305,188	348,786	435,983
-	**Subtotal Arizona Irrigation**	**45**	**54,569**	**90,948**	**136,421**	**163,706**	**181,895**	**190,990**	**209,179**	**272,843**	**318,316**	**363,790**	**454,738**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Riverside County	3	37,667	62,778	94,167	113,001	125,556	131,834	144,390	188,334	219,724	251,113	313,891
-	Imperial County	10	223,342	372,236	558,354	670,025	744,473	781,696	856,143	1,116,709	1,302,827	1,488,945	1,861,181
-	San Bernardino	3	12	20	29	35	39	41	45	59	69	78	98
-	**Subtotal California Irrigation**	**16**	**261,020**	**435,034**	**652,551**	**783,061**	**870,068**	**913,571**	**1,000,578**	**1,305,102**	**1,522,619**	**1,740,136**	**2,175,170**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.

[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.

[3]This user also holds a PPR entitlement.

Disclaimer: These modeling results for the pro rata alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

Table C-40
Pro Rata Alternative Distribution Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	195	324	486	584	648	681	746	973	1,135	1,297	1,621
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	1,270	2,116	3,174	3,809	4,232	4,444	4,867	6,349	7,407	8,465	10,581
CAP NIA-B	Carefree Water Company	Maricopa County	8	13	20	23	26	27	30	39	46	52	65
CAP NIA-B	Cave Creek	Maricopa County	27	45	67	81	90	94	103	135	157	180	225
CAP NIA-B	El Mirage	Maricopa County	92	153	230	276	307	322	353	460	537	614	767
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	225	374	562	674	749	786	861	1,123	1,310	1,497	1,872
CAP NIA-B	Freeport	Pima County	396	661	991	1,189	1,322	1,388	1,520	1,982	2,313	2,643	3,304
CAP NIA-B	Gilbert	Maricopa County	128	213	320	384	426	448	490	640	746	853	1,066
CAP NIA-B	Marana	Pima County	36	60	90	108	120	126	138	180	210	240	300
CAP NIA-B	Queen Creek	Maricopa County	291	484	727	872	969	1,017	1,114	1,453	1,695	1,937	2,422
CAP NIA-B	Resolution Copper	Maricopa County	156	260	391	469	521	547	599	781	912	1,042	1,302
CAP NIA-B	Rosemont Copper	Pima County	78	131	196	235	262	275	301	392	458	523	654
CAP NIA-B	SRP	Maricopa County	151	251	377	452	503	528	578	754	880	1,005	1,257
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	57	95	143	171	190	200	219	285	333	380	475
CAP NIA-A	Phoenix	Maricopa County	2,603	4,338	6,507	7,809	8,677	9,110	9,978	13,015	15,184	17,353	21,691
CAP NIA-A	Chandler	Maricopa County	274	457	685	822	913	959	1,050	1,370	1,598	1,827	2,283
CAP NIA-A	Gilbert	Maricopa County	107	179	268	322	358	376	411	537	626	715	894
CAP NIA-A	Glendale	Maricopa County	48	79	119	143	159	167	183	238	278	317	397
CAP NIA-A	Mesa	Maricopa County	388	646	969	1,163	1,292	1,357	1,486	1,938	2,261	2,584	3,230

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Scottsdale	Maricopa County	231	385	577	692	769	808	885	1,154	1,347	1,539	1,924
CAP NIA-A	Tempe	Maricopa County	2	3	4	5	5	6	6	8	9	11	13
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	35	58	87	105	116	122	134	175	204	233	291
CAP M&I	ASARCO	Pima County	1,466	2,444	3,666	4,399	4,888	5,132	5,621	7,331	8,553	9,775	12,219
CAP M&I	Avondale	Maricopa County	378	630	945	1,134	1,261	1,324	1,450	1,891	2,206	2,521	3,151
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	1,967	3,279	4,918	5,902	6,558	6,886	7,541	9,837	11,476	13,115	16,394
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	620	1,034	1,551	1,861	2,068	2,171	2,378	3,102	3,618	4,135	5,169
CAP M&I	Arizona Water Company, Coolidge	Pinal County	140	233	349	419	465	489	535	698	815	931	1,164
CAP M&I	Arizona Water Company, Superstition	Pinal County	439	731	1,097	1,316	1,463	1,536	1,682	2,194	2,560	2,926	3,657
CAP M&I	Arizona Water Company, White Tank	Maricopa County	68	113	169	203	225	237	259	338	394	451	563
CAP M&I	Buckeye	Maricopa County	5	8	12	14	16	17	18	24	28	32	40
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	449	748	1,122	1,346	1,496	1,570	1,720	2,243	2,617	2,991	3,739
CAP M&I	Carefree Water Company	Maricopa County	117	195	293	351	391	410	449	586	683	781	976
CAP M&I	Cave Creek	Maricopa County	156	259	389	467	519	544	596	778	907	1,037	1,296
CAP M&I	Chandler	Maricopa County	604	1,007	1,511	1,813	2,014	2,115	2,316	3,021	3,525	4,028	5,035
CAP M&I	Chaparral City Water Company	Maricopa County	622	1,037	1,555	1,866	2,073	2,177	2,385	3,110	3,629	4,147	5,184
CAP M&I	Circle City	Maricopa County	275	458	686	824	915	961	1,052	1,373	1,601	1,830	2,288
CAP M&I	El Mirage	Maricopa County	35	59	89	106	118	124	136	177	207	236	296
CAP M&I	Eloy	Pinal County	152	253	379	455	505	531	581	758	884	1,011	1,263
CAP M&I	EPCOR, Agua Fria	Maricopa County	775	1,291	1,936	2,324	2,582	2,711	2,969	3,873	4,518	5,164	6,454
CAP M&I	EPCOR, Paradise Valley	Maricopa County	226	376	564	677	752	790	865	1,128	1,316	1,504	1,880
CAP M&I	EPCOR, Sun City	Maricopa County	292	487	731	877	975	1,024	1,121	1,462	1,706	1,950	2,437

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	EPCOR, Sun City West	Maricopa County	166	276	414	497	552	580	635	828	966	1,104	1,380
CAP M&I	Florence	Pinal County	143	238	357	429	477	500	548	715	834	953	1,192
CAP M&I	Freeport-Miami	Gila County	203	338	507	609	676	710	778	1,015	1,184	1,353	1,691
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	199	332	498	598	664	697	764	996	1,162	1,328	1,661
CAP M&I	Gilbert	Maricopa County	505	842	1,263	1,515	1,684	1,768	1,936	2,526	2,947	3,368	4,210
CAP M&I	Glendale	Maricopa County	1,203	2,006	3,009	3,610	4,012	4,212	4,613	6,017	7,020	8,023	10,029
CAP M&I	Goodyear	Maricopa County	750	1,250	1,875	2,250	2,500	2,625	2,875	3,750	4,375	5,000	6,250
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	4	7	11	13	15	16	17	22	26	30	37
CAP M&I	Green Valley Community Water Company	Pima County	200	333	499	599	665	698	765	998	1,164	1,330	1,663
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	133	221	332	398	442	464	509	663	774	884	1,106
CAP M&I	Marana	Pima County	163	272	408	489	544	571	625	816	951	1,087	1,359
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	46	77	116	139	155	163	178	232	271	310	387
CAP M&I	Mesa	Maricopa County	3,037	5,062	7,594	9,112	10,125	10,631	11,644	15,187	17,719	20,250	25,312
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	940	1,566	2,350	2,819	3,133	3,289	3,603	4,699	5,482	6,265	7,832
CAP M&I	Oro Valley	Pima County	720	1,199	1,799	2,159	2,398	2,518	2,758	3,598	4,197	4,797	5,996
CAP M&I	Peoria	Maricopa County	1,894	3,156	4,734	5,681	6,312	6,628	7,259	9,468	11,046	12,624	15,780
CAP M&I	Phoenix	Maricopa County	8,805	14,675	22,012	26,415	29,350	30,817	33,752	44,024	51,362	58,699	73,374
CAP M&I	Pine	Gila County	11	19	28	34	37	39	43	56	66	75	94
CAP M&I	Queen Creek	Maricopa County	35	58	86	104	115	121	132	173	202	230	288
CAP M&I	Rio Verde Utilities	Maricopa County	57	94	142	170	189	198	217	283	331	378	472
CAP M&I	San Tan Irrigation District	Maricopa County	16	27	41	49	55	58	63	82	96	110	137
CAP M&I	Scottsdale	Maricopa County	3,687	6,146	9,218	11,062	12,291	12,906	14,135	18,437	21,509	24,582	30,728
CAP M&I	Spanish Trail Water Company	Pima County	212	353	530	636	707	742	813	1,060	1,237	1,414	1,767

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Surprise	Maricopa County	716	1,193	1,789	2,147	2,385	2,505	2,743	3,578	4,174	4,771	5,963
CAP M&I	Tempe	Maricopa County	301	502	753	904	1,004	1,054	1,155	1,506	1,757	2,009	2,511
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	5	8	12	15	17	17	19	25	29	33	41
CAP M&I	Tucson	Pima County	10,068	16,780	25,169	30,203	33,559	35,237	38,593	50,339	58,728	67,118	83,898
CAP M&I	Vail Water Company	Pima County	130	216	324	389	432	454	497	648	756	864	1,080
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	204	340	510	611	679	713	781	1,019	1,189	1,359	1,698
4(i)	Arizona State Land Department	Yuma County	65	109	163	196	218	228	250	326	381	435	544
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	4	6	10	12	13	14	15	19	23	26	32
4(i)	B&F Investment, LLC	La Paz County	3	5	7	8	9	10	11	14	16	18	23
4(i)	Bullhead City	Mohave County	668	1,113	1,669	2,003	2,225	2,336	2,559	3,338	3,894	4,450	5,563
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	94	156	235	282	313	329	360	469	548	626	782
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	307	512	768	922	1,024	1,075	1,178	1,536	1,792	2,048	2,560
4(i)	Bureau of Land Management	La Paz County	267	444	667	800	889	933	1,022	1,333	1,555	1,778	2,222
4(i)	Crystal Beach Water Conservation District	Mohave County	6	10	14	17	19	20	22	29	33	38	48
4(i)	Ehrenburg Improvement District	La Paz County	31	51	77	92	103	108	118	154	180	205	257
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	82	137	206	247	274	288	315	411	480	548	685
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	2	4	6	7	8	8	9	12	14	16	20
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	0	0	0	0	0	0	0	0	1
4(i)	Gold Dome Mining Corporation	Yuma County	0	1	1	1	2	2	2	2	3	3	4
4(i)	Golden Shores Water Conservation District	Mohave County	89	149	223	267	297	312	342	446	520	594	743
4(i)	GSC Farm, LLC	La Paz County	3	6	8	10	11	12	13	17	20	22	28
4(i)	Hillcrest Water Company	La Paz County	4	6	9	11	12	13	14	18	21	24	30

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Lake Havasu City	Mohave County	791	1,319	1,978	2,374	2,638	2,769	3,033	3,956	4,616	5,275	6,594
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	88	147	220	265	294	309	338	441	514	588	735
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	299	498	747	897	996	1,046	1,146	1,495	1,744	1,993	2,491
4(i)	La Paz County	La Paz County	23	39	58	70	78	81	89	116	136	155	194
4(i)	Martinez Lake Cabin Sites	Yuma County	1	2	2	3	3	3	4	5	6	7	8
4(i)	McAlister Family Trust	Mohave County	2	3	5	6	6	6	7	9	11	12	15
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	45	75	112	135	150	157	172	224	262	299	374
4(i)	Mohave Water Conservation District	Mohave County	80	134	200	241	267	281	307	401	468	535	668
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	134	223	334	401	446	468	512	668	780	891	1,114
4(i)	Parker, Town of[1]	La Paz County	29	48	72	86	96	101	110	144	168	192	240
4(i)	Quartzsite, Town of	La Paz County	71	119	178	213	237	249	273	356	415	474	593
4(i)	Queen Creek, Town of	Maricopa County	135	225	338	406	451	473	518	676	789	901	1,127
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	0	0	0	0	0	0	0	0	1
4(i)	Shepard Water Company, Incorporated	Yuma County	2	4	5	6	7	8	8	11	13	14	18
4(i)	Somerton, City of	Yuma County	50	83	125	150	166	175	191	249	291	332	416
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	5	8	12	15	16	17	19	24	28	32	40
4(i)	TV Marble Canyon AZ, LLC	Coconino County	3	5	8	9	10	11	12	15	18	20	25
3	City of Yuma[1]	Yuma County	3,227	5,378	8,066	9,680	10,755	11,293	12,369	16,133	18,822	21,511	26,888
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	2	3	4	5	6	6	6	8	10	11	14
3	Kaman, Inc.	Yuma County	0	0	0	0	0	0	1	1	1	1	1
3	Department of the Navy, MCAS	Yuma County	199	332	499	598	665	698	765	997	1,164	1,330	1,662
3	City of Yuma (cemetery)	Yuma County	4	7	10	12	13	14	15	20	23	27	33

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Mesa Fruit Growers' Association	Yuma County	1	2	2	3	3	3	4	5	6	7	8
3	Desert Lawn Memorial Park Association	Yuma County	9	15	23	28	31	32	35	46	54	61	76
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	284	474	711	853	948	996	1,090	1,422	1,659	1,897	2,371
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	450	749	1,124	1,349	1,499	1,574	1,724	2,248	2,623	2,998	3,747
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	199	332	499	598	665	698	765	997	1,164	1,330	1,662
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	184	306	459	551	612	642	704	918	1,071	1,224	1,529
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	332	554	831	997	1,108	1,164	1,275	1,662	1,940	2,217	2,771
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	7	11	17	20	22	23	25	33	39	44	55
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	7	11	17	20	22	23	25	33	39	44	55
3	Department of the Army - Yuma Proving Ground	Yuma County	75	125	188	225	250	263	288	375	438	501	626
3	Yuma Union High School District	Yuma County	10	16	25	30	33	34	38	49	57	66	82
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	17	28	41	50	55	58	63	83	96	110	138
2	Cibola National Wildlife Refuge	La Paz County	1,117	1,861	2,792	3,350	3,722	3,908	4,281	5,583	6,514	7,445	9,306
2	Lake Mead National Recreation Area	Mohave County	23	38	57	68	76	80	87	114	133	152	190
2	Bureau of Reclamation - Davis Dam	Mohave County	0	1	1	1	2	2	2	2	3	3	4
2	Imperial National Wildlife Refuge	La Paz County	1,529	2,549	3,824	4,588	5,098	5,353	5,863	7,647	8,922	10,196	12,745
2	Havasu Lake National Wildlife Refuge	Mohave County	2,487	4,145	6,217	7,461	8,290	8,704	9,533	12,435	14,507	16,580	20,724
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	16	26	39	47	53	55	61	79	92	105	132
1	PPR No. 20, Parker, City of	La Paz County	27	44	66	80	89	93	102	133	155	177	222
1	PPR No. 21, Yuma, City of	Yuma County	98	164	246	295	328	344	377	491	573	655	819
-	-	**Subtotal**	**63,820**	**106,366**	**159,550**	**191,460**	**212,733**	**223,369**	**244,643**	**319,099**	**372,282**	**425,466**	**531,832**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	25,801	43,002	64,503	77,403	86,004	90,304	98,904	129,006	150,506	172,007	215,009
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 30, Stephenson	San Bernardino	10	17	26	31	34	36	39	51	60	68	85
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 38, Andrade	San Bernardino	3	5	7	8	9	10	11	14	16	19	23
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	3	4	6	8	9	9	10	13	15	17	21
PPR	PPR No. 39, Reynolds	San Bernardino	2	3	4	5	5	5	6	8	9	10	13
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	18	30	45	54	61	64	70	91	106	121	151
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	5	9	13	15	17	18	20	26	30	34	43
PPR	PPR No. 43, City of Needles	San Bernardino	63	105	158	190	211	221	242	316	369	421	526
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	33	55	83	100	111	116	127	166	194	221	277
-	-	**Subtotal**	**25,939**	**43,232**	**64,848**	**77,818**	**86,464**	**90,787**	**99,434**	**129,696**	**151,312**	**172,929**	**216,161**
Nevada			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	**-**	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	6,165	10,276	15,414	18,496	20,551	21,579	23,634	30,827	35,965	41,103	51,378
8	Big Bend Water District	Clark	326	543	815	978	1,086	1,140	1,249	1,629	1,901	2,172	2,715
8	Robert B. Griffith Project	Clark	10,512	17,520	26,280	31,536	35,040	36,792	40,296	52,560	61,319	70,079	87,599
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	1	1	1	1	1	1	2	2	2	3
7	Bureau of Reclamation (includes Sportsman Park)	Clark	10	16	24	29	33	34	37	49	57	65	81
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	2	3	4	5	6	6	6	8	10	11	14
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	138	231	346	415	461	484	530	692	807	922	1,153
6	Las Vegas Valley Water District	Clark	533	888	1,332	1,598	1,776	1,865	2,042	2,664	3,108	3,552	4,440
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	32	53	80	96	107	112	123	160	187	214	267
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	284	473	710	851	946	993	1,088	1,419	1,656	1,892	2,365
4	City of Henderson	Clark	549	915	1,373	1,647	1,830	1,922	2,105	2,745	3,203	3,660	4,575
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	517	862	1,292	1,551	1,723	1,809	1,982	2,585	3,016	3,446	4,308

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Boulder City	Clark	203	339	508	610	677	711	779	1,016	1,185	1,355	1,693
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	100	166	249	299	332	349	382	499	582	665	831
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	20	33	50	60	66	70	76	100	116	133	166
-	-	**Subtotal**	**19,391**	**32,318**	**48,477**	**58,172**	**64,636**	**67,868**	**74,331**	**96,954**	**113,113**	**129,272**	**161,590**
-	-	**Total**	**109,150**	**181,917**	**272,875**	**327,450**	**363,833**	**382,025**	**418,408**	**545,750**	**636,708**	**727,666**	**909,583**
	Summary by County												
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	3	5	8	9	10	11	12	15	18	20	25
-	Gila County	2	214	357	535	642	714	750	821	1,071	1,249	1,428	1,785
-	La Paz County	14	3,124	5,206	7,810	9,371	10,413	10,933	11,975	15,619	18,222	20,825	26,032
-	Maricopa County	55	34,798	57,996	86,994	104,393	115,993	121,792	133,391	173,989	202,987	231,985	289,981
-	Mohave County	17	5,199	8,665	12,997	15,596	17,329	18,196	19,929	25,994	30,326	34,658	43,323
-	Pima County	13	14,741	24,568	36,851	44,222	49,135	51,592	56,505	73,703	85,986	98,270	122,838
-	Pinal County	8	1,979	3,298	4,947	5,936	6,596	6,926	7,586	9,894	11,543	13,192	16,490
-	Yuma County	18	3,763	6,272	9,407	11,289	12,543	13,170	14,425	18,815	21,951	25,087	31,358
-	**Subtotal Arizona Domestic**	**128**	**63,820**	**106,366**	**159,550**	**191,460**	**212,733**	**223,369**	**244,643**	**319,099**	**372,282**	**425,466**	**531,832**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	25,801	43,002	64,503	77,403	86,004	90,304	98,904	129,006	150,506	172,007	215,009
-	Imperial County	32	39	66	99	118	132	138	151	197	230	263	329
-	Riverside County	5	0	0	0	1	1	1	1	1	1	1	2
-	San Bernardino	7	98	164	246	295	328	345	377	492	574	656	821
-	**Subtotal California Domestic**	**45**	**25,939**	**43,232**	**64,848**	**77,818**	**86,464**	**90,787**	**99,434**	**129,696**	**151,312**	**172,929**	**216,161**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	19,391	32,318	48,477	58,172	64,636	67,868	74,331	96,954	113,113	129,272	161,590
-	**Subtotal Nevada Domestic**	**15**	**19,391**	**32,318**	**48,477**	**58,172**	**64,636**	**67,868**	**74,331**	**96,954**	**113,113**	**129,272**	**161,590**

[1]This user also holds a PPR entitlement.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Disclaimer: These modeling results for the pro rata alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.

C.9 Lower Basin Pro Rata Alternative Distribution Model

The Lower Basin Pro Rata Alternative Distribution Model represents a distribution of shortages outside the priority system. It simulates shortages and distributes water pro rata, without regard to priority, but within the framework of the Lower Division States proposal submitted on March 6, 2024. This Alternative Distribution Model reflects a modeling commitment to stakeholders to display the results of this distribution of water; it is not an interpretation of law, contracts, or a legal position.

The Excel workbook contains formulas to extend the proposed distribution to deeper shortage levels (pro rata) as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

C.9.1 Distribution Among States for the Lower Basin Pro Rata Alternative Distribution Model

The Lower Basin Pro Rata Alternative Distribution Model distributes shortages up to 1.5 maf among states based on the specified state reductions modeled and described for the Lower Basin Priority Shortage Allocation Model. Shortages in excess of 1.5 maf are distributed among the Lower Division States and Mexico in proportion to the unreduced remainder of each apportionment, as described below.

- Arizona bears 27.20 percent of the shortage in excess of 1.5 maf, computed as a ratio of Arizona's apportionment less the amount of shortage applied to Arizona under the Static Reduction Zone, over the sum of the apportionments of the Lower Division States and Mexico less the total amount of shortage applied to users under the Static Reduction Zone, or
    - (2.8 maf – 760 kaf) / (9.0 maf – 1.5 maf) = 27.20 percent
- California bears 52.80 percent of the shortage in excess of 1.5 maf, computed as a ratio of California's apportionment less the amount of shortage applied to California under the Static Reduction Zone, over the sum of the apportionments of the Lower Division States and Mexico less the total amount of shortage applied to users under the Static Reduction Zone, or
    - (4.4 maf – 440 kaf) / (9.0 maf – 1.5 maf) = 52.80 percent
- Nevada bears 3.33 percent of the shortage in excess of 1.5 maf, computed as a ratio of Nevada's apportionment less the amount of shortage applied to Nevada under the Static Reduction Zone, over the sum of the apportionments of the Lower Division States and

Mexico less the total amount of shortage applied to users under the Static Reduction Zone, or

  - (300 kaf – 50 kaf) / (9.0 maf – 1.5 maf) = 3.33 percent

- Mexico bears 16.67 percent of the shortage in excess of 1.5 maf, computed as a ratio of Mexico's allotment less the amount of shortage applied to Mexico under the Static Reduction Zone, over the sum of the apportionments of the Lower Division States and Mexico less the total amount of shortage applied to users under the Static Reduction Zone, or

  - (1.5 maf – 250 kaf) / (9.0 maf – 1.5 maf) = 16.67 percent

PPRs are not recognized as a basin-wide first priority without regard to state lines and do not affect the distribution of shortage among states in this Alternative Distribution Model.

Table C-41 below shows a distribution of shortage among the Lower Division States and corresponding volumes of water available to each Lower Division State under the Lower Basin Pro Rata Shortage Allocation Model. Total shortage volumes include an assumed component for Mexico, as described in the sections that follow, and will not sum across rows.

Table C-41
Summary of Shortage Volumes and Available Water by Lower Division State Under the Lower Basin Pro Rata Alternative Distribution Model (af)

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
0	0	2,800,000	0	4,400,000	0	300,000
(100,000)	80,000	2,720,000	0	4,400,000	3,333	296,667
(200,000)	160,000	2,640,000	0	4,400,000	6,667	293,333
(300,000)	240,000	2,560,000	0	4,400,000	10,000	290,000
(400,000)	283,333	2,516,667	36,667	4,363,333	13,333	286,667
(500,000)	326,667	2,473,333	73,333	4,326,667	16,667	283,333
(600,000)	370,000	2,430,000	110,000	4,290,000	20,000	280,000
(700,000)	413,333	2,386,667	146,667	4,253,333	23,333	276,667
(800,000)	456,667	2,343,333	183,333	4,216,667	26,667	273,333
(900,000)	500,000	2,300,000	220,000	4,180,000	30,000	270,000
(1,000,000)	543,333	2,256,667	256,667	4,143,333	33,333	266,667
(1,100,000)	586,667	2,213,333	293,333	4,106,667	36,667	263,333
(1,200,000)	630,000	2,170,000	330,000	4,070,000	40,000	260,000
(1,300,000)	673,333	2,126,667	366,667	4,033,333	43,333	256,667
(1,400,000)	716,667	2,083,333	403,333	3,996,667	46,667	253,333
(1,500,000)	760,000	2,040,000	440,000	3,960,000	50,000	250,000

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(1,600,000)	787,200	2,012,800	492,800	3,907,200	53,333	246,667
(1,700,000)	814,400	1,985,600	545,600	3,854,400	56,667	243,333
(1,800,000)	841,600	1,958,400	598,400	3,801,600	60,000	240,000
(1,900,000)	868,800	1,931,200	651,200	3,748,800	63,333	236,667
(2,000,000)	896,000	1,904,000	704,000	3,696,000	66,667	233,333
(2,100,000)	923,200	1,876,800	756,800	3,643,200	70,000	230,000
(2,200,000)	950,400	1,849,600	809,600	3,590,400	73,333	226,667
(2,300,000)	977,600	1,822,400	862,400	3,537,600	76,667	223,333
(2,400,000)	1,004,800	1,795,200	915,200	3,484,800	80,000	220,000
(2,500,000)	1,032,000	1,768,000	968,000	3,432,000	83,333	216,667
(2,600,000)	1,059,200	1,740,800	1,020,800	3,379,200	86,667	213,333
(2,700,000)	1,086,400	1,713,600	1,073,600	3,326,400	90,000	210,000
(2,800,000)	1,113,600	1,686,400	1,126,400	3,273,600	93,333	206,667
(2,900,000)	1,140,800	1,659,200	1,179,200	3,220,800	96,667	203,333
(3,000,000)	1,168,000	1,632,000	1,232,000	3,168,000	100,000	200,000
(3,100,000)	1,195,200	1,604,800	1,284,800	3,115,200	103,333	196,667
(3,200,000)	1,222,400	1,577,600	1,337,600	3,062,400	106,667	193,333
(3,300,000)	1,249,600	1,550,400	1,390,400	3,009,600	110,000	190,000
(3,400,000)	1,276,800	1,523,200	1,443,200	2,956,800	113,333	186,667
(3,500,000)	1,304,000	1,496,000	1,496,000	2,904,000	116,667	183,333
(3,600,000)	1,331,200	1,468,800	1,548,800	2,851,200	120,000	180,000
(3,700,000)	1,358,400	1,441,600	1,601,600	2,798,400	123,333	176,667
(3,800,000)	1,385,600	1,414,400	1,654,400	2,745,600	126,667	173,333
(3,900,000)	1,412,800	1,387,200	1,707,200	2,692,800	130,000	170,000
(4,000,000)	1,440,000	1,360,000	1,760,000	2,640,000	133,333	166,667
(4,100,000)	1,467,200	1,332,800	1,812,800	2,587,200	136,667	163,333
(4,200,000)	1,494,400	1,305,600	1,865,600	2,534,400	140,000	160,000
(4,300,000)	1,521,600	1,278,400	1,918,400	2,481,600	143,333	156,667
(4,400,000)	1,548,800	1,251,200	1,971,200	2,428,800	146,667	153,333
(4,500,000)	1,576,000	1,224,000	2,024,000	2,376,000	150,000	150,000
(4,600,000)	1,603,200	1,196,800	2,076,800	2,323,200	153,333	146,667
(4,700,000)	1,630,400	1,169,600	2,129,600	2,270,400	156,667	143,333
(4,800,000)	1,657,600	1,142,400	2,182,400	2,217,600	160,000	140,000
(4,900,000)	1,684,800	1,115,200	2,235,200	2,164,800	163,333	136,667
(5,000,000)	1,712,000	1,088,000	2,288,000	2,112,000	166,667	133,333
(5,100,000)	1,739,200	1,060,800	2,340,800	2,059,200	170,000	130,000
(5,200,000)	1,766,400	1,033,600	2,393,600	2,006,400	173,333	126,667
(5,300,000)	1,793,600	1,006,400	2,446,400	1,953,600	176,667	123,333
(5,400,000)	1,820,800	979,200	2,499,200	1,900,800	180,000	120,000

Total Lower Basin Shortage Volumes	Arizona Shortage Volume	Arizona Available Water	California Shortage Volume	California Available Water	Nevada Shortage Volume	Nevada Available Water
(5,500,000)	1,848,000	952,000	2,552,000	1,848,000	183,333	116,667
(5,600,000)	1,875,200	924,800	2,604,800	1,795,200	186,667	113,333
(5,700,000)	1,902,400	897,600	2,657,600	1,742,400	190,000	110,000
(5,800,000)	1,929,600	870,400	2,710,400	1,689,600	193,333	106,667
(5,900,000)	1,956,800	843,200	2,763,200	1,636,800	196,667	103,333
(6,000,000)	1,984,000	816,000	2,816,000	1,584,000	200,000	100,000
(6,100,000)	2,011,200	788,800	2,868,800	1,531,200	203,333	96,667
(6,200,000)	2,038,400	761,600	2,921,600	1,478,400	206,667	93,333
(6,300,000)	2,065,600	734,400	2,974,400	1,425,600	210,000	90,000
(6,400,000)	2,092,800	707,200	3,027,200	1,372,800	213,333	86,667
(6,500,000)	2,120,000	680,000	3,080,000	1,320,000	216,667	83,333
(6,600,000)	2,147,200	652,800	3,132,800	1,267,200	220,000	80,000
(6,700,000)	2,174,400	625,600	3,185,600	1,214,400	223,333	76,667
(6,800,000)	2,201,600	598,400	3,238,400	1,161,600	226,667	73,333
(6,900,000)	2,228,800	571,200	3,291,200	1,108,800	230,000	70,000
(7,000,000)	2,256,000	544,000	3,344,000	1,056,000	233,333	66,667
(7,100,000)	2,283,200	516,800	3,396,800	1,003,200	236,667	63,333
(7,200,000)	2,310,400	489,600	3,449,600	950,400	240,000	60,000
(7,300,000)	2,337,600	462,400	3,502,400	897,600	243,333	56,667
(7,400,000)	2,364,800	435,200	3,555,200	844,800	246,667	53,333
(7,500,000)	2,392,000	408,000	3,608,000	792,000	250,000	50,000
(7,600,000)	2,419,200	380,800	3,660,800	739,200	253,333	46,667
(7,700,000)	2,446,400	353,600	3,713,600	686,400	256,667	43,333
(7,800,000)	2,473,600	326,400	3,766,400	633,600	260,000	40,000
(7,900,000)	2,500,800	299,200	3,819,200	580,800	263,333	36,667
(8,000,000)	2,528,000	272,000	3,872,000	528,000	266,667	33,333
(8,100,000)	2,555,200	244,800	3,924,800	475,200	270,000	30,000
(8,200,000)	2,582,400	217,600	3,977,600	422,400	273,333	26,667
(8,300,000)	2,609,600	190,400	4,030,400	369,600	276,667	23,333
(8,400,000)	2,636,800	163,200	4,083,200	316,800	280,000	20,000
(8,500,000)	2,664,000	136,000	4,136,000	264,000	283,333	16,667
(8,600,000)	2,691,200	108,800	4,188,800	211,200	286,667	13,333
(8,700,000)	2,718,400	81,600	4,241,600	158,400	290,000	10,000
(8,800,000)	2,745,600	54,400	4,294,400	105,600	293,333	6,667
(8,900,000)	2,772,800	27,200	4,347,200	52,800	296,667	3,333
(9,000,000)	2,800,000	0	4,400,000	0	300,000	0

C.9.2 Distribution Within States for the Lower Basin Pro Rata Alternative Distribution Model

The Lower Basin Pro Rata Alternative Distribution Model simulates shortages and distributes water on a proportional basis (i.e., at the same percentage reduction from each user's entitlement) within each of the Lower Division States according to the shortage calculated for the state as described in the previous section.

Entitlements, as modeled for the Priority Shortage Allocation Model, form the baseline against which shortages are assessed for each water user. Each entitlement's percentage share of the shortage to each state is calculated as the ratio of the entitlement to the sum of all entitlements within the state. The resulting percentages are multiplied by the volume of shortage to the state to determine the volume of shortage assigned to each entitlement. At a given level of shortage, as a consequence of how that shortage is distributed as described in this paragraph and the previous section, all entitlements within a given state bear the same percentage reduction, but bear a different percentage reduction from entitlements in a different state. The volume of shortage assigned to a water user with entitlements in different priority categories is the sum across multiple line items in the model; designations of priority do not affect the function of this Alternative Distribution Model, but are retained to facilitate comparison of the results between models.

Because PPRs are not recognized in this Alternative Distribution Model as a basin-wide first priority, PPRs are included in the distribution of shortages.

In the Lower Basin Pro Rata Alternative Distribution Model, as in the Pro Rata Alternative Distribution Model, the internal CAP priority system set forth in the CAP Master Repayment Contract and elsewhere is assumed to be inoperable. Instead, individual long-term CAP contracts and subcontracts (rather than the Master CAP Repayment Contract) are modeled as mainstream consumptive use equivalents, with 5 percent for CAP main system loss added to the contract or subcontract volume; all other entitlements are shown as calculated for the Priority Shortage Allocation Model. As a result, this Alternative Distribution Model does not emulate an Arizona P4 shortage sharing formula and does not calculate an Available CAP Supply or a volume of shortage for CAP at the project level. Note that entitlements within the state of Arizona, as modeled in all models, exceed the state's 2.8 maf annual apportionment; in this Alternative Distribution Model, unlike in priority-based modeling, that has a small effect on the distribution of water.

C.9.3 Lower Basin Pro Rata Alternative Distribution Model Results

The tables in this section present the results of the Lower Basin Pro Rata Alternative Distribution Model over a range of total shortages to the Lower Basin including Mexico.

Table C-42, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-43, the Tribal Summary, presents the shortage impacts on tribes.

Table C-44, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-45, the Domestic Summary, presents the shortage impacts on domestic users.

Table C-42
Lower Basin Pro Rata Alternative Distribution Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-	-	600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion	-	-	-	-	-	-	-	-	-	-	-
-	NIA Priority	37,628	55,256	77,291	85,589	91,122	93,888	99,420	118,784	132,615	146,446	174,108
-	M&I Priority	87,917	129,104	180,587	199,976	212,902	219,366	232,292	277,534	309,849	342,165	406,796
-	Indian Priority	47,216	69,335	96,984	107,397	114,339	117,810	124,752	149,049	166,404	183,759	218,469
-	4th Priority i (Mainstream)	14,281	20,971	29,334	32,484	34,584	35,633	37,733	45,082	50,331	55,581	66,079
-	2nd & 3rd Priorities	104,602	153,605	214,858	237,927	253,306	260,996	276,375	330,203	368,651	407,099	483,996
-	1st Priority (Present Perfected Rights)	78,355	115,062	160,946	178,227	189,747	195,507	207,028	247,349	276,150	304,951	362,552
-	**Subtotal**	**370,000**	**543,333**	**760,000**	**841,600**	**896,000**	**923,200**	**977,600**	**1,168,000**	**1,304,000**	**1,440,000**	**1,712,000**
California	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	9,700	22,633	38,800	52,768	62,080	66,736	76,048	108,641	131,921	155,201	201,761
-	3rd Priority (IID, CVWD, PVID)	20,875	48,708	83,500	113,560	133,600	143,620	163,660	233,800	283,900	334,000	434,200
-	2nd Priority (Yuma Project Reservation Division)	182	425	729	992	1,167	1,255	1,430	2,042	2,480	2,918	3,793
-	1st Priority (PVID)	9,209	21,489	36,838	50,099	58,940	63,361	72,202	103,146	125,249	147,351	191,557
-	Present Perfected Rights (PPRs)	70,033	163,411	280,133	380,980	448,212	481,828	549,060	784,371	952,451	1,120,530	1,456,690
-	**Subtotal**	**110,000**	**256,667**	**440,000**	**598,400**	**704,000**	**756,800**	**862,400**	**1,232,000**	**1,496,000**	**1,760,000**	**2,288,000**
Nevada	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	6,181	10,302	15,453	18,543	20,604	21,634	23,694	30,906	36,056	41,207	51,509
-	8th Priority (SNWA & Big Bend)	10,865	18,109	27,163	32,596	36,218	38,029	41,650	54,327	63,381	72,436	90,544
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	150	251	376	451	502	527	577	752	878	1,003	1,254
-	6th Priority (Las Vegas Valley Water District)	534	890	1,335	1,602	1,780	1,869	2,047	2,671	3,116	3,561	4,451
-	5th Priority (PABCO)	32	54	80	97	107	113	123	161	188	214	268
-	4th Priority (Henderson & Basic)	1,353	2,255	3,383	4,060	4,511	4,736	5,187	6,766	7,894	9,022	11,277
-	3rd Priority (Boulder City)	204	340	509	611	679	713	781	1,019	1,188	1,358	1,698

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-	-	600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	2nd Priority (Lake Mead National Rec Area)	100	167	250	300	333	350	383	500	583	667	833
-	1st Priority (PPRs: LMNRA & Fort Mojave Indian Reservation)	580	966	1,450	1,740	1,933	2,029	2,223	2,899	3,382	3,866	4,832
-	**Subtotal**	**20,000**	**33,333**	**50,000**	**60,000**	**66,667**	**70,000**	**76,667**	**100,000**	**116,667**	**133,333**	**166,667**
-	**Lower Basin States Subtotal**	**500,000**	**833,333**	**1,250,000**	**1,500,000**	**1,666,667**	**1,750,000**	**1,916,667**	**2,500,000**	**2,916,667**	**3,333,333**	**4,166,667**
Mexico	**Mexico Subtotal**	**100,000**	**166,667**	**250,000**	**300,000**	**333,333**	**350,000**	**383,333**	**500,000**	**583,333**	**666,667**	**833,333**
-	**Total**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

Disclaimer: These modeling results for the Lower Basin Pro Rata should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here

Table C-43
Lower Basin Pro Rata Alternative Distribution Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	3,273	4,806	6,723	7,445	7,926	8,167	8,648	10,332	11,535	12,738	15,144
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	3,881	5,699	7,972	8,828	9,398	9,684	10,254	12,251	13,678	15,104	17,957
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	16,597	24,373	34,092	37,752	40,193	41,413	43,853	52,394	58,495	64,595	76,797
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	550	808	1,131	1,252	1,333	1,374	1,454	1,738	1,940	2,142	2,547
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	26,314	38,641	54,050	59,853	63,722	65,656	69,525	83,066	92,738	102,410	121,754
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	5,202	7,639	10,686	11,833	12,598	12,980	13,745	16,422	18,334	20,246	24,071
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	168	246	344	381	406	418	443	529	591	652	776
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	8,023	11,782	16,481	18,250	19,430	20,020	21,199	25,328	28,277	31,226	37,125
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	2,509	3,685	5,154	5,708	6,077	6,261	6,630	7,921	8,844	9,766	11,611
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	69	101	141	157	167	172	182	217	243	268	318
CAP Indian Priority	San Carlos Apache Tribe	Gila County	1,748	2,567	3,590	3,976	4,233	4,361	4,618	5,517	6,160	6,802	8,087
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	1,830	2,688	3,760	4,163	4,433	4,567	4,836	5,778	6,451	7,124	8,469
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	1,101	1,617	2,261	2,504	2,666	2,747	2,909	3,476	3,880	4,285	5,094
CAP Indian Priority	Tonto Apache Tribe	Gila County	18	26	36	40	43	44	47	56	62	69	82
CAP Indian Priority	Yavapai Apache Nation	Gila County	165	243	339	376	400	412	436	521	582	643	764
CAP M&I Priority	San Carlos Apache Tribe	Gila County	2,497	3,667	5,129	5,680	6,047	6,231	6,598	7,883	8,801	9,719	11,555
4(i)	Hopi Tribe[1]	La Paz County	398	585	818	906	964	993	1,052	1,257	1,403	1,549	1,842
4(i)	Cocopah Indian Reservation	Yuma County	178	261	365	405	431	444	470	562	627	692	823

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	459	674	942	1,043	1,111	1,145	1,212	1,448	1,617	1,785	2,123
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	1,341	1,969	2,754	3,050	3,247	3,346	3,543	4,233	4,726	5,218	6,204
3	Ak-Chin Indian Community[1]	Pinal County	6,554	9,624	13,461	14,907	15,870	16,352	17,315	20,688	23,097	25,506	30,323
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	675	991	1,386	1,534	1,633	1,683	1,782	2,129	2,377	2,625	3,121
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	100	147	206	228	242	250	265	316	353	390	463
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	5,348	7,854	10,986	12,165	12,952	13,345	14,131	16,884	18,850	20,815	24,747
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	1,980	2,907	4,066	4,503	4,794	4,939	5,230	6,249	6,977	7,704	9,160
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	524	770	1,077	1,193	1,270	1,308	1,385	1,655	1,848	2,041	2,426
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	3,543	5,203	7,278	8,059	8,580	8,841	9,362	11,185	12,487	13,790	16,394
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	17,177	25,223	35,282	39,070	41,595	42,858	45,383	54,222	60,536	66,849	79,476
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	24,427	35,871	50,175	55,562	59,154	60,949	64,541	77,111	86,090	95,069	113,026
-	-	**Subtotal**	**136,649**	**200,665**	**280,685**	**310,822**	**330,913**	**340,959**	**361,050**	**431,369**	**481,597**	**531,824**	**632,280**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	153	357	612	833	980	1,053	1,200	1,715	2,082	2,449	3,184
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	226	527	903	1,228	1,445	1,553	1,770	2,528	3,070	3,612	4,695
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	913	2,131	3,652	4,967	5,844	6,282	7,159	10,227	12,418	14,610	18,993
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	85	198	340	462	544	585	666	952	1,156	1,360	1,767
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	583	1,361	2,334	3,174	3,734	4,014	4,575	6,535	7,936	9,336	12,137
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	156	364	623	848	997	1,072	1,221	1,745	2,119	2,493	3,241
-	-	**Subtotal**	**2,116**	**4,938**	**8,465**	**11,512**	**13,544**	**14,559**	**16,591**	**23,701**	**28,780**	**33,859**	**44,017**
Nevada			**-**	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	560	933	1,400	1,680	1,866	1,959	2,146	2,799	3,266	3,732	4,665

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	-	**Subtotal**	**560**	**933**	**1,400**	**1,680**	**1,866**	**1,959**	**2,146**	**2,799**	**3,266**	**3,732**	**4,665**
-	-	**Total**	**139,325**	**206,536**	**290,549**	**324,013**	**346,323**	**357,477**	**379,787**	**457,869**	**513,642**	**569,416**	**680,962**
	Summary by County												
_	Coconino County	0.83	428	629	879	974	1,037	1,068	1,131	1,352	1,509	1,666	1,981
_	Gila County	4.67	5,575	8,186	11,451	12,680	13,500	13,909	14,729	17,598	19,647	21,696	25,794
_	La Paz County	4	45,545	66,882	93,552	103,597	110,293	113,641	120,338	143,775	160,516	177,257	210,739
_	Maricopa County	2.6	17,213	25,277	35,357	39,153	41,683	42,949	45,480	54,337	60,664	66,991	79,645
_	Mohave County	2.5	7,603	11,165	15,617	17,294	18,412	18,971	20,089	24,002	26,796	29,591	35,180
_	Pima County	3	9,152	13,439	18,799	20,817	22,163	22,835	24,181	28,891	32,255	35,619	42,347
_	Pinal County	4.40	45,716	67,132	93,903	103,985	110,706	114,067	120,788	144,314	161,117	177,921	211,528
_	Yuma County	5	2,818	4,138	5,788	6,409	6,824	7,031	7,445	8,895	9,931	10,966	13,038
_	Apache County	1.00	1,300	1,909	2,670	2,956	3,148	3,243	3,434	4,103	4,581	5,059	6,014
_	Navajo County	1.00	1,300	1,909	2,670	2,956	3,148	3,243	3,434	4,103	4,581	5,059	6,014
_	**Subtotal Arizona Tribal**	**29**	**136,649**	**200,665**	**280,685**	**310,822**	**330,913**	**340,959**	**361,050**	**431,369**	**481,597**	**531,824**	**632,280**
_	**California**	-	-	-	-	-	-	-	-	-	-	-	-
_	San Bernardino	2.5	791	1846	3164	4303	5062	5442	6201	8859	10757	12655	16452
_	Riverside	0.50	412	962	1649	2242	2638	2835	3231	4616	5605	6594	8,572
_	Imperial	1	913	2131	3652	4967	5844	6282	7159	10227	12418	14610	18993
_	**Subtotal California Tribal**	**4**	**2116**	**4938**	**8465**	**11512**	**13544**	**14559**	**16591**	**23701**	**28780**	**33859**	**44017**
_	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
_	Clark	1	560	933	1400	1680	1866	1959	2146	2799	3266	3732	4665
_	**Subtotal Nevada Tribal**	**1**	**560**	**933**	**1400**	**1680**	**1866**	**1959**	**2146**	**2799**	**3266**	**3732**	**4665**

Disclaimer: These modeling results for the Lower Basin Pro Rata should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and Tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Table C-44
Lower Basin Pro Rata Alternative Distribution Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	268	393	550	609	649	668	708	845	944	1,042	1,239
4(i)	Arizona State Land Department	Yuma County	554	814	1,138	1,261	1,342	1,383	1,464	1,750	1,953	2,157	2,564
4(i)	Beattie Farms, Southwest	Yuma County	95	139	194	215	229	236	250	299	333	368	438
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	39	57	80	89	95	98	103	123	138	152	181
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	12	17	24	27	28	29	31	37	41	46	54
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	179	263	367	407	433	446	473	565	631	696	828
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	20	30	41	46	49	50	53	63	71	78	93
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	693	1,017	1,423	1,575	1,677	1,728	1,830	2,186	2,441	2,696	3,205
4(i)	Curtis, Armon	Yuma County	26	38	52	58	62	64	68	81	90	99	118
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	107	157	220	244	260	268	283	338	378	417	496
4(i)	Matador Farms, LLC	La Paz County	383	563	787	872	928	957	1,013	1,210	1,351	1,492	1,774
4(i)	JRJ Partners, L.L.C.	Yuma County	92	135	189	209	223	230	243	290	324	358	426
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	2,481	3,644	5,097	5,644	6,009	6,192	6,556	7,833	8,746	9,658	11,482
4(i)	North Baja Pipeline, LLC[2]	La Paz County	41	60	84	93	99	102	108	129	144	159	189
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	79	116	162	179	191	196	208	249	277	306	364
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	41	60	84	93	99	102	108	129	144	159	189
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	41	61	85	94	100	103	109	131	146	161	192
4(i)	Red River Land Company, LLC	La Paz County	28	41	57	64	68	70	74	88	98	109	129
4(i)	Phillips, Milton and Jean	Yuma County	8	12	16	18	19	20	21	25	28	31	36
4(i)	Western Water, LLC	La Paz County	51	74	104	115	123	126	134	160	178	197	234
3	Sturges, Harold	Yuma County	44	64	90	100	106	110	116	139	155	171	203
3	Sturges, Irma	Yuma County	50	74	104	115	122	126	133	159	178	196	233
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	18,549	27,239	38,101	42,191	44,919	46,282	49,009	58,555	65,373	72,191	85,826

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	8,818	12,949	18,113	20,058	21,354	22,002	23,299	27,837	31,078	34,319	40,802
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	882	1,296	1,812	2,007	2,136	2,201	2,331	2,785	3,109	3,434	4,082
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	36,438	53,507	74,845	82,881	88,238	90,917	96,274	115,025	128,418	141,811	168,598
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	470	690	964	1,068	1,137	1,172	1,241	1,482	1,655	1,827	2,173
3	Yuma County Water Users' Association (14,701 af M&I includes YAO's 489.95 af conversion)[2,3]	Yuma County	10,394	15,264	21,351	23,643	25,171	25,935	27,464	32,813	36,633	40,454	48,095
3	University of Arizona	Yuma County	143	209	293	324	345	356	377	450	503	555	660
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	16	23	32	36	38	39	42	50	55	61	73
3	Unit B Irrigation & Drainage District[3]	Yuma County	2,213	3,250	4,546	5,034	5,360	5,522	5,848	6,987	7,800	8,614	10,241
1	PPR No. 15, Molina	Yuma County	42	61	86	95	101	104	110	132	147	162	193
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	58	86	120	133	141	145	154	184	205	227	270
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	570	838	1,172	1,297	1,381	1,423	1,507	1,801	2,010	2,220	2,639
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	803	1,179	1,649	1,826	1,944	2,003	2,121	2,534	2,829	3,124	3,715
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	22,323	32,781	45,853	50,776	54,058	55,699	58,981	70,469	78,674	86,879	103,290
1	PPR No. 7, Powers	Yuma County	82	120	168	186	198	204	216	258	288	318	378
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	51	75	105	116	123	127	135	161	180	198	236
1	PPR No. 10, Hulet (MVIDD)	Mohave County	76	112	157	174	185	191	202	241	269	297	354
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	74	109	153	169	180	185	196	235	262	289	344
1	PPR No. 12, Miller (MVIDD)	Mohave County	17	25	35	39	41	42	45	54	60	66	79
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	57	84	118	130	139	143	151	181	202	223	265
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	76	112	157	174	185	191	202	241	269	297	354
1	PPR No. 18, Swan (MVIDD)	Mohave County	68	100	140	155	165	170	180	214	239	264	314
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	6	8	11	13	13	14	15	17	19	21	25
-	-	**Subtotal**	**107,558**	**157,945**	**220,930**	**244,651**	**260,465**	**268,371**	**284,185**	**339,534**	**379,069**	**418,604**	**497,673**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
California			-	-	-	-	-	-	-	-	-	-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	125	292	500	680	800	860	980	1,400	1,700	2,000	2,600
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	8,250	19,250	33,000	44,880	52,800	56,760	64,680	92,400	112,200	132,000	171,600
3	Imperial Irrigation District (IID) (3a)	Imperial County	12,500	29,167	50,000	68,000	80,000	86,000	98,000	140,000	170,000	200,000	260,000
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	182	425	729	992	1,167	1,255	1,430	2,042	2,480	2,918	3,793
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	9,209	21,489	36,838	50,099	58,940	63,361	72,202	103,146	125,249	147,351	191,557
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	3	7	12	16	18	20	23	32	39	46	60
PPR	PPR No. 41, Chagnon	San Bernardino	2	4	8	10	12	13	15	22	26	31	40
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	2	4	6	8	10	11	12	17	21	25	32
PPR	PPR No. 34, Milpitas	Imperial County	2	4	7	9	11	12	14	19	24	28	36
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	488	1,139	1,952	2,654	3,123	3,357	3,825	5,465	6,636	7,807	10,149
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	65,000	151,667	260,000	353,600	416,000	447,200	509,600	728,000	884,000	1,040,000	1,352,000
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	2,363	5,513	9,451	12,853	15,121	16,255	18,523	26,462	32,132	37,802	49,143
PPR	PPR No. 42, Lawrence	Imperial County	2	4	8	10	12	13	15	22	26	31	40
PPR	PPR No. 37, Milpitas	Imperial County	1	3	4	6	7	8	9	12	15	18	23
PPR	PPR No. 33, Morgan	Imperial County	2	6	10	13	15	17	19	27	33	38	50
PPR	PPR No. 35, Simons	San Bernardino	1	2	4	5	6	7	8	11	13	15	20
-	-	**Subtotal**	**98,132**	**228,974**	**392,527**	**533,837**	**628,044**	**675,147**	**769,354**	**1,099,076**	**1,334,593**	**1,570,109**	**2,041,142**
Nevada			-	-	-	-	-	-	-	-	-	-	-
None	None	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**205,690**	**386,920**	**613,457**	**778,488**	**888,508**	**943,518**	**1,053,539**	**1,438,611**	**1,713,662**	**1,988,713**	**2,538,815**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	1,534	2,253	3,151	3,490	3,715	3,828	4,053	4,843	5,407	5,971	7,099
-	Mohave County	8	2,902	4,261	5,961	6,601	7,027	7,241	7,667	9,161	10,227	11,294	13,427
-	Yuma County	28	103,122	151,431	211,818	234,560	249,722	257,303	272,465	325,531	363,435	401,339	477,148
-	**Subtotal Arizona Irrigation**	**45**	**107,558**	**157,945**	**220,930**	**244,651**	**260,465**	**268,371**	**284,185**	**339,534**	**379,069**	**418,604**	**497,673**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Riverside County	3	14,161	33,042	56,644	77,036	90,631	97,428	111,023	158,604	192,590	226,577	294,550
-	Imperial County	10	83,966	195,922	335,865	456,777	537,385	577,689	658,296	940,423	1,141,943	1,343,462	1,746,500
-	San Bernardino	3	4	10	18	24	28	30	35	49	60	71	92
-	**Subtotal California Irrigation**	**16**	**98,132**	**228,974**	**392,527**	**533,837**	**628,044**	**675,147**	**769,354**	**1,099,076**	**1,334,593**	**1,570,109**	**2,041,142**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

Disclaimer: These modeling results for the Lower Basin Pro Rata should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement.

Table C-45
Lower Basin Pro Rata Alternative Distribution Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	383	563	788	872	928	957	1,013	1,210	1,351	1,492	1,774
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	2,503	3,675	5,141	5,693	6,061	6,245	6,613	7,900	8,820	9,740	11,580
CAP NIA-B	Carefree Water Company	Maricopa County	15	23	32	35	37	38	41	49	54	60	71
CAP NIA-B	Cave Creek	Maricopa County	53	78	109	121	129	133	140	168	187	207	246
CAP NIA-B	El Mirage	Maricopa County	181	266	373	413	439	453	479	573	639	706	839
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	443	650	909	1,007	1,072	1,105	1,170	1,398	1,560	1,723	2,049
CAP NIA-B	Freeport	Pima County	781	1,148	1,605	1,777	1,892	1,950	2,065	2,467	2,754	3,041	3,616
CAP NIA-B	Gilbert	Maricopa County	252	370	518	573	611	629	666	796	889	981	1,167
CAP NIA-B	Marana	Pima County	71	104	146	161	172	177	187	224	250	276	328
CAP NIA-B	Queen Creek	Maricopa County	573	841	1,177	1,303	1,387	1,429	1,513	1,808	2,019	2,229	2,650
CAP NIA-B	Resolution Copper	Maricopa County	308	452	633	701	746	769	814	972	1,085	1,199	1,425
CAP NIA-B	Rosemont Copper	Pima County	155	227	318	352	375	386	409	488	545	602	716
CAP NIA-B	SRP	Maricopa County	297	437	611	676	720	742	785	938	1,048	1,157	1,375
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	112	165	231	256	272	281	297	355	396	438	520
CAP NIA-A	Phoenix	Maricopa County	5,131	7,534	10,539	11,670	12,424	12,802	13,556	16,196	18,082	19,968	23,740
CAP NIA-A	Chandler	Maricopa County	540	793	1,109	1,228	1,308	1,347	1,427	1,705	1,903	2,102	2,499
CAP NIA-A	Gilbert	Maricopa County	212	311	434	481	512	528	559	668	745	823	979
CAP NIA-A	Glendale	Maricopa County	94	138	193	213	227	234	248	296	331	365	434
CAP NIA-A	Mesa	Maricopa County	764	1,122	1,569	1,738	1,850	1,906	2,018	2,412	2,692	2,973	3,535
CAP NIA-A	Scottsdale	Maricopa County	455	668	935	1,035	1,102	1,135	1,202	1,436	1,604	1,771	2,105

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Tempe	Maricopa County	3	5	7	7	8	8	8	10	11	12	15
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	69	101	141	157	167	172	182	217	243	268	318
CAP M&I	ASARCO	Pima County	2,890	4,244	5,936	6,574	6,999	7,211	7,636	9,123	10,186	11,248	13,373
CAP M&I	Avondale	Maricopa County	745	1,095	1,531	1,695	1,805	1,860	1,969	2,353	2,627	2,901	3,449
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	3,878	5,694	7,965	8,820	9,390	9,675	10,245	12,241	13,666	15,092	17,942
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	1,223	1,795	2,511	2,781	2,961	3,051	3,230	3,860	4,309	4,758	5,657
CAP M&I	Arizona Water Company, Coolidge	Pinal County	275	404	565	626	667	687	727	869	970	1,071	1,274
CAP M&I	Arizona Water Company, Superstition	Pinal County	865	1,270	1,777	1,967	2,095	2,158	2,285	2,730	3,048	3,366	4,002
CAP M&I	Arizona Water Company, White Tank	Maricopa County	133	196	274	303	323	332	352	421	470	518	616
CAP M&I	Buckeye	Maricopa County	9	14	19	21	23	23	25	30	33	36	43
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	884	1,299	1,817	2,012	2,142	2,207	2,337	2,792	3,117	3,442	4,092
CAP M&I	Carefree Water Company	Maricopa County	231	339	474	525	559	576	610	729	814	899	1,069
CAP M&I	Cave Creek	Maricopa County	307	450	630	697	743	765	810	968	1,081	1,193	1,419
CAP M&I	Chandler	Maricopa County	1,191	1,749	2,446	2,709	2,884	2,972	3,147	3,760	4,197	4,635	5,511
CAP M&I	Chaparral City Water Company	Maricopa County	1,226	1,800	2,518	2,789	2,969	3,059	3,240	3,870	4,321	4,772	5,673
CAP M&I	Circle City	Maricopa County	541	795	1,112	1,231	1,310	1,350	1,430	1,708	1,907	2,106	2,504
CAP M&I	El Mirage	Maricopa County	70	103	144	159	169	174	185	221	246	272	323
CAP M&I	Eloy	Pinal County	299	439	614	680	724	746	789	943	1,053	1,163	1,382
CAP M&I	EPCOR, Agua Fria	Maricopa County	1,527	2,242	3,136	3,473	3,697	3,809	4,034	4,819	5,380	5,942	7,064
CAP M&I	EPCOR, Paradise Valley	Maricopa County	445	653	913	1,011	1,077	1,109	1,175	1,404	1,567	1,731	2,057
CAP M&I	EPCOR, Sun City	Maricopa County	577	847	1,184	1,311	1,396	1,438	1,523	1,820	2,032	2,244	2,668
CAP M&I	EPCOR, Sun City West	Maricopa County	326	479	671	743	791	815	863	1,031	1,150	1,270	1,510
CAP M&I	Florence	Pinal County	282	414	579	641	683	703	745	890	993	1,097	1,304
CAP M&I	Freeport-Miami	Gila County	400	587	821	910	968	998	1,057	1,262	1,410	1,557	1,851

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	393	577	807	893	951	980	1,038	1,240	1,384	1,529	1,817
CAP M&I	Gilbert	Maricopa County	996	1,462	2,045	2,265	2,411	2,484	2,631	3,143	3,509	3,875	4,607
CAP M&I	Glendale	Maricopa County	2,372	3,483	4,872	5,396	5,744	5,919	6,267	7,488	8,360	9,232	10,976
CAP M&I	Goodyear	Maricopa County	1,478	2,171	3,037	3,363	3,580	3,689	3,906	4,667	5,210	5,754	6,840
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	9	13	18	20	21	22	23	28	31	34	41
CAP M&I	Green Valley Community Water Company	Pima County	393	578	808	895	952	981	1,039	1,242	1,386	1,531	1,820
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	261	384	537	595	633	652	691	825	922	1,018	1,210
CAP M&I	Marana	Pima County	321	472	660	731	779	802	849	1,015	1,133	1,251	1,488
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	92	134	188	208	222	228	242	289	323	356	423
CAP M&I	Mesa	Maricopa County	5,987	8,792	12,298	13,618	14,498	14,939	15,819	18,900	21,100	23,301	27,702
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	1,852	2,720	3,805	4,213	4,486	4,622	4,894	5,848	6,529	7,209	8,571
CAP M&I	Oro Valley	Pima County	1,418	2,083	2,913	3,226	3,434	3,539	3,747	4,477	4,998	5,520	6,562
CAP M&I	Peoria	Maricopa County	3,732	5,481	7,667	8,490	9,039	9,313	9,862	11,783	13,155	14,526	17,270
CAP M&I	Phoenix	Maricopa County	17,355	25,485	35,648	39,475	42,027	43,303	45,855	54,785	61,164	67,543	80,302
CAP M&I	Pine	Gila County	22	33	46	50	54	55	59	70	78	86	103
CAP M&I	Queen Creek	Maricopa County	68	100	140	155	165	170	180	215	240	265	315
CAP M&I	Rio Verde Utilities	Maricopa County	112	164	230	254	271	279	295	353	394	435	517
CAP M&I	San Tan Irrigation District	Maricopa County	32	48	67	74	79	81	86	103	114	126	150
CAP M&I	Scottsdale	Maricopa County	7,268	10,673	14,929	16,532	17,600	18,134	19,203	22,943	25,615	28,286	33,629
CAP M&I	Spanish Trail Water Company	Pima County	418	614	859	951	1,012	1,043	1,104	1,319	1,473	1,627	1,934
CAP M&I	Surprise	Maricopa County	1,411	2,071	2,897	3,208	3,416	3,519	3,727	4,453	4,971	5,490	6,526
CAP M&I	Tempe	Maricopa County	594	872	1,220	1,351	1,438	1,482	1,569	1,875	2,093	2,311	2,748
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	10	14	20	22	24	24	26	31	34	38	45
CAP M&I	Tucson	Pima County	19,844	29,140	40,761	45,137	48,055	49,514	52,431	62,643	69,937	77,231	91,819

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Vail Water Company	Pima County	256	375	525	581	619	638	675	807	901	995	1,183
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	402	590	825	914	973	1,002	1,061	1,268	1,416	1,563	1,859
4(i)	Arizona State Land Department	Yuma County	129	189	264	293	312	321	340	406	454	501	595
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	8	11	16	17	19	19	20	24	27	30	35
4(i)	B&F Investment, LLC	La Paz County	5	8	11	12	13	14	14	17	19	21	25
4(i)	Bullhead City	Mohave County	1,316	1,932	2,703	2,993	3,186	3,283	3,476	4,154	4,637	5,121	6,088
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	185	272	380	421	448	462	489	584	652	720	856
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	606	889	1,244	1,377	1,466	1,511	1,600	1,912	2,134	2,357	2,802
4(i)	Bureau of Land Management	La Paz County	526	772	1,080	1,195	1,273	1,311	1,389	1,659	1,852	2,045	2,432
4(i)	Crystal Beach Water Conservation District	Mohave County	11	17	23	26	27	28	30	36	40	44	52
4(i)	Ehrenburg Improvement District	La Paz County	61	89	125	138	147	151	160	192	214	236	281
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	162	238	333	369	393	404	428	512	571	631	750
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	5	7	10	11	11	12	12	15	16	18	22
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	0	0	0	0	0	0	0	1	1
4(i)	Gold Dome Mining Corporation	Yuma County	1	1	2	2	2	2	2	3	3	4	4
4(i)	Golden Shores Water Conservation District	Mohave County	176	258	361	399	425	438	464	554	619	684	813
4(i)	GSC Farm, LLC	La Paz County	7	10	14	15	16	16	17	21	23	26	31
4(i)	Hillcrest Water Company	La Paz County	7	11	15	16	17	18	19	23	25	28	33
4(i)	Lake Havasu City	Mohave County	1,560	2,290	3,204	3,548	3,777	3,892	4,121	4,923	5,497	6,070	7,217
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	174	255	357	395	421	434	459	549	613	676	804
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	589	865	1,210	1,340	1,427	1,470	1,557	1,860	2,076	2,293	2,726
4(i)	La Paz County	La Paz County	46	67	94	104	111	114	121	145	162	179	212
4(i)	Martinez Lake Cabin Sites	Yuma County	2	3	4	4	5	5	5	6	7	8	9

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	McAlister Family Trust	Mohave County	4	5	7	8	9	9	10	11	13	14	17
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	88	130	182	201	214	221	234	279	312	344	409
4(i)	Mohave Water Conservation District	Mohave County	158	232	325	360	383	394	418	499	557	615	731
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	263	387	541	599	638	657	696	832	928	1,025	1,219
4(i)	Parker, Town of[1]	La Paz County	57	83	116	129	137	141	150	179	200	221	262
4(i)	Quartzsite, Town of	La Paz County	140	206	288	319	340	350	371	443	494	546	649
4(i)	Queen Creek, Town of	Maricopa County	266	391	547	606	645	665	704	841	939	1,037	1,233
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	0	0	0	0	0	0	0	1	1
4(i)	Shepard Water Company, Incorporated	Yuma County	4	6	9	10	10	11	11	13	15	17	20
4(i)	Somerton, City of	Yuma County	98	144	202	224	238	245	260	310	346	383	455
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	10	14	20	22	23	24	25	30	34	37	44
4(i)	TV Marble Canyon AZ, LLC	Coconino County	6	9	12	14	14	15	16	19	21	23	28
3	City of Yuma[1]	Yuma County	6,360	9,339	13,063	14,466	15,401	15,869	16,804	20,076	22,414	24,752	29,427
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	3	5	7	8	8	8	9	11	12	13	15
3	Kaman, Inc.	Yuma County	0	0	1	1	1	1	1	1	1	1	1
3	Department of the Navy, MCAS	Yuma County	393	577	808	894	952	981	1,039	1,241	1,386	1,530	1,819
3	City of Yuma (cemetery)	Yuma County	8	12	16	18	19	20	21	25	28	31	36
3	Yuma Mesa Fruit Growers' Association	Yuma County	2	3	4	4	5	5	5	6	7	8	9
3	Desert Lawn Memorial Park Association	Yuma County	18	27	37	41	44	45	48	57	64	70	84
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	561	823	1,152	1,275	1,358	1,399	1,482	1,770	1,976	2,182	2,594
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	886	1,302	1,821	2,016	2,146	2,211	2,342	2,798	3,124	3,449	4,101
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	393	577	808	894	952	981	1,039	1,241	1,386	1,530	1,819
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	362	531	743	823	876	903	956	1,142	1,275	1,408	1,674

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	655	962	1,346	1,491	1,587	1,635	1,732	2,069	2,310	2,551	3,032
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	13	19	27	30	32	33	35	41	46	51	61
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	13	19	27	30	32	33	35	41	46	51	61
3	Department of the Army - Yuma Proving Ground	Yuma County	148	217	304	337	358	369	391	467	522	576	685
3	Yuma Union High School District	Yuma County	19	28	40	44	47	48	51	61	68	75	90
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	33	48	67	74	79	81	86	103	115	127	151
2	Cibola National Wildlife Refuge	La Paz County	2,201	3,232	4,521	5,007	5,330	5,492	5,816	6,948	7,757	8,566	10,184
2	Lake Mead National Recreation Area	Mohave County	45	66	92	102	109	112	119	142	158	175	208
2	Bureau of Reclamation - Davis Dam	Mohave County	1	1	2	2	2	2	2	3	3	4	4
2	Imperial National Wildlife Refuge	La Paz County	3,015	4,427	6,192	6,857	7,300	7,522	7,965	9,516	10,624	11,733	13,949
2	Havasu Lake National Wildlife Refuge	Mohave County	4,902	7,198	10,069	11,150	11,871	12,231	12,952	15,474	17,276	19,078	22,681
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	31	46	64	71	75	78	82	98	110	121	144
1	PPR No. 20, Parker, City of	La Paz County	52	77	108	119	127	131	139	166	185	204	243
1	PPR No. 21, Yuma, City of	Yuma County	194	284	398	441	469	483	512	612	683	754	896
-	-	**Subtotal**	**125,793**	**184,723**	**258,385**	**286,128**	**304,623**	**313,870**	**332,365**	**397,097**	**443,335**	**489,572**	**582,047**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	9,700	22,633	38,800	52,768	62,080	66,736	76,048	108,641	131,921	155,201	201,761
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 30, Stephenson	San Bernardino	4	9	15	21	25	26	30	43	52	61	80
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 38, Andrade	San Bernardino	1	2	4	6	7	7	8	12	14	17	22
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	1	2	4	5	6	7	8	11	13	15	20
PPR	PPR No. 39, Reynolds	San Bernardino	1	1	2	3	4	4	5	6	8	9	12
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	7	16	27	37	44	47	54	76	93	109	142
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	2	4	8	10	12	13	15	22	26	31	40
PPR	PPR No. 43, City of Needles	San Bernardino	24	55	95	129	152	163	186	266	323	380	494
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	12	29	50	68	80	86	98	140	170	200	260
-	-	**Subtotal**	**9,752**	**22,755**	**39,008**	**53,051**	**62,413**	**67,094**	**76,456**	**109,222**	**132,627**	**156,032**	**202,841**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	6,181	10,302	15,453	18,543	20,604	21,634	23,694	30,906	36,056	41,207	51,509
8	Big Bend Water District	Clark	327	544	817	980	1,089	1,143	1,252	1,633	1,906	2,178	2,722
8	Robert B. Griffith Project	Clark	10,539	17,564	26,347	31,616	35,129	36,885	40,398	52,693	61,476	70,258	87,822

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	1	1	1	1	1	1	2	2	2	3
7	Bureau of Reclamation (includes Sportsman Park)	Clark	10	16	25	29	33	34	38	49	57	65	82
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	2	3	4	5	6	6	6	8	10	11	14
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	139	231	347	416	462	485	532	693	809	924	1,156
6	Las Vegas Valley Water District	Clark	534	890	1,335	1,602	1,780	1,869	2,047	2,671	3,116	3,561	4,451
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	32	54	80	97	107	113	123	161	188	214	268
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	285	474	711	854	948	996	1,091	1,423	1,660	1,897	2,371
4	City of Henderson	Clark	550	917	1,376	1,651	1,835	1,927	2,110	2,752	3,211	3,670	4,587
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	518	864	1,296	1,555	1,728	1,814	1,987	2,591	3,023	3,455	4,319
3	Boulder City	Clark	204	340	509	611	679	713	781	1,019	1,188	1,358	1,698
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	100	167	250	300	333	350	383	500	583	667	833
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	20	33	50	60	67	70	77	100	117	133	167
-	-	**Subtotal**	**19,440**	**32,400**	**48,600**	**58,320**	**64,800**	**68,041**	**74,521**	**97,201**	**113,401**	**129,601**	**162,001**
-	-	**Total**	**154,985**	**239,878**	**345,994**	**397,499**	**431,836**	**449,004**	**483,341**	**603,520**	**689,363**	**775,205**	**946,889**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	6	9	12	14	14	15	16	19	21	23	28
-	Gila County	2	422	620	867	960	1,022	1,053	1,115	1,332	1,488	1,643	1,953
_	La Paz County	14	6,157	9,042	12,647	14,005	14,910	15,363	16,268	19,437	21,700	23,963	28,490
_	Maricopa County	55	68,589	100,720	140,885	156,011	166,095	171,138	181,222	216,517	241,728	266,939	317,361
_	Mohave County	17	10,247	15,047	21,048	23,308	24,814	25,568	27,074	32,347	36,114	39,880	47,413
_	Pima County	13	29,054	42,666	59,679	66,087	70,359	72,495	76,767	91,718	102,397	113,077	134,436
_	Pinal County	8	3,900	5,728	8,012	8,872	9,445	9,732	10,305	12,313	13,746	15,180	18,047
_	Yuma County	18	7,417	10,892	15,235	16,871	17,961	18,507	19,597	23,414	26,140	28,866	34,319
_	**Subtotal Arizona Domestic**	**128**	**125,793**	**184,723**	**258,385**	**286,128**	**304,623**	**313,870**	**332,365**	**397,097**	**443,335**	**489,572**	**582,047**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Lower Basin Pro Rata (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
_	**California**	-	-	-	-	-	-	-	-	-	-	-	-
_	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	9,700	22,633	38,800	52,768	62,080	66,736	76,048	108,641	131,921	155,201	201,761
_	Imperial County	32	15	35	59	81	95	102	116	166	202	238	309
_	Riverside County	5	0	0	0	0	0	1	1	1	1	1	2
_	San Bernardino	7	37	86	148	201	237	255	290	415	503	592	770
_	**Subtotal California Domestic**	**45**	**9,752**	**22,755**	**39,008**	**53,051**	**62,413**	**67,094**	**76,456**	**109,222**	**132,627**	**156,032**	**202,841**
_	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
_	Clark	15	19,440	32,400	48,600	58,320	64,800	68,041	74,521	97,201	113,401	129,601	162,001
_	**Subtotal Nevada Domestic**	**15**	**19,440**	**32,400**	**48,600**	**58,320**	**64,800**	**68,041**	**74,521**	**97,201**	**113,401**	**129,601**	**162,001**

Disclaimer: These modeling results for the Lower Basin Pro Rata should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]This user also holds a PPR entitlement.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

C.10 Pro Rata Without Tribal Shortage Alternative Distribution Model

The Pro Rata Without Tribal Shortage Alternative Distribution Model is an adaptation of the Pro Rata Alternative Distribution Model that represents a distribution of shortages to all users except tribes. It simulates shortages and distributes water on a proportional basis (i.e., at the same percentage reduction from each user's entitlement) across all non-tribal lower Colorado River water entitlements, and assumes all tribal entitlements are fully satisfied and are never shorted.

Assumptions for this Alternative Distribution Model are the same as for the Pro Rata Alternative Distribution Model unless described otherwise below. This Alternative Distribution Model reflects a modeling commitment to display a distribution of water during shortage that does not short tribal entitlements/allocations. It is not an interpretation of law, contracts, or a legal position.

The Excel workbook contains formulas extending into deep shortage levels as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

C.10.1 Entitlements Which are Not Shorted in the Pro Rata Without Tribal Shortage Alternative Distribution Model

For modeling purposes, the tribal entitlements/allocations in the following **Table C-46** have been removed from the distribution of shortage in this Alternative Distribution Model. The priority of these entitlements is only identified in the Excel workbook and the table below for the purpose of cross-reference. Note that CAP allocations are shown as mainstream consumptive use equivalents, with 5 percent for CAP system loss added to the contract volume. All other entitlements are shown as calculated for the Priority Shortage Allocation Model.

Table C-46
Entitlements and Allocations Not Shorted Under this Alternative Shortage Distribution

State	Priority	Entitlement Holder, Contractor, or Subcontractor	Consumptive Use or Equivalent Entitlement (af)*
Arizona	CAP NIA-B	WMAT	24,971.10
Arizona	CAP NIA-A	Gila River Indian Community	126,630.00
Arizona	CAP NIA-A	Tohono O'odham - Schuk Toak & San Xavier	29,610.00
Arizona	CAP NIA-A	Hualapai Tribe**	4,200.00
Arizona	CAP M&I	San Carlos Apache Tribe	19,052.25
Arizona	CAP Indian	Gila River Indian Community	200,760.00
Arizona	CAP Indian	Tohono O'odham Nation (ST & SX)	39,690.00
Arizona	CAP Indian	White Mountain Apache Tribe	1,278.90

State	Priority	Entitlement Holder, Contractor, or Subcontractor	Consumptive Use or Equivalent Entitlement (af)*
Arizona	CAP Indian	Ak-Chin Indian Community	61,215.00
Arizona	CAP Indian	Fort McDowell Yavapai Nation	19,144.65
Arizona	CAP Indian	Pascua Yaqui Tribe	525.00
Arizona	CAP Indian	San Carlos Apache Tribe	13,335.00
Arizona	CAP Indian	Salt River Pima-Maricopa Indian Community	13,965.00
Arizona	CAP Indian	Tohono O'odham Nation Sif Oidak District	8,400.00
Arizona	CAP Indian	Tonto Apache Tribe	134.40
Arizona	CAP Indian	Yavapai Apache Nation	1,260.00
Arizona	P4(i)	Cocopah Indian Reservation	1,357.42
Arizona	P4(i)	Hopi Tribe	3,037.38
Arizona	P4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	3,500.00
Arizona	P4(i)	Unallocated 4th Priority Mainstream Water	10,230.00
Arizona	P3	Ak-Chin Indian Community	50,000.00
Arizona	PPR	Cocopah Indian Reservation	5,146.27
Arizona	PPR	United States (Cocopah Indian Tribe)	763.80
Arizona	PPR	Fort Mojave Indian Reservation	40,805.64
Arizona	PPR	Fort Mojave Indian Reservation	15,103.26
Arizona	PPR	Fort Yuma Indian Reservation	4,000.50
Arizona	PPR	Colorado River Indian Reservation	27,032.72
Arizona	PPR	Colorado River Indian Reservation	131,048.32
Arizona	PPR	Colorado River Indian Reservation	186,368.00
-	-	**Subtotal**	**1,042,564.61**
California	PPR	Chemehuevi Indian Reservation	6,123.60
California	PPR	Fort Mojave Indian Reservation	9,028.80
California	PPR	Fort Yuma Indian Reservation	36,524.16
California	PPR	Colorado River Indian Reservation	3,398.80
California	PPR	Colorado River Indian Reservation	23,339.78
California	PPR	Colorado River Indian Reservation	6,232.10
-	-	**Subtotal**	**84,647.24**
Nevada	P1 (PPR)	Fort Mojave Indian Reservation	8,397.78
-	-	**Subtotal**	**8,397.78**
-	-	**Total**	**1,135,609.63**

*CAP allocations are shown as mainstream consumptive use equivalents, with 5 percent for CAP system loss added to the Contract volume.

** May at some time be diverted from the Colorado River above Lake Mead.

C.10.2 Distribution Among Water Users

Shortage in this Alternative Distribution Model is distributed among only the remaining non-tribal entitlements after the tribal entitlements described above are set aside and assumed to be fully filled.

Each non-tribal entitlement's percentage share of the total shortage is calculated as the ratio of the non-tribal entitlement to the sum of all non-tribal entitlements, including a proportional component[26] for Mexico. The resulting percentages are multiplied by the volume of total shortage to determine the volume of shortage assigned to each entitlement. At a given level of shortage, as a consequence of how that shortage is distributed as described in this paragraph, all non-tribal entitlements bear the same percentage reduction. The volume of shortage assigned to a water user with entitlements in different priority categories is the sum across multiple line items in the model; designations of priority do not affect the function of this Alternative Distribution Model, but are retained to facilitate comparison of the results between models. Entitlements subject to shortage in this Alternative Distribution Model are summarized in the following **Table C-47**.

Table C-47
Non-Tribal Entitlements Subject to Shortage Under this Alternative Distribution Model

Arizona, California, Nevada, and Mexico Summary	CU Equivalent (afy)
Arizona Total	1,780,346
California Total	4,315,353
Nevada Total	291,602
Mexico Total	1,272,878
Total	**7,660,179**

C.10.3 Pro Rata Without Tribal Shortage Alternative Distribution Model Results

The tables in this section present the results of the Pro Rata Without Tribal Shortage Alternative Distribution Model over a range of total shortages to the Lower Basin including Mexico.

Table C-48, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-49, the Tribal Summary, presents the shortage impacts on tribes.

Table C-50, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-51, the Domestic Summary, presents the shortage impacts on domestic users.

[26] A non-shorted component is set aside for Mexico in proportion to the non-shorted Tribal entitlements in the United States; in this model, 15.14 percent of 1,500,000 afy, or 227,122 afy.

Table C-48
Pro Rata Without Tribal Shortage Alternative Distribution Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-	-	600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion[2]	-	-	-	-	-	-	-	-	-	-	-
-	NIA Priority	7,964	13,273	19,910	23,892	26,546	27,874	30,528	39,819	46,456	53,093	66,366
-	M&I Priority	51,047	85,078	127,617	153,140	170,156	178,664	195,679	255,234	297,773	340,312	425,389
-	Indian Priority	41	69	103	123	137	144	158	206	240	274	343
-	4th Priority i (Mainstream)	7,115	11,858	17,787	21,344	23,716	24,901	27,273	35,574	41,502	47,431	59,289
-	2nd & 3rd Priorities	58,593	97,656	146,483	175,780	195,311	205,077	224,608	292,967	341,794	390,622	488,278
-	1st Priority (Present Perfected Rights)	14,690	24,483	36,724	44,069	48,966	51,414	56,310	73,448	85,690	97,931	122,414
-	**Subtotal**	**139,449**	**232,416**	**348,624**	**418,348**	**464,831**	**488,073**	**534,556**	**697,247**	**813,455**	**929,663**	**1,162,079**
California	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	30,391	50,652	75,978	91,173	101,304	106,369	116,499	151,955	177,281	202,607	253,259
-	3rd Priority (IID, CVWD, PVID)	65,403	109,005	163,508	196,210	218,011	228,911	250,712	327,016	381,518	436,021	545,026
-	2nd Priority (Yuma Project Reservation Division)	571	952	1,428	1,714	1,904	2,000	2,190	2,857	3,333	3,809	4,761
-	1st Priority (PVID)	28,854	48,090	72,135	86,562	96,180	100,989	110,607	144,270	168,315	192,360	240,450
-	Present Perfected Rights (PPRs)	212,790	354,650	531,974	638,369	709,299	744,764	815,694	1,063,949	1,241,273	1,418,598	1,773,248
-	**Subtotal**	**338,009**	**563,349**	**845,023**	**1,014,028**	**1,126,698**	**1,183,032**	**1,295,702**	**1,690,046**	**1,971,721**	**2,253,395**	**2,816,744**
Nevada	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	7,262	12,104	18,156	21,787	24,207	25,418	27,839	36,311	42,363	48,415	60,519
-	8th Priority (SNWA & Big Bend)	12,766	21,276	31,914	38,297	42,553	44,680	48,935	63,829	74,467	85,105	106,381
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	177	295	442	530	589	619	678	884	1,031	1,179	1,473
-	6th Priority (Las Vegas Valley Water District)	628	1,046	1,569	1,883	2,092	2,196	2,406	3,138	3,661	4,184	5,229
-	5th Priority (PABCO)	38	63	94	113	126	132	145	189	220	252	315
-	4th Priority (Henderson & Basic)	1,590	2,650	3,975	4,770	5,300	5,565	6,095	7,950	9,275	10,600	13,250
-	3rd Priority (Boulder City)	239	399	598	718	798	838	917	1,197	1,396	1,596	1,994

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-	**-**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
-	2nd Priority (Lake Mead National Rec Area)	117	196	294	352	392	411	450	587	685	783	979
-	1st Priority (PPR: LMNRA)	23	39	59	70	78	82	90	117	137	157	196
-	**Subtotal**	**22,840**	**38,067**	**57,101**	**68,521**	**76,135**	**79,941**	**87,555**	**114,202**	**133,235**	**152,269**	**190,336**
-	**Lower Division States Subtotal**	**500,299**	**833,832**	**1,250,748**	**1,500,897**	**1,667,664**	**1,751,047**	**1,917,813**	**2,501,495**	**2,918,411**	**3,335,327**	**4,169,159**
Mexico	**Mexico Subtotal**	**99,701**	**166,168**	**249,252**	**299,103**	**332,336**	**348,953**	**382,187**	**498,505**	**581,589**	**664,673**	**830,841**
-	**Total**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

Disclaimer: These modeling results for the pro rata (w/o tribal Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here
[2]The CAP priority system is not maintained in the pro rata distribution. CAP contractors and subcontractors are shorted pro rata with non-CAP water users; therefore, there is not an Available CAP Supply calculated for the pro rata alternative distribution model, or a shortage volume given for CAP as a whole.

Table C-49
Pro Rata Without Tribal Shortage Alternative Distribution Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	0	0	0	0	0	0	0	0	0	0	0
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	0	0	0	0	0	0	0	0	0	0	0
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	San Carlos Apache Tribe	Gila County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Tonto Apache Tribe	Gila County	0	0	0	0	0	0	0	0	0	0	0
CAP Indian Priority	Yavapai Apache Nation	Gila County	0	0	0	0	0	0	0	0	0	0	0
CAP M&I Priority	San Carlos Apache Tribe	Gila County	0	0	0	0	0	0	0	0	0	0	0
4(i)	Hopi Tribe[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
4(i)	Cocopah Indian Reservation	Yuma County	0	0	0	0	0	0	0	0	0	0	0
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	0	0	0	0	0	0	0	0	0	0	0
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Ak-Chin Indian Community[1]	Pinal County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0.83	0	0	0	0	0	0	0	0	0	0	0
-	Gila County	4.67	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	4	0	0	0	0	0	0	0	0	0	0	0
-	Maricopa County	2.6	0	0	0	0	0	0	0	0	0	0	0
-	Mohave County	2.5	0	0	0	0	0	0	0	0	0	0	0
-	Pima County	3	0	0	0	0	0	0	0	0	0	0	0
-	Pinal County	4.40	0	0	0	0	0	0	0	0	0	0	0
-	Yuma County	5	0	0	0	0	0	0	0	0	0	0	0
-	Apache County	1.00	0	0	0	0	0	0	0	0	0	0	0
-	Navajo County	1.00	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal Arizona Tribal**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	San Bernardino	2.5	0	0	0	0	0	0	0	0	0	0	0
-	Riverside	0.50	0	0	0	0	0	0	0	0	0	0	0
-	Imperial	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal California Tribal**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	1	0	0	0	0	0	0	0	0	0	0	0
-	**Subtotal Nevada Tribal**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Disclaimer: These modeling results for the pro rata (w/o tribal Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and Tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Table C-50
Pro Rata Without Tribal Shortage Alternative Distribution Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	160	267	400	480	534	560	614	800	934	1,067	1,334
4(i)	Arizona State Land Department	Yuma County	331	552	828	994	1,104	1,159	1,270	1,656	1,932	2,208	2,760
4(i)	Beattie Farms, Southwest	Yuma County	57	94	141	170	188	198	217	283	330	377	471
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	23	39	58	70	78	82	90	117	136	156	195
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	7	12	18	21	23	25	27	35	41	47	58
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	107	178	267	321	356	374	410	535	624	713	891
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	12	20	30	36	40	42	46	60	70	80	100
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	414	690	1,035	1,242	1,380	1,449	1,587	2,069	2,414	2,759	3,449
4(i)	Curtis, Armon	Yuma County	15	25	38	46	51	53	59	76	89	102	127
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	64	107	160	192	214	224	246	320	374	427	534
4(i)	Matador Farms, LLC	La Paz County	229	382	573	687	764	802	878	1,146	1,336	1,527	1,909
4(i)	JRJ Partners, L.L.C.	Yuma County	55	92	137	165	183	192	211	275	321	367	458
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	1,483	2,472	3,707	4,449	4,943	5,190	5,685	7,415	8,650	9,886	12,358
4(i)	North Baja Pipeline, LLC[2]	La Paz County	24	41	61	73	81	86	94	122	143	163	204
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	47	78	118	141	157	165	180	235	274	314	392
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	24	41	61	73	81	86	94	122	143	163	204
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	25	41	62	74	82	87	95	124	144	165	206
4(i)	Red River Land Company, LLC	La Paz County	17	28	42	50	56	58	64	83	97	111	139
4(i)	Phillips, Milton and Jean	Yuma County	5	8	12	14	16	16	18	23	27	31	39
4(i)	Western Water, LLC	La Paz County	30	50	76	91	101	106	116	151	176	202	252
3	Sturges, Harold	Yuma County	26	44	66	79	87	92	101	131	153	175	219
3	Sturges, Irma	Yuma County	30	50	75	90	101	106	116	151	176	201	251
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	11,085	18,475	27,712	33,254	36,949	38,797	42,492	55,424	64,661	73,899	92,373
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	5,270	8,783	13,174	15,809	17,566	18,444	20,200	26,348	30,740	35,131	43,914

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	527	879	1,318	1,582	1,757	1,845	2,021	2,636	3,075	3,515	4,394
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	21,775	36,292	54,437	65,325	72,583	76,212	83,471	108,875	127,021	145,166	181,458
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	281	468	702	842	935	982	1,076	1,403	1,637	1,871	2,338
3	Yuma County Water Users' Association (14,701af M&I includes YAO's 489.95af conversion)[2,3]	Yuma County	6,212	10,353	15,529	18,635	20,706	21,741	23,811	31,058	36,235	41,411	51,764
3	University of Arizona	Yuma County	85	142	213	256	284	298	327	426	497	568	710
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	9	16	23	28	31	33	36	47	55	63	78
3	Unit B Irrigation & Drainage District[3]	Yuma County	1,323	2,204	3,307	3,968	4,409	4,629	5,070	6,613	7,715	8,818	11,022
1	PPR No. 15, Molina	Yuma County	25	42	62	75	83	87	95	125	145	166	208
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	35	58	87	104	116	122	133	174	203	232	290
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	341	568	852	1,023	1,136	1,193	1,307	1,704	1,988	2,273	2,841
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	480	800	1,199	1,439	1,599	1,679	1,839	2,399	2,799	3,198	3,998
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	13,340	22,234	33,351	40,021	44,467	46,691	51,137	66,701	77,818	88,935	111,168
1	PPR No. 7, Powers	Yuma County	49	81	122	147	163	171	187	244	285	326	407
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	30	51	76	91	102	107	117	152	178	203	254
1	PPR No. 10, Hulet (MVIDD)	Mohave County	46	76	114	137	152	160	175	228	266	305	381
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	44	74	111	133	148	155	170	222	259	296	370
1	PPR No. 12, Miller (MVIDD)	Mohave County	10	17	25	30	34	36	39	51	59	68	85
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	34	57	86	103	114	120	131	171	200	228	286
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	46	76	114	137	152	160	175	228	266	305	381
1	PPR No. 18, Swan (MVIDD)	Mohave County	41	68	102	122	135	142	156	203	237	271	338
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	3	5	8	10	11	12	13	16	19	22	27
-	-	**Subtotal**	**64,276**	**107,127**	**160,690**	**192,829**	**214,254**	**224,967**	**246,392**	**321,381**	**374,944**	**428,508**	**535,635**
California			-	-	-	-	-	-	-	-	-	-	-
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	392	653	979	1,175	1,305	1,371	1,501	1,958	2,285	2,611	3,264
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	25,848	43,080	64,620	77,544	86,160	90,468	99,084	129,240	150,780	172,320	215,400
3	Imperial Irrigation District (IID) (3a)	Imperial County	39,164	65,273	97,909	117,491	130,545	137,073	150,127	195,818	228,454	261,090	326,363
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	571	952	1,428	1,714	1,904	2,000	2,190	2,857	3,333	3,809	4,761

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	28,854	48,090	72,135	86,562	96,180	100,989	110,607	144,270	168,315	192,360	240,450
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	9	15	23	27	30	32	35	45	53	60	75
PPR	PPR No. 41, Chagnon	San Bernardino	6	10	15	18	20	21	23	30	35	40	50
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	5	8	12	14	16	17	18	24	28	32	40
PPR	PPR No. 34, Milpitas	Imperial County	5	9	14	16	18	19	21	27	32	36	45
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	1,529	2,548	3,822	4,586	5,096	5,351	5,860	7,644	8,918	10,192	12,740
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	203,651	339,418	509,126	610,952	678,835	712,777	780,661	1,018,253	1,187,962	1,357,671	1,697,088
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	7,402	12,337	18,506	22,207	24,674	25,908	28,376	37,012	43,180	49,349	61,686
PPR	PPR No. 42, Lawrence	Imperial County	6	10	15	18	20	21	23	30	35	40	50
PPR	PPR No. 37, Milpitas	Imperial County	3	6	9	10	12	12	13	17	20	23	29
PPR	PPR No. 33, Morgan	Imperial County	8	13	19	23	25	26	29	38	44	50	63
PPR	PPR No. 35, Simons	San Bernardino	3	5	8	9	10	11	12	15	18	20	25
-	-	**Subtotal**	**307,455**	**512,426**	**768,639**	**922,366**	**1,024,851**	**1,076,094**	**1,178,579**	**1,537,277**	**1,793,490**	**2,049,703**	**2,562,129**
Nevada			-	-	-	-	-	-	-	-	-	-	-
None	None	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**371,732**	**619,553**	**929,329**	**1,115,195**	**1,239,105**	**1,301,061**	**1,424,971**	**1,858,658**	**2,168,434**	**2,478,211**	**3,097,763**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	917	1,528	2,292	2,750	3,056	3,209	3,514	4,584	5,348	6,112	7,640
-	Mohave County	8	1,734	2,890	4,335	5,202	5,781	6,070	6,648	8,671	10,116	11,561	14,451
-	Yuma County	28	61,625	102,709	154,063	184,876	205,417	215,688	236,230	308,126	359,480	410,835	513,543
_	**Subtotal Arizona Irrigation**	**45**	**64,276**	**107,127**	**160,690**	**192,829**	**214,254**	**224,967**	**246,392**	**321,381**	**374,944**	**428,508**	**535,635**
_	**California**	-	-	-	-	-	-	-	-	-	-	-	-
_	Riverside County	3	44,368	73,946	110,919	133,103	147,893	155,287	170,076	221,839	258,812	295,785	369,731
_	Imperial County	10	263,074	438,456	657,685	789,222	876,913	920,758	1,008,450	1,315,369	1,534,597	1,753,826	2,192,282
_	San Bernardino	3	14	23	35	42	46	48	53	69	81	92	115
_	**Subtotal California Irrigation**	**16**	**307,455**	**512,426**	**768,639**	**922,366**	**1,024,851**	**1,076,094**	**1,178,579**	**1,537,277**	**1,793,490**	**2,049,703**	**2,562,129**

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
_	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
_	None	None	0	0	0	0	0	0	0	0	0	0	0

Disclaimer: These modeling results for the pro rata (w/o tribal Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement.

Table C-51
Pro Rata Without Tribal Shortage Alternative Distribution Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	229	382	573	687	764	802	878	1,146	1,337	1,528	1,909
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	1,496	2,493	3,739	4,487	4,985	5,235	5,733	7,478	8,724	9,971	12,463
CAP NIA-B	Carefree Water Company	Maricopa County	9	15	23	28	31	32	35	46	54	61	77
CAP NIA-B	Cave Creek	Maricopa County	32	53	79	95	106	111	122	159	185	212	265
CAP NIA-B	El Mirage	Maricopa County	108	181	271	325	361	379	416	542	632	723	903
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	265	441	661	794	882	926	1,014	1,323	1,543	1,764	2,205
CAP NIA-B	Freeport	Pima County	467	778	1,167	1,401	1,557	1,634	1,790	2,335	2,724	3,113	3,891
CAP NIA-B	Gilbert	Maricopa County	151	251	377	452	502	527	578	753	879	1,004	1,256
CAP NIA-B	Marana	Pima County	42	71	106	127	141	148	162	212	247	282	353
CAP NIA-B	Queen Creek	Maricopa County	342	570	856	1,027	1,141	1,198	1,312	1,711	1,997	2,282	2,852
CAP NIA-B	Resolution Copper	Maricopa County	184	307	460	552	614	644	706	920	1,074	1,227	1,534
CAP NIA-B	Rosemont Copper	Pima County	92	154	231	277	308	324	354	462	539	616	770
CAP NIA-B	SRP	Maricopa County	178	296	444	533	592	622	681	888	1,036	1,184	1,480
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	67	112	168	202	224	235	258	336	392	448	560
CAP NIA-A	Phoenix	Maricopa County	3,066	5,110	7,665	9,198	10,220	10,731	11,753	15,330	17,885	20,440	25,550
CAP NIA-A	Chandler	Maricopa County	323	538	807	968	1,076	1,130	1,237	1,614	1,883	2,151	2,689
CAP NIA-A	Gilbert	Maricopa County	126	211	316	379	421	442	485	632	737	843	1,053
CAP NIA-A	Glendale	Maricopa County	56	93	140	168	187	196	215	280	327	374	467
CAP NIA-A	Mesa	Maricopa County	457	761	1,141	1,370	1,522	1,598	1,750	2,283	2,663	3,044	3,804
CAP NIA-A	Scottsdale	Maricopa County	272	453	680	816	906	952	1,042	1,359	1,586	1,813	2,266

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Tempe	Maricopa County	2	3	5	6	6	7	7	9	11	13	16
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	41	69	103	123	137	144	158	206	240	274	343
CAP M&I	ASARCO	Pima County	1,727	2,879	4,318	5,181	5,757	6,045	6,621	8,636	10,075	11,514	14,393
CAP M&I	Avondale	Maricopa County	445	742	1,114	1,336	1,485	1,559	1,707	2,227	2,598	2,970	3,712
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	2,317	3,862	5,793	6,952	7,724	8,111	8,883	11,586	13,518	15,449	19,311
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	731	1,218	1,827	2,192	2,436	2,557	2,801	3,653	4,262	4,871	6,089
CAP M&I	Arizona Water Company, Coolidge	Pinal County	164	274	411	493	548	576	631	822	960	1,097	1,371
CAP M&I	Arizona Water Company, Superstition	Pinal County	517	862	1,292	1,551	1,723	1,809	1,981	2,585	3,015	3,446	4,308
CAP M&I	Arizona Water Company, White Tank	Maricopa County	80	133	199	239	265	279	305	398	464	531	663
CAP M&I	Buckeye	Maricopa County	6	9	14	17	19	20	21	28	33	37	47
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	528	881	1,321	1,585	1,762	1,850	2,026	2,642	3,083	3,523	4,404
CAP M&I	Carefree Water Company	Maricopa County	138	230	345	414	460	483	529	690	805	920	1,150
CAP M&I	Cave Creek	Maricopa County	183	305	458	550	611	641	702	916	1,069	1,222	1,527
CAP M&I	Chandler	Maricopa County	712	1,186	1,779	2,135	2,372	2,491	2,728	3,559	4,152	4,745	5,931
CAP M&I	Chaparral City Water Company	Maricopa County	733	1,221	1,832	2,198	2,442	2,564	2,809	3,664	4,274	4,885	6,106
CAP M&I	Circle City	Maricopa County	323	539	808	970	1,078	1,132	1,240	1,617	1,886	2,156	2,695
CAP M&I	El Mirage	Maricopa County	42	70	104	125	139	146	160	209	244	279	348
CAP M&I	Eloy	Pinal County	179	298	446	536	595	625	684	893	1,042	1,190	1,488
CAP M&I	EPCOR, Agua Fria	Maricopa County	912	1,521	2,281	2,737	3,041	3,193	3,497	4,562	5,322	6,082	7,603
CAP M&I	EPCOR, Paradise Valley	Maricopa County	266	443	664	797	886	930	1,019	1,329	1,550	1,772	2,214
CAP M&I	EPCOR, Sun City	Maricopa County	345	574	861	1,034	1,148	1,206	1,321	1,723	2,010	2,297	2,871
CAP M&I	EPCOR, Sun City West	Maricopa County	195	325	488	585	650	683	748	975	1,138	1,301	1,626
CAP M&I	Florence	Pinal County	168	281	421	505	561	590	646	842	983	1,123	1,404
CAP M&I	Freeport-Miami	Gila County	239	398	597	717	797	836	916	1,195	1,394	1,593	1,992

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	235	391	587	704	782	822	900	1,174	1,369	1,565	1,956
CAP M&I	Gilbert	Maricopa County	595	992	1,488	1,785	1,983	2,083	2,281	2,975	3,471	3,967	4,959
CAP M&I	Glendale	Maricopa County	1,418	2,363	3,544	4,253	4,725	4,961	5,434	7,088	8,269	9,450	11,813
CAP M&I	Goodyear	Maricopa County	883	1,472	2,209	2,650	2,945	3,092	3,387	4,417	5,154	5,890	7,362
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	5	9	13	16	18	18	20	26	31	35	44
CAP M&I	Green Valley Community Water Company	Pima County	235	392	588	705	784	823	901	1,175	1,371	1,567	1,959
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	156	260	391	469	521	547	599	781	912	1,042	1,302
CAP M&I	Marana	Pima County	192	320	480	576	640	672	736	961	1,121	1,281	1,601
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	55	91	137	164	182	191	210	273	319	365	456
CAP M&I	Mesa	Maricopa County	3,578	5,963	8,945	10,734	11,926	12,522	13,715	17,889	20,871	23,852	29,815
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	1,107	1,845	2,767	3,321	3,690	3,874	4,243	5,535	6,457	7,380	9,225
CAP M&I	Oro Valley	Pima County	848	1,413	2,119	2,543	2,825	2,966	3,249	4,238	4,944	5,650	7,063
CAP M&I	Peoria	Maricopa County	2,231	3,718	5,576	6,692	7,435	7,807	8,550	11,153	13,011	14,870	18,588
CAP M&I	Phoenix	Maricopa County	10,371	17,285	25,928	31,114	34,571	36,299	39,756	51,856	60,499	69,142	86,427
CAP M&I	Pine	Gila County	13	22	33	40	44	46	51	66	77	88	110
CAP M&I	Queen Creek	Maricopa County	41	68	102	122	136	142	156	204	237	271	339
CAP M&I	Rio Verde Utilities	Maricopa County	67	111	167	200	223	234	256	334	390	445	557
CAP M&I	San Tan Irrigation District	Maricopa County	19	32	49	58	65	68	74	97	113	129	162
CAP M&I	Scottsdale	Maricopa County	4,343	7,239	10,858	13,030	14,478	15,201	16,649	21,716	25,336	28,955	36,194
CAP M&I	Spanish Trail Water Company	Pima County	250	416	624	749	833	874	957	1,249	1,457	1,665	2,081
CAP M&I	Surprise	Maricopa County	843	1,405	2,107	2,529	2,810	2,950	3,231	4,215	4,917	5,619	7,024
CAP M&I	Tempe	Maricopa County	355	591	887	1,065	1,183	1,242	1,360	1,774	2,070	2,366	2,957
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	6	10	15	18	19	20	22	29	34	39	49
CAP M&I	Tucson	Pima County	11,859	19,765	29,647	35,576	39,529	41,506	45,459	59,294	69,176	79,058	98,823

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Vail Water Company	Pima County	153	255	382	458	509	535	585	764	891	1,018	1,273
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	240	400	600	720	800	840	920	1,200	1,400	1,600	2,001
4(i)	Arizona State Land Department	Yuma County	77	128	192	231	256	269	295	384	449	513	641
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	5	8	11	14	15	16	18	23	27	31	38
4(i)	B&F Investment, LLC	La Paz County	3	5	8	10	11	11	12	16	19	22	27
4(i)	Bullhead City	Mohave County	786	1,310	1,966	2,359	2,621	2,752	3,014	3,931	4,587	5,242	6,552
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	111	184	276	332	369	387	424	553	645	737	921
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	362	603	905	1,086	1,206	1,267	1,387	1,809	2,111	2,412	3,016
4(i)	Bureau of Land Management	La Paz County	314	523	785	942	1,047	1,099	1,204	1,570	1,832	2,094	2,617
4(i)	Crystal Beach Water Conservation District	Mohave County	7	11	17	20	22	24	26	34	39	45	56
4(i)	Ehrenburg Improvement District	La Paz County	36	60	91	109	121	127	139	181	212	242	302
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	97	161	242	291	323	339	371	484	565	646	807
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	3	5	7	8	9	10	11	14	16	19	23
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	0	0	0	0	0	0	0	1	1
4(i)	Gold Dome Mining Corporation	Yuma County	1	1	1	2	2	2	2	3	3	4	5
4(i)	Golden Shores Water Conservation District	Mohave County	105	175	262	315	350	367	402	525	612	700	875
4(i)	GSC Farm, LLC	La Paz County	4	7	10	12	13	14	15	20	23	26	33
4(i)	Hillcrest Water Company	La Paz County	4	7	11	13	14	15	16	21	25	29	36
4(i)	Lake Havasu City	Mohave County	932	1,553	2,330	2,796	3,107	3,262	3,573	4,660	5,437	6,214	7,767
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	104	173	260	312	346	364	398	519	606	693	866
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	352	587	880	1,056	1,174	1,232	1,350	1,760	2,054	2,347	2,934
4(i)	La Paz County	La Paz County	27	46	69	82	91	96	105	137	160	183	228
4(i)	Martinez Lake Cabin Sites	Yuma County	1	2	3	3	4	4	4	6	7	8	10
4(i)	McAlister Family Trust	Mohave County	2	4	5	6	7	8	8	11	13	14	18
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	53	88	132	159	176	185	203	264	308	352	441
4(i)	Mohave Water Conservation District	Mohave County	94	157	236	283	315	331	362	472	551	630	787

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	157	262	394	472	525	551	604	787	918	1,050	1,312
4(i)	Parker, Town of[1]	La Paz County	34	56	85	102	113	119	130	169	198	226	282
4(i)	Quartzsite, Town of	La Paz County	84	140	210	251	279	293	321	419	489	559	698
4(i)	Queen Creek, Town of	Maricopa County	159	265	398	478	531	557	610	796	929	1,062	1,327
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	0	0	0	0	0	0	0	1	1
4(i)	Shepard Water Company, Incorporated	Yuma County	3	4	6	8	8	9	10	13	15	17	21
4(i)	Somerton, City of	Yuma County	59	98	147	176	196	206	225	294	343	392	490
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	6	10	14	17	19	20	22	29	33	38	48
4(i)	TV Marble Canyon AZ, LLC	Coconino County	4	6	9	11	12	12	14	18	21	24	30
3	City of Yuma[1]	Yuma County	3,801	6,334	9,501	11,402	12,669	13,302	14,569	19,003	22,170	25,337	31,672
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	2	3	5	6	7	7	8	10	12	13	17
3	Kaman, Inc.	Yuma County	0	0	0	0	1	1	1	1	1	1	1
3	Department of the Navy, MCAS	Yuma County	235	392	587	705	783	822	901	1,175	1,371	1,567	1,958
3	City of Yuma (cemetery)	Yuma County	5	8	12	14	16	16	18	23	27	31	39
3	Yuma Mesa Fruit Growers' Association	Yuma County	1	2	3	4	4	4	5	6	7	8	10
3	Desert Lawn Memorial Park Association	Yuma County	11	18	27	32	36	38	41	54	63	72	90
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	335	558	838	1,005	1,117	1,173	1,284	1,675	1,955	2,234	2,792
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	530	883	1,324	1,589	1,765	1,854	2,030	2,648	3,090	3,531	4,414
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	235	392	587	705	783	822	901	1,175	1,371	1,567	1,958
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	216	360	540	649	721	757	829	1,081	1,261	1,441	1,802
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	392	653	979	1,175	1,305	1,371	1,501	1,958	2,285	2,611	3,264
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	8	13	20	23	26	27	30	39	46	52	65
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	8	13	20	23	26	27	30	39	46	52	65
3	Department of the Army - Yuma Proving Ground	Yuma County	88	147	221	265	295	310	339	442	516	590	737
3	Yuma Union High School District	Yuma County	12	19	29	35	39	41	44	58	68	77	97

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	19	32	49	58	65	68	75	97	113	130	162
2	Cibola National Wildlife Refuge	La Paz County	1,315	2,192	3,288	3,946	4,384	4,604	5,042	6,577	7,673	8,769	10,961
2	Lake Mead National Recreation Area	Mohave County	27	45	67	81	90	94	103	134	157	179	224
2	Bureau of Reclamation - Davis Dam	Mohave County	1	1	1	2	2	2	2	3	3	4	5
2	Imperial National Wildlife Refuge	La Paz County	1,802	3,003	4,504	5,405	6,005	6,305	6,906	9,008	10,509	12,010	15,013
2	Havasu Lake National Wildlife Refuge	Mohave County	2,929	4,882	7,323	8,788	9,765	10,253	11,229	14,647	17,088	19,529	24,411
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	19	31	47	56	62	65	71	93	109	124	155
1	PPR No. 20, Parker, City of	La Paz County	31	52	78	94	104	110	120	157	183	209	261
1	PPR No. 21, Yuma, City of	Yuma County	116	193	289	347	386	405	444	579	675	772	965
-	-	**Subtotal**	**75,173**	**125,289**	**187,933**	**225,520**	**250,578**	**263,106**	**288,164**	**375,866**	**438,511**	**501,155**	**626,444**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside, San Bernardino	30,391	50,652	75,978	91,173	101,304	106,369	116,499	151,955	177,281	202,607	253,259
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 30, Stephenson	San Bernardino	12	20	30	36	40	42	46	60	70	80	100
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 38, Andrade	San Bernardino	3	6	8	10	11	12	13	17	19	22	28
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	3	5	8	9	10	11	12	15	18	20	25
PPR	PPR No. 39, Reynolds	San Bernardino	2	3	5	5	6	6	7	9	11	12	15
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	21	36	53	64	71	75	82	107	125	143	178
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	6	10	15	18	20	21	23	30	35	40	50

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 43, City of Needles	San Bernardino	74	124	186	223	248	260	285	372	434	496	620
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	39	65	98	117	130	137	150	196	228	261	326
-	-	**Subtotal**	**30,554**	**50,923**	**76,385**	**91,662**	**101,846**	**106,938**	**117,123**	**152,769**	**178,231**	**203,692**	**254,615**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	7,262	12,104	18,156	21,787	24,207	25,418	27,839	36,311	42,363	48,415	60,519
8	Big Bend Water District	Clark	384	640	960	1,151	1,279	1,343	1,471	1,919	2,239	2,559	3,198
8	Robert B. Griffith Project	Clark	12,382	20,637	30,955	37,146	41,273	43,337	47,464	61,910	72,228	82,546	103,183
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	1	1	1	1	1	2	2	2	3	3
7	Bureau of Reclamation (includes Sportsman Park)	Clark	12	19	29	35	38	40	44	58	67	77	96
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	2	3	5	6	7	7	8	10	11	13	16
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	163	272	407	489	543	570	625	815	950	1,086	1,358
6	Las Vegas Valley Water District	Clark	628	1,046	1,569	1,883	2,092	2,196	2,406	3,138	3,661	4,184	5,229
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	38	63	94	113	126	132	145	189	220	252	315
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	334	557	836	1,003	1,114	1,170	1,282	1,672	1,950	2,229	2,786
4	City of Henderson	Clark	647	1,078	1,617	1,940	2,156	2,263	2,479	3,234	3,772	4,311	5,389
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	609	1,015	1,522	1,827	2,030	2,131	2,334	3,045	3,552	4,059	5,074
3	Boulder City	Clark	239	399	598	718	798	838	917	1,197	1,396	1,596	1,994
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	117	196	294	352	392	411	450	587	685	783	979
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	23	39	59	70	78	82	90	117	137	157	196
-	-	**Subtotal**	**22,840**	**38,067**	**57,101**	**68,521**	**76,135**	**79,941**	**87,555**	**114,202**	**133,235**	**152,269**	**190,336**
-	-	**Total**	**128,567**	**214,279**	**321,419**	**385,702**	**428,558**	**449,986**	**492,842**	**642,837**	**749,977**	**857,117**	**1,071,396**

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	4	6	9	11	12	12	14	18	21	24	30
-	Gila County	2	252	420	631	757	841	883	967	1,261	1,471	1,682	2,102
-	La Paz County	14	3,680	6,133	9,199	11,039	12,265	12,878	14,105	18,398	21,464	24,530	30,663
-	Maricopa County	55	40,988	68,314	102,471	122,965	136,627	143,459	157,122	204,941	239,098	273,255	341,569
-	Mohave County	17	6,124	10,206	15,309	18,371	20,412	21,433	23,474	30,618	35,721	40,824	51,030
-	Pima County	13	17,363	28,938	43,407	52,089	57,876	60,770	66,558	86,814	101,283	115,752	144,690
-	Pinal County	8	2,331	3,885	5,827	6,993	7,770	8,158	8,935	11,654	13,597	15,539	19,424
-	Yuma County	18	4,432	7,387	11,081	13,297	14,775	15,513	16,991	22,162	25,856	29,549	36,937
-	**Subtotal Arizona Domestic**	**128**	**75,173**	**125,289**	**187,933**	**225,520**	**250,578**	**263,106**	**288,164**	**375,866**	**438,511**	**501,155**	**626,444**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	30,391	50,652	75,978	91,173	101,304	106,369	116,499	151,955	177,281	202,607	253,259
-	Imperial County	32	47	78	116	140	155	163	178	233	271	310	388
-	Riverside County	5	0	0	1	1	1	1	1	1	1	2	2
-	San Bernardino	7	116	193	290	348	387	406	445	580	677	773	967
-	**Subtotal California Domestic**	**45**	**30,554**	**50,923**	**76,385**	**91,662**	**101,846**	**106,938**	**117,123**	**152,769**	**178,231**	**203,692**	**254,615**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	22,840	38,067	57,101	68,521	76,135	79,941	87,555	114,202	133,235	152,269	190,336
-	**Subtotal Nevada Domestic**	**15**	**22,840**	**38,067**	**57,101**	**68,521**	**76,135**	**79,941**	**87,555**	**114,202**	**133,235**	**152,269**	**190,336**

Disclaimer: These modeling results for the pro rata (w/o tribal Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]This user also holds a PPR entitlement.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

C.11 Pro Rata Without Tribal PPR Shortage Alternative Distribution Model

The Pro Rata Without Tribal PPR Shortage Alternative Distribution Model is an adaptation of the Pro Rata Alternative Distribution Model that represents a distribution of shortages to all entitlements except tribal PPRs. It simulates shortages and distributes water on a proportional basis (i.e., at the same percentage reduction from each entitlement) across all lower Colorado River water entitlements that are not tribal PPRs, and assumes all tribal PPR entitlements are fully satisfied and are never shorted. This Alternative Distribution Model reflects a modeling commitment to display a distribution of water during shortage that does not short certain tribal entitlements. It is not an interpretation of law, contracts, or a legal position.

The Excel workbook contains formulas extending into deep shortage levels as a modeling exercise relating to potential capacity constraints on Lake Mead releases, and as a basis for comparison with other distributions of shortage. This deeper shortage level modeling does not represent an effect of the Federal action(s) described in this EIS, and this modeling is for informational purposes only.

C.11.1 Distribution Among Water Users

Assumptions for this Alternative Distribution Model are the same as for the Pro Rata Without Tribal Shortage Alternative Distribution Model except as described below. The entitlements listed in the following **Table C-52** were removed from the distribution of shortage in this Alternative Distribution Model.

Table C-52
PPRs Not Shorted Under this Alternative Distribution Model

Entitlement Holders	CU Equivalent (af)*	Diversion (af)	PPR No.	Date	Type of Use
Cocopah Indian Reservation	5,146	7,681	1	1917	Tribal
United States (Cocopah Indian Tribe)	764	1,140	8	1915	Tribal
Chemehuevi Indian Reservation	6,124	11,340	22	1907	Tribal
Fort Mojave Indian Reservation	40,806	75,566	3	1890	Tribal
Fort Mojave Indian Reservation	15,103	27,969	3	1890	Tribal
Fort Mojave Indian Reservation	9,029	16,720	25	1890	Tribal
Fort Mojave Indian Reservation	8,398	12,534	81	1890	Tribal
Fort Yuma Indian Reservation	36,524	71,616	23	1884	Tribal
Fort Yuma Indian Reservation	4,001	6,350	3a	1884	Tribal
Colorado River Indian Reservation	3,399	5,860	24	1876	Tribal
Colorado River Indian Reservation	27,033	51,986	2	1874	Tribal
Colorado River Indian Reservation	23,340	40,241	24	1874	Tribal
Colorado River Indian Reservation	131,048	252,016	2	1873	Tribal

Entitlement Holders	CU Equivalent (af)*	Diversion (af)	PPR No.	Date	Type of Use
Colorado River Indian Reservation	6,232	10,745	24	1873	Tribal
Colorado River Indian Reservation	186,368	358,400	2	1865	Tribal

*Calculated consumptive use equivalents. Historical Decree Accounting data were used to estimate average CU/Diversion ratios as part of development of the CRSS hydrologic modeling dataset for this EIS. For purposes of modeling, these values are assumed to be generally representative of return flow conditions for the specified users, and match CRSS inputs. Those ratios were used to estimate the consumptive use equivalent of diversion entitlements. In CA, miscellaneous PPRs were assumed to have a CU/Div ratio of .64. For IID, consumptive use was assumed to equal diversion since the CU/diversion ratio based on average historical efficiency was 0.996. In AZ, with limited supporting data about miscellaneous PPRs, they were assumed to be fully consumptive. Where an entitlement was quantified on the basis of CU by the Consolidated Decree, those values are used.

A non-shorted component is set aside for Mexico in proportion to the non-shorted tribal PPR entitlements in the United States; in this model, 6.71 percent of 1.5 mafy, or 100,663 afy. Entitlements subject to shortage in this Alternative Distribution Model are summarized in the following **Table C-53**.

Table C-53
Non-Tribal Entitlements Subject to Shortage Under this Alternative Distribution Model

Arizona, California, Nevada, and Mexico Summary	CU Equivalent (afy)
Arizona Total	2,412,642
California Total	4,315,353
Nevada Total	291,602
Mexico Total	1,399,337
Total	**8,418,934**

C.11.2 Pro Rata Without PPR Tribal Shortage Alternative Distribution Model Results

The tables in this section present the results of the Pro Rata Without PPR Tribal Shortage Alternative Distribution Model over a range of total shortages to the Lower Basin including Mexico.

Table C-54, the Regional Summary, summarizes the shortage attributed to each priority within the Lower Division States and reflects shortage attributed to Mexico.

Table C-55, the Tribal Summary, presents the shortage impacts on tribes.

Table C-56, the Irrigation Summary, presents the shortage impacts on irrigators.

Table C-57, the Domestic Summary, presents the shortage impacts on domestic users.

Table C-54
Pro Rata Without PPR Tribal Shortage Alternative Distribution Model Regional Summary

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-	-	600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	5th, 6th, and CAP Agricultural and Other Excess[1]	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced	Fully Reduced
-	4th Priority ii (CAP) at the Point of Diversion[2]	-	-	-	-	-	-	-	-	-	-	-
-	NIA Priority	20,460	34,100	51,150	61,380	68,200	71,610	78,430	102,300	119,350	136,400	170,500
-	M&I Priority	47,804	79,673	119,510	143,412	159,347	167,314	183,249	239,020	278,856	318,693	398,366
-	Indian Priority	25,673	42,788	64,183	77,019	85,577	89,856	98,413	128,365	149,759	171,154	213,942
-	4th Priority i (Mainstream)	7,765	12,942	19,413	23,296	25,884	27,178	29,767	38,826	45,297	51,768	64,710
-	2nd & 3rd Priorities	56,876	94,793	142,190	170,628	189,587	199,066	218,025	284,380	331,777	379,173	473,967
-	1st Priority (Present Perfected Rights)	13,366	22,276	33,414	40,097	44,553	46,780	51,236	66,829	77,967	89,105	111,382
-	**Subtotal**	**171,944**	**286,573**	**429,860**	**515,832**	**573,147**	**601,804**	**659,119**	**859,720**	**1,003,007**	**1,146,293**	**1,432,867**
California	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	4th Priority (MWD)	27,652	46,087	69,130	82,956	92,174	96,782	106,000	138,260	161,304	184,347	230,434
-	3rd Priority (IID, CVWD, PVID)	59,509	99,181	148,772	178,526	198,362	208,281	228,117	297,544	347,134	396,725	495,906
-	2nd Priority (Yuma Project Reservation Division)	520	866	1,300	1,559	1,733	1,819	1,993	2,599	3,032	3,466	4,332
-	1st Priority (PVID)	26,254	43,756	65,634	78,761	87,512	91,887	100,639	131,268	153,146	175,024	218,779
-	Present Perfected Rights (PPRs)	193,612	322,687	484,030	580,836	645,374	677,642	742,180	968,060	1,129,404	1,290,747	1,613,434
-	**Subtotal**	**307,546**	**512,577**	**768,866**	**922,639**	**1,025,154**	**1,076,412**	**1,178,927**	**1,537,731**	**1,794,020**	**2,050,308**	**2,562,885**
Nevada	**Priority**	-	-	-	-	-	-	-	-	-	-	-
-	8th Priority (SNWA - Balance & Unused)	6,608	11,013	16,519	19,823	22,026	23,127	25,330	33,039	38,545	44,051	55,064
-	8th Priority (SNWA & Big Bend)	11,615	19,359	29,038	34,846	38,717	40,653	44,525	58,076	67,756	77,435	96,794
-	7th Priority (Boy Scouts, USBR, NV Dept of Wildlife)	161	268	402	483	536	563	617	804	938	1,072	1,341
-	6th Priority (Las Vegas Valley Water District)	571	952	1,427	1,713	1,903	1,998	2,189	2,855	3,331	3,806	4,758
-	5th Priority (PABCO)	34	57	86	103	115	120	132	172	201	229	287
-	4th Priority (Henderson & Basic)	1,447	2,411	3,617	4,340	4,822	5,063	5,545	7,233	8,439	9,644	12,055
-	3rd Priority (Boulder City)	218	363	544	653	726	762	835	1,089	1,270	1,452	1,815

Summary of Shortage Impacts by State and Priority		Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-	**-**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**
-	2nd Priority (Lake Mead National Rec Area)	107	178	267	321	356	374	410	535	624	713	891
-	1st Priority (PPR: LMNRA)	21	36	53	64	71	75	82	107	125	143	178
-	**Subtotal**	**20,782**	**34,636**	**51,955**	**62,346**	**69,273**	**72,737**	**79,664**	**103,909**	**121,228**	**138,546**	**173,182**
-	**Lower Division States Subtotal**	**500,272**	**833,787**	**1,250,680**	**1,500,816**	**1,667,574**	**1,750,952**	**1,917,710**	**2,501,361**	**2,918,254**	**3,335,148**	**4,168,934**
Mexico	**Mexico Subtotal**	**99,728**	**166,213**	**249,320**	**299,184**	**332,426**	**349,048**	**382,290**	**498,639**	**581,746**	**664,852**	**831,066**
-	**Total**	**600,000**	**1,000,000**	**1,500,000**	**1,800,000**	**2,000,000**	**2,100,000**	**2,300,000**	**3,000,000**	**3,500,000**	**4,000,000**	**5,000,000**

Disclaimer: These modeling results for the pro rata (w/o tribal PPR Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
[1]Agricultural and Other CAP Excess contracts do not confer a Colorado River water entitlement and cannot be exercised under any of the scenarios modeled here
[2]The CAP priority system is not maintained in the pro rata distribution. CAP contractors and subcontractors are shorted pro rata with non-CAP water users; therefore, there is not an Available CAP Supply calculated for the pro rata alternative distribution model, or a shortage volume given for CAP as a whole.

Table C-55
Pro Rata Without PPR Tribal Shortage Alternative Distribution Model Tribal Summary

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	1,780	2,966	4,449	5,339	5,932	6,229	6,822	8,898	10,381	11,864	14,830
CAP NIA-A Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)	Pima County	2,110	3,517	5,276	6,331	7,034	7,386	8,089	10,551	12,310	14,068	17,585
CAP NIA-A Priority	Gila River Indian Community	Maricopa and Pinal County	9,025	15,041	22,562	27,074	30,082	31,586	34,595	45,123	52,644	60,164	75,205
CAP NIA-A Priority	Hualapai Tribe	Coconino and Mohave County	299	499	748	898	998	1,048	1,147	1,497	1,746	1,996	2,494
CAP Indian Priority	Gila River Indian Community[1]	Maricopa and Pinal County	14,308	23,846	35,769	42,923	47,692	50,077	54,846	71,539	83,462	95,385	119,231
CAP Indian Priority	Tohono O'odham Nation (Schuk Toak & San Xavier Districts)[1]	Pima County	2,829	4,714	7,072	8,486	9,429	9,900	10,843	14,143	16,500	18,857	23,572
CAP Indian Priority	White Mountain Apache Tribe	Apache, Gila, and Navajo	91	152	228	273	304	319	349	456	532	608	760
CAP Indian Priority	Ak-Chin Indian Community[1]	Pinal County	4,363	7,271	10,907	13,088	14,542	15,269	16,724	21,813	25,449	29,084	36,356
CAP Indian Priority	Fort McDowell Yavapai Nation	Maricopa County	1,364	2,274	3,411	4,093	4,548	4,775	5,230	6,822	7,959	9,096	11,370
CAP Indian Priority	Pascua Yaqui Tribe	Pima County	37	62	94	112	125	131	143	187	218	249	312
CAP Indian Priority	San Carlos Apache Tribe	Gila County	950	1,584	2,376	2,851	3,168	3,326	3,643	4,752	5,544	6,336	7,920
CAP Indian Priority	Salt River Pima-Maricopa Indian Community	Maricopa County	995	1,659	2,488	2,986	3,318	3,483	3,815	4,976	5,806	6,635	8,294
CAP Indian Priority	Tohono O'odham Nation Sif Oidak District	Pinal County	599	998	1,497	1,796	1,996	2,095	2,295	2,993	3,492	3,991	4,989
CAP Indian Priority	Tonto Apache Tribe	Gila County	10	16	24	29	32	34	37	48	56	64	80
CAP Indian Priority	Yavapai Apache Nation	Gila County	90	150	224	269	299	314	344	449	524	599	748
CAP M&I Priority	San Carlos Apache Tribe	Gila County	1,358	2,263	3,395	4,073	4,526	4,752	5,205	6,789	7,921	9,052	11,315
4(i)	Hopi Tribe[1]	La Paz County	216	361	541	649	722	758	830	1,082	1,263	1,443	1,804
4(i)	Cocopah Indian Reservation	Yuma County	97	161	242	290	322	339	371	484	564	645	806
4(i)	Water Reserved by the Secretary for a Navajo-Hopi Settlement	Apache, Navajo, Coconino	249	416	624	748	831	873	956	1,247	1,455	1,663	2,079
4(i)	Unallocated 4th Priority Mainstream Water[2]	Yuma County	729	1,215	1,823	2,187	2,430	2,552	2,795	3,645	4,253	4,860	6,076

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Ak-Chin Indian Community[1]	Pinal County	3,563	5,939	8,908	10,690	11,878	12,472	13,660	17,817	20,786	23,756	29,695
1	PPR No. 1, Cocopah Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 8, United States (Cocopah Indian Tribe)[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3, Fort Mojave Indian Reservation[1]	Mohave County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 3a, Fort Yuma Indian Reservation[1]	Yuma County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
1	PPR No. 2, Colorado River Indian Reservation[1]	La Paz County	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**45,062**	**75,104**	**112,656**	**135,187**	**150,208**	**157,719**	**172,739**	**225,312**	**262,864**	**300,416**	**375,520**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
PPR	PPR No. 22, Chemehuevi Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 25, Fort Mojave Indian Reservation[1]	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 23, Fort Yuma Indian Reservation[1]	Imperial	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 24, Colorado River Indian Reservation[1]	San Bernardino, Riverside	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
1	PPR No. 81, Fort Mojave Indian Reservation[1]	Clark	0	0	0	0	0	0	0	0	0	0	0
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**45,062**	**75,104**	**112,656**	**135,187**	**150,208**	**157,719**	**172,739**	**225,312**	**262,864**	**300,416**	**375,520**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-

Summary of Consumptive Use Impacts to Tribal Allocations			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
_	Coconino County	0.83	233	388	582	698	776	815	892	1,164	1,358	1,552	1,940
_	Gila County	4.67	3,031	5,052	7,578	9,093	10,104	10,609	11,619	15,156	17,682	20,208	25,260
_	La Paz County	4	216	361	541	649	722	758	830	1,082	1,263	1,443	1,804
_	Maricopa County	2.6	9,359	15,599	23,398	28,078	31,198	32,758	35,878	46,797	54,596	62,396	77,995
_	Mohave County	2.5	150	249	374	449	499	524	574	748	873	998	1,247
_	Pima County	3	4,976	8,294	12,441	14,929	16,588	17,417	19,076	24,881	29,028	33,175	41,469
_	Pinal County	4.40	24,857	41,429	62,143	74,572	82,858	87,001	95,287	124,287	145,001	165,716	207,145
_	Yuma County	5	826	1,376	2,065	2,477	2,753	2,890	3,166	4,129	4,817	5,505	6,882
_	Apache County	1.00	707	1,178	1,767	2,120	2,356	2,474	2,709	3,534	4,123	4,712	5,890
_	Navajo County	1.00	707	1,178	1,767	2,120	2,356	2,474	2,709	3,534	4,123	4,712	5,890
_	**Subtotal Arizona Tribal**	**29**	**45,062**	**75,104**	**112,656**	**135,187**	**150,208**	**157,719**	**172,739**	**225,312**	**262,864**	**300,416**	**375,520**
_	**California**	-	-	-	-	-	-	-	-	-	-	-	-
_	San Bernardino	2.5	0	0	0	0	0	0	0	0	0	0	0
_	Riverside	0.50	0	0	0	0	0	0	0	0	0	0	-
_	Imperial	1	0	0	0	0	0	0	0	0	0	0	0
_	**Subtotal California Tribal**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
_	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
_	Clark	1	0	0	0	0	0	0	0	0	0	0	0
_	**Subtotal Nevada Tribal**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Disclaimer: These modeling results for the pro rata (w/o tribal PPR Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis attributes shortage to the base allocation or entitlement according to its priority, representing an opportunity cost. The ultimate impacts, both financial and in terms of the lost productive value of water, are diverse according to their varied uses and compensation structures under a large body of exchanges, leases, and other Federal and non-Federal arrangements and commitments. The modeled distribution of shortage to the base allocation reflects how shortage affects the ability for allocations to be exercised, and water users will face decisions in administering agreements during a Shortage Condition; actual water orders received each year will affect shortage impacts.
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Denotes full or substantial use in tribal agricultural operations, which may or may not be impacted according to the terms of related agreements.
[2]Likely to include domestic, irrigation, and Tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Table C-56
Pro Rata Without PPR Tribal Shortage Alternative Distribution Model Irrigation Summary

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4(i)	Arizona Game and Fish Commission	La Paz County	146	243	364	437	485	510	558	728	849	971	1,214
4(i)	Arizona State Land Department	Yuma County	301	502	753	904	1,005	1,055	1,155	1,507	1,758	2,009	2,511
4(i)	Beattie Farms, Southwest	Yuma County	51	86	129	154	171	180	197	257	300	343	428
4(i)	Bishop, Alfred F. and Erma Jean Family Trust	La Paz County	21	35	53	64	71	74	81	106	124	142	177
4(i)	Cathcart, Bruce Y. and Lora M. and James Y. and Maria E.	La Paz County	6	11	16	19	21	22	24	32	37	43	53
4(i)	Perricone Arizona Properties, LLC and Meyer Farms, LLC	Yuma County	97	162	243	292	324	340	373	486	567	649	811
4(i)	Cibola Sportsman's Club, Inc.	La Paz County	11	18	27	33	36	38	42	55	64	73	91
4(i)	Cibola Valley Irrigation and Drainage District[2]	La Paz County	377	628	941	1,130	1,255	1,318	1,444	1,883	2,197	2,511	3,138
4(i)	Curtis, Armon	Yuma County	14	23	35	42	46	49	53	69	81	93	116
4(i)	Gila Monster Farms, Inc.[3]	Yuma County	58	97	146	175	194	204	223	291	340	389	486
4(i)	Matador Farms, LLC	La Paz County	208	347	521	625	695	730	799	1,042	1,216	1,390	1,737
4(i)	JRJ Partners, L.L.C.	Yuma County	50	83	125	150	167	175	192	250	292	334	417
4(i)	Mohave Valley Irrigation and Drainage District[2,3]	Mohave County	1,349	2,249	3,373	4,048	4,498	4,722	5,172	6,746	7,871	8,995	11,244
4(i)	North Baja Pipeline, LLC[2]	La Paz County	22	37	56	67	74	78	85	111	130	148	185
4(i)	Ogram Boys Enterprises, Inc.	Yuma County	43	71	107	128	143	150	164	214	250	285	357
4(i)	Ott, Larry and Gina, and Lee C. and Candace M.	Yuma County	22	37	56	67	74	78	85	111	130	148	185
4(i)	Pasquinelli, Gary J. and Barbara J.	Yuma County	23	38	56	68	75	79	86	113	131	150	188
4(i)	Red River Land Company, LLC	La Paz County	15	25	38	46	51	53	58	76	89	101	127
4(i)	Phillips, Milton and Jean	Yuma County	4	7	11	13	14	15	16	21	25	29	36
4(i)	Western Water, LLC	La Paz County	28	46	69	83	92	96	106	138	161	184	229
3	Sturges, Harold	Yuma County	24	40	60	72	80	84	92	119	139	159	199
3	Sturges, Irma	Yuma County	27	46	69	82	91	96	105	137	160	183	229

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Yuma Mesa Irrigation & Drainage District (10.0 kaf M&I)[1]	Yuma County	10,086	16,810	25,214	30,257	33,619	35,300	38,662	50,429	58,834	67,238	84,048
3	Yuma Irrigation District (5.0 kaf M&I)[1]	Yuma County	4,795	7,991	11,987	14,384	15,983	16,782	18,380	23,974	27,969	31,965	39,956
3	North Gila Valley Irrigation District (2.5 kaf M&I)[1,3]	Yuma County	480	800	1,199	1,439	1,599	1,679	1,839	2,399	2,798	3,198	3,998
3	Wellton-Mohawk Irrigation and Drainage District (12.0 kaf M&I)[1]	Yuma County	19,812	33,021	49,531	59,437	66,042	69,344	75,948	99,062	115,573	132,083	165,104
3	Gila Monster Farms (formerly Sturges)[3]	Yuma County	255	426	638	766	851	894	979	1,277	1,489	1,702	2,128
3	Yuma County Water Users' Association (14,701af M&I includes YAO's 489.95af conversion)[2,3]	Yuma County	5,652	9,420	14,130	16,955	18,839	19,781	21,665	28,259	32,969	37,679	47,099
3	University of Arizona	Yuma County	78	129	194	233	259	271	297	388	452	517	646
3	Camille Allec, Jr. (Formerly Yuma Mesa Grapefruit Company)	Yuma County	9	14	21	26	29	30	33	43	50	57	71
3	Unit B Irrigation & Drainage District[3]	Yuma County	1,203	2,006	3,009	3,610	4,011	4,212	4,613	6,017	7,020	8,023	10,029
1	PPR No. 15, Molina	Yuma County	23	38	57	68	76	79	87	113	132	151	189
1	PPR No. 16, Sturges (Gila Monster Farms, Inc.)	Yuma County	32	53	79	95	106	111	121	158	185	211	264
1	PPR No. 5, Yuma Auxiliary Project, Unit B	Yuma County	310	517	775	930	1,034	1,086	1,189	1,551	1,809	2,068	2,585
1	PPR No. 6, North Gila Valley Unit, Yuma Mesa Division, Gila Project	Yuma County	437	728	1,091	1,310	1,455	1,528	1,673	2,183	2,546	2,910	3,638
1	PPR No. 4, Valley Division, Yuma Project (Yuma County Water Users' Association)	Yuma County	12,138	20,230	30,345	36,414	40,460	42,483	46,529	60,690	70,805	80,920	101,149
1	PPR No. 7, Powers	Yuma County	44	74	111	133	148	156	170	222	259	296	371
1	PPR No. 17, Zozaya (MVIDD)	Mohave County	28	46	69	83	92	97	106	139	162	185	231
1	PPR No. 10, Hulet (MVIDD)	Mohave County	42	69	104	125	139	145	159	208	242	277	346
1	PPR No. 11, Hurschler (First American Title Insurance Agency of Mohave, Inc.) (MVIDD)	Mohave County	40	67	101	121	135	141	155	202	236	269	337
1	PPR No. 12, Miller (MVIDD)	Mohave County	9	15	23	28	31	32	35	46	54	62	77
1	PPR No. 13, McKellips and Granite Reef Farms (MVIDD)	Mohave County	31	52	78	94	104	109	119	156	182	208	260
1	PPR No. 14, Sherrill & Lafollette (MVIDD)	Mohave County	42	69	104	125	139	145	159	208	242	277	346
1	PPR No. 18, Swan (MVIDD)	Mohave County	37	62	92	111	123	129	142	185	216	246	308
1	PPR No. 19, Phillips, Milton and Jean	Yuma County	3	5	7	9	10	10	11	15	17	20	25
-	-	**Subtotal**	**58,483**	**97,472**	**146,208**	**175,450**	**194,944**	**204,692**	**224,186**	**292,416**	**341,153**	**389,889**	**487,361**
California			-	-	-	-	-	-	-	-	-	-	-

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Palo Verde Irrigation District (3b) - Lower Palo Verde Mesa Lands	Riverside County	356	594	891	1,069	1,188	1,247	1,366	1,782	2,079	2,376	2,969
3	Coachella Valley Water District (CVWD) (3a)	Riverside County	23,518	39,197	58,796	70,555	78,395	82,314	90,154	117,592	137,191	156,789	195,987
3	Imperial Irrigation District (IID) (3a)	Imperial County	35,634	59,390	89,085	106,902	118,780	124,719	136,597	178,170	207,865	237,560	296,950
2	Yuma Project, Reservation Division (Bard Unit Only - Indian Unit Under PPRs)	Imperial County	520	866	1,300	1,559	1,733	1,819	1,993	2,599	3,032	3,466	4,332
1	Palo Verde Irrigation District - Valley Lands	Riverside, Imperial	26,254	43,756	65,634	78,761	87,512	91,887	100,639	131,268	153,146	175,024	218,779
PPR	PPR No. 32, Sonny Gowan (Grannis)	Imperial County	8	14	21	25	27	29	31	41	48	55	68
PPR	PPR No. 41, Chagnon	San Bernardino	5	9	14	16	18	19	21	27	32	36	46
PPR	PPR No. 36, Colorado River Sportsmen's League	San Bernardino	4	7	11	13	15	15	17	22	26	29	36
PPR	PPR No. 34, Milpitas	Imperial County	5	8	12	15	16	17	19	25	29	33	41
PPR	PPR No. 28, Reservation Division/Yuma Project (non-Indian portion)	Imperial County	1,391	2,318	3,477	4,173	4,637	4,868	5,332	6,955	8,114	9,273	11,592
PPR	PPR No. 27, Imperial Irrigation District & CVWD lands	Imperial County	185,297	308,828	463,242	555,890	617,655	648,538	710,304	926,483	1,080,897	1,235,311	1,544,138
PPR	PPR No. 26, Palo Verde Irrigation District	Riverside, Imperial	6,735	11,225	16,838	20,206	22,451	23,573	25,818	33,676	39,289	44,901	56,127
PPR	PPR No. 42, Lawrence	Imperial County	5	9	14	16	18	19	21	27	32	36	46
PPR	PPR No. 37, Milpitas	Imperial County	3	5	8	9	10	11	12	16	18	21	26
PPR	PPR No. 33, Morgan	Imperial County	7	11	17	21	23	24	26	34	40	46	57
PPR	PPR No. 35, Simons	San Bernardino	3	5	7	8	9	10	10	14	16	18	23
-	-	**Subtotal**	**279,746**	**466,243**	**699,365**	**839,238**	**932,487**	**979,111**	**1,072,360**	**1,398,730**	**1,631,852**	**1,864,974**	**2,331,217**
Nevada			-	-	-	-	-	-	-	-	-	-	-
None	None		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Subtotal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
-	-	**Total**	**338,229**	**563,716**	**845,573**	**1,014,688**	**1,127,431**	**1,183,803**	**1,296,546**	**1,691,147**	**1,973,005**	**2,254,862**	**2,818,578**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	0	0	0	0	0	0	0	0	0	0	0	0
-	La Paz County	9	834	1,390	2,085	2,503	2,781	2,920	3,198	4,171	4,866	5,561	6,951
-	Mohave County	8	1,578	2,630	3,945	4,734	5,260	5,523	6,049	7,889	9,204	10,519	13,149

Summary of Consumptive Use Impacts to Irrigation			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	Yuma County	28	56,071	93,452	140,178	168,214	186,904	196,249	214,940	280,356	327,082	373,808	467,260
-	**Subtotal Arizona Irrigation**	**45**	**58,483**	**97,472**	**146,208**	**175,450**	**194,944**	**204,692**	**224,186**	**292,416**	**341,153**	**389,889**	**487,361**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Riverside County	3	40,369	67,282	100,923	121,107	134,564	141,292	154,748	201,846	235,487	269,127	336,409
-	Imperial County	10	239,364	398,941	598,411	718,093	797,881	837,775	917,563	1,196,822	1,396,292	1,595,762	1,994,703
-	San Bernardino	3	13	21	31	38	42	44	48	63	73	84	105
-	**Subtotal California Irrigation**	**16**	**279,746**	**466,243**	**699,365**	**839,238**	**932,487**	**979,111**	**1,072,360**	**1,398,730**	**1,631,852**	**1,864,974**	**2,331,217**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	None	None	0	0	0	0	0	0	0	0	0	0	0

Disclaimer: These modeling results for the pro rata (w/o tribal PPR Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]Combined irrigation and domestic entitlement where domestic use is contractually subordinated to irrigation.
[2]Combined irrigation and domestic entitlement where priority of domestic and irrigation uses may be subject to an annual determination that varies based on the water supply conditions.
[3]This user also holds a PPR entitlement.

Table C-57
Pro Rata Without PPR Tribal Shortage Alternative Distribution Model Domestic Summary

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
Arizona			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
CAP NIA-B	Buckeye	Maricopa County	208	347	521	625	695	730	799	1,042	1,216	1,390	1,737
CAP NIA-B	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	1,361	2,268	3,402	4,082	4,536	4,763	5,216	6,804	7,938	9,072	11,340
CAP NIA-B	Carefree Water Company	Maricopa County	8	14	21	25	28	29	32	42	49	56	70
CAP NIA-B	Cave Creek	Maricopa County	29	48	72	87	96	101	111	144	168	193	241
CAP NIA-B	El Mirage	Maricopa County	99	164	247	296	329	345	378	493	575	658	822
CAP NIA-B	EPCOR, San Tan (ST)	Pinal County	241	401	602	722	802	843	923	1,204	1,404	1,605	2,006
CAP NIA-B	Freeport	Pima County	425	708	1,062	1,275	1,416	1,487	1,629	2,124	2,479	2,833	3,541
CAP NIA-B	Gilbert	Maricopa County	137	228	343	411	457	480	526	685	800	914	1,142
CAP NIA-B	Marana	Pima County	39	64	96	116	128	135	148	193	225	257	321
CAP NIA-B	Queen Creek	Maricopa County	311	519	779	934	1,038	1,090	1,194	1,557	1,817	2,076	2,595
CAP NIA-B	Resolution Copper	Maricopa County	167	279	419	502	558	586	642	837	977	1,116	1,396
CAP NIA-B	Rosemont Copper	Pima County	84	140	210	252	280	294	322	421	491	561	701
CAP NIA-B	SRP	Maricopa County	162	269	404	485	539	566	620	808	943	1,078	1,347
CAP NIA-B	Water Utilities Community Facilities District, Apache Junction	Pinal County	61	102	153	183	204	214	234	306	357	408	509
CAP NIA-A	Phoenix	Maricopa County	2,790	4,650	6,974	8,369	9,299	9,764	10,694	13,949	16,273	18,598	23,248
CAP NIA-A	Chandler	Maricopa County	294	489	734	881	979	1,028	1,126	1,468	1,713	1,958	2,447
CAP NIA-A	Gilbert	Maricopa County	115	192	288	345	383	403	441	575	671	767	958
CAP NIA-A	Glendale	Maricopa County	51	85	128	153	170	179	196	255	298	340	425
CAP NIA-A	Mesa	Maricopa County	415	692	1,038	1,246	1,385	1,454	1,592	2,077	2,423	2,769	3,462

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP NIA-A	Scottsdale	Maricopa County	247	412	618	742	825	866	948	1,237	1,443	1,649	2,062
CAP NIA-A	Tempe	Maricopa County	2	3	4	5	6	6	7	9	10	11	14
CAP Indian	Scottsdale (Yavapai Prescott Indian Tribe Allocation)	Maricopa County	37	62	94	112	125	131	143	187	218	249	312
CAP M&I	ASARCO	Pima County	1,571	2,619	3,929	4,714	5,238	5,500	6,024	7,857	9,167	10,476	13,095
CAP M&I	Avondale	Maricopa County	405	675	1,013	1,216	1,351	1,419	1,554	2,026	2,364	2,702	3,377
CAP M&I	Arizona State Land Department (AZSLD)	Maricopa County	2,108	3,514	5,271	6,325	7,028	7,380	8,082	10,542	12,299	14,056	17,570
CAP M&I	Arizona Water Company, Casa Grande	Pinal County	665	1,108	1,662	1,994	2,216	2,327	2,548	3,324	3,878	4,432	5,540
CAP M&I	Arizona Water Company, Coolidge	Pinal County	150	249	374	449	499	524	574	748	873	998	1,247
CAP M&I	Arizona Water Company, Superstition	Pinal County	470	784	1,176	1,411	1,568	1,646	1,803	2,352	2,744	3,135	3,919
CAP M&I	Arizona Water Company, White Tank	Maricopa County	72	121	181	217	241	254	278	362	423	483	604
CAP M&I	Buckeye	Maricopa County	5	8	13	15	17	18	20	25	30	34	42
CAP M&I	Central Arizona Groundwater Replenishment District (CAGRD)	Maricopa County	481	801	1,202	1,443	1,603	1,683	1,843	2,404	2,805	3,206	4,007
CAP M&I	Carefree Water Company	Maricopa County	126	209	314	377	419	439	481	628	732	837	1,046
CAP M&I	Cave Creek	Maricopa County	167	278	417	500	556	584	639	834	973	1,111	1,389
CAP M&I	Chandler	Maricopa County	648	1,079	1,619	1,943	2,159	2,267	2,482	3,238	3,778	4,317	5,397
CAP M&I	Chaparral City Water Company	Maricopa County	667	1,111	1,667	2,000	2,222	2,333	2,556	3,333	3,889	4,444	5,556
CAP M&I	Circle City	Maricopa County	294	490	736	883	981	1,030	1,128	1,471	1,716	1,962	2,452
CAP M&I	El Mirage	Maricopa County	38	63	95	114	127	133	146	190	222	253	317
CAP M&I	Eloy	Pinal County	162	271	406	487	542	569	623	812	948	1,083	1,354
CAP M&I	EPCOR, Agua Fria	Maricopa County	830	1,384	2,075	2,490	2,767	2,905	3,182	4,151	4,842	5,534	6,918
CAP M&I	EPCOR, Paradise Valley	Maricopa County	242	403	604	725	806	846	927	1,209	1,410	1,612	2,015
CAP M&I	EPCOR, Sun City	Maricopa County	313	522	784	940	1,045	1,097	1,202	1,567	1,829	2,090	2,612
CAP M&I	EPCOR, Sun City West	Maricopa County	177	296	444	532	592	621	680	887	1,035	1,183	1,479

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Florence	Pinal County	153	255	383	460	511	536	587	766	894	1,022	1,277
CAP M&I	Freeport-Miami	Gila County	217	362	544	652	725	761	834	1,087	1,269	1,450	1,812
CAP M&I	Flowing Wells Irrigation District (FWID)	Pima County	214	356	534	641	712	747	819	1,068	1,246	1,424	1,780
CAP M&I	Gilbert	Maricopa County	541	902	1,354	1,624	1,805	1,895	2,075	2,707	3,158	3,609	4,512
CAP M&I	Glendale	Maricopa County	1,290	2,150	3,224	3,869	4,299	4,514	4,944	6,449	7,524	8,599	10,748
CAP M&I	Goodyear	Maricopa County	804	1,340	2,010	2,412	2,679	2,813	3,081	4,019	4,689	5,359	6,699
CAP M&I	Greater Tonopah, Water Utility	Maricopa County	5	8	12	14	16	17	18	24	28	32	40
CAP M&I	Green Valley Community Water Company	Pima County	214	356	535	642	713	749	820	1,069	1,248	1,426	1,782
CAP M&I	Green Valley Domestic Water Improvement District	Pima County	142	237	355	427	474	498	545	711	829	948	1,185
CAP M&I	Marana	Pima County	175	291	437	524	583	612	670	874	1,020	1,165	1,457
CAP M&I	Maricopa County Parks & Recreation	Maricopa County	50	83	124	149	166	174	191	249	290	332	415
CAP M&I	Mesa	Maricopa County	3,255	5,426	8,138	9,766	10,851	11,394	12,479	16,277	18,990	21,703	27,128
CAP M&I	Metropolitan Domestic Water Improvement District	Pima County	1,007	1,679	2,518	3,022	3,357	3,525	3,861	5,036	5,876	6,715	8,394
CAP M&I	Oro Valley	Pima County	771	1,285	1,928	2,313	2,570	2,699	2,956	3,856	4,498	5,141	6,426
CAP M&I	Peoria	Maricopa County	2,030	3,383	5,074	6,089	6,765	7,103	7,780	10,148	11,839	13,530	16,913
CAP M&I	Phoenix	Maricopa County	9,437	15,728	23,591	28,310	31,455	33,028	36,173	47,183	55,046	62,910	78,638
CAP M&I	Pine	Gila County	12	20	30	36	40	42	46	60	70	80	100
CAP M&I	Queen Creek	Maricopa County	37	62	93	111	123	130	142	185	216	247	309
CAP M&I	Rio Verde Utilities	Maricopa County	61	101	152	182	203	213	233	304	354	405	506
CAP M&I	San Tan Irrigation District	Maricopa County	18	29	44	53	59	62	68	88	103	118	147
CAP M&I	Scottsdale	Maricopa County	3,952	6,586	9,880	11,856	13,173	13,831	15,149	19,759	23,052	26,346	32,932
CAP M&I	Spanish Trail Water Company	Pima County	227	379	568	682	758	795	871	1,136	1,326	1,515	1,894
CAP M&I	Surprise	Maricopa County	767	1,278	1,917	2,301	2,556	2,684	2,940	3,835	4,474	5,113	6,391

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
CAP M&I	Tempe	Maricopa County	323	538	807	969	1,076	1,130	1,238	1,614	1,884	2,153	2,691
CAP M&I	Tonto Hills Domestic Water Improvement District	Maricopa County	5	9	13	16	18	19	20	27	31	35	44
CAP M&I	Tucson	Pima County	10,790	17,983	26,975	32,370	35,967	37,765	41,362	53,950	62,942	71,933	89,917
CAP M&I	Vail Water Company	Pima County	139	232	347	417	463	486	533	695	811	926	1,158
CAP M&I	Water Utilities Community Facilities District, Apache Junction	Pinal County	218	364	546	655	728	765	837	1,092	1,274	1,456	1,820
4(i)	Arizona State Land Department	Yuma County	70	117	175	210	233	245	268	350	408	466	583
4(i)	Arizona State Parks Board - Windsor Beach	Mohave County	4	7	10	13	14	15	16	21	24	28	35
4(i)	B&F Investment, LLC	La Paz County	3	5	7	9	10	10	11	15	17	20	25
4(i)	Bullhead City	Mohave County	715	1,192	1,789	2,146	2,385	2,504	2,742	3,577	4,173	4,770	5,962
4(i)	Bullhead City (Mohave County Water Authority (MCWA) Subcontract)	Mohave County	101	168	252	302	335	352	386	503	587	671	838
4(i)	Bullhead City (MCWA Subcontract)	Mohave County	329	549	823	988	1,098	1,152	1,262	1,646	1,921	2,195	2,744
4(i)	Bureau of Land Management	La Paz County	286	476	714	857	953	1,000	1,095	1,429	1,667	1,905	2,381
4(i)	Crystal Beach Water Conservation District	Mohave County	6	10	15	18	20	21	23	31	36	41	51
4(i)	Ehrenburg Improvement District	La Paz County	33	55	83	99	110	116	127	165	193	220	275
4(i)	EPCOR Water Arizona Inc.[1]	Mohave County	88	147	220	264	294	309	338	441	514	588	735
4(i)	Fisher's Landing Water and Sewer Works, L.L.C.	Yuma County	3	4	6	8	8	9	10	13	15	17	21
4(i)	Frontier Communications West Coast Inc.	La Paz County	0	0	0	0	0	0	0	0	0	0	1
4(i)	Gold Dome Mining Corporation	Yuma County	0	1	1	1	2	2	2	2	3	3	4
4(i)	Golden Shores Water Conservation District	Mohave County	95	159	239	286	318	334	366	477	557	637	796
4(i)	GSC Farm, LLC	La Paz County	4	6	9	11	12	13	14	18	21	24	30
4(i)	Hillcrest Water Company	La Paz County	4	6	10	12	13	14	15	19	23	26	32
4(i)	Lake Havasu City	Mohave County	848	1,413	2,120	2,544	2,827	2,968	3,251	4,240	4,947	5,654	7,067
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	95	158	236	284	315	331	362	473	551	630	788

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
4(i)	Lake Havasu City (MCWA Subcontract)	Mohave County	320	534	801	961	1,068	1,121	1,228	1,602	1,869	2,136	2,670
4(i)	La Paz County	La Paz County	25	42	62	75	83	87	96	125	146	166	208
4(i)	Martinez Lake Cabin Sites	Yuma County	1	2	3	3	3	4	4	5	6	7	9
4(i)	McAlister Family Trust	Mohave County	2	3	5	6	7	7	8	10	11	13	16
4(i)	Mohave Valley Irrigation and Drainage District (MCWA Subcontract)	Mohave County	48	80	120	144	160	168	184	241	281	321	401
4(i)	Mohave Water Conservation District	Mohave County	86	143	215	258	286	301	329	430	501	573	716
4(i)	Mohave Water Conservation District (MCWA Subcontract)	Mohave County	143	239	358	430	477	501	549	716	836	955	1,194
4(i)	Parker, Town of[1]	La Paz County	31	51	77	92	103	108	118	154	180	206	257
4(i)	Quartzsite, Town of	La Paz County	76	127	191	229	254	267	292	381	445	508	635
4(i)	Queen Creek, Town of	Maricopa County	145	241	362	435	483	507	555	724	845	966	1,207
4(i)	Roy, Estates of Anna R. and Edward P.	Yuma County	0	0	0	0	0	0	0	0	0	0	1
4(i)	Shepard Water Company, Incorporated	Yuma County	2	4	6	7	8	8	9	12	14	15	19
4(i)	Somerton, City of	Yuma County	53	89	134	160	178	187	205	267	312	356	445
4(i)	Springs Del Sol Domestic Water Improvement District	La Paz County	5	9	13	16	17	18	20	26	30	35	43
4(i)	TV Marble Canyon AZ, LLC	Coconino County	3	5	8	10	11	11	12	16	19	22	27
3	City of Yuma[1]	Yuma County	3,458	5,763	8,645	10,374	11,527	12,103	13,256	17,290	20,172	23,054	28,817
3	Union Pacific Railroad (formerly Southern Pacific Co.)	Yuma County	2	3	5	5	6	6	7	9	11	12	15
3	Kaman, Inc.	Yuma County	0	0	0	0	0	0	1	1	1	1	1
3	Department of the Navy, MCAS	Yuma County	214	356	535	641	713	748	820	1,069	1,247	1,425	1,782
3	City of Yuma (cemetery)	Yuma County	4	7	11	13	14	15	16	21	25	29	36
3	Yuma Mesa Fruit Growers' Association	Yuma County	1	2	3	3	4	4	4	5	6	7	9
3	Desert Lawn Memorial Park Association	Yuma County	10	16	25	30	33	34	38	49	57	66	82

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
3	Chandler (Salt River Pima-Maricopa Exchange)	Maricopa County	305	508	762	915	1,016	1,067	1,169	1,524	1,778	2,033	2,541
3	Gilbert (Salt River Pima-Maricopa Exchange)	Maricopa County	482	803	1,205	1,446	1,606	1,687	1,847	2,410	2,811	3,213	4,016
3	Glendale (Salt River Pima-Maricopa Exchange)	Maricopa County	214	356	535	641	713	748	820	1,069	1,247	1,425	1,782
3	Mesa (Salt River Pima-Maricopa Exchange)	Maricopa County	197	328	492	590	656	688	754	983	1,147	1,311	1,639
3	Phoenix (Salt River Pima-Maricopa Exchange)	Maricopa County	356	594	891	1,069	1,188	1,247	1,366	1,782	2,079	2,376	2,969
3	Scottsdale (Salt River Pima-Maricopa Exchange)	Maricopa County	7	12	18	21	24	25	27	36	42	48	59
3	Tempe (Salt River Pima-Maricopa Exchange)	Maricopa County	7	12	18	21	24	25	27	36	42	48	59
3	Department of the Army - Yuma Proving Ground	Yuma County	80	134	201	241	268	282	308	402	469	536	671
3	Yuma Union High School District	Yuma County	11	18	26	32	35	37	40	53	62	70	88
3	Desert Lawn Memorial Park Association, Inc.	Yuma County	18	30	44	53	59	62	68	89	103	118	148
2	Cibola National Wildlife Refuge	La Paz County	1,197	1,995	2,992	3,590	3,989	4,189	4,588	5,984	6,981	7,979	9,973
2	Lake Mead National Recreation Area	Mohave County	24	41	61	73	81	86	94	122	143	163	204
2	Bureau of Reclamation - Davis Dam	Mohave County	0	1	1	1	2	2	2	2	3	3	4
2	Imperial National Wildlife Refuge	La Paz County	1,639	2,732	4,098	4,917	5,464	5,737	6,283	8,196	9,562	10,928	13,660
2	Havasu Lake National Wildlife Refuge	Mohave County	2,665	4,442	6,663	7,996	8,884	9,329	10,217	13,327	15,548	17,769	22,211
1	PPR No. 9, EPCOR CSA #2 (Formerly Brooke Water Company) (Graham)	La Paz County	17	28	42	51	56	59	65	85	99	113	141
1	PPR No. 20, Parker, City of	La Paz County	29	48	71	86	95	100	109	143	166	190	238
1	PPR No. 21, Yuma, City of	Yuma County	105	176	263	316	351	369	404	527	614	702	878
-	-	**Subtotal**	**68,398**	**113,997**	**170,996**	**205,195**	**227,994**	**239,394**	**262,193**	**341,991**	**398,990**	**455,989**	**569,986**
California			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
4	Metropolitan Water District of Southern California (MWD) (4)	Los Angeles, Orange, San Diego, Riverside,	27,652	46,087	69,130	82,956	92,174	96,782	106,000	138,260	161,304	184,347	230,434

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
		San Bernardino											
PPR	PPR No. 59, Diehl	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 66, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 77, Estrada	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 79, Corrington	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 80, Tolliver	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 65, Randolph	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 67, Keefe	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 48, Faubion	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 58, Earle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 78, Whittle	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 51, Beauchamp	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 63, McGee	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 64, Stallard	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 72, Hadlock	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 30, Stephenson	San Bernardino	11	18	27	33	36	38	42	55	64	73	91
PPR	PPR No. 46, Draper, G.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 49, Dudley	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 38, Andrade	San Bernardino	3	5	8	9	10	11	12	15	18	20	25
PPR	PPR No. 45, Conger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 70, Vaulin	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 71, Salisbury	Imperial County	0	0	0	0	0	0	0	0	0	0	0

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)									
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 47, McDonough	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 62, Cate	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 56, Schneider	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 50, Douglas	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 52, Clark	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 61, Graham	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 53, Lawrence	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 54, Graham, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 60, Reid	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 75, Fitz	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 55, Geiger	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 76, Williams	Riverside County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 40, Cooper	San Bernardino	3	5	7	8	9	10	10	14	16	18	23
PPR	PPR No. 39, Reynolds	San Bernardino	2	3	4	5	5	6	6	8	10	11	14
PPR	PPR No. 68, Ferguson, C.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 69, Ferguson, W.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 73, Streeter	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 74, Draper, J.	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 44, City of Needles (formerly Atchison, Topeka, and Santa Fe Railway Co.)	San Bernardino	19	32	49	58	65	68	75	97	113	130	162
PPR	PPR No. 57, Martinez	Imperial County	0	0	0	0	0	0	0	0	0	0	0
PPR	PPR No. 31, Mendivil (Picacho Development Corp and CA Dept of Parks and Rec)	Imperial County	5	9	14	16	18	19	21	27	32	36	46
PPR	PPR No. 43, City of Needles	San Bernardino	68	113	169	203	226	237	260	339	395	451	564

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
PPR	PPR No. 29, Yuma Associates LTD and Winterhaven Water District (formerly Wavers)	Imperial County	36	59	89	107	119	125	136	178	208	237	296
-	-	**Subtotal**	**27,800**	**46,334**	**69,500**	**83,401**	**92,667**	**97,301**	**106,567**	**139,001**	**162,168**	**185,334**	**231,668**
Nevada			-	-	-	-	-	-	-	-	-	-	-
Priority	**Entitlement Holder**	**County**	-	-	-	-	-	-	-	-	-	-	-
8 - Balance & Surplus	Southern Nevada Water Authority (SNWA)	Clark	6,608	11,013	16,519	19,823	22,026	23,127	25,330	33,039	38,545	44,051	55,064
8	Big Bend Water District	Clark	349	582	873	1,048	1,164	1,222	1,339	1,746	2,037	2,328	2,910
8	Robert B. Griffith Project	Clark	11,266	18,777	28,165	33,798	37,553	39,431	43,186	56,330	65,719	75,107	93,884
7	Southern Nevada Water Authority (Formerly Boy Scouts of America)	Clark	0	1	1	1	1	1	1	2	2	2	3
7	Bureau of Reclamation (includes Sportsman Park)	Clark	10	17	26	31	35	37	40	52	61	70	87
7	Nevada Dept. of Wildlife (formerly NV Dept of Game & Fish)	Clark	2	3	4	5	6	6	7	9	10	12	15
7	U.S. Air Force (4.0 kaf) (Delivery from SNWA)	Clark	148	247	371	445	494	519	568	741	865	988	1,235
6	Las Vegas Valley Water District	Clark	571	952	1,427	1,713	1,903	1,998	2,189	2,855	3,331	3,806	4,758
5	Pacific Coast Building Products, Inc. (PABCO)	Clark	34	57	86	103	115	120	132	172	201	229	287
4	Henderson Water Company (formerly BMI/Basic Water Company)	Clark	304	507	760	913	1,014	1,065	1,166	1,521	1,774	2,028	2,535
4	City of Henderson	Clark	588	981	1,471	1,765	1,961	2,059	2,256	2,942	3,432	3,923	4,904
4	Southern Nevada Water Authority (From Basic Water Company)	Clark	554	923	1,385	1,662	1,847	1,939	2,124	2,770	3,232	3,694	4,617
3	Boulder City	Clark	218	363	544	653	726	762	835	1,089	1,270	1,452	1,815
2	Lake Mead National Recreation Area, Executive Order No. 5339	Clark	107	178	267	321	356	374	410	535	624	713	891
1	PPR No. 82, Lake Mead National Recreation Area (Overton Area, EO 5105)	Clark	21	36	53	64	71	75	82	107	125	143	178
-	-	**Subtotal**	**20,782**	**34,636**	**51,955**	**62,346**	**69,273**	**72,737**	**79,664**	**103,909**	**121,228**	**138,546**	**173,182**
-	-	**Total**	**116,980**	**194,967**	**292,451**	**350,941**	**389,934**	**409,431**	**448,425**	**584,902**	**682,385**	**779,869**	**974,836**
Summary by County													
-	**Arizona**	-	-	-	-	-	-	-	-	-	-	-	-
-	Coconino County	1	3	5	8	10	11	11	12	16	19	22	27

Summary of Consumptive Use Impacts to Domestic Uses			Range of Analyzed Volumes of Total Shortage to Lower Basin for the Pro Rata (w/o Tribal PPR Shortage) Alternative Distribution (af)										
-			600,000	1,000,000	1,500,000	1,800,000	2,000,000	2,100,000	2,300,000	3,000,000	3,500,000	4,000,000	5,000,000
-	Gila County	2	230	383	574	689	765	803	880	1,148	1,339	1,530	1,913
-	La Paz County	14	3,348	5,580	8,370	10,044	11,160	11,718	12,834	16,740	19,529	22,319	27,899
-	Maricopa County	55	37,294	62,157	93,235	111,883	124,314	130,530	142,961	186,471	217,549	248,628	310,785
-	Mohave County	17	5,572	9,286	13,929	16,715	18,572	19,501	21,358	27,859	32,502	37,145	46,431
-	Pima County	13	15,798	26,330	39,495	47,394	52,660	55,293	60,559	78,990	92,155	105,320	131,650
-	Pinal County	8	2,121	3,535	5,302	6,362	7,069	7,423	8,130	10,604	12,371	14,139	17,673
-	Yuma County	18	4,033	6,722	10,082	12,099	13,443	14,115	15,460	20,165	23,525	26,886	33,608
-	**Subtotal Arizona Domestic**	**128**	**68,398**	**113,997**	**170,996**	**205,195**	**227,994**	**239,394**	**262,193**	**341,991**	**398,990**	**455,989**	**569,986**
-	**California**	-	-	-	-	-	-	-	-	-	-	-	-
-	Los Angeles, Orange, San Diego, Riverside, San Bernardino	1	27,652	46,087	69,130	82,956	92,174	96,782	106,000	138,260	161,304	184,347	230,434
-	Imperial County	32	42	71	106	127	141	148	162	212	247	282	353
-	Riverside County	5	0	0	1	1	1	1	1	1	1	1	2
-	San Bernardino	7	106	176	264	317	352	369	405	528	616	704	879
-	**Subtotal California Domestic**	**45**	**27,800**	**46,334**	**69,500**	**83,401**	**92,667**	**97,301**	**106,567**	**139,001**	**162,168**	**185,334**	**231,668**
-	**Nevada**	-	-	-	-	-	-	-	-	-	-	-	-
-	Clark	15	20,782	34,636	51,955	62,346	69,273	72,737	79,664	103,909	121,228	138,546	173,182
-	**Subtotal Nevada Domestic**	**15**	**20,782**	**34,636**	**51,955**	**62,346**	**69,273**	**72,737**	**79,664**	**103,909**	**121,228**	**138,546**	**173,182**

Disclaimer: These modeling results for the pro rata (w/o tribal PPR Shortage) alternative distribution should only be used to compare the relative magnitude of effects reasonably expected to occur under the alternatives evaluated in this EIS. Modeling assumptions should not be taken as agency position with respect to contract or statutory interpretation, and are not intended to limit Secretarial discretion with respect to current or future policy. This model is not a substitute for the annual process of reviewing water orders and determining which can be filled, and cannot replicate the precision required of that process.

Note: Orange highlights indicate the level at which available water for a priority is reduced. Lighter orange indicates smaller reductions, while the darkest orange indicates a priority is reduced to zero (does not occur in this table).
Note: This analysis does not reflect an operational estimate of when water may cease to be physically available to certain users.
[1]This user also holds a PPR entitlement.
[2]Likely to include domestic, irrigation, and tribal elements (including an unquantified entitlement for the Cocopah Reservation's 1985 lands)

Attachment C-1

Exhibit 5.3.4.1 to the Tohono O'odham Settlement Agreement, *Secretary's Approach for Determining the Amount of Water Available to the Nation During a Time of Shortage Under 1980 Contract*

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EXHIBIT 5.3.4.1

SECRETARY'S SHORTAGE SHARING APPROACH

UNDER THE 1980 CONTRACT

Secretary's Approach for Determining
The Amount of Water Available to the Nation
During a Time of Shortage Under 1980 Contract

If the Available CAP Supply is insufficient to fill all orders for CAP water, the Secretary shall take the following steps, in succession, as necessary to match the available supply with orders for the delivery of CAP water in each of the categories described below:

1. First, miscellaneous uses of CAP water are reduced, pro rata. If, after eliminating all miscellaneous uses of CAP water, there is still insufficient available CAP water to meet outstanding orders for the delivery of CAP water, the Secretary shall take the following measure.

2. Uses of CAP NIA Priority Water are reduced, pro rata. If, after eliminating all uses of CAP NIA Priority Water, there is still insufficient available CAP water to meet outstanding orders for delivery of CAP water, then the Secretary shall take the following measure.

3. Uses of CAP M&I Priority Water in excess of 510,000 acre-feet are reduced, pro rata. If, after eliminating all uses of CAP M&I Priority Water in excess of 510,000 acre-feet, there is still insufficient available CAP water to meet outstanding orders for delivery of CAP water, then the Secretary shall take the following measure.

4. If the preceding reductions do not bring CAP water orders in line with the Available CAP Supply, uses of CAP Indian Priority Water in excess of 291,574 acre-feet are reduced, in accordance with the Secretarial Decision published in the Federal Register on March 24, 1983.

5. If the preceding reductions do not bring CAP water orders in line with the Available CAP Supply, the available CAP water supply will be allocated between users of CAP Indian Priority Water and users of CAP M&I Priority Water on a 36.37518 and 63.62482 percentage basis, respectively.

6. If step 5 is implemented, the amount of water available for the Nation shall be determined by multiplying the amount of CAP Indian Priority Water by the ratio of the amount of water delivered pursuant to the Nation's CAP Water Delivery Contract in the latest non-shortage Year relative to the total quantity of water delivered to all CAP Contracts for Indian Priority Water in that same Year.

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