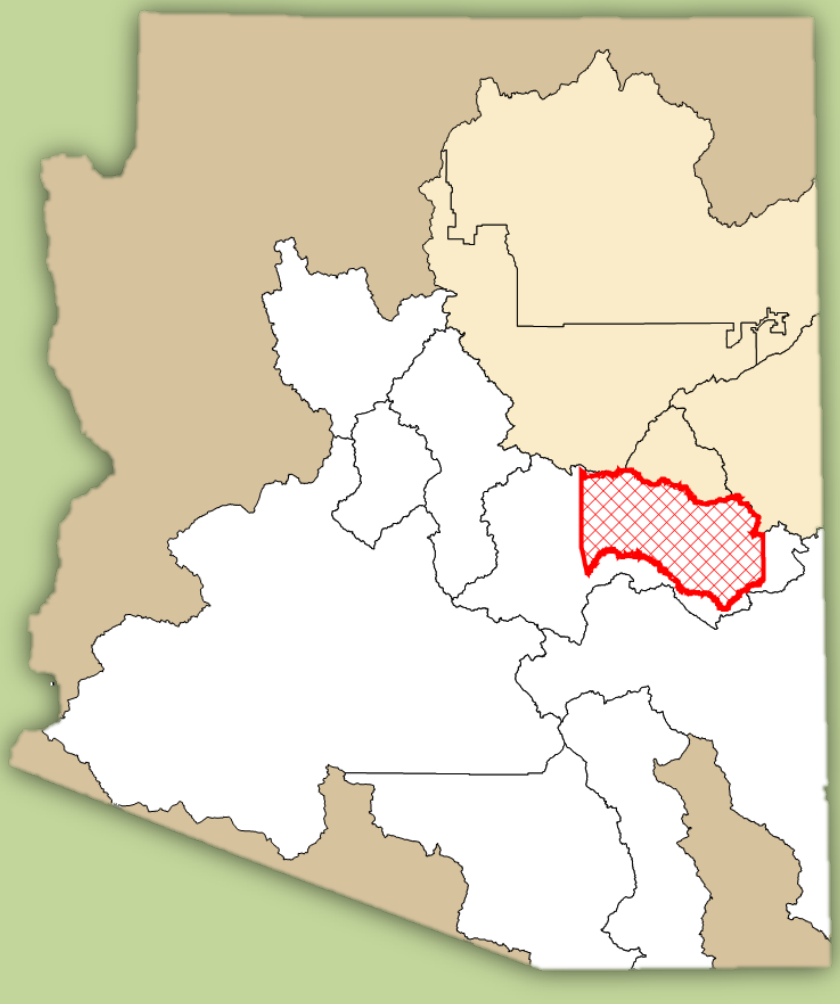
TECHNICAL ASSESSMENT OF THE WHITE MOUNTAIN APACHE TRIBE WATER RIGHTS QUANTIFICATION AGREEMENT

In re The General Adjudication of the Gila River System and Source and Little Colorado River System and Source



Arizona Department of Water Resources

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1.1 BACKGROUND

The Arizona Department of Water Resources ("ADWR" or "Department") prepared this report at the direction of the Court presiding over the general stream adjudications for the Gila River System and Source ("Gila River Adjudication")[1] and the Little Colorado River System and Source ("LCR Adjudication").[2] This report ("ADWR Report" or "Report") contains a factual analysis and technical assessment of an agreement among certain parties to quantify claims filed in the Gila River Adjudication and the LCR Adjudication by the White Mountain Apache Tribe and its members ("WMAT" or "Tribe"), and the United States in its capacity as trustee for the Tribe ("United States" or "U.S.").

On January 13, 2009, the Tribe and a number of other parties ("Agreement Parties" or "Parties")[3] entered into an agreement entitled the "White Mountain Apache Tribe Water Rights Quantification Agreement" to permanently quantify the Tribe's water rights claims. The purpose of the WMAT quantification agreement was to resolve the water rights claims of the Tribe and the United States to waters of the Gila River System and Source and Little Colorado River System and Source for land within the White Mountain Apache Indian Reservation ("WMAT Reservation," "Fort Apache Indian Reservation" or "Reservation") and for lands held by the

[1] *In re the General Adjudication of All Rights to Use Water in the Gila River System and Source*, Nos. W-1, W-2, W-3, and W-4 (Consolidated).

[2] *In re the General Adjudication of All Rights to Use Water in the Little Colorado River System and Source*, No. CV 6417-202.

[3] In the Gila River Adjudication, the parties to the WMAT Agreement include the United States, State of Arizona, White Mountain Apache Tribe, Salt River Valley Water Users' Association, Salt River Project Agricultural Improvement and Power District, Roosevelt Water Conversation District, Arizona Water Company, Arizona Cities of Avondale, Chandler, Glendale, Mesa, Peoria, Phoenix, Scottsdale and Tempe, Town of Gilbert, Buckeye Irrigation Company, Buckeye Water Conservation and Drainage District, and Central Arizona Water Conservation District. In the LCR Adjudication, the parties to the WMAT Agreement include the United States, State of Arizona, White Mountain Apache Tribe, Salt River Valley Water Users' Association, Salt River Project Agricultural Improvement and Power District, Arizona City of Show Low, and Arizona Water Company.

United States in trust for the Tribe outside of the Reservation ("Off-Reservation Trust Land"). The WMAT quantification agreement also confirmed water rights held by a number of WMAT Parties.

The terms of the WMAT water rights quantification agreement were ratified and approved by Congress in the White Mountain Apache Tribe Water Rights Quantification Act of 2010 ("Act"),[4] with certain modifications set forth in the Act.[5] A copy of the Act is included in **Appendix A**. On November 1, 2012, the WMAT quantification agreement was amended and restated in accordance with provisions of the Act, and was thereafter executed by the parties. A copy of the "Amended and Restated White Mountain Apache Tribe Water Rights Quantification Agreement" ("WMAT Agreement", "Quantification Agreement" or "Agreement") is included in **Appendix A**.

One of the purposes of the Act is to "permanently resolve certain damage claims and all water rights claims among" (1) the WMAT, (2) the United States, (3) the Agreement Parties, and (4) all other claimants in the Gila River Adjudication and the LCR Adjudication.[6] Under the Act, the Quantification Agreement becomes enforceable on or before April 30, 2021 ("Enforceability Date").[7] The Enforceability Date is the date by which the United States Secretary of the Interior ("Secretary") is required to make findings that certain conditions have been satisfied and publish those findings in the Federal Register.[8]

On April 16, 2014, the Agreement Parties in both the Gila River Adjudication and the Little Colorado River Adjudication filed an "Application for an Order for Special Proceedings to Approve an Indian Water Rights Settlement Stipulation." The Parties requested that the Court enter a judgment and decree approving the Quantification Agreement and adjudicating the water rights of the WMAT and the United States.[9] Copies of the documents filed with the Court by the

[4] Public Law 111-291, Title III, 124 Stat. 3064, 3073 (December 8, 2010).
[5] *Id*. at § 304(a).
[6] *Id*. at § 302(4).
[7] *Id*. at § 309(d)(2).
[8] *Id.* at § 309(d)(1).
[9] The water rights of the WMAT are held in trust by the United States on behalf of the WMAT, and they are not subject to forfeiture or abandonment. *Id*. at 305(a).

WMAT Parties are included in **Appendix A**, including stipulations of the Parties, proposed judgments and decrees, and proposed orders for special proceedings, among others.[10]

On April 29, 2014, in both the Gila River Adjudication and the LCR Adjudication, the Court entered a separate Order for "Special Proceedings for Consideration of the Amended and Restated White Mountain Apache Tribe Water Rights Quantification Agreement" ("Order for Special Proceedings"). Attached to each Order for Special Proceedings are copies of the following documents: (1) a "Description of the Proposed Water Rights and Other Terms of the Quantification Agreement" prepared by the Agreement Parties; (2) special procedural and administrative orders of the Arizona Supreme Court dated May 16, 1991 and September 27, 2000 for the Gila River Adjudication and LCR Adjudication, respectively, that authorize special procedures for the approval of federal water rights settlements for Indian tribes; and (3) a "Notice of Proposed Settlement" required to be mailed by the Agreement Parties to all claimants in the Gila River Adjudication and LCR Adjudication. The notices provide information concerning the WMAT Agreement and related court filings and proceedings, dates and locations of the public meetings to discuss the WMAT Agreement,[11] the availability of ADWR's Report, and the September 8, 2014 deadline for filing an objection. Copies of these documents are in **Appendix A**.

1.2 SCOPE OF REPORT

In the Order for Special Proceedings in both the Gila River Adjudication and the LCR Adjudication, the Court directed ADWR to file its Report no later than July 25, 2014, and include the following:

- A review of the terms of the WMAT Agreement;
- Summaries of the statements of claimant filed by or on behalf of the WMAT and by the United States;

[10] Copies of these documents are also posted on ADWR's website at www.azwater.gov.
[11] Two public meetings are scheduled within the Gila River Adjudication for July 29, 2014 in Globe, Arizona, and on August 14, 2014 in Phoenix, Arizona. One public meeting is scheduled within the LCR Adjudication for August 6, 2014 in Show Low, Arizona.

- A brief description of the history, physical characteristics, and natural resources (including an estimate of the arable acreage) of the WMAT and its reservation, emphasizing those facts, events, and plans which may be important in ascertaining the water rights of the Reservation;
- A determination of whether there is a reasonable basis to conclude that the water rights of the WMAT and the United States, as established in the WMAT Agreement and the proposed judgment and decree, from sources subject to the jurisdiction of the Court, are no more extensive than the water rights that the WMAT and the United States would be able to prove to a degree of reasonable probability at the trial of these claimed rights in the due course of the Gila River and LCR Adjudications;
- Probable depletion of water resources in the Gila River System and Source and LCR River System and Source resulting from the WMAT Agreement;
- Probable impact of the WMAT Agreement upon categories of other claimants in the Gila River Adjudication and LCR Adjudication;
- Probable impact of the WMAT Agreement upon the groundwater uses on or in the vicinity of the Reservation; and
- Other important impacts or consequences that might result from the WMAT Agreement.

(Orders for Special Proceedings at 7-8, ¶ 4.) These matters are addressed in the following chapters.

CHAPTER 2: QUANTIFICATION AGREEMENT

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This chapter reviews the terms of the Quantification Agreement entered into by the Agreement Parties described in Chapter 1 of this Report. The Quantification Agreement lists 34 Exhibits,[1] which are incorporated into the Agreement with Exhibit numbers that correspond to the paragraph in which the Exhibit is first mentioned (¶ 3.1, pp. 16-22).[2] Each Exhibit is only binding on the specific Parties to that Exhibit, with certain exceptions (¶ 3.1, pp. 16-17). Capitalized words in this chapter of the Report are terms of art in the Agreement and are capitalized therein (¶ 2.0, pp. 3-16).

2.1 WMAT WATER RIGHTS (Paragraph 4.0)

Under the Agreement, the WMAT and the United States are entitled to "permanent quantified Water[3] Rights to the Use[4] of Water on the Reservation and on Off-Reservation Trust Land"[5] (¶ 4.1, p. 22). Unless otherwise noted, references in this Report include Water Rights and Water Uses on both Reservation and Off-Reservation Trust Land. The Water Rights are summarized in a table that includes the following information. See **Table 2-1**.

(1) For Surface Water and Groundwater Diverted from sources within the Salt River watershed, a Maximum Annual Diversion Amount[6] of 64,000 acre-feet per year (AFY), and a

[1] Capitalized words are terms of art defined in Paragraph 2 of the Agreement.
[2] References in this format are to paragraph and subparagraph numbers and page numbers of the Agreement.
[3] "Water" means Groundwater, Surface Water, CAP Water or Effluent (¶ 2.75, p. 15).
[4] "Use" means "any beneficial use including instream flows, recharge, underground storage, recovery or any other use recognized as beneficial under applicable law" (¶ 2.73, p. 15).
[5] "Off-Reservation Trust Land" is defined as "(1) land located outside the exterior boundaries of the Reservation that is held in trust by the United States for the benefit of the WMAT as of the Enforceability Date; and (2) depicted on the map attached as Exhibit 2.57" (¶ 2.57, p. 12).
[6] "Diversion" is defined as the act of diverting which means "to receive, withdraw or develop and produce or capture Groundwater, Surface water, CAP Water or Effluent by means of a ditch, canal, flume, bypass, pipeline, pit, collection or infiltration gallery, conduit, well, pump, turnout, dam or other mechanical device or any other human act" (¶ 2.32, p. 8).

Maximum Annual Depletion Amount[7] of 21,800 AFY, as set forth in Paragraphs 5.0, 6.0, and 11.0 (¶ 4.1.1, p. 22).

(2) For Surface Water and Groundwater Diverted from sources within the Salt River watershed *or* the Little Colorado River watershed, a Maximum Annual Diversion Amount of 7,000 AFY, and a Maximum Annual Depletion Amount of 4,000 AFY, as set forth in Paragraphs 5.0, 6.0, and 11.0 (¶ 4.1.2, p. 22).

(3) For Surface Water and Groundwater Diverted from sources within the Salt River watershed for uses that commence after the Year 2100, a Maximum Annual Diversion Amount of 3,000 AFY, and a Maximum Annual Depletion Amount of 1,200 AFY, as set forth in Paragraphs 5.2 and 11.0 (¶ 4.1.3, p. 23).

(4) For WMAT Central Arizona Project ("CAP") Water, a Maximum Annual Diversion Amount of *at least* 25,000 AFY, and a Maximum Annual Depletion Amount of 25,000 AFY, as set forth in Paragraphs 7.0 and 11.0 (¶ 4.1.4, p. 23).

The total Maximum Annual Diversion Amount is 99,000 AFY (subject to ¶ 4.1.4 described above), and the total Maximum Annual Depletion Amount is 52,000 AFY (¶ 4.1.5, p. 23). The WMAT and the United States may not Divert more than 99,000 AFY from all available sources of Water (subject to ¶ 4.1.4), and may not cause the Depletion of the amount Diverted from all available sources to exceed 52,000 AFY (¶ 4.3, p. 23). Diversions and Depletions are measured or calculated pursuant to Paragraph 11.0 (¶ 4.10, p. 25; ¶ 4.11, p. 26). All Water Diverted or Depleted by Members[8] or pursuant to any agreement or authorization by the WMAT or the United States are considered to be Diverted or Depleted by the WMAT or the United States (¶ 4.4, p. 24).

With the exception of WMAT CAP Water, the Water Rights may be used for any Use on the Reservation, Off-Reservation Trust Lands or any land determined to be part of the Reservation after the Enforceability Date (¶ 4.5, p. 24; ¶ 4 .14, p. 27). However, no Water available for Use "may be sold, leased, transferred or used outside the boundaries of the reservation or Off-Reservation Trust Land other than pursuant to an exchange," except for Use of WMAT CAP Water as provided in Paragraph 7.0 (¶ 4.7, p. 24).

[7] "Depletion" is defined as "the amount of Water Diverted less return flows to the Salt River or Little Colorado River watershed from which it was Diverted" (¶ 2.30, p. 7).

[8] "Member" is defined as "any person or person duly enrolled as members" of the WMAT (¶ 2.55, p. 12).

Beginning on the Enforceability Date, all land held by the United States in trust for the WMAT shall have no rights to Water except those specifically quantified for the WMAT and the United States pursuant to Paragraph 4.0 (¶ 4.8, p. 25; ¶ 12.9.2, p. 69). Except as set forth in the Agreement, the benefits realized by the WMAT under the Agreement and the Act are in full satisfaction of all claims of the WMAT and the United States for Water Rights and Injury to Water Rights. Also, nothing in the Agreement or the Act recognizes or establishes any right of a Member to Water on the Reservation or on Off-Reservation Land (¶ 12.9.2, p. 69).

Water counted in determining compliance by the WMAT and the United States with the Maximum Annual Diversion Amounts and the Maximum Annual Depletion Amounts includes (1) all Diversions and Depletions, (2) all WMAT CAP Water used by the WMAT outside of the Reservation and outside of Off-Reservation Trust Land, and (3) all WMAT CAP Water leased to others or exchanged (¶ 4.10 and 4.11, pp. 25-26).

Any Diversions or Depletions that occur when the Salt River Reservoir System is full and the amount of Water in the Salt River Reservoir System is increasing are not counted for compliance purposes (¶ 4.12, p. 26). If the Maximum Annual Diversion Amounts or the Maximum Annual Depletion Amounts are exceeded, those Amounts are required to be reduced in the following Year by the amount of the exceedance (¶ 4.13, p. 27).

Except for Surface Water, Groundwater and Effluent that the WMAT or the United States purchases or acquires after the Enforceability Date pursuant to State law, all Uses of Water on any land outside of the Reservation that may later be finally determined to be part of the Reservation, and any fee land within the Reservation that may be placed into trust and made part of the Reservation, are subject to the Maximum Annual Diversion and the Maximum Annual Depletion Amounts (¶ 4.6, p. 24; ¶ 4.14, p. 27).

2.2 SURFACE WATER (Paragraph 5.0)

The WMAT and the United States have the permanent right to Divert the Maximum Annual Diversion Amount of 71,000 AFY from all sources of Surface Water[9] within the Salt River watershed, provided that the Maximum Annual Depletion Amount of all such Diversions

[9] "Surface Water" is defined as all Water that is appropriable under State law (¶ 2.70, p. 14).

does not exceed 25,800 AFY. Up to 7,000 AFY of the Maximum Annual Diversion Amount and up to 4,000 AFY of the Maximum Annual Depletion Amount may be Diverted and Depleted from sources within the LCR watershed (¶ 5.1, pp. 27-28).[10] Commencing in the Year 2100, the WMAT and the United States have the permanent right to Divert an additional Maximum Annual Diversion Amount of 3,000 AFY within the Salt River watershed, provided that the additional Maximum Annual Depletion Amount of all such Diversions does not exceed 1,200 AFY (¶ 5.2, p. 28).[11]

The Maximum Annual Diversion Amounts and the Maximum Annual Depletion Amounts of Surface Water include the amounts of Groundwater[12] Diverted and Depleted in the same Year (¶ 5.4, p. 29). The priority date for the administration of Water Rights for Uses on the Reservation is November 9, 1871, and for Uses on Off-Reservation Trust Land is November 4, 1985 (¶ 5.5, p. 29).

The WMAT and the United States have the permanent right to Divert an additional Maximum Annual Diversion Amount of *at least* 25,000 AFY from all sources of Surface Water within the Salt River watershed pursuant to an exchange of WMAT CAP Water, provided that the additional Maximum Annual Depletion Amount of all such Diversions does not exceed 25,000 AFY (¶ 5.3, pp. 28-29). The priority date for the administration of WMAT CAP Water is determined by the type of CAP Water reallocated to the WMAT by the Secretary as described in in Paragraphs 7.2.1 and 7.2.2 (¶ 5.5, p. 29).

2.3 WMAT RURAL WATER SYSTEM AND RESERVOIRS (Paragraphs 5.6, 5.7)

All Diversions and Depletions associated with the operation of the WMAT Rural Water System,[13] authorized under Section 307 of the Act are subject to the Agreement (¶ 5.6, p. 29). With the exception of the WMAT Rural Water System, the Agreement does not authorize the construction of reservoirs along the White River, Black River, Carrizo Creek, Bonito Creek and

[10] See ¶¶ 4.1.1 and 4.1.2 of the Water Rights table summarized in Section 2.1, *supra*.
[11] See ¶ 4.1.3 of the Water Rights table summarized in Section 2.1, *supra*.
[12] "Groundwater" is defined as all Water beneath the surface of the Earth other than Surface Water (¶ 2.42, p. 9).
[13] "WMAT Rural Water System" means "the municipal, rural and industrial Water Diversion, storage, and delivery system described in Section 307 of the Act" (¶ 2.82, p. 16).

Salt River contemplated by claims filed in the Gila River Adjudication. Except for Miner Flat Dam and Reservoir with a capacity not exceeding 9,000 acre-feet (AF) and one Large Reservoir[14] on the White River below Miner Flat Dam with an Active Conservation Capacity not exceeding 10,000 AF, prior to the construction of any reservoir having a capacity greater than 2,000 AF, the WMAT and the Secretary[15] must execute a separate agreement with SRP[16] regarding the operation of any such new reservoir. (¶ 5.7.1, p. 30). Except for Miner Flat Dam and the Large Reservoir on the White River, if the combined aggregate amount of Water stored in Large Reservoirs is greater than a certain percentage of Active Conservation Capacity, the water in storage is subject to certain releases and deductions of existing long term storage credits (¶¶ 5.7.2, pp. 30-31; 5.7.3, p. 31; 5.7.6, p. 32).

The WMAT may exchange CAP Water for storage in reservoirs located on the Reservation. The amount of CAP Water exchanged is not included in the combined aggregate amount of Water stored in Large reservoirs for purposes of determining whether the Active Conservation Capacity percentage has been exceeded (¶ 5.7.4, p. 31).

Evaporation losses associated with the storage of Water in any reservoir are considered Diversions and Depletions and are deducted from the Maximum Annual Diversion Amount and the Maximum Annual Depletion Amount (¶ 5.7.5, p. 32).

2.4 GROUNDWATER (Paragraph 6.0)

The WMAT and the United States have the permanent right to Divert Groundwater, subject to the Maximum Annual Diversion Amounts and the Maximum Annual Depletion Amounts specified in Paragraphs 4.0, 5.1 and 5.2. Also, the WMAT may transport onto the Reservation Groundwater obtained from Off-Reservation Trust Land pumping (¶ 6.1, pp. 32-33).

[14] "Large Reservoir" is defined as a "Water storage reservoir located entirely on the Reservation with an Active Conservation Capacity exceeding 2,000 acre-feet" (¶ 2.45, p. 10).
[15] "Secretary" is defined as the "Secretary of the United States Department of the Interior" (¶ 2.64, p. 13).
[16] "SRP" refers to the Salt River Project Agricultural Improvement and Power District and the Salt River Valley Water Users' Association.

2.5 CAP WATER (Paragraphs 7.0, 9.0 and 10.0)

Pursuant to § 306 of the Act, the Secretary is required to execute the WMAT CAP Water Delivery Contract (Exhibit 7.1) and deliver to the WMAT directly or through an exchange 25,000 AFY of CAP water (¶¶ 7.1 and 7.2, pp. 33-34). The WMAT CAP Water Delivery Contract must be executed before the Enforceability Date in order for the Secretary to make the findings required in the Act.[17] The CAP Water Delivery Contract is for permanent[18] service and is without limit as to term. (¶ 7.3, p. 34). The WMAT may use WMAT CAP Water for any purpose, and such Uses are considered Diversions and Depletions (¶ 7.9, p. 36). If the WMAT enters into contracts for Excess CAP Water, use of such water does not constitute a Diversion or Depletion (¶ 7.14, p. 38).

Pursuant to § 306 of the Act, on approval of the Secretary, the WMAT may enter into contracts or options to lease, contracts to exchange, and options to exchange WMAT CAP Water within Maricopa, Pinal, Pima and Yavapai Counties, but the WMAT CAP Water may not be permanently alienated (¶ 7.4, p. 34). Exchanges of WMAT CAP Water from the Salt River watershed upstream of Modified Roosevelt Dam are subject to the approval of the Secretary and the terms and conditions of agreements to be negotiated with necessary parties, including the WMAT, the United States, SRP and Plan 6 Cities[19] (¶ 7.5, pp. 34-35). The terms and conditions of future WMAT CAP Water lease agreements are required to conform to the provisions of Paragraph 9.0 of the Agreement. The payment of costs associated with the delivery of CAP Water is subject to §§ 305 and 306 of the Act (¶ 7.11, p. 36-38). The United States and the State each are required to firm 3,750 AFY for a total of 7,500 AFY of CAP Water for the benefit of the WMAT (¶ 7.17, pp. 39-40).

Leases with certain Cities,[20] including the Plan 6 Cities and the CAWCD[21] must conform to the requirements of Paragraph 10.0. The WMAT may lease to any or all of the Cities 22,500 AFY of WMAT CAP Water (of which 7,500 AFY is firmed) in accordance with City Lease

[17] Act at §§ 306 and 309.
[18] "Permanent service" is a term used in Section 5 of the Boulder Canyon Project Act of 1928, 43 U.S.C. § 619d (¶ 7.3, p. 34).
[19] "Plan 6 Cities" means "the Arizona Cities of Chandler, Glendale, Mesa, Phoenix, Scottsdale, and Tempe" (¶ 2.60, p. 13).
[20] "Cities" includes the Plan 6 Cities, Avondale, Gilbert and Peoria (¶ 2.28, p. 7).
[21] "CAWCD" means the Central Arizona Water Conservation District (¶ 2.27, p. 7).

Agreements attached at Exhibits 10.1.1A through 10.1.1H (¶ 10.1, pp. 44-45), that may be assumed by the Leasing Cities and CAWCD in accordance with agreements attached as Exhibits 10.1.1.A and 10.1.1.1B. The WMAT is required to lease to the CAWCD 2,500 AFY of WMAT CAP Water in accordance with the CAWCD Lease Agreement attached as Exhibit 10.2.1.

2.6 DIVERSIONS AND DEPLETIONS (Paragraph 11.0)

The WMAT is required to install and maintain devices capable of measuring and recording all Diversions on the Reservation and Off-Reservation Trust Land, or wherever the WMAT uses WMAT CAP Water, except for livestock consumption and Water Use from lakes, stockponds or other impoundments, and to record and collect data concerning those Diversions (¶11.1, pp. 48-49). The WMAT is required to file reports in the Gila River Adjudication and the LCR Adjudication including amounts Diverted, Depleted, and WMAT CAP Water exchanged, recharged, leased and otherwise used by the WMAT (¶ 11.2, p. 50). The methodology for calculating Diversions and Depletions is subject to amendment or petition for modification filed with the Gila River Adjudication court and the Little Colorado River Adjudication court (¶ 11.6, pp. 57-58; ¶ 16.4, pp. 87-88).

Any reuse of Effluent or other return flows are considered another separate Diversion, and Depletions from such Diversions are considered separate Depletions that are computed in accordance with the type of use set forth in Paragraph 11.3 (¶ 11.4, p. 57). Any Diversion that does not result in return flow to the Salt River or Little Colorado River watershed from which it was Diverted is considered a Depletion (¶ 11.5, p. 57).

2.6.1 Lakes, Stockponds and Other Impoundments

Inventories of lakes, stockponds and other impoundments existing as of the Enforceability Date are included in Exhibits to the Agreement.[22] Diversions and Depletions resulting from these lakes, stockponds and other impoundments are required to be computed annually as provided in Exhibit 11.3.1.2 (¶ 11.3.1, p. 51).

[22] Exhibit 11.3.1.1.A is the inventory of existing lakes, which is also included in SOC No. 39-16948, Attachment 1 described in Chapter 4 of this Report. Exhibit 11.3.1.1.B is the inventory of existing stockponds, which is also included in SOC No. 39-16947 described in Chapter 4 of this Report.

2.6.2 Irrigation

No later than December 1 following the Year of the Enforceability Date, the WMAT or the United States is required to provide to the Parties maps of lands irrigated prior to January 1, 2007 and the ditches serving those lands. No later than December 1 of each of the following years, the WMAT or the United States is required to provide a written inventory of all lands irrigated at any time during the Year, including the amount of Water Diverted for each parcel. Depletions resulting from irrigation are required to be computed annually as provided in Exhibit 11.3.2.3 (¶ 11.3.2, p. 52).

2.6.3 Municipal and Industrial Uses

No later than January 30 of the second Year following the Year of the Enforceability Date, and by the same date of each Year thereafter, the WMAT or the United States is required to provide each Party with a written report of Diversions for all municipal and industrial (M&I) Uses during the prior Year. Diversions resulting from M&I Uses are required to be computed annually as provided in Exhibit 11.3.3.2 (¶ 11.3.3, p. 53).

2.6.4 Artificial Snow Making

No later than January 30 of the second Year following the Year of the Enforceability Date, and by the same date of each Year thereafter, the WMAT or the United States is required to provide each Party with a written report of Diversions for artificial snow making during the prior Year. Diversions resulting from artificial snow making are required to be computed annually as provided in Exhibit 11.3.4.2 (¶ 11.3.4, pp. 53-54).

2.6.5 Livestock Consumption

For purposes of the Agreement, Diversions for livestock consumption shall be deemed to be equal to Depletions. No later than January 30 of the second Year following the Year of the Enforceability Date, and by the same date of each Year thereafter, the WMAT or the United States is required to provide each Party with a written report estimating all Depletions for livestock watering purposes (¶ 11.3.5, p. 54).

2.6.6 Fish Hatcheries

No later than January 30 of the second Year following the Year of the Enforceability Date, and by the same date of each Year thereafter, the WMAT or the United States is required to provide each Party with a written report of Diversions for fish hatchery Uses during the prior Year. It is presumed that there will not be Depletions for fish hatchery purposes if all Diversions are returned to the source. Otherwise, the Depletions are required to be computed annually in the same manner as Depletions for M&I Uses (¶ 11.3.6, p. 55).

2.6.7 Mining Uses

No later than January 30 of the second Year following the Year of the Enforceability Date, and by the same date of each Year thereafter, the WMAT or the United States is required to provide each Party with a written report of Diversions for mining uses during the prior Year. Depletions resulting from mining are required to be computed annually as provided in Exhibit 11.3.7.2 (¶ 11.3.7, pp. 55-56).

2.6.8 WMAT CAP Water

All WMAT CAP Water leased to others is required to be counted as a Diversion and Depletion by the WMAT for the Year of delivery regardless of the amount actually delivered. For WMAT CAP Water exchanged to others for Use by the WMAT, the calculation of the Diversion of Water is related to exchange credits, and the Depletion of Water is calculated in same manner as described above in Sections 2.6.2 through 2.6.7 of this Report, plus any additional Depletions that may be specified in the exchange agreement.

2.7 WAIVERS AND RELEASES OF CLAIMS AND RESERVATIONS AND RETENTIONS OF RIGHTS (Paragraphs 12.0 and 14.0)

2.7.1 Other Parties

In the form of Exhibit 12.1, the Parties, other than the WMAT and United States,[23] are required to execute certain waivers and releases of claims against the WMAT and the United

[23] The waiver and releases of claims against and by the United States are in all capacities of the United States except as trustee for an Indian Tribe other than the WMAT.

States. These waivers and releases relate to Injury to Water Rights, and claims arising out of or related to the Agreement, settlement judgment or decree, or the Act, and become effective upon the Enforceability Date (¶ 12.1, pp. 58-59)

These waivers and releases are subject to certain reservation of rights and retention of claims related to enforcement of the Agreement or the Act, and the Judgments and Decrees entered in the Gila River Adjudication and the Little Colorado River Adjudication. Also reserved and retained are certain claims to Surface Water and Groundwater, and claims for injury to Water Rights arising after the Enforceability Date that are not specifically waived (¶ 12.5, pp. 64-65).

2.7.2 WMAT and the United States

In the form of Exhibit 12.2, the WMAT and the United States are required to execute certain waivers and releases of claims against the State (or any agency or political subdivision of the State) or any other person, entity, corporation, or municipal corporation. These waivers and releases relate to claims for Water Rights, Injury to Water Rights, and claims arising out of or related to the Agreement, an applicable settlement judgment or decree, or the Act, and become effective upon the Enforceability Date (¶ 12.2, pp. 59-60).

These waivers and releases are subject to certain reservation of rights and retention of claims related to enforcement of the Agreement or the Act, and the Judgments and Decrees entered in the Gila River Adjudication and the Little Colorado River Adjudication. Also reserved and retained are rights to object to claims by or for other Indian tribes,[24] and to participate in the Gila River Adjudication and Little Colorado River Adjudication proceedings, as well as claims arising after the Enforceability Date for Injury to Water Rights not specifically waived, for Injury to Water Rights against any other Indian tribe;[25] from trespass claims against Freeport-McMoRan, Phelps Dodge, and Phelps Dodge Morenci;[26] and from certain uses of Water pumped from within certain national forest land as of January 13, 2009. (¶ 12.6, pp. 65-67). Except for these wells, the WMAT and the United States may not object to the use of

[24] Also included are Indian communities or nations, dependent Indian communities, and the United States or their behalf.
[25] Also included are Indian communities or nations, dependent Indian communities, allottees, or the United States or their behalf.
[26] Also included are their predecessors and successors, and subsidiaries and affiliates.

any well located outside the boundaries of the Reservation or the Off-Reservation Trust Land as of the Enforceability Date, or object to, dispute or challenge after the Enforceability Date the drilling of any well or the withdrawal and Use of Water from any well in the Little Colorado River Adjudication Proceedings, the Gila River Adjudication Proceedings or in any other judicial or administrative proceedings (¶ 12.9.4, p. 70).

In addition, the WMAT and the United States reserve and retain the right to challenge or object to any claim for Use of Water by or on behalf of the following Arizona persons or entities: (1) the Gila River Indian Community, (2) the Tonto Apache Tribe, (3) the San Carlos Apache Tribe, (4) the Salt-River Pima-Maricopa Indian Community, (5) Freeport-McMoRan, Phelps Dodge and Phelps Dodge Morenci, (6) those responsible for Injury to Water Rights arising after the Enforceability Date resulting from the drilling of wells or the pumping of Water from lands located within certain national forest lands as of the date of the Agreement, in the event that title to such lands is no longer retained by the United States, or Water from such lands is transported off such lands for M&I Use (¶ 14.1.4, pp. 73-74).

2.7.3 WMAT

In the form of Exhibit 12.3, the WMAT is required to execute certain waivers and releases of claims against the United States. These waivers and releases relate to claims for Water Rights; damages, losses, or injuries to Water, Water Rights, land or other resources; Injury to Water Rights; claims arising out of or related to the Agreement, settlement judgment or decree, or the Act; pending litigation of claims relating to Water Rights; irrigation systems; the WMAT Rural Water System; negligent claims for damage related to land and natural resources; and trespass. These waivers and releases become effective on the Enforceability Date except as otherwise provided (¶ 12.3, pp. 60-63).

These waivers and releases are subject to certain reservation of rights and retention of claims related to enforcement of the Agreement or the Act, and the Judgments and Decrees entered in the Gila River Adjudication and the Little Colorado River Adjudication. Also reserved and retained are rights to (1) object to claims by or for other Indian tribes, (2) seek remedies and assert any other claims not specifically waived, (3) assert claims for Injury to Water Rights against any other Indian tribe, (4) assert claims arising after the Enforceability Date for Injury to Water Rights not specifically waived, (5) assert claims arising after the

Enforceability Date for future taking by the United States of Reservation land, Off-Reservation Trust Land, or any property rights appurtenant to that land, including Water Rights, and (6) assert claims arising from certain uses of Water pumped from within certain national forest land as of January 13, 2009 (¶ 12.7, pp. 67-68). Except for these wells on certain national forest land, the WMAT and the United States may not object to the use of any well located outside the boundaries of the Reservation or the Off-Reservation Trust Land as of the Enforceability Date, or object to the drilling of any well or the withdrawal and Use of Water from any well in the Little Colorado River Adjudication Proceedings, the Gila River Adjudication Proceedings or in any other judicial or administrative proceedings (¶ 12.9.4, p. 70).

2.7.4 United States

In the form of Exhibit 12.4, the United States is required to execute certain waivers and releases of claims against WMAT related to claims for Injury to Water Rights, and claims arising out of, or related to, the Agreement, settlement judgment or decree, or the Act. These waivers and releases become effective on the Enforceability Date (¶ 12.4, pp. 63-64). The United States retains any right to assert any claims not specifically waived (¶ 12.8, p. 68).

2.8 FEDERAL APPROPRIATION AND LOCAL CONTRIBUTION

A combination of funding is required to be made available and deposited as provided in the Act. The State is required to contribute $2 million for the implementation of the Agreement. Enforceability of the Agreement is conditioned upon satisfaction of the conditions set forth in § 309 of the Act, including the deposit of Federal and State funds into the account specified by the Act. Funds provided to the WMAT under this Agreement may not be distributed to any Member on a per capita basis (¶¶ 13.1-13.5, pp. 71-72).

2.9 CONFIRMATION OF RIGHTS (Paragraph 14.0)

2.9.1 WMAT and United States

The Parties, including the United States[27] confirm the rights of the WMAT and the United States in its capacity as trustee for the WMAT to the Water Rights or Use of Water, quantified in the Agreement and the Act.[28]

Except for the reservation and retention of rights described in **Section 2.7.2** of this Report, the WMAT and the United States shall "neither challenge nor object to claims of other persons for the Use of Water from the Salt River and the Little Colorado River and their tributaries in the Gila River Adjudication Proceedings, the Little Colorado River Adjudication Proceedings or in any other judicial or administrative proceedings" (¶ 14.1.3, p. 73).

2.9.2 SRP

All of the Parties, including the United States, confirm the rights of SRP and its shareholders to the Waters of the Salt and Verde Rivers, which are appurtenant to the lands of SRP and its shareholders, as described in certain documents identified in the Agreement (¶ 14.2, pp. 74-78).

2.9.3 Buckeye

All of the Parties, including the United States, confirm the rights of the Buckeye Water Conservation & Drainage District and the Buckeye Irrigation Company and its shareholders to the Waters of the Salt, Verde and Gila Rivers that are appurtenant to lands served with Water as described in certain documents identified in the Agreement (¶ 14.3, pp. 78-80).

[27] The confirmation of rights by the United States is in all capacities of the United States except as trustee for an Indian tribe other than the WMAT.

[28] As used in the Report, "confirm" means "ratify, confirm, declare to be valid, and agree not to object to, dispute or challenge" in any judicial or administrative proceeding, including the Gila River Adjudication and/or the Little Colorado River Adjudication as used throughout Paragraph 14.0 of the Agreement.

2.9.4 City of Phoenix

All of the Parties, including the United States, confirm the rights of the City of Phoenix in the Waters of the Salt and Verde Rivers as described in certain documents identified in the Agreement (¶ 14.4, pp. 80-81).

2.9.5. Plan 6 Storage and Appropriative Rights

All of the Parties, including the United States, confirm (1) the rights of the United States and Plan 6 Cities in Waters of the Salt River at Modified Roosevelt Dam and (2) the rights of the United States and CAWCD in Waters of the Agua Fria River at New Waddell Dam, as described in certain documents identified in the Agreement (¶¶ 14.5 and 14.6, pp. 81-83).

2.9.6 RWCD

All of the Parties, including the United States, confirm (1) the rights of the RWCD[29] as defined in a certain agreement with the Salt River Valley Water Users' Association, (2) the entitlement of the RWCD to Surface Water from the Salt and Verde River systems appurtenant to RWCD lands as described in certain documents identified in the Agreement, and (3) the manner in which RWCD's entitlement to Surface Water is measured (¶ 14.7, pp. 83-85). RWCD authorizes SRP to transfer to SRP on an annual basis from the credits accruing to RWCD under RWCD's Surface Water entitlement a certain percentage of the Water Depleted during the prior Year by WMAT Diversions within the Salt River watershed up to a maximum of 4,000 AFY (¶ 8.0, pp. 41-42).

2.10 WMAT WATER CODE (Paragraph 15.0)

The WMAT is required to adopt a Water Code no later than 18 months after the Enforceability Date to allocate Water, and to manage, regulate and control the Use of Water Rights quantified by the Agreement. At a minimum, the Water Code must include provisions that (1) require the measurement, calculation and recordation of all Diversions and Depletions, (2) include a water conservation plan, (3) the approval of the WMAT from the severance and

[29] "RWCD" means the Roosevelt Water Conservation District (¶ 2.61, p. 13).

transfer of rights to the Use of Water from historically irrigated lands to non-historically irrigated lands in a different watershed, and (4) authorization of the WMAT for all Diversions by any individual or entity other than the WMAT (¶ 15.0, pp. 85-86).

2.11 STATE CAPACITY (Paragraph 16.5, 16.6)

By executing the Agreement, the Governor commits the State to carry out the terms and conditions of certain provisions of the Agreement relating to the firming of WMAT CAP Water under Paragraph 7.17, and the waiver and release of claims under Paragraph 12.1. The State also commits to work in good faith to satisfy the conditions in Section 309 of the Act regarding the Enforceability Date as required by Paragraph 16.6. The Agreement is not determinative of any decision to be made by any State agency in any administrative or judicial proceeding, and the State is not bound as to a waiver of rights or release of claims, if any, for lands received by the State from the United States pursuant to certain federal legislation described in the Agreement (¶ 16.5, p. 88).

2.12 CHANGES IN USE ON SRRD AND RWCD LANDS (Paragraph 16.8)

All of the Parties, including the United States:[30] (1) recognize that Water Uses on the urbanized portions of the lands within the SRRD[31] and the RWCD have changed from agricultural Uses to M&I Uses and will continue to do so, (2) agree that such uses are valid, (3) that Water appurtenant to urbanized lands within a particular municipal or other water service area may be delivered for M&I Uses on such urbanized lands, and (4) that the Water Rights appurtenant to such urbanized lands carry the original priority dates. All of the Parties, including the United States, further agree not to challenge or otherwise object to these rights on any basis in any judicial or administrative proceeding. Regarding urbanized lands with the SRRD, all of the Parties, including the United States, also agree that the historical practices of the cities and towns located within the SRRD and SRP and the general nature of the rights are appropriately

[30] For purposes of this section of the Report, United States means the United States in all capacities of the United States except as trustee for an Indian Tribe other than the WMAT.
[31] "SRRD" means the Salt River Reservoir District (¶ 2.67, p. 14).

described in a certain Water Commissioner's Report attached as Exhibit 16.8 to the Agreement. (¶ 16.8, pp. 89-90).

2.13 RIGHT TO PETITION ANY COURT OF COMPETENT JURISDICTION (Paragraph 16.9)

Any Party has the right to petition any State or Federal court of competent jurisdiction for such declaratory and injunctive relief as many be necessary to enforce the agreement. However, the right of the United States and the WMAT to object to the jurisdiction of the State courts, and the right of any Party to object to the jurisdiction of any federal court to adjudicate any dispute arising under the Agreement or the Act are not waived (¶ 16.9, p. 90).

2.14 EFFECT ON OTHER TRIBES AND FUTURE CAP ALLOCATIONS (Paragraphs 16.16, 16.17)

The Agreement shall not be construed to quantify or otherwise affect the Water Rights, claims or entitlements to Water of any tribe, band or community other than the WMAT (¶ 16.16, p. 92). Also, Water received under a lease or exchange of WMAT CAP Water under the Act shall not affect any future allocation or reallocation by the Secretary of CAP Water (¶ 16.17, p. 92).

CHAPTER 3: DESCRIPTION OF THE HISTORY, PHYSICAL CHARACTERISTICS AND NATURAL RESOURCES OF THE WMAT AND FORT APACHE RESERVATION

CHAPTER 3: DESCRIPTION OF THE HISTORY, PHYSICAL CHARACTERISTICS AND NATURAL RESOURCES OF THE WMAT AND FORT APACHE INDIAN RESERVATION

This chapter briefly describes the history, physical characteristics, and natural resources of the WMAT and the Fort Apache Indian Reservation with emphasis on information that may be important in ascertaining the water rights of the WMAT.

3.1 HISTORY OF THE TRIBE AND ESTABLISHMENT OF THE RESERVATION

Unless otherwise noted, the information presented in this section is summarized from a paper titled, The White Mountain Apache Indians, prepared by the White Mountain Apache Tribal Council in 1978. Also used in this section is information from the WMAT Home Webpage.[1]

In July 1869, Colonel John Green of the U.S. 1st Cavalry led an expedition into the White Mountains area from Camp Goodwin and Camp Grant to the south, then north up the San Carlos River, across the Black River, and to the White River in the vicinity of the future site of Fort Apache (Camp Apache) Arizona Territory. Colonel Green returned to the White Mountains in November 1869, where he met again with the Apache leaders and they agreed to the creation of a military post and reservation. Colonel Green, prior to construction of Camp Apache in 1870, described the area near the confluence of the East and North Forks of the White River as follows:

> "I have selected a site for a military post on the White Mountain River which is the finest I ever saw. The climate is delicious, and said by the Indians to be perfectly healthy, free from all malaria. Excellently well wooded and watered. It seems as though this one corner of Arizona were almost its garden spot, the beauty of its scenery, the fertility of its soil and facilities for irrigation are not surpassed by any place that ever came under my observation. Building material of fine pine timber is available within eight miles of this site. There is also plenty of limestone within a reasonable distance."

[1] http://www.wmat.nsn.us/history.html.

The U.S. Army began construction of Camp Apache (also known as Camp Ord) on May 16, 1870 at the confluence of the East and North Forks of the White River. On November 9, 1871, the Fort Apache Indian Reservation was established by Executive Order of President Grant. Known as the "White Mountain Indian Reservation," the Reservation was established for the use and occupancy of Apache Indians. Originally, the Reservation included people of both the Fort Apache and San Carlos Apache Indian Reservations. The camp would change names several times over the next few years until it finally became designated as Fort Apache in 1879.[2] The U.S. Army maintained the military post for over 50 years eventually abandoning Fort Apache in 1922. In 1923, the post was transferred to the U.S. Department of the Interior ("DOI") and it became home to the Bureau of Indian Affairs' ("BIA") Theodore Roosevelt Indian Boarding School.

The WMAT was organized under the provisions of the Indian Reorganization Act of June 18, 1934. The Tribal Constitution was ratified by the membership of the Tribe on August 15, 1938 and amended on June 27, 1958. The White Mountain Apache Tribal Council is the formal governing body of the WMAT.

The population currently consists of approximately 15,000 members with the majority living in and around the community of Whiteriver. Other notable communities within the Reservation include Cibecue, Carrizo, Cedar Creek, Forestdale, Hon-Dah, McNary, East Fork and Seven Mile.

The WMAT has a long history of farming lands on its Reservation. Historically, most of the farms on the Reservation were subsistence farms. Some of the crops traditionally cultivated include alfalfa, berries, sorghum, corn, beans, and squash. As part of the *Arizona v. California* court case, an inventory of cultivated/irrigated lands on the WMAT Reservation was conducted by the BIA in the 1950s.[3] The total historical irrigated acreage on the Reservation claimed by the WMAT in the Gila River Adjudication was 4,151 acres.

[2] The Fort Apache Reservation was split from the San Carlos Apache Reservation by an Act of Congress on June 7, 1897. At this time, an Indian agency for the WMAT was established (WMAT, 1978).

[3] The US DOI, BIA Maps (1956) are provided as an attachment to SOC No. 39-16946 and discussed in Chapter 4 of this report.

The Tribe has developed plans to increase the extent of farming on its Reservation by 15,569 acres as part of multiple new and/or expanded irrigation and storage projects.[4] The total reported irrigable acreage (historic and future) on the WMAT Reservation is not less than 19,720 acres. The WMAT has provided no plans for agricultural development on existing Off-Reservation Trust Land.

3.2 PHYSICAL CHARACTERISTICS AND NATURAL RESOURCES

The Fort Apache Indian Reservation covers over 2,600 square miles or 1.67 million acres in the east-central portion of Arizona.[5] Tribal lands are located in three Arizona counties-Apache, Gila, and Navajo. Navajo County Assessor records indicate the United States holds a narrow strip of land that consists of two additional parcels of land (approximately 12 acres) in trust for the Tribe outside of the Reservation in the LCR Adjudication. Elevations within the Reservation range from 2,600 feet in the Salt River Canyon area to more than 11,400 feet at the top of Mount Baldy in the far eastern portion of the Reservation. The Reservation and Off-Reservation Trust Land are depicted on **Figure 3-1**.

3.2.1 Upper Salt River Adjudication Watershed

The Upper Salt River adjudication watershed[6] is located in the east-central portion of the state and contains all of the Fort Apache Indian Reservation. The Off-Reservation Trust Land is located solely within the Little Colorado River adjudication watershed (described below). The Upper Salt River watershed is within the Central Highlands Province (transition zone), located between the Basin and Range Lowlands and Colorado Plateau Provinces. It is characterized by rugged mountains of igneous, metamorphic and sedimentary rocks. A unique geographic feature of the watershed is the Mogollon Rim, an escarpment that defines the southern boundary of the Colorado Plateau. The rim is approximately 7,000 feet in elevation with sheer drops of 2,000 feet at some locations. The perennial Black and White Rivers in the eastern portion of the

[4] *Id.*
[5] www.wmat.nsn.us.
[6] The Upper Salt River adjudication watershed boundary coincides nearly with the boundaries of the Salt River and Tonto Creek groundwater basins.

Reservation merge to form the Salt River. The information presented in this and the following subsections is summarized from Arizona Water Atlas, Volume 5.[7]

The Fort Apache Indian Reservation is located within the boundaries of the Salt River basin, which is bounded on the west and southwest by the Sierra Ancha and Superstition Mountains, on the south by the Natanes Plateau, and on the east by the White Mountains. The Mogollon Rim forms a natural groundwater divide along much of the Salt River basin's northern boundary. The Salt River basin is the second largest in the state at 5,232 square miles.

The Mogollon Rim and the White Mountains are significant topographic barriers that result in orographic[8] uplift of air masses, making the climate of the Central Highlands wetter and cooler than the rest of the state. Precipitation in this region has a bi-modal pattern with both winter and summer precipitation peaks. Winter precipitation generates snowpack and is important for water resource planning purposes. Cooler temperatures and less intense sunlight during the winter help to reduce evaporation. Gradually melting snow in the spring replenishes local aquifers and generates surface water flows. Many summer convective storms begin in the high elevations of the region and move downward to the deserts. These precipitation events help replenish streamflow and recharge aquifers to a lesser degree than the winter storms.

Vegetation types include Arizona upland Sonoran desert scrub; semi-desert, plains and Great Basin and subalpine grasslands; interior chaparral; madrean evergreen woodland; Great Basin conifer woodland; and montane and Rocky Mountain subalpine conifer forests. Riparian vegetation includes mesquite, mixed broadleaf and tamarisk along the Salt River, and mixed broadleaf along the Black River.

3.2.1.1 Surface Water Resources

The surface water characteristics of the Upper Salt River watershed are influenced by precipitation patterns, topography and geology. The Salt River is the largest tributary of the Gila River with a drainage area of about 5,980 square miles. Its headwaters are the White and Black Rivers that originate in the high elevations of the Upper Salt River watershed where winter snow accumulation is critical to downstream water supplies. This area is the most prolific producer of

[7] www.azwater.gov.

[8] Orographic uplift occurs when an air mass is forced from a low elevation to a higher elevation as it moves over rising terrain.

surface water in Arizona with unit runoff values as high as 674 AF/square mile (12.6 inches) in the drainage of the East Fork of the White River.

There are many perennial streams in the Upper Salt River watershed, particularly in the Salt River basin. The Salt River is perennial throughout its length in the watershed. Numerous small streams that begin along the Mogollon Rim and the White Mountains feed tributaries of the Salt River. Perennial flow in these streams is primarily due to geologic features (e.g., joints and fractures) that cause groundwater to surface and discharge to streams.

Annual streamflow of the Salt River fluctuates widely. At the nearest gage upstream from Roosevelt Lake, USGS streamflow monitoring gage site No. 09498500 with a contributing drainage area of 4,306 mi^2, the maximum annual flow was over 2.4 million AF in 1916. Based on the available 89 water year record between 1913 and present, median annual flow was 518,499 AF; and mean annual flow was 644,942 AF.

There are several springs in the Upper Salt River watershed with discharges of 10 gallons per minute ("gpm") or more. A high concentration of these springs occurs near McNary, emanating from fractured basalt. Alchesay Spring, which issues from the Supai Formation along the North Fork of the White River, has the greatest reported discharge measurement in the watershed of about 9,000 gpm.

3.2.1.2 Groundwater Resources

The Salt River basin contains four subbasins: Salt River Lakes, Salt River Canyon, Black River and White River. Principal aquifers differ between the subbasins, with basin-fill and alluvial aquifers found in the western portion of the basin, and limestone and volcanic aquifers in the eastern portion.

In the northern part of the Salt River basin, groundwater flow in the C-aquifer, named for its primary water-bearing unit, the Coconino Sandstone, is from north to south. Groundwater flow has not been characterized in the rest of the basin. Groundwater recharge is estimated at 178,000 AFY. The estimate of groundwater storage in the Salt River basin is 8.7 million AF or more to a depth of 1,200 feet below land surface ("bls").

3.2.2 LCR Adjudication Watershed

The Off-Reservation Trust Land is located just north of the southern boundary of the LCR adjudication watershed. The LCR watershed area is approximately 27,051 square miles and covers about 19% of the state. The eastern portion of the watershed extends into New Mexico. The Little Colorado River is the major surface drainage in the watershed, originating in the White Mountains and flowing northwest to its confluence with the Colorado River.

A large portion of the LCR watershed is located within the boundaries of the Little Colorado River Plateau basin ("LCR basin"). The LCR basin covers 26,700 square miles and is the largest groundwater basin in the state. The southern boundary of the LCR basin marks part of the southern extent of the Colorado Plateau that occupies northern Arizona, northwestern New Mexico, eastern Utah and western Colorado. The Mogollon Rim forms a hydrologic boundary between the LCR basin and the basins of the Central Highlands province, including the Salt River basin, where the WMAT is located.

The LCR basin is located in a semi-arid, relatively high elevation region with cooler average temperatures than the lower deserts of Arizona. Average annual temperature is 50.8°F, compared to the state-wide average of 59.9°F. Precipitation is highest during July and August, when the area receives over 43% of its yearly precipitation. April, May and June are the driest months in the LCR basin on average. Average annual precipitation is about 36 inches in the White Mountains and Mogollon Rim areas. Much of the state's snowfall occurs along the Mogollon Rim and White Mountains.

Vegetation types are primarily Great Basin conifer woodland, plains and Great Basin grasslands, and Great Basin desert scrub. At higher elevations, vegetation types include subalpine grassland, Rocky Mountain subalpine conifer forest, and Rocky Mountain and madrean montane conifer forests. Riparian vegetation is found along streams including: conifer oak, mixed broadleaf, Russian olive and wet meadow along Tsalie Creek, Kinlechee Creek and Canyon de Chelly; tamarisk on Chinle and Silver Creeks; and mixed broadleaf, wet meadow and conifer oak on the Little Colorado River east of Springerville.

3.2.2.1 Surface Water Resources

As stated previously, the Little Colorado River is the major surface drainage in the watershed. The maximum recorded annual flow in the watershed was 587,869 AFY at a

discontinued gage on the Little Colorado River at Grand Falls located downstream of Leupp. The median annual flow at this station was 162,171 AFY.

There are clusters of major springs in the vicinity of Pinetop-Lakeside with discharges of 100 gpm or more.

3.2.2.2 Groundwater Resources

A significant portion of the LCR basin is underlain by Mesozoic to Paleozoic sedimentary and volcanic rocks that form the area's regional aquifers. The sedimentary rocks consist of sandstones and limestones stacked on top of one another that are generally separated by low permeability shales and siltstones.

The C-aquifer is the largest and most productive aquifer with an aerial extent of 21,655 square miles. The C-aquifer extends from the Mogollon Rim in the south to an area west of the Little Colorado River and northeast into New Mexico. Water flow in the aquifer is generally in a west-northwest direction. Recharge to the aquifer occurs along the Mogollon. The major discharge from the C-aquifer is at Blue Springs along the lower Colorado River. ADWR estimated there was about 413 million AF of C-aquifer water in storage, and approximately 508 million AF of water storage in Little Colorado River Plateau aquifers.[9] The Water Resource Development Commission[10] Report ("WRDC 2011 Report") estimated 954 million AF of water storage in these aquifers. Well yields are typically low (<100 gpm) north of the Little Colorado River and higher in the south-central and southeast part of the basin where wells encounter the C-aquifer.

Local aquifers are important for domestic uses where the regional aquifers are too deep or have unsuitable water quality. In the southeastern part of Navajo County, saturated basaltic rocks together with underlying sedimentary rocks are locally known as the Pinetop-Lakeside aquifer, which is an important supply for the area. The aquifer covers an area of about 16 square miles and is composed of two distinctive, but hydrologically well-connected, water-bearing zones.

[9] ADWR, 1990a, 1994.

[10] In 2010, the Arizona State Legislature passed House Bill 2661 that established the Water Resource Development Commission (WRDC).

CHAPTER 4: STATEMENTS OF CLAIMANT

CHAPTER 4: STATEMENTS OF CLAIMANT

This chapter summarizes the Statements of Claimant (SOCs) filed in the Gila River Adjudication and LCR Adjudication by the WMAT and the United States. Copies of the SOCs, including amendments and supporting information, are provided in **Appendix B.**

4.1 CLAIMS FILED IN THE GILA RIVER ADJUDICATION BY THE WMAT

In the Gila River Adjudication, the WMAT filed four SOCs on November 14, 2012 designated as Nos. 39-16945 (Domestic Uses), 39-16946 (Irrigation Uses), 39-16947 (Stockpond Uses), and 39-16948 (Other Uses). These SOCs are described below.

4.1.1 Legal Basis of Claim

The legal basis for each SOC is described as "Indian and federal reserved and aboriginal reserved water rights to surface water and groundwater for historic, present and future use."

4.1.2 Priority Date

The claimed priority date for each SOC is "time immemorial."

4.1.3 Uses of Water

Domestic Uses (39-16945). Domestic uses are claimed for "residential, garden, commercial, light industrial, institutional and public purposes in communities and in the rural areas of the Fort Apache Indian Reservation from all surface water and groundwater sources."

Irrigation Uses (39-16946). Irrigation uses are claimed for historical and future irrigation on the Reservation.

Stockpond Uses (39-16947). Stockpond uses are claimed for 671 stockponds located throughout the Reservation.

Other Uses (39-16948). Other uses are claimed for commercial or industrial, recreation, fish and wildlife, hydropower and mineral purposes.

4.1.4 Sources of Water

For each claim, the source of water is described as surface water and groundwater from "Canyon, Cibecue, Carrizo Creeks and all tributaries, springs and lakes; and White, Black and Salt Rivers and all tributaries and springs and lakes not listed above; Coconino, Pinetop-Lakeside and all other aquifers and groundwater." For Domestic Uses (39-16945) and Other Uses (39-16948), the groundwater source is described as all groundwater underneath and outside the Reservation (1) from certain aquifers, (2) that sustains Reservation wells and the baseflow of certain springs and streams, and (3) which, in conjunction with surface water, satisfies the claims previously filed by the United States on behalf of the WMAT.

4.1.5 Points and Means of Diversion

Domestic Uses (39-16945). Attachment 3 to the claim is a table that provides information about domestic, commercial and municipal diversions for existing and future uses by communities located on the Reservation. Six maps are attached that depict the approximate locations of 29 domestic wells both on the Reservation and Off-Reservation Trust Land. The means of diversion include instream pumps, wells and gravity flow into a ditch, canal or pipeline.

Irrigation Uses (39-16946). The points of diversion for irrigation uses appear to be instream pumps and wells, which are listed as means of diversion. The means of diversion also include gravity flow into a ditch, canal or pipeline and other diversions that may be determined in the future.

Stockpond Uses (39-16947). The claim indicates there are 671 stockponds located throughout the Reservation. Information regarding each stockpond is provided in a table as Attachment 1 to the claim, and the locations of the stockponds are depicted on 14 maps.

Other Uses (39-16948). The points of diversion appear to be wells and impoundments, which are listed in the claim as means of conveyance. Means of diversion include wells, dams and gravity flow into a ditch, canal or pipeline. The location of the dam sites and pumps are depicted on five maps that include the Lower Black River Power Reserve Dam site, the Black River Pumps, the Carrizo Power Reserve Dam site, the Knob Power Reserve Dam site, and the Gleason Flat Power Reserve Dam site.

4.1.6 Places of Use

Domestic Uses (39-16945). Attachment 2 to the claim is a map that depicts the location of existing communities on the Reservation and Off-Reservation Trust Land where water will be put to use.

Irrigation Uses (39-16946). Attachments 1 and 2 to the claim are tables that provide information about historic and future irrigation on the Reservation. Also attached to the claim are maps that depict the locations of historic and future irrigation and future storage reservoirs.

Stockpond Uses (39-16947). The claim indicates there are 671 stockponds located throughout the Reservation. Information regarding each stockpond is provided in a table as Attachment 1 to the claim, and the locations of the stockponds are depicted on 14 maps.

Other Uses (39-16948). Information regarding the places of use for existing and future reservoirs, lakes and power sites is provided in a table as Attachment 1 to the claim. Additional information is provided in another table as Attachment 2 concerning diversion requirements for recreation housing developments, golf courses, commercial uses, livestock, the Sunrise Ski Area, mineral and industrial (sawmills) and fish hatcheries. Maps were also provided that depict the existing and future locations of recreation lakes, fish hatcheries, existing sawmills, existing power reserves dam sites, recreation homes and snowmaking. On the bottom of each of the maps for the existing power reserve dam sites there is a note that states, "Dam sites and claims are shared between White Mountain Apache and San Carlos Apache Tribes."

4.1.7 Quantities of Use

Domestic Uses (39-16945). The claimed volume is an amount "not less than 21,433" AFY, based on a population of "not less than 93,833" persons. Attachment 3 to the claim is a table with population projections and diversion amounts for each named community on the Reservation.

Irrigation Uses (39-16946). The claimed quantity is 89,858 AFY consisting of 20,755 AFY of historic irrigation on 4,151 acres and 69,103 AFY of future irrigation on 15,569 acres. A maximum flow rate of 395 cubic feet per second ("cfs") is also claimed.

Storage rights for irrigation uses are claimed in the amount of 139,800 AF, which consists of 8,000 AF at Miner Flat Dam, 101,000 AF at Bonita Creek Dam, 13,000 AF at Salt

Creek Dam, and 17,800 AF at Bear Canyon Dam. The locations of Miner Flat, Bonito Creek, Salt Creek and Bear Canyon Reservoirs are depicted on four maps with additional information and are described as "multi-purpose storage reservoirs." A map for Canyon Day Dam is also provided with the claim, but a storage amount is not listed in the claim. A graph with the map indicates that approximately 12,500 AF may be stored at Canyon Day Reservoir.

Stockpond Uses (39-16947). The quantity of water claimed appears to be based on evaporative losses which total 1,885.62 AFY for 671 stockponds. Attachment 1 to the claim is a table that provides information related to the depletion amount from evaporation losses for each stockpond. The claim also indicates that 21,000 animal units (AUs) for horses, cattle, wildlife and other livestock will use water annually, but this amount is not quantified in this claim.

Other Uses (39-16948). Attachment 1 to this claim is a table that describes 2,120 AFY of evaporation losses from existing recreation lakes, 3,060 AFY of evaporation losses from future recreation lakes, 5,131 AFY of evaporation losses from "multi-purpose reservoirs," and 31,707 AFY of evaporation losses from power sites. A maximum flow rate of "133 plus evaporation rates" "cfs" is also claimed.

Attachment 2 to this claim is a table that describes the total amount claimed as 44,199 [*sic*] AFY of diversions for future recreation residential (4,085 AFY), future[1] recreation golf courses (1,001 AFY), future recreation commercial (704 AFY), future snowmaking (2,000 AFY), future sawmills (10,000 AFA), existing fish hatcheries (17,757 AFY), future fish hatcheries (3,228 AFY), future mineral development (5,000 AFY) and existing livestock consumption (423 AFY). The SOC also claims a storage right of 167,557 AF from "Multi-purpose reservoirs."

Total. The total quantity of water claimed by the WMAT in SOC Nos. 39-16945 through 39-16948 for the uses described above is 199,376 AFY of diversions. See **Table 4-1**.

[1]The storage right claimed for Other Uses is greater than the storage right claimed from the same reservoirs for Irrigation Uses. The claims do not provide any explanation how the claimed storage rights are related.

4.2 CLAIMS FILED IN THE GILA RIVER ADJUDICATION BY THE UNITED STATES

In the Gila River Adjudication, the United States filed an SOC on behalf of the WMAT designated as No. 39-12168. This SOC was filed on January 4, 1985 as a preliminary claim, and later amended on November 29, 1985 pursuant to order of the Court for the Gila River Adjudication. The first amendment incorporated the text and exhibits of the January 4, 1985 claim. On October 2, 2000, the United States filed a second amendment and added claims to "groundwater resources locally available to the Tribe and Reservation." The second amendment stated that it was "in addition to and not a substitute for claims previously filed by the United States as trustee for the Tribe and the Reservation."

On November 1, 1985, the United States also filed an SOC designated as No. 39-64259 for the San Carlos Apache Reservation. On October 2, 2000, the United States amended this claim "for the benefit of" the WMAT.

SOC Nos. 39-12168 and 39-64259 (as amended) are described below**.**

4.2.1 Legal Basis of Claim

In SOC Nos. 39-12168 (second amendment) and 39-64259 (amended), the legal basis is described as a "federal reserved and aboriginal reserved water right." In the initial filing for SOC No. 39-12168, the legal basis was further described as water in amounts "sufficient to provide for the agricultural, recreational, municipal/domestic, industrial, power development, mineral development, wildlife, stock-grazing and other present and future water uses to fulfill the purposes of the White Mountain Apache Reservations and to maintain the Reservation as a permanent tribal homeland for the White Mountain Apache Indians."

4.2.2 Priority Date

In both SOCs, the claimed priority date is "time immemorial."

4.2.3 Uses of Water

In SOC No. 39-12168 (first amendment), the United States claims federal reserved water rights for future and existing irrigation uses, and certain non-irrigation uses including stockwater and wildlife; existing and potential recreational lakes; domestic, municipal (including light

industry), recreational uses; present and future industrial uses; existing fish hatcheries; mineral development and power generation. SOC No. 39-12168 (second amendment) also includes "other uses deemed beneficial" by the WMAT. Uses claimed under SOC 39-64259 (amended) include municipal, commercial or industrial, mining, stockwatering, recreation, fish and wildlife, domestic, agricultural and unspecified "other uses deemed beneficial" by the WMAT.

4.2.4 Sources of Water

For irrigation uses, the United States listed the sources in the original SOC No. 39-12168 as certain creeks, rivers and springs. For non-irrigation uses, the United States listed the sources in SOC No. 39-12168 (first amendment) as springs, ponds, rivers, creeks, surface runoff, unnamed tributaries, and community and private wells. In SOC No. 39-12168 (second amendment) and in SOC No. 39-64259 (amended), the United States included all groundwater underneath and outside the Reservation (1) from certain aquifers, (2) that sustains Reservation wells and the baseflow of certain springs and streams, and (3) which, in conjunction with surface water, satisfies the claims previously filed by the United States on behalf of the WMAT. In SOC No. 39-64259 (amended), the United States also listed streams, springs, and lakes or reservoirs.

4.2.5 Points of Diversion

In SOC No. 39-12168, the United States listed various means of water diversion including natural spring discharges, surface water diversions, and well pumpage. In SOC No. 39-64259 (amended), the United States listed instream pumps, gravity flow into a ditch, canal or pipeline, and wells.

4.2.6 Places of Use

In Table F.A.1 attached to SOC No. 39-12168 (first amendment), the United States identified nine areas that may be irrigated in the future and 23 areas that have been irrigated historically. The locations of these lands are apparently depicted on 23 map sheets not incorporated in the claim but referenced by Table F.A.1.

In Table F.A.2 attached to SOC No. 39-12168 (first amendment), the United States identified the places of use for non-irrigation uses as follows:

- Stockpond and wildlife uses, and mineral development distributed throughout the Reservation.
- The locations of individual claims for existing and potential recreational lakes described by site and legal description.
- The locations of domestic, municipal and recreational uses described by named community and recreational areas.
- The industrial uses described by the locations of named sawmills.
- The locations of named fish hatcheries described by GPS coordinates and the water source.
- The power uses described by the name of six hydropower sites, which include Lower Black River, Black River Pumps, Carrizo, Knob, Walnut Canyon and Gleason Flat. Because all of these sites share a common boundary with the San Carlos Apache Reservation, except for Gleason Flat, this is a partial joint claim with the San Carlos Apache Tribe for those power uses.

4.2.7 Quantities of Use

Summarized below are the quantities claimed in SOC No. 39-12168 (first amendment). SOC No. 39-64259 (amended) does not include any claimed quantities of use.

Irrigation Uses. The claimed amount is 63,975 AFY consisting of 20,086 AFY of historic irrigation on 4,460 acres and 43,889 AFY of future irrigation on 22,114 acres.

Storage rights for irrigation uses in the amount of 82,000 AF are claimed for the first time filling requirements from the storage sites on Bonito Creek (56,000 AF), the North Fork of the White River (18,200 AF), and Cibecue Creek (7,800 AF). Also claimed are estimated evaporation losses from these storage sites in the amount of 3,010 AFY consisting of 1,310 AFY, 1,300 AFY and 400 AFY, respectively.

Stockwatering and Wildlife Uses. The claimed amount is a consumptive use of 490 AFY for stock and wildlife, and 6,900 AFY for evaporation losses from stockponds.

Recreational Lakes. The claimed amount is 43,500 AF for the initial filling of future recreation and stock reservoirs. Also claimed are 11,193 AFY of evaporation losses consisting

of 5,215 AFY from 19 existing recreation lakes and 5,978 AFY from 32 potential sites for recreational lakes.

Domestic, Municipal and Recreational Uses. The claimed amount is 6,330 AFY for tribal communities, based on population projections for the year 2040, and recreation areas. The community areas include Whiteriver, Cibecue, Canyon Day, Cedar Creek, North Fork, East Fork and Sevenmile, Carrizo, McNary, and Fort Apache. The recreation areas include Hawley Lake, Hon-Dah, Sunrise and campgrounds.

Industrial Uses. The claimed amount is 14,025 AFY consisting of 9,025 AFY at the Whiteriver, Cibecue and McNary sawmills and 5,000 AFY for miscellaneous uses.

Fish Hatcheries. The claimed amount is 12,434 AFY diverted for use at the Williams Creek and Alchesey fish hatcheries.

Mineral Uses. The claimed amount is 20,000 AFY for development of mineral resources on the Reservation including deposits of iron, manganese, asbestos, uranium, gypsum, limestone, clay, shale, coal, oil and gas.

Power Uses. The claimed storage amount is 1,000,000 AF for initial filling at the six power sites. Of this amount, 850,000 AF is identified as a joint claim with the San Carlos Apache Reservation for sites located on a common boundary. An additional 44,500 AFY is claimed for evaporation losses.

Total. The total quantity of water claimed by the US in SOC No. 39-12168 (first amendment) is 182,857 AFY for the uses described above. See **Table 4-1**.

4.3 CLAIMS FILED IN THE LCR ADJUDICATION BY THE WMAT

In the LCR Adjudication, the WMAT filed two SOCs on November 14, 2012 designated as Nos. 39-95155 (Domestic Uses) and 39-95156 (Other Uses). These SOCs are described below.

4.3.1 Legal Basis of Claim

The legal basis for each SOC is described as “Indian and federal reserved and aboriginal reserved water rights to surface water and groundwater for historic, present and future use.”

4.3.2 Priority Date

The claimed priority date for each SOC is "time immemorial."

4.3.3 Uses of Water

Domestic Uses (39-95155). Domestic uses are claimed for "residential, garden, commercial, light industrial, institutional, and public purposes in communities and in the rural areas of the Fort Apache Indian Reservation from all surface water and groundwater sources."

Other Uses (39-95156). Other uses are claimed for municipal, commercial or industrial, mining, stockwatering, recreation, fish and wildlife, and other uses deemed beneficial by the WMAT.

4.3.4 Sources of Water

For each claim, the source of water is described as the "Coconino, Pinetop-Lakeside and all other aquifers and groundwater." In Attachment 1, the groundwater source is described as all groundwater underneath and outside the Reservation (1) from certain aquifers, (2) that sustains Reservation wells and the baseflow of certain springs and streams, and (3) which, in conjunction with surface water, satisfies the claims previously filed by the United States on behalf of the WMAT.

4.3.5 Points and Means of Diversion

In both of their claims, the WMAT identify points of diversion by reference to Attachment 2, which is a map of the Reservation. For domestic uses, a map depicting the approximate locations of domestic wells is also provided, which includes two wells located within the Off-Reservation Trust Land.

4.3.6 Places of Use

In both of their claims, the WMAT identify the places of use by reference to Attachment 2, which is a map of the Reservation.

4.3.7 Quantities of Use

Domestic Uses (39-95155). The claimed amount is "not less than 1,349" AFY based on a population of "not less than 5,904" persons. Attachment 3 projects the population and diversion amounts for Hon Dah and McNary.

Other Uses (39-95156). The claimed amount is 9,790 AFY consisting of future recreation residential (4,085 AFY), future recreation golf courses (1,001 AFY), future recreation commercial (704 AFY), snowmaking (2,000 AFY), and mineral development (2,000 AFY along the northern boundary of the Reservation). A maximum flow rate of 43 cfs is also claimed.

Total. The total quantity of water claimed by the WMAT in SOC Nos. 39-95155 and 39-95156 is 11,139 AFY for the uses described above. See **Table 4-2**.

4.4 CLAIMS FILED IN THE LCR ADJUDICATION BY THE UNITED STATES

On November 29, 1985, the United States filed SOC No. 39-91441 on behalf of the Navajo Nation and Hopi Tribe. On November 22, 1994, the United States filed a first amendment to this SOC to include claims for the "Indian Lands in the Little Colorado River Basin," on behalf of the Navajo Nation, the Hopi Tribe, the WMAT, and the Zuni Pueblo. On October 2, 2000, the United States filed a second amendment to this SOC and updated claims made on behalf of the WMAT. On February 2, 2004 and November 16, 2009, the United States filed third and fourth amendments to this SOC to update claims made on behalf of the Hopi Tribe. This SOC is described below as it relates to water rights claimed on behalf of the WMAT in the first and second amendments.

4.4.1 Legal Basis

In the second amendment, the legal basis for the claim is described as a federal reserved and aboriginal reserved right to water.

4.4.2 Priority Date

In the second amendment, the claimed priority date is "time immemorial."

4.4.3 Uses of Water

In the second amendment, the United States claims multiple types of water uses including municipal, commercial or industrial, mining, stockwatering, recreation, fish and wildlife, domestic, agricultural, and unspecified "other uses deemed beneficial" by the WMAT.

4.4.4 Sources of Water

In the second amendment, the United States claimed all groundwater underneath and outside the Reservation (1) from certain aquifers, (2) that sustains Reservation wells and the baseflow of certain springs and streams, and (3) in conjunction with surface water satisfies the claims previously filed by the United States for the benefit of the WMAT.

4.4.5 Points of Diversion

In the second amendment, the United States listed the points of diversion as the "Fort Apache Indian Reservation."

4.4.6 Places of Use

In the second amendment, the United States identified the "Fort Apache Indian Reservation" as the place of use.

4.4.7 Quantities of Use

Municipal and Domestic Uses. In the first amendment, the claimed amount is 1,100 AFY consisting of 323 AFY for present uses and 777 AFY for future uses.

Recreation Uses. In the first amendment, the claimed amount is 188 AFY consisting of 162 AFY for present recreational use and 26 AFY for future recreational use. These recreation uses are served by lakes, reservoirs and wells.

Industrial Uses. In the first amendment, the claimed amount is 162 AFY for present industrial uses.

Total. The total quantity of water claimed by the US in SOC No. 39-91441 (first and second amendments) is 1,450 AFY for the uses described above. See **Table 4-2**.

CHAPTER 5:
EVALUATION OF WATER RIGHTS ESTABLISHED IN THE WMAT QUANTIFICATION AGREEMENT

CHAPTER 5: EVALUATION OF WATER RIGHTS ESTABLISHED IN THE WMAT QUANTIFICATION AGREEMENT

This chapter evaluates whether there is a reasonable basis to conclude that the water rights of the WMAT and the United States under the WMAT Agreement are no more extensive than the water rights that the WMAT and the United States would be able to prove to a degree of reasonable probability at trial. For this evaluation, the Department compared the quantities of water established in the WMAT Agreement with the quantities claimed in the Gila River and LCR Adjudications. The Department also analyzed whether sufficient water supplies are available to satisfy the claimed amounts.

5.1 COMPARISON BETWEEN AGREEMENT AND CLAIMED QUANTITIES

The Department compared the total quantities for the water rights established in the WMAT Agreement (as described in Chapter 2 of this Report) with the quantities in the water rights claims filed in the Gila River Adjudication and the LCR Adjudication by, and on behalf of, the WMAT (as described in Chapter 4 of this Report). This comparison is presented in **Table 5-1**, which demonstrates that the quantities established in the WMAT Agreement are significantly less than the water rights claimed.

5.2 CLAIMS ANALYSIS

The Department analyzed the availability of water supplies to satisfy the claimed water rights within the Upper Salt River watershed and the Little Colorado River watershed. This analysis was undertaken to determine whether the claimed water rights had a reasonable basis and could be proved with a degree of reasonable probability at trial. For this purpose, the Department used the claims filed by WMAT as the base of comparison. The claims filed by the United States totaled less than the claims filed by the WMAT.

Reported planning studies and other documentation submitted in support of the claims in the Gila River Adjudication indicate that surface water within the Upper Salt River watershed is

the predominate supply intended for use by the WMAT.[1] Available surface water supplies within the Upper Salt River watershed were estimated using average annual streamflow volumes at gaging stations operated by the United States Geological Survey ("USGS") within the boundaries of designated drainage areas known as HUCs (Hydrologic Unit Codes).[2] As shown in **Figure 5-1**, the Reservation boundaries are located within USGS Salt basin (HUC 150601) and several of its subbasins, *i.e.* the Black (HUC 15060101), White (HUC 15060102), Carrizo (HUC 15060104), and Upper Salt (HUC 15060103) subbasins. Within each USGS designated subbasin, the Department compared the estimated available supply to the quantity of claimed water rights.

Documentation submitted in support of the claims in the LCR Adjudication indicate that groundwater is the predominate supply intended for use by the WMAT.[3] The Department compared published estimates of groundwater in storage in the Little Colorado River Plateau aquifers to the quantity of claimed water rights.

The following sections discuss the claims filed in the Gila River and LCR Adjudications from the water sources described above.

5.2.1 Gila River Adjudication Claims

As shown in **Table 5-1** the total annual diversions claimed by the WMAT in the Gila River Adjudication are 199,376 AFY. The WMAT presented information concerning the claimed amounts in a report titled "2007 Project Extension Report" that was submitted to Congress in support of the Agreement. A copy of the 2007 Project Extension Report is included in **Appendix C**.

Based on the information provided in the claims, the Department apportioned the claimed uses among the four USGS subbasins located within the Reservation, *i.e.* the Black, White,

[1] Both the WMAT and the United States also claimed all groundwater underneath and outside of the Reservation from certain aquifers. See Sections 4.1.4 and 4.2.4.
[2] As of 2010, the USGS uses six levels in the hierarchy of HUCs, represented by subbasin codes from 2 to 12 digits long, called "regions" (2 digits), "subregions" (4 digits), "basins" (6 digits), "subbasins" (8 digits), "watersheds" (10 digits), and "subwatersheds" (12 digits). The longer the number of digits, the smaller the drainage area.
[3] See Sections 4.3.4 and 4.4.4.

Carrizo and Upper Salt.[4] This section describes the claimed water uses and available supplies that the Department apportioned to each subbasin. Major water diversions are described in more detail and compared to the magnitude of estimated available supplies.

5.2.1.1 Claimed Water Uses and Available Supplies in the Black Subbasin

The total annual diversion claimed in the Black subbasin for historic and/or existing uses is 2,198 AFY. If the Tribe were to use all of the water claimed, including future uses, then annual diversions would increase to 42,647 AFY. The Black River and Big Bonito Creek are identified as primary water sources for uses claimed by the WMAT within the Black subbasin.

Figure 5-2 shows approximate locations of water uses claimed within the Black subbasin. Claimed uses included the following:

- Irrigation;[5]
- Stockponds;
- Consumption by livestock;
- Recreational lakes;
- Multi-purpose reservoirs; and
- Hydropower generation.

Of the 42,647 AFY claimed within the Black subbasin, 36,200 AFY is attributed to future irrigation at the planned Bonito Prairie Irrigation Project, which also includes plans for a 101,000 AF capacity multi-purpose reservoir on Big Bonito Creek. The 2007 Project Extension Report describes the Bonito Creek irrigation project for irrigation of 9,060 acres of hybrid poplar and Christmas tree plantations. The nurseries are intended to be compatible with the Tribe's historical forest industry and represent a continuation of the economic culture within the Reservation.

Between 1957 and 1981, the USGS operated streamflow monitoring gage site No. 09489700 on Big Bonito Creek, a short distance upstream of the location of the planned

[4] The Department used information in the WMAT claims from tables and maps that identified the locations of the claimed uses.

[5] Maps in support of historically irrigated lands on the Reservation were presented in Attachment 1 to SOC #39-16946. Because this information is not available in electronic (GIS) format, it is not shown on Figure 5-2.

irrigation project. Measurements recorded during this period of record showed an average annual flow at the gage of about 49,500 AFY from the 221 square-mile area contributing watershed upstream of the gage. Available information suggests adequate surface flows exist to fulfill the 42,647 AFY claimed annual surface water diversions within the Black subbasin, including the projected storage and irrigation needs of the Bonito Prairie Project.

5.2.1.2 Claimed Water Uses and Available Supplies in the White Subbasin

The total annual diversion claimed in the White subbasin for historic and/or existing uses is 33,224 AFY. If the Tribe were to use all of the water claimed, including future uses, then annual diversions would increase to 99,343 AFY. The White River and the East and North Forks of the White River are identified as sources of water for uses claimed by the WMAT within the White subbasin. **Figure 5-3** shows approximate locations of water uses claimed within the White subbasin. Claimed uses include the following:

- Domestic;
- Irrigation;[6]
- Stockponds;
- Consumption by livestock;
- Recreational lakes;
- Recreational golf courses;
- Recreational commercial;
- Recreational residential;
- Snowmaking;
- Multi-purpose reservoirs;
- FATCO sawmill; and
- Fish hatcheries.

The majority of the claimed water uses are attributed to existing uses by fish hatcheries and irrigation, and future uses for domestic and increased irrigation. The SOCs claim existing

[6] Maps in support of historically irrigated lands on the Reservation were presented in Attachment 1 to SOC #39-16946. Because this information is not available in electronic (GIS) format, except for the 885 acres near Canyon Day Dam, it is not shown in Figure 5-3.

diversions of 17,800 AFY for uses at fish hatcheries.[7] The Department estimates surface water diversions of approximately 13,500 AFY for existing irrigation uses. Claims for future irrigation uses indicate surface water diversions will increase to approximately 38,500 AFY including uses at the Canyon Day Irrigation Project. The Canyon Day Irrigation Project on the North Fork of the White River, as claimed in the SOCs, includes plans for construction and operation of the Miner Flat Dam multi-purpose reservoir, located upstream of the community of Whiteriver with a storage capacity of 8,000 AF; Bear Canyon Dam, an off-stream 17,800 AF capacity reservoir; and Canyon Day Dam located at Fort Apache with a storage capacity of 12,500 AF. The 2007 Project Extension Report describes the Canyon Day Irrigation Project as irrigation of 5,875 acres of apple orchard, vineyard, berries and field crops in rotation. Orchards and field crops are elements of the historical irrigated cropping pattern on the alluvium of the Reservation streams, particularly in the White River and Cibecue valleys.

The SOCs also indicate that demands for historic and existing domestic uses are met by groundwater pumped from community wells. The SOCs further indicate the annual amount for domestic purposes will increase to at least 21,433 AFY and be served by a combination of surface water diverted and stored at Miner Flat Dam, and from groundwater sources.

Since 1957, the USGS has operated streamflow monitoring gage site No. 09494000 on the White River below Fort Apache. Measurements recorded during this period of record showed an average annual flow at the gage of about 135,250 AFY from the 632 square-mile area contributing watershed upstream of the gage. Available information suggests that adequate surface flows exist to fulfill the 99,343 AFY claimed annual surface water diversions within the White subbasin, including projected domestic and irrigation needs.

5.2.1.3 Claimed Water Uses and Available Supplies in the Carrizo Subbasin

The total annual diversion claimed in the Carrizo subbasin for historic and/or existing uses is 2,916 AFY. If the Tribe were to use all of the water claimed, including future uses and annual evaporation losses from proposed recreational lakes, then annual diversions would increase to 2,995 AFY. Carrizo, Corduroy and Cedar Creeks are identified as water sources for

[7] Diversions for fish hatcheries are non-consumptive uses of water except for associated losses due to evaporation. Evaporation losses due to fish hatcheries are not identified in the claims.

uses claimed by the WMAT within the Carrizo subbasin. Of the total claimed within the Carrizo subbasin, 2,535 AFY is attributed to historic and existing irrigation.

Figure 5-4 shows approximate locations of water uses claimed within the Carrizo subbasin. Claimed uses include the following:

- Irrigation;[8]
- Stockponds;
- Consumption by livestock; and
- Recreational lakes.

Since 1951, the USGS has operated streamflow monitoring gage site No. 09496500 on Carrizo Creek near the community of Carrizo, a short distance below the confluence with Corduroy Creek. The average annual flow recorded at the gage site is 32,064 AFY from the 439 square-mile area contributing watershed upstream of the gage. Available information suggests adequate surface flows exist to fulfill the 2,995 AFY claimed annual surface water diversions within the Carrizo subbasin.

5.2.1.4 Claimed Water Uses and Available Supplies in the Upper Salt Subbasin

The total annual diversion claimed in the Upper Salt subbasin for historic and/or existing uses is 4,574 AFY. If the Tribe were to use all of the water claimed, including future uses, then annual diversions would increase to 43,102 AFY. The Salt River, Cibecue Creek and Canyon Creek are identified as water sources for uses claimed by the WMAT within the Upper Salt subbasin.

Figure 5-5 shows approximate locations of water uses claimed within the Upper Salt subbasin. Claimed uses include the following:

- Irrigation;[9]
- Stockponds;

[8] Maps in support of historically irrigated lands on the Reservation were presented in Attachment 1 to SOC #39-16946. Because this information is not available in electronic (GIS) format, it is not shown on Figure 5-4.

[9] Maps in support of historically irrigated lands on the Reservation were presented in Attachment 1 to SOC #39-16946. Because this information is not available in electronic (GIS) format, it is not shown on Figure 5-5.

- Consumption by livestock;
- Multi-purpose reservoirs;
- Hydropower generation;
- Cibeque sawmill; and
- Fish hatcheries.

The majority of the claimed water uses on Cibecue and Canyon Creeks are attributed to existing uses by fish hatcheries and irrigation, and future uses by increased irrigation on Cibecue Creek. Claimed surface water diversions on Cibeque and Canyon Creeks amount to 4,120 AFY from historic and/or existing irrigation. Claims for future uses indicate surface water diversions will increase on Cibecue Creek to 14,926 AFY. The 2007 Project Extension Report describes the Cibecue Irrigation Project as irrigation of 1,079 acres of bench lands west of Cibecue Creek. The cropping pattern would include orchard crops grown in the area historically (with the possible exception of cherries and asparagus).

Since 1959, the USGS has operated streamflow monitoring gage site No. 09497800 on Cibecue Creek near the confluence with the Salt River. The average annual flow recorded at the gage site is 30,883 AFY from the 295 square-mile area contributing watershed upstream of the gage. Available information suggests adequate surface flows exist to fulfill the 14,926 AFY claimed annual surface water diversions on Cibecue Creek.

Claimed water use of 25,420 AFY is attributed to evaporation losses at up to six potential hydropower generation sites identified on the Salt River with combined initial fill requirements of 1,000,000 acre-feet. Additionally, new irrigation uses will be initiated on the Salt River, with total estimated diversions of 1,900 AFY.

Since 1924, the USGS has operated streamflow monitoring gage site No. 09497500 on the Salt River above Cibecue Creek. The average annual flow recorded at the gage site is 633,200 AFY from the 2,849-square mile area contributing watershed upstream of the gage. Available information suggests adequate surface flows exist to fulfill the 27,328 AFY claimed annual surface water diversions on the Salt River within the Upper Salt subbasin, and satisfy initial fill requirements within several years of capturing flows.

5.2.2 LCR Adjudication Claims

This section describes claims to uses of water on the Reservation filed in the LCR Adjudication and compares them to locally available water supplies. Some of the LCR claims are for the same uses described in claims filed in the Gila River Adjudication.[10]

Groundwater pumped from the Coconino, Pintetop-Lakeside, and all other aquifers, is identified as the water source for uses claimed by the WMAT. The SOCs describe claims for annual water use of approximately 11,139 AFY. Claimed uses include the following:

- Domestic;
- Mineral;
- Recreational residential;
- Recreational golf course;
- Recreational commercial; and
- Snowmaking.

Existing water uses are supplied by two wells located on Off-Reservation Trust Land. Increased demands for water uses as described in the SOCs may require additional groundwater resource development. As described in **Section 3.2.2.2** of this Report, estimates of the total volume of groundwater in storage within the Little Colorado River Plateau aquifers range between 500 million and nearly one billion acre-feet.

5.3 CONCLUSION

The water rights established in the Quantification Agreement are no more extensive than the claimed uses of water by the WMAT filed in the Gila River Adjudication and the LCR Adjudication. Also, the Department's analysis of available water supplies indicates that the claimed water uses have a reasonable basis and there is a degree of reasonable probability that that they could be proved at trial.

[10] See Tables 4-1 and 4-2

CHAPTER 6: DEPLETIONS OF WATER RESOURCES AND OTHER IMPACTS OF THE QUANTIFICATION AGREEMENT

CHAPTER 6: DEPLETIONS OF WATER RESOURCES AND OTHER IMPACTS OF THE QUANTIFICATION AGREEMENT

This chapter evaluates the probable depletion of water resources in the Gila River System and Source and the LCR System and Source resulting from the WMAT Agreement. Evaluation of the probable impacts of the WMAT Agreement upon categories of other claimants in the Gila River Adjudication and LCR Adjudication, and upon the groundwater uses on or in the vicinity of the Reservation is presented. Additionally, other important impacts or consequences that might result from the WMAT Agreement are evaluated.

6.1 PROBABLE DEPLETIONS OF WATER RESOURCES

Under the WMAT Agreement, the WMAT and the United States have permanent quantified Water Rights for a Maximum Annual Diversion Amount of 99,000 AFY of Water[1] from the Upper Salt River watershed, including up to 7,000 AFY from the LCR watershed. The Maximum Annual Depletion Amount of Diversions cannot exceed 52,000 AFY from all sources of Water, including up to 4,000 AFY from the LCR watershed.[2] Diversions and Depletions are calculated as provided in the Agreement. See **Sections 2.1 and 2.6** of this Report for a description of the procedures to calculate Diversions and Depletions.

6.1.1 Gila River System and Source

The 2007 Project Extension Report indicated that the WMAT undertook a series of investigations from the late 1970s to the present to determine the best use of the water resources on its Reservation for a growing population and the need for economic development. The Report concluded that "the development and sustainability of groundwater was found infeasible for

[1] "Water" is defined in the Agreement as Groundwater, Surface Water, CAP Water, or Effluent (¶ 2.75, p. 15).
[2] The capitalized words used in this chapter are the terms of art capitalized and used in the Agreement.

current and future domestic water demands of the communities served by the Greater Whiteriver, Cedar Creek, Carrizo and Cibecue public water systems."[3]

The WRDC 2011 Report estimated groundwater withdrawals of 12,600 AFY within the Salt River groundwater basin and 12,000 AFY of surface water diversions within that portion of the Upper Salt River watershed that includes the Salt River groundwater basin, for a total water use of 24,600 AFY[4] Available streamflow records suggest that surface water flows generated within the boundary of the WMAT Reservation average approximately 494,000 AF per year. **Table 6-1** shows the Department's estimation of the annual volume of streamflow within the WMAT Reservation boundaries based on available streamflow records measured at USGS gages upstream and downstream of the Reservation boundaries. Based upon available information, annual depletions of 52,000 AFY of water by the WMAT, as allowed under the Quantification Agreement, will likely result in depletions of between six and eleven percent of the average annual surface water flows generated within the boundary of the Reservation,[5] and between four and eight percent of the average annual flows entering Lake Roosevelt downstream on the Salt River.[6]

6.1.2 LCR System and Source

The WRDC estimated 95,800 AFY of groundwater withdrawals and 14,700 AFY of surface

[3] 2007 Project Extension Report at p. ES-1.

[4] The boundaries of the Upper Salt River watershed include the boundaries of the Salt River and Tonto Creek groundwater basins.

[5] If the 24,600 AFY estimated current water use within the Salt River groundwater basin were all attributable to the Tribe, then the additional depletion of 27,400 AFY would be approximately 6 percent of total surface runoff from within the Reservation boundaries. If none of the 24,600 AFY estimated current water use within the Salt River groundwater basin was attributable to the Tribe, then the allowable depletion amount of 52,000 AFY would be approximately 11 percent of the average annual surface runoff from within the Reservation boundaries.

[6] If the 24,600 AFY estimated current water use within the Salt River groundwater basin were all attributable to the Tribe, then the additional depletion of 27,400 AFY would be approximately 6 percent of total surface runoff from within the Reservation boundaries. If none of the 24,600 AFY estimated current water use within the Salt River groundwater basin was attributable to the Tribe, then the allowable depletion amount of 52,000 AFY would be approximately 11 percent of the average annual surface runoff from within the Reservation boundaries.

water diversions within the Little Colorado River Plateau groundwater basin.[7] It also estimated annual natural recharge to the Little Colorado River Plateau aquifers at nearly 350,000 AFY. As described in **Section 3.2.2.2** of this Report, estimates of the total volume of groundwater in storage within the Little Colorado River Plateau aquifers range between 500 million and nearly one billion acre-feet. Based upon available information, annual allowed depletions of up to 4,000 AFY of groundwater from the LCR watershed would represent an increase in groundwater use of up to four percent over current 95,800 AFY withdrawals.

6.2 PROBABLE IMPACTS UPON CATEGORIES OF OTHER CLAIMANTS

One of the purposes of the Act is to "permanently resolve certain damage claims and all water rights claims" not only among the Parties to the Agreement, but also among all other claimants in the Gila River and LCR Adjudications.[8] The Proposed Judgment and Decree submitted by the Parties in both the adjudications[9] indicate that certain "Sections" of each Proposed Judgment and Decree are binding on all parties in the Gila River Adjudication and the LCR Adjudication.[10] The binding Sections of the Proposed Judgment and Decree in both the Gila River and LCR adjudications state that:

(1) the Water Rights described in the Judgment and Decree are held in trust by the United States[11] and are not subject to forfeiture or abandonment;[12]

(2) the WMAT and the United States have the permanent right to Divert for use on the Reservation and on Off-Reservation Trust Land (a) a Maximum Annual Diversion Amount of 71,000 AFY from all sources of Surface Water on the Reservation and Off-Reservation Trust Land within the Salt River watershed, provided that the Maximum Annual Depletion amount of all such Diversions do not exceed 25,800 AFY, of which up to 7,000 AFY of the Maximum

[7] A majority of the LCR watershed is located within the Little Colorado River Plateau groundwater basin. However, a small portion of the LCR watershed is located within the Coconino Plateau groundwater basin north of Flagstaff.
[8] Act at § 302(4).
[9] The Proposed Judgments and Decrees use the same capitalized words as those used in the WMAT Agreement, n. 1, p. 1 (Gila and LCR).
[10] Section 9 (Gila); Section 8 (LCR).
[11] References to the United States are to the United States acting in its capacity for the WMAT and its members unless otherwise stated.
[12] Section 4 (Gila and LCR).

Annual Diversion Amount and up to 4,000 AFY of the Maximum Annual Depletion Amount may be from sources of Water within the LCR watershed[13] and (b) commencing after the Year 2100, an additional Maximum Annual Diversion Amount of 3,000 AFY from all sources of Surface Water within the Salt River watershed, provided that the Maximum Annual Depletion Amount of all such Diversions does not exceed 1,200 AFY;[14]

(3) the WMAT and the United States have the permanent right to Divert Groundwater from any location within the Reservation and on Off-Reservation Trust Land subject to the Maximum Annual Diversion Amounts and the Maximum Annual Depletion Amounts specified in Paragraph (2) above, as provided in Paragraphs 4.0, 5.4 and 6.0 of the WMAT Agreement;[15] and

(4) the priority date for the administration of the Water Rights of the WMAT and the United States from the Salt River and the LCR and their tributaries described above in paragraphs (1) and (2) is November 9, 1871 for Uses on the Reservation, and November 4, 1985 for Uses on Off-Reservation Trust Land.[16]

Both of the Proposed Judgments and Decrees state that they may not be construed to "quantify or otherwise affect the Water Rights, claims or entitlements to Water of any Arizona Indian tribe, band or community, or the United States on their behalf, other than the WMAT and the United States acting in its capacity as trustee for the WMAT and its Members."[17]

Under the Agreement, the WMAT and the United States are required to execute certain waivers and releases of claims against the State, any agency or political subdivision of the State, or any other person, entity, corporation, or municipal corporation, subject to certain reservations of rights and retentions of claims, including those against certain Arizona persons or entities (¶ 12.2, pp. 59-60; ¶ 12.6, pp. 65-67; ¶ 14.1.4, pp. 73-74). These waivers and releases, reservations of rights, and retentions of claims are described above in **Section 2.7.2** of this Report, and referenced in each of the Proposed Judgments and Decrees.[18]

[13] Section 5.A (Gila); Section 5 (LCR).
[14] Section 5.B (Gila).
[15] Section 5.C (Gila); Section 6 (LCR).
[16] Section 9 (Gila); Section 8 (LCR).
[17] Section 21 (Gila); Section 19 (LCR).
[18] Section 19 (Gila); Section 17 (LCR).

In addition, except for the reservation of rights and retention of claims described in **Section 2.7.2** of this Report, the WMAT and the United States agree not to challenge or object to claims of other persons for the Use of Water from the Salt River and the LCR and their tributaries in any judicial or administrative proceedings, including the Gila River Adjudication Proceedings and the LCR Adjudication Proceedings (¶ 14.1.3, p. 73). See **Section 2.9.1** of this Report.

6.3 PROBABLE IMPACTS UPON GROUNDWATER USES ON OR IN THE VICINITY OF THE RESERVATION

"Groundwater" is defined in the Agreement as "all Water beneath the surface of the Earth other than Surface Water."[19] The WMAT and the United States have the permanent right to Divert Groundwater, which includes Water pumped from a well,[20] subject to the Maximum Annual Diversion Amounts and Maximum Annual Depletion Amounts specified in Paragraphs 4.0, 5.1 and 5.2 of the Agreement. See **Section 2.1** of this Report.

As described in **Section 2.7.2** of this Report, and referenced in the Proposed Judgments and Decrees,[21] except for certain wells, the WMAT and the United States agree not to object to the use of any well located outside the boundaries of the Reservation or the Off-Reservation Trust Land as of the Enforceability Date; or object to, dispute, or challenge, after the Enforceability Date, the drilling of any well or the withdrawal and Use of Water from any well in the Little Colorado River Adjudication Proceedings, the Gila River Adjudication Proceedings, or in any other judicial or administrative proceeding (¶ 12.9.4, p. 70).

The WRDC 2011 Report estimated 12,600 AFY in annual groundwater withdrawals and 178,000 AFY in natural recharge for the Salt River groundwater basin. Also estimated was nearly 7 million AF of available groundwater resources in storage. Current groundwater withdrawals from the 27 domestic wells located within the WMAT Reservation is unknown. As described above in **Section 6.1.1**, the Tribe has concluded that development and sustainability of groundwater was found infeasible for current and future domestic water demands. If the Tribe

[19] Agreement, ¶ 2.42, p. 9.
[20] *Id.* at ¶ 2.31, p. 8.
[21] Section 16 (Gila); Section 14 (LCR).

does not further develop groundwater resources within the Salt River groundwater basin, then impacts on groundwater uses will be minimal.

Current groundwater withdrawals from the two wells located Off-Reservation Trust Land is unknown. As described above in **Section 6.1.2**, annual allowed depletions of up to 4,000 AFY of groundwater from the Little Colorado River Plateau groundwater basin would represent an increase in groundwater use of up to four percent over current 95,800 AFY withdrawals.

6.4 OTHER IMPORTANT IMPACTS OR CONSEQUENCES THAT MIGHT RESULT FROM THE WMAT AGREEMENT

Several provisions of the WMAT Agreement have other important impacts or consequences. These provisions are described in detail in Chapter 2 of this Report and relate to the following:

(1) the WMAT's entitlement to CAP water;[22]

(2) the contribution of funds by the United States and the State for the implementation of the Agreement;[23]

(3) the confirmation of water rights of certain Parties in addition to those of the WMAT and the United States;[24]

(4) the adoption of a Water Code by the WMAT;[25]

(5) changes in use from agricultural to M&I Uses on certain lands;[26]

(6) the jurisdiction of State courts or any federal court to adjudicate disputes arising under the Agreement;[27] and

(7) the Water Rights, claims or entitlements to Water of any tribe, band or community other than the WMAT, and the future allocation or reallocation of CAP Water by the Secretary.[28]

[22] Report, Section 2.5.
[23] *Id.* at Section 2.8.
[24] *Id.* at Section 2.9.
[25] *Id.* at Section 2.10.
[26] *Id.* at Section 2.12.
[27] *Id.* at Section 2.13.
[28] *Id.* at Section 2.14.

TABLES

TABLE 2-1: WMAT PROPOSED WATER RIGHTS[1]

SOURCE	MAXIMUM ANNUAL DIVERSION AMOUNT (AFY)	MAXIMUM ANNUAL DEPLETION AMOUNT (AFY)	REFERENCE
4.1.1 Surface Water and Groundwater Diverted on the Reservation or on Off-Reservation Trust Land from sources within the Salt River Watershed	64,000	21,800	Paragraphs 5.0, 6.0, and 11.0
4.1.2 Surface Water and Groundwater Diverted on the Reservation or on Off-Reservation Trust Land from sources within the Salt River Watershed or the Little Colorado River Watershed	7,000	4,000	Paragraphs 5.0, 6.0, and 11.0
4.1.3 Surface Water and Groundwater Diverted on the Reservation or on Off-Reservation Trust Land from sources within the Salt River Watershed the first Use of which shall not commence until after the Year 2100	3,000	1,200	Subparagraphs 5.2 and Paragraph 11.0
4.1.4 White Mountain Apache Tribe Central Arizona Project Water	At least 25,000	25,000	Paragraphs 7.0 and 11.0
4.1.5 TOTAL	**99,000** Subject to Subparagraph 4.1.4	**52,000**	

[1] As set forth in Paragraph 4.0 of the WMAT Agreement.

TABLE 4-1. SUMMARY OF ANNUAL DIVERSION CLAIMS FILED IN THE GILA RIVER ADJUDICATION

WMAT (SOC Nos. 39-16945 through 16948)			
TYPE OF USE	**DIVERSIONS (AFY)**		
	Existing/Historic Uses	**Additional Future Uses**	**Total Claimed**
Domestic	--	at least 21,443	21,443
Irrigation	20,755	69,103	89,858
Stockponds	1,858	--	1,858
Recreation Lakes	2,120	3,060	5,179
Multi-Purpose Reservoirs	--	5,131	5,131
Recreation Residential	--	4,085	4,085
Recreation Golf Courses	--	1,001	1,001
Recreation Commercial	--	704	704
Snowmaking	--	2,000	2,000
FATCO Sawmills (3)	--	10,000	10,000
Fish Hatcheries (3)	17,757	3,228	20,985
Mineral	--	5,000	5,000
Power Sites (6)	--	31,709	31,709
Livestock Consumption	423	--	423
TOTALS	**42,912**	**156,464**	**199,376**

UNITED STATES ON BEHALF OF WMAT (SOC No. 39-12168)			
TYPE OF USE	**DIVERSIONS (AFY)**		
	Existing/Historic Uses	**Additional Future Uses**	**Total Claimed**
Irrigation	20,086	43,889	63,975
Evaporation	--	3,010	3,010
Stockponds	6,900	--	6,900
Stockwater and Wildlife	490	--	490
Recreational Lakes	5,215	5,978	11,193
Domestic, Municipal, Recreational	--	6,330	6,330
Sawmills (3)	--	9,025	9,025
Miscellaneous Industrial	--	5,000	5,000
Fish Hatcheries (2)	12,434	--	12,434
Mineral	--	20,000	20,000
Power	--	44,500	44,500
TOTALS	**45,125**	**137,732**	**182,857**

TABLE 4-2. SUMMARY OF ANNUAL DIVERSION CLAIMS FILED IN THE LCR ADJUDICATION

WMAT (SOC Nos. 39-95155 and 95156)			
TYPE OF USE	**DIVERSIONS (AFY)**		
	Existing/Historic Uses	**Additional Future Uses**	**Total Claimed**
Domestic	--	at least 1,349	1,349
Mineral	--	2,000 (along northern boundary)	2,000
Recreation Residential	--	4,085	4,085
Recreation Golf Courses	--	1,001	1,001
Recreation Commercial	--	704	704
Snowmaking	--	2,000	2,000
TOTALS	--	**11,139**	**11,139**
UNITED STATES ON BEHALF OF WMAT (SOC No. 39-91441)			
TYPE OF USE	**DIVERSIONS (AFY)**		
	Existing/Historic Uses	**Additional Future Uses**	**Total Claimed**
Municipal and Domestic	323	777	1,100
Recreation	162	26	188
Industrial	162	--	162
TOTALS	**647**	**803**	**1,450**

TABLE 5-1. COMPARISON BETWEEN AGREEMENT AND CLAIMED QUANTITIES

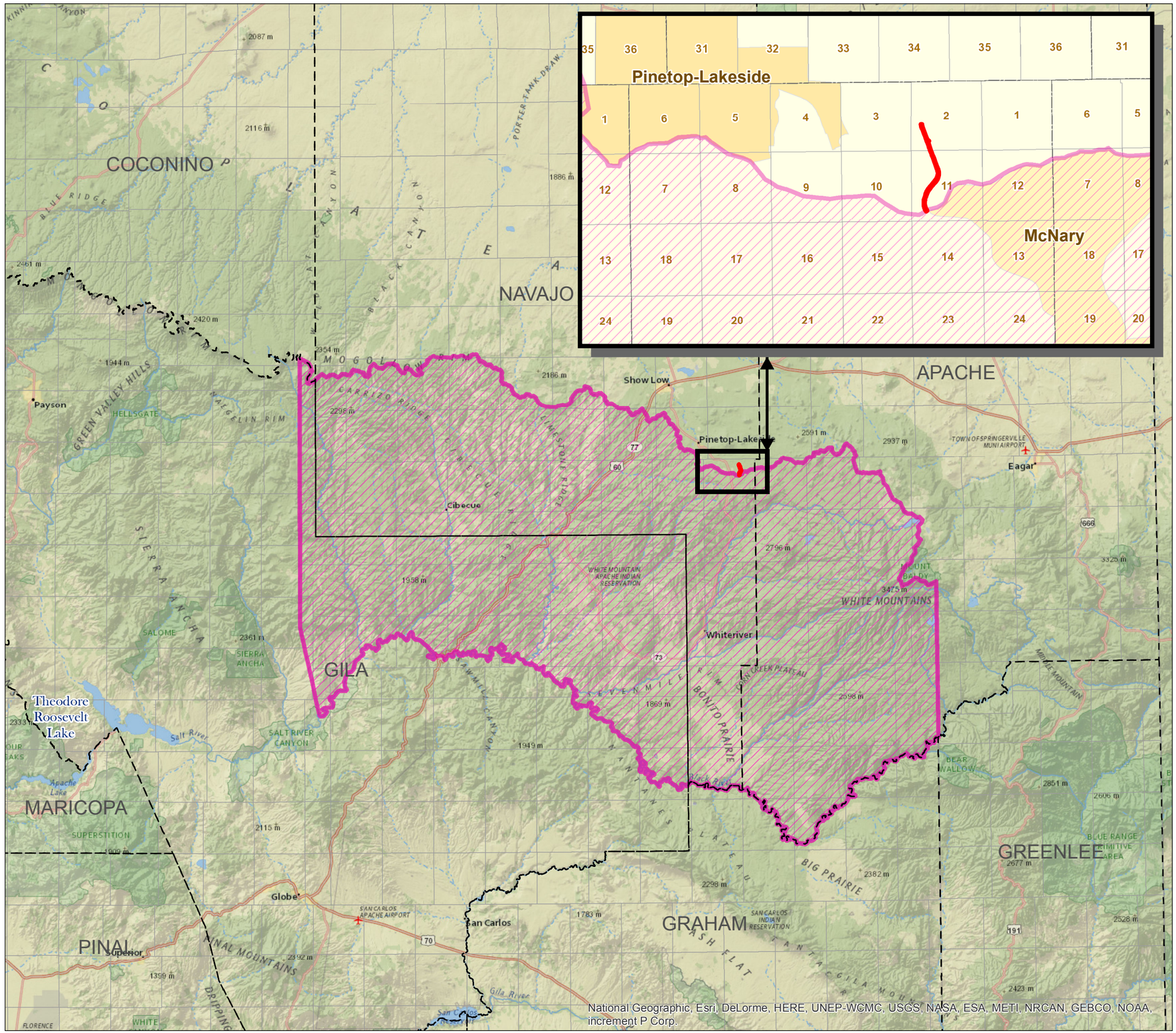
QUANTIFICATION AGREEMENT		
Gila River and LCR Adjudications	Maximum Annual Diversion Amount	**99,000 AFY** (See Section 2.1)
WMAT CLAIMS		
Gila SOC Nos. 39-16945 through 16948	Annual Diversions Claimed	199,376 AFY (See Section 4.1.7)
LCR SOC Nos. 39-95155 and 95156		11,139 AFY (See Section 4.3.7)
	Total	**210,515 AFY**
UNITED STATES CLAIMS		
Gila SOC No. 39-12168	Annual Diversion Claimed	182,857 AFY (See Section 4.2.7)
LCR SOC No. 39-91441		1,450 AFY (See Section 4.4.7)
	Total	**184,307 AFY**

AFY = Acre-feet per year

TABLE 6-1. SURFACE WATER FLOWS WITHIN WMAT RESERVATION

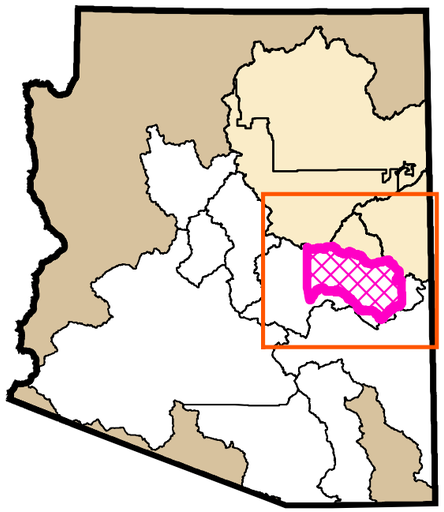
USGS GAGE No.	LOCATION	PERIOD OF RECORD	DRAINAGE AREA [MI^2]	AVERAGE ANNUAL FLOW [AFY]
Upstream of Reservation				
9489100	BLACK RIVER NEAR MAVERICK, ARIZ. (Streamflow entering Reservation)	1963-1982	315	102,021
Downstream of Reservation				
9497980	CHERRY CREEK NEAR GLOBE, AZ (Downstream addition to streamflow)	1966-2013	62	23,166
9498400	PINAL CREEK AT INSPIRATION DAM, NR GLOBE, AZ (Downstream addition to streamflow)	1981-2013	195	7,223
9498500	SALT RIVER NEAR ROOSEVELT, AZ (Streamflow entering Lake Roosevelt)	1914-2013	4306	626,166
*Estimated average annual surface water flows within Reservation = 626,166 − 7,223 − 23,166 − 102,021 = **493,755 AFY**				

FIGURES



Legend

- WMAT Reservation
- WMAT Off-Reservation Trust Land
- Township
- Section
- County



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Miles

Figure 3-1
WMAT Reservation and WMAT Off-Reservation Trust Land

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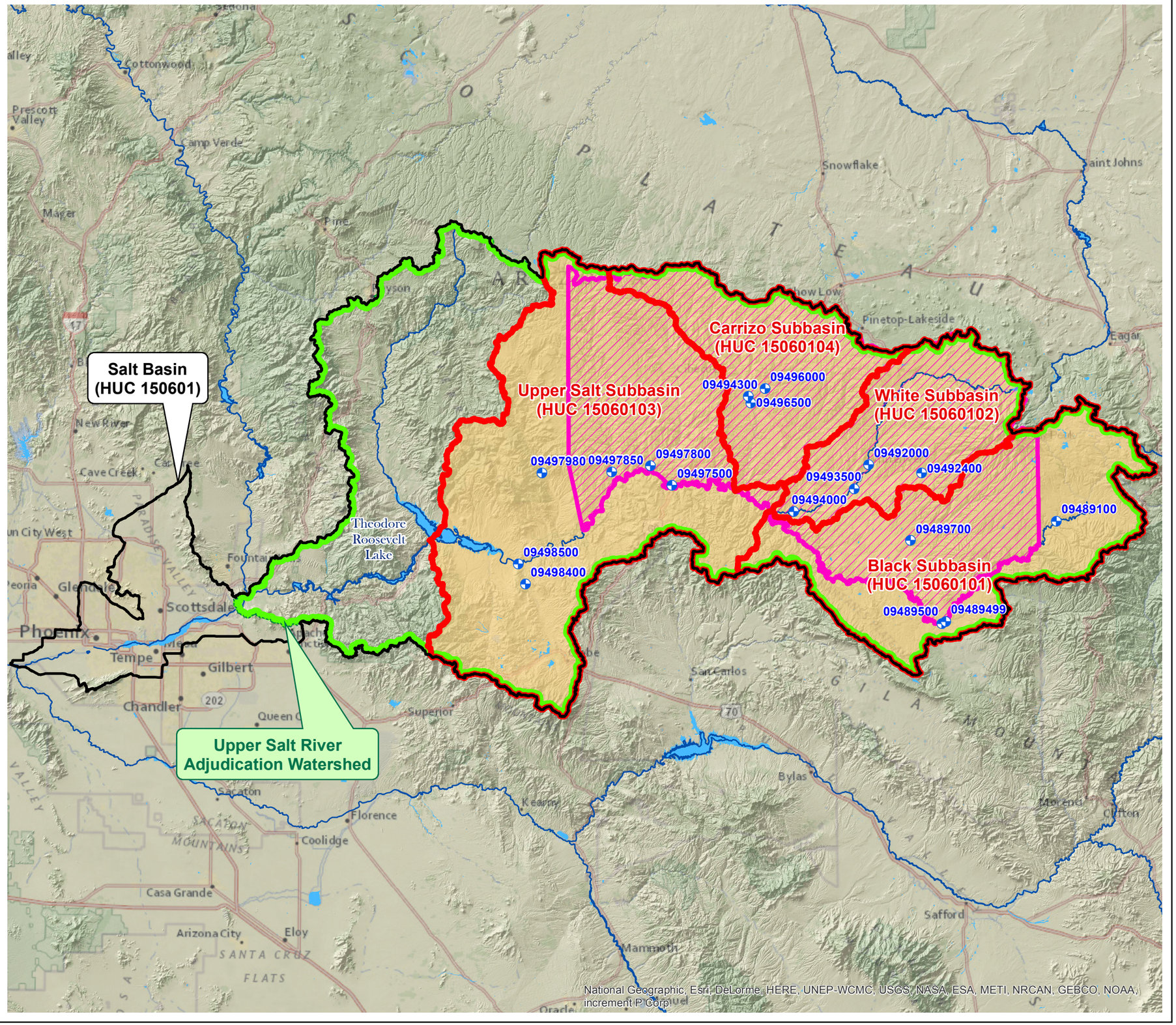

Legend

- WMAT Reservation
- USGS Subbasins
- USGS Salt Basin
- Selected USGS Gages
- Upper Salt River Adjudication Watershed
- Rivers

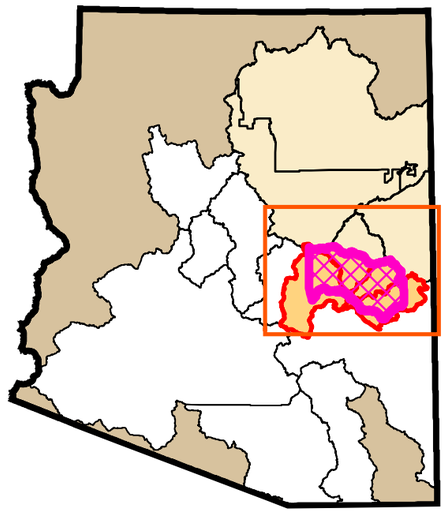

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Figure 5-1
USGS Subbasins Used in Evaluation of Water Availability to Satisfy Gila Adjudication Claims

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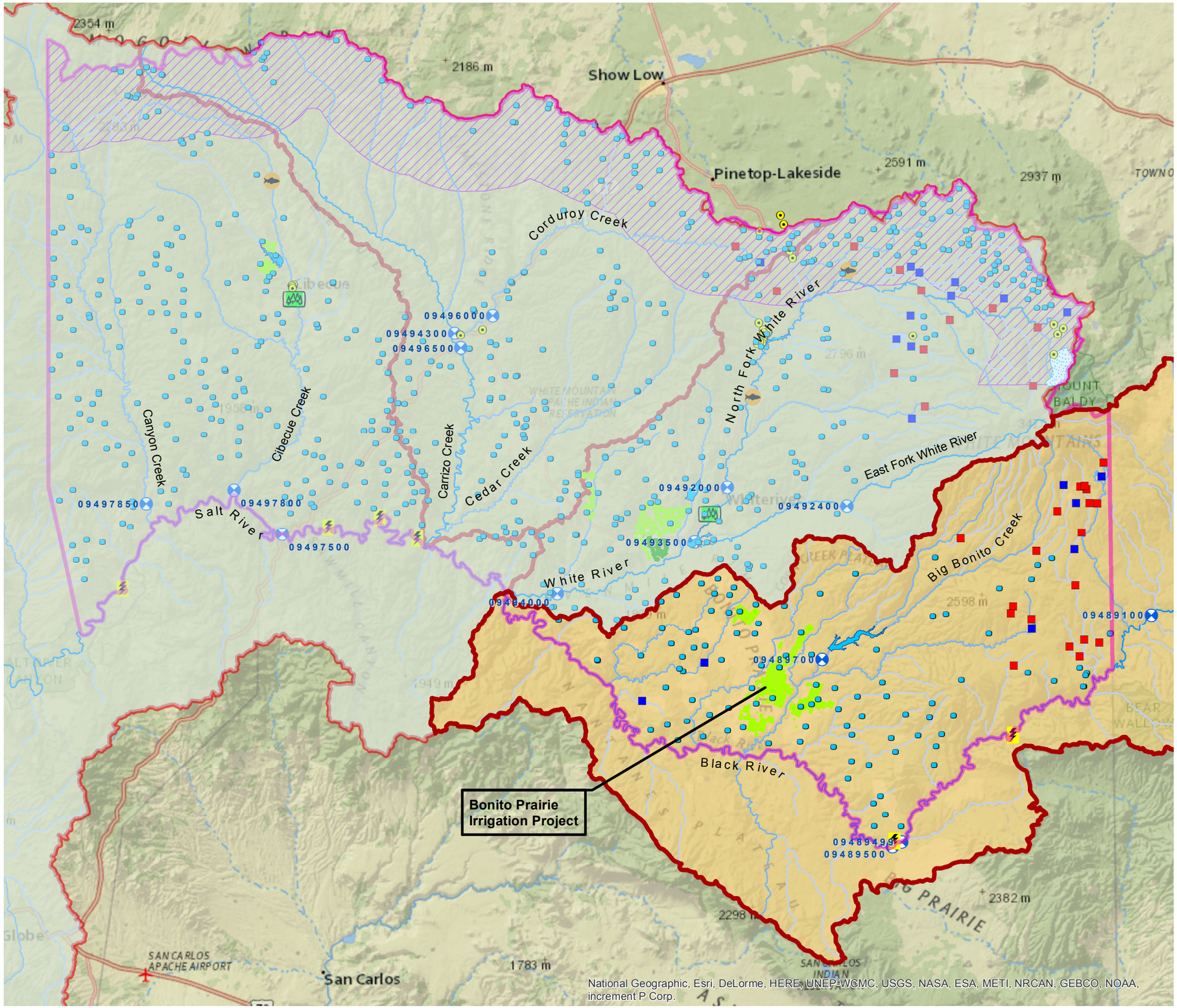
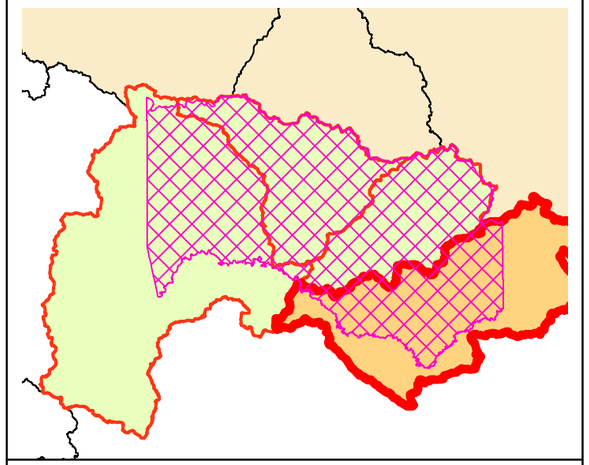


Legend

- Reservation Boundary
- USGS Black Subbasin
- USGS Stream Gages

WMAT Claimed Uses

- Stockpond & Livestock Consumption
- Existing Domestic Wells
- Sawmills
- Future Recreational Lakes
- Current Recreational Lakes
- Fish Hatchery
- Power Sites/Hydropower Generation
- Future Irrigation Lands
- Existing Irrigation Lands
- Future Multi-Use Reservoir
- Snowmaking Area
- Recreational Zone (Residential, Golf, Commercial)



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0 5 10 15 20

Miles

Figure 5-2
Water Uses Claimed within the Black Subbasin (HUC 15060101)

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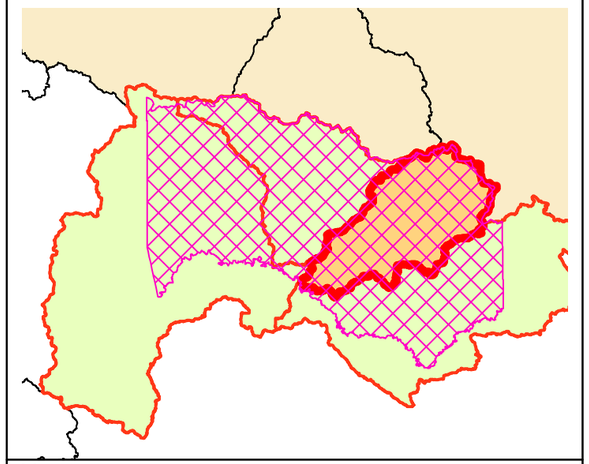
Legend

- Reservation Boundary
- USGS White Subbasin
- USGS Stream Gages

WMAT Claimed Uses

- Stockpond & Livestock Consumption
- Existing Domestic Wells
- Sawmills
- Future Recreational Lakes
- Current Recreational Lakes
- Fish Hatchery
- Power Sites/Hydropower Generation
- Future Irrigation Lands
- Existing Irrigation Lands
- Future Multi-Use Reservoir
- Snowmaking Area
- Recreational Zone (Residential, Golf, Commercial)



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0 5 10 15 20

Miles

Figure 5-3
Water Uses Claimed within the White Subbasin (HUC 15060102)

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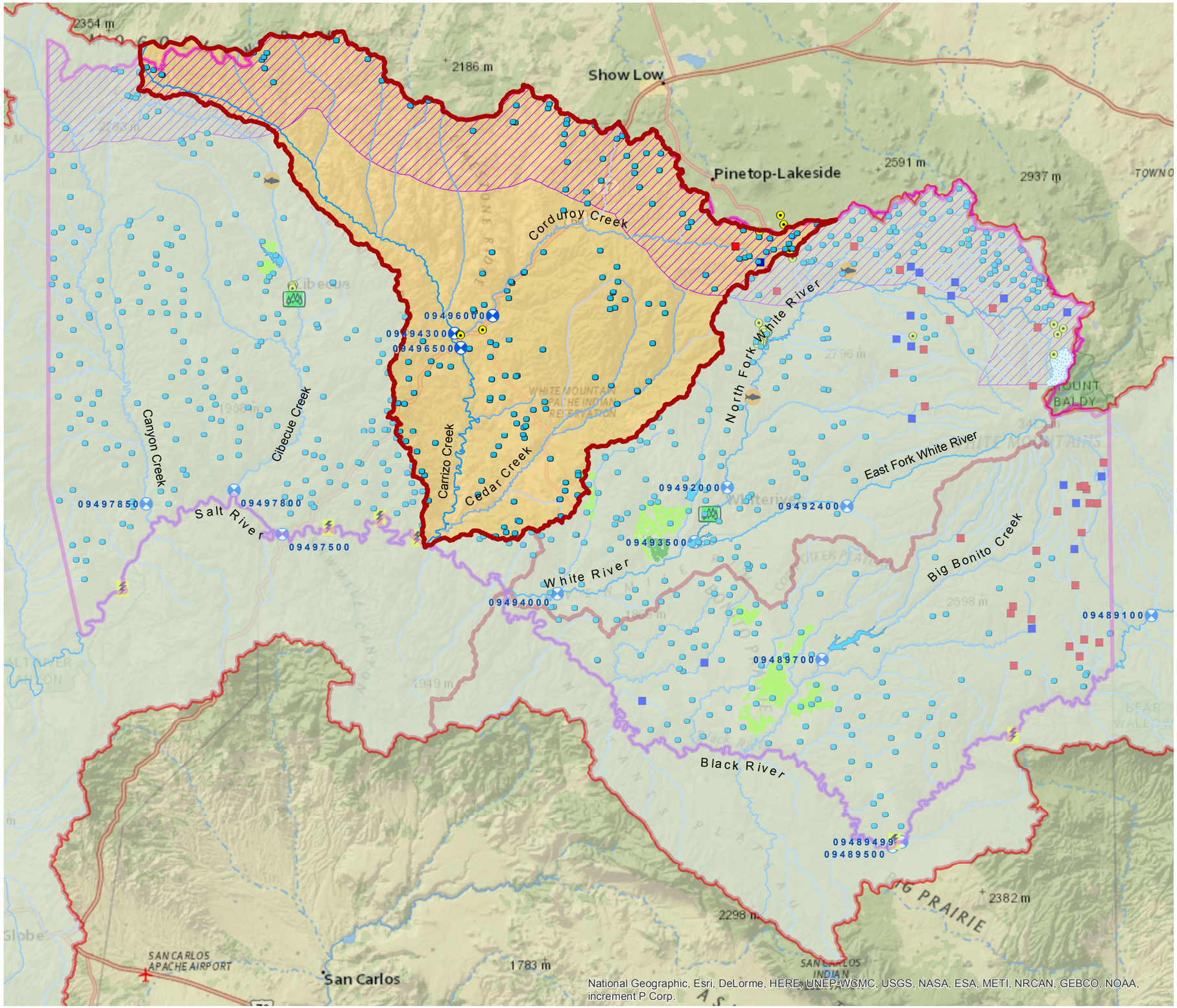
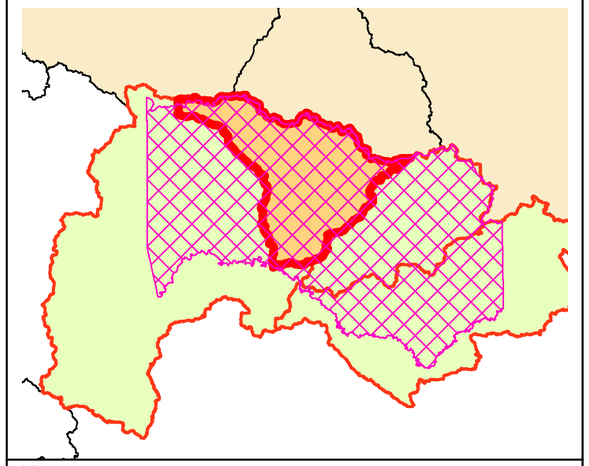


Legend

- Reservation Boundary
- USGS Carrizo Subbasin
- USGS Stream Gages

WMAT Claimed Uses

- Stockpond & Livestock Consumption
- Existing Domestic Wells
- Sawmills
- Future Recreational Lakes
- Current Recreational Lakes
- Fish Hatchery
- Power Sites/Hydropower Generation
- Future Irrigation Lands
- Existing Irrigation Lands
- Future Multi-Use Reservoir
- Snowmaking Area
- Recreational Zone (Residential, Golf, Commercial)



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Miles

Figure 5-4
Water Uses Claimed within the Carrizo Subbasin (HUC 15060104)

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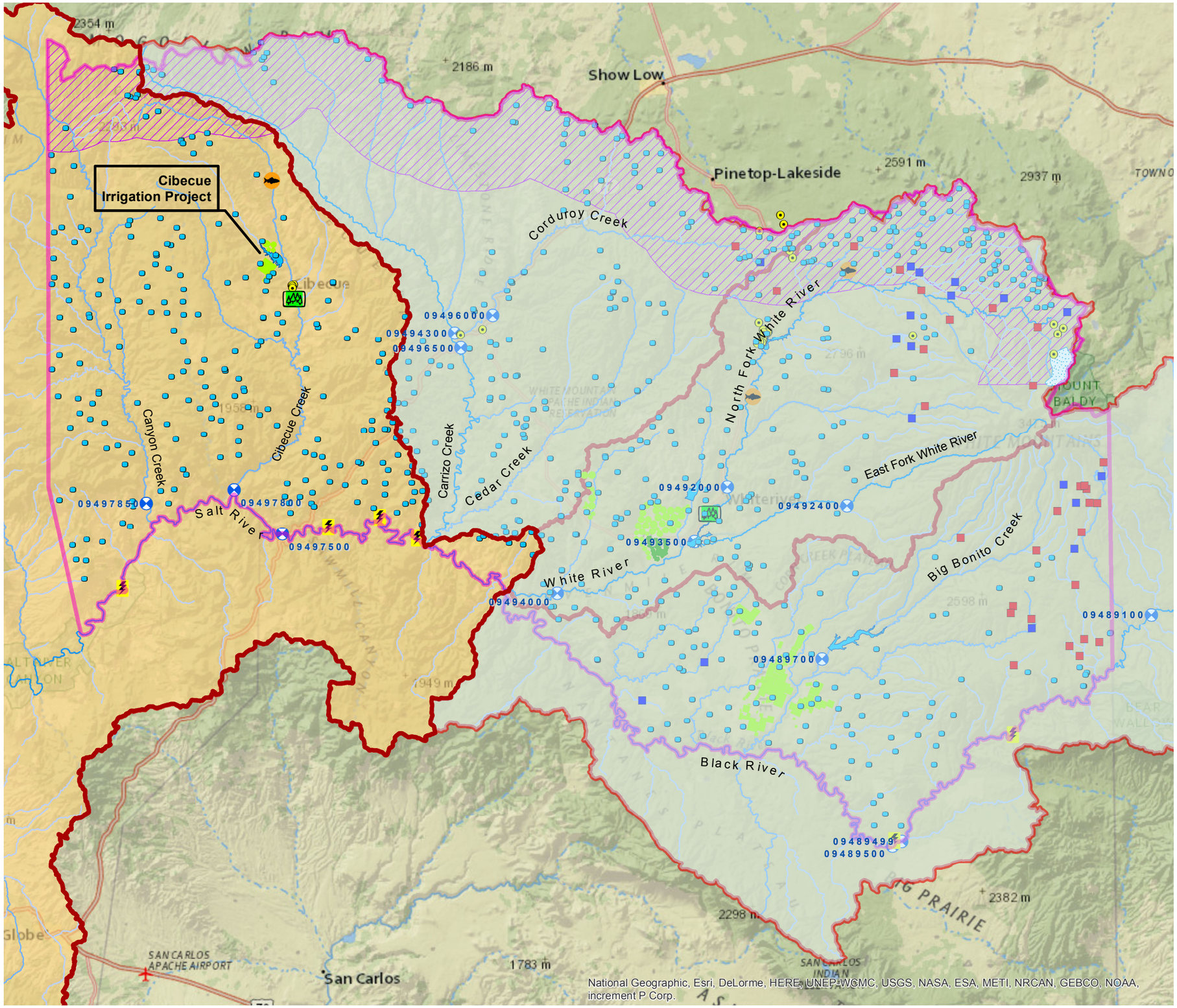
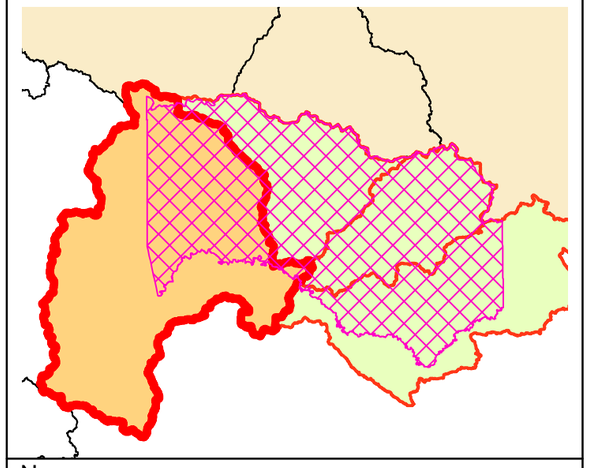


Legend

- Reservation Boundary
- USGS Upper Salt Subbasin
- USGS Stream Gages

WMAT Claimed Uses

- Stockpond & Livestock Consumption
- Existing Domestic Wells
- Sawmills
- Future Recreational Lakes
- Current Recreational Lakes
- Fish Hatchery
- Power Sites/Hydropower Generation
- Future Irrigation Lands
- Existing Irrigation Lands
- Future Multi-Use Reservoir
- Snowmaking Area
- Recreational Zone (Residential, Golf, Commercial)



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0 5 10 15 20

Miles

Figure 5-5
Water Uses Claimed within the Upper Salt Subbasin (HUC 15060103)

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