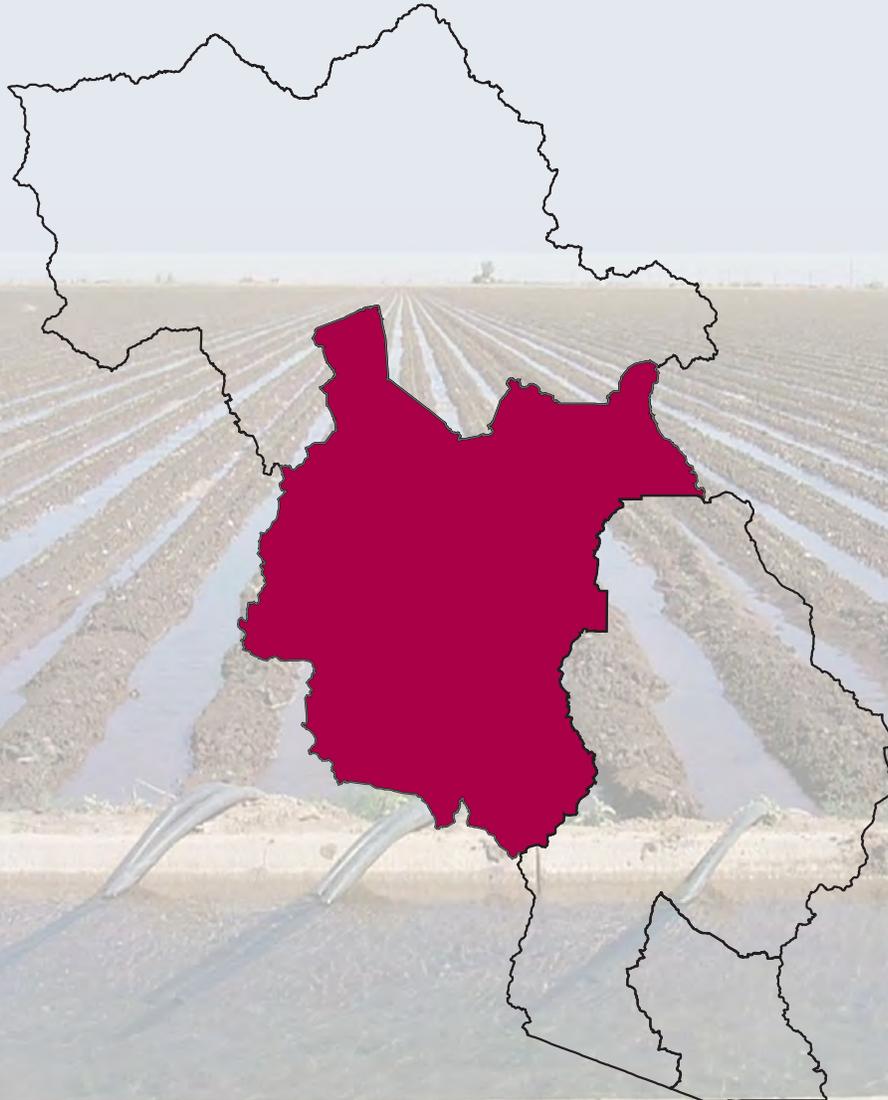
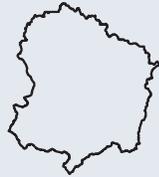


Section 8.2

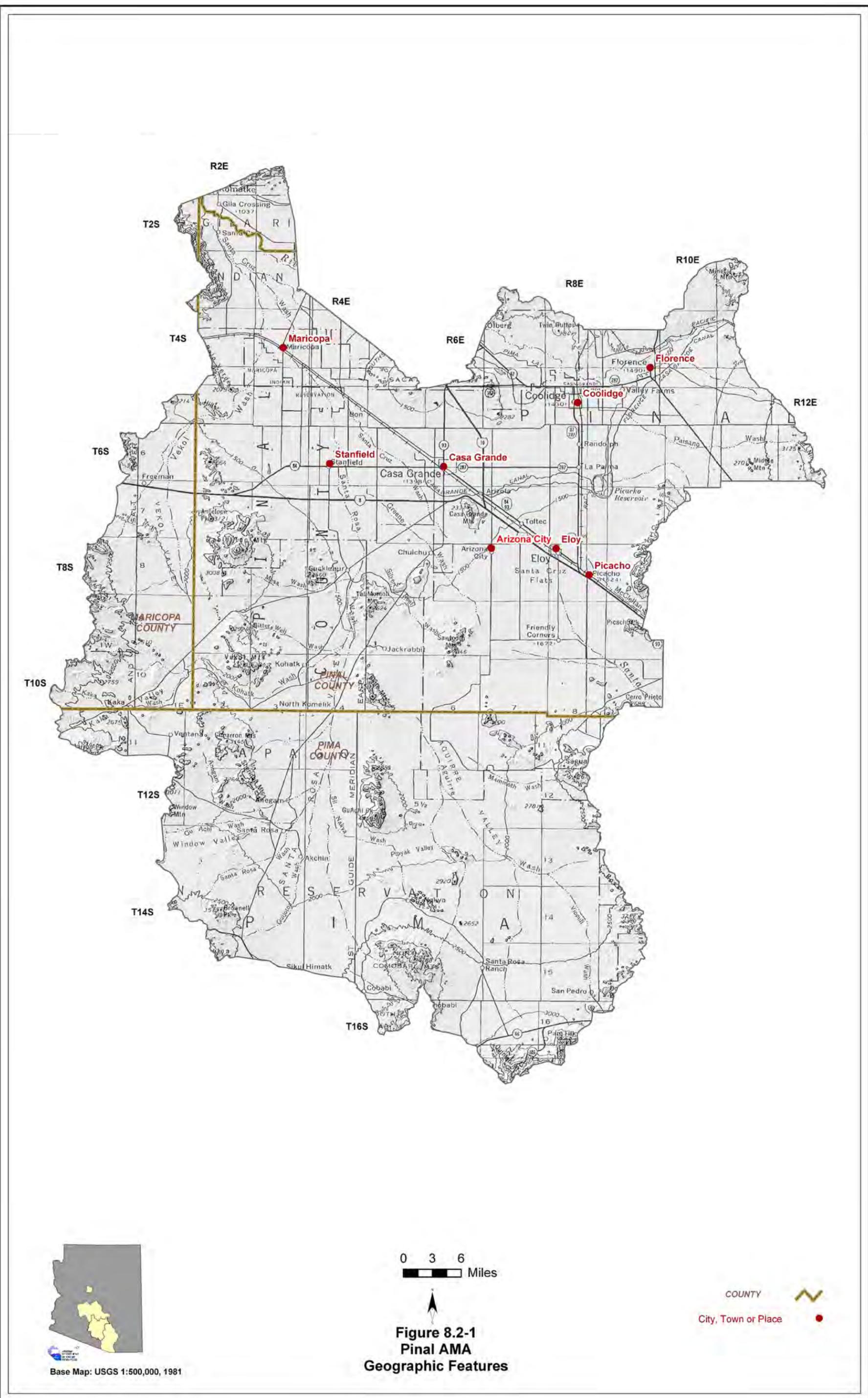
Pinal AMA



8.2.1 Geography of the Pinal AMA

The Pinal AMA is 4,100 square miles in area. Geographic features and principal communities are shown on Figure 8.2-1. The AMA is characterized by gently sloping alluvial valleys separated by north to northwest trending fault-block mountains. Vegetation types are predominantly Lower Colorado River Valley and Arizona Uplands Sonoran desertscrub with a small area of semi-desert grassland in the western portion of the AMA. (See Figure 8.0-10)

- Principal geographic features shown on Figure 8.2-1 are:
 - The Gila River in the northern part of the AMA in the vicinity of Florence and Coolidge, running west and exiting the AMA at the northwestern tip.
 - The Santa Cruz River, which enters the AMA from the southeast, south of Picacho Peak.
 - The Aguirre and Santa Rosa Washes in the south and center.
 - The Santa Cruz Wash east of Casa Grande, running northwest toward the Gila River.
 - Numerous valleys and plains including Aguirre and Santa Rosa Valleys in the south, and Vekol Valley in the west.
 - Mountain ranges along the AMA boundary: the Santan, Sacaton and South Mountains on the north; Picacho, Waterman and Roskrige Mountains on the east; the Quinlan, North Comobabi, and Quijotoa Mountains on the south; and the Castle, Sand Tank and Sierra Estrella Mountains on the west. Picacho Peak, a prominent geographic feature, is located southeast of Picacho on the eastern AMA boundary.
 - The lowest point in the AMA at 1,000 feet where the Santa Cruz Wash and Gila River exit to the northwest.
 - The highest point is Kitt Peak at 6,857 feet in the Quinlan Mountains at the southern AMA boundary.



8.2.2 Land Ownership in the Pinal AMA

Land ownership, including the percentage of ownership by category, for the Pinal AMA is shown in Figure 8.2-2. The principal feature of land ownership in this AMA is the large proportion of Indian Reservation lands. A description of land ownership data sources and methods is found in Volume 1, Section 1.3.8. Land ownership categories are discussed below in the order of largest to smallest percentage in the AMA.

Indian Reservation

- 51.4% of the land is under tribal ownership as the Tohono O’odham, Gila River and Ak-Chin Indian Reservations.
- This is the largest percentage of Indian reservation land in any of the AMA basins.
- Land uses include domestic, commercial, agriculture and grazing.

Private

- 22.5% of the land is private.
- Land uses include domestic, commercial, agriculture and mining.

State Trust Land

- 13.0% of the land is held in trust for public schools and other beneficiaries under the State Trust Land system.
- A portion of state trust land is within the Ironwood and Sonoran Desert National Monuments.
- Land uses include agriculture, grazing and recreation.

U.S. Bureau of Land Management (BLM)

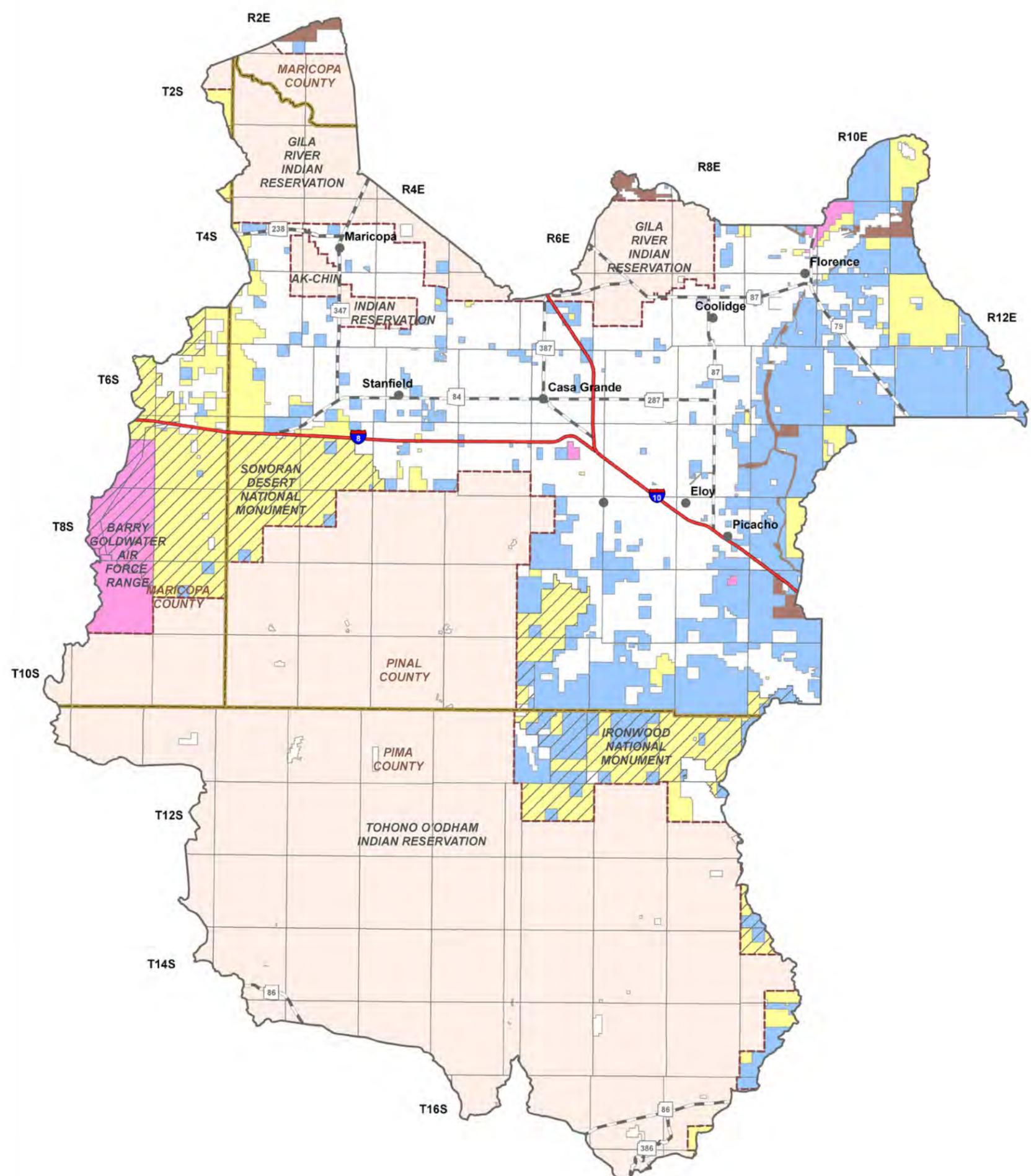
- 10.5% of the land is federally owned and managed by the Tucson and Lower Sonoran Field Offices of the Bureau of Land Management.
- The AMA includes 1,309 acres of the 5,080-acre Coyote Mountain Wilderness and 3,041 acres of the 14,400-acre Sierra Estrella Wilderness. BLM lands also include portions of the Sonoran Desert and Ironwood National Monuments (See Figure 8.0-13)
- Land uses include resource conservation, recreation and grazing.

U.S. Military

- 1.9% of the land is federally owned and managed by the U.S. Military.
- Military lands include a portion of the Barry Goldwater Air Force Range, part of which is within the Sonoran Desert National Monument.
- Primary land use is military activity.

Other

- 0.7% of the land is owned and managed by the U.S. Bureau of Reclamation (BOR) or local and regional governments.
- “Other” includes land in the eastern portion of the AMA managed by BOR for the Central Arizona Project canal and pumping stations as well as local and regional parks managed by Maricopa County.
- Land uses include water infrastructure and recreation.



- Indian Reservation (51.4%)
- Private (22.5%)
- State Trust (13.0%)
- BLM (10.5%)
- Military (1.9%)
- Other (0.7%)
- National Monument
- Indian Reservation Boundary
- COUNTY
- Interstate Highway
- Major Road
- City, Town or Place

0 3 6
Miles



Figure 8.2-2
Pinal AMA
Land Ownership



Source: ALRIS, 2004

8.2.3 Climate of the Pinal AMA

Climate data from NOAA/NWS Co-op Network and AZMET stations are compiled in Table 8.2-1 and the locations are shown on Figure 8.2-3. Figure 8.2-3 also shows precipitation contour data from the Spatial Climate Analysis Service (SCAS) at Oregon State University. The Pinal AMA does not contain Evaporation Pan or SNOTEL /Snowcourse stations. A description of the climate data sources and methods is found in Volume 1, Section 1.3.3.

NOAA/NWS Co-op Network

- Refer to Table 8.2-1A
- There are nine NOAA/NWS Co-op Network stations in the AMA. The average monthly maximum temperature occurs in July and is between 70.7°F and 91.1°F. The average monthly minimum temperature occurs in December or January and is between 41.3°F and 52.9°F.
- The highest seasonal rainfall occurs at most stations in the summer (July-September). For the period of record used, the highest average annual rainfall is 23.95 inches at the Kitt Peak station and the lowest is 6.11 inches at the Santa Rosa School station.

AZMET

- Refer to Table 8.2-1C
- There are three AZMET stations in the AMA. Elevation at the stations range from 1,184 feet to 1,512 feet and the corresponding annual average evaporation ranges from 79.84 inches to 77.53 inches.

SCAS Precipitation Data

- See Figure 8.2-3
- Additional precipitation data shows average annual rainfall as high as 30 inches on the AMA boundary near Kitt Peak and as low as six inches in the northwestern portion of the AMA near Maricopa.

Table 8.2-1 Climate Data for the Pinal AMA

A. NOAA/NWS Co-op Network:

Station Name	Elevation (in feet)	Period of Record Used for Averages	Monthly Average Temperature Range (in F)		Average Precipitation (in inches)				
			Max/Month	Min/Month	Winter	Spring	Summer	Fall	Annual
Casa Grande	1,462	1971-2000	90.4/Jul	51.9/Dec	2.59	0.57	3.59	2.47	9.22
Casa Grande Natl Mon	1,419	1971-2000	90.4/Jul	50.4/Dec	3.06	0.66	3.12	2.77	9.61
Covered Wells 1E	2,622	1956-1963	88.2/Jul	50.22/Jan	2.67	0.89	5.89	2.34	11.8
Eloy 4 NE	1,545	1971-2000	89.9/Jul	52/Dec	3.10	0.69	3.69	3.12	10.60
Florence	1,505	1971-2000	89/Jul	52.3/Jan	3.29	0.84	3.05	2.87	10.05
Kitt Peak	6,800	1971-2000	70.7/Jul	41.3/Jan	5.45	1.43	11.53	5.54	23.95
Maricopa 4 N	1,160	1971-2000	91.4/Jul	50.3/Dec	2.59	0.51	2.61	2.27	7.98
Maricopa 9 SSW	1,401	1898-1958 ¹	91.1/Jul	48.8/Jan	1.83	0.55	3.10	1.86	7.34
Picacho 8 SE	1,830	1971-2000	91.1/Jul	52.9/Jan	3.26	0.73	3.52	2.56	10.07
Santa Rosa School	1,841	1959-1977 ¹	88.2/Jul	49.1/Jan	0.87	0.72	2.97	1.55	6.11
Silver Bell	2,740	1906-1974	85.8/Jul	52.7/Jan	2.65	0.73	6.2	3.2	12.78

Source: WRCC

Notes:

¹Average temperature data from period of record shown; average precipitation data from 1971 - 2000

B. Evaporation Pan:

Station Name	Elevation (in feet)	Period of Record Used for Averages	Avg. Annual Evap (in inches)
None			

Source: WRCC

C. AZMET:

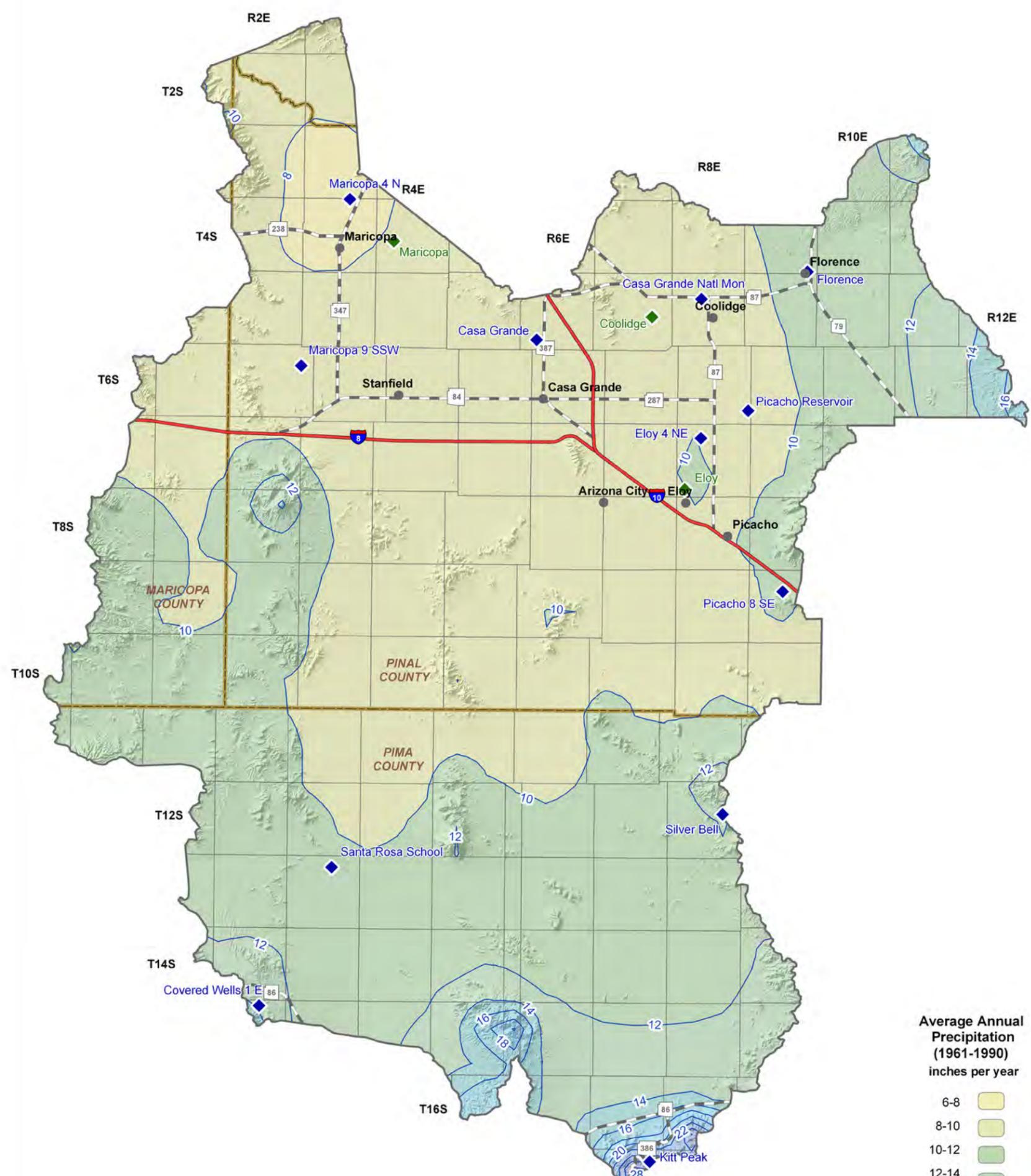
Station Name	Elevation (in feet)	Period of Record Used for Averages	Average Annual Reference Evapotranspiration, in inches (Number of years to calculate averages)
Coolidge	1,385	1999 - current	77.53
Eloy	1,512	1999 - current	79.84
Maricopa	1,184	1999 - current	79.37

Source: Arizona Meteorological Network, 2004

D. SNOTEL/Snowcourse:

Station Name	Elevation (in feet)	Period of Record Used for Averages	Average Snowpack, at Beginning of the Month, as Inches Snow Water Content (Number of measurements to calculate average)					
			Jan.	Feb.	March	April	May	June
None								

Source: NRCS, 2005



Average Annual Precipitation (1961-1990) inches per year

6-8	[Lightest yellow box]
8-10	[Light yellow box]
10-12	[Yellow-green box]
12-14	[Light green box]
14-16	[Light teal box]
16-18	[Teal box]
18-20	[Medium teal box]
20-22	[Blue-teal box]
22-24	[Blue box]
24-26	[Dark blue box]
26-28	[Purple-blue box]
28-30	[Purple box]

Meteorological Stations

- NOAA/NWS [Blue diamond symbol]
- AZMET [Green diamond symbol]

Precipitation Contour [Blue line with '12' label]

COUNTY [Yellow outline symbol]

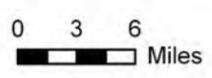
Interstate Highway [Red line with '8' label]

Major Road [Grey line with '84' label]

City, Town or Place [Black dot symbol]



Precipitation Data Source: Oregon State University, 1998



**Figure 8.2-3
Pinal AMA
Meteorological Stations and Annual Precipitation**

8.2.4 Surface Water Conditions in the Pinal AMA

Streamflow data, including average seasonal flow, annual flow and other information are shown in Table 8.2-2. Flood ALERT equipment in the AMA is shown in Table 8.2-3. Flood ALERT equipment information is current up to October 2005. New flood warning gages are routinely added to the ALERT network so the current number of stations may be greater. Reservoir and stockpond data, including maximum storage or maximum surface area, are shown in Table 8.2-4. The location of streamflow gages identified by USGS number, flood ALERT equipment, USGS runoff contours and large reservoirs are shown on Figure 8.2-4. A description of stream data sources and methods is found in Volume 1, Section 1.3.16. A description of reservoir data sources and methods is found in Volume 1, Section 1.3.11. A description of stockpond data sources and methods is found in Volume 1, Section 1.3.15.

Streamflow Data

- Refer to Table 8.2-2.
- Data from nine stations located at five watercourses are shown in the table and on Figure 8.2-4.
- Average seasonal flow at the Gila River gages is highest during the winter season (January-March) and highest on other watercourses during the summer (July-September).
- The largest annual flow recorded in the AMA is 1.2 million acre feet in 1993 at the Gila River near Laveen gage with a contributing drainage area of 7,729 square miles.

Flood ALERT Equipment

- Refer to Table 8.2-3.
- There are six ALERT gages in the Pinal AMA.

Reservoirs and Stockponds

- Refer to Table 8.2-4.
- The AMA contains three large reservoirs. The largest, Saint Clair, has a maximum storage of 375,000 acre-feet.
- Reservoirs uses vary and include recreation, flood control, irrigation, fish and wildlife, fire protection, stock or farm, and water supply.
- Water is diverted for the San Carlos Irrigation Project (SCIP) at Ashurst-Hayden Diversion Dam located on the north bank of the Gila River 12 miles east of Florence. The dam, completed in 1922, consists of diversion works and is not a storage or flood control facility.
- Surface water is stored or could be stored in 12 small reservoirs.
- There are 315 registered stockponds in the AMA.

Runoff Contour

- Refer to Figure 8.2-4.
- Average annual runoff is highest, 0.5 inches per year or 26.7 acre-feet per square mile, at the northeastern tip of the AMA and the southwestern portion of the AMA and decreases to 0.1 inches, or five acre-feet per square mile, in the center of the AMA.

Table 8.2-2 Streamflow Data for the Pinal AMA

Station Number	USGS Station Name	Drainage Area (in mi ²)	Mean Basin Elevation (in feet)	Period of Record	Average Seasonal Flow (% of annual flow)				Annual Flow/Year (in acre-feet)				Years of Record	
					Winter	Spring	Summer	Fall	Minimum	Median	Mean	Maximum		
9477570	Gila River at Attaway	18,776	1,418	10/2002-current (real-time)	53	0	47	0	0 (2004)	0	10,719	32,158 (2005)	3	
9479500	Gila River near Laveen	7,729	1,019	1/1940-9/1994 (discontinued)	67	6	13	15	0 (1969)	9,420	45,227	1,189,109 (1993)	52	
9479501	Gila River near Laveen (Main Channel)	20,615	1,019	10/1992-5/1995 (discontinued)	No statistics run, less than 3 years of data									
9479502	Gila River near Laveen (Overflow Channel)	NA	NA	10/1983-5/1995 (discontinued)	83	10	0	8	0 (1994)	0	75,390	677,452 (1993)	9	
9487500	Santa Rosa Wash at Gu Komelik near Sells	629	1,590	10/1954-6/1959 (discontinued)	24	0	48	28	417 (1956)	9,759	9,981	19,989 (1958)	4	
9488000	Kohatk Wash near Chiapuk near Sells	185	1,932	10/1954-6/1959 (discontinued)	1	1	96	2	155 (1956)	412	1,873	6,514 (1955)	4	
9488500	Santa Rosa Wash near Vaiva Vo	1,782	1,470	1954-1980 (discontinued)	7	1	76	16	9 (1979)	3,937	8,107	51,056 (1962)	25	
9488650	Vekol Wash near Stanfield	150	1,724	10/1989-9/1996 (discontinued)	1	1	96	2	2 (1991)	195	391	1,318 (1994)	6	
9489000	Santa Cruz River near Laveen	8,581	1,021	1/1940-current (real-time)	27	3	41	29	173 (1969)	6,122	12,637	134,770 (1983)	64	

Sources: USGS NWIS, USGS 1998 and USGS 2005.

Notes:

- NA = Not available
- Statistics based on Calendar Year
- Annual Flow statistics based on monthly values
- Summation of Average Seasonal Flows may not equal 100 due to rounding
- Period of record may not equal Year of Record used for annual Flow/Year statistics due to only using years with a 12 month record

Table 8.2-3 Flood ALERT Equipment in the Pinal AMA

Station ID	Station Name	Station Type	Install Date	Responsibility
750	Sacaton Peak Repeater	Repeater/Precip	6/11/1996	FCD Maricopa Co
770	Tat Momolikot Dam	Precip/Stage	1/29/1998	FCD Maricopa Co
780	Gila @ Olberg	Precip/Stage	4/12/1995	FCD Maricopa Co
785	Santa Cruz @ SR 84	Precip/Stage	3/16/1994	FCD Maricopa Co
795	Santa Rosa @ SR 84	Precip/Stage	3/16/1994	FCD Maricopa Co
6980	Vekol Wash	Precip/Stage	3/7/1990	FCD Maricopa Co

FCD = Flood Control District

Table 8.2-4 Reservoirs and Stockponds in the Pinal AMA

A. Large Reservoirs (500 acre-feet capacity and greater)

MAP KEY	RESERVOIR/LAKE NAME (Name of dam, if different)	OWNER/OPERATOR	MAXIMUM STORAGE (AF)	USE ¹	JURISDICTION
1	Saint Clair (Tat Momoliklot)	Bureau of Indian Affairs	375,000	C,I,P,R	Federal
2	Reach 11 Detention Dike 3	Bureau of Reclamation	9,100	C,I,R,S	Federal

Source: U.S. Army Corps of Engineers 2005

B. Other Large Reservoirs (50 acre surface area or greater)²

MAP KEY	RESERVOIR/LAKE NAME (Name of dam, if different)	OWNER/OPERATOR	MAXIMUM SURFACE AREA (acres)	USE ¹	JURISDICTION
3	Picacho Reservoir ³	Pinal County	2,238	F,R	County

Source: USGS 2005

C. Small Reservoirs (greater than 15 acre-feet and less than 500 acre-feet capacity)

Total number: 0

Total maximum storage: 0 acre-feet

D. Other Small Reservoirs (between 5 and 50 acres surface area)²

Total number: 12

Total surface area: 150 acres

E. Stockponds (up to 15 acre-feet capacity)

Total number: 315

Notes:

¹C= Flood Control, F = fish & wildlife pond, I = Irrigation, P = Fire Protection, Stock or Farm pond, R = Recreation, S = Water Supply

²Capacity data is not available to ADWR

³Intermittent Lake

8.2.5 Perennial/Intermittent Streams and Springs in the Pinal AMA

The locations perennial and intermittent streams are shown on Figure 8.2-5. There are no major or minor springs in the Pinal AMA. A description of data sources and methods for intermittent and perennial reaches is found in Volume 1, Section 1.3.16. A description of spring data sources and methods is found in Volume 1, Section 1.3.14.

- There are two intermittent streams in the AMA, the Gila River in the north and a portion of the Santa Cruz River south of Picacho.
- The total number of springs, regardless of discharge, identified by the USGS or ALRIS varies from five to six, depending on the database reference.

Table 8.2-5 Springs in the Pinal AMA

A. Major Springs (10 gpm or greater):

Map Key	Name	Location		Discharge (in gpm)	Date Discharge Measured
		Latitude	Longitude		
None identified by ADWR at this time					

B. Minor Springs (1 to 10 gpm):

Name	Location		Discharge (in gpm)	Date Discharge Measured
	Latitude	Longitude		
None identified by ADWR at this time				

C. Total number of springs, regardless of discharge, identified by USGS (see ALRIS, 2005 and USGS, 2006): 5-6



Stream Data Source: AZGF, 1993 & 1997

0 3 6
Miles



Figure 8.2-5
Pinal AMA
Perennial/Intermittent Streams
and Major (>10 gpm) Springs

- Intermittent Stream
- COUNTY
- Interstate Highway
- Major Road
- City, Town or Place

8.2.6 Groundwater Conditions of the Pinal AMA

Major aquifers, well yields, estimated natural recharge, number of index wells and date of last water-level sweep are shown in Table 8.2-6. Figure 8.2-6 shows aquifer flow direction and water-level change between 1993-1994 and 2003-2004 for the entire Pinal AMA. Figures 8.2-6A-B show depth to water during 2003-2004 and water-level change between 1993-1994 and 2003-2004 for selected wells by sub-basin. Figure 8.2-7 contains hydrographs for selected wells shown on Figures 8.2-6A-B. Figure 8.2-8 shows well yields in five yield categories. Underground Storage Facilities (USF) and Groundwater Savings Facilities (GSF) are shown on Table 8.2-7 with facility name, facility permit number and type, permittee name, permitted acre-feet per year and water source. Locations of USFs and GSFs are shown on Figure 8.2-9. A description of aquifer data sources and methods is found in Volume 1, Section 1.3.2. A description of well data sources and methods, including water-level changes and well yields, is found in Volume 1, Section 1.3.19.

Major Aquifers

- Refer to Table 8.2-6 and Figure 8.2-6
- The major aquifers in this AMA are recent stream alluvium and basin fill.
- Groundwater flow is generally to the north with flow toward cones of depression at the center of the Maricopa-Stanfield Sub-basin and west of Maricopa.

Well Yields

- Refer to Table 8.2-6 and Figure 8.2-8
- As shown on Figure 8.2-8, well yields are generally greater than 1,000 gallons per minute (gpm).
- One source of well yield information, based on 1,582 reported wells, indicates that the median well yield is 1,000 gpm.

Natural Recharge

- Refer to Table 8.2-6
- Natural recharge in the Pinal AMA is estimated at 82,750 acre-feet per year.
- Primary source of natural recharge is streambed recharge along the Gila and Santa Cruz Rivers.

Water Level

- Refer to Figures 8.2-6 and 8.2-6A-B. Water levels are shown for wells measured in 2003-2004. Not all water level data shown on Figure 8.2-6 are shown on Figure 8.2-6A-B.
- The Department annually measures 163 index wells in the AMA; hydrographs for nine index wells are shown on Figure 8.2-7.
- The deepest water level shown is 662 feet south of I-8 (Figure 8.2-7A) and the shallowest is 24 feet west of highway 387 in the Eloy Sub-basin (Figure 8.2-7B).

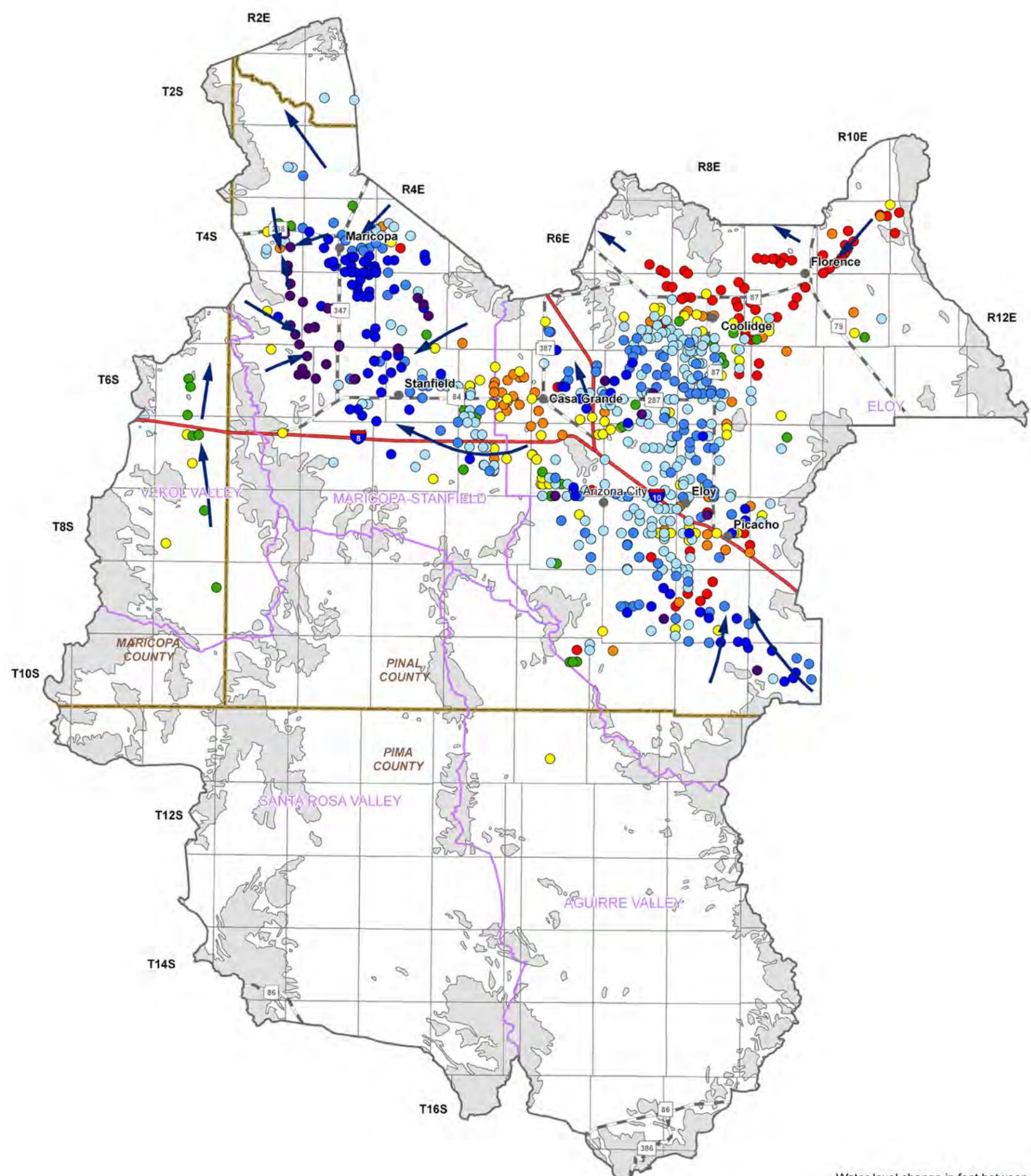
Recharge Sites

- Refer to Table 8.2-7 and Figure 8.2-9.

- There are six active USFs and four active GSFs.
- Total permitted storage capacity for USFs is 6,400 acre-feet per year. All USFs are permitted to store effluent.
- Total permitted storage capacity for GSFs is 303,480. All GSFs are permitted to store CAP water.

Table 8.2-6 Groundwater Data for the Pinal AMA

Basin Area, in square miles:	4,000	
Major Aquifer(s):	Name and/or Geologic Units	
	Recent Stream Alluvium	
	Basin Fill	
Well Yields, in gal/min:	Range 2-6000 Median 1,010 (1,342 wells measured)	ADWR GWSI
	Range 3-3,600 Median 1,000 (1,582 wells reported)	ADWR Wells55 (>10-inch diameter)
Estimated Natural Recharge, in acre-feet/year:	82,750	ADWR (2004 Estimate)
Current Number of Index Wells:	163	
Date of Last Water-level Sweep:	2004 (1,003 well measurements)	



- Water-level change in feet between 1993-1994 and 2003-2004
- Greater than -30 ●
 - Between -30 and -15 ●
 - Between -15 and -1 ●
 - Between -1 and +1 ●
 - Between +1 and +15 ●
 - Between +15 and +30 ●
 - Between +30 and +60 ●
 - Greater than +60 ●
- Generalized Flow Direction ➔
- Consolidated Crystalline & Sedimentary Rocks
- Unconsolidated Sediments
- Sub-basin Boundary ~
- COUNTY =
- Interstate =
- Major Road =
- City, Town or Place ●

0 3 6
Miles



Figure 8.2-6
Pinal AMA
Groundwater Conditions



Water-level change in feet between
1993-1994 and 2003-2004

H = number is depth to water
in feet during 2003-2004;
letter is hydrograph

- Greater than -30 ●
- Between -30 and -15 ●
- Between -15 and -1 ●
- Between -1 and +1 ●
- Between +1 and +15 ●
- Between +15 and +30 ●
- Between +30 and +60 ●
- Greater than +60 ●
- Consolidated Crystalline & Sedimentary Rocks □
- Unconsolidated Sediments □
- Sub-basin Boundary —
- COUNTY —
- Interstate —
- Major Road —
- City, Town or Place ●

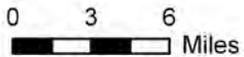
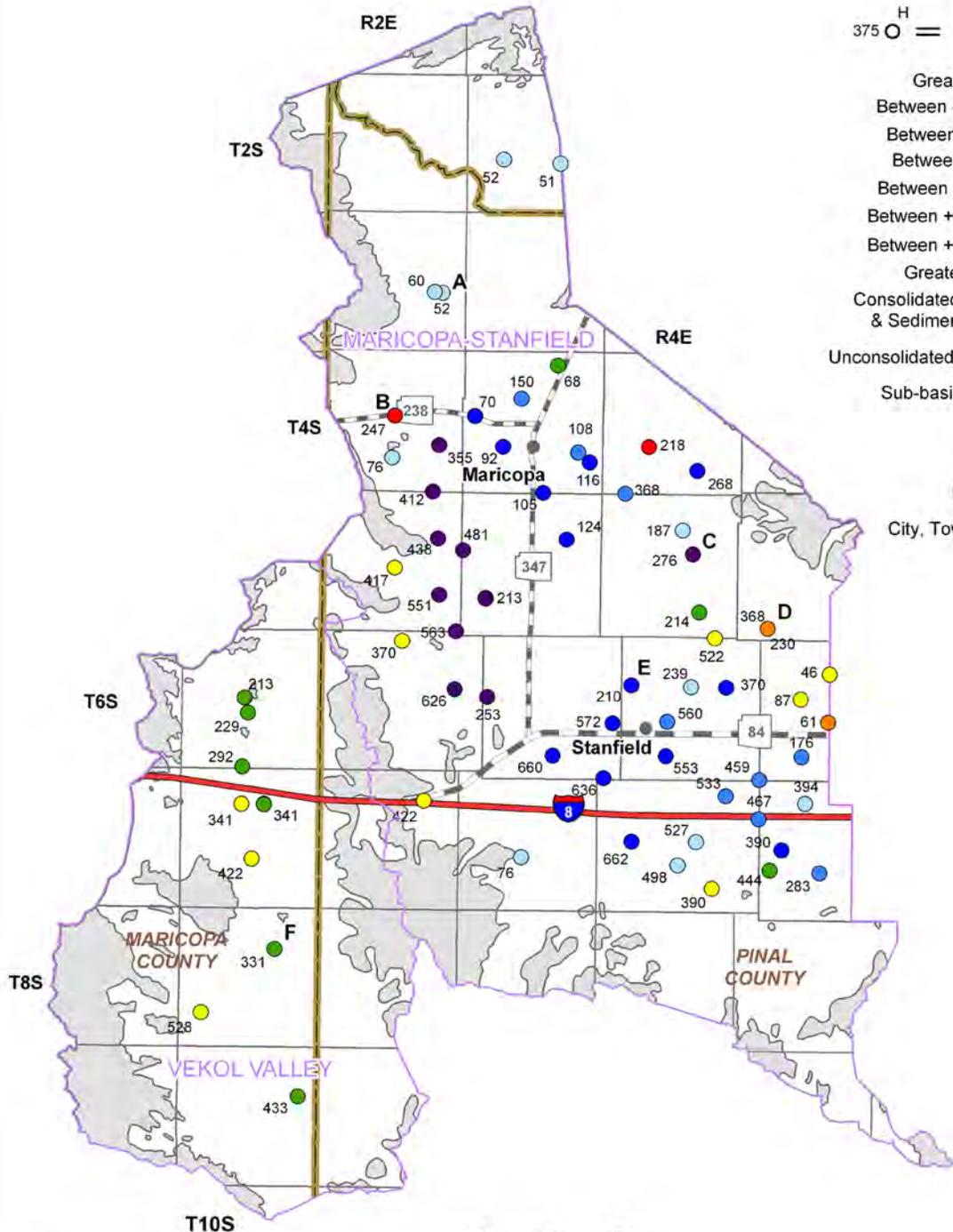


Figure 8.2-6A
Maricopa-Stanfield/Vekol Valley Sub-basins
Groundwater Conditions



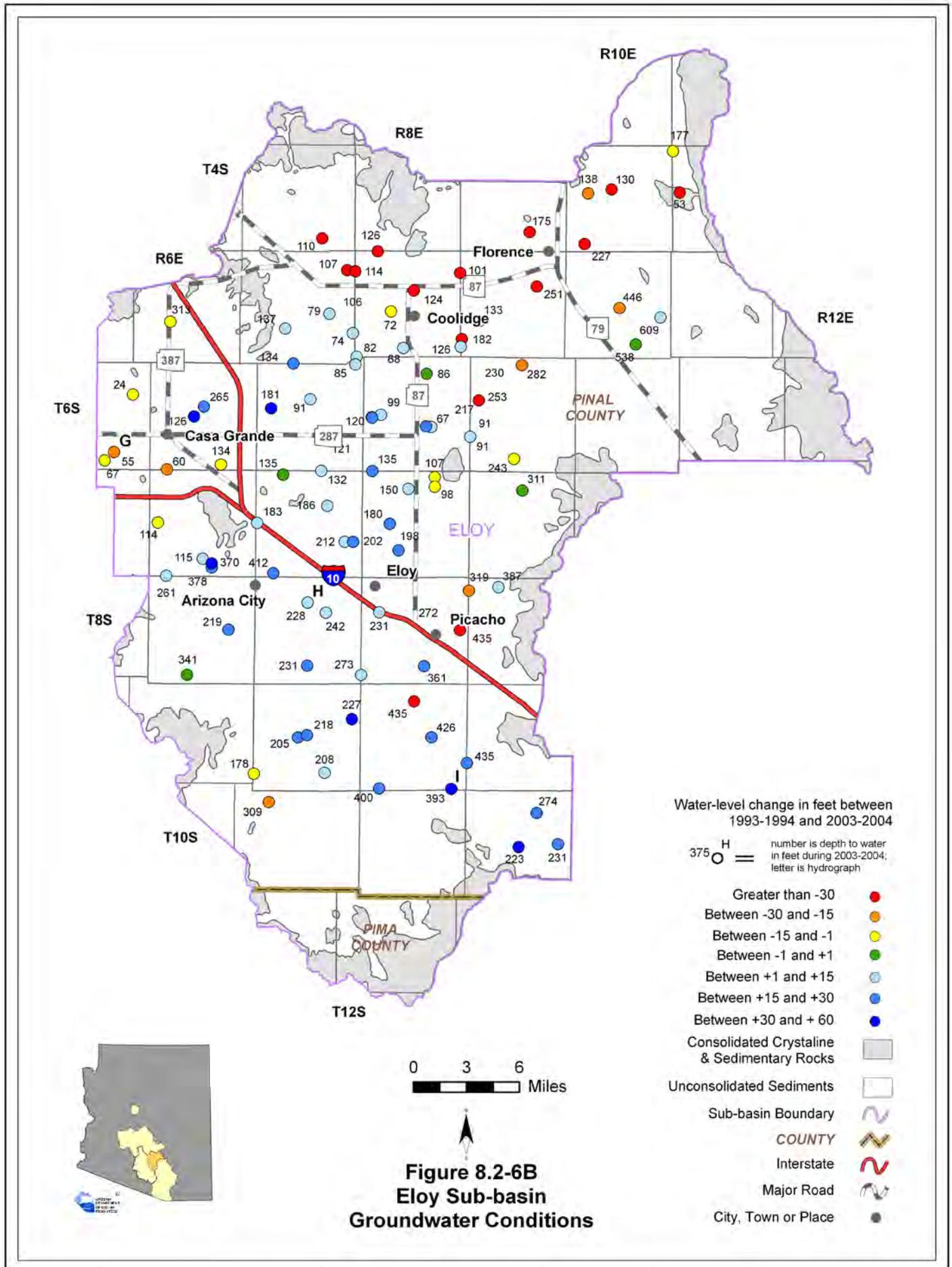


Figure 8.2-7
Pinal Active Management Area
Hydrographs Showing Depth to Water in Selected Wells

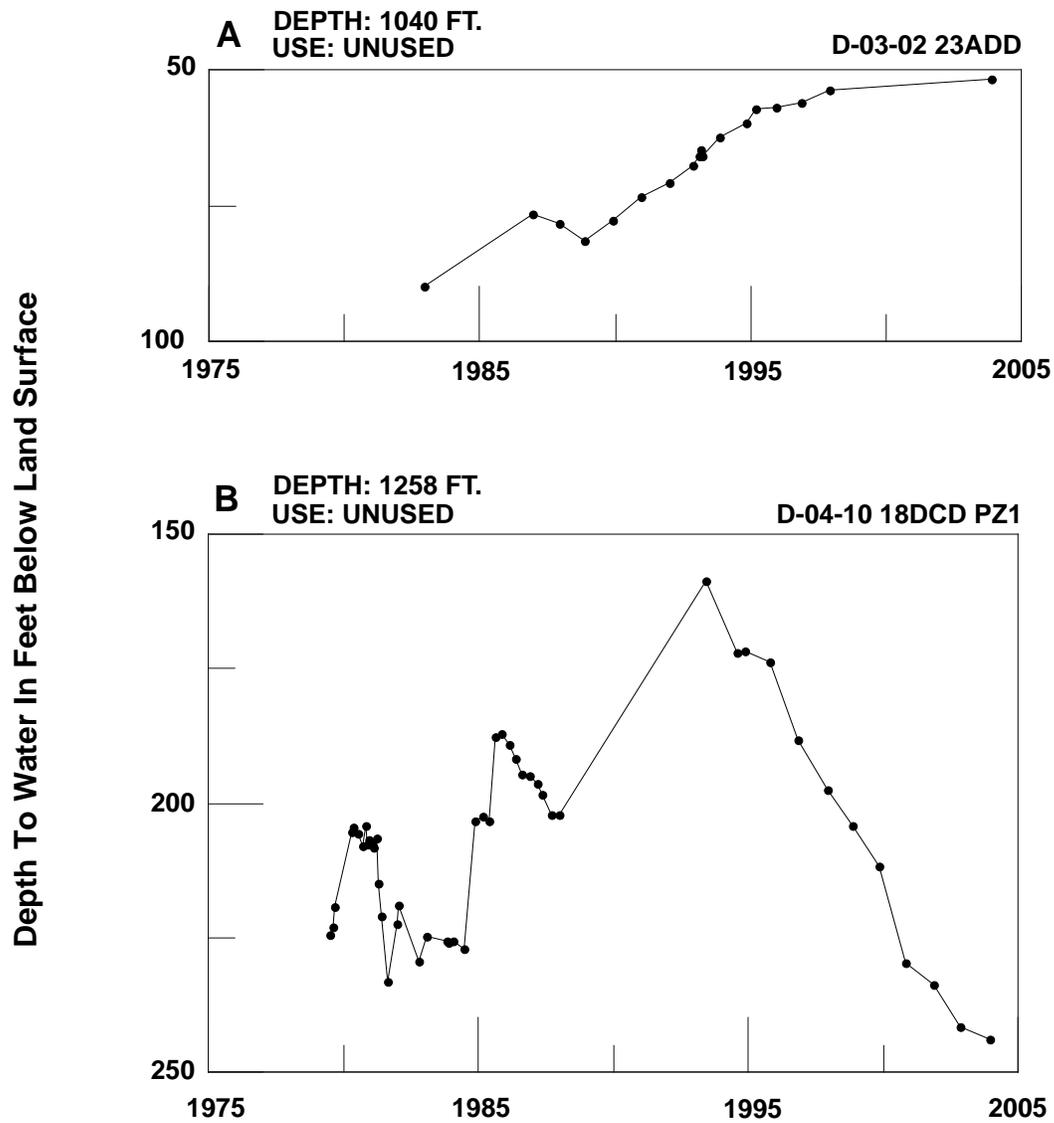


Figure 8.2-7 (cont)
Pinal Active Management Area
Hydrographs Showing Depth to Water in Selected Wells

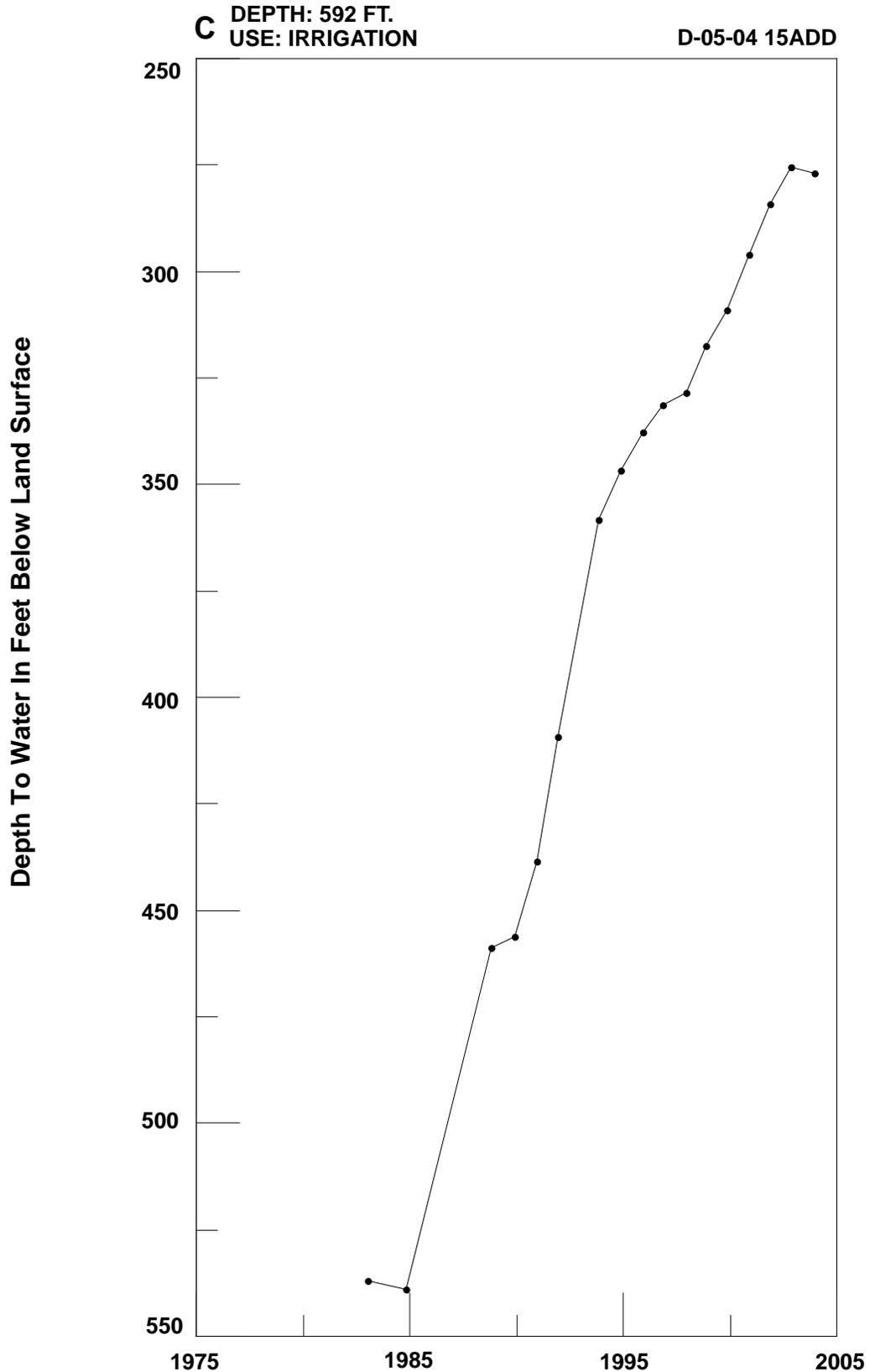


Figure 8.2-7 (cont)
Pinal Active Management Area
Hydrographs Showing Depth to Water in Selected Wells

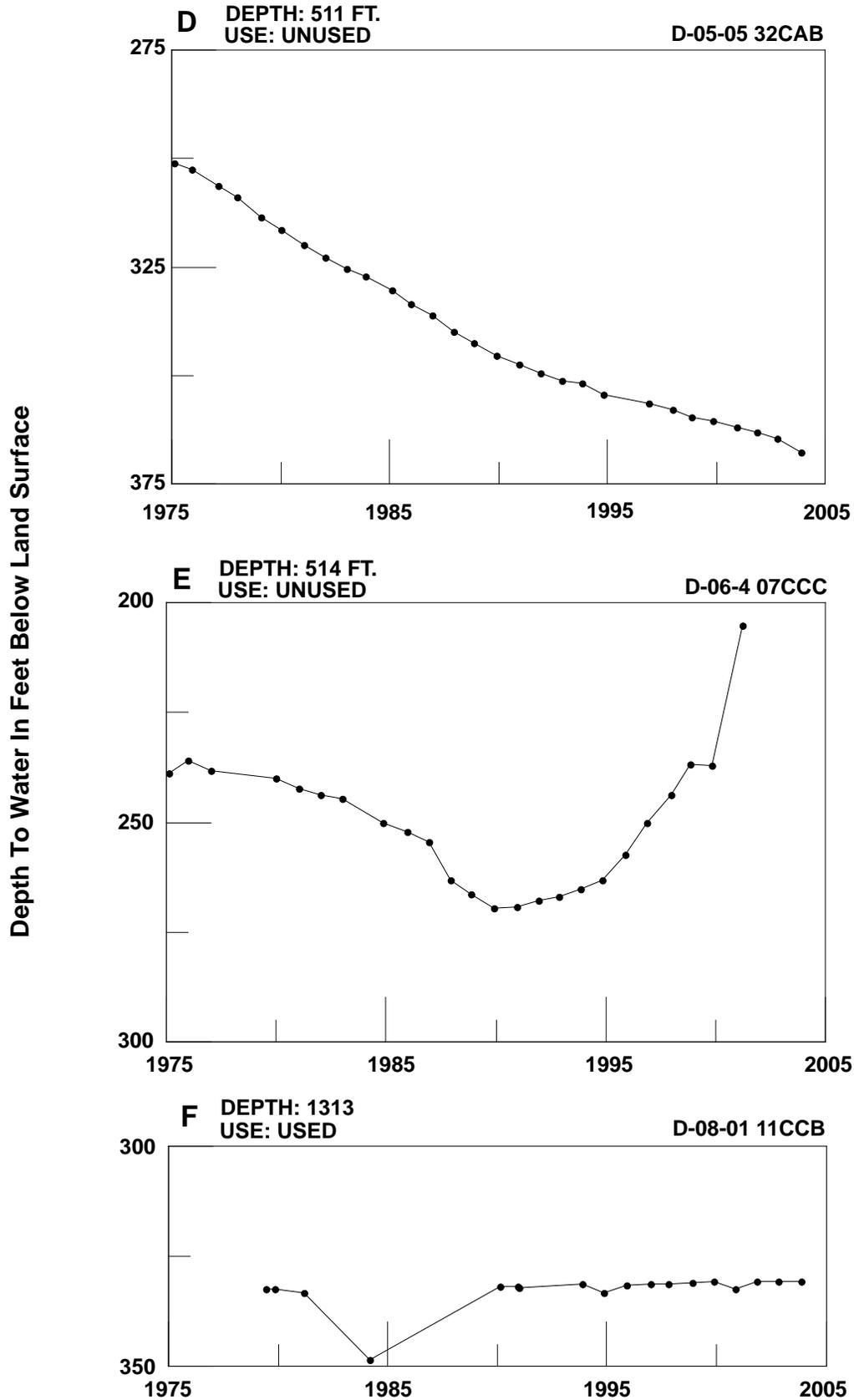


Figure 8.2-7 (cont)
Pinal Active Management Area
Hydrographs Showing Depth to Water in Selected Wells

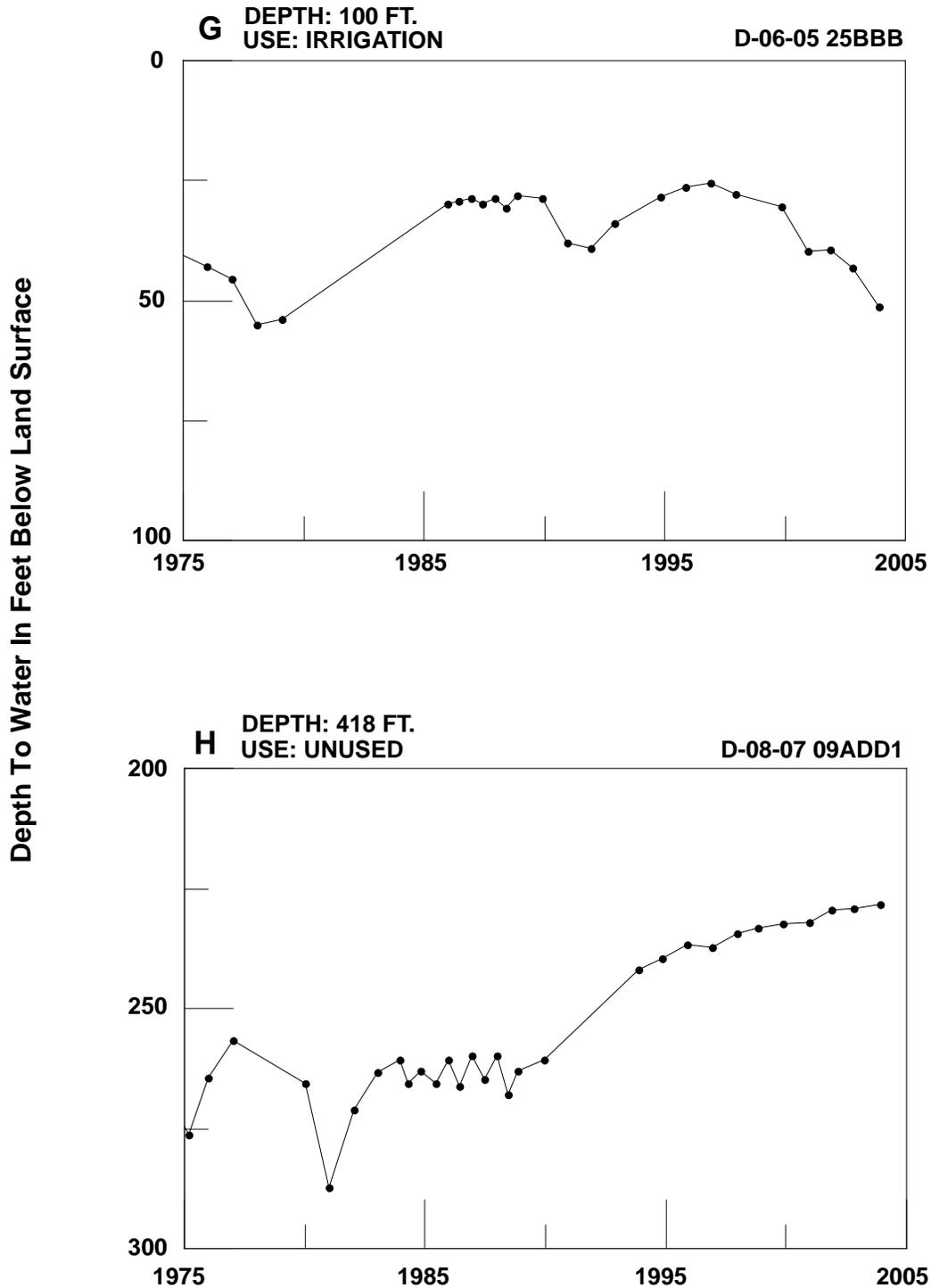
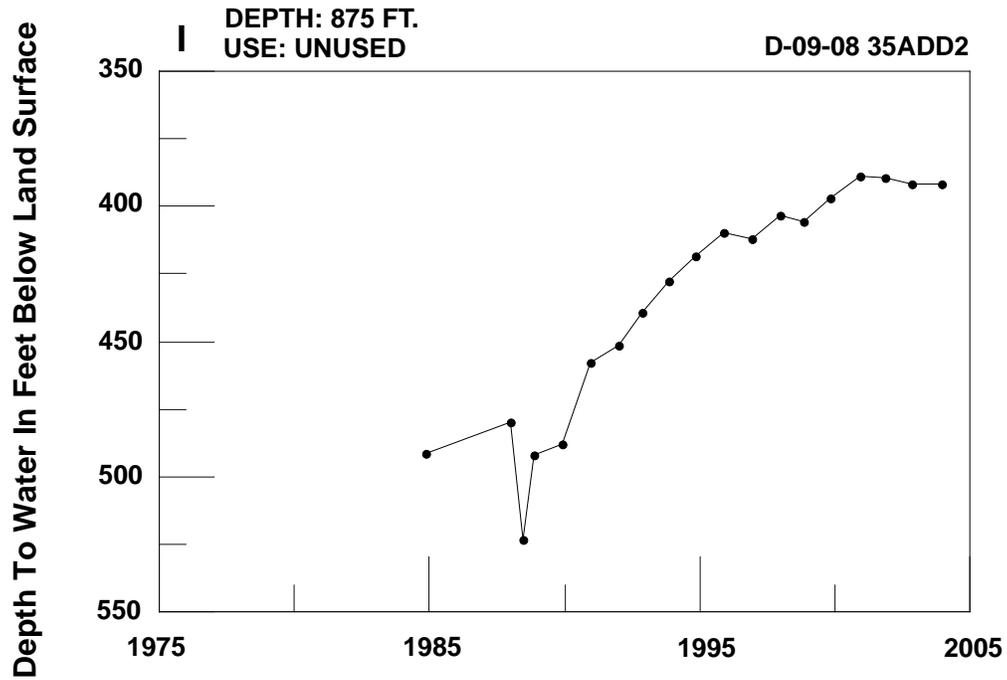


Figure 8.2-7 (cont)
Pinal Active Management Area
Hydrographs Showing Depth to Water in Selected Wells



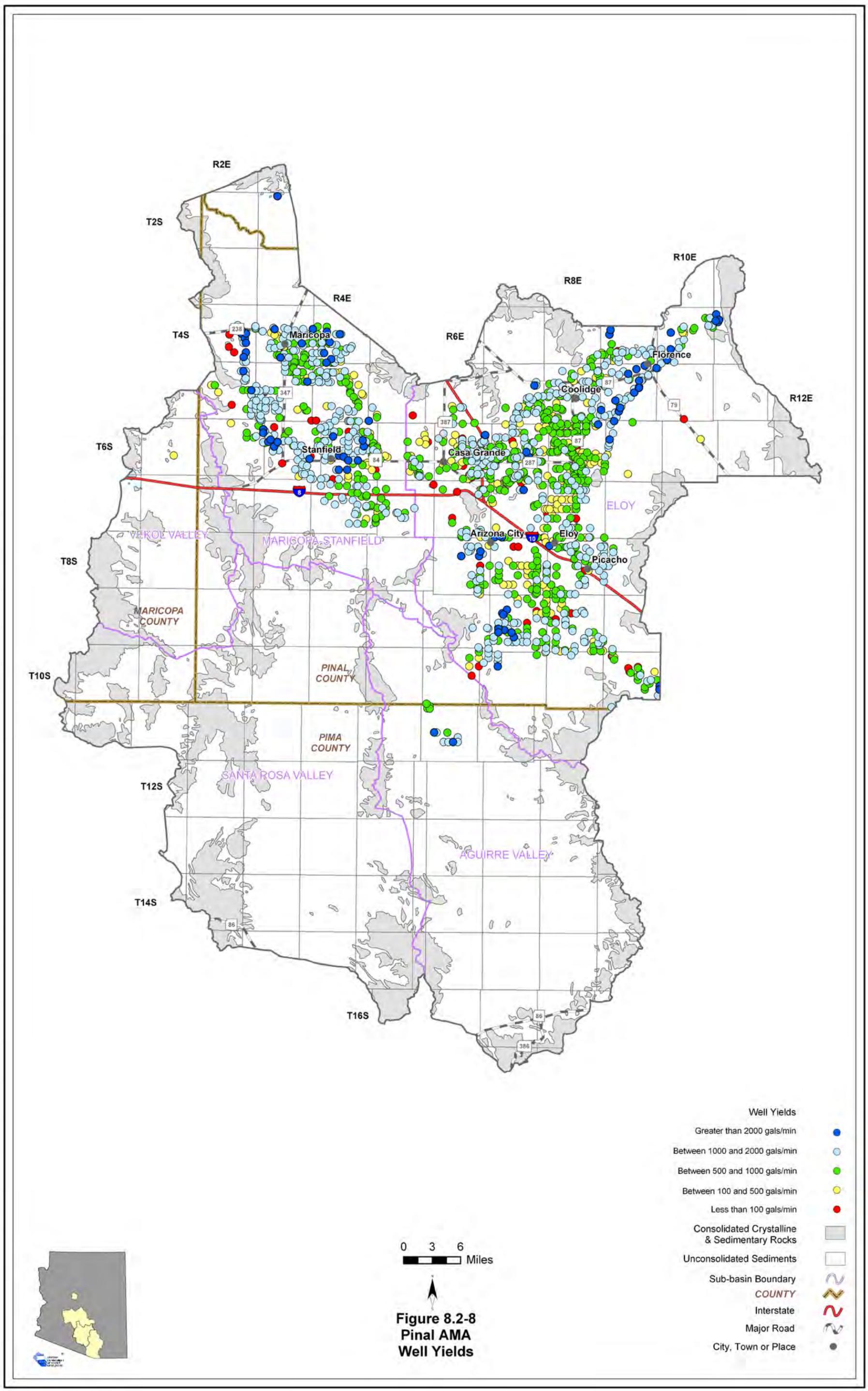


Table 8.2-7 Recharge Sites in the Pinal AMA

FACILITY NAME	FACILITY NUMBER	PERMITEE NAME	FACILITY TYPE	PERMITTED AF/YEAR	WATER SOURCE
ARIZONA CITY SANITARY DISTRICT	71-209000.0000	ARIZONA CITY SANITARY DISTRICT	CONSTRUCTED	2,240	E
ELOY RECLAIMED WATER RECHARGE PROJECT	71-591932.0000	CITY OF ELOY	CONSTRUCTED	2,240	E
NORTH FLORENCE RECHARGE FACILITY	71-519876.0001	TOWN OF FLORENCE	CONSTRUCTED	135	E
PICACHO SEWER COMPANY	71-575760.0000	PICACHO SEWER COMPANY	CONSTRUCTED	340	E
SOUTHWEST WATER DISTRIBUTION CENTER	71-211279.0000	GLOBAL WATER	CONSTRUCTED	1,120	E
SUN LAKES AT CASA GRANDE	71-591938.0000	PICACHO SEWER COMPANY	CONSTRUCTED	340	E

B. Groundwater Savings Facilities

PERMITEE/FACILITY NAME	FACILITY NUMBER	PERMITTED AF/YEAR	WATER SOURCE
GILA RIVER INDIAN IDD	72-211277.0000	18,480	C
HOHOKAM IDD	72-534489.0003	55,000	C
CENTRAL ARIZONA IDD	72-531382.0002	110,000	C
MARICOPA STANFIELD IDD	72-531381.0003	120,000	C

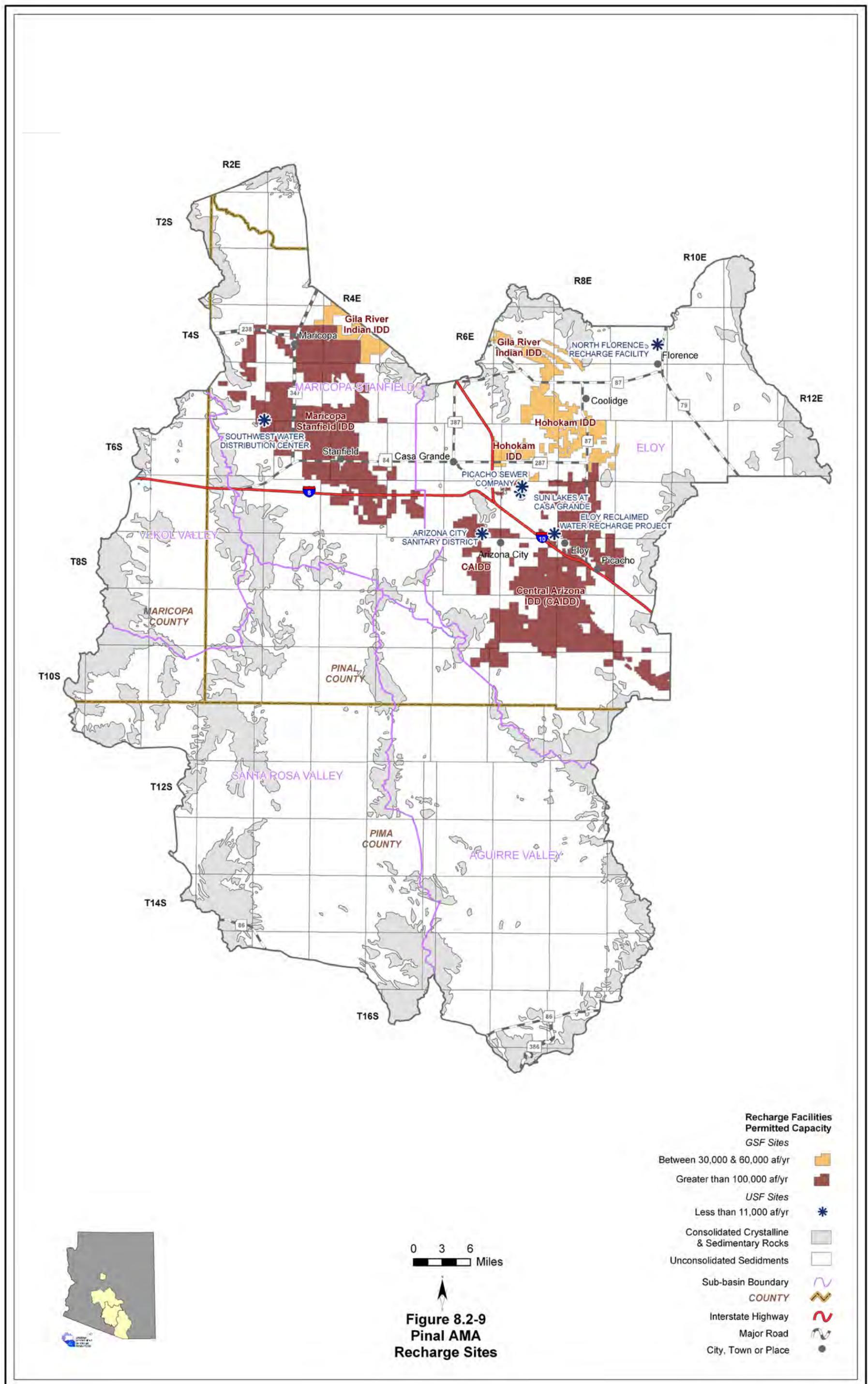
Notes:

Gila River Indian IDD GSF is located in the Phoenix and Pinal AMAs. Permitted AF/Year shown here is for the Pinal AMA only.

C - CAP

E - Effluent

IDD - Irrigation and Drainage District



- Recharge Facilities Permitted Capacity**
- GSF Sites**
 - Between 30,000 & 60,000 af/yr
 - Greater than 100,000 af/yr
 - USF Sites**
 - Less than 11,000 af/yr *
 - Consolidated Crystalline & Sedimentary Rocks
 - Unconsolidated Sediments
 - Sub-basin Boundary
 - COUNTY
 - Interstate Highway
 - Major Road
 - City, Town or Place

0 3 6
Miles

**Figure 8.2-9
Pinal AMA
Recharge Sites**



8.2.7 Water Quality Exceedences and Contamination Sites in the Pinal AMA

Sites with parameter concentrations that have equaled or exceeded drinking water standard(s), including location and parameter(s) are shown in Table 8.2-8A. There are no impaired lakes or streams in the Pinal AMA. Figure 8.2-10 shows the location of water quality occurrences keyed to Table 8.2-8. Figure 8.2-11 shows the located of contamination sites with site information shown in Table 8.2-9. A description of water quality data sources and methods is found in Volume 1, Section 1.3.18. All community water systems are regulated under the Safe Drinking Water Act and treat water supplies to meet drinking water standards. Not all parameters were measured at all sites; selective sampling for particular constituents is common.

Well, spring and mine sites that have equaled or exceeded drinking water standards (DWS)

- Refer to Table 8.2-8A.
- Three hundred and twenty five sites have parameter concentrations that have equaled or exceeded DWS.
- Frequently equaled or exceeded the parameters include nitrate, fluoride and arsenic.
- Other parameters equaled or exceeded include manganese, cadmium, lead, radionuclides, selenium, beryllium, total dissolved solids and zinc.

Effluent Dependent Reaches

- Refer to Figure 8.2-10
- There are two effluent dependent reaches on the Santa Cruz River and the Gila River.

Contamination Sites

- Refer to Figure 8.2-11 and Table 8.2-9
- There are three Voluntary Remediation Program: Terminal 2 Plume, Anderson Clayton - Sunshine Gin and Former Puregro #175.

Table 8.2-8 Water Quality Exceedences in the Pinal AMA¹

A. Wells, Springs and Mines

Map Key(s)	Location			Number of Stations	Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard (DWS) ²
	Township	Range	Section		
1	2 South	3 East	9	1	TDS
2	2 South	3 East	20	1	NO3, TDS
2	2 South	3 East	27	2	NO3, TDS
2	2 South	3 East	28	1	TDS
3	3 South	2 East	23	1	F
3	3 South	2 East	24	2	As, F
4	4 South	2 East	14	2	F
4	4 South	2 East	23	1	F
4	4 South	2 East	26	1	F
5	4 South	2 East	13	1	F
6	4 South	3 East	15	1	F
6	4 South	3 East	22	1	F
7	4 South	3 East	2	1	F
8	4 South	3 East	25	2	F, NO3
8	4 South	3 East	26	2	F
8	4 South	3 East	34	1	NO3
8	4 South	4 East	19	3	F, NO3
9	4 South	4 East	27	3	As, F
9	4 South	4 East	34	2	NO3
10	5 South	3 East	12	1	F
10	5 South	4 East	6	1	NO3
10	5 South	4 East	8	1	NO3
10	5 South	4 East	18	1	F
11	5 South	4 East	20	1	F
11	5 South	4 East	29	2	As, NO3
12	5 South	4 East	10	1	NO3
12	5 South	4 East	11	1	NO3
13	5 South	4 East	23	2	F, NO3
14	5 South	2 East	2	1	F, NO3
15	5 South	2 East	24	3	F, NO3
15	5 South	3 East	18	1	F
15	5 South	3 East	19	2	F
15	5 South	3 East	30	2	F, NO3
16	5 South	3 East	21	2	As, Cd, F, NO3, TDS
17	5 South	3 East	33	1	Cd, NO3
18	5 South	3 East	22	1	F
19	5 South	4 East	31	1	Cd
20	4 South	8 East	6	1	NO3
21	4 South	9 East	28	2	NO3
22	4 South	9 East	15	1	Mn
23	4 South	10 East	31	2	NO3
23	5 South	10 East	6	1	Mn
24	5 South	5 East	32	1	As
25	5 South	5 East	16	1	F
25	5 South	5 East	21	1	F
26	5 South	6 East	30	1	NO3
27	5 South	6 East	20	1	NO3
27	5 South	6 East	21	2	As, F, NO3
27	5 South	6 East	26	1	As, F
27	5 South	6 East	27	1	F
27	5 South	6 East	28	1	As, F, Mn
27	5 South	6 East	34	2	As, F
27	6 South	6 East	3	1	As, F
27	6 South	6 East	4	1	F
28	5 South	7 East	27	1	F

Table 8.2-8 Water Quality Exceedences in the Pinal AMA¹

A. Wells, Springs and Mines

Map Key(s)	Location			Number of Stations	Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard (DWS) ²
	Township	Range	Section		
28	5 South	7 East	34	2	F
29	5 South	7 East	23	2	F, NO3, TDS
29	5 South	7 East	25	2	F
29, 30	5 South	7 East	24	4	As, F, NO3, TDS
30	5 South	7 East	13	2	F
30	5 South	8 East	18	1	F
30	5 South	8 East	19	5	As, F
30	5 South	8 East	20	1	F
30	5 South	8 East	21	1	F
31	5 South	8 East	29	1	F
31	5 South	8 East	33	3	Be, Cd, F, NO3, TDS
32	5 South	8 East	22	1	NO3
32	5 South	8 East	23	1	As, Mn
33	5 South	8 East	13	2	NO3
34	6 South	8 East	2	2	F
34	5 South	8 East	25	1	NO3
34	5 South	8 East	36	3	F, Mn, NO3
34	5 South	9 East	31	2	F, NO3
34	5 South	9 East	32	1	NO3
35	5 South	9 East	19	1	NO3
35	5 South	9 East	20	1	Cd
36	5 South	10 East	34	1	As
37	6 South	2 East	27	1	F
38	6 South	2 East	3	2	F, NO3
39	6 South	2 East	1	1	F
39	6 South	2 East	12	1	As
39	6 South	3 East	6	2	As
39	6 South	3 East	7	2	As, F
40	6 South	3 East	16	1	As
40	6 South	3 East	17	1	As, NO3
40	6 South	3 East	21	1	F
41	6 South	3 East	26	2	As, NO3, Organics
41	6 South	3 East	27	1	As, NO3
42	6 South	4 East	6	1	F
42	6 South	4 East	7	1	NO3
43	6 South	4 East	19	1	Cd
43	6 South	4 East	29	1	NO3
44	6 South	4 East	10	2	NO3
45	6 South	4 East	13	1	Rad
45	6 South	4 East	14	1	As
46	6 South	5 East	19	2	As, Cd
46	6 South	5 East	20	1	As, Cd
47	6 South	5 East	32	2	As, NO3
48	6 South	5 East	22	1	NO3
48	6 South	5 East	26	1	As, F, NO3
48	6 South	5 East	35	2	NO3
49	6 South	5 East	12	1	F
49	6 South	5 East	13	1	As, F, NO3
49	6 South	5 East	24	1	As
49	6 South	6 East	7	2	As, F, NO3

Table 8.2-8 Water Quality Exceedences in the Pinal AMA¹

A. Wells, Springs and Mines

Map Key(s)	Location			Number of Stations	Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard (DWS) ²
	Township	Range	Section		
49	6 South	6 East	8	2	As, NO3
49	6 South	6 East	18	1	NO3
50	6 South	6 East	31	1	As, F, NO3
51	6 South	6 East	10	2	As
51	6 South	6 East	15	2	As
51	6 South	6 East	16	1	As
51	6 South	6 East	23	2	F, NO3
51	6 South	6 East	27	1	Mn
52	6 South	7 East	5	1	NO3
52	6 South	7 East	8	1	F
52	6 South	7 East	9	1	As
52	6 South	7 East	17	1	As
52	6 South	7 East	18	2	F
53	6 South	7 East	15	1	As, F
53	6 South	7 East	22	1	F
53	6 South	7 East	23	1	As, F
54	6 South	7 East	13	1	F
54	6 South	8 East	19	1	As, NO3
55	6 South	8 East	6	2	F, NO3, TDS
55	6 South	8 East	7	2	NO3, TDS
56	6 South	8 East	20	1	NO3
57	6 South	8 East	15	1	Mn, Pb
57	6 South	8 East	16	1	Mn, Pb
58	6 South	8 East	2	1	F
58	6 South	8 East	11	1	As, F
58	6 South	8 East	12	1	F
59	6 South	9 East	6	1	F
59	6 South	9 East	7	1	F
59	6 South	9 East	18	3	As, F
60	7 South	1 East	22	1	As
61	7 South	2 East	10	2	NO3
61	7 South	2 East	11	2	NO3
62	7 South	3 East	1	2	As, F
62	7 South	4 East	6	1	F
62	7 South	4 East	8	1	F
63	7 South	4 East	23	1	F
63	7 South	4 East	26	1	F
64	7 South	4 East	1	2	As
65	7 South	5 East	16	1	F
66	7 South	6 East	32	2	NO3
66	7 South	6 East	33	3	NO3
66	7 South	6 East	34	2	NO3, Organics
66	8 South	6 East	3	3	NO3
67	7 South	6 East	12	1	NO3
67	7 South	7 East	6	1	NO3
68	7 South	7 East	32	1	F
68	8 South	6 East	1	1	As
68	8 South	7 East	5	1	As, F
69	6 South	7 East	33	2	As, NO3
69	7 South	7 East	5	2	NO3
70	7 South	7 East	2	1	F
71	7 South	8 East	16	2	NO3
72	7 South	8 East	33	1	NO3
73	7 South	9 East	9	2	Mn

Table 8.2-8 Water Quality Exceedences in the Pinal AMA¹

A. Wells, Springs and Mines

Map Key(s)	Location			Number of Stations	Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard (DWS) ²
	Township	Range	Section		
74	8 South	1 East	31	1	As
75	8 South	1 East	11	1	Mn
76	8 South	4 East	23	1	As
77	8 South	5 East	24	1	As
78	8 South	6 East	8	1	As
78	8 South	6 East	10	1	As
78	8 South	6 East	16	1	As
79	8 South	6 East	35	1	As
80	9 South	1 West	15	1	Mn
81	8 South	7 East	25	1	NO3
81	8 South	7 East	34	1	F
81	8 South	7 East	35	1	NO3
81	9 South	7 East	1	1	NO3
82	8 South	7 East	12	1	As, F
83	8 South	7 East	23	1	F
83	8 South	7 East	24	1	NO3
83	8 South	8 East	19	1	NO3
83	8 South	8 East	30	1	F
84	7 South	8 East	31	1	NO3
84	8 South	8 East	5	1	NO3
84	8 South	8 East	8	1	F
84, 86	8 South	8 East	9	2	Mn, NO3, Pb, TDS
85	8 South	8 East	32	2	NO3
85	9 South	8 East	6	1	NO3
86	8 South	8 East	14	1	As
86	8 South	8 East	15	1	NO3
86	8 South	8 East	21	1	NO3
86	8 South	8 East	22	1	NO3
86	8 South	8 East	23	3	Mn, NO3
87	8 South	8 East	27	1	As
88	8 South	9 East	5	1	Mn
88	8 South	9 East	7	1	F
88	8 South	9 East	18	1	As
89	9 South	7 East	4	1	As
90	10 South	6 East	1	1	NO3
91	9 South	6 East	25	1	As
92	10 South	7 East	5	1	As
93	9 South	7 East	27	1	As
93	9 South	7 East	28	1	As
93	9 South	7 East	34	1	As
94	9 South	7 East	2	1	NO3
94	9 South	7 East	11	1	NO3
95	9 South	7 East	35	1	F
95	9 South	7 East	36	1	As
96	9 South	7 East	12	2	NO3
96	9 South	7 East	13	2	F, NO3
96	9 South	7 East	14	1	NO3
96	9 South	7 East	24	1	NO3
97	9 South	8 East	33	1	As
97	10 South	8 East	4	1	As, F
98	9 South	8 East	15	1	As
99	9 South	8 East	25	1	As
100	10 South	3 East	12	1	As, Mn

Table 8.2-8 Water Quality Exceedences in the Pinal AMA¹

A. Wells, Springs and Mines

Map Key(s)	Location			Number of Stations	Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard (DWS) ²
	Township	Range	Section		
101	10 South	1 West	36	1	Pb
102	10 South	4 East	28	1	As, Pb
102	11 South	4 East	3	2	As, Pb
103	10 South	8 East	12	1	NO3
104	10 South	9 East	10	1	As
104	10 South	9 East	11	1	As
105	11 South	1 East	14	1	Pb
106	11 South	4 East	29	1	As
107	12 South	3 East	27	2	As, Pb
108	12 South	3 East	35	1	As
108	13 South	3 East	2	1	As
108	13 South	3 East	11	1	As
109	12 South	3 East	23	1	As
110	13 South	2 East	22	1	As
111	13 South	4 East	30	2	As, Mn
112	14 South	5 East	12	3	As, Mn
113	14 South	2 East	27	1	Pb
113	14 South	2 East	34	2	As
114	14 South	2 East	36	1	As
114	14 South	3 East	31	1	Cd, Mn, Pb, Zn
115	14 South	5 East	27	1	As
116	14 South	6 East	20	1	As
116	14 South	6 East	21	1	As
117	16 South	8 East	10	1	Mn
118	15 South	8 East	27	1	Pb
118	15 South	8 East	36	1	As, Mn
119	17 South	7 East	5	1	Mn
119	17 South	7 East	8	1	Mn
120	16 South	7 East	35	1	Mn
121	16 South	8 East	30	1	Cd

B. Lakes and Streams

Map Key	Site Type	Site Name	Length of Impaired Stream Reach (in miles)	Area of Impaired Lake (in acres)	Designated Use Standard	Parameter(s) Exceeding Use Standard
None identified by ADWR at this time						

Notes:

¹ Water quality samples collected between 1975 and 2004.

² As = Arsenic

Be = Beryllium

Cd = Cadmium

F = Fluoride

Mn = Manganese

Pb = Lead

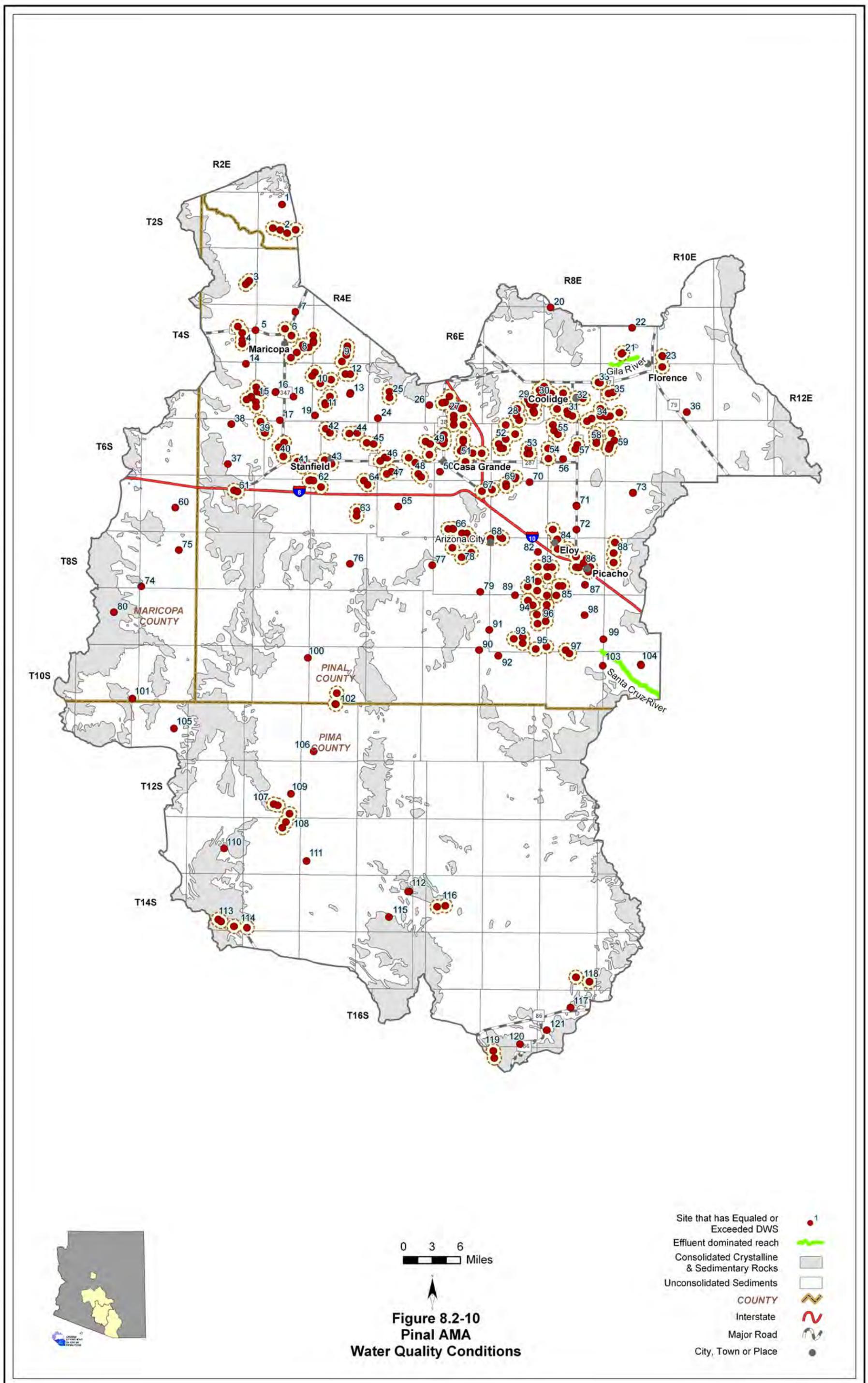
NO3 = Nitrate/ Nitrite

Organics = One or more of several volatile and semi-volatile organic compounds and pesticides

Rad = radionuclides

TDS = Total Dissolved Solids

Zn = Zinc



0 3 6
Miles

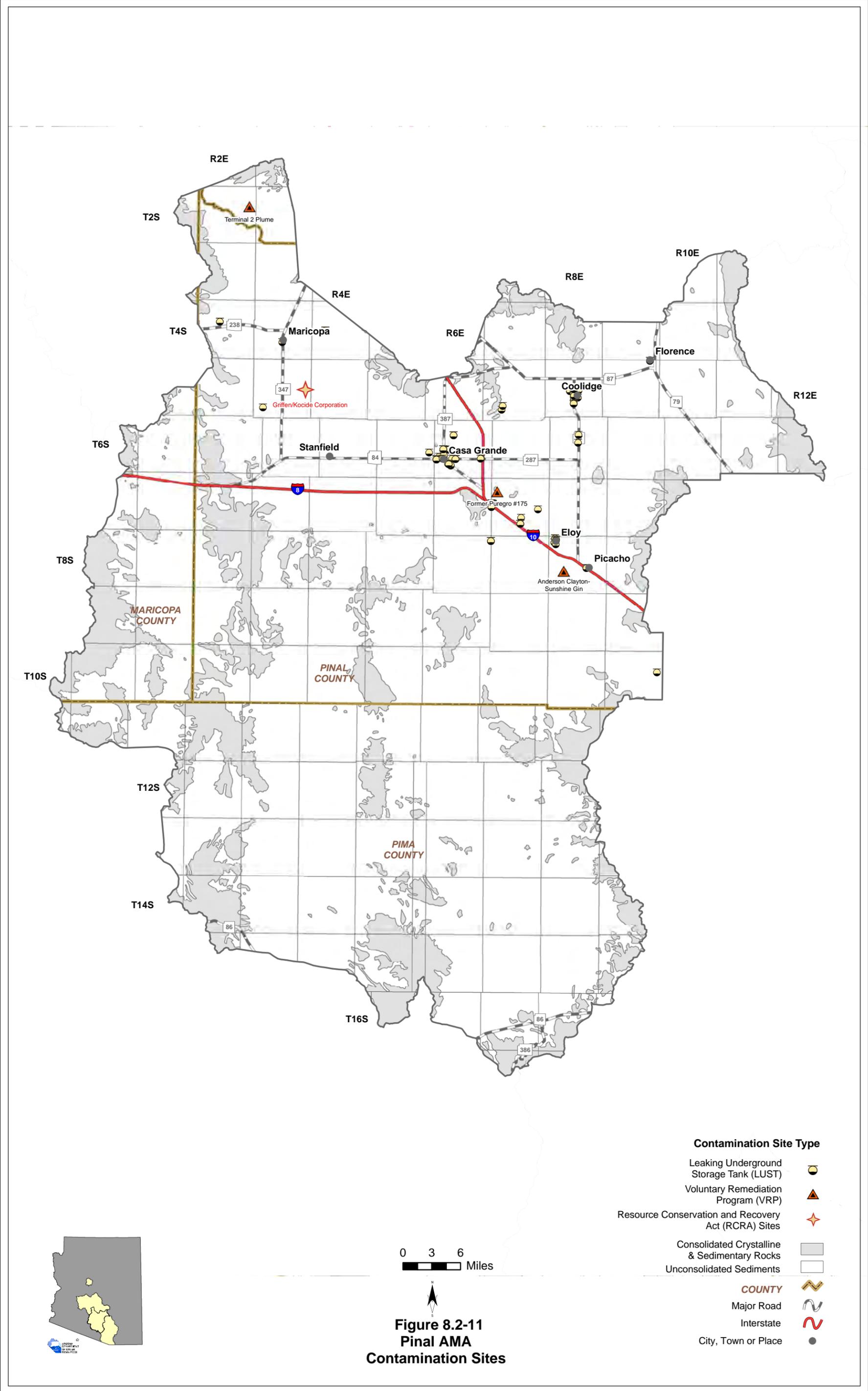


**Figure 8.2-10
Pinal AMA
Water Quality Conditions**

Table 8.2-9 Contamination Sites in the Pinal AMA

SITE NAME	MEDIA AFFECTED AND CONTAMINANT
Voluntary Remediation Sites	
Terminal 2 Plume	Soil & Groundwater/Jet-A-Fuel
Anderson Clayton - Sunshine Gin	Soil/Hydraulic fluid
Former Puregro #175	Soil/Pesticides
Resource Conservation and Remediation Act Sites	
Griffen/Kocide Corporation	Groundwater & Soil/Pesticides

Sources: ADEQ 2002, ADEQ 2006a, ADEQ 2006b



Contamination Site Type

- Leaking Underground Storage Tank (LUST)
- Voluntary Remediation Program (VRP)
- Resource Conservation and Recovery Act (RCRA) Sites
- Consolidated Crystalline & Sedimentary Rocks
- Unconsolidated Sediments
- COUNTY
- Major Road
- Interstate
- City, Town or Place

0 3 6
Miles



Figure 8.2-11
Pinal AMA
Contamination Sites



8.2.8 Cultural Water Demands in the Pinal AMA

Cultural water demand data including population, number of wells and the average well pumpage and non-groundwater use by the municipal, industrial and agricultural sectors are shown in Table 8.2-10. Effluent generation including facility ownership, location, population served and not served, volume treated, disposal method and treatment level is shown in Table 8.2-11. Figure 8.2-12 shows the location of demand centers. A description of cultural water demand data sources and methods is found in Volume 1, Section 1.3.5. More detailed information on cultural water demands is found in Section 8.0.7.

Cultural Water Demands

- Refer to Table 8.2-10 and Figure 8.2-12.
- Population in the Pinal AMA increased from 41,677 in 1980 to 89,032 in 2000 and projections suggest an increase to over 677,000 residents by 2050.
- Agricultural water use is by far the largest demand in the Pinal AMA. Approximately 96% of the average annual demand was agricultural in 2001-2003.
- Approximately 45% of the agricultural demand in 2001-2003 was met with groundwater.
- Average annual municipal demand in 2001-2003 increased roughly 50% from a decade earlier.
- The industrial sector accounted for approximately 1% of the total annual AMA water demand in the period between 2001-2003.
- As of 2003 there were 1,770 registered wells with a pumping capacity of less than or equal to 35 gallons per minute and 2,956 wells with a pumping capacity of more than 35 gallons per minute.

Effluent Generation

- Refer to Table 8.2-12.
- 21 wastewater treatment facilities were identified in the AMA.
- There are a wide range of effluent disposal methods with some of the most common being: discharge into an open watercourse, golf course irrigation, permitted recharge, industrial reuse and crop irrigation.
- More than 6,930 acre-feet of effluent are treated/produced annually in the Pinal AMA.

Table 8.2-10 Cultural Water Demands in the Pinal AMA¹

Year	Recent (Census) and Projected (DES) Population	Number of Registered Water Supply Wells Drilled		Average Annual Demand (in acre-feet) ²						Data Source
		Q ≤ 35 gpm	Q > 35 gpm	Well Pumpage			Non-Groundwater ³			
				Municipal	Industrial	Irrigation ⁴	Municipal	Industrial	Irrigation ⁴	
1971										
1972										
1973						959,000			251,000	
1974										
1975										
1976		799 ⁵	2,105 ⁵							
1977										
1978						885,000			276,000	
1979										
1980	41,667									
1981	43,204									
1982	44,742									
1983	46,279	129	53			788,000			383,000	
1984	47,816									
1985	49,353									
1986	50,457									
1987	52,066	108	115			553,600			367,900	
1988	58,015									
1989	61,770									
1990	61,222									
1991	64,281									
1992	64,831	108	335	17,600	5,400	347,100	700	200	530,500	
1993	58,937									
1994	67,730									
1995	72,487									
1996	76,173									
1997	78,016	307	240	21,300	7,800	457,000	1,000	200	560,900	
1998	81,548									
1999	85,307									
2000	89,032									
2001	91,516									
2002	90,481	319	108	23,700	11,900	444,400	4,200	2,100	543,100	
2003	99,000									
2010	199,522									
2020	325,054									
2030	448,804									
2040	565,315									
2050	677,164									

ADDITIONAL WELLS:⁶ 18 0
WELL TOTALS: 1,788 2,956

Notes:

¹ Does not include evaporation losses from stockponds and reservoirs.

² Includes Indian Demand.

³ Non-Groundwater supplies may include surface water, CAP, effluent, spill water or tail water.

⁴ Agricultural use does not include small exempt use after 1993.

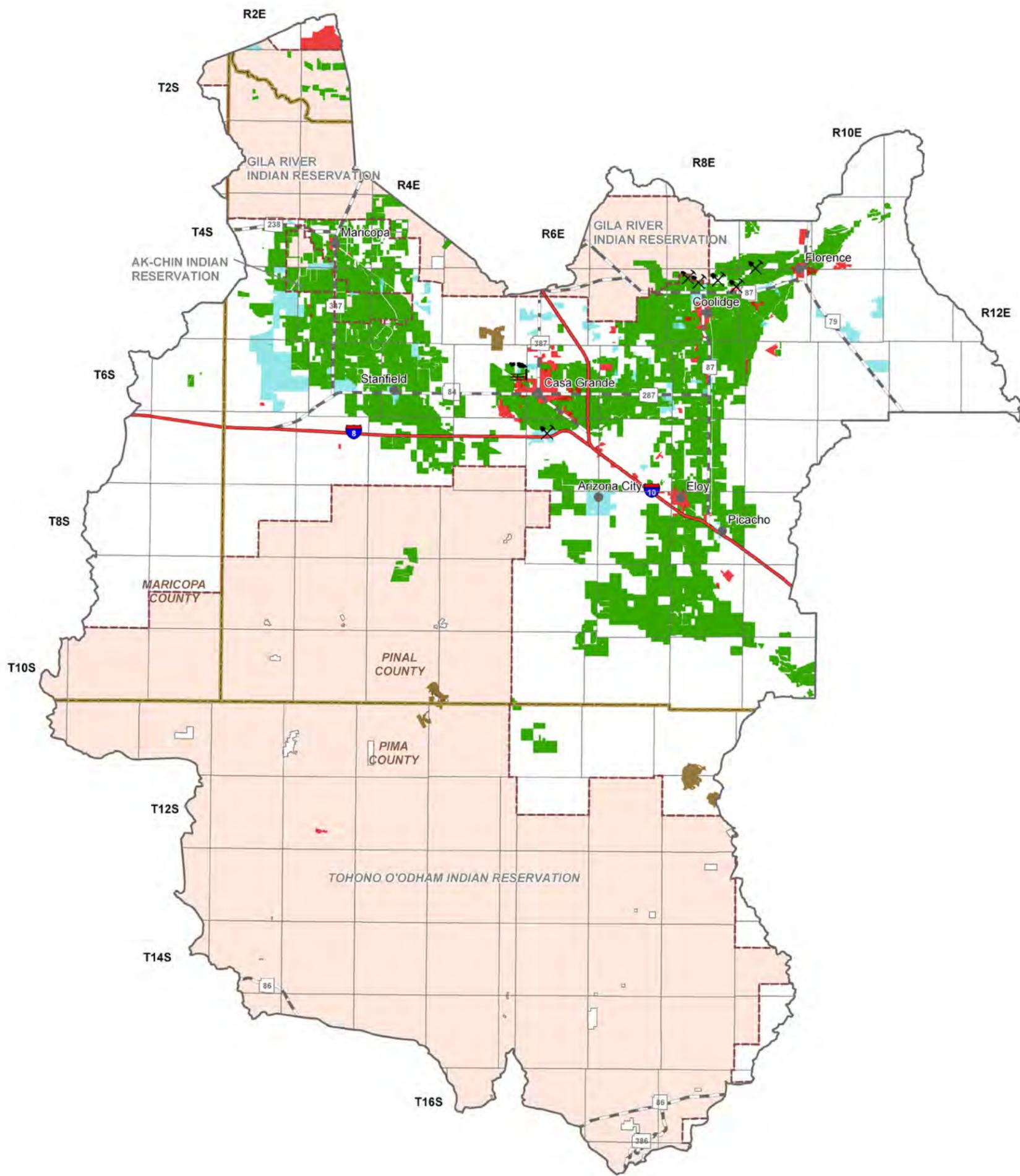
⁵ Includes all wells through 1980.

⁶ Other water-supply wells are listed in the ADWR Well Registry for this basin, but they do not have completion dates. These wells are summed here.

Table 8.2-11 Effluent Generation in the Pinal AMA

Facility Name	Ownership	City/Location Served	Population Served	Volume Treated/Generated (acre-feet)	Disposal Method							Current Treatment Level	Population Not Served	Year of Record		
					Water - course	Evaporation Pond	Irrigation	Golf Course	Wildlife Area	Discharged to Another Facility	Infiltration Basins				Industrial Reuse	Other
Ak-Chin Village	Ak-Chin Tribe	Ak-Chin Tribe	1,820	148							X			Secondary	NA	2004
Arizona City WWTF	Arizona City Sanitary District	Arizona City	5,400	700	X		X							Advanced Treatment I	NA	2004
Casa Grande WWTF	City of Casa Grande	Casa Grande	29,285	2,800	X							X		Advanced Treatment I	1285	2004
Coolidge WWTF	City Of Coolidge	Coolidge	8,500	728			X							Secondary	NA	2004
Desert Gardens RV Park - WWTF	Private	Florence	NA	NA										NA		
Dunn Ranch WWTF	Private	Maricopa	NA	NA										NA		
Eloy WWTF	Town of Eloy	Eloy	10,400	694			X							Advanced Treatment I	NA	2004
Entrada Del Oro	Private	Maricopa	NA	NA										NA		
Florence Prison WWTF	Arizona State Prison Complex	Florence Prison	3,360	NA	X		X							NA	NA	2007
Florence WWTF	Town of Florence	Florence	11,000	1,680			X							Secondary	NA	2004
Francisco Grande Resort WWTF	Private	Casa Grande	NA	NA				X						NA	NA	NA
Frito-Lay WWTF	Private	Casa Grande	NA	NA								X		NA	NA	NA
Maricopa WWTF	Pinal County	Maricopa	NA	NA										NA		
North Florence WWTF	Town of Florence	Florence	3,540	179				X						Primary	NA	2004
Palo Verde Utility WWTF	Private	Maricopa	NA	NA					X					NA	NA	NA
Stanfield WWTF	Pinal County	Stanfield	NA	NA										NA		
Sun Lakes at Casa Grande	Private	Casa Grande	NA	NA					X					NA	NA	NA
Sunscape RV Resort - WWTF	Private	Casa Grande	NA	NA										NA		
Sunshine Estates WWTF	Private	Casa Grande	NA	NA										NA		
Tierra Grande WWTF	Private	Casa Grande	NA	NA										NA		
Eleven-Mile Corner WWTF	Pinal County	Casa Grande	NA	NA										NA		
Total			73,305	6,930												

Sources: Clean Water Needs Survey (CWNS) 2002 and 2004 Data, Pinal County Comprehensive Plan 2001, ADEQ's AZURITE Facility website, ADWR 2004 Annual Water Use Reports
P = Permitted Underground Recharge Facility
NA = Not available
WWTF=Wastewater Treatment Facility



Demand Centers

- Agriculture ■
- M&I - High Intensity ■
- M&I - Low Intensity ■
- Large Mine ■
- Power Plant
- Small Mine/Quarry
- Indian Reservation Boundary
- Indian Reservation
- COUNTY
- Interstate Highway
- Major Road
- City, Town or Place ●

0 3 6
Miles



Figure 8.2-12
Pinal AMA
Cultural Water Demand



Primary Data Source: USGS National Gap Analysis Program, 2004

8.2.9 Assured Water Supply Determinations in the Pinal AMA

Assured water supply determination information including the subdivision name, location, number of lots, date of determination, subdivision water provider and Central Arizona Groundwater Replenishment District (CAGRD) membership status are shown in Table 8.2-12A, B and C for certificates, water adequacy reports and analysis of assured water supply. Designated water provider information is shown in Table 8.2-12D with date of application, date the designation was issued and projected or annual estimated demand. Figure 8.2-13 shows the general locations of subdivisions (to the section level) and designated provider water service areas keyed to the Table. A description of the Assured Water Supply Program is found Section 8.0.5 and in Volume 1, Appendix A. Assured Water Supply determination data sources and methods are found in Volume 1, Sections 1.3.1.

Assured Water Supply Records

- See Table 8.2-12
- As of February 2008, 251 subdivisions with a total of 161,062 lots have been reviewed for an assured water supply determination. All of the determinations were in Pinal County.
- 84,160 lots in 216 subdivisions received Certificates of Assured Water Supply, 2,134 lots in 16 subdivisions received Water Adequacy Reports and 74,768 lots in 19 developments received an Analyses of Assured Water Supply.
- Of the 216 subdivisions with a Certificate of Assured Water Supply, 137 are CAGRD members.
- There are five designated providers with a total projected or estimated annual water use of 90,112 acre-feet.

Table 8.2-12 Assured Water Supply Determinations in the Pinal AMA¹

A. Certificates of Assured Water Supply

Map Key	Subdivision	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application	GRD Member
			Township	Range	Section					
1	Maricopa Manor	Pinal	4 South	3 East	21	38	27-200195	07/22/87	NA	N
2	Smith Farms	Pinal	4 South	3 East	25	705	27-401185	10/13/04	387 District	N
3	Senita Unit 3	Pinal	4 South	3 East	26	499	27-401646	01/03/06	387 District	Y
4	Desert Cedars	Pinal	4 South	3 East	27	418	27-401158	06/25/04	387 District	Y
4	Senita Unit 1 and Unit 2	Pinal	4 South	3 East	26 & 27	876	27-401159	08/30/04	387 District	Y
5	Alterra	Pinal	4 South	3 East	28	1005	27-401126	04/08/04	387 District	Y
6	Maricopa Meadows	Pinal	4 South	3 East	28 & 33	1608	27-401014	03/01/04	387 District	Y
7	Palo Brea	Pinal	4 South	3 East	34	525	27-401143	04/08/04	387 District	N
8	Tortosa	Pinal	4 South	4 East	21 & 28	1290	27-401243	06/25/04	387 District	Y
12	Western Pueblo Ranchettes	Pinal	5 South	3 East	3	24	27-300382	07/28/98	NA	N
20	Red River Phase 1 - Province	Pinal	5 South	3 East	26, 27, 34 & 35	2276	27-700380	02/28/08	Santa Rosa Water Company	Y
22	Maricopa Industrial Park	Pinal	5 South	4 East	15	56	27-200194	11/22/89	NA	N
23	Ghost Hollow Estates	Pinal	5 South	6 East	17	260	27-402224	09/21/07	Arizona Water Co - Casa Grande	Y
24	Desert Views, Unit 1	Pinal	5 South	6 East	19	10	27-300224	03/28/97	Arizona Water Co - Casa Grande	Y
24	Desert Views, Unit 2	Pinal	5 South	6 East	19	26	27-400153	01/28/00	Arizona Water Co - Casa Grande	Y
25	Copper Vista, Parcels A,B,C,D	Pinal	5 South	6 East	20	206	27-400567	06/12/02	Arizona Water Co - Casa Grande	N
26	Ghost Ranch	Pinal	5 South	6 East	21	125	27-400568	08/26/02	Arizona Water Co - Casa Grande	Y
26	Ghost Ranch Unit II	Pinal	5 South	6 East	21	235	27-401399	08/23/04	Arizona Water Co - Casa Grande	N
26	Countrywalk Estates	Pinal	5 South	6 East	21	67	27-401652	08/04/05	Arizona Water Co - Casa Grande	N
26	Dominion Creek	Pinal	5 South	6 East	21	202	27-401724	07/12/05	Arizona Water Co - Casa Grande	Y
26	Mystic Trails	Pinal	5 South	6 East	21	11	27-402020	07/17/06	Arizona Water Co - Casa Grande	N
27	Val Vista Estates	Pinal	5 South	6 East	25	126	27-300267	04/04/97	Arizona Water Co - Casa Grande	Y
28	Villa Arroyo	Pinal	5 South	6 East	27	723	27-700378	01/07/08	Arizona Water Co - Casa Grande	Y
29	Villago, Phase 1	Pinal	5 South	6 East	28 & 33	999	27-401411	05/13/05	Arizona Water Co - Casa Grande	Y
30	Avalon Phase A	Pinal	5 South	6 East	30	131	27-401114	02/17/04	Arizona Water Co - Casa Grande	N
30	Gila Buttes	Pinal	5 South	6 East	30	525	27-402186	07/26/06	Arizona Water Co - Casa Grande	N
31	Avalon Phase B	Pinal	5 South	6 East	30	116	27-401518	12/09/04	Arizona Water Co - Casa Grande	N
31	Casa Grande Air Park	Pinal	5 South	6 East	32	34	27-402068	06/26/06	Arizona Water Co - Casa Grande	Y
32	Arroyo Grande	Pinal	5 South	6 East	34	672	27-400560	05/23/02	Arizona Water Co - Casa Grande	Y
33	McCartney Center	Pinal	5 South	6 East	35	1083	27-400384	03/19/01	Arizona Water Co - Casa Grande	Y
34	Sandia NW, Parcels A,B,C & K	Pinal	5 South	7 East	13, 14, 23 & 24	4188	27-402039	11/21/06	Woodruff Water Company	Y
34	Sandia - SE1	Pinal	5 South	7 East	13, 24 & 25	5634	27-402227	12/11/06	Woodruff Water Company	Y
34	Sandia SE2	Pinal	5 South	7 East	13, 24 & 25	484	27-402228	12/06/06	Woodruff Water Company	Y
35	Martin Valley	Pinal	5 South	7 East	23, 25 & 26	1108	27-402084	08/11/06	Arizona Water Co - Casa Grande	Y
36	Tierra Rica Estates	Pinal	5 South	7 East	30	305	27-400028	04/16/99	Arizona Water Co - Casa Grande	N
37	Chaparral Estates	Pinal	5 South	7 East	31	204	27-400399	01/26/01	Arizona Water Co - Casa Grande	Y
37	Bel Aire Estates	Pinal	5 South	7 East	31	44	27-400529	11/29/01	Arizona Water Co - Casa Grande	Y
37	Signal Peak Estates	Pinal	5 South	7 East	31	19	27-401436	01/25/05	Arizona Water Co - Casa Grande	Y
38	Ridge at Black Butte, The	Pinal	5 South	7 East	32	32	27-300342	10/16/97	Arizona Water Co - Casa Grande	Y
38	Weaver Ranch	Pinal	5 South	7 East	32	31	27-400273	08/22/00	Arizona Water Co - Casa Grande	Y
38	Black Mountain Estates	Pinal	5 South	7 East	32	101	27-400305	09/21/00	Arizona Water Co - Casa Grande	Y
38	Lustano	Pinal	5 South	7 East	32	79	27-401986	05/19/06	Arizona Water Co - Casa Grande	Y
39	Mandalay Ranch	Pinal	5 South	7 East	33	32	27-400643	03/11/03	Arizona Water Co - Casa Grande	Y
39	Saddle Creek Ranch	Pinal	5 South	7 East	33	130	27-400936	02/09/04	Arizona Water Co - Casa Grande	Y
40	Arlington Ranch	Pinal	5 South	7 East	31	22	27-401629	06/08/05	Arizona Water Co - Casa Grande	Y
41	Coolidge Gateway Manor	Pinal	5 South	8 East	15	114	27-401891	01/03/06	Arizona Water Co - Coolidge	Y
41	Casa Blanca	Pinal	5 South	8 East	15	240	27-500072	03/09/07	Arizona Water Co - Coolidge	N
42	Cota Ranch	Pinal	5 South	8 East	16	67	27-400667	09/25/02	Arizona Water Co - Coolidge	Y
43	Skousen Farms	Pinal	5 South	8 East	17 & 18	1300	27-401939	06/23/06	Arizona Water Co - Coolidge	Y
44	Heartland Unit 1	Pinal	5 South	8 East	20	490	27-400353	09/26/00	Arizona Water Co - Coolidge	N
44	Heartland - Unit 4	Pinal	5 South	8 East	20	480	27-401935	11/09/06	Arizona Water Co - Coolidge	N
44	Heartland - Unit 3	Pinal	5 South	8 East	20	622	27-401936	05/02/06	Arizona Water Co - Coolidge	N
45	Coolidge Country Village Estates	Pinal	5 South	8 East	21	150	27-300351	03/27/99	Arizona Water Co - Coolidge	Y
45	Carter Ranch	Pinal	5 South	8 East	21	176	27-400377	09/18/01	Arizona Water Co - Coolidge	Y
45	Elizabeth Ranch	Pinal	5 South	8 East	21	62	27-401872	11/30/05	Arizona Water Co - Coolidge	Y
45	The Village at Coolidge	Pinal	5 South	8 East	21	51	27-500077	02/22/07	Arizona Water Co - Coolidge	Y
46	Kenilworth Gardens	Pinal	5 South	8 East	22 & 23	1247	27-400393	12/11/00	Arizona Water Co - Coolidge	Y
47	KLC Ranch	Pinal	5 South	8 East	23	24	27-300569	03/12/99	Arizona Water Co - Coolidge	N
47	CLK Ranches (Formerly known as KLC Ranches)	Pinal	5 South	8 East	23	745	27-500051	06/08/07	Arizona Water Co - Coolidge	Y
48	Picacho Crossing	Pinal	5 South	8 East	27	625	27-401983	03/08/06	Arizona Water Co - Coolidge	Y
48	Picacho Village	Pinal	5 South	8 East	27	137	27-500027	01/11/07	Arizona Water Co - Coolidge	Y
49	Park Homes	Pinal	5 South	8 East	28	115	27-400293	05/30/00	Arizona Water Co - Coolidge	Y
49	Landmark Ranch - Unit 1 - Parcel 1	Pinal	5 South	8 East	28	187	27-401111	02/02/04	Arizona Water Co - Coolidge	N
49	McClellan Meadows	Pinal	5 South	8 East	28	325	27-401587	06/10/05	Arizona Water Co - Coolidge	Y
49	Landmark Ranch Unit 1, Parcels 2, 3, & 4	Pinal	5 South	8 East	28	451	27-401811	10/17/05	Arizona Water Co - Coolidge	Y

Table 8.2-12 Assured Water Supply Determinations in the Pinal AMA¹

A. Certificates of Assured Water Supply

Map Key	Subdivision	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application	GRD Member
			Township	Range	Section					
49	Stoney Creek Estates I & II	Pinal	5 South	8 East	28	48	27-700339	01/15/08	Arizona Water Co - Coolidge	Y
50	Landmark Ranch, Parcels 9 & 10	Pinal	5 South	8 East	33	244	27-402042	05/11/06	Arizona Water Co - Coolidge	Y
50	Brighton Village Phase 1	Pinal	5 South	8 East	33	890	27-500001	01/18/07	Arizona Water Co - Coolidge	N
51	Cross Creek Ranch I Phases 1-8 and Cross Creek Ranch II	Pinal	5 South	8 East	16, 17 & 25	1311	27-401940	03/13/06	Arizona Water Co - Coolidge	Y
52	Heartland - Unit 2	Pinal	5 South	8 East		667	27-401630	11/15/05	Arizona Water Co - Coolidge	N
53	Homestead Acres	Pinal	5 South	9 East	17	45	27-200145	07/07/87	Arizona Water Co - Coolidge	N
54	Valley Vista Estates	Pinal	5 South	9 East	20	115	27-400370	12/06/00	Arizona Water Co - Coolidge	Y
56	Mesquite Tree Ranch	Pinal	6 South	5 East	10	150	27-400150	01/28/00	Arizona Water Co - Casa Grande	Y
57	Gadsden Greens	Pinal	6 South	5 East	12	391	27-400193	07/20/00	Arizona Water Co - Casa Grande	Y
58	Westfield Park	Pinal	6 South	5 East	23	282	27-401987	03/08/06	Arizona Water Co - Casa Grande	Y
59	Central Arizona Commerce Park	Pinal	6 South	5 East	25	18	27-700410	11/08/07	Arizona Water Co - Casa Grande	N
60	Acacia Farms	Pinal	6 South	5 East	26 & 35	1314	27-402146	10/04/06	Arizona Water Co - Casa Grande	Y
63	Central Arizona Commerce Park Phase 2	Pinal	6 South	5 East		6	27-700501	05/14/08	Arizona Water Co - Casa Grande	N
64	Desert Reins	Pinal	6 South	6 East	1	31	27-402266	11/09/06	Arizona Water Co - Casa Grande	Y
65	Sandalwood, Phase 1	Pinal	6 South	6 East	2	47	27-300345	12/23/97	Arizona Water Co - Casa Grande	N
66	Mission Ranch	Pinal	6 South	6 East	3	344	27-401122	07/19/04	Arizona Water Co - Casa Grande	Y
67	Arroyo Vista	Pinal	6 South	6 East	4	509	27-401367	07/21/04	Arizona Water Co - Casa Grande	N
67	Mission Ranch II	Pinal	6 South	6 East	3	157	27-500054	03/23/07	Arizona Water Co - Casa Grande	Y
68	Santa Rosa	Pinal	6 South	6 East	4	201	27-300446	08/21/98	Arizona Water Co - Casa Grande	Y
68	Mountain View Ranch Parcel E	Pinal	6 South	6 East	4	137	27-400195	11/21/00	Arizona Water Co - Casa Grande	Y
68	Mountain View Ranch, Parcels B,C,D	Pinal	6 South	6 East	4	184	27-401313	08/18/04	Arizona Water Co - Casa Grande	Y
68	Mountain View Ranch Parcel F	Pinal	6 South	6 East	4	85	27-401378	04/22/05	Arizona Water Co - Casa Grande	Y
69	Quail Run	Pinal	6 South	6 East	5	38	27-300316	10/16/97	Arizona Water Co - Casa Grande	Y
69	Pebble Trail	Pinal	6 South	6 East	5	51	27-300432	08/21/98	Arizona Water Co - Casa Grande	Y
69	Pebble Trail Units 3, 4 & 5	Pinal	6 South	6 East	5	80	27-400108	02/17/00	Arizona Water Co - Casa Grande	Y
69	Cornerstone	Pinal	6 South	6 East	5	26	27-400176	01/19/00	Arizona Water Co - Casa Grande	Y
69	Manor Vista	Pinal	6 South	6 East	5	7	27-400200	05/01/00	Arizona Water Co - Casa Grande	N
69	McCartney Ranch	Pinal	6 South	6 East	5	2334	27-400202	05/30/00	Arizona Water Co - Casa Grande	Y
69	McCartney Ranch, Parcel 2 aka Tierra Pointe Apartments	Pinal	6 South	6 East	5	236	27-700247	03/19/07	Arizona Water Co - Casa Grande	Y
71	Casa Mirage	Pinal	6 South	6 East	7	86	27-300421	06/23/98	Arizona Water Co - Casa Grande	Y
71	Los Portales	Pinal	6 South	6 East	7	208	27-401011	12/30/04	Arizona Water Co - Casa Grande	Y
71	Santa Cruz Village	Pinal	6 South	6 East	7	386	27-401416	11/23/04	Arizona Water Co - Casa Grande	Y
71	Mesquite Trails	Pinal	6 South	6 East	7	159	27-402054	07/05/06	Arizona Water Co - Casa Grande	Y
71	Lake Shore Village Office Condominiums	Pinal	6 South	6 East	7	24	27-700290	08/30/07	Arizona Water Co - Casa Grande	N
72	Rodeo Ranch Estates	Pinal	6 South	6 East	8	37	27-401978	05/07/06	Arizona Water Co - Casa Grande	Y
72	Elaine Farms	Pinal	6 South	6 East	8	532	27-402058	10/19/07	Arizona Water Co - Casa Grande	Y
73	Bella Visa Estates	Pinal	6 South	6 East	9	253	27-700266	11/27/07	Arizona Water Co - Casa Grande	Y
74	Mission Valley Unit One	Pinal	6 South	6 East	10	891	27-400454	05/03/01	Arizona Water Co - Casa Grande	N
74	Mission Valley Unit II	Pinal	6 South	6 East	10	227	27-400599	06/07/02	Arizona Water Co - Casa Grande	Y
75	Vista Ranch	Pinal	6 South	6 East	14	1112	27-402289	05/23/07	Arizona Water Co - Casa Grande	Y
76	Highland Manor	Pinal	6 South	6 East	15	305	27-400495	09/14/01	Arizona Water Co - Casa Grande	Y
76	Monterra Village	Pinal	6 South	6 East	15	253	27-401484	02/10/05	Arizona Water Co - Casa Grande	Y
76	Tamaron	Pinal	6 South	6 East	15	422	27-401487	11/23/04	Arizona Water Co - Casa Grande	Y
77	SK Ranch	Pinal	6 South	6 East	16	281	27-400140	12/10/99	Arizona Water Co - Casa Grande	N
77	Cottonwood Ranch	Pinal	6 South	6 East	16	923	27-400323	11/07/00	Arizona Water Co - Casa Grande	Y
77	G Diamond Ranch a Portion of Parcel G	Pinal	6 South	6 East	16	224	27-401548	01/25/05	Arizona Water Co - Casa Grande	Y
77	G Diamond Ranch Preserve	Pinal	6 South	6 East	16	10	27-401929	06/20/06	Arizona Water Co - Casa Grande	N
77	G-Diamond Ranch Parcels D and E Phase II	Pinal	6 South	6 East	16	324	27-402280	12/11/06	Arizona Water Co - Casa Grande	N
78	Rancho Palo Verde Estates	Pinal	6 South	6 East	17	108	27-400088	12/02/99	Arizona Water Co - Casa Grande	Y
78	Safeway Store #1706	Pinal	6 South	6 East	17	6	27-400419	04/18/01	Arizona Water Co - Casa Grande	Y
79	Desert Sky Ranch	Pinal	6 South	6 East	18	108	27-300261	08/08/97	Arizona Water Co - Casa Grande	Y
79	Desert Sky Ranch Unit II and IV	Pinal	6 South	6 East	18	262	27-400429	04/06/01	Arizona Water Co - Casa Grande	Y
79	Desert Crossing	Pinal	6 South	6 East	18	249	27-400646	06/07/02	Arizona Water Co - Casa Grande	Y
79	Desert Views	Pinal	6 South	6 East	18	200	27-402055	08/18/06	Arizona Water Co - Casa Grande	Y
80	Saguaro Estates	Pinal	6 South	6 East	19	9	27-300389	03/20/98	Arizona Water Co - Casa Grande	Y
80	Lancaster Estates	Pinal	6 South	6 East	19	11	27-400248	06/28/00	Arizona Water Co - Casa Grande	Y
80	Cottonwoods, The	Pinal	6 South	6 East	19	197	27-400303	07/27/00	Arizona Water Co - Casa Grande	N
80	Jardines de Esperanzas	Pinal	6 South	6 East	19	16	27-400402	08/09/01	Arizona Water Co - Casa Grande	Y
80	The Cottonwoods, Phase II - VI	Pinal	6 South	6 East	19	393	27-402014	05/10/06	Arizona Water Co - Casa Grande	N
80	Cottonwoods Industrial Park	Pinal	6 South	6 East	19	10	27-700360	09/06/07	Arizona Water Co - Casa Grande	N
82	Casa de Ensueno	Pinal	6 South	6 East	21	11	27-300095	07/10/96	Arizona Water Co - Casa Grande	Y
82	Echeverria Estates	Pinal	6 South	6 East	21	12	27-300353	04/15/98	Arizona Water Co - Casa Grande	Y
82	Acacia Landing	Pinal	6 South	6 East	21	350	27-400168	03/02/00	Arizona Water Co - Casa Grande	Y
82	Smoketree-1c	Pinal	6 South	6 East	21	30	27-400171	04/20/99	Arizona Water Co - Casa Grande	Y
82	Ironwood Commons	Pinal	6 South	6 East	21	267	27-400214	08/10/00	Arizona Water Co - Casa Grande	Y
82	Garrett Estates	Pinal	6 South	6 East	21	6	27-400311	12/11/00	Arizona Water Co - Casa Grande	Y
82	Cottonwood Village	Pinal	6 South	6 East	21	16	27-400313	04/30/01	Arizona Water Co - Casa Grande	Y
82	Ironwood Commons II	Pinal	6 South	6 East	21	79	27-401437	01/05/05	Arizona Water Co - Casa Grande	Y
82	Cottonwood Commons	Pinal	6 South	6 East	21	27	27-401473	12/09/04	Arizona Water Co - Casa Grande	Y
82	Cinco Viejos	Pinal	6 South	6 East	21	8	27-401580	03/16/05	Arizona Water Co - Casa Grande	Y

Table 8.2-12 Assured Water Supply Determinations in the Pinal AMA¹

A. Certificates of Assured Water Supply

Map Key	Subdivision	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application	GRD Member
			Township	Range	Section					
82	Acacia Lofts	Pinal	6 South	6 East	21	180	27-401822	11/30/05	Arizona Water Co - Casa Grande	Y
82	Pueblo Townhomes	Pinal	6 South	6 East	21	40	27-402262	11/06/06	Arizona Water Co - Casa Grande	Y
83	Casa Grande Medical Campus	Pinal	6 South	6 East	22	9	27-300538	03/29/99	Arizona Water Co - Casa Grande	Y
83	Sandalwood, Phase 2	Pinal	6 South	6 East	22	47	27-300545	01/21/99	Arizona Water Co - Casa Grande	N
83	Villa De Jardines	Pinal	6 South	6 East	22	124	27-400063	12/22/99	Arizona Water Co - Casa Grande	N
83	Sandalwood, Phase 3	Pinal	6 South	6 East	22	58	27-400217	03/21/00	Arizona Water Co - Casa Grande	N
83	Silverhawk	Pinal	6 South	6 East	22	158	27-400234	04/13/00	Arizona Water Co - Casa Grande	Y
83	Ironwood Village	Pinal	6 South	6 East	22	264	27-400281	10/27/00	Arizona Water Co - Casa Grande	Y
83	Wildwood	Pinal	6 South	6 East	22	97	27-400605	05/14/02	Arizona Water Co - Casa Grande	Y
84	The Promenade at Casa Grande	Pinal	6 South	6 East	24	31	27-700316	07/09/07	Arizona Water Co - Casa Grande	N
85	Mission Royal Parcels A, H, & I	Pinal	6 South	6 East	25	322	27-400797	05/20/03	Arizona Water Co - Casa Grande	Y
85	Mission Royale Block M	Pinal	6 South	6 East	25	73	27-401100	12/16/03	Arizona Water Co - Casa Grande	N
85	Mission Royale Block G	Pinal	6 South	6 East	25	180	27-401101	12/16/03	Arizona Water Co - Casa Grande	N
85	Mission Royale Phase 2, Parcel F	Pinal	6 South	6 East	25	245	27-401949	03/27/06	Arizona Water Co - Casa Grande	N
86	Sonoran Heights	Pinal	6 South	6 East	26	1076	27-400237	11/07/00	Arizona Water Co - Casa Grande	Y
86	Casa Grande Crossings	Pinal	6 South	6 East	26	635	27-400452	05/02/01	Arizona Water Co - Casa Grande	N
86	Sonoran Heights	Pinal	6 South	6 East	26	750	27-401839	11/15/05	Arizona Water Co - Casa Grande	Y
87	Carlton Commons	Pinal	6 South	6 East	27	892	27-401335	01/24/05	Arizona Water Co - Casa Grande	Y
87	Carlton Commons Phase 4 & 5	Pinal	6 South	6 East	27	508	27-401371	03/25/05	Arizona Water Co - Casa Grande	Y
87	Sierra Ranch II	Pinal	6 South	6 East	27	471	27-401881	03/08/06	Arizona Water Co - Casa Grande	Y
87	McNatt Estates	Pinal	6 South	6 East	27	28	27-500091	04/18/07	Arizona Water Co - Casa Grande	N
88	McMurtry Ranch	Pinal	6 South	6 East	28	7	27-400830	02/14/03	Arizona Water Co - Casa Grande	N
88	Southfork Unit II	Pinal	6 South	6 East	28	28	27-401611	05/09/05	Arizona Water Co - Casa Grande	N
88	Tuscany	Pinal	6 South	6 East	28	189	27-401789	04/18/06	Arizona Water Co - Casa Grande	Y
89	Trekell Estates	Pinal	6 South	6 East	29	40	27-400312	06/11/01	Arizona Water Co - Casa Grande	Y
90	Parks Ranch	Pinal	6 South	6 East	30	165	27-500086	04/10/07	Arizona Water Co - Casa Grande	N
91	Vista Estates	Pinal	6 South	6 East	35	1186	27-500058	06/13/07	Arizona Water Co - Casa Grande	Y
92	Las Palmas	Pinal	6 South	6 East	66	66	27-700491	06/13/08	Arizona Water Co - Casa Grande	Y
93	The Shops at TC Village	Pinal	6 South	6 East	7	7	27-700462	04/25/08	Arizona Water Co - Casa Grande	Y
94	Desert Sky Ranch, Unit III, Phase IV	Pinal	6 South	6 East	75	75	27-700406	02/08/08	Arizona Water Co - Casa Grande	Y
95	Los Alamos Professional Condominium Complex	Pinal	6 South	6 East		22	27-700500	05/20/08	Arizona Water Co - Casa Grande	Y
96	Mission Royale Phase 2, Parcel C	Pinal	6 South	6 East		145	27-401895	10/04/06	Arizona Water Co - Casa Grande	Y
96	Mission Royale Phase 2, Parcel D	Pinal	6 South	6 East		164	27-401896	03/08/06	Arizona Water Co - Casa Grande	N
96	Mission Royale Phase 2, Parcel E	Pinal	6 South	6 East		121	27-401897	03/08/06	Arizona Water Co - Casa Grande	N
97	Marabella Parcels 1,2 & 3	Pinal	6 South	6 East		281	27-700448	02/12/08	Arizona Water Co - Casa Grande	Y
98	Mission Royale Phase 3, Parcel 1	Pinal	6 South	6 East		178	27-401898	03/08/06	Arizona Water Co - Casa Grande	N
98	Mission Royale Phase 3, Parcel 2	Pinal	6 South	6 East	25 & 36	119	27-401899	03/08/06	Arizona Water Co - Casa Grande	N
98	Mission Royale Phase 3, Parcel 3	Pinal	6 South	6 East		85	27-401900	03/08/06	Arizona Water Co - Casa Grande	N
98	Mission Royale Phase 3, Parcel 4	Pinal	6 South	6 East	25 & 36	177	27-401901	03/08/06	Arizona Water Co - Casa Grande	N
98	Mission Royale Phase 3, Parcel 5	Pinal	6 South	6 East		159	27-401902	03/08/06	Arizona Water Co - Casa Grande	N
98	Mission Royale Phase 3, Parcel 6	Pinal	6 South	6 East		158	27-401903	04/27/06	Arizona Water Co - Casa Grande	N
98	Mission Royale Phase 3, Parcel 7	Pinal	6 South	6 East		164	27-401904	05/02/06	Arizona Water Co - Casa Grande	N
99	Vista Del Rey Estates	Pinal	6 South	7 East	3	80	27-401817	08/11/06	Arizona Water Co - Casa Grande	Y
99	Saddle Creek II	Pinal	6 South	7 East	3	144	27-401828	07/26/06	Arizona Water Co - Casa Grande	Y
101	Arroyo Verde Estates	Pinal	6 South	7 East	6	94	27-401677	10/12/05	Arizona Water Co - Casa Grande	Y
101	Overfield Country Estates	Pinal	6 South	7 East	6	68	27-700288	10/23/07	Arizona Water Co - Casa Grande	Y
104	Post Ranch	Pinal	6 South	7 East	29	2417	27-401944	02/22/06	Arizona Water Co - Casa Grande	N
105	Hacienda Highlands	Pinal	6 South	7 East	30	266	27-402070	07/06/06	Arizona Water Co - Casa Grande	N
105	Hacienda Estates	Pinal	6 South	7 East	30	275	27-402071	07/06/06	Arizona Water Co - Casa Grande	N
105	Springwater Pointe	Pinal	6 South	7 East	30	497	27-402135	02/02/07	Arizona Water Co - Casa Grande	Y
106	Tierra Grande Co Club Twnhs #1	Pinal	6 South	7 East	36		27-200347	03/23/84	Arizona Water Co - Casa Grande	N
106	Tierra Grande Village #1-6	Pinal	6 South	7 East	36		27-200349	08/01/83	Arizona Water Co - Casa Grande	N
106	Sun Fair Estates	Pinal	6 South	7 East	36	73	27-300561	12/01/98	Arizona Water Co - Casa Grande	N
107	EJR Ranch, Phase II	Pinal	6 South	7 East	32, 33 & 34	3640	27-402076	07/12/06	Picacho Water Company	Y
108	Sunrise at Wildhorse	Pinal	6 South	8 East	4	95	27-400882	08/01/03	Arizona Water Co - Coolidge	Y
109	Sunset View Units 1 & 2	Pinal	6 South	8 East	5	45	27-400836	04/16/03	Arizona Water Co - Casa Grande	Y
110	Verona at 11 Mile Corner	Pinal	6 South	8 East	6	1468	27-401924	12/20/06	Arizona Water Co - Coolidge	Y
111	Northview Estates	Pinal	6 South	8 East	31	198	27-400044	07/01/99	Arizona Water Co - Casa Grande	Y
112	Saguaro Estates	Pinal	6 South	10 East	11	33	27-200307	06/30/81	Arizona Water Co - Casa Grande	N
113	Casa Vista	Pinal	7 South	6 East	2	366	27-402024	07/10/06	Arizona Water Co - Casa Grande	N
113	The Shops at Palm Court	Pinal	7 South	6 East	2	294	27-700251	06/15/07	Arizona Water Co - Casa Grande	N
114	Sun Lakes- Casa Grande	Pinal	7 South	7 East	3, 4, 8, 9, 16 & 17	7891	27-400614	12/16/02	Picacho Water Company	Y
114	Robson Ranch Unit 60	Pinal	7 South	7 East	3	255	27-401775	11/18/05	Picacho Water Company	Y
115	Robson Ranch Arizona Units 27 & 28	Pinal	7 South	7 East	20 & 21	583	27-402206	02/22/07	Picacho Water Company	Y
117	Villa Grande Casa Simpatico #2	Pinal	7 South	8 East	28	41	27-200376	11/19/85	Villa Grande DWID	N
118	Sunland Ranches	Pinal	8 South	6 East	13	84	27-400203	03/21/00	Arizona Water Co - Casa Grande	N
119	Brookside Farms	Pinal	8 South	6 East	14	15	27-400738	02/24/03	Sunland Water Company	N
119	Phillips Country Estates	Pinal	8 South	6 East	14	459	27-402276	01/30/07	Sunland Water Company	Y
121	Toltec Estates West	Pinal	8 South	7 East	4	30	27-400165	01/05/00	NA	N
122	Hacienda Palo Verde	Pinal	8 South	7 East	5	21	27-400531	03/27/02	Arizona Water Co - Casa Grande	Y
123	Casitas Hermosa	Pinal	8 South	7 East	6	10	27-200042	12/20/84	Arizona Water Co - Casa Grande	N

Table 8.2-12 Assured Water Supply Determinations in the Pinal AMA¹

A. Certificates of Assured Water Supply

Map Key	Subdivision	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application	GRD Member
			Township	Range	Section					
124	Rae-Berwick Townhomes	Pinal	8 South	7 East	6 & 7	4	27-200272	04/13/81	Arizona Water Co - Casa Grande	N
126	Milliner Project, The	Pinal	8 South	7 East	19 & 30	72	27-200198	01/29/82	NA	N
126	Sunland Estates	Pinal	8 South	7 East	19 & 30	25	27-200332	05/04/88	NA	N
128	Picacho Pecans	Pinal	8 South	8 East	15 & 22	695	27-200228	11/22/89	NA	N
129	Agrocenter AZ R E Ltd Prtnrshp	Pinal	8 South	8 East	31	50	27-200002	07/09/84	City of Eloy	N
130	Picacho Peak Estates	Pinal	9 South	8 East	6	64	27-300427	09/15/98	NA	N
132	Unnamed property, Pinal Co.	Pinal	10 South	6 East	13	9	27-200369	04/06/84	Silverbell Irrigation and Drainage District	N
132	Montana Del Sol	Pinal	10 South	6 East	13	203	27-401098	02/17/04	Silverbell Irrigation and Drainage District	Y

B. Water Adequacy Reports

Map Key	Subdivision	County	Location			No. of Lots	ADWR File No.	ADWR Adequacy Determination ²	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section					
9	Caliente Casa del Sol	Pinal	4 South	9 East	24	218	53-500376	Adequate	09/19/73	Town of Florence
10	Thunderbird Farms North	Pinal	5 South	2 East	2	41	53-501542	Inadequate	02/20/81	NA
11	Papago Buttes Ranchos	Pinal	5 South	2 East	13 & 24	180	53-501102	Adequate	01/30/79	NA
14	Papago Buttes Ranchos	Pinal	5 South	3 East	18, 19, 20, 21 & 29	225	53-501101	Inadequate	09/19/73	NA
21	Saddleback Farms #2	Pinal	5 South	4 East	11	88	53-501349	Adequate	12/24/73	NA
23	Park West	Pinal	5 South	6 East	17	107	53-501124	Adequate	07/13/73	Arizona Water Co - Casa Grande
55	Hacienda Acres	Pinal	6 South	2 East	4	24	53-500768	Adequate	06/03/74	NA
81	Bomac Corporation Subdivision	Pinal	6 South	6 East	20	48	53-500347	Adequate	06/07/73	Arizona Water Co - Casa Grande
100	College View Ranchettes	Pinal	6 South	7 East	4	16	53-500483	Adequate	11/09/78	Signal Peak Water Co
106	Tierra Grande	Pinal	6 South	7 East	36	0	53-501548	Adequate	07/10/73	Arizona Water Co - Casa Grande
116	Villa Grande	Pinal	7 South	8 East	22	192	53-501625	Adequate	12/31/73	Villa Grande DWID
119	Sunland Estates	Pinal	8 South	6 East	14	119	53-501498	Adequate	06/13/73	Sunland Water Company
119	Sunland Estates #2,3	Pinal	8 South	6 East	14	430	53-501499	Adequate	07/10/74	Sunland Water Company
120	Sunland Park #1	Pinal	8 South	6 East	25	56	53-501500	Adequate	12/10/73	Sunland Water Company
125	Arizona City #17	Pinal	8 South	7 East	8	120	53-500285	Adequate	08/08/73	Arizona Water Co - Casa Grande
131	Silver Bell Estates Units 1-5	Pinal	10 South	6 East	10	270	53-501408	Adequate	01/29/74	Silverbell Irrigation and Drainage District

Table 8.2-12 Assured Water Supply Determinations in the Pinal AMA¹

C. Analyses of Assured Water Supply

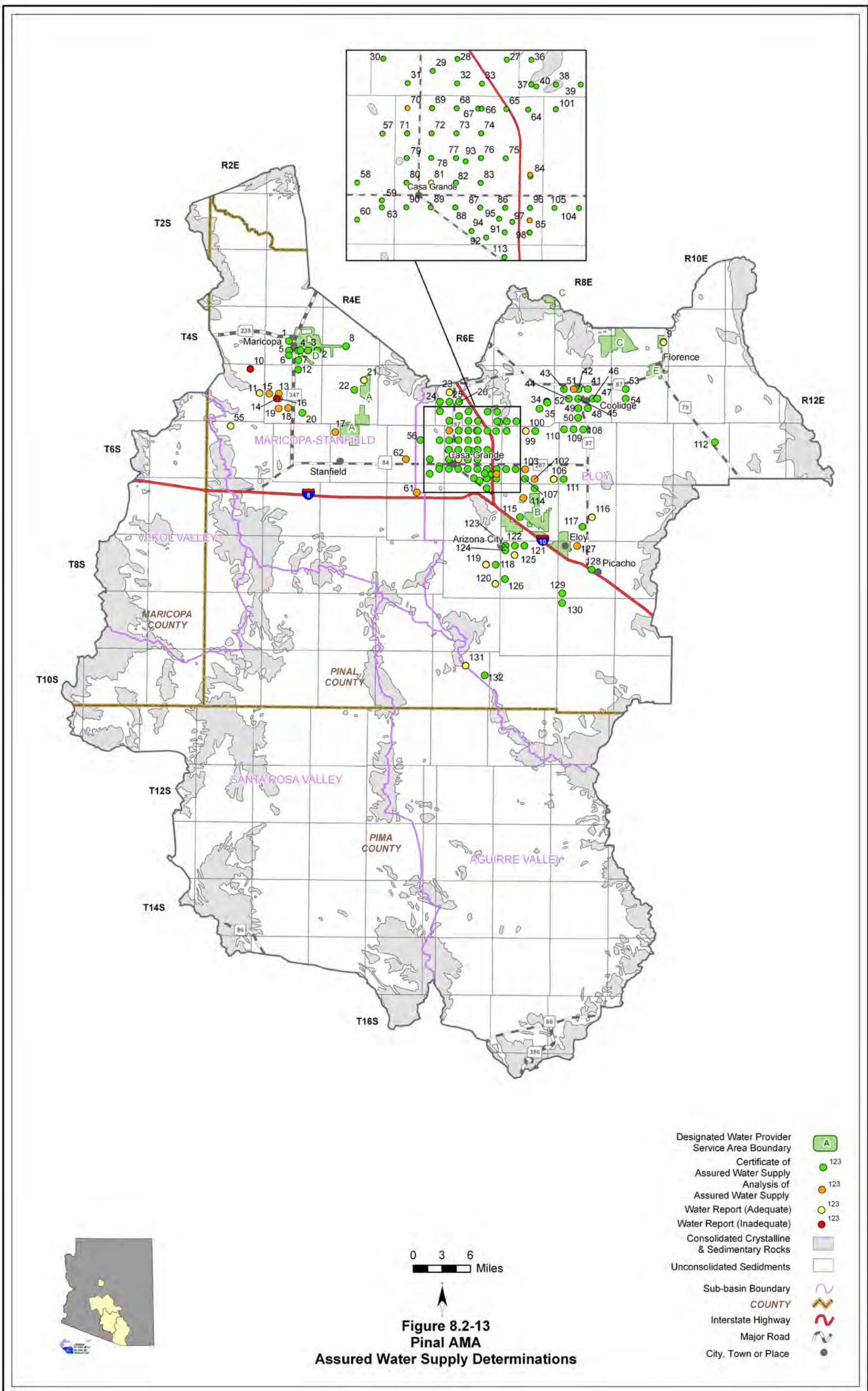
Map Key	Subdivision	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section				
13	Amarillo Creek	Pinal	5 South	3 East	17 & 20	3235	28-401363	02/10/05	387 District
15	Villages at Palomino Ranch	Pinal	5 South	3 East	18 & 19	2100	28-401364	07/07/05	387 District
16	Pecan Woods	Pinal	5 South	3 East	20	581	28-401362	01/24/05	387 District
17	Red River	Pinal	5 South; 6 South	3 East; 4 East	25, 26 & 27; 25 & 26	15210	28-401958	05/24/06	NA
18	Sunset Canyon	Pinal	5 South	3 East	28	1225	28-401361	12/28/04	387 District
18	McLean Ranch	Pinal	5 South	3 East	28	1200	28-401365	02/10/05	387 District
19	Papago and Val Vista Property	Pinal	5 South	3 East	29	2569	28-401360	02/22/05	387 District
43	Cross Creek Ranch	Pinal	5 South	8 East	16 & 17	1676	28-401734	08/22/05	Arizona Water Co - Coolidge
61	Traviano	Pinal	6 South; 7 South	5 East; 5 East	34; 3, 4, 9, 10 & 15	9012	28-402194	09/15/06	Arizona Water Co - Casa Grande
62	Francisco Grande	Pinal	6 South	5 East	20 & 21	1875	28-300052	01/25/96	Francisco Grande Utility Company
70	Villago Phases 2,3,4 & Villago Village	Pinal	6 South	6 East	6	5792	28-401951	03/07/06	Arizona Water Co - Casa Grande
84	Casa Grande 761	Pinal	6 South	6 East	13 & 24	1628	28-700408	10/24/07	Arizona Water Co - Casa Grande
85	Sun Dance Ranch	Pinal	6 South	6 East	25 & 36	2415	28-300169	08/01/96	Arizona Water Co - Casa Grande
85	Mission Royale	Pinal	6 South	6 East	25 & 36	2415	28-400417	03/02/01	Arizona Water Co - Casa Grande
99	Vista Del Monte	Pinal	6 South	7 East	3, 4 & 5	2653	28-401917	03/07/06	Arizona Water Co - Casa Grande
102	EJR Ranch	Pinal	6 South; 7 South	7 East; 7 East	26-28, 32-34; 1-3	8099	28-401544	03/02/05	Picacho Water Company
103	Northwest Quarter Section 28, T6S, R7E	Pinal	6 South	7 East	28	583	28-402240	10/04/06	NA
114	Sun Lakes Casa Grande	Pinal	7 South	7 East	3, 4, 8, 9, 16 & 17	8000	28-400308	08/24/00	Picacho Water Company
127	Palmilla	Pinal	8 South	8 East	4 & 5	4500	28-402275	10/24/06	NA

D. Designated Water Providers

Map Key	Water Provider Name	County	Designation No.	Date Application Received	Date Designation Issued	Projected or Annual Estimated Demand (af/yr)	Year of Projected or Annual Estimated Demand
A	City of Casa Grande	Pinal	26-400728.0000	05/06/02	07/21/03	4,113	2013
B	City of Eloy	Pinal	26-402148.0000	05/10/06	02/20/07	49,159	2015
C	Johnson Utilities	Pinal	26-401382.0000	05/26/04	10/14/05	551	2007
D	Santa Cruz Water Company	Pinal	26-402008.0000	01/24/06	12/27/07	23,979	2013
E	Town of Florence	Pinal	26-401284.0000	03/12/04	01/25/05	12,310	2014

¹ Includes water reports issued under the Water Adequacy program prior to 1980 implementation of the Assured Water Supply program.

² Adequacy determinations were based on the information available to ADWR and the standards of review and policies in effect at the time the determination was made. A determination of inadequacy could be due to insufficient physical or legal access to water or poor water quality. The Adequacy Program was replaced by the Assured Water Supply Program in the AMAs in 1980.



- Designated Water Provider Service Area Boundary
- Certificate of Assured Water Supply Analysis of Assured Water Supply Water Report (Adequate)
- Water Report (Inadequate)
- Consolidated Crystalline & Sedimentary Rocks
- Unconsolidated Sediments
- Sub-basin Boundary
- COUNTY
- Interstate Highway
- Major Road
- City, Town or Place

0 3 6
Miles



Figure 8.2-13
Pinal AMA
Assured Water Supply Determinations



Pinal AMA

References and Supplemental Reading

References

A

- Arizona Department of Economic Security (DES), 2005, Workforce Informer: Data file, accessed August 2005, <http://www.workforce.az.gov>.
- Arizona Department of Environmental Quality, 2005, ADEQSWI: Data file, received September 2005.
- _____, 2005, ADEQWATP: Data file, received May 2005.
- _____, 2005, ADEQWWTP: Data file, received August 2005.
- _____, 2005, Azurite: Data file, received September 2005.
- _____, 2005, Effluent dependent waters: GIS cover, received December 2005.
- _____, 2005, Impaired lakes and reaches: GIS cover, received January 2006.
- _____, 2004, Water providers with arsenic concentrations in wells over 10ppb: Data file, received August 2004.
- _____, 2004, Water quality exceedences by watershed: Data file, received June 2004.
- _____, 2004, Water quality exceedences for drinking water providers in Arizona: Data file, received September 2004.
- Arizona Department of Water Resources (ADWR), 2007, Estimated cultural water demand in the AMA Planning Area: Unpublished Analysis, ADWR Office of Data Management.
- _____, 2006, Assured and adequate water supply applications: Project files, ADWR Hydrology Division.
- _____, 2005, Automated recorder sites: Data files, ADWR Basic Data Unit.
- _____, 2005, Assured and adequate water supply determinations: Database, ADWR Office of Assured and Adequate Water Supply.
- _____, 2005, Flood warning gages: Database, ADWR Office of Water Engineering.
- _____, 2005, Inspected dams: Database, ADWR Office of Dam Safety.
- _____, 2005, Non-jurisdictional dams: Database, ADWR Office of Dam Safety.
- _____, 2005, Groundwater Site Inventory (GWSI): Database, ADWR Hydrology Division.
- _____, 2005, Registry of surface water rights: ADWR Office of Water Management.
- _____, 2005, Wells55: Database.
- _____, 2004, Annual withdrawal and use reports for the Pinal AMA: ADWR Office of Water Management.
- _____, 1999, Third Management Plan for the Pinal Active Management Area 2000-2010.
- _____, 1994, Arizona Water Resources Assessment, Vol. I, Inventory and Analysis.
- _____, 1994, Arizona Water Resources Assessment, Vol. II, Hydrologic Summary.
- Arizona Game and Fish Department (AGF), 2005, Arizona Waterways: Data file, received April 2005.
- _____, 1997 & 1993, Statewide riparian inventory and mapping project: GIS cover.
- Arizona Land Resource Information System (ALRIS), 2005, Springs: GIS cover, accessed January 2006 at <http://www.land.state.az.us/alris/index.html>.
- _____, 2005, Streams: GIS cover, accessed 2005 at <http://www.land.state.az.us/alris/index.html>.
- _____, 2005, Water features: GIS cover, accessed July 2005 at <http://www.land.state.az.us/alris/>

index.html.

_____, 2004, Land ownership: GIS cover, accessed in 2004 at <http://www.land.state.az.us/alris/index.html>.

Arizona Meteorological Network (AZMET), 2005, Arizona climate stations: Pan evaporation data, accessed December 2005 at <http://www.ag.arizona.edu/azmet/locate.html>.

D

Diroll, M., and Marsh, D., 2006, Status of water quality in Arizona-2004 integrated 305(b) assessment and 303(d) listing report: ADEQ report.

E

Environmental Protection Agency (EPA), 2005, Surf Your Watershed: Facility reports, accessed April 2005 at http://oaspub.epa.gov/enviro/ef_home2.water.

_____, 2005, 2000 and 1996, Clean Watershed Needs Survey: datasets, accessed March 2005 at <http://www.epa.gov/owm/mtb/cwns/index.htm>.

K

Konieczki, A.D. and Wilson, R.P., 1992, Annual summary of ground-water conditions in Arizona, spring 1986 to spring 1987: USGS Open File Report 92-54.

M

McCormack, H.F., Fisk, G.G., Duet, N.R., Evans, D.W., Roberts, W.P., and Castillo, N.K., 2002, Water resources data Arizona, water year 2002: USGS Water Data Report AZ-02-1.

O

Oregon State University, Spatial Climate Analysis Service (SCAS), 2006, Average annual precipitation in Arizona for 1961-1990: PRISM GIS cover, accessed in 2006 at www.ocs.orst.edu/prism.

P

Pinal County, 2001, Pinal County Comprehensive Plan, Adopted by the Pinal County Board of Supervisors December 19, 2001.

U

US Army Corps of Engineers, 2004 and 2005, National Inventory of Dams: Arizona Dataset, accessed November 2004 to April 2005 at <http://crunch.tec.army.mil/nid/webpages/nid.cfm>

US Geological Survey (USGS), 2006, Average annual runoff in the United States, 1951-1980: Data file, accessed March 2006 at <http://aa179.cr.usgs.gov/metadata/wrdmeta/runoff.htm>.

_____, 2006, Springs and spring discharges: Dataset, received November 2004 and January 2006 from USGS office in Tucson, AZ.

_____, 2006, National Hydrography Dataset: Arizona dataset, accessed at <http://nhd.usgs.gov/>.

_____, 2005, National Water Information System (NWIS): Arizona dataset, accessed December 2005 at <http://waterdata.usgs.gov/nwis>.

_____. 2004, Southwest Regional Gap analysis study- land cover descriptions: Electronic file, accessed January 2005 at <http://earth.gis.usu.edu/swgap>.

_____. 1981, Geographic digital data for 1:500,000 scale maps: USGS National Mapping Program Data Users Guide.

V

Valencia, R.A., Wennerlund, J.A., Winstead, R.A., Woods, S., Riley, L., Swanson, E., and Olson, S., 1993, Arizona riparian inventory and mapping project: Arizona Game and Fish Department.

W

Wahl, C.R., Boe, S.R., Wennerlund, R.A., Winstead, R.A., Allison, L.J., Kubly, D.M., 1997, Remote sensing mapping of Arizona intermittent stream riparian areas: Arizona Game and Fish Technical Report 112.

Western Regional Climate Center (WRCC), 2005, Pan evaporation stations: Data file accessed December 2005 at <http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwDI~GetCity~USA>.

_____. 2005, Precipitation and temperature stations: Data file, accessed December 2007 at <http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwDI~GetCity~USA>.

Weidner, C., 1996, ADEQ Pollution Prevention Report, Arizona Pollution Prevention. Spring/Summer 1996.

Supplemental Reading

Arizona Department of Environmental Quality, 2007, Ambient Groundwater Quality of the Pinal Active Management Area: A 2005-2006 Baseline Study, ADEQ Fact Sheet C -7-27.

City of Casa Grande, 2001, City of Casa Grande General Plan 2010: Chapter 8 Water Resources Element.

Colby, B.G. and Jacobs, K.L eds, 2007, Arizona Water Policy: Management and Innovations in an Urbanizing, Arid Region: Resources for the Future, Washington D.C.

Corkhill, E.F. and Plato, P.R, 1992, Pinal Active Management Area Second Management Plan Simulations of Water Use Scenarios Utilizing the Pinal AMA Regional Groundwater Flow Model: Arizona Department of Water Resources, Model Report No. 04 - 000190

Corkhill, E.F. and Hill, B.M, 1990, Pinal Active Management Area Regional Groundwater Flow Model Phase II: Numerical Model, Calibration, Sensitivity and Recommendations: Arizona Department of Water Resources, Model Report No. 02 - 000188.

Governor's Drought Task Force, 2004, Arizona Drought Preparedness Plan. Draft. Phoenix.

Governor's Drought Task Force, 2004, Arizona Drought Management Plan. Draft. Phoenix

Governor's Water Management Commission, 2000, Briefing Book: Water Management

- Framework for AMAs, Groundwater Use Restrictions and Requirements. Phoenix: Arizona Department of Water Resources.
- Governor's Water Management Commission, 2002, Final Report and Recommendations. Phoenix: Arizona Department of Water Resources.
- Hammett, B.A., 1992, Maps showing groundwater conditions in the Eloy and Maricopa-Stanfield sub-basins of the Pinal Active Management Area, Pinal, Pima, and Maricopa Counties, Arizona 1989, Arizona Department of Water Resources, HMS No. 23 - 000238.
- Holway, J.M. and K.L. Jacobs, 2006, Managing for Sustainability in Arizona, USA: Linking Climate, Water Management and Growth: in Mays, L., eds., Managing for Sustainability in Arizona, USA: Linking Climate, Water Management and Growth. McGraw-Hill.
- Jacobs, K. L. and J. M. Holway, 2004, Lessons Learned from Twenty Years of Groundwater Management in Arizona, USA. *Hydrogeology Journal*. 12, No. 1.
- Megdal, S. and Smith, Z., 2008, Evolution and Evaluation of the Active Management Area Management Plans, Water Resources Research Center, University of Arizona.
- Megdal, S. and Colby, B., 2004, Arizona's Water Future: Challenges and Opportunities, 85th Arizona Town Hall Background Report, University of Arizona.
- Rascona, S.J., 2003, Maps showing groundwater conditions in the Pinal Active Management Area, Maricopa, Pinal, and Pima Counties, Arizona-Nov. 2002-Feb 2003: Arizona Department of Water Resources, HMS No. 36 - 000319
- Seventy-first Arizona Town Hall. 1997. Ensuring Arizona's Water Quantity and Quality into the 21st Century. Marshall A. Worden, editor. Phoenix: Arizona Town Hall.
- Town of Florence, 2002, Florence Area General Plan Update.

Index to Section 8.0

Geography	6
Hydrology	
Groundwater Hydrology	6,7,8,9-10
Surface Water Hydrology	17-18
Environmental Conditions	
Vegetation	24,26
Arizona Water Protection Fund	28
Endangered Species	31
Protected Areas	34
Population	35,38,39,40,41
Water Supply	42
Central Arizona Project	43
Surface Water	45
Groundwater	46
Effluent	48
Contamination Sites	49
Cultural Water Use	50,51,52
Tribal Demand	53,54-55,56
Municipal Demand	56,60
Agricultural Demand	65,67
Industrial Demand	70-71
Water Resource Issues	71-75

