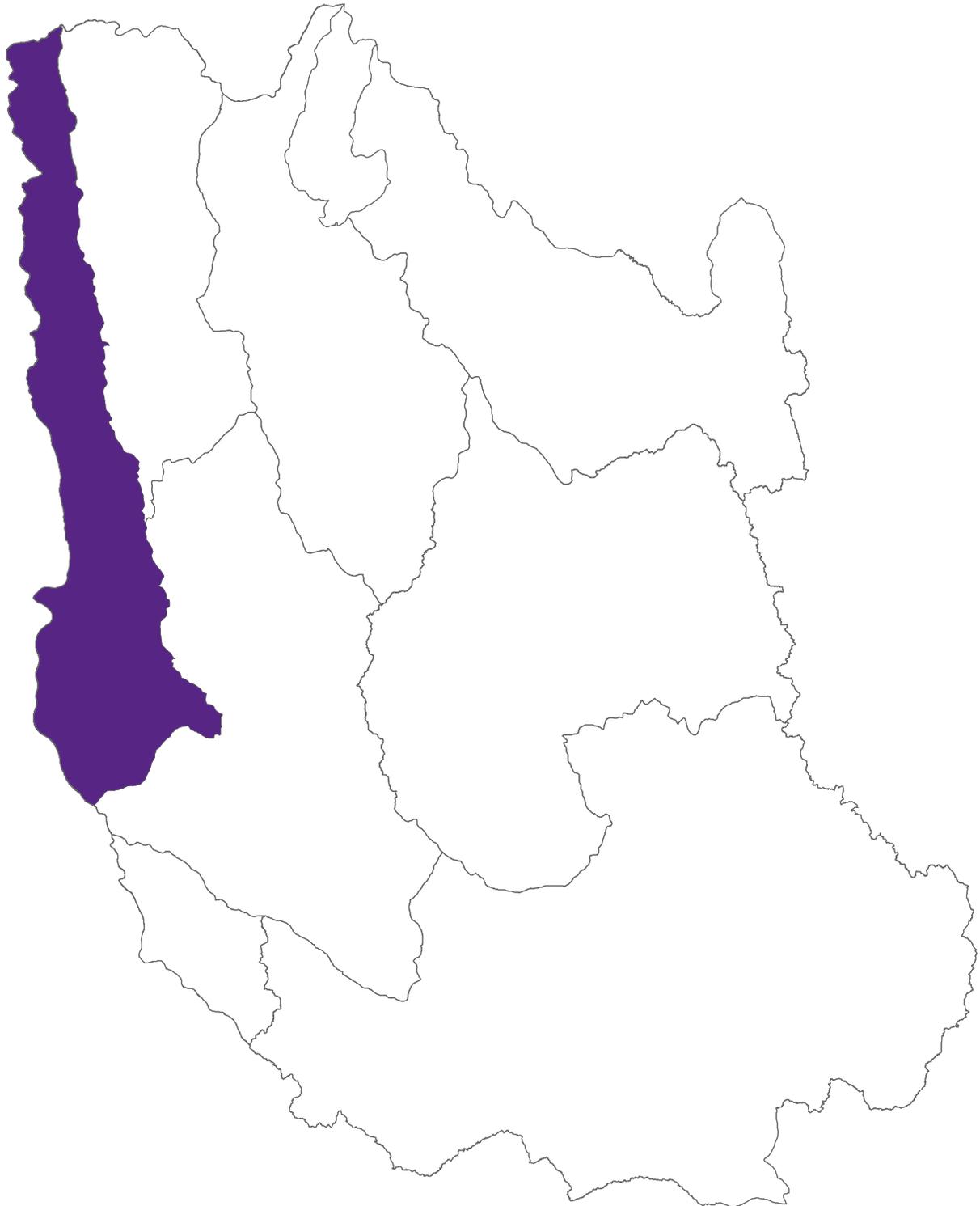


# Section 4.6

## Lake Mohave Basin



### 4.6.1 Geography of the Lake Mohave Basin

The Lake Mohave Basin is a small and long basin located in the northwestern portion of the planning area at 980 square miles. Geographic features and principal communities are shown on Figure 4.6-1. The basin is characterized by a broad valley along the Colorado River in the southern part of the basin and by mountains in the northern part of the basin. The Colorado River, Lake Mohave and Lake Mead define the western and northern basin boundary. Vegetation is primarily Mohave desertscrub with a small area of lower Colorado River Sonoran desertscrub (see Figure 4.0-9) and tamarisk and marsh vegetation along sections of the Colorado River.

- Principal geographic features shown on Figure 4.6-1 are:
  - Mohave Valley in the southern part of the basin running parallel to the Colorado River
  - Silver Creek Wash running east to west from Oatman to Bullhead City
  - The Black Mountains that define the eastern basin boundary with the highest point in the basin, Mount Perkins at 5,456 feet northeast of Cottonwood East at the basin boundary
  - The lowest point in the basin is approximately 500 feet near Golden Shores at the Colorado River



0 3 6  
Miles



**Figure 4.6-1**  
**Lake Mohave Basin**  
**Geographic Features**

California State Boundary  
Nevada State Boundary  
City, Town or Place



Base Map: USGS 1:500,000, 1981

## 4.6.2 Land Ownership in the Lake Mohave Basin

Land ownership, including the percentage of ownership by category, for the Lake Mohave Basin is shown in Figure 4.6-2. The principal feature of land ownership in this basin is the largest variety of land ownership of any basin in the planning area. A description of land ownership data sources and methods is found in Volume 1, Appendix A. More detailed information on protected areas is found in Section 4.0.4. Land ownership categories are discussed below in the order from largest to smallest percentage in the basin.

### U.S. Bureau of Land Management (BLM)

- 44.5% of the land is federally owned and managed by the Kingman Field Office of the Bureau of Land Management.
- BLM lands in this basin are primarily contiguous and located in the eastern portion of the basin.
- The basin contains a portion of two wilderness areas, the 112,400-acre Warm Springs Wilderness and the 27,660-acre Mt. Nutt Wilderness (see Figure 4.0-12).
- Primary land uses are recreation and grazing.

### National Park Service (NPS)

- 33.9% of the land is federally owned and managed by the National Park Service (NPS) as the Lake Mead National Recreation Area.
- The NPS lands are located in the northern and west central portions of the basin.
- Primary land use is recreation

### Private

- 11.9% of the land is private.
- The majority of the private land is located in the vicinity of Bullhead City and Mohave Valley. Private land around Mohave Valley occurs in a checkerboard pattern with tribal lands.
- Primary land uses are domestic, commercial and farming.

### Indian Reservation

- 3.8% of the land is under ownership of the Fort Mojave Tribe.
- Tribal lands are found in the southern portion of the basin and the majority of the lands are interspersed with private lands.
- Primary land uses are domestic and farming.

### State Trust Land

- 3.3% of the land in this basin is held in trust for the public schools and the Miner's Hospital under the State Trust Land system.
- State lands are scattered throughout the southern portion of the basin.
- Primary land use is grazing.

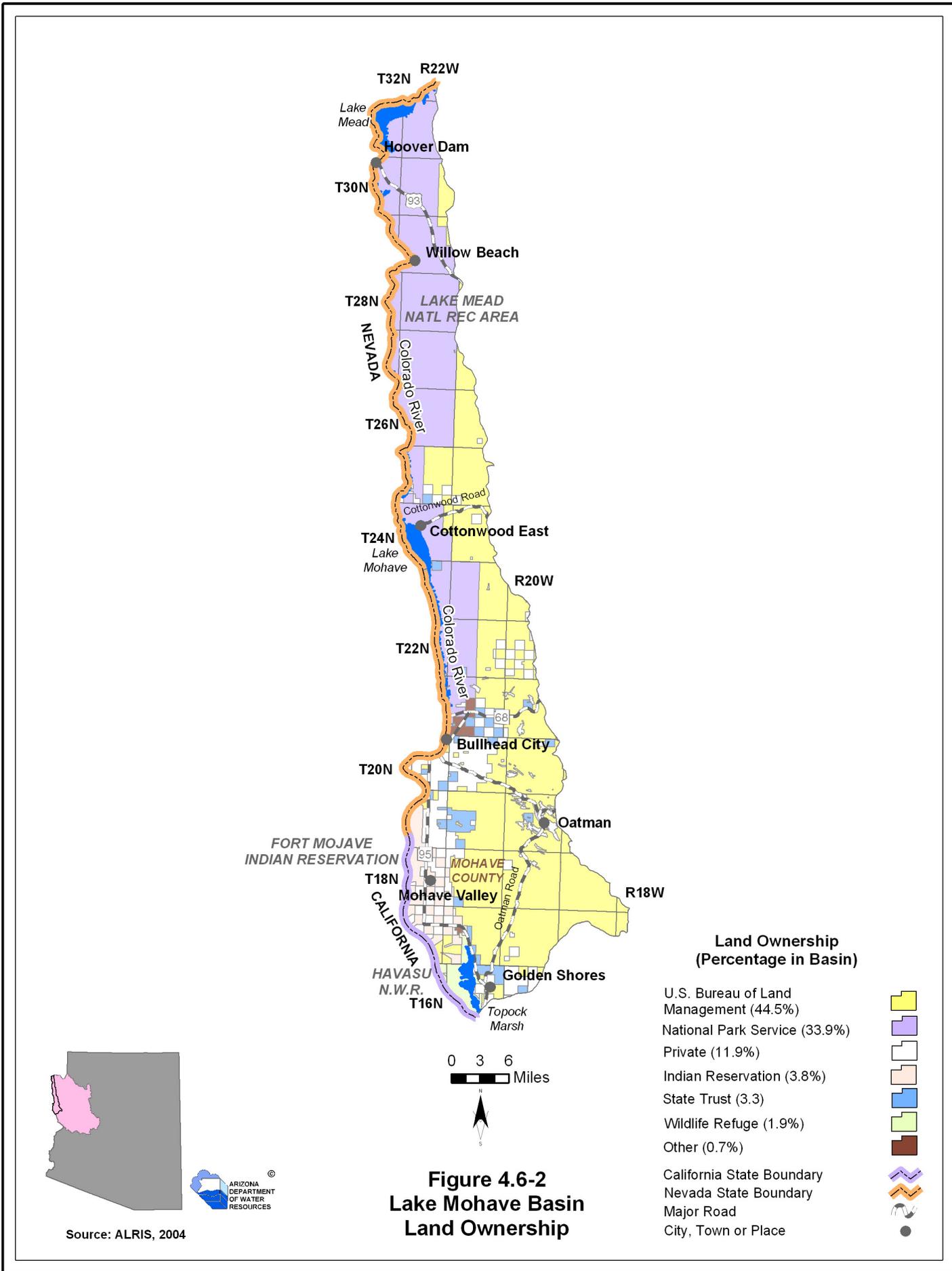
### Wildlife Refuge

- 1.9% of land is federally owned and managed by the U.S. Fish and Wildlife Service.

- All wildlife refuge lands are part of the Havasu National Wildlife Refuge located along the southwestern basin boundary.
- Primary land uses are wildlife conservation and recreation.

**Other (Game and Fish, County and Bureau of Reclamation Lands)**

- 0.7% of the land is under ownership of the Bureau of Reclamation and the Arizona Game and Fish Department.
- The portion of “other” land in T21N, R19W is managed by the U.S. Bureau of Reclamation. The other small parcel of land in T17N, R21W is managed by the Arizona Game and Fish Department as the Colorado River Nature Center.
- Primary land use is recreation.



### 4.6.3 Climate of the Lake Mohave Basin

Climate data from NOAA/NWS Co-op Network, Evaporation Pan and AZMET stations are compiled in Table 4.6-1 and the location is shown on Figure 4.6-3. Figure 4.6-3 also shows precipitation data from the Spatial Climate Analysis Service (SCAS) at Oregon State University. The Lake Mohave Basin does not contain SNOTEL/Snowcourse stations. More detailed information on climate in the planning area is found in Section 4.0.3. A description of the climate data sources and methods is found in Volume 1, Appendix A.

#### NOAA/NWS Co-op Network

- Refer to Table 4.6-1A
- There are three NOAA/NWS Co-op network climate stations in the basin. The average monthly maximum temperature occurs in July at all stations and is approximately 95°F. The average monthly minimum temperature occurs in January or December and ranges between 51.4°F at Willow Beach and 54.3°F at Bullhead City.
- Highest average seasonal rainfall occurs in the winter (January – March). For the period of record used, the highest annual rainfall is 5.84 inches at Bullhead City and the lowest is 4.63 inches at Davis Dam #2.

#### Evaporation Pan

- Refer to Table 4.6-1B
- There is one site at Davis Dam #2 at 660 feet with an annual evaporation rate of 154.32 inches.
- This is the only evaporation pan station in the planning area.

#### AZMET

- Refer to Table 4.6-1C
- There are two AZMET stations in the basin at Mohave and Mohave #2.
- Average annual evaporation at the Mohave site, located at 495 feet, is 80.93 inches.
- Average annual evaporation at the Mohave #2 site, located at 432 feet, is 81.61 inches.
- These are the only AZMET stations in the planning area.

#### SCAS Precipitation Data

- See Figure 4.6-3
- Additional precipitation data shows rainfall as high as 12 inches in the Black Mountains near Oatman, and four inches or less in a number of areas along the boundary with Nevada. This is the lowest average annual precipitation in the planning area.

**Table 4.6-1 Climate Data for the Lake Mohave Basin**

**A. NOAA/NWS Co-op Network:**

Station Name	Elevation (in feet)	Period of Record Used for Averages	Average Temperature Range (in F)		Average Total Precipitation (in inches)				
			Max/Month	Min/Month	Winter	Spring	Summer	Fall	Annual
Bullhead City	540	1971-2000	95.6/Jul	54.3/Dec	2.87	0.26	1.41	1.30	5.84
Davis Dam #2	660	1958-1977 <sup>1</sup>	95.2/Jul	52.2/Jan	1.49	0.44	1.30	1.41	4.63
Willow Beach	760	1971-2000	95.8/Jul	51.4/Jan	2.31	0.56	1.55	1.21	5.63

Source: WRCC, 2005

**Notes:**

<sup>1</sup>Average temperature for period of record shown; average precipitation from 1971-2000

**B. Evaporation Pan:**

Station Name	Elevation (in feet)	Period of Record Used for Averages	Avg. Annual Evap (in inches)
Davis Dam #2	660	1958 - 1977	154.32

Source: WRCC, 2005

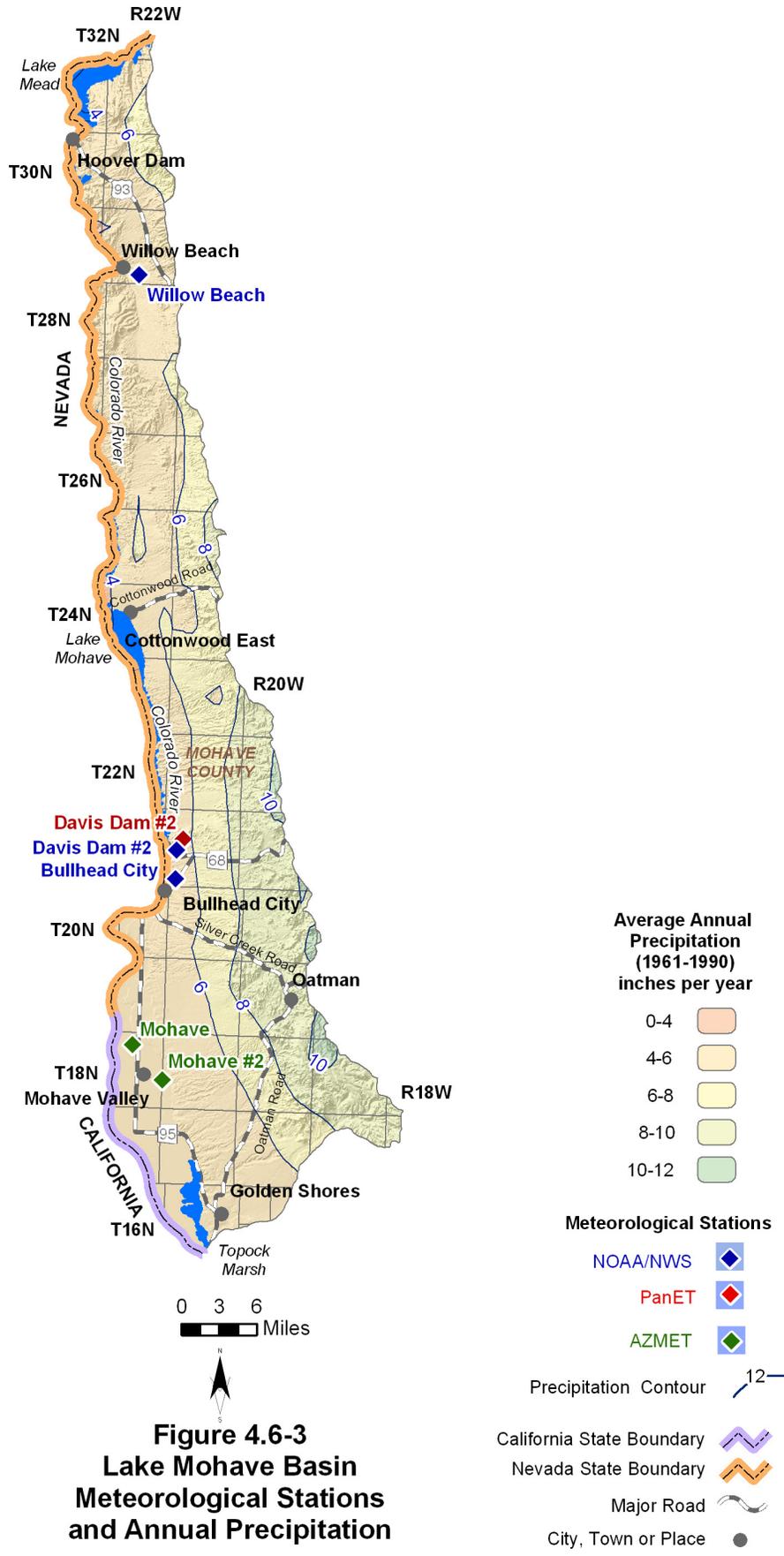
**C. AZMET:**

Station Name	Elevation (feet)	Period of Record	Average Annual Reference Evapotranspiration, in inches (Number of years to calculate averages)
Mohave	495	1999 - current	80.93 (9)
Mohave #2	492	2003 - current	81.61 (5)

Source: Arizona Meteorological Network, 2007

**D. SNOTEL/Snowcourse:**

Station Name	Elevation (in feet)	Period of Record	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								



**Figure 4.6-3**  
**Lake Mohave Basin**  
**Meteorological Stations**  
**and Annual Precipitation**

Precipitation Data Source: Oregon State University, 1998

ARIZONA DEPARTMENT OF WATER RESOURCES

#### 4.6.4 Surface Water Conditions in the Lake Mohave Basin

Streamflow data, including average seasonal flow, average annual flow and other information is shown in Table 4.6-2. Flood ALERT equipment in the basin is shown on Table 4.6-3. Reservoir and stockpond data, including maximum storage or maximum surface area, are shown in Table 4.6-4. The location of streamflow gages identified by USGS number, flood ALERT equipment, USGS runoff contours and large reservoirs are shown on Figure 4.6-4. Descriptions of stream, reservoir and stockpond data sources and methods are found in Volume 1, Appendix A.

##### Streamflow Data

- Refer to Table 4.6-2.
- Data from two real-time stations located on the Colorado River are shown in the table and on Figure 4.6-4.
- Seasonal flow is regulated by releases from the dams and therefore is similar in all seasons.
- Maximum annual flow for both stations occurred in 1984; 21,350,096 acre-feet at the Colorado River below Hoover Dam station and 21,596,249 acre-feet at the Colorado River below Davis Dam station. Minimum annual flow was 5,919,516 acre-feet at the station below Hoover Dam in 1934 and 7,406,290 acre-feet in 1982 at the station below Davis Dam.

##### Flood ALERT Equipment

- Refer to Table 4.6-3.
- As of October 2005 there were eight stations in the basin.

##### Reservoirs and Stockponds

- Refer to Table 4.6-4.
- The basin contains five large reservoirs. The largest is Lake Mead with a maximum capacity of 29,755,000 acre-feet.
- There are two small reservoirs in the basin.
- There are three registered stockponds in the basin.

##### Runoff Contours

- Refer to Figure 4.6-4
- Runoff is 0.1 inches per year, or 5.33 acre-feet per square mile, along the eastern basin boundary.

**Table 4.6-2 Streamflow Data for the Lake Mohave Basin**

Station Number	USGS Station Name	Drainage Area (in mi <sup>2</sup> )	Gage Elevation (in feet)	Period of Record	Average Seasonal Flow (% of annual flow)				Annual Flow/Year (in acre-feet)				Years of Annual Flow Record
					Winter	Spring	Summer	Fall	Minimum	Median	Mean	Maximum	
9421500	Colorado River below Hoover Dam <sup>1</sup>	171,700	675	4/1934 to current (real time)	24	29	26	21	5,919,516 (1934)	9,183,655	10,109,870	21,350,096 (1984)	70
9423000	Colorado River below Davis Dam <sup>1</sup>	173,300	490	5/1905 to current (real time)	21	32	29	18	7,406,290 (1982)	8,499,496	10,102,448	21,596,249 (1984)	44

Source: USGS (NWIS) 2005 & 2008

**Notes:**

<sup>1</sup>Station is located in NV

Statistics based on Calendar Year

Annual Flow statistics based on monthly values

Summation of Average Annual 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

In Period of Record, current equals November 2008

Seasonal and annual flow data used for the statistics was retrieved in 2005

**Table 4.6-3 Flood ALERT Equipment in the Lake Mohave Basin**

Station ID	Station Name	Station Type	Install Date	Responsibility
1560	Gold Road Crest Repeater	Repeater/Precipitation	12/4/2001	Mohave County FCD
1590	Boundary Cone	Precipitation/Stage	12/6/2001	Mohave County FCD
1610	Silver Creek Wash	Precipitation/Stage	12/5/2001	Mohave County FCD
1620	Montana Wash	Precipitation/Stage	12/5/2001	Mohave County FCD
1640	El Rodeo Channel	Precipitation/Stage	12/6/2001	Mohave County FCD
1680	Mohave Valley	Weather Station	NA	Mohave County FCD
7420	Golden Shores	Precipitation	NA	Mohave County FCD
7610	Bullhead City	Weather Station	NA	Mohave County FCD

Source: ADWR 2005b

**Notes:**

FCD = Flood Control District

NA = Not available



**Table 4.6-4 Reservoirs and Stockponds in the Lake Mohave Basin**

**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 <sup>1</sup>	JURISDICTION
1	Mead (Hoover Dam) <sup>2</sup>	Bureau of Reclamation	29,755,000 <sup>3</sup>	C,H,I,RR,S,R	Federal
2	Mohave (Davis Dam)	Bureau of Reclamation	1,818,300 <sup>4</sup>	H,S,R	Federal

**B. Other Large Reservoirs (50 acre surface area or greater)<sup>5</sup>**

MAP KEY	RESERVOIR/LAKE NAME (Name of dam, if different)	OWNER/OPERATOR	MAXIMUM SURFACE AREA (acres)	USE <sup>1</sup>	JURISDICTION
3	Topock Marsh	Bureau of Reclamation	4,000	R	Federal
4	Lost Lake	US Fish & Wildlife Service	568	F,R	Federal
5	Beal Lake	US Fish & Wildlife Service	300	F,R	Federal

Source: Compilation of databases from ADWR & others

**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)<sup>5</sup>**

Total number: 2

Total surface area: 30 acres

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

Total number: 3 (from water right filings)

**Notes:**

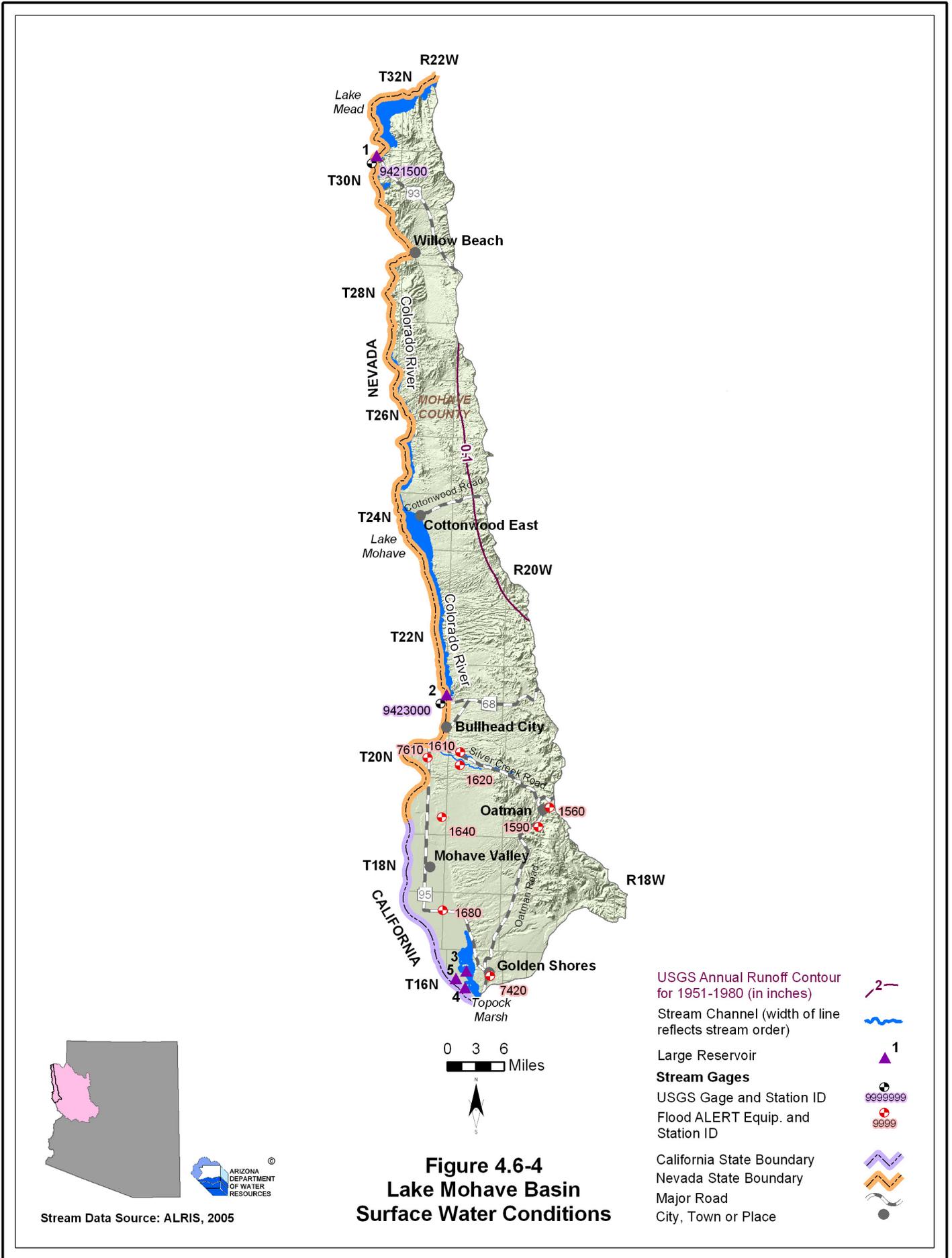
<sup>1</sup>C=flood control; F=fish & wildlife pond; H=hydroelectric; I=irrigation; R=recreation; RR=river regulation; S=water supply

<sup>2</sup>Dam is located in Lake Mohave Basin and lake storage is located in Lake Mohave, Detrital Valley, Hualapai Valley and Meadview Basins.

<sup>3</sup>Includes 2,378,000 acre-feet of dead storage.

<sup>4</sup>Includes 8,530 acre-feet of dead storage.

<sup>5</sup>Capacity data not available to ADWR



#### **4.6.5 Perennial/Intermittent Streams and Major Springs in the Lake Mohave Basin**

Major and minor springs with discharge rates and date of measurement, and the total number of springs in the basin are shown in Table 4.6-5. The locations of major springs as well as perennial and intermittent streams are shown on Figure 4.6-5. Descriptions of data sources and methods for intermittent and perennial reaches and springs are found in Volume 1, Appendix A.

- There is one perennial stream, the Colorado River, located along the western basin boundary.
- There are ten major springs with a measured discharge of 10 gallons per minute (gpm) or greater at any time. The largest discharge rate is 400 gpm at Arizona Hot Springs.
- Springs with measured discharge of 1 to 10 gpm are not mapped but coordinates are given in Table 4.6-5B. There are two minor springs identified in this basin.
- Listed discharge rates may not be indicative of current conditions. All of the measurements, except for Arizona Hot Springs, were made during or prior to 1983.
- The total number of springs identified by the USGS varies from 27 to 29, depending on the database reference.

**Table 4.6-5 Springs in the Lake Mohave Basin**

**A. Major Springs (10 gpm or greater):**

Map Key	Name	Location		Discharge (in gpm) <sup>1</sup>	Date Discharge Measured
		Latitude	Longitude		
1	Arizona Hot Springs	355738	1144332	400	11/1/2004
2	Unnamed	360008	1144420	100	During or prior to 1971
3	Unnamed	355956	1144410	100	During or prior to 1971
4	Hot - Ringbolt Rapids	355739	1144326	48	During or prior to 1983
5	Palm Tree- Cold <sup>2</sup>	355942	1144415	40	During or prior to 1983
6	Arizona Seep	355542	1144220	32	During or prior to 1983
7	Arizona Hot Spot <sup>2</sup>	360022	1144431	32	During or prior to 1983
8	Palm Tree Hot <sup>2</sup>	355942	1144420	32	During or prior to 1983
9	Unnamed	360015	1144420	30	During or prior to 1971
10	Unnamed	360001	1144424	20	10/23/1970

**B. Minor Springs (1 to 10 gpm):**

Name	Location		Discharge (in gpm) <sup>1</sup>	Date Discharge Measured
	Latitude	Longitude		
Unnamed <sup>3</sup>	355925	1144421	5	During or prior to 1979
Box	351649	1142906	1	NA

Source: Compilation of databases from ADWR & others

**C. Total number of springs, regardless of discharge, identified by USGS (see ALRIS, 2005a and USGS, 2006a): 27 to 29**

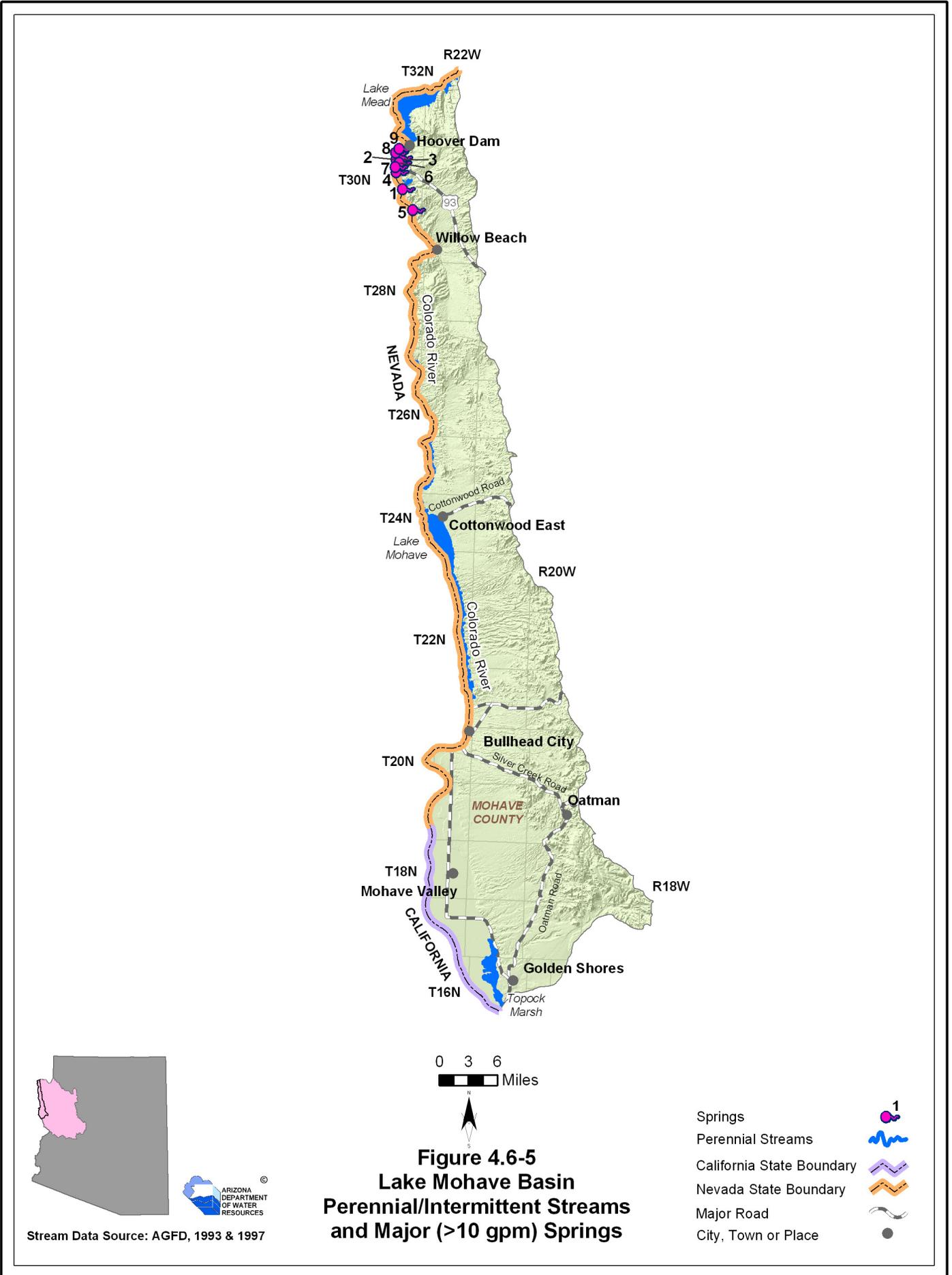
**Notes:**

<sup>1</sup>Most recent measurement identified by ADWR

<sup>2</sup>Spring is not displayed on current USGS topo maps

<sup>3</sup>Location approximated by ADWR

NA=Not available



#### 4.6.6 Groundwater Conditions of the Lake Mohave Basin

Major aquifers, well yields, estimated natural recharge, estimated water in storage, number of index wells and date of last water-level sweep are shown in Table 4.6-6. Figure 4.6-6 shows aquifer flow direction and water-level change between 1990-1991 and 2003-2004. Figure 4.6-7 contains hydrographs for selected wells shown on Figure 4.6-6. Figure 4.6-8 shows well yields in five yield categories. A description of aquifer data sources and methods as well as well data sources and methods, including water-level changes and well yields are found in Volume 1, Appendix A.

##### Major Aquifers

- Refer to Table 4.6-6 and Figure 4.6-6.
- The major aquifer in this basin is recent stream alluvium.
- Flow direction is from north to south in this basin.

##### Well Yields

- Refer to Table 4.6-6 and Figure 4.6-8.
- As shown on Figure 4.6-8 well yields in this basin range from less than 100 gallons per minute (gpm) to greater than 2,000 gpm.
- One source of well yield information, based on 96 reported wells, indicates that the median well yield in this basin is 1,000 gpm.

##### Natural Recharge

- Refer to Table 4.6-6.
- The estimate of natural recharge for this basin is 183,000 acre-feet per year (AFA). Recharge comes principally from infiltration of Colorado River water.

##### Water in Storage

- Refer to Table 4.6-6.
- Storage estimates for this basin range from 1.2 maf to 8.0 maf to a depth of 1,200 feet

##### Water Level

- Refer to Figure 4.6-6. Water levels are shown for wells measured in 2003-2004.
- The Department annually measures three index wells in this basin. Hydrographs for two of these wells are shown in Figure 4.6-7.
- Of the three water depths shown, the deepest is 427 feet south of Bullhead City and the shallowest is 337 feet north of Mohave Valley.

**Table 4.6-6 Groundwater Data for the Lake Mohave Basin**

<b>Basin Area, in square miles:</b>	980	
<b>Major Aquifer(s):</b>	<b>Name and/or Geologic Units</b>	
	Recent Stream Alluvium	
<b>Well Yields, in gal/min:</b>	3,205 (1 well measured)	Measured by ADWR (GWSI) and/or USGS
	Range 15-5,000 Median 1,000 (96 wells reported)	Reported on registration forms for large (>10-inch) diameter wells (Wells55)
	Range 30-1,000	ADWR (1990 and 1994b)
	Range 0-2,500	Anning and Duet (1994)
<b>Estimated Natural Recharge, in acre-feet/year:</b>	183,000	Frethey and Anderson (1986)
<b>Estimated Water Currently in Storage, in acre-feet:</b>	1,200,000 (to 1,200 ft)	ADWR (1994b)
	8,000,000 <sup>1</sup> (to 1,200 ft)	Frethey and Anderson (1986)
	6,000,000 (to 1,200 ft)	Arizona Water Commission (1975)
<b>Current Number of Index Wells:</b>	3	
<b>Date of Last Water-level Sweep:</b>	NA	

**Notes:**

NA = Not Available

<sup>1</sup>Predevelopment Estimate



Water-level change in feet between 1990-1991 and 2003-2004

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

Between -15 and -1 ●  
Between +15 and +30 ●

Generalized Flow Direction →

Consolidated Crystalline & Sedimentary Rocks

Unconsolidated Sediments

California State Boundary

Nevada State Boundary

Major Road

City, Town or Place

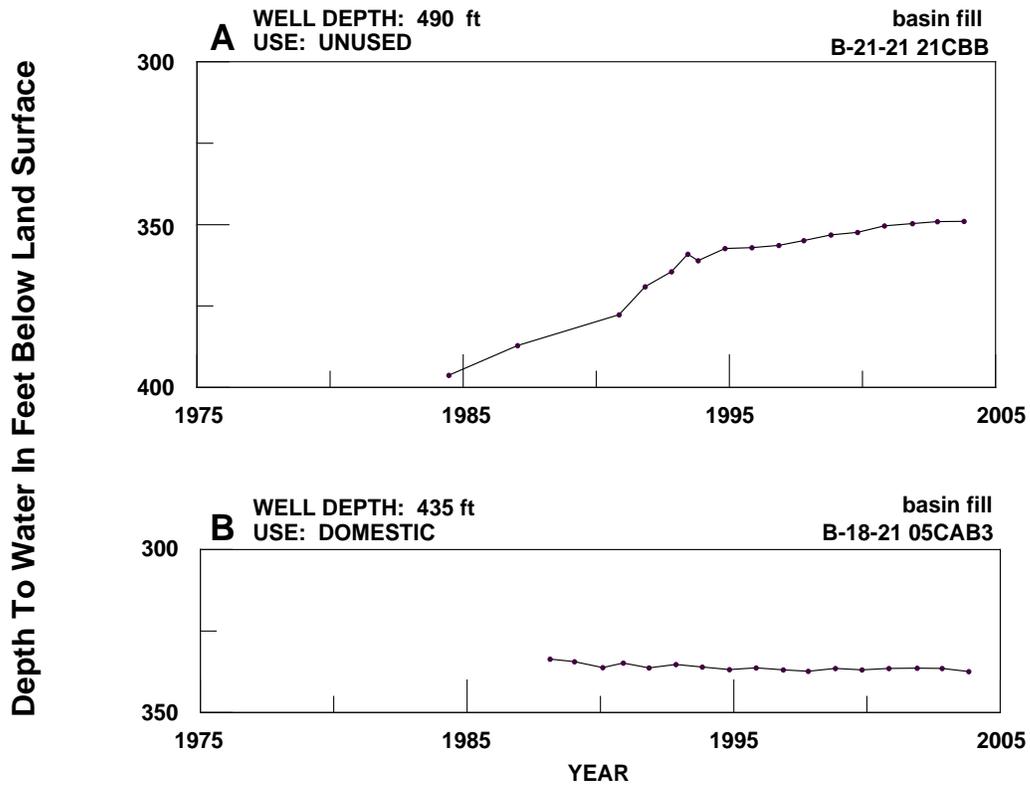
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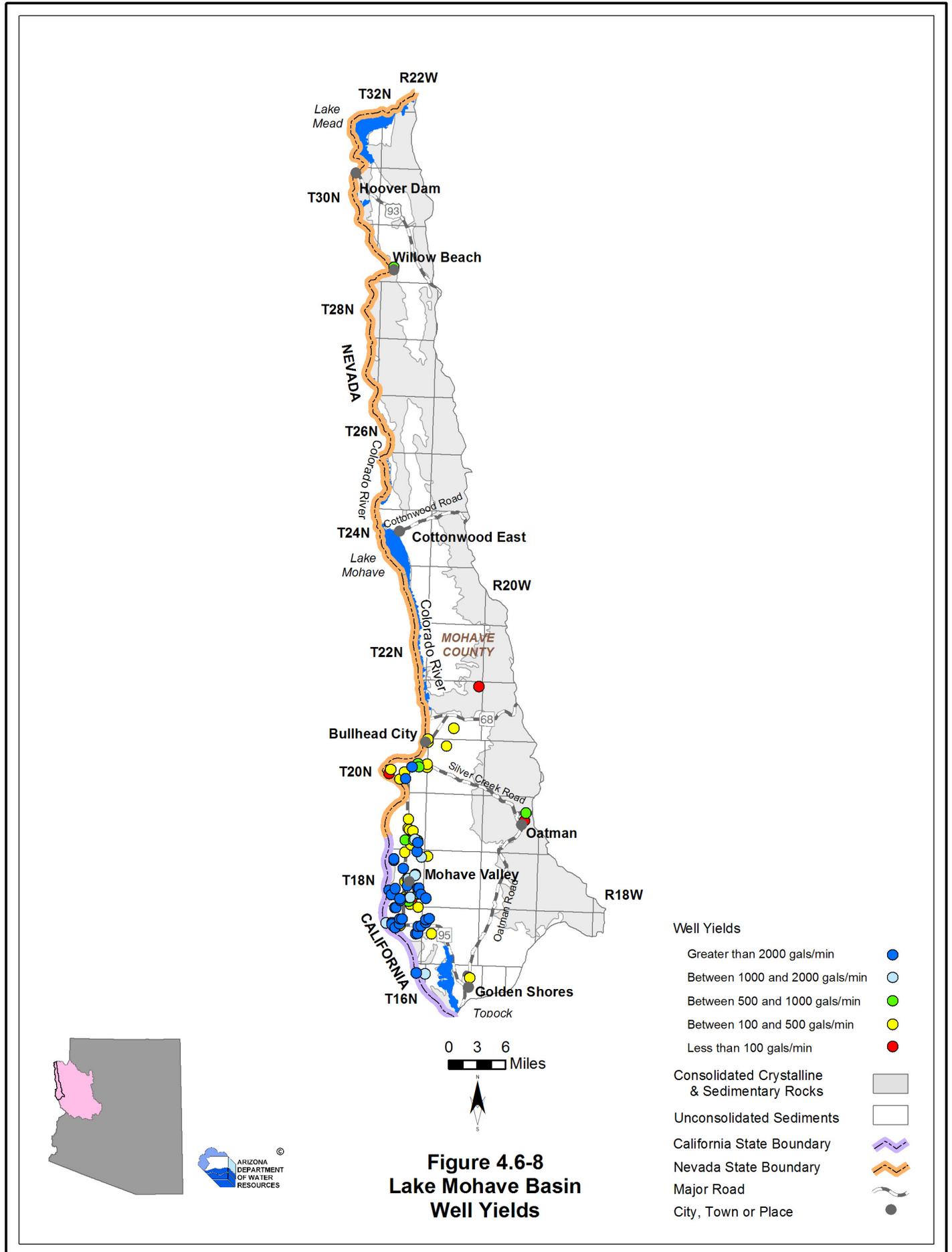


**Figure 4.6-6**  
**Lake Mohave Basin**  
**Groundwater Conditions**



**Figure 4.6-7**  
**Lake Mohave Basin**  
**Hydrographs Showing Depth to Water in Selected Wells**





#### **4.6.7 Water Quality of the Lake Mohave Basin**

Sites with parameter concentrations that have equaled or exceeded drinking water standard(s) (DWS), including location and parameter(s) are shown in Table 4.6-7A. Impaired lakes and streams with site type, name, length of impaired stream reach, area of impaired lake, designated use standard and parameter(s) exceeded is shown in Table 4.6-7B. Figure 4.6-9 shows the location of exceedences and impairment keyed to Table 4.6-7. 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. A description of water quality data sources and methods is found in Volume 1, Appendix A.

##### **Well, Mine or Spring sites that have equaled or exceeded drinking water standards (DWS)**

- Refer to Table 4.6-7A.
- Sixty-five measured sites have parameter concentrations that have equaled or exceeded drinking water standards.
- The parameter most frequently equaled or exceeded in the sites measured was arsenic. Other parameters equaled or exceeded included cadmium, fluoride, lead, nitrate, mercury and total dissolved solids.

##### **Lakes and Streams with impaired waters**

- Refer to Table 4.2-7B.
- Water quality standards for selenium were equaled or exceeded in one 40-mile reach of the Colorado River between Hoover Dam and Lake Mohave.
- The Colorado River between Hoover Dam and Lake Mohave is not part of the ADEQ water quality improvement effort called the Total Maximum Daily Load (TMDL) program at this time.

**Table 4.6-7 Water Quality Exceedences in the Lake Mohave Basin<sup>1</sup>**

**A. Wells, Springs and Mines**

Map Key	Site Type	Site Location			Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard <sup>2</sup>
		Township	Range	Section	
1	Spring	30 North	23 West	10	F
2	Spring	30 North	23 West	10	Hg
3	Spring	30 North	23 West	15	Hg, TDS
4	Spring	30 North	23 West	26	Hg
5	Well	29 North	22 West	29	As
6	Spring	29 North	23 West	12	Hg, TDS
7	Well	27 North	21 West	29	As, TDS
8	Well	27 North	22 West	1	As
9	Well	21 North	21 West	21	As, F, NO3
10	Well	21 North	21 West	27	As
11	Well	21 North	21 West	27	As
12	Well	21 North	21 West	29	As, Pb
13	Well	21 North	21 West	29	As, F
14	Well	21 North	21 West	31	As, Pb
15	Well	20 North	22 West	1	As
16	Well	20 North	22 West	1	NO3
17	Well	20 North	22 West	12	Cd
18	Well	20 North	22 West	14	As
19	Well	20 North	22 West	16	Pb
20	Well	20 North	22 West	16	Pb
21	Well	20 North	22 West	19	NO3
22	Well	20 North	22 West	19	TDS
23	Well	20 North	22 West	19	As, NO3
24	Well	20 North	22 West	25	As
25	Well	20 North	22 West	25	As
26	Well	20 North	22 West	25	As
27	Well	20 North	22 West	26	As, Hg
28	Well	20 North	22 West	26	As
29	Well	20 North	22 West	26	As
30	Well	20 North	22 West	26	F
31	Well	20 North	22 West	26	As
32	Well	20 North	22 West	26	As
33	Well	20 North	22 West	26	As
34	Well	20 North	22 West	26	As, F
35	Well	20 North	22 West	26	F
36	Well	20 North	22 West	26	As, F
37	Well	20 North	22 West	26	As, F
38	Well	20 North	22 West	29	As, NO3
39	Well	20 North	22 West	32	As
40	Well	20 North	22 West	32	As
41	Well	20 North	22 West	35	As, Hg
42	Well	20 North	22 West	35	As, NO3
43	Well	20 North	22 West	35	As, NO3, Hg
44	Well	20 North	23 West	24	As
45	Well	19 North	20 West	26	As
46	Well	19 North	22 West	1	As
47	Well	19 North	22 West	14	As
48	Well	19 North	22 West	26	As
49	Well	19 North	22 West	34	TDS
50	Well	19 North	22 West	35	NO3
51	Well	19 North	22 West	36	F
52	Well	18 North	20 West	7	Pb, NO3

**Table 4.6-7 Water Quality Exceedences in the Lake Mohave Basin (Cont)<sup>1</sup>**

**A. Wells, Springs and Mines**

Map Key	Site Type	Site Location			Parameter(s) Concentration has Equaled or Exceeded Drinking Water Standard <sup>2</sup>
		Township	Range	Section	
53	Well	18 North	22 West	25	As
54	Well	18 North	22 West	27	As
55	Well	18 North	22 West	35	As
56	Well	18 North	22 West	35	As
57	Well	18 North	22 West	36	As
58	Well	17 North	19 West	4	As
59	Well	17 North	21 West	17	As
60	Well	17 North	22 West	3	Pb
61	Well	17 North	22 West	4	As
62	Well	17 North	22 West	10	As, Pb
63	Well	17 North	22 West	11	TDS
64	Well	17 North	22 West	13	As
65	Well	17 North	22 West	14	Pb

Source: Compilation of databases from ADWR & others

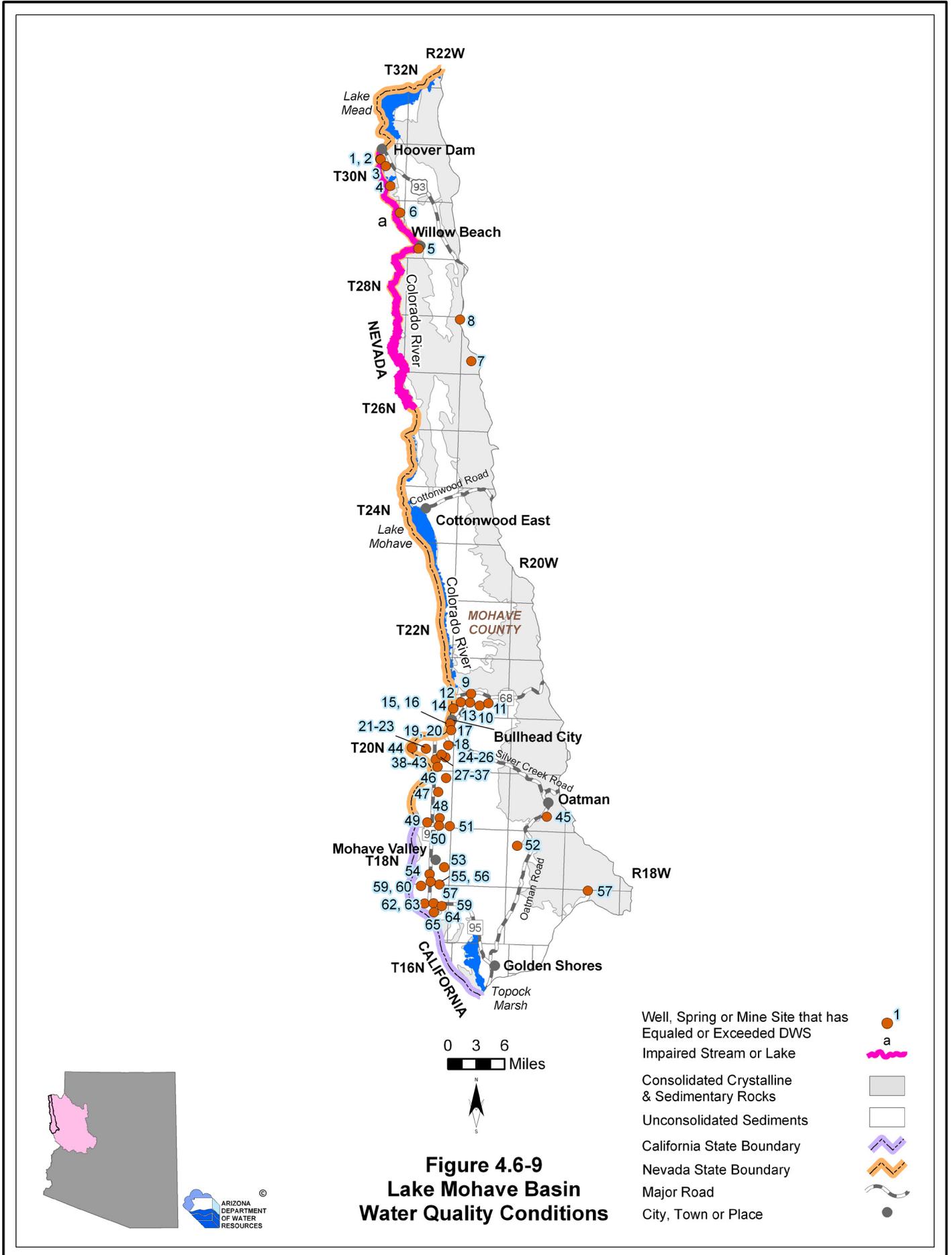
**B. Lakes and Streams**

Map Key	Site Type	Site Name	Length of Impaired Stream Reach (in miles)	Area of Impaired Lake (in acres)	Designated Use Standard <sup>3</sup>	Parameter(s) Exceeding Use Standard <sup>2</sup>
a	Stream	Colorado River (Hoover Dam to Lake Mohave)	40	NA	A&W	Se

Source: ADEQ 2005d

**Notes:**

- NA = Not applicable
- <sup>1</sup> Water quality samples collected between 1970 and 2004.
- <sup>2</sup> As = Arsenic
- Cd = Cadmium
- F = Fluoride
- Pb = Lead
- NO<sub>3</sub> = Nitrate
- Hg = Mercury
- TDS = Total Dissolved Solids
- Se = Selenium
- <sup>3</sup> A&W = Aquatic and Wildlife



#### 4.6.8 Cultural Water Demand in the Lake Mohave Basin

Cultural water demand data including population, number of wells and the average well pumpage and surface water diversions by the municipal, industrial and agricultural sectors are shown in Table 4.6-8. Effluent generation including facility ownership, location, population served and not served, volume treated, disposal method and treatment level is shown in Table 4.6-9. Figure 4.6-10 shows the location of demand centers. A description of cultural water demand data sources and methods is found in Volume 1, Appendix A. More detailed information on cultural water demand is found in Section 4.0.7.

##### Cultural Water Demand

- Refer to Table 4.6-8 and Figure 4.6-10.
- Population in this basin has increased substantially since 1980, increasing from 13,653 in 1980 to 51,549 in 2000.
- Groundwater use has increased in this basin since 1971, with an average of 17,500 AFA from 1971-1975 and an average of 54,000 AFA from 2001-2005.
- The cultural water demand table for this basin reflects the amount of water pumped from wells and diverted from streams for use. Some of these water uses may be accounted as Colorado River water based on an entitlement system established by Decree by the U.S. Supreme Court in Arizona v. California et.al. Further information on Colorado River entitlements in this planning area is provided in Section 4.0.6.
- Surface water diversions in this basin were relatively minimal in the 1970s, with a significant increase in surface water diversions in 1980-1985. Current surface water diversions are 69,000 AFA on average during 2001-2005.
- The majority of surface water use from 1990-2005 was for agricultural irrigation on the Fort Mojave Indian Reservation in the vicinity of Mohave Valley.
- Municipal and industrial demand is found along Highway 95 north of Mohave Valley and in the vicinity of Bullhead City. Although the USGS National Gap Analysis Program GIS cover used for Figure 4.6-10 does not show high intensity municipal and industrial use in the vicinity of Bullhead City, this use exists in this area.
- Municipal groundwater demand has grown from 12,700 AFA in 1991 to 18,800 AFA in 2001-2005.
- Industrial groundwater demand is minimal in this basin, at an average of 600 AFA during 2001-2005. Industrial groundwater demand is for three small mines or quarries and two golf courses in the vicinity of Bullhead City. One golf course, El Rio Country Club, opened in 2005 therefore only one year of water use for is included in the average.
- In 2001-2005 an average of 3,700 acre-feet of surface water per year was used for industrial demand. All industrial surface water demand comes from the South Point power plant on the Fort Mojave Reservation.
- As of 2005 there were 1,887 registered wells with a pumping capacity of less than or equal to 35 gallons per minute and 353 wells with a pumping capacity of more than 35 gallons per minute.

### Effluent Generation

- Refer to Table 4.6-9.
- There are fifteen wastewater treatment facilities in this basin.
- Information on population served was available for only six facilities and information on effluent generation was available for nine facilities. These facilities serve over 15,800 people and generate over 3,100 acre-feet of effluent per year.

**Table 4.6-8 Cultural Water Demand in the Lake Mohave Basin<sup>1</sup>**

Year	Estimated and Projected Population	Number of Registered Water Supply Wells Drilled		Average Annual Demand (in acre-feet) <sup>2</sup>						Data Source	
		Q ≤ 35 gpm	Q > 35 gpm	Well Pumpage			Surface-Water Diversions				
				Municipal	Industrial	Agricultural	Municipal	Industrial	Agricultural		
1971		725 <sup>3</sup>	201 <sup>3</sup>	17,500			2,600			ADWR (2007)	
1972											
1973											
1974											
1975											
1976											
1977											
1978		22,000			14,400						
1979											
1980	13,653	331			34			27,300			
1981	15,353										
1982	17,053										
1983	18,752										
1984	20,452										
1985	22,152										
1986	23,852										
1987	25,551	281			37			29,500			
1988	27,251										
1989	28,951										
1990	30,651	187			31			12,700			
1991	32,740										
1992	34,830										
1993	36,920										
1994	39,010										
1995	41,100										
1996	43,190										
1997	45,280	159			32			16,000			
1998	47,369										
1999	49,459										
2000	51,549										
2001	52,920	203			18			18,800			
2002	54,291										
2003	55,662										
2004	57,033										
2005	58,404										
2010	65,259										
2020	79,878										
2030	91,747										
<b>WELL TOTALS:</b>											<b>1,887</b>

**Notes:**

NR = Not reported.

<sup>1</sup> Does not include effluent or evaporation losses from stockponds and reservoirs.

<sup>2</sup> Includes pumpage and diversion of Colorado River Contract Water.

<sup>3</sup> Includes all wells through 1980.

Table 4.6-9 Effluent Generation in the Lake Mohave Basin

Facility Name	Ownership	City/Location Served	Population Served	Volume Treated/Generated (acre-feet/year)	Disposal Method							Current Treatment Level	Population Not Served	Year of Record	
					Water-course	Evaporation Pond	Irrigation	Golf Course/Turf/Landscape	Wildlife Area	Discharged to Another Facility	Infiltration Basins				
Adobe Highlands Apt. WWTF	Private	Bullhead City			NA										
Bullhead Biltmore	Private	Bullhead City			NA										
Citizens Utilities	Private	Bullhead City	NA	3.3	NA									2003	
Davis Dam Evaporation Ponds	Bureau of Reclamation	Dam		NA		X						NA			
Fort Mohave Treatment Wetland	Ft. Mohave Indian Tribe	Ft. Mohave Indian Reservation	400	45					X			Secondary	NA	2000	
Hoover Dam WWTF	Bureau of Reclamation	Dam			NA										
Katherine's Landing WWTF	National Park Service	Park		NA		X						NA			
Riverbend	NA	Bullhead City			NA										
Section 10	Bullhead City	Bullhead City	12,000	1,792					Rotary Park/Chaparral			X	Adv.Tr.II	10,000	2004
Section 18 WWTF	Bullhead City	Bullhead City	2,000	392			X		Laughlin Ranch				Adv. Tr. II	18,500	2004
Sierra	AZ American Water	Bullhead City	NA	467					Riverview				NA		2004
Sun Ridge	NA	Bullhead City	500	78	X								Adv. Tr. 1	NA	2000
Sunrise Vista Utilities	Private	Bullhead City	665	92							X		Secondary	NA	2007
Tierra Grande <sup>1</sup>	NA	Bullhead City	280	37		X							Adv. Tr. 1	3,720	2000
Wishing Well WWTP	AZ American Water	Ft. Mohave	NA	220					Desert Lakes				Secondary	NA	2007
<b>Total</b>			<b>15,845</b>	<b>3,126</b>											

Source: Compilation of databases from ADWR & others

**Notes:**

Year of record is for the volume of effluent treated/generated

NA: Data not currently available to ADWR

WWTF: Waste Water Treatment Facility

WWTP: Waste Water Treatment Plant

Ad. Tr. 1: Advanced treatment level 1

Adv. Tr. II: Advanced Treatment level II

<sup>1</sup>Scheduled to close in May 2005



**Demand Centers**

- Agriculture 
- M&I - Low Intensity 
- Indian Reservation 
- Indian Reservation Boundary 
- Small Mine/Quarry 
- Power Plant 
- California State Boundary 
- Nevada State Boundary 
- Major Road 
- City, Town or Place 

0 3 6  
Miles



**Figure 4.6-10**  
**Lake Mohave Basin**  
**Cultural Water Demand**



Primary Data Source: USGS National Gap Analysis Program, 2004  
USBOR Lower Colorado River Accounting System, 2003

#### 4.6.9 Water Adequacy Determinations in the Lake Mohave Basin

Water adequacy determination information including the subdivision name, location, number of lots, adequacy determination, reason for the inadequacy determination, date of determination and subdivision water provider are shown in Table 4.6-10A and B for water reports and analysis of adequate water supply. Designated water provider information is shown in Table 4.6-10C with date of application, date the designation was issued and projected or annual estimated demand. Figure 4.6-11 shows the locations of subdivisions and designated providers keyed to the Table. A description of the Water Adequacy Program is found in Volume 1, Appendix C. Adequacy determination data sources and methods are found in Volume 1, Appendix A.

- All subdivisions receiving an adequacy determination are in Mohave County. Two hundred and sixty-five water adequacy determinations have been made in this basin through December 2008. Of the 32,802 lots in 262 subdivisions for which lot information is available, 32,530 lots or 99% were determined to be adequate.
- The three determinations of inadequacy were based on: the applicant's failure to demonstrate a legal right to use the water or failure to demonstrate their legal authority to serve the subdivision; the applicant did not submit the necessary information and/or available hydrologic data were insufficient to make a determination; and water quality.
- Five Analyses of Adequate Water Supply applications have been approved for this basin, for a total of 663 lots.
- There is one designated water provider, Bullhead City, with a projected or annual estimated demand of 23,691 acre-feet.

Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
1	Agua View Tract 1051	Mohave	17 North	22 West	23	56	53-500254	Adequate		2/28/1994	Fort Mohave Tribal Utilities
2	American Business Park	Mohave	19 North	22 West	35	NA	53-500265	Adequate		10/19/1988	Bermuda Water Company, Inc.
3	American Business Park Tct 4075	Mohave	19 North	22 West	35	NA	53-500266	Adequate		10/19/1992	Bermuda Water Company, Inc.
4	Arroyo Park at Desert Foothills	Mohave	20 North	21 West	5	63	53-300215	Adequate		11/18/1996	Citizens Utilities Company-Mohave
5	Arroyo Vista Estates	Mohave	19 North	22 West	12	NA	53-500301	Adequate		1/6/1988	Bermuda Water Company, Inc.
6	Arroyo Vista Estates 4077-E Uni	Mohave	19 North	22 West	12	36	53-400526	Adequate		6/29/2001	Bermuda Water Company, Inc.
7	Aztec Village Tract 4144A	Mohave	19 North	22 West	23	7	53-500305	Adequate		4/20/1993	Bermuda Water Company, Inc.
8	Bermuda Dunes Tract 4039A	Mohave	17 North	22 West	15	NA	53-500319	Adequate		12/11/1984	Bermuda Water Company, Inc.
9	Bermuda Dunes Tract 4039C	Mohave	17 North	22 West	15	NA	53-500320	Adequate		1/7/1988	Bermuda Water Company, Inc.
10	Bermuda Dunes Tract 4039D	Mohave	17 North	22 West	15	NA	53-500321	Adequate		11/15/1988	Bermuda Water Company, Inc.
11	Bermuda Dunes Tract 4059B	Mohave	17 North	22 West	15	NA	53-500322	Adequate		11/21/1985	Bermuda Water Company, Inc.
14	Bermuda Meadows (A)	Mohave	17 North	22 West	15	4	53-500325	Adequate		3/4/1992	Fort Mohave Tribal Utilities
15	Bermuda Meadows (B)	Mohave	17 North	22 West	15	8	53-500326	Adequate		2/27/1992	Fort Mohave Tribal Utilities
16	Beverly Hills Estates Tract 402	Mohave	19 North	22 West	25	NA	53-500329	Adequate		5/2/1983	Dry Lot Subdivision
17	Black Mountain Park	Mohave	20 North	22 West	23	988	53-500342	Adequate		5/1/1990	Citizens Utilities Company-Mohave
18	Bluewater Shores	Mohave	20 North	22 West	17	4	53-500346	Adequate		3/13/1990	Citizens Utilities Company-Mohave
19	Brett Canyon Estates, Tract 419	Mohave	19 North	22 West	25	55	53-401809	Adequate		8/4/2005	Bermuda Water Company, Inc.
20	Buena Vista #4	Mohave	20 North	22 West	16	NA	53-500365	Adequate		11/12/1975	Oasis Utility Company
21	Bullhead Airpark Phase 1	Mohave	21 North	21 West	31,32	7	53-300153	Adequate		7/23/1996	North Mohave Valley Corp.
22	Bullhead Plaza	Mohave	20 North	22 West	18	NA	53-500369	Adequate		5/17/1982	Oasis Utility Company
23	Camp Mohave Heights	Mohave	19 North	22 West	23	NA	53-500385	Adequate		10/23/1989	Citizens Utilities Company-Mohave
24	Casa Blanca	Mohave	20 North	23 West	13	13	53-500401	Adequate		4/9/1991	Citizens Utilities Company-Mohave
25	Casa Grande Condominiums	Mohave	21 North	21 West	21	19	53-500406	Adequate		6/26/1992	North Mohave Valley Corp.
26	Casa de Rio Villas Condos	Mohave	20 North	22 West	17	60	53-500403	Adequate		9/28/1983	Citizens Utilities Company-Mohave
27	Central Village A	Mohave	20 North	22 West	19	46	53-500432	Adequate		3/21/1978	Citizens Utilities Company-Mohave
28	Chaparral Country Club Tract 50	Mohave	20 North	22 West	29	30	53-500437	Adequate		11/22/1994	Citizens Utilities Company-Mohave
29	Chaparral Terrace	Mohave	20 North	22 West	29	319	53-500444	Adequate		10/11/1985	Citizens Utilities Company-Mohave
30	Chaparral Villas Condominiums	Mohave	20 North	22 West	29	NA	53-500446	Adequate		10/25/1988	Citizens Utilities Company-Mohave
31	Chaparral del Rio Condominiums	Mohave	20 North	22 West	29	90	53-500438	Adequate		7/28/1989	Citizens Utilities Company-Mohave
32	Clearwater Hills #1	Mohave	19 North	22 West	11	120	53-500470	Adequate		10/15/1980	Bermuda Water Company, Inc.
33	Clearwater Hills #2	Mohave	19 North	22 West	11	75	53-500471	Adequate		6/13/1985	Bermuda Water Company, Inc.



Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
34	Clearwater Hills #2,3	Mohave	19 North	22 West	11	81	53-500472	Adequate		4/12/1982	Bermuda Water Company, Inc.
35	Colorado River Estates	Mohave	20 North	22 West	25,26	128	53-500486	Adequate		4/2/1990	Dry Lot Subdivision
36	Colorado Riverfront Terrace	Mohave	17 North	22 West	23	61	53-500488	Adequate		6/22/1989	Bermuda Water Company, Inc.
37	Courtney Greens Tract 4054	Mohave	19 North	22 West	23	42	53-500531	Adequate		12/16/1986	Bermuda Water Company, Inc.
38	Courtney Greens #2 Tract 4054B	Mohave	19 North	22 West	23	30	53-500532	Adequate		8/20/1990	Bermuda Water Company, Inc.
39	Courtney Park East 4147A	Mohave	19 North	22 West	23	6	53-500533	Adequate		7/22/1993	Bermuda Water Company, Inc.
40	Courtney Park East Tract 4147-B	Mohave	19 North	22 West	23	64	53-500534	Adequate		6/23/1997	Bermuda Water Company, Inc.
41	Courtney Place Tract 4070	Mohave	19 North	22 West	23	5	53-500535	Adequate		10/24/1990	Bermuda Water Company, Inc.
42	Courtney Place Townhomes 4071A	Mohave	19 North	22 West	23	18	53-500536	Adequate		9/24/1992	Bermuda Water Company, Inc.
43	Covina Gardens Condominiums	Mohave	20 North	22 West	29	12	53-500538	Adequate		12/8/1982	Citizens Utilities Company-Mohave
44	Coyote Run Tract 4176-B	Mohave	19 North	22 West	23	104	53-700238	Adequate		2/21/2007	Arizona American Water Co.
45	Coyote Run Tract, 4176-A	Mohave	19 North	22 West	23	42	53-401144	Adequate		2/18/2004	Arizona American Water Co.
46	Del Rio Estates	Mohave	20 North	22 West	32	7	53-400542	Adequate		8/6/2001	Citizens Utilities Company-Mohave
47	Delta City #5	Mohave	17 North	21 West	7	2,173	53-500548	Adequate		9/13/1973	Bermuda Water Company, Inc.
48	Desert Canyon at SunRidge	Mohave	21 North	21 West	21	141	53-401837	Adequate		2/2/2006	North Mohave Valley Corp.
49	Desert Foothills Estates #5011	Mohave	20 North	21 West	5	3,353	53-500559	Adequate		4/18/1995	Citizens Utilities Company-Mohave
50	Desert Glen	Mohave	20 North	22 West	13	103	53-500562	Adequate		5/20/1981	Citizens Utilities Company-Mohave
51	Desert Horizons, Tract 4161	Mohave	19 North	22 West	23	44	53-400113	Adequate		9/21/1999	Bermuda Water Company, Inc.
52	Desert Isle	Mohave	20 North	22 West	13	15	53-500566	Adequate		11/15/1990	Citizens Utilities Company-Mohave
53	Desert Lakes Estates Tract 4152	Mohave	19 North	22 West	36	31	53-300025	Adequate		6/5/1996	Bermuda Water Company, Inc.
54	Desert Lakes Estates Tract 4152	Mohave	19 North	22 West	36	40	53-400220	Adequate		1/5/2000	Bermuda Water Company, Inc.
55	Desert Lakes Estates Tract 4152	Mohave	19 North	22 West	36	42	53-400987	Adequate		10/22/2003	Bermuda Water Company, Inc.
56	Desert Lakes Estates Tract 4159	Mohave	19 North	22 West	35	6	53-400475	Adequate		4/27/2001	Bermuda Water Company, Inc.
57	Desert Lakes Estates, Tract 415	Mohave	19 North	22 West	36	159	53-401687	Adequate		9/27/2005	Bermuda Water Company, Inc.
58	Desert Lakes Golf Course & Estates	Mohave	19 North	22 West	36	233	53-500569	Adequate		5/14/1990	Bermuda Water Company, Inc.
59	Desert Lakes Golf Course & Estates #F	Mohave	19 North	22 West	35	38	53-300326	Adequate		10/29/1997	Bermuda Water Company, Inc.
60	Desert Lakes Golf Course & Estates Tract 4163	Mohave	19 North	22 West	35	32	53-400697	Adequate		5/7/2002	Bermuda Water Company, Inc.
61	Desert Ridge Tract 4032A	Mohave	19 North	22 West	11	83	53-500575	Adequate		2/23/1984	Bermuda Water Company, Inc.
62	Dos Vientos Tr. 4199	Mohave	19 North	22 West	23	15	53-401676	Adequate		4/11/2005	Bermuda Water Company, Inc.
63	East Shore Villas #1 Tract 5070	Mohave	20 North	22 West	9,16	51	53-400175	Adequate		11/22/1999	Arizona American Water Co.

Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
64	Edgewood Condominiums Tr 4021	Mohave	20 North	22 West	13	36	53-500599	Adequate		8/18/1981	Citizens Utilities Company-Mohave
65	El Camino Estates	Mohave	19 North	22 West	1	763	53-500601	Adequate		12/7/1989	Bermuda Water Company, Inc.
66	El Camino Village #1	Mohave	19 North	22 West	1	251	53-500602	Adequate		12/26/1991	Bermuda Water Company, Inc.
67	El Rio Country Club, Tract 417	Mohave	18 North	22 West	11	143	53-401778	Adequate		9/1/2005	Bermuda Water Company, Inc.
68	El Rio Country Club, Tract 4177	Mohave	18 North	22 West	11	161	53-401466	Adequate		5/4/2005	Bermuda Water Company, Inc.
69	Emerald River Estates T4093	Mohave	19 North	22 West	25	45	53-500612	Adequate		8/21/1990	Bermuda Water Company, Inc.
70	Emerald River Estates Tract 409	Mohave	19 North	22 West	25	62	53-400002	Adequate		8/24/1999	Bermuda Water Company, Inc.
71	Everglades Estates Tract 4214A	Mohave	19 North	22 West	36	65	53-700575	Adequate		10/23/2008	Bermuda Water Company, Inc.
72	Evergreen Addition	Mohave	18 North	22 West	27	38	53-500623	Adequate		7/3/1979	Willow Valley Water Co.
73	Evergreen Addition #3	Mohave	18 North	22 West	27	77	53-500625	Adequate		10/19/1987	Willow Valley Water Co.
74	Fairway Estates #1-4148A	Mohave	19 North	22 West	35	49	53-500630	Adequate		10/22/1992	Bermuda Water Company, Inc.
75	Fairway Estates #2	Mohave	19 North	22 West	35	28	53-500631	Adequate		4/26/1993	Bermuda Water Company, Inc.
76	Fairway Estates Tract 4097A	Mohave	19 North	22 West	35	100	53-500632	Adequate		5/8/1991	Bermuda Water Company, Inc.
77	Fairway Estates Tract 4097B	Mohave	19 North	22 West	35	28	53-500633	Adequate		7/12/1991	Bermuda Water Company, Inc.
78	Fairway Estates Tract 4097C	Mohave	19 North	22 West	35	47	53-401366	Adequate		9/9/2004	Bermuda Water Company, Inc.
79	Fairway Estates Tract 4097D	Mohave	19 North	22 West	35	48	53-401201	Adequate		2/13/2004	Bermuda Water Company, Inc.
80	Fairway Estates Tract 4097 E	Mohave	19 North	22 West	35	41	53-400538	Adequate		3/4/2002	Bermuda Water Company, Inc.
81	Fox Creek Estates	Mohave	20 North	21 West	31	1,750	NA	Adequate		11/2/1988	Citizens Utilities Company-Mohave
82	Fort Mojave Business Park, Trac	Mohave	19 North	22 West	25	28	53-700474	Adequate		1/25/2008	Bermuda Water Company, Inc.
83	Golden Shores Tract 4051	Mohave	16 North	21 West	11	32	53-500720	Adequate		5/19/1989	Golden Shores Water Co.
84	Granmar Estates, Tract 4181	Mohave	18 North	22 West	3	49	43-401259	Adequate		5/11/2004	Bermuda Water Company, Inc.
85	Highlands at Desert Foothills	Mohave	20 North	21 West	5	211	53-500792	Adequate		4/18/1995	Citizens Utilities Company-Mohave
86	Holiday Hills	Mohave	20 North	21 West	29	658	53-500796	Adequate		11/14/1986	Citizens Utilities Company-Mohave
87	Holiday Shores	Mohave	20 North	22 West	18	458	53-500797	Adequate		6/11/1973	Oasis Utility Company
88	Holiday Shores #4	Mohave	20 North	22 West	18	458	53-500798	Adequate		11/23/1973	Oasis Utility Company
89	Holiday Shores #5	Mohave	20 North	22 West	18	120	53-500799	Adequate		9/2/1975	Oasis Utility Company
90	Holiday Shores #6	Mohave	20 North	22 West	18	405	53-500800	Adequate		11/13/1975	Oasis Utility Company
91	Joy Lane Plaza	Mohave	19 North	22 West	26	13	53-500829	Adequate		3/27/1991	Bermuda Water Company, Inc.
92	La Mesa Acres Tract 4038	Mohave	19 North	22 West	13	51	53-500857	Adequate		4/29/1983	Bermuda Water Company, Inc.
93	La Paloma Condominiums	Mohave	21 North	21 West	21	194	53-500858	Adequate		12/8/1992	North Mohave Valley Corp.
94	Lagoon Estates #6	Mohave	17 North	22 West	1	160	53-500869	Adequate		7/20/1976	Lagoon Estates Water Co.
95	Lagoon, The	Mohave	20 North	22 West	9	72	53-500870	Adequate		2/16/1982	Citizens Utilities Company-Mohave



Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
97	Lake Cimarron Estates, Unit II,	Mohave	18 North	22 West	23	35	53-401661	Adequate		3/11/2005	Willow Valley Water Co.
98	Lake Mohave Highlands	Mohave	21 North	21 West	29	93	53-500881	Adequate		8/15/1973	Lake Mohave Highlands Water Company
99	Lake Mohave Highlands #2	Mohave	21 North	21 West	29	10	53-500882	Adequate		12/4/1974	Lake Mohave Highlands Water Company
100	Lake Mohave Highlands #3	Mohave	21 North	21 West	29	124	NA	Adequate		2/28/1975	Lake Mohave Highlands Water Company
101	Lake Mohave Highlands #4	Mohave	21 North	21 West	29	7	53-500883	Adequate		3/1/1976	Lake Mohave Highlands Water Company
102	Lakeside Estates	Mohave	20 North	22 West	18	44	53-500890	Adequate		5/5/1981	Oasis Utility Company
103	Lakeview Village Tract 4097	Mohave	19 North	22 West	35	279	53-500892	Adequate		5/2/1990	Bermuda Water Company, Inc.
104	Las Estancias Tract 1199	Mohave	19 North	22 West	26	151	53-500894	Adequate		8/28/1973	Bermuda Water Company, Inc.
105	Las Palmas, Tract 4222 (fkaTrac	Mohave	19 North	22 West	23	14	53-401739	Adequate		12/3/2007	Arizona American Water Co.
106	Linda Vista	Mohave	19 North	22 West	23	42	53-400839	Adequate		11/19/2002	Arizona American Water Co.
107	Linda Vista Tract 4178	Mohave	19 North	22 West	23	42	53-400899	Adequate		2/19/2003	Arizona American Water Co.
108	Lone Star Commercial Park	Mohave	19 North	22 West	23	9	53-500914	Adequate		8/20/1990	Bermuda Water Company, Inc.
109	Los Altos, Tract 4184	Mohave	19 North	22 West	25	21	53-401370	Adequate		8/22/2005	Arizona American Water Co.
110	Los Lagos	Mohave	18 North	22 West	1	457	53-500919	Adequate		10/16/1990	Bermuda Water Company, Inc.
111	Los Pueblos @Desert FoothillsTr	Mohave	20 North	21 West	5	71	53-400235	Adequate		1/31/2000	Arizona American Water Co.
112	Mesa Vista, Tract 4169	Mohave	19 North	22 West	24	131	53-400618	Adequate		3/4/2002	Bermuda Water Company, Inc.
113	Miracle View Condominiums	Mohave	20 North	22 West	26	32	53-500986	Adequate		8/28/1985	Citizens Utilities Company-Mohave
114	Mohave Landing Tract 4213 A, Ph	Mohave	18 North	22 West	23	46	53-700571	Adequate		12/10/2008	Citizens Utilities Company-Mohave
115	Mohave Mesa Estates Tract 4013	Mohave	19 North	22 West	27	14	53-500999	Adequate		4/27/1982	Dry Lot Subdivision
116	Mohave Sun Valley Airport	Mohave	18 North	22 West	25	170	53-501000	Adequate		2/12/1985	Bermuda Water Company, Inc.
117	Mohave Sunrise Tract 1084B	Mohave	19 North	22 West	11	99	53-501001	Adequate		5/18/1989	Bermuda Water Company, Inc.
118	Mohave Sunrise Tract 4085	Mohave	19 North	22 West	11	NA	53-501002	Adequate		6/22/1989	Bermuda Water Company, Inc.
119	Mohave Valley Business Park	Mohave	19 North	22 West	23	31	53-501004	Adequate		5/2/1986	Bermuda Water Company, Inc.
120	Monte Vista Estates	Mohave	18 North	22 West	23	22	53-501007	Adequate		12/2/1981	Dry Lot Subdivision
121	Moon Ridge	Mohave	19 North	22 West	25	99	53-501011	Adequate		7/25/1991	Bermuda Water Company, Inc.
122	Moon River Resort, Inc.	Mohave	18 North	22 West	3	89	53-400579	Adequate		12/10/2001	Bermuda Water Company, Inc.
123	Moon Valley Tract 4120	Mohave	19 North	22 West	25	16	53-501012	Adequate		9/5/1991	Bermuda Water Company, Inc.
124	Mountain View Ranches	Mohave	18 North	21 West	5	34	53-501032	Inadequate	A1	4/15/1981	Dry Lot Subdivision
126	Mountainside Village Ranch	Mohave	18 North	21 West	6	315	53-402049	Adequate		4/8/2008	Bermuda Water Company, Inc.
127	Mystic Canyon, Tract 4197	Mohave	18 North	21 West	7	266	53-401832	Adequate		8/15/2005	Bermuda Water Company, Inc.
128	Mystic Canyon, Tract 4197 A	Mohave	18 North	21 West	7	119	53-500021	Adequate		10/20/2006	Bermuda Water Company, Inc.

Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
129	Palm Estates #2 Tract 4104	Mohave	19 North	22 West	14	56	53-501093	Adequate		8/2/1990	Bermuda Water Company, Inc.
130	Palm Estates #2, Tract 4104B	Mohave	19 North	22 West	14	25	53-400003	Adequate		8/24/1999	Bermuda Water Company, Inc.
131	Palm Villa Ranchos Tract 1226	Mohave	19 North	22 West	11	50	53-501094	Adequate		12/8/1982	Bermuda Water Company, Inc.
132	Palma Quartz	Mohave	20 North	22 West	17	33	53-501095	Adequate		6/19/1991	Citizens Utilities Company-Mohave
133	Palo Verde Place Tract 4006	Mohave	20 North	22 West	32	420	53-501096	Adequate		5/27/1980	Rio Utility Co.
134	Palo Verde Place Tract 4006-E	Mohave	20 North	22 West	32	68	53-501097	Adequate		7/2/1992	Rio Utility Co.
135	Palo Verde Plaza, Tract 5025	Mohave	20 North	22 West	35	15	53-300097	Adequate		3/20/1996	Arizona American
136	Palo Verde Shores	Mohave	20 North	22 West	29	28	53-400330	Adequate		7/18/2000	Citizens Utilities Company-Mohave
137	Park at Mesquite Creek, The	Mohave	18 North	22 West	12	226	53-501107	Inadequate	B	1/16/1992	Fort Mohave Triba
139	Patriot Estates Subdivision	Mohave	19 North	22 West	36	119	53-500031	Adequate		11/30/2006	Bermuda Water Company, Inc.
140	Pebble Lake #2	Mohave	19 North	22 West	34	30	53-501131	Adequate		8/25/1978	Pebble Lake Water Co.
141	Pebble Lake #3	Mohave	19 North	21 West	34	143	53-501132	Adequate		5/8/1980	Pebble Lake Water Co.
142	Pegasus Ranch	Mohave	21 North	21 West	29	100	53-501139	Adequate		10/22/1992	Citizens Utilities Company-Mohave
143	Pegasus Ranch Tract 4019-A	Mohave	21 North	21 West	29	26	53-501140	Adequate		8/22/1983	Citizens Utilities Company-Mohave
144	Pegasus Ranch Estates Tract 508	Mohave	21 North	21 West	29	20	53-400638	Adequate		1/15/2002	Citizens Utilities Company-Mohave
145	Pegasus Ranch Tract 5030	Mohave	21 North	21 West	29	14	53-300355	Adequate		10/29/1997	Arizona American Water Co.
146	Perry Acres #2 Tract 4026	Mohave	18 North	22 West	13	157	53-501142	Adequate		5/21/1982	Mohave Valley Water Co
147	Perry Acres Tract 4007	Mohave	18 North	22 West	13	96	53-501143	Adequate		10/7/1980	Mohave Valley Water Co
148	Pine River Estates Tract 4128	Mohave	19 North	22 West	25	17	53-501155	Adequate		9/5/1991	Bermuda Water Company, Inc.
149	Pueblo Grove	Mohave	18 North	22 West	35	14	53-501227	Adequate		9/18/1981	Dry Lot Subdivision
150	Punto de Vista #5	Mohave	21 North	21 West	27	233	53-501229	Adequate		6/25/1980	Thumb Butte Water Co.
151	Rancho Colorado	Mohave	20 North	21 West	13	1,886	53-501253	Adequate		7/28/1988	Citizens Utilities Company-Mohave
152	Rancho Colorado B	Mohave	20 North	22 West	13	15	53-501254	Adequate		7/28/1988	Citizens Utilities Company-Mohave
153	Rancho Grande Tract 4083	Mohave	19 North	22 West	14	NA	53-501259	Adequate		1/5/1990	Bermuda Water Company, Inc.
154	Rio Camino Tract 4123	Mohave	19 North	22 West	23	34	53-501300	Adequate		2/14/1991	Bermuda Water Company, Inc.
155	Rio Hacienda	Mohave	19 North	22 West	14	102	53-501301	Adequate		8/1/1975	Bermuda Water Company, Inc.
156	Rio Lado Villas Condominiums	Mohave	20 North	23 West	13	25	53-501302	Adequate		7/3/1986	Citizens Utilities Company-Mohave
157	Rio Las Palmas	Mohave	20 North	22 West	1	48	53-501303	Adequate		2/10/1982	Citizens Utilities Company-Mohave
158	Rio Lindo Condominiums	Mohave	20 North	23 West	13	32	53-501304	Adequate		4/25/1984	Citizens Utilities Company-Mohave
159	Rio Lomas #4	Mohave	19 North	22 West	11	104	53-501306	Adequate		1/28/1974	Bermuda Water Company, Inc.
160	Rio Vista Condominiums	Mohave	20 North	22 West	9	22	53-501322	Adequate		5/5/1981	Citizens Utilities Company-Mohave



Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
161	Rio Vista Estates	Mohave	18 North	22 West	27	36	53-501324	Adequate		4/12/1988	Willow Valley Water Co.
162	River Retreat	Mohave	20 North	23 West	13	127	53-501325	Adequate		12/11/1974	Fort Mohave Tribal Utilities
163	River Road City Tract 1022	Mohave	17 North	22 West	11	141	53-501326	Adequate		2/1/1991	Fort Mohave Tribal Utilities
164	River View Mall	Mohave	20 North	22 West	23	8	53-501327	Adequate		11/17/1988	Citizens Utilities Company-Mohave
165	River View Ranches	Mohave	19 North	22 West	13	197	53-501328	Adequate		1/23/1980	Dry Lot Subdivision
166	Rivershore Villas Condominiums	Mohave	20 North	22 West	9	165	53-501329	Adequate		3/26/1981	Citizens Utilities Company-Mohave
167	Riverview Bluffs #2A	Mohave	20 North	22 West	13	54	53-501331	Adequate		8/28/1989	Citizens Utilities Company-Mohave
168	Riverview Bluffs Condominiums	Mohave	20 North	22 West	13	63	53-501332	Adequate		2/6/1985	Citizens Utilities Company-Mohave
169	Riviera Commercial Park	Mohave	20 North	22 West	19	12	53-501333	Inadequate	C	2/28/1984	Citizens Utilities Company-Mohave
170	Riviere D' Azur Villas	Mohave	20 North	22 West	16	243	53-501334	Adequate		5/1/1990	Citizens Utilities Company-Mohave
171	Roadhaven Marina Condominiums	Mohave	20 North	22 West	16	58	53-501335	Adequate		10/19/1983	Oasis Utility Company
172	Roadhaven Marina Condos #2	Mohave	20 North	22 West	16	51	53-501336	Adequate		2/3/1984	Oasis Utility Company
173	Roadhaven Marina Condos #3	Mohave	20 North	22 West	16	60	53-501337	Adequate		8/21/1984	Citizens Utilities Company-Mohave
174	Roadhaven Resort of Bullhead Ct	Mohave	20 North	22 West	24	697	53-501338	Adequate		2/3/1984	Citizens Utilities Company-Mohave
175	Rodeo Park Tract 4145-A	Mohave	19 North	22 West	23	24	53-400296	Adequate		3/14/2001	Bermuda Water Company, Inc.
176	Rodeo Park Tract 4145-B	Mohave	19 North	22 West	23	31	53-400755	Adequate		7/30/2002	Bermuda Water Company, Inc.
177	Rodeo Park Tract 4145-C	Mohave	19 North	22 West	23	60	53-401117	Adequate		11/3/2003	Bermuda Water Company, Inc.
178	Sage Hill, Tract 4179-A	Mohave	19 North	22 West	25	46	53-401219	Adequate		2/23/2004	Bermuda Water Company, Inc.
179	Sage Hill, Tract 4179-B, Phase	Mohave	19 North	22 West	25	53	53-401506	Adequate		11/24/2004	Bermuda Water Company, Inc.
180	Santa Evinita, Tract 4167-A	Mohave	19 North	22 West	23	34	53-400515	Adequate		7/17/2001	Bermuda Water Company, Inc.
181	Santa Evinita, Tract 4167-B	Mohave	19 North	22 West	23	40	53-400860	Adequate		3/17/2003	Bermuda Water Company, Inc.
182	Sellan Estates, Tract 5024	Mohave	21 North	21 West	30	6	53-300051	Adequate		10/10/1995	North Mohave Valley Corp.
183	Shores, The	Mohave	20 North	23 West	13	17	53-501390	Adequate		6/28/1977	Citizens Utilities Company-Mohave
184	Silver Ridge Townhouse Condos	Mohave	20 North	21 West	19	210	53-501410	Adequate		3/6/1991	Citizens Utilities Company-Mohave
185	Silver Sands Estates	Mohave	19 North	22 West	26	159	53-501411	Adequate		6/19/1990	Bermuda Water Company, Inc.
186	South Valley Park Tract 4068	Mohave	17 North	22 West	15	30	53-501442	Adequate		1/7/1988	Bermuda Water Company, Inc.
188	Stoneridge	Mohave	19 North	22 West	11	14	53-501459	Adequate		9/18/1990	Bermuda Water Company, Inc.
189	Sun Desert Estates	Mohave	19 North	22 West	25	49	53-501479	Adequate		9/5/1991	Bermuda Water Company, Inc.
190	Sun Ridge Tract 4042F	Mohave	21 North	21 West	30	59	53-501481	Adequate		2/8/1990	North Mohave Valley Corp.
191	Sun Ridge 4042-J	Mohave	21 North	21 West	21	36	53-400633	Adequate		1/18/2002	North Mohave Valley Corp.

Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
192	Sun Ridge Estates Tract 4024A	Mohave	21 North	21 West	21	223	53-501482	Adequate		11/16/1983	North Mohave Valley Corp.
193	Sun Ridge Estates Tract 4024B	Mohave	21 North	21 West	29	NA	53-501483	Adequate		8/1/1984	North Mohave Valley Corp.
194	Sun Ridge Estates Tract 4024C	Mohave	21 North	21 West	21	376	53-501484	Adequate		10/25/1985	North Mohave Valley Corp.
195	Sun Ridge Estates Tract 4042D	Mohave	21 North	21 West	30	175	53-501485	Adequate		4/11/1988	North Mohave Valley Corp.
196	Sun Ridge Estates Tract 4042E	Mohave	21 North	21 West	29	215	53-501486	Adequate		1/19/1989	North Mohave Valley Corp.
197	Sun Ridge Estates Tract 4042F	Mohave	21 North	21 West	29	59	53-501487	Adequate		8/2/1989	North Mohave Valley Corp.
198	Sun Valley	Mohave	19 North	22 West	29	302	53-501488	Adequate		7/18/1983	Bermuda Water Company, Inc.
199	Sun Valley Tract 4063B	Mohave	19 North	22 West	36	98	53-501490	Adequate		10/30/1997	Bermuda Water Company, Inc.
200	Sun Valley Tract 4017	Mohave	19 North	22 West	36	211	53-501491	Adequate		1/8/1982	Bermuda Water Company, Inc.
201	Sun Valley Tract 4018A,B	Mohave	19 North	22 West	36	302	53-501492	Adequate		7/14/1983	Bermuda Water Company, Inc.
202	Sun Valley Tract 4064A	Mohave	18 North	22 West	1	210	53-501493	Adequate		12/11/1991	Bermuda Water Company, Inc.
203	Sun Valley Unit II, Tract 4185	Mohave	18 North	22 West	1	53	53-401785	Adequate		7/18/2005	Bermuda Water Company, Inc.
204	Sun Valley Unit II, Tract 4185	Mohave	18 North	22 West	1	18	53-401784	Adequate		10/6/2005	Bermuda Water Company, Inc.
205	Sun Valley Unit II, Tract 4185	Mohave	18 North	22 West	1	50	53-401954	Adequate		1/3/2006	Bermuda Water Company, Inc.
206	Sunrise Estates	Mohave	19 North	22 West	35	52	53-501507	Adequate		8/19/1986	Bermuda Water Company, Inc.
207	Sunrise Estates #2	Mohave	19 North	22 West	35	49	53-501508	Adequate		11/14/1988	Bermuda Water Company, Inc.
208	Sunrise Vistas Tract 4108-A	Mohave	19 North	21 West	18	146	53-501515	Adequate		9/16/1993	Sunrise Vistas Utilities Company
209	Sunrise Vistas Tract 4108-B	Mohave	19 North	21 West	18	86	NA	Adequate		8/23/1994	Sunrise Vistas Utilities Company
210	Sunrise Vistas Tract 4108-C	Mohave	19 North	21 West	18	92	NA	Adequate		11/8/1995	Sunrise Vistas Utilities Company
211	Sunrise Vistas Tract 4108-D	Mohave	19 North	21 West	18	40	53-300296	Adequate		6/3/1997	Sunrise Vistas Utilities Company
212	Sunrise Vistas Tract 4108-E	Cochise	19 North	21 West	18	57	53-400170	Adequate		11/22/1999	Sunrise Vistas Utilities Company
213	Sunrise Vistas Tract 4108-F	Cochise	19 North	21 West	18	28	53-400071	Adequate		5/21/1999	Sunrise Vistas Utilities Company
214	Sunrise Vistas Tract 4108-G	Cochise	19 North	21 West	18	27	53-400082	Adequate		8/30/1999	Sunrise Vistas Utilities Company
215	Sunrise Vistas Tract 4108-H	Mohave	19 North	21 West	18	6	53-400553	Adequate		10/10/2001	Sunrise Vistas Utilities Company
216	Sunrise Vistas Tract 4108-I	Mohave	19 North	21 West	18	31	53-400554	Adequate		10/10/2001	Sunrise Vistas Utilities Company
217	Sunrise Vistas Tract 4108-J	Mohave	19 North	21 West	18	22	53-400612	Adequate		11/26/2001	Sunrise Vistas Utilities Company



Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
218	Sunrise Vistas - Tract 4108-K	Mohave	19 North	21 West	18	22	53-400801	Adequate		12/3/2002	Sunrise Vistas Utilities Company
219	Sunrise Vistas, Tract 4108-L	Mohave	19 North	21 West	18	23	53-400877	Adequate		5/12/2003	Sunrise Vistas Utilities Company
220	Sunrise Vistas, Tract 4108-M	Mohave	19 North	21 West	18	30	53-400999	Adequate		9/25/2003	Sunrise Vistas Utilities Company
221	Sunrise Vistas, Tract 4108-N	Mohave	19 North	21 West	18	30	53-400998	Adequate		9/25/2003	Sunrise Vistas Utilities Company
222	Sunrise Vista, Tract 4108-O	Mohave	19 North	21 West	18	50	53-401347	Adequate		12/15/2004	Sunrise Vistas Utilities Company
223	Sunrise Vistas, Unit II Tract 4	Mohave	19 North	21 West	17	10	53-500046	Adequate		4/24/2007	Sunrise Vistas Utilities Company
224	Sunset Palms, Tr. 4183-A	Mohave	19 North	22 West	26	33	53-401760	Adequate		6/6/2005	Bermuda Water Company, Inc.
225	Sunset Ranchos II, Tract 4156	Mohave	19 North	22 West	13	22	53-300221	Adequate		10/23/1996	Bermuda Water Company, Inc.
226	Sunset Ranchos Unit 2	Mohave	19 North	22 West	13	18	53-400445	Adequate		1/30/2001	Dry Lot Subdivision
227	Sunset Ranchos, Tract 4046-B	Mohave	19 North	22 West	13	NA	53-501520	Adequate		7/28/1987	Dry Lot Subdivision
228	Sunset Ranchos, Tract 4046-C	Mohave	19 North	22 West	13	284	53-501521	Adequate		7/7/1992	Bermuda Water Company, Inc.
229	Sunset Ranchos, Tract 4046-A	Mohave	19 North	22 West	13	NA	53-501522	Adequate		2/20/1986	Dry Lot Subdivision
230	Tangerine Terrace Tract 4142	Mohave	17 North	22 West	23	22	53-501537	Adequate		7/13/1992	Fort Mohave Tribal Utilities
231	Terraces at Desert Foothills Es	Mohave	20 North	21 West	5	123	53-300214	Adequate		11/18/1996	Citizens Utilities Company-Mohave
232	The Borgata on Mountain View, T	Mohave	19 North	22 West	14	107	53-402045	Adequate		6/22/2006	Bermuda Water Company, Inc.
233	The Coves on The Colorado River	Mohave	17 North	22 West	23	99	53-401766	Adequate		3/13/2006	Fort Mohave Tribal Utilities
234	The Estates at Cimarron Lake Tr	Mohave	18 North	22 West	23	35	53-401688	Adequate		11/3/2005	Willow Valley Water Co.
235	The Villas at Desert Horizons	Mohave	19 North	22 West	23	33	53-401084	Adequate		1/12/2004	Bermuda Water Company, Inc.
236	Tierra Grande Tract 4023 A	Mohave	20 North	21 West	19	130	53-501549	Adequate		7/18/1983	Citizens Utilities Company-Mohave
237	Tierra Grande Tract 4023B	Mohave	20 North	21 West	24	202	53-501550	Adequate		8/3/1984	Citizens Utilities Company-Mohave
238	Tierra Grande Tract 4023C	Mohave	20 North	21 West	19	78	53-501551	Adequate		11/16/1984	Citizens Utilities Company-Mohave
239	Tierra Grande Tract 4052	Mohave	20 North	21 West	19	22	53-501552	Adequate		8/28/1985	Citizens Utilities Company-Mohave
240	Tierra Verde Tract 1073-B	Mohave	19 North	22 West	14	360	53-501557	Adequate		4/8/1974	Bermuda Water Company, Inc.
241	Tierra del Rio Tract 4048	Mohave	19 North	22 West	25	348	53-501547	Adequate		8/2/1984	Bermuda Water Company, Inc.
242	Tierre Plaza	Mohave	19 North	22 West	14	35	53-501559	Adequate		6/17/1986	Bermuda Water Company, Inc.
243	Tierre del Sol	Mohave	19 North	22 West	23	32	53-501558	Adequate		5/9/1983	Dry Lot Subdivision
244	Topock Village Estates, Tract 4	Mohave	16 North	21 West	23	205	53-402046	Adequate		9/28/2006	Golden Shores Wat
245	Toprock Lake Rancheros	Mohave	17 North	21 West	17	8	53-501566	Adequate		5/1/1991	Dry Lot Subdivision

Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>

A. Water Adequacy Reports

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No. <sup>2</sup>	ADWR Adequacy Determination	Reason(s) for Inadequacy Determination <sup>3</sup>	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section						
246	Twin Palms Estates, Tract 4189	Mohave	19 North	22 West	36	144	43-401423	Adequate		8/5/2005	Bermuda Water Company, Inc.
247	Twin Palms Estates, Tract 4189A	Mohave	19 North	22 West	36	97	53-402255	Adequate		8/31/2006	Bermuda Water Company, Inc.
249	Valley Springs Estates Subdivision	Mohave	19 North	22 West	36	132	53-700215	Adequate		1/31/2007	Bermuda Water Company, Inc.
250	Valley View at Sunrise Hills, T	Mohave	18 North	21 West	6	124	53-700269	Adequate		9/15/2008	Bermuda Water Company, Inc.
251	Villa del Rio Tract 4016 A&B	Mohave	20 North	22 West	29	13	53-501623	Adequate		1/22/1983	Rio Verde Utilities
252	Villa del Sol Condominiums	Mohave	20 North	23 West	24	24	53-501624	Adequate		2/18/1982	Citizens Utilities Company-Mohave
253	Village Estates Tr. 4198	Mohave	18 North	22 West	3	347	53-700260	Adequate		3/6/2007	Bermuda Water Company, Inc.
254	Villas At Desert Horizons, Trac	Mohave	19 North	22 West	23	48	53-400496	Adequate		7/17/2001	Bermuda Water Company, Inc.
255	Villas at Desert Horizons	Mohave	19 North	22 West	23	51	53-400180	Adequate		11/5/1999	Bermuda Water Company, Inc.
256	Vineyard at Sun Ridge, Tract 50	Mohave	21 North	21 West	30	67	53-300213	Adequate		12/18/1996	North Mohave Valley Corp.
257	Vineyard at Sun Ridge Unit 3	Mohave	21 North	21 West	30	8	53-401351	Adequate		12/20/2004	North Mohave Valley Corp.
258	Vista Grande Condominiums	Mohave	21 North	21 West	21	32	53-501647	Adequate		2/27/1990	North Mohave Valley Corp.
259	Vista del Rio # 3, Tract 5066	Mohave	19 North	22 West	11	12	53-400052	Adequate		5/24/1999	Bermuda Water Company, Inc.
260	Vista del Rio # 4, Tract 5067	Mohave	19 North	22 West	11	21	53-400053	Adequate		5/21/1999	Bermuda Water Company, Inc.
261	Vista del Rio #2, Tract 5061	Mohave	19 North	22 West	11	18	53-300411	Adequate		6/19/1998	Bermuda Water Company, Inc.
262	Vista del Rio Tract 5043	Mohave	19 North	22 West	11	35	53-300139	Adequate		7/12/1996	Bermuda Water Company, Inc.
263	Vista del Rio Condominiums	Mohave	20 North	22 West	17	18	53-501644	Adequate		9/8/1981	Oasis Utility Company
264	Willow Valley Estates	Mohave	18 North	22 West	21	48	NA	Adequate		9/18/1994	Willow Valley Water Co.
265	Willow Valley Estates 20, Tract	Mohave	18 North	22 West	21	27	53-300085	Adequate		12/13/1996	Willow Valley Water Co.
266	Willow Valley Estates Tract 413	Mohave	18 North	22 West	21	29	53-400791	Adequate		9/25/2003	Willow Valley Water Co.
267	Willow Valley Mobile Homes Est	Mohave	18 North	22 West	27	277	53-501689	Adequate		12/2/1981	Willow Valley Water Co.
268	Willows at Cimarron Lake #2 Tra	Mohave	18 North	22 West	23	79	53-400142	Adequate		8/30/1999	Willow Valley Water Co.
269	Willows at Cimarron Lake, The	Mohave	18 North	22 West	23	94	53-501690	Adequate		12/7/1990	Willow Valley Water Co.
270	Winterhaven Estates	Mohave	20 North	22 West	18	148	53-501699	Adequate		2/23/1988	Citizens Utilities Company-Mohave

B. Analysis of Adequate Water Supply

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section				
96	Lake Cimarron Estates Unit II,	Mohave	18 North	22 West	23	35	43-401439	3/22/2005	Willow Valley Water Company
125	Mountainside Village Ranch	Mohave	18 North	21 West	6	320	43-401581	12/22/2004	Bermuda Water Company, Inc.



**Table 4.6-10 Adequacy Determinations in the Lake Mohave Basin (Cont)<sup>1</sup>**

**B. Analysis of Adequate Water Supply**

Map Key	Subdivision Name	County	Location			No. of Lots	ADWR File No.	Date of Determination	Water Provider at the Time of Application
			Township	Range	Section				
138	Patriot Estates Subdivision	Mohave	19 North	22 West	36	119	43-401619	2/4/2005	Bermuda Water Company, Inc.
187	Stetson Ranch	Mohave	19 North	22 West	25	57	43-401875	5/1/2006	Bermuda Water Company, Inc.
248	Valley Springs Estates Subdivision	Mohave	19 North	22 West	36	132	43-401861	2/1/2006	Bermuda Water Company, Inc.

**C. Designated Adequate Water Supply**

Map Key	Water Provider Name	County	Designation No.	Projected or Annual Estimated Demand (af/yr)	Date Application Received	Date Application Issued	Year of Projected or Annual Demand
a	City of Bullhead City	Mohave	41-400649	23,691	2/25/2005	2/11/2008	2018

Source: ADWR 2008a

**Notes:**

<sup>1</sup> Each determination of the adequacy of water supplies available to a subdivision is based on the information available to ADWR and the standards of review and policies in effect at the time the determination was made. In some cases, ADWR might make a different determination if a similar application were submitted today, based on the hydrologic data and other information currently available, as well as current rules and policies.

<sup>2</sup> Prior to February 1995, ADWR did not assign file numbers to applications for adequacy. Between 1995-2006 all applications for adequacy were given a file number with a 22 prefix. In 2006 a 53 prefix was assigned to all water adequacy reports and applications regardless of their issue date.

<sup>3</sup> A. Physical/Continuous

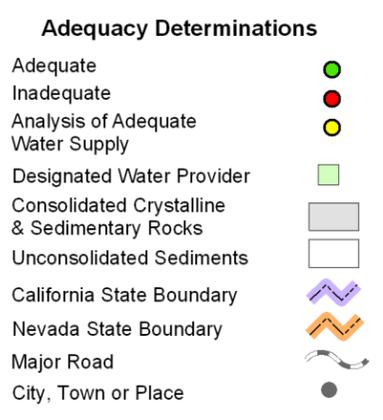
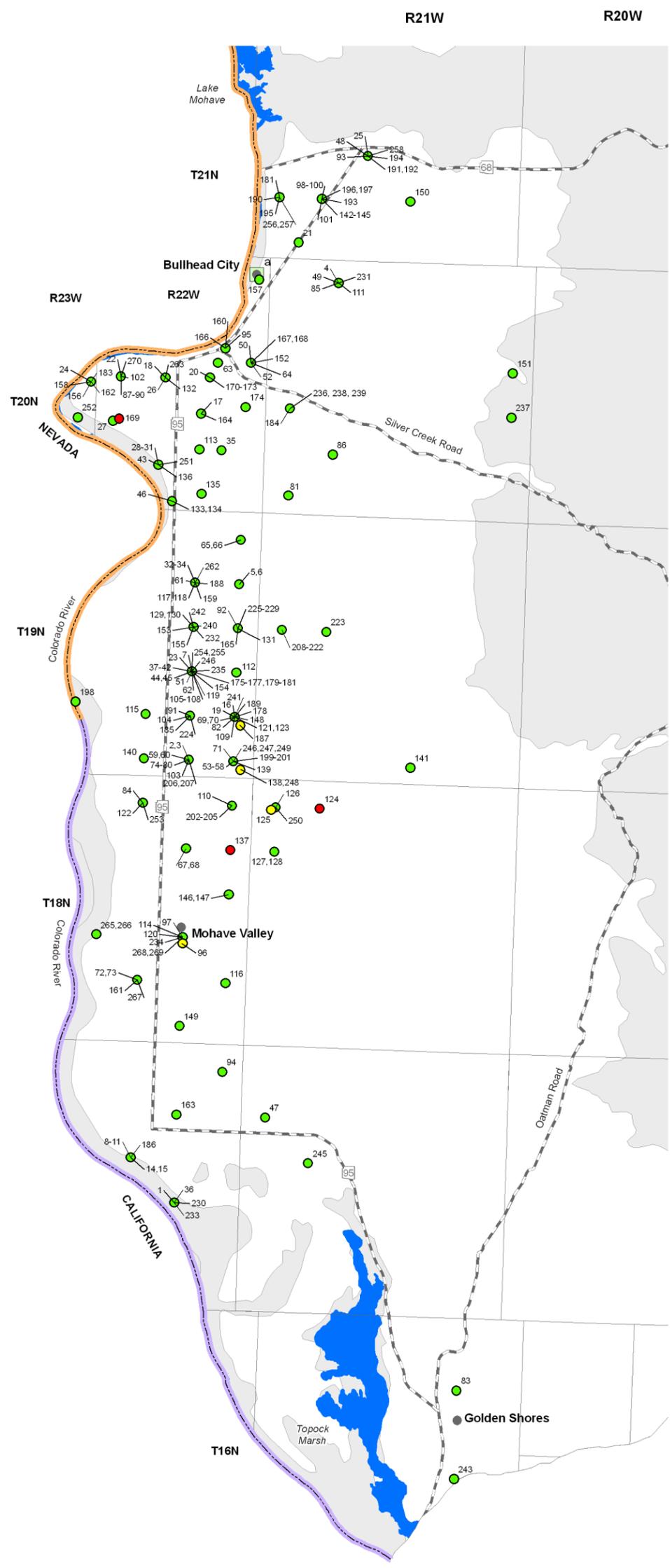
- 1) Insufficient Data (applicant chose not to submit necessary information, and/or available hydrologic data insufficient to make determination)
- 2) Insufficient Supply (existing water supply unreliable or physically unavailable; for groundwater, depth-to-water exceeds criteria)
- 3) Insufficient Infrastructure (distribution system is insufficient to meet demands or applicant proposed water hauling)

B. Legal (applicant failed to demonstrate a legal right to use the water or failed to demonstrate the provider's legal authority to serve the subdivision)

C. Water Quality

D. Unable to locate records

NA= not currently available to ADWR



**Figure 4.6-11**  
**Lake Mohave Basin**  
**Adequacy Determinations**



# Lake Mohave Basin

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