

## Yaqui Well Area Groundwater Basin

- Groundwater Basin Number: 7-56
- County: San Diego
- Surface Area: 15,000 acres (23.4 square miles)

### **Basin Boundaries and Hydrology**

This groundwater basin underlies Yaqui Flat and Mescal Bajada in eastern San Diego County within the Anza-Borrego Desert State Park (Rogers 1965). Elevation of the valley floor ranges from about 1,050 feet above sea level at the east end to 2,000 feet at the west end. The basin is bounded by nonwater-bearing rocks of Pinyon Ridge on the north and northwest, of the Grapevine Mountain on the west, and of the Pinyon and Vallecito Mountains on the south and southeast. Elevation of the surrounding mountains ranges from about 3,700 to 4,600 feet.

Annual average precipitation ranges from about 8 to 14 inches. Surface runoff from the surrounding mountains drains towards San Felipe Creek, and out of the valley eastward towards Ocotillo-Clark Valley Groundwater Basin (Brown 1923; Rogers 1965).

### **Hydrogeologic Information**

#### ***Water Bearing Formations***

Groundwater is found in unconsolidated younger Quaternary alluvial deposits and underlying unconsolidated to semi-consolidated older Tertiary to Quaternary alluvial deposits (DWR 1954).

#### ***Restrictive Structures***

The Caliente fault zone, which trends along the northern margin of the basin and includes the San Felipe fault, may impede the movement of groundwater.

#### ***Recharge and Discharge Areas***

Recharge of the basin is derived from surface and subsurface inflow from San Felipe Creek by way of Sentenac Canyon on the south, from the infiltration of runoff through course-grained alluvial deposits at the base of the surrounding mountains, and from the percolation of precipitation that falls to the valley floor. Groundwater moves in an easterly direction as underflow to San Felipe Creek and discharges to Ocotillo-Clark Valley Groundwater Basin (Brown 1923; Rogers 1965).

#### ***Groundwater Level Trends***

Groundwater levels are not available.

#### ***Groundwater Storage***

**Groundwater Storage Capacity.** Unknown (DWR 1975).

**Groundwater in Storage.** Unknown.

### **Groundwater Budget (C)**

Groundwater budget information is not available.

### **Groundwater Quality**

**Characterization.** Groundwater analyses show sodium-calcium sulfate and calcium-sodium sulfate character. TDS concentrations range from about 1,060 to 3,750 mg/L and average about 2,400 mg/L.

**Impairments.** Elevated TDS concentrations impair the groundwater for domestic use.

### **Well Characteristics**

<b>Well yields (gal/min)</b>		
Municipal/Irrigation	Range:	Average:
<b>Total depths (ft)</b>		
Domestic	Range:	Average:
Municipal/Irrigation	Range:	Average:

### **Active Monitoring Data**

<b>Agency</b>	<b>Parameter</b>	<b>Number of wells /measurement frequency</b>
	Groundwater levels	
	Miscellaneous water quality	
Department of Health Services and cooperators	Title 22 water quality	1

### **Basin Management**

Groundwater management:

Water agencies

Public

Private

### **References Cited**

- Brown, J.S., 1923. *The Salton Sea Region, California*. U. S. Geological Survey Water-Supply Paper 497. 292 p.
- California Department of Public Works. 1954. *Ground Water Occurrence and Quality, Colorado River Basin Region*. Water Quality Investigations Report No. 4. 59 p.
- \_\_\_\_\_. 1975. *California's Groundwater*. Bulletin No. 118. 135 p.
- Rogers, T. H. 1965. *Geologic Map of California: Santa Ana Sheet*. Olaf P. Jenkins Edition. California Department of Conservation, Division of Mines and Geology. Scale 1: 250,000.

### **Errata**

Changes made to the basin description will be noted here.