

## Cottonwood Spring Area Groundwater Basin

- Groundwater Basin Number: 6-65
- County: Inyo
- Surface Area: 3,900 acres (6.1 square miles)

### Basin Boundaries and Hydrology

The Cottonwood Spring Area Groundwater Basin underlies a north-trending intermontane valley in the Cottonwood Mountains of central Inyo County. Elevation of the valley floor ranges from about 3,600 feet above sea level at Cottonwood Spring to about 4,200 along the southern margins of the valley. The basin is bound on all sides by nonwater-bearing rocks of the Cottonwood Mountains of the northern Panamint Range. Elevation of the surrounding Cottonwood Mountains range from about 5,000 to a maximum of 7,263 feet at Hunter Mountain. This basin lies within Death Valley National Park (Jennings 1958; USGS 1986a, 1987)

Average annual precipitation ranges from about 6 to 8 inches. Runoff from the surrounding mountains drains towards Cottonwood Spring, which is located along the eastern margin of the basin, prior to flowing northeast into Cottonwood Canyon and on to Death Valley (USGS 1986a, 1986b, 1987).

### Hydrogeologic Information

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

Quaternary alluvium forms the water-bearing material within the basin and includes unconsolidated younger alluvial deposits and underlying unconsolidated to semi-consolidated older alluvial deposits (DWR 1964).

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

Recharge of the basin is chiefly from the percolation of runoff through alluvial deposits at the base of the surrounding mountains and from the infiltration of precipitation that falls to the valley floor. Groundwater likely moves towards the eastern margin of the basin and discharges at Cottonwood Spring and as underflow to Cottonwood Canyon (USGS 1986a, 1987).

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

There are no historical records of wells or groundwater levels in the basin.

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

**Groundwater Storage Capacity.** Unknown.

**Groundwater in Storage.** Unknown.

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

Groundwater budget information is not available.

### **Groundwater Quality**

**Characterization.** TDS content at Cottonwood Spring, in the eastern part of the basin, is about 350 mg/L (Miller 1977). There are no additional historical records of chemical analyses of groundwater from springs or wells in the basin.

**Impairments.** Unknown.

### **Well Production characteristics**

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

### **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	

### **Basin Management**

Groundwater management:

Water agencies

Public

Private

### **References Cited**

- California Department of Water Resources (DWR). 1964. *Ground Water Occurrence and Quality Lahontan Region*. Bulletin No.106-1. 439 p.
- Jennings, C.W. 1958. *Geologic Map of California: Death Valley Sheet*. Olaf P. Jenkins Edition. California Department of Conservation, Division of Mines and Geology. Scale 1: 250,000.
- Miller, G. A., 1977. *Appraisal of the Water Resources of Death Valley, California-Nevada*. U. S. Geological Survey, Open-File Report 77-728. 68 p.
- U.S. Geological Survey. 1986a. *Harris Hill, California*. 7.5' Quadrangle. Provisional Edition. Scale 1: 24,000.
- U.S. Geological Survey. 1986b. *The Dunes, California*. 7.5' Quadrangle. Provisional Edition. Scale 1: 24,000.
- U.S. Geological Survey. 1987. *Cottonwood Canyon, California*. 7.5' Quadrangle. Provisional Edition. Scale 1: 24,000.

## **Errata**

Changes made to the basin description will be noted here.