Water in Bakersfield and Kern County

- Background Kern County
- Water use
- Water sources
- Entities that control water
- Groundwater recharge

Sources:
Tom Haslebacher, Kern County Water Agency
Jon Parker, Kern Water Bank Authority

About Kern County

Area
- Kern County covers 5.21 million acres, roughly the area of Connecticut, Delaware and Rhode Island.

About Kern County

Area
- About one-third of Kern’s area is on the valley floor, which is intensively cultivated. There are 860,000 irrigated acres on the valley floor, one-third of which are permanent crops. Kern consistently ranks 3rd or 4th in the state in value of production.

About Kern County

Population
- Kern County's population is 677,400. It is one of the fastest growing counties in the state, growing 19% since 1995, and about 2% per year. Kern is California's 14th most populous county.

Annual water usage in Kern County:

- Municipal and industrial - 182,000 acre-feet
- Agricultural - 2,250,000 acre-feet

California Water Projects
Kern County water sources:
- Kern River - 22%
- State Water Project (California Aqueduct) - 23%
- Federal (Friant-Kern Canal) - 11%
- Groundwater - 43%

Kern County Water Agency
- Created in 1961 by act of the Legislature
- Annual entitlement of one million acre-feet of water from State Water Project
- Largest agricultural participant on SWP - second largest urban participant
- Funded by tax assessments

Gross Water Supplies and Net Water Requirements
San Joaquin Valley Portion of Kern County

Additions to Groundwater Storage
Withdrawals from Groundwater Storage

Local CVP SWP Demand (Net Water Requirements)
Improvement District 4
- Formed by the KCWA to act as a wholesale provider of drinking water for most of the Bakersfield metropolitan area
- Operates Henry C. Garnett Water Purification Plant (Golden State Avenue and Airport Drive)
- Funded by tax assessments
- Distributes water to retail water suppliers

Groundwater Recharge aka “Water Banking”

Infrastructure is Key

Kern County Water Agency
California Aqueduct is Key for Recovery

Kern County has made major investments since the 1987-92 drought.
Kern Fan Projects
Historic Recharge/Recovery Operations

FACTORS INFLUENCING DEPTH TO GROUNDWATER
Hydrograph for well 30S/24E-02C01 (North of Elk Preserve)

- Increased demands after World War II
- Completion of Lake Isabella
- Completion of California Aqueduct
- Construction of Cross Valley Canal

Recharge commences on KWB and Pioneer Projects

Development of James Pioneer I.D.

Completion of Kern River Canal

Recovery commences on KWB and Pioneer Projects

Kern County Water Agency
Groundwater Banking

• Banking projects cannot be duplicated everywhere (politics, geology, geography, infrastructure)
• They have their limitations (slow rate of reservoir cycling)
• Access to high-flow or excess supplies is needed.

Preservation of open space in areas with sandy soils is needed.