U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

In cooperation with the MOJAVE WATER AGENCY

SCIENTIFIC INVESTIGATIONS REPORT 2004-5081
Regional water table (2002) and water-level changes—Plate 1

Smith, G.A., Stamos, C.L. and Predmore, S.K., 2004, Regional water table (2002) and water-level changes in the Mojave River and Morongo ground-water basins, southwestern Mojave Desert, California

Figure 2
WATER-LEVEL CHANGE MAP
(Click to view)

Figure 3
(Click to view enlargement)

Figure 4
(Click to view enlargement)

EXPLANATION

Perched water—Approximate area

Fault—Dashed where approximately located, dotted where concealed

Boundaries—
- **Mojave River drainage basin**
- **Mojave River ground-water basin (approximate)** Subarea
- **Morongo ground-water basin (approximate)**— Subbasin boundary, Warren ground-water basin
- **Mojave Water Agency management area**— Subarea

Water-table contour—Shows altitude of water table. Contour interval, in feet, is variable; dashed where approximately located, queried where uncertain. Hachures indicate depression. Datum is North American Vertical Datum of 1988 (NAVD 88)

Generalized direction of ground-water flow

Well—
781 / 1,702
Top number is abbreviated State well number. Bottom number is altitude of water level, in feet above NAVD 88 (Spring 2002). Dash (—) indicates no measurement.

Well with perched water level—
30M1 / 2,449*
Top number is abbreviated State well number. Bottom number is altitude of water level, in feet above NAVD 88 (Spring 2002). Asterisk (*) indicates perched water

Well with historical data shown on a multiple-well hydrograph
29R1

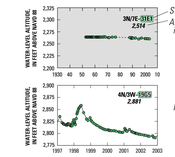
Multiple-well site—Top number is abbreviated State well number. Bottom number is altitude of water level, in feet above NAVD 88 (Spring 2002)
30A3 / 2,786

Spring

Extinct spring

Hodge Outlet — **Artificial-recharge site and name**

Hydrograph—Shows period of record for well. Dashed where data collection interval excedes two years; dots indicate actual data values



0 2 4 6 8 10 MILES
0 2 4 6 8 10 KILOMETERS

Location of Study Area

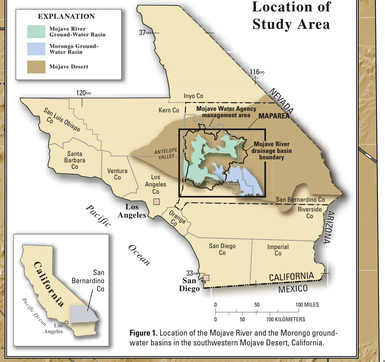
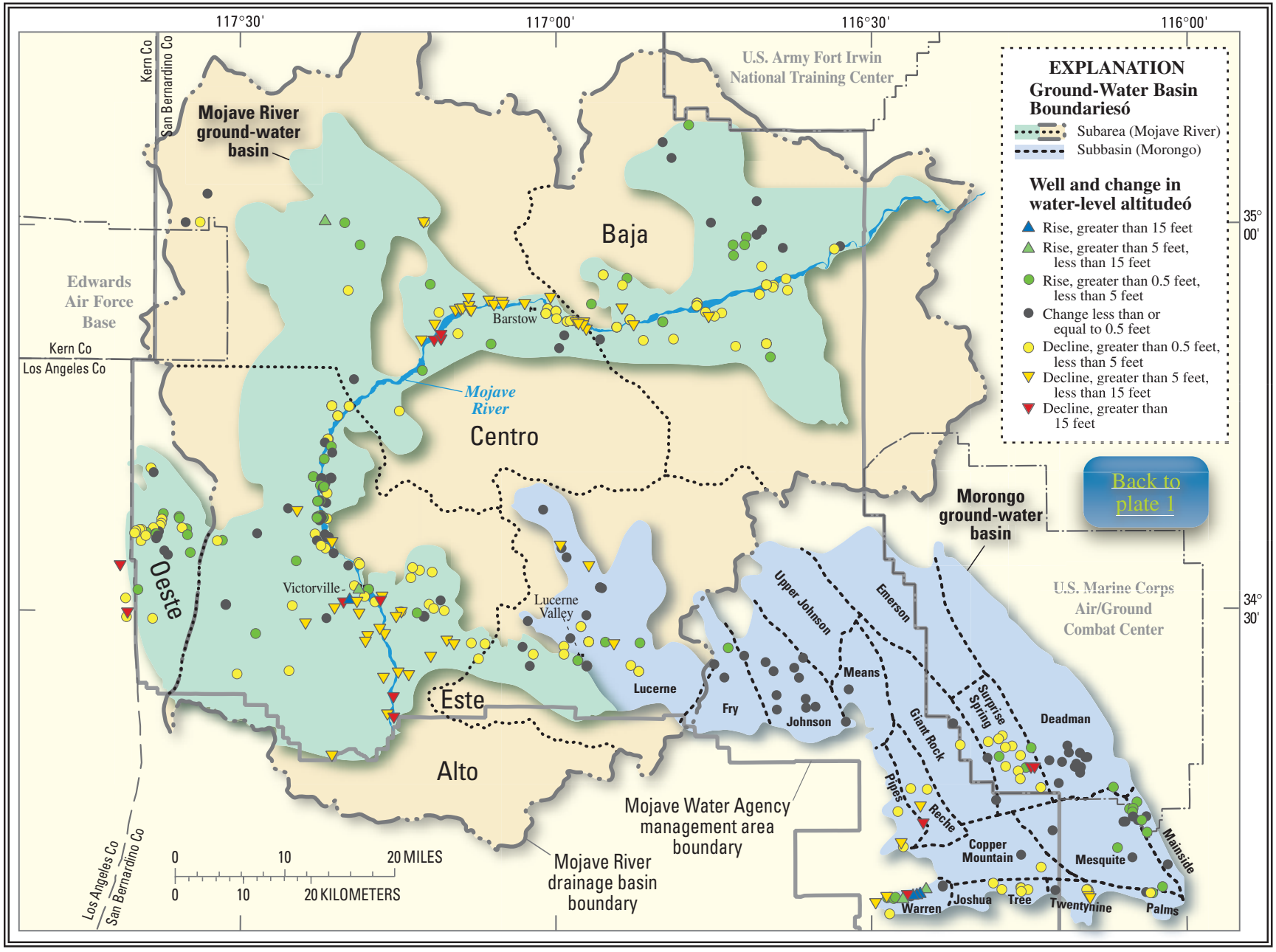


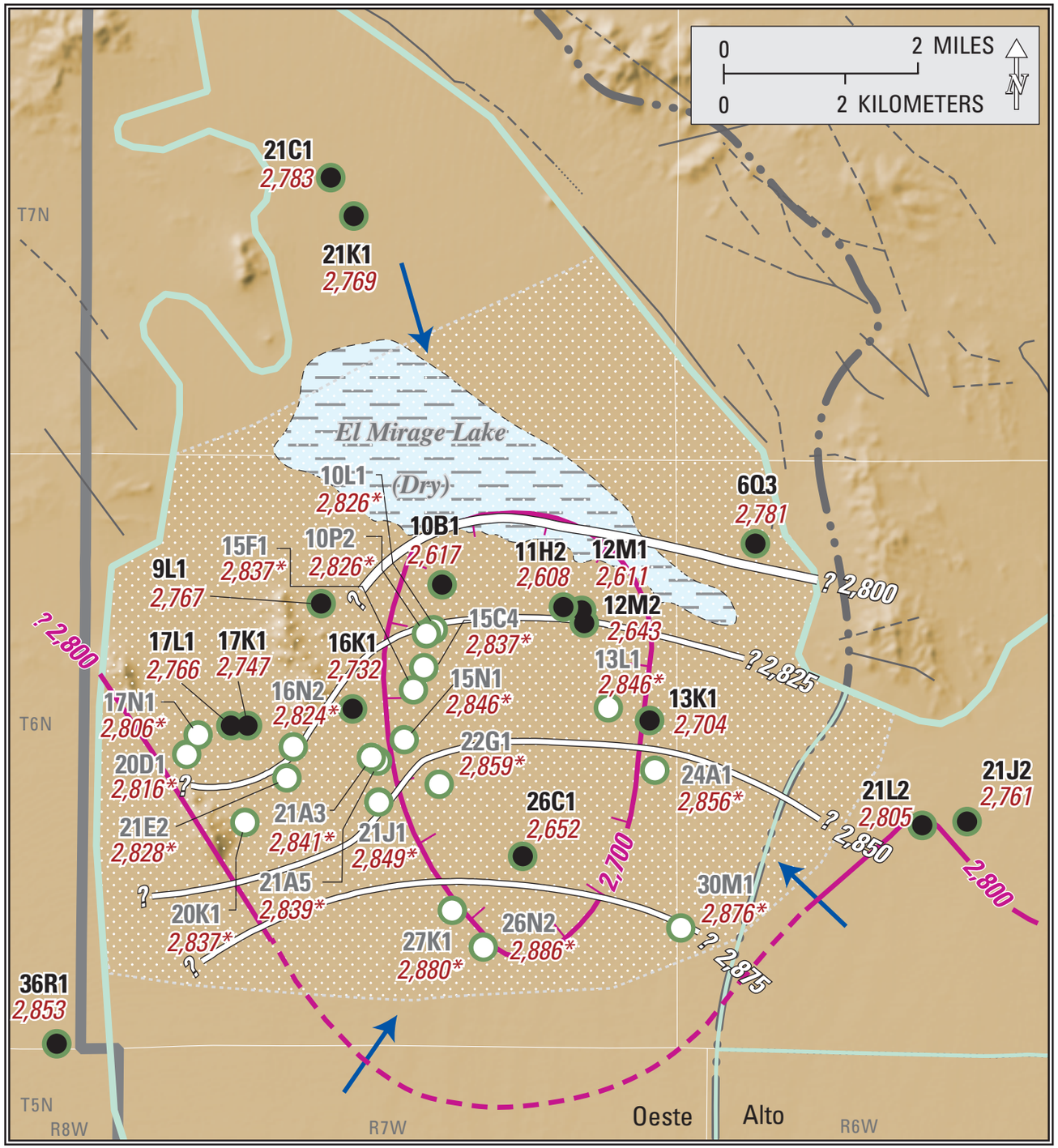
Figure 1. Location of the Mojave River and the Morongo ground-water basins in the southwestern Mojave Desert, California.

Base from U.S. Geological Survey digital elevation data, 1:250,000, 1987, and digital data, 1:100,000, 1981–89; Universal Transverse Mercator Projection, Zone 11. Shaded relief base from 1:250,000-scale Digital Elevation Model; simulated sun illumination from northwest at 30 degrees above horizon

Faults modified from Schaefer, 1979; Bortugno, 1986; Londquist and Martin,1991; Cox and Wilshire, 1993; and J.C. Matti and G.I. Dixon, U.S. Geological Survey, written commun., 1994

REGIONAL WATER TABLE (2002) AND WATER-LEVEL CHANGES IN THE MOJAVE RIVER AND MORONGO GROUND-WATER BASINS, SOUTHWESTERN MOJAVE DESERT, CALIFORNIA


117°30'
117°00'
116°30'
116°00'
35° 00'
34° 30'
Kern Co
San Bernardino Co
Mojave River ground-water basin
U.S. Army Fort Irwin National Training Center
Edwards Air Force Base
Kern Co
Los Angeles Co
Baja
Barstow
Mojave River
Centro
Oeste
Victorville
Lucerne Valley
Este
Alto
Lucerne
Fry
Johnson
Means
Upper Johnson
Emerson
Surprise Spring
Giant Rock
Deadman
Pipes
Reche
Copper Mountain
Mesquite
Mainside
Warren
Joshua Tree
Twentynine Palms
Morongo ground-water basin
U.S. Marine Corps Air/Ground Combat Center
Back to plate 1
Mojave Water Agency management area boundary
Mojave River drainage basin boundary
0 10 20 MILES
0 10 20 KILOMETERS
Los Angeles Co
San Bernardino Co
EXPLANATION
Ground-Water Basin Boundariesó
Subarea (Mojave River)
Subbasin (Morongo)
Well and change in water-level altitudeó
Rise, greater than 15 feet
Rise, greater than 5 feet, less than 15 feet
Rise, greater than 0.5 feet, less than 5 feet
Change less than or equal to 0.5 feet
Decline, greater than 0.5 feet, less than 5 feet
Decline, greater than 5 feet, less than 15 feet
Decline, greater than 15 feet



EXPLANATION

Perched water—Approximate area

Fault—Dashed where approximately located, dotted where concealed

Boundaries—

Mojave ground-water basin (approximate)—Subarea

Mojave River drainage basin

Mojave Water Agency management area

Regional
Perched
—2,800 - - ?
2,800
2,825
(Intermediate contour)

Water-table contour—Shows altitude of water table (Spring 2002). Contour interval, in feet, is variable; dashed where approximately located, queried where uncertain. Hachures indicate depression. Datum is NAVD 88

Regional
Perched
11H2
2,608
30M1
2,876*

Well—
Top number is abbreviated State well number. Bottom number is altitude of water level, in feet above NAVD 88 (Spring 2002). Asterisk (*) indicates perched water

Generalized direction of ground-water flow

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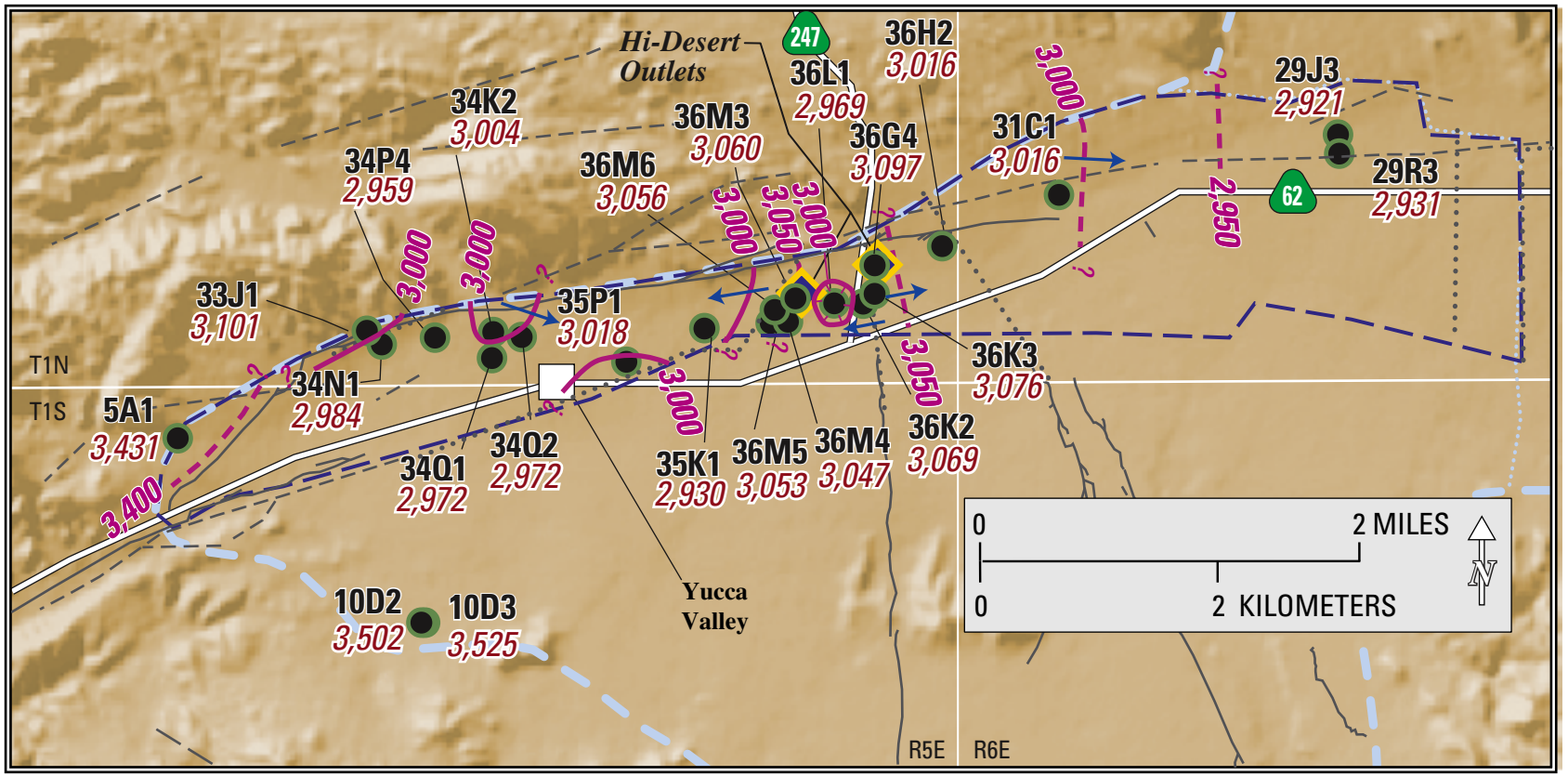

EXPLANATION

Fault—Dashed where approximately located; dotted where concealed

Boundaries—

Morongo ground-water basin (approximate)— Subbasin boundary

Warren ground-water subbasin boundary

3,000 ? **Water-table contour**—Shows altitude of water table (2002). Contour interval, in feet, is variable; dashed where approximately located, queried where uncertain. Hachures indicate depression. Datum is NAVD 88

Generalized direction of ground-water flow

35K1 2,930 **Well—** Top number is abbreviated State well number. Bottom number is altitude of water level in feet above NAVD 88 (

Hi-Desert Outlets **Artificial-recharge sites**

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