

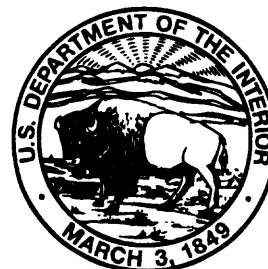
# Ground-Water Data for the Nevada Test Site and Selected Other Areas in South-Central Nevada, 1992-93

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U.S. GEOLOGICAL SURVEY

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## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
becquerel (Bq)	27.027	picocurie
kilometer (km)	0.6214	mile
liter (l)	0.2642	gallon
meter (m)	3.281	foot
million liters	0.2642	million gallons
square kilometer (km <sup>2</sup> )	0.3861	square mile

**Sea level:** In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929, formerly called "Sea-Level Datum of 1929"), which is derived from a general adjustment of the first-order leveling networks of the United States and Canada.

**Water Year:** Comprises the 12-month period from October 1 through September 30, and is designated by the year in which the period ends.

# Ground-Water Data for the Nevada Test Site and Selected Other Areas in South-Central Nevada, 1992-93

By Steven R. Reiner, Glenn L. Locke, and Leanne S. Robie

## ABSTRACT

The U.S. Geological Survey, in support of the U.S. Department of Energy Environmental Restoration and Hydrologic Resources Management Programs, collects and compiles hydrogeologic data to aid in characterizing the regional and local ground-water flow systems underlying the Nevada Test Site and vicinity. This report presents selected ground-water data collected from wells and test holes at and in the vicinity of the Nevada Test Site.

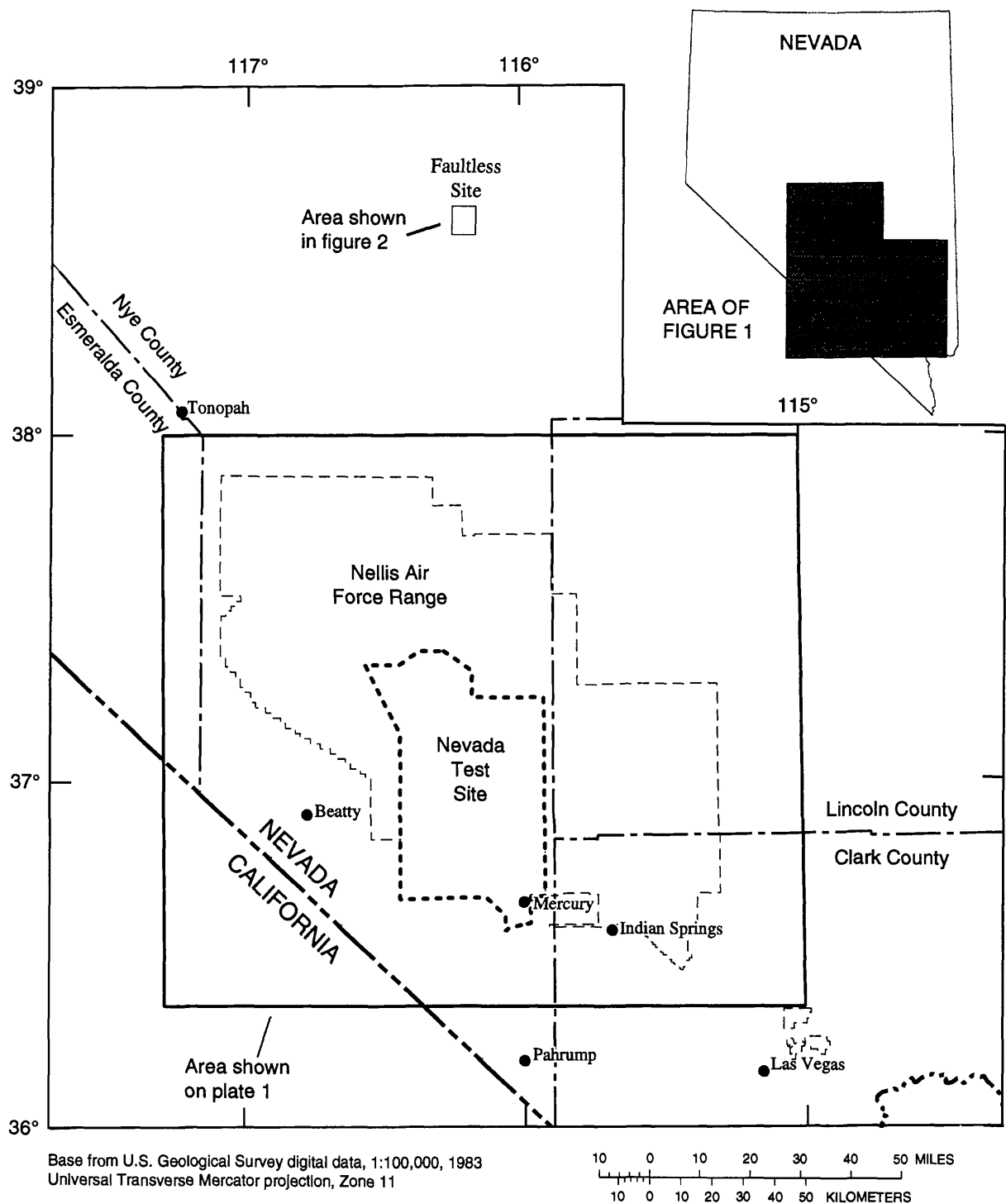
Depth-to-water measurements were made during water year 1993 at 55 sites at the Nevada Test Site and 43 regional sites in the vicinity of the Nevada Test Site. Depth to water ranged from 87.7 to 674.6 meters below land surface at the Nevada Test Site and from 6.0 to 444.7 meters below land surface at sites in the vicinity of the Nevada Test Site. Depth-to-water measurements were obtained using the wire-line, electric-tape, air-line, and steel-tape devices.

Total measured ground-water withdrawal from the Nevada Test Site during the 1993 calendar year was 1,888.04 million liters. Annual ground-water withdrawals from 14 wells ranged from 0.80 million to 417.20 million liters. Tritium concentrations from four samples at the Nevada Test Site and from three samples in the vicinity of the Nevada Test Site collected during water year 1993 ranged from near 0 to 27,676.0 becquerels per liter and from near 0 to 3.9 becquerels per liter, respectively.

## INTRODUCTION

The Nevada Test Site (fig. 1) was established in 1950 as a continental proving ground for testing nuclear weapons. Atmospheric nuclear testing began in 1951 and underground nuclear testing began in 1957. Since 1962, all nuclear testing has been done underground, primarily in alluvium and volcanic rocks (U.S. Geological Survey, 1976, p. 17). Nuclear testing and ancillary operations at the Nevada Test Site (NTS) have created the potential for contamination of ground-water supplies by radionuclides and other substances (U.S. Department of Energy, 1990, p. 110).

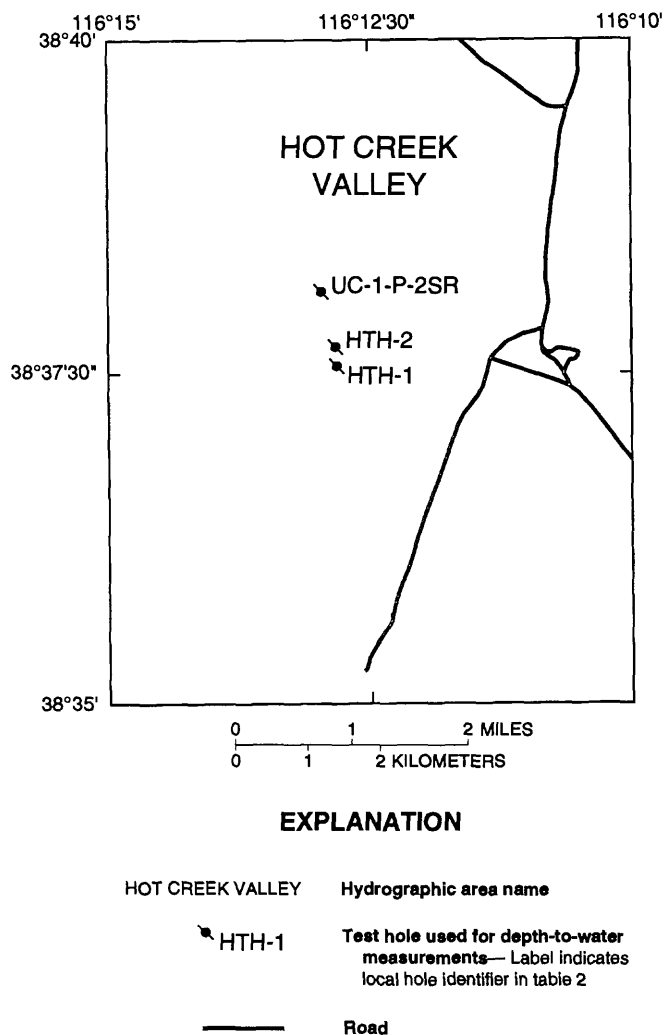
The U.S. Department of Energy (USDOE) is required to study potential ground-water contamination at NTS and, through its Environmental Restoration Program, has begun to define possible contamination resulting from past activities at NTS. The mission of the USDOE Hydrologic Resources Management Program is to ensure that current activities proceed in an environmentally sound manner and in accordance with applicable Federal and State regulations and USDOE orders. The U.S. Geological Survey (USGS) provides hydrologic expertise and technical guidance to the USDOE in support of these programs. Specific responsibilities of the USGS include providing the necessary hydrologic and hydrogeologic data and interpretation of these data to aid in characterizing ground-water flow at the NTS and vicinity. This characterization is needed to assess the potential for contamination of ground-water supplies and to support USDOE operations at NTS.



**Figure 1.** Location of Nevada Test Site and vicinity, including Faultless Site.

## Purpose and Scope

This report presents ground-water data collected at NTS and selected other areas in south-central Nevada. Depth-to-water measurements made during water year 1993 at 55 wells and test holes at NTS and 43 wells and test holes in south-central Nevada are presented. Ground-water withdrawal data are compiled for 14 wells at NTS during the 1993 calendar year. Water samples from four wells and test holes at NTS and from three wells in the vicinity of NTS were collected and analyzed during the 1993 water year.



**Figure 2.** Location of test holes at Faultless Site, Nye County, Nevada.

## Study Area

NTS is subdivided into 27 administrative areas between latitudes 36 and 38 degrees north and longitudes 115 and 117 degrees west within Nye County, Nev. (fig. 1, pl. 1). Regional ground-water sites in the vicinity of NTS are between latitudes 36 and 39 degrees north and longitudes 115 and 117 degrees west within Clark and Nye Counties, Nev. (fig. 1, pl. 1). The Faultless Site in Hot Creek Valley is between latitudes 38 and 39 degrees north and longitudes 116 and 117 degrees west within Nye County, Nev. (figs. 1, 2).

## Ground-Water Information Sources

Depth-to-water data at and in the vicinity of NTS have been collected, compiled, verified, and stored in the Ground-Water Site Inventory (GWSI) data base by the USGS in support of the USDOE Environmental Restoration and Hydrologic Resources Management Programs. This GWSI data base is one of four subsystems that constitute the computerized National Water-Information System (NWIS) of the USGS (U.S. Geological Survey, 1989).

Other ground-water data were compiled and reported by the USGS Hydrologic Investigation and USGS Environmental Monitoring Programs, Yucca Mountain Project (Luckey and others, 1989; O'Brien, 1991; La Camera and Westenburg, 1994). Ground-water withdrawal data for two wells in Area 25 (J-12 WW and J-13 WW) are included in this report to account for total withdrawal from NTS.

## Geohydrologic Setting

The geohydrologic setting of NTS is characterized by local aquifers of alluvium of Quaternary and Tertiary age and volcanic rock of Tertiary age. Regional aquifers are mainly complex folded and faulted carbonate rock of Paleozoic age (Winograd and Thordarson, 1975, p. 14-31), but deep, fractured volcanic rock of Tertiary age also may be regional aquifers at some locations (Blankennagel and Veir, 1973, p. 6). Regional confining units are mainly clastic rock of Paleozoic age and some volcanic rock of Tertiary age. Much of the ground-water movement is

regional interbasin flow, which is not controlled by the basin-and-range topography that defines the local surface drainage basins (Winograd and Thordarson, 1975, p. 62).

Ground water at NTS and vicinity is part of the Death Valley ground-water flow system, a regional system encompassing 38,800 km<sup>2</sup>. NTS includes parts of three subbasins of the Death Valley ground-water flow system—Alkali Flat-Furnace Creek Ranch, Ash Meadows, and Oasis Valley (Waddell and others, 1984, p. 36-39; R.J. Lacznia, U.S. Geological Survey, written commun., 1995; pl. 1).

## Site Designations

Ground-water sites in this report are either wells or test holes: wells are cased holes drilled specifically to find ground water; test holes are all other drilled holes. Wells and test holes at NTS and vicinity are identified herein by Raytheon Services Nevada (RSN) hole number or local well identifier, by USGS standard identification number, and by the latitude and longitude of the site.

Hole numbers are assigned by RSN to wells and test holes according to the type of hole drilled, site location (NTS administrative area), and sequence code for the consecutive order in which the hole was drilled or redrilled. Emplacement holes drilled for proposed nuclear testing events begin with the letter "U," followed by a dash (-), NTS area number, and sequence code (letters "a-z, aa-az, ba-bz,..., za-zz"). Exploratory holes, drilled to assess material properties within a defined area, follow the same naming convention but begin with the letters "UE." The suffix letters "PS" indicate a post-shot hole drilled to monitor radio-nuclides and the effects of nuclear testing events; "S," a substitute hole drilled to replace an emplacement or exploratory hole; and "WW," a water well drilled as a potential water-supply source.

Exceptions to the standard naming convention are PM-1, PM-2, RNM-2S, TW-1, TW-7, TW-B, TW-D, TW-F, WW-2, WW-3, WW-4, WW-4A, WW-5A, and WW-5C. The prefix letters "ER," indicate environmental restoration; "PM," Pahute Mesa; "RNM," radionuclide migration; "TW," test well; and "WW," water well. Numbers and letters following the dash in these exceptions represent sequence of site drilling, not NTS area location.

Local hole identifiers for wells and test holes in the vicinity of NTS are assigned by well owners or the USGS. These local hole identifiers may contain abbreviations that are the same as or similar to the ones found in RSN hole numbers for NTS wells and test holes. Abbreviations used in these hole identifiers that are not used at NTS include "DDL" for Desert Dry Lake, "DR" Desert Range, "HTH" hydrologic test hole, "TTR" Tonopah Test Range, "TPJ" Tolicha Peak Junction, "UC" underground central Nevada, and "USAF" United States Air Force.

The USGS system for site identification is based on the latitude-longitude grid. Each site is identified by a unique 15-digit number; the first six digits are generally the degrees, minutes, and seconds of latitude, the next seven digits are the generally the degrees, minutes, and seconds of longitude, and the last two digits are the sequence number of the well or test hole within the 1-second grid of latitude and longitude. The assigned number is retained as a permanent identifier even if a more precise latitude and longitude are later determined (U.S. Geological Survey, 1989). To determine the geographic location of a well or test hole, the latitude and longitude coordinates should be used rather than the site identifier.

## Acknowledgments

Raytheon Services Nevada and Atlas Wireline Services, contractors with the Nevada Operations Office of USDOE, made substantial contributions to this report including field inventory of wells and test holes and other hydrologic work at NTS. Reynolds Electrical & Engineering Co., Inc. (REECo) provided data on ground-water withdrawal. The Environmental Monitoring Systems Laboratory of the U.S. Environmental Protection Agency (USEPA) at Las Vegas did the tritium analyses. Personnel of Nellis and Indian Springs Air Force Bases assisted in providing access and construction data for many off-site wells.

## GROUND-WATER DATA

Data presented consist of depth-to-water measurements for accessible wells and test holes, compiled ground-water withdrawals for wells, and tritium concentrations for wells and test holes. Depth to water was measured in 98 wells and test holes, ground-water

withdrawals were compiled for 14 wells, and tritium concentrations were determined for water samples collected from 7 wells and test holes.

Measurements were made in inch-pound units and converted to the International System of Units (SI). The number of significant figures was retained in each conversion. However, length measurements are reported to the nearest tenth of a meter to reflect the precision of field measurements.

## Depth to Water

The term "depth to water" is used rather than "water level" to avoid confusion with "static water level" as defined by Winograd (1970, p. 19) for NTS. Use of depth to water does not imply static conditions.

Two networks of wells and test holes are measured—an NTS network and a regional network in the vicinity of NTS. Depth to water is measured intermittently in most of the accessible wells and test holes in these areas.

Measurements are made frequently in new wells and test holes until the depth to water stabilizes, the hole is destroyed, or the hole becomes inaccessible due to test site activities. Depth-to-water measurements in wells and test holes often represent elevated or depressed water levels caused by injection or removal of fluids during drilling operations or by nearby underground detonations (Winograd, 1970, p. 20-25). Because most of the existing wells and test holes available for long-term monitoring were not drilled for the acquisition of hydrologic data, construction may allow several saturated units to contribute water to the wells or test holes. Depth-to-water fluctuations may represent a composite water level for multiple saturated units rather than conditions within a single aquifer unit (alluvium, volcanic-rock, or carbonate-rock aquifers).

Water-level altitudes, determined by subtracting depth-to-water measurements from the reported land-surface altitude, should be used with caution. The reported altitude of land surface is usually determined when drilling operations are completed. However, subsequent NTS activities may alter the land-surface datum. Changes in land-surface altitude, measuring point, or both, may affect depth-to-water measurements and the calculated water-level altitude.

## Methods

Several techniques are used to measure depth to water at NTS and other areas in south-central Nevada. Currently, measurements are made by the USGS with wire-line, electric-tape, air-line, and steel-tape devices.

The wire-line and electric-tape devices are calibrated at least annually against a reference steel tape. For these devices, a correction factor is determined to account for cable or tape stretch that occurs during measurement. The apparent depth-to-water measurement is adjusted by the correction factor to obtain the depth to water. Each device is calibrated at different depths over the useful range of measurement of the device. The reference steel tape is calibrated by procedures of the National Institute of Standards and Technology (Taylor and Opperman, 1986).

A measuring point is established for each well or test hole. The measuring point is a point on the well or test hole from which depth-to-water measurements are referenced. Measured depth to water is adjusted to land-surface datum by subtracting or adding the distance of the measuring point above or below land surface.

### Wire-Line Device

The wire-line device consists of an armored four-conductor cable mounted on a motorized reel. The cable is centered over the hole with a hydraulic boom. Attached to the cable end is a probe that transmits an electric current to a meter at land surface when water is contacted. A measuring wheel, over which the cable passes, measures the length of cable passed into the hole below the measuring point. The measured depth to water below the measuring point is corrected for cable stretch and adjusted to land-surface datum.

### Electric-Tape Device

The electric-tape device consists of a weighted electrical cable with two wire conductors exposed on the leading end. When both conductors contact water, electrical continuity between the two conductors is made and a visual display, sound beeper, or both is activated. The measured depth to water below the measuring point is corrected for tape stretch and adjusted to land surface datum.

### **Air-Line Device**

The technique used for making air-line measurements of depth to water is described by Garber and Koopman (1968, p. 11-14). The top of the air-line tube is connected to a motor-driven air compressor. Air pressure is increased in the air-line tube until all water in the tube has been expelled. Pressure stabilizes as the forced air pressure gradient in the air-line tube decreases with increasing water pressure. Gage readings indicate the length of the column of water expelled from the air line, either directly in feet of water or indirectly through pressure readings. To calculate depth to water, the length of the column of expelled water is subtracted from the length of the air-line tube. Measured depth to water is adjusted to land-surface datum by subtracting or adding the distance of the air-line reference point above or below land surface.

### **Steel-Tape Device**

The technique used for making steel-tape measurements of depth to water greater than 305 m below land surface is described by Garber and Koopman (1968, p. 2-6) and by Robison and others (1988, p. 9-11). The steel tape, which is mounted on a motorized reel, is suspended in the hole a known distance below the measuring point so that the bottom end is below the water surface. The length of wetted tape is subtracted from the suspended length below the measuring point and adjusted to land-surface datum.

### **Measurements**

Depth-to-water measurements at 55 wells and test holes at NTS made during water year 1993 are listed in table 1. Depth-to-water measurements for 43 wells and test holes in the vicinity of NTS made during water year 1993 are shown in table 2. Data are organized in table 1 first by NTS administrative area, then by RSN hole-number designation within each area. Data are organized in table 2 by Nevada hydrographic area (Rush, 1968) and then by local hole identifier. Tables 1 and 2 also include well location and construction information.

Depth to water ranged from 87.7 to 674.6 m below land surface at NTS and from 6.0 to 444.7 m below land surface at sites in the vicinity of NTS for water year 1993. All data have been entered into the GWSI data base. Pre-1993 and water year 1993 depth-to-water measurements at and in the vicinity of NTS

can be retrieved from the GWSI data base or found in previous publications (Wood, 1992; Robie and others, 1995).

The information available for some wells and test holes listed in tables 1 and 2 may be incomplete. Dates for which the month or day are unknown are listed as "00." Other information that is unknown or not applicable is identified with one or two dashes.

In this report, values for date hole completed and hole depth may disagree with values reported by RSN or other agencies. The date of hole completion shown in tables 1 and 2 is the date when drilling activities that may have affected water levels ceased. The date of hole completion is not the reported date that all construction activities at the hole ceased. The hole depth is the most recently available measured or reported accessible depth. For some holes, the bottom of open interval listed in tables 1 and 2 may be deeper than the hole depth listed. This is because the bottom of open interval is reported at the time of well or test hole installation, whereas the hole depth is the latest accessible depth measured or reported.

The terms active testing area and inactive testing area refer to the approximate extent of areas where nuclear testing occurred. Active testing areas are areas where nuclear testing occurred during or after 1982. Inactive testing areas are areas where nuclear testing occurred prior to 1982.

Nine hydrographs for wells and test holes at NTS (figs. 3-11) and six hydrographs for wells in the vicinity of NTS (figs. 12-17) show changes in depth to water with time. These selected hydrographs are from wells in several geographic areas and rock types. All available depth-to-water measurements for these hydrographs are displayed.

Depth-to-water measurements in well TW-7, which is in an active testing area in the Yucca Flat hydrographic area (Area 3, pl. 1), are shown in figure 3. The well is open to volcanic rocks of Tertiary age, primarily tuff. Two anomalous rises in water level (lesser depth to water) were recorded, one on June 12, 1962, and one on September 13, 1963. These peaks coincide with two nuclear detonations. The Aardvark event was 307 m east of TW-7 on May 12, 1962. The Bilby event was 1,173 m east-southeast of TW-7 on September 13, 1963 (U.S. Department of Energy, 1993).

Depth-to-water measurements in test hole U-3cn 5, which is in an active testing area in the Yucca Flat hydrographic area (Area 3, pl. 1), are shown in figure 4. The test hole is open to Paleozoic carbonate rock.

Depth-to-water measurements in test hole UE-3e4, which is in an active testing area in the Yucca Flat hydrographic area (Area 3, pl. 1), are shown in figure 5. The site consists of three piezometers each open to Tertiary volcanic rock at different depths.

Depth-to-water measurements in test hole UE-5n, which is in an inactive testing area in the Frenchman Flat hydrographic area (Area 5, pl. 1), are shown in figure 6. The test hole is open to Quaternary alluvium.

Depth-to-water measurements in well TW-B, which is in an area of active testing in the Yucca Flat hydrographic area (Area 6, pl. 1), are shown in figure 7. The well is open to Tertiary volcanic rock, primarily tuff.

Depth-to water measurements in test hole UE-18r, which is on Buckboard Mesa in the Fortymile Canyon hydrographic area (Area 18, pl. 1), are shown in figure 8. The test hole is open to Tertiary volcanic rock, primarily tuff.

Depth-to-water measurements in test hole PM-1, which is in an active testing area on Pahute Mesa in the Gold Flat hydrographic area (Area 20, pl. 1), are shown in figure 9. The test hole is open to Tertiary volcanic rock, primarily tuff and rhyolite.

Depth-to-water measurements in test hole PM-2, which is in an area of active testing on Pahute Mesa in the Gold Flat hydrographic area (Area 20, pl. 1), are shown in figure 10. The test hole is open to Tertiary volcanic rock, primarily tuff, rhyolite, and dacite. The cause of the water-level rise in May 1993 has not been determined, but the rise may represent a recharge event or direct infiltration into the annulus of the test hole (G.M. Russell, U.S. Geological Survey, oral commun., 1994).

Depth-to-water measurements in well TW-F in the Frenchman Flat hydrographic area (Area 27, pl. 1) are shown in figure 11. The well is open to Paleozoic carbonate rock, primarily dolomite.

Depth-to-water measurements in test hole HTH-1 in the Hot Creek Valley hydrographic area (fig. 2) are shown in figure 12. The test hole is open to Quaternary and Tertiary alluvium and Tertiary volcanic rock. The minimum depth-to-water measurement was on January 22, 1968, three days after a nuclear detonation—the Faultless event—on January 19, 1968. The Faultless event was 915 m northwest of HTH-1 (U.S. Department of Energy, 1993).

Depth-to-water measurements in test hole UC-1-P-2SR in the Hot Creek Valley hydrographic area (fig. 2) are shown in figure 13. The test hole is open to

rubble, consisting of Quaternary and Tertiary alluvium and Tertiary volcanic rocks, caused by the collapse of the cavity formed by the Faultless event (Garber, 1981, p. 207-209). The Faultless event was 91 m northeast of UC-1-P-2SR (U.S. Department of Energy, 1993). Decreases in depth to water from September 1974 to the present are attributed to infilling of the cavity (Thordarson, 1987, p. 15-16).

Depth-to-water measurements in well Army 2 in the Indian Springs Valley hydrographic area (pl. 1) are shown in figure 14. The well is open to Quaternary and Tertiary alluvium.

Depth-to-water measurements in well Army 3 in the Indian Springs Valley hydrographic area (pl. 1) are shown in figure 15. The well is open to Quaternary and Tertiary alluvium.

Depth-to-water measurements in well Army 6A in the Mercury Valley hydrographic area (pl. 1) are shown in figure 16. The well is open to Paleozoic clastic rocks.

Depth-to-water measurements in test hole PM-3 on Pahute Mesa in the Oasis Valley hydrographic area (pl. 1) are shown in figure 17. The test hole is open to Tertiary volcanic rock, primarily tuff. Measurements prior to September 14, 1988, were made when the hole depth was 502.0 m. Measurements from September 21, 1988, through 1991 were made when the hole depth was 920.2 m. Measurements from 1992 through 1993 were made from two piezometers installed in February 1992 at depths of 508.1 and 653.5 m.

## Ground-Water Withdrawals

Ground-water withdrawals at NTS were compiled for calendar year 1993. Withdrawals were measured by REECO at 14 pumping wells used for water supply at NTS. The compilation does not include ground water removed from other wells and test holes during drilling, hydrologic testing, or sampling activities.

Withdrawals were determined from flowmeter information. Each well is equipped with a totalizing flowmeter that is periodically read by REECO personnel. Differences between flowmeter readings provide the volume of ground water withdrawn during the period between readings. Flow rates were assumed to be constant during the period between readings. Daily withdrawal was computed from the total calculated volume of withdrawal. Flowmeter readings are accurate to the last thousand gallons pumped.

Monthly and yearly ground-water withdrawals from wells at NTS during 1993 are shown in table 3. The table lists wells by ground-water flow system sub-basin, NTS administrative area, and RSN hole number. Primary water yielding units and location and construction data also are listed in table 3.

Annual ground-water withdrawals from individual wells during 1993 ranged from 0.80 million liters to 417.20 million liters. Total measured ground-water withdrawal from NTS was 1,888.04 million liters.

Ground water at NTS is withdrawn from alluvium, volcanic rock, and carbonate rock (table 3). Wells at NTS in the Alkali Flat-Furnace Creek Ranch subbasin withdrew ground water from volcanic rock and those wells at NTS in the Ash Meadows subbasin withdrew from all three rock units. About 52 percent of the Ash Meadows subbasin withdrawal was from carbonate rock, 25 percent from alluvium, 21 percent from volcanic rock, and 2 percent from a well open to both alluvium and volcanic rock. Wells at NTS in the Oasis Valley subbasin had no withdrawals.

Annual ground-water withdrawals at NTS from 1984 through 1993 are shown in figure 18. Total ground-water withdrawals decreased from 4,229.61 million liters in 1989 to 1,888.04 million liters in 1993.

Monthly ground-water withdrawals at NTS during 1993 is shown in figure 19. Monthly ground-water withdrawals ranged from 121.73 million liters in December to 227.18 million liters in August.

## **Tritium Concentrations**

Raw, unfiltered water samples were collected from four wells and test holes at NTS and three wells in the vicinity of NTS by using a wire-line point sampler. Prior to sampling, the collection bailer was rinsed with 5-percent hydrochloric acid. The bailer was then rinsed with tap and deionized water, air dried, and used to remove approximately 2 L of water from the well or test hole. Samples were collected in 1-L glass bottles. The Environmental Monitoring Systems Laboratory of USEPA in Las Vegas, Nev., analyzed the samples for tritium concentration.

Location and construction information, sample collection depths, and tritium concentrations for the sampled wells and test holes are presented in table 4. This table lists wells and test holes at NTS by administrative area number, and wells in the vicinity of NTS by Nevada hydrographic area. Because some of the wells

have not been completely developed for water-quality sampling use, tritium concentrations may be from residual drilling fluids or other fluids introduced during drilling, pumping, or water injection instead of representing water solely from the saturated zone.

Tritium concentrations ranged from near 0 to 27,676.0 Bq/L from four wells sampled at NTS and from near 0 to 3.9 Bq/L from three wells sampled in the vicinity of NTS during water year 1993. An average annual concentration of 740 Bq/L of tritium in drinking water is the maximum permissible limit established by USEPA in Title 40, Code of Federal Regulations (1988). Tritium concentrations in one well, PM-2, at NTS exceeded this limit.

## **SUMMARY**

The USGS, in support of the USDOE Environmental Restoration and Hydrologic Resources Management Programs, collects and compiles hydrogeologic data to aid in characterizing the regional and local ground-water flow systems at NTS and vicinity. This report presents data on depth to water, ground-water withdrawals, and tritium concentrations for selected wells and test holes.

Depth-to-water measurements were made at 55 sites at NTS during the 1993 water year and ranged from 87.7 to 674.6 m below land surface. Depth-to-water measurements made at 43 regional sites in the vicinity of NTS during water year 1993 ranged from 6.0 to 444.7 m below land surface. Annual ground-water withdrawals from 14 wells at NTS during calendar year 1993 ranged from 0.80 to 417.20 million liters per well. Total annual ground-water withdrawal from NTS was 1,888.04 million liters. Tritium concentrations of four ground-water samples collected at NTS during the 1993 water year ranged from near 0 to 27,676.0 Bq/L and exceeded established drinking water standards at one well. Tritium concentrations of three ground-water samples collected in the vicinity of NTS during the 1993 water year ranged from near 0 to 3.9 Bq/L and did not exceed established drinking water standards.

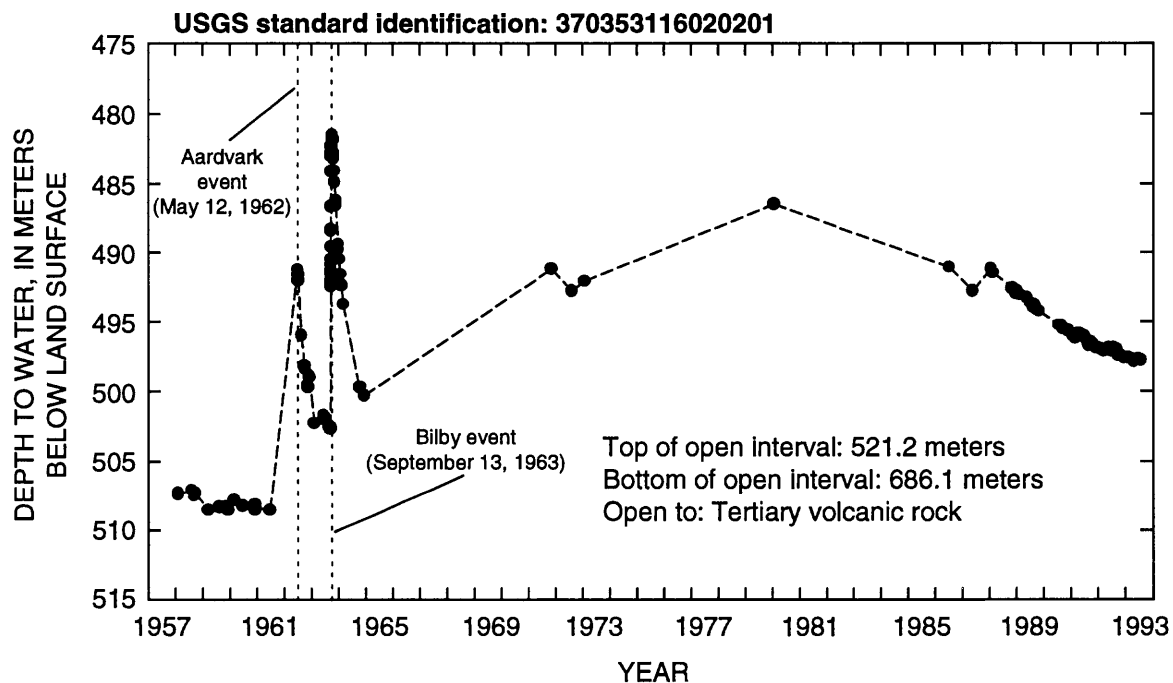
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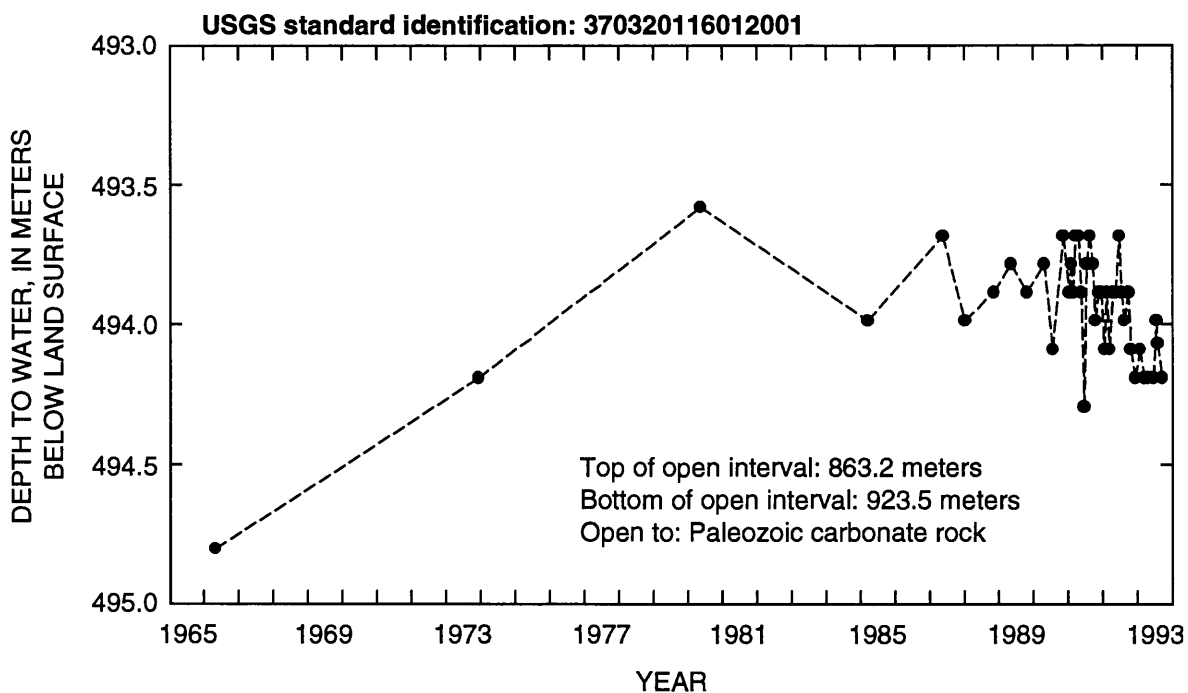


.

## **BASIC DATA**



**Figure 3.** Depth to water through water year 1993 in well TW-7 in active testing area in Yucca Flat hydrographic area (Area 3), Nevada Test Site. Names and dates are indicated for nearby weapons tests.



**Figure 4.** Depth to water through water year 1993 in test hole U-3cn 5 in active testing area in Yucca Flat hydrographic area (Area 3), Nevada Test Site.

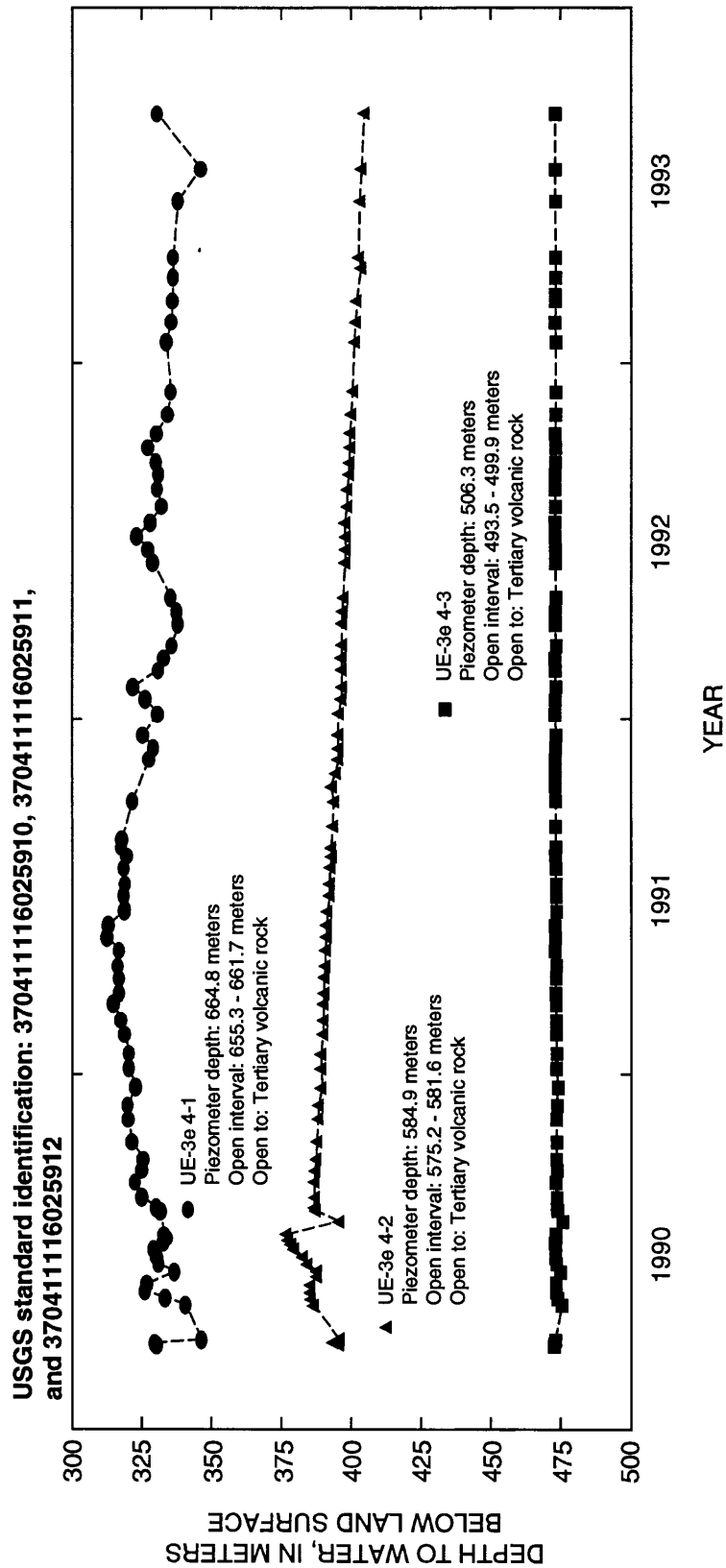
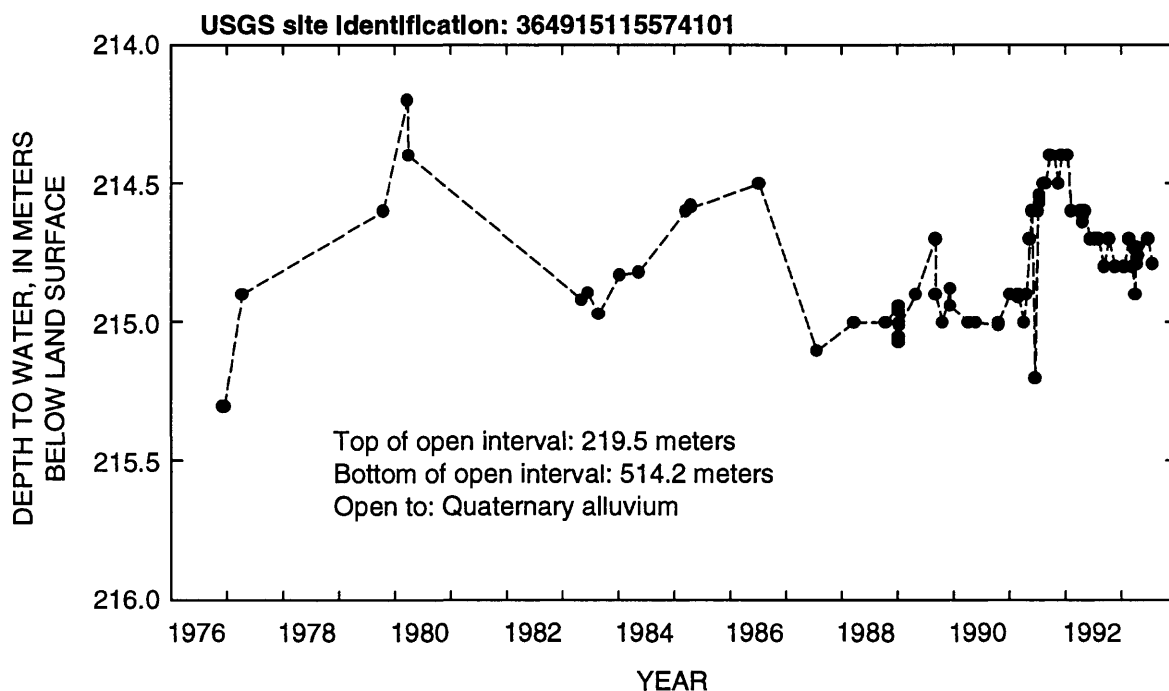
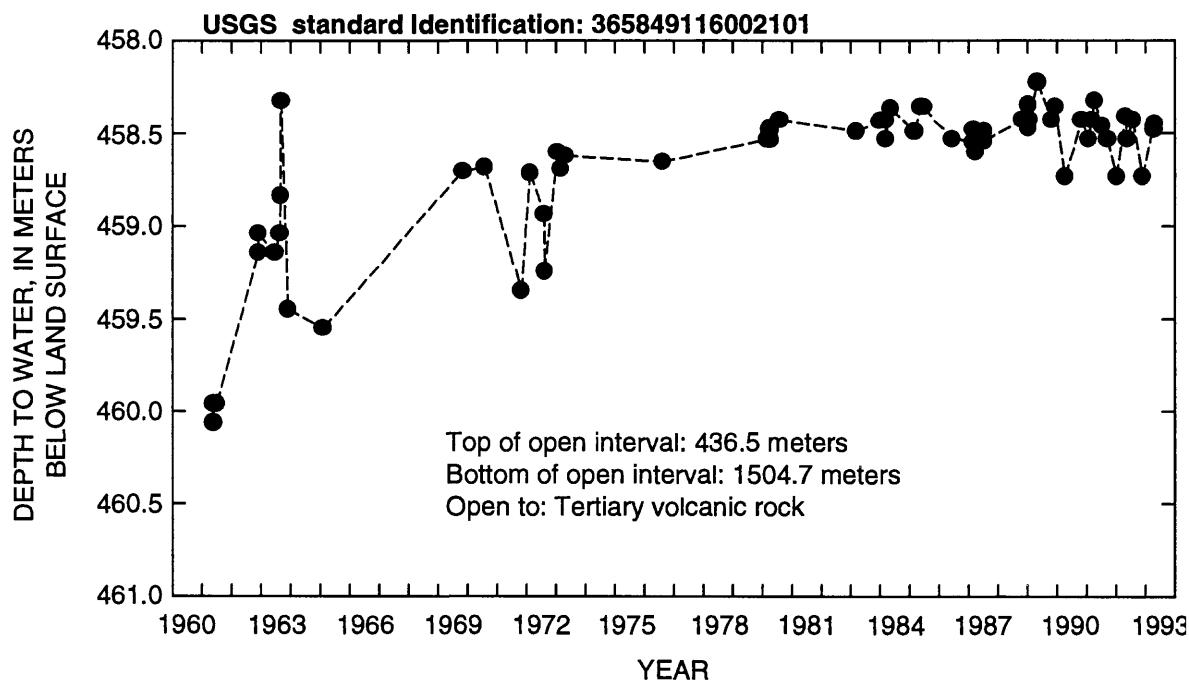


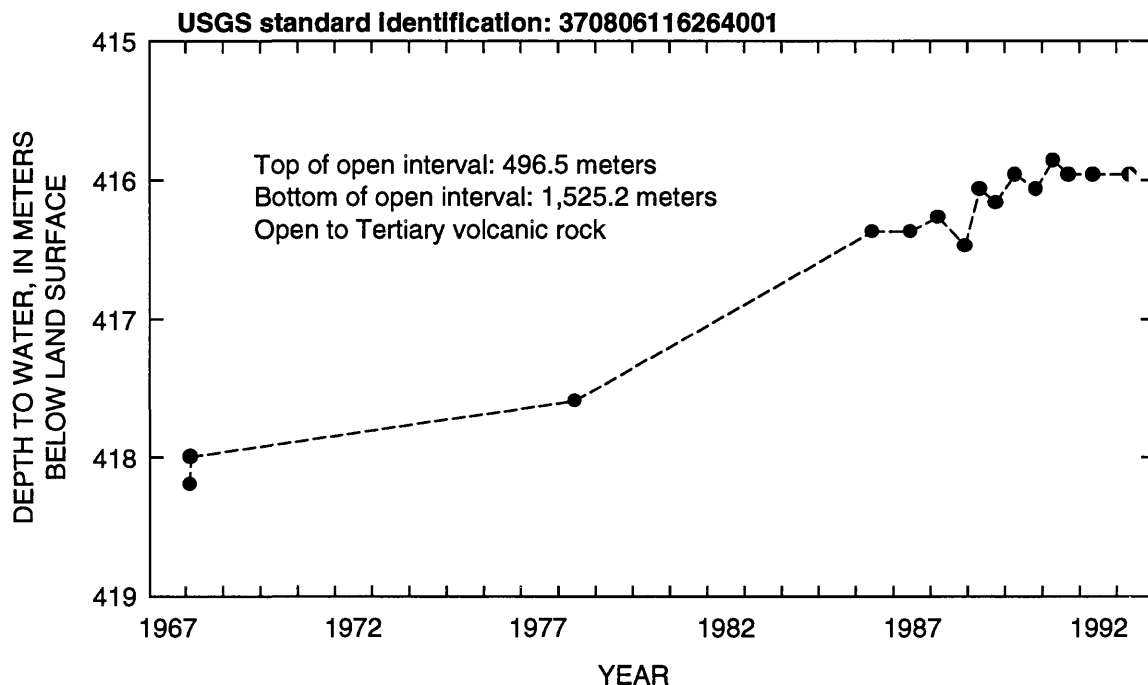
Figure 5. Depth to water through water year 1993 in test hole UE-3e 4 in Yucca Flat hydrographic area (Area 3), Nevada Test Site



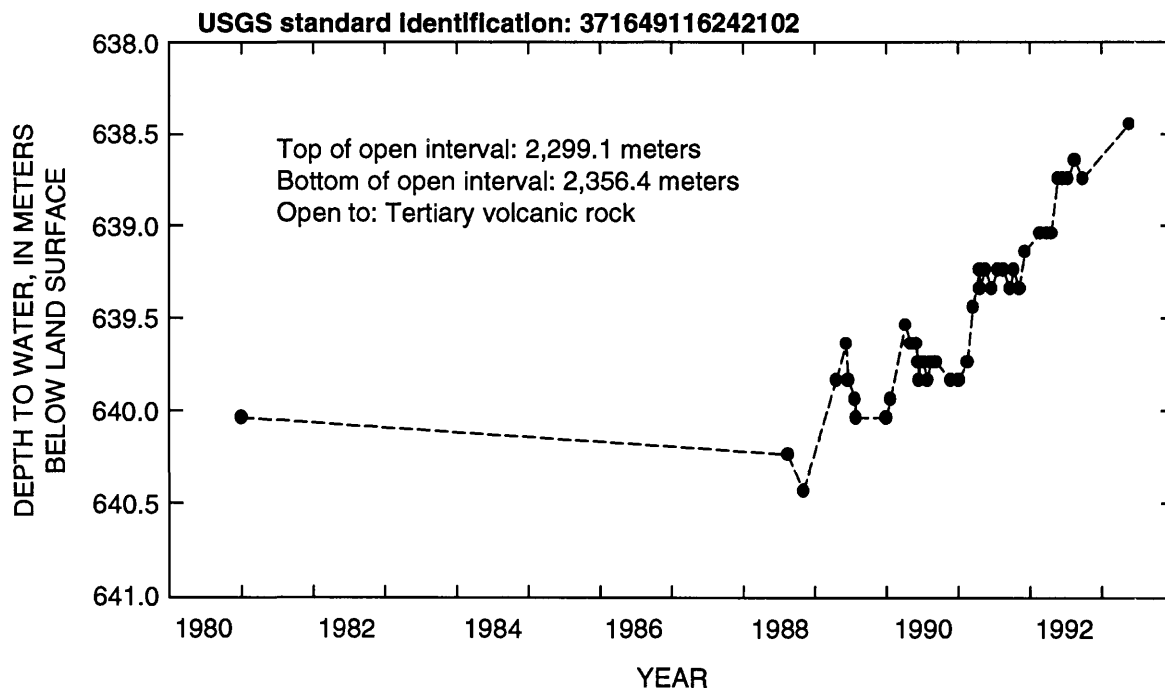
**Figure 6.** Depth to water through water year 1993 in test hole UE-5n in Frenchman Flat hydrographic area (Area 5), Nevada Test Site.



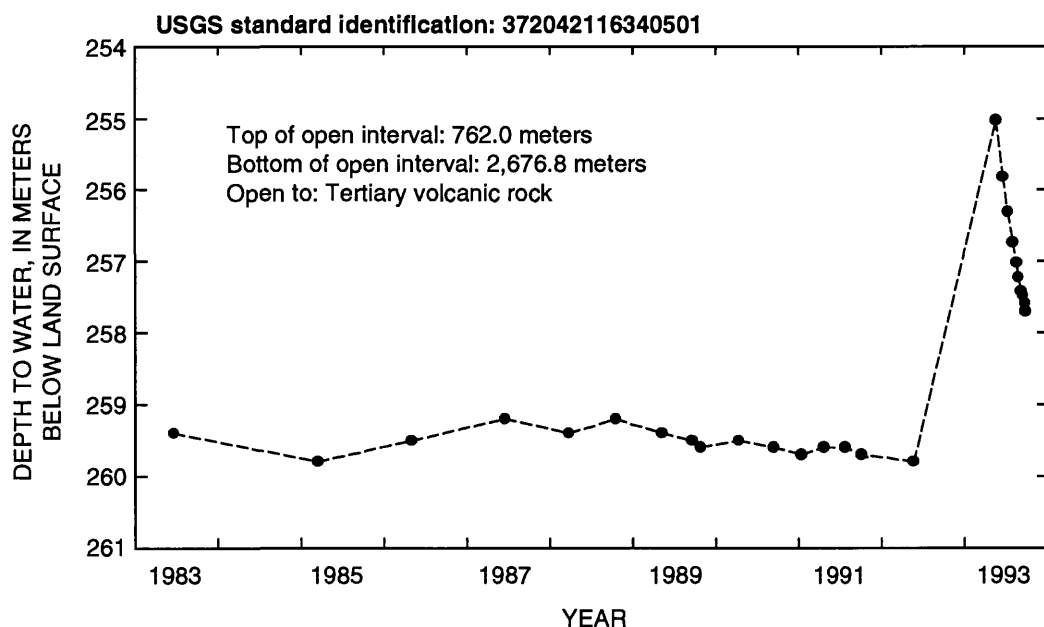
**Figure 7.** Depth to water through water year 1993 in well TW-B in Yucca Flat hydrographic area (Area 6), Nevada Test Site.



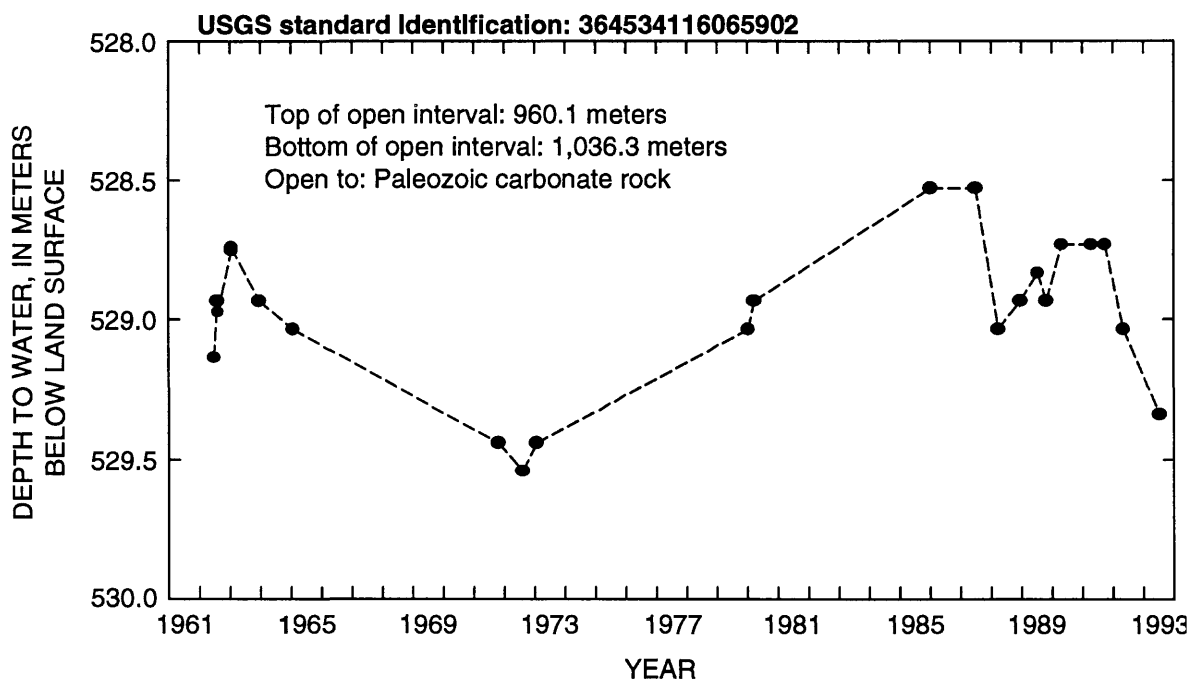
**Figure 8.** Depth to water through water year 1993 in test hole UE-18r on Buckboard Mesa (Area 18), Nevada Test Site.



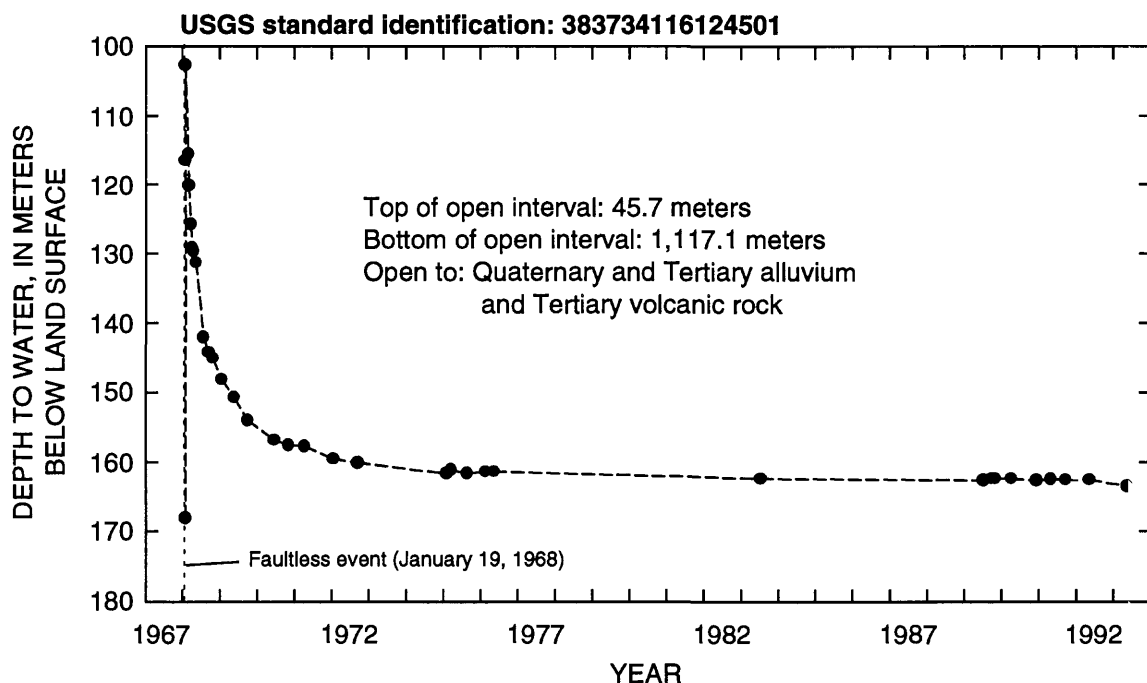
**Figure 9.** Depth to water through water year 1993 in test hole PM-1 on Pahute Mesa (Area 20), Nevada Test Site



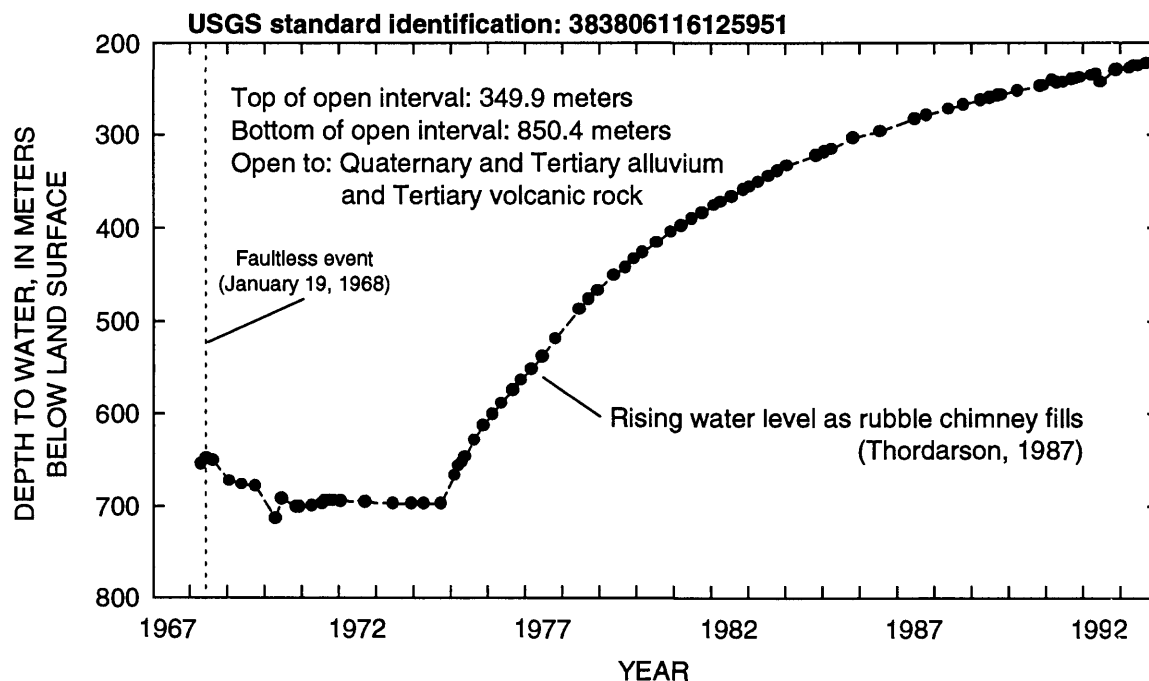
**Figure 10.** Depth to water through water year 1993 in test hole PM-2 on Pahute Mesa (Area 20), Nevada Test Site.



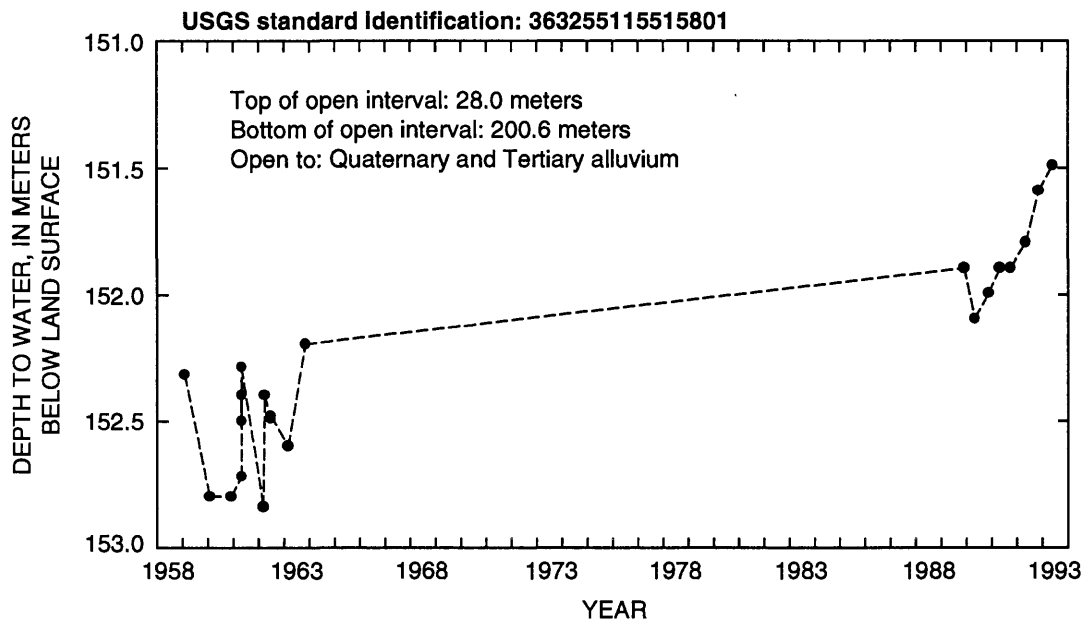
**Figure 11.** Depth to water through water year 1993 in well TW-F in Frenchman Flat hydrographic area (Area 27), Nevada Test Site.



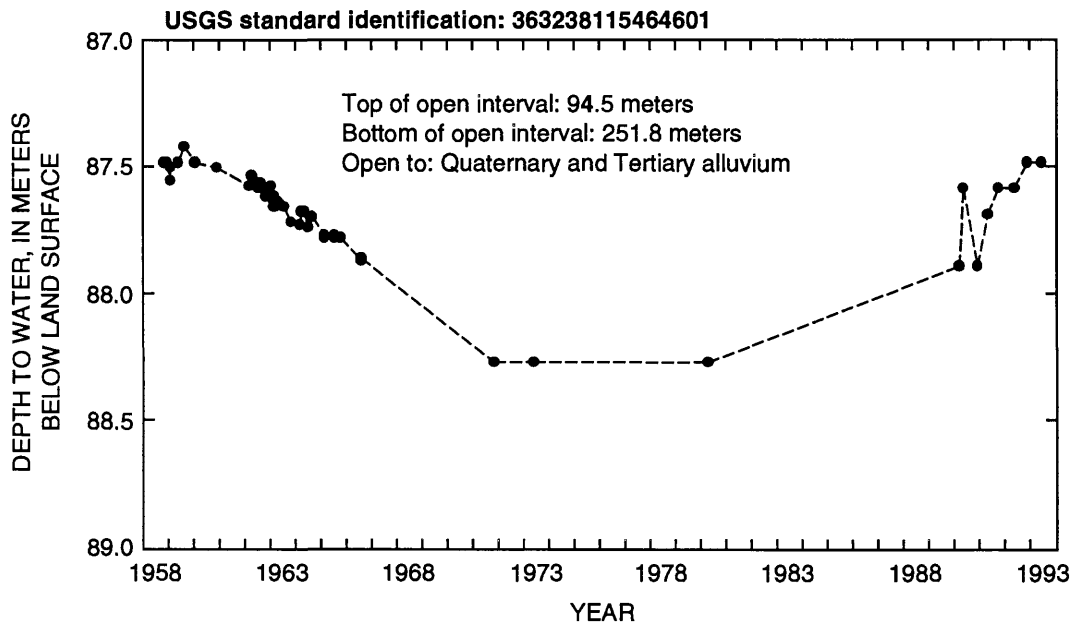
**Figure 12.** Depth to water through water year 1993 in test hole HTH-1 in Hot Creek Valley hydrographic area in vicinity of Nevada Test Site. Name and date are indicated for nearby weapon test.



**Figure 13.** Depth to water through water year 1993 in test hole UC-1-P-2SR in Hot Creek Valley hydrographic area in vicinity of Nevada Test Site. Name and date are indicated for nearby weapon test.



**Figure 14.** Depth to water through water year 1993 in well Army 2 in Indian Springs Valley hydrographic area in vicinity of Nevada Test Site.



**Figure 15.** Depth to water through water year 1993 in well Army 3 in Indian Springs Valley hydrographic area in vicinity of Nevada Test Site.

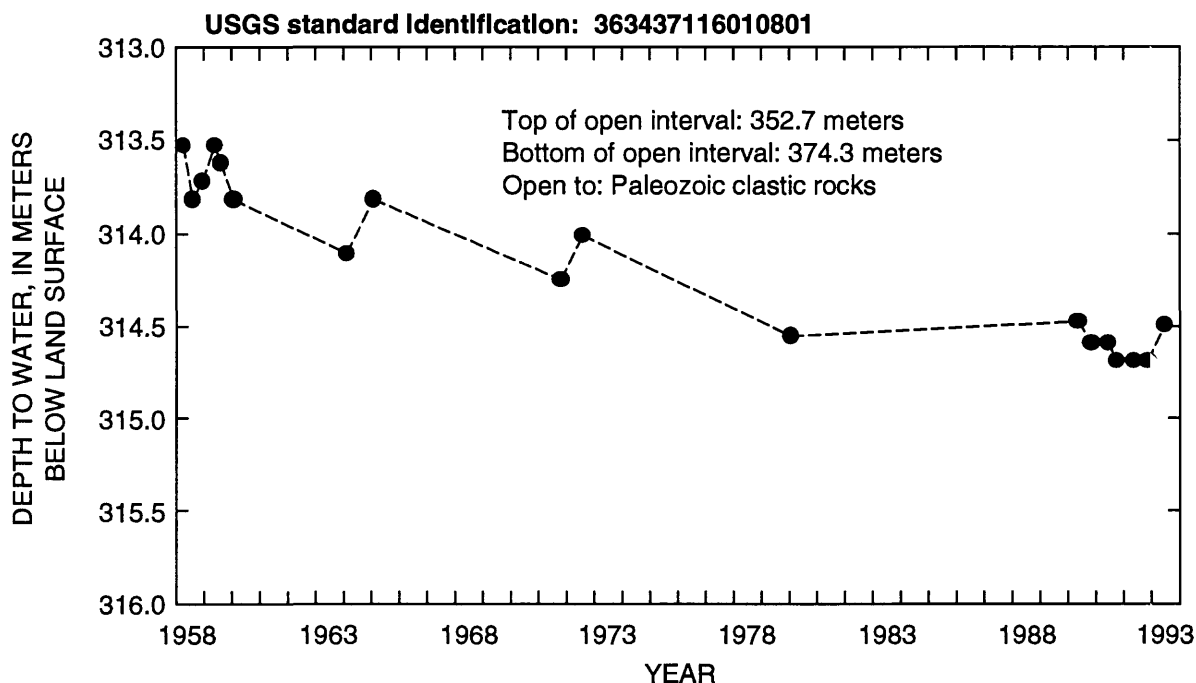


Figure 16. Depth to water through water year 1993 in well Army 6A in Mercury Valley hydrographic area in vicinity of Nevada Test Site.

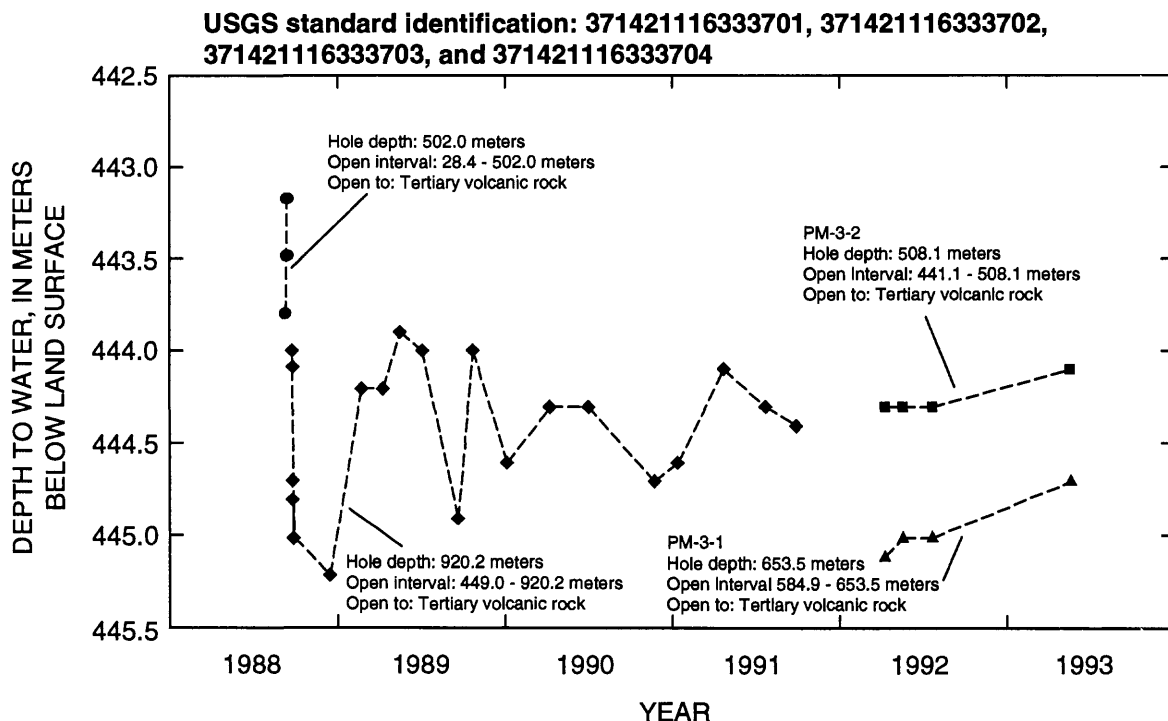
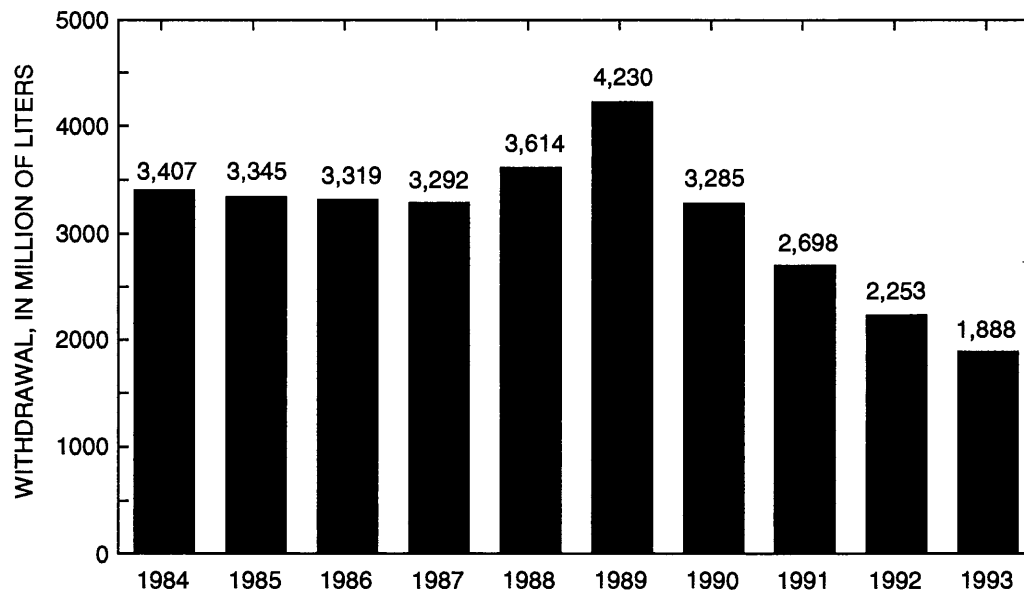
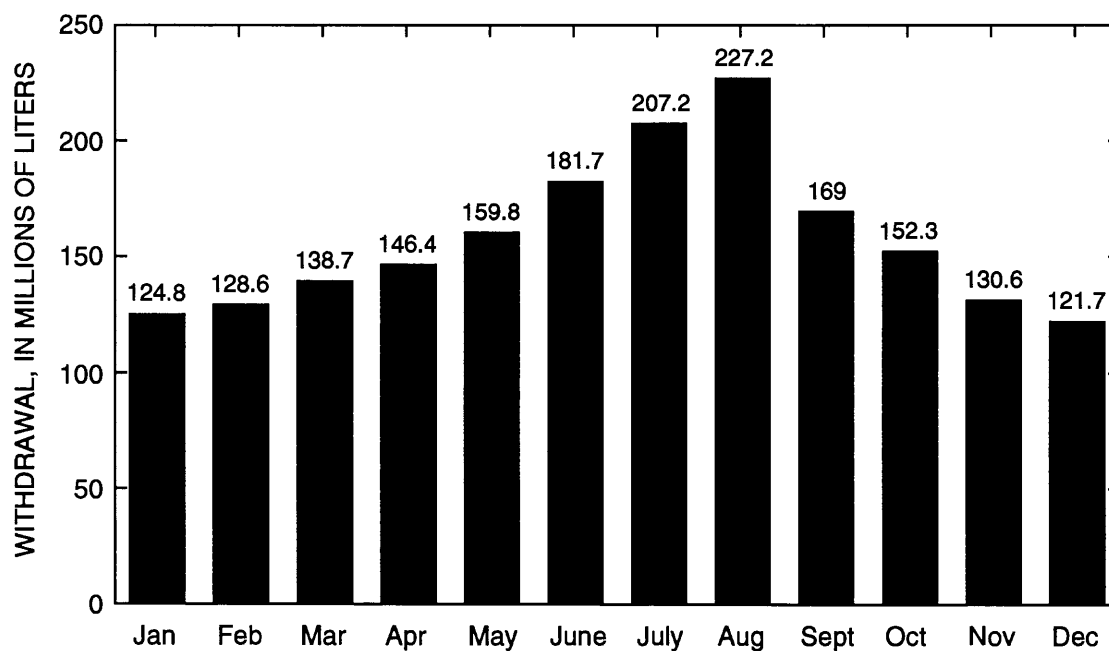


Figure 17. Depth to water through water year 1993 in test hole PM-3 in Oasis Valley hydrographic area in vicinity of Nevada Test Site.



**Figure 18.** Annual ground-water withdrawals from Nevada Test Site, 1984-93.



**Figure 19.** Monthly ground-water withdrawals from Nevada Test Site, 1993.

**Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada**

RSN hole number--Drill hole number assigned by Raytheon Services Nevada; see section "Site Designations" in text.  
 USGS standard identification--U.S. Geological Survey site designation; see section "Site Designations" in text.  
 Date hole completed--Date that borehole construction work ceased that may have affected depth to water; see section "Measurements" in text.  
 Land-surface altitude--Datum is sea level. Value may not represent current altitude; see section "Depth to Water" in text.  
 Hole depth--Datum is land surface. Represents most recent available accessible depth; see section "Measurements" in text.  
 Depth of open interval--Datum is land surface. Bottom of open interval may be deeper than present accessible hole depth; see section "Measurements" in text.  
 Type--P, perforated or slotted casing; S, screen; X, open (uncased) hole.  
 Measurement--Datum is land surface. Value may not represent static water level; see section "Depth to Water" in text.  
 Method--S, steel tape; T, electric tape; V, wire-line device.  
 Site Status--P, site pumping; Q, water-quality sample collected; S, nearby site pumping; -, no observation.

RSN	hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Depth of open interval				Measurement				
							Hole depth (meters)	Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status
AREA 1															
UE-1a	370254	370254116070601	370254	1160706	02-02-64	1,311.6	171.3	23.8	291.7	267.9	X	11-30-92 05-10-93 06-02-93	166.4 166.3 166.2	T T S	- - -
UE-1b	370254	370254116064201	370254	1160642	02-10-64	1,302.4	213.7	23.2	382.2	359.0	X	11-30-92 05-10-93	196.6 196.5	T T	- -
UE-1c	370253	370253116055201	370253	1160552	02-11-64	1,282.0	540.1	22.6	573.0	550.4	X	11-30-92 05-10-93	395.6 395.4	V V	- -
UE-1h	370005	370005116040301	370005	1160403	07-03-68	1,217.7	983.9	650.4	1,023.5	373.1	X	11-30-92 06-08-93	474.5 474.6	V V	- -
UE-1L	370254	370254116082002	370254	1160820	11-11-77	1,357.6	696.2	218.2	696.2	478.0	X	11-30-92 05-10-93	158.4 158.3	T T	- -
UE-1q	370337	370337116033002	370337	1160330	05-22-92	1,244.2	792.5	749.5	792.5	43.0	X	03-15-93 06-07-93	504.7 504.4	V V	- -
AREA 2															
U-2gk	370720	370720116041601	370720	1160416	10-19-92	1,292.6	551.4	35.4	551.4	516.0	X	10-27-92 11-03-92 06-07-93 07-02-93 08-03-93 09-10-93	549.7 549.4 544.1 544.0 543.8 543.7	V V V V V V	- - - Q - -
UE-2ce <sup>a</sup>	370831	370831116080701	370831	1160807	01-23-77	1,452.1	502.6	421.8	502.9	81.1	P, X	10-01-92 11-02-92 11-30-92 01-05-93 02-03-93	440.8 440.7 440.8 440.7 440.8	S S S S S	- - - - -

**Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth of open interval			Measurement				
							Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status
UE-2ce <sup>a</sup>	370831116080701	370831	1160807	01-23-77	1,452.1	502.6	421.8	502.9	81.1	P, X	10-01-92	440.8	S	-
											11-02-92	440.7	S	-
											11-30-92	440.8	S	-
											01-05-93	440.7	S	-
											02-03-93	440.8	S	-
WW-2 <sup>a</sup>	370958116051512	370958	1160515	03-20-62	1,362.5	1,043.0					03-03-93	440.9	V	-
											04-07-93	440.9	V	-
											05-06-93	440.7	V	-
											07-19-93	440.7	V	-
											08-10-93	440.7	V	-
TW-7 <sup>a</sup>	370353116020201	370353	1160202	06-27-54	1,238.4						08-26-93	440.8	V	-
											09-01-93	440.7	V	-
											09-08-93	440.7	V	-
											03-15-93	626.5	V	-
											AREA 3			
U-3cn 5 <sup>b</sup>	370320116012001	370334	1160121	02-07-66	1,222.9	862.6	863.2	923.5	60.3	X	10-19-92	494.1	V	-
											12-01-92	494.2	V	-
											01-27-93	497.6	V	-
											03-09-93	497.7	V	-
											04-14-93	497.9	V	-
U-3mi	370020115593001	370021	1155930	01-20-86	1,220.4						06-15-93	497.7	V	-
											07-20-93	497.8	V	-
											10-19-92	494.1	V	-
											12-01-92	494.2	V	-
											01-27-93	494.1	V	-
UE-3e 4-1	370411116025910	370411	1160259	03-19-90	1,244.2	536.8	113.4	546.8	433.4	X	03-09-93	494.2	V	-
											04-14-93	494.2	V	-
											06-15-93	494.2	V	-
											07-20-93	494.0	V	-
											08-04-93	494.1	V	-
UE-3e 4-1	370411116025910	370411	1160259	03-19-90	1,244.2	664.8	655.3	661.7	6.4	S	09-14-93	494.2	V	-
											11-27-92	478.0	V	-
											06-08-93	477.3	V	-
											07-30-93	477.2	V	-
											10-06-92	326.7	V	-
UE-3e 4-1	370411116025910	370411	1160259	03-19-90	1,244.2	664.8	655.3	661.7	6.4	S	10-20-92	329.9	V	-
											11-09-92	333.9	V	-
											12-02-92	334.9	V	-
											01-22-93	333.5	V	-

**Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Depth of open interval				Measurement													
						Hole depth (meters)	Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status									
UE-3e 4-1	370411116025910	370411	1160259	03-19-90	1,244.2	664.8	655.3	661.7	6.4	S	02-12-93	335.3	V	-									
											03-05-93	335.7	V	-									
											03-29-93	335.9	V	-									
											04-19-93	335.8	V	-									
											06-16-93	337.7	V	-									
											07-19-93	345.8	V	-									
UE-3e 4-2	370411116025911	370411	1160259	03-22-90	1,244.2	584.9	575.2	581.6	6.4	S	09-14-93	330.1	V	-									
											10-06-92	399.2	V	-									
											10-20-92	399.3	V	-									
											11-09-92	399.7	V	-									
											12-02-92	400.2	V	-									
											01-22-93	400.9	V	-									
											02-12-93	401.2	V	-									
											03-05-93	401.8	V	-									
											04-08-93	403.3	V	-									
											04-19-93	402.4	V	-									
UE-3e 4-3	370411116025912	370411	1160259	03-26-90	1,244.2	506.3	493.5	499.9	6.4	S	06-16-93	402.9	V	-									
											07-19-93	403.5	V	-									
											09-14-93	404.5	V	-									
											10-06-92	473.0	V	-									
											10-20-92	472.9	V	-									
											11-09-92	473.0	V	-									
											12-02-92	473.1	V	-									
											01-22-93	473.0	V	-									
											02-12-93	472.9	V	-									
											03-05-93	473.0	V	-									
TW-D <sup>a</sup>	370418116044501	370428	1160430	01-08-61	1,265.5	594.4	540.1	594.4	48.8	P, X	03-11-93	473.0	V	-									
											03-29-93	473.0	V	-									
											04-19-93	473.0	V	-									
											06-16-93	472.8	V	-									
											07-19-93	472.8	V	-									
											09-14-93	472.8	V	-									
											AREA 4												
											12-01-92	525.3	V	-									
											06-07-93	525.0	V	-									
											U-4u PS 2A <sup>a, b</sup>	370513116025101	370513	1160251	08-30-90	1,254.9	694.9	490.7	694.9	204.2	X	10-06-92	485.4
10-20-92	486.7	V	-																				
11-09-92	486.2	V	-																				
12-02-92	485.6	V	-																				
											01-29-93	484.3	V	-									

**Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued**

Depth of open interval														Measurement	
RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status	
U-4u PS 2A <sup>a, b</sup>	370513116025101	370513	1160251	08-30-90	1,254.9	694.9	490.7	694.9	204.2	X	02-17-93	483.9	V	-	
											03-09-93	483.6	V	-	
											03-24-93	482.9	V	-	
											04-23-93	482.3	V	-	
											06-16-93	480.8	V	-	
											07-20-93	480.1	V	-	
UE-4t 1 <sup>a</sup>	370556116025405	370556	1160254	10-24-90	1,263.1	612.6	580.9	612.6	31.7	P, X	10-08-92	88.1	T	-	
											10-22-92	87.8	T	-	
											11-09-92	87.7	T	-	
											12-03-92	87.9	T	-	
											01-29-93	88.3	T	-	
											02-17-93	88.5	T	-	
											03-08-93	88.3	T	-	
											03-24-93	88.4	T	-	
											04-23-93	88.5	T	-	
											04-29-93	88.6	S	-	
UE-4t 2 <sup>a</sup>	370556116025406	370556	1160254	10-24-90	1,263.1	534.6	476.7	534.6	57.9	P, X	08-19-93	89.7	T	-	
											10-08-92	347.5	V	-	
											10-22-92	347.8	V	-	
											11-09-92	348.4	V	-	
											12-03-92	349.4	V	-	
											01-29-93	348.9	V	-	
											02-17-93	349.4	V	-	
											03-08-93	348.8	V	-	
											03-24-93	348.9	V	-	
											04-23-93	349.6	V	-	
RNM-2S <sup>a</sup>	364922115580101	364921	1155801	04-01-74	954.9	352.3	316.4	352.3	35.7	P, X	04-29-93	350.1	S	-	
											AREA 5				
											10-14-92	220.8	T	-	
											11-24-92	220.8	T	-	
											01-21-93	220.8	T	-	
											02-24-93	220.6	T	-	
											03-17-93	220.7	T	-	
											04-06-93	220.7	T	-	
											06-28-93	220.6	T	-	
											07-29-93	220.6	T	-	
UE-5 PW-1 <sup>a</sup>	365105115565801	365105	1155658	09-29-92	968.6	255.7	229.2	255.7	26.5	S, X	03-02-93	235.1	T	-	
											03-17-93	235.0	T	-	
											03-20-93	235.0	S	-	
											04-06-93	235.1	T	-	

Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued

Depth of open interval														Measurement	
RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth of open interval			Length open (meters)	Date (month, day, year)	Depth to water (meters)	Method	Site status	
							Top (meters)	Bottom (meters)	Type						
UE-5 PW-2 <sup>a</sup>	365152115565701	365152	1155657	02-19-93	989.5	280.3	250.0	280.3	30.3	S, X	03-02-93 03-29-93 04-06-93	256.2 256.0 256.1	T S T	-	
UE-5 PW-3 <sup>a</sup>	365201115581601	365201	1155816	01-05-93	1,005.1	291.1	264.6	291.1	26.5	S, X	03-02-93 03-17-93 03-29-93 04-06-93	271.1 271.0 271.0 271.1	T T S T	-	
UE-5n <sup>a</sup>	364915115574101	364915	1155741	03-01-76	948.5	514.2	219.5	514.2	53.0	P, X	10-14-92 11-24-92 01-21-93 02-24-93 03-17-93 04-06-93 04-09-93 04-13-93 04-20-93 04-21-93	214.7 214.8 214.8 214.7 214.8 214.9 214.7 214.8 214.8 214.7 214.8	T T T T T T S S S S S	-	
WW-5a	364635115572901	364635	1155729	03-23-51	942.7	277.4	195.7	267.3	71.6	P	10-14-92 11-24-92 01-21-93 02-24-93 03-17-93	217.1 216.4 217.2 217.5 217.6	T T T T T	-	
WW-5c	364708115574401	364720	1155749	03-24-54	939.1	365.8	270.4	365.8	95.4	P, X	04-06-93 06-28-93 07-29-93	217.7 217.1 216.5	T T T	-	
TW-B <sup>a</sup>	365849116002101	365845	1160049	05-14-61	1,197.6	509.0	436.5	504.7	50.0	P	11-27-92 04-13-93 04-21-93 04-26-93	458.7 458.4 458.4 458.4	V S S S	-	
UE-6d	365905116033201	365905	1160332	05-01-68	1,203.0	1,177.7	647.7	1,187.5	539.8	X	11-27-92 06-08-93 08-04-93	462.1 461.8 461.8	V V V	-	
WW-3	365942116032001	365943	1160329	02-05-52	1,209.8	548.5	457.9	548.5	80.7	P	03-25-93 06-15-93 08-03-93	457.3 467.1 467.1	V V V	-	

Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued

Depth of open interval														Measurement	
RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth of open interval			Date (month, day, year)	Depth to water (meters)	Method	Site status		
							Top (meters)	Bottom (meters)	Length open (meters)					Type	
WW-4 <sup>a</sup>	365418116012601	365418	1160126	11-18-81	1,097.9	450.8	287.1	450.8	163.1	P, X	10-14-92	259.3	T	P	
											11-17-92	254.6	T	-	
											11-20-92	259.2	T	P	
											01-22-93	254.5	S	-	
											03-10-93	254.6	S	-	
WW-4a <sup>a</sup>	365412116013901	365412	1160139	02-21-90	1,099.1	457.8	324.9	457.8	107.0	P, X	06-28-93	259.2	T	P	
											07-29-93	254.8	T	-	
											01-20-93	254.7	T	-	
											01-21-93	254.7	S	-	
											03-30-93	254.8	S	-	
U-7cd	370451116024101	370451	1160241	04-14-92	1,254.3	493.8	35.7	495.3	459.6	X	10-01-92	471.6	V	-	
											10-05-92	471.3	V	-	
											10-08-92	471.1	V	-	
											10-13-92	470.5	V	-	
											10-15-92	470.3	V	-	
											10-22-92	469.8	V	-	
											10-27-92	469.3	V	-	
											11-24-92	484.3	V	-	
											11-30-92	484.0	V	-	
											12-03-92	483.6	V	-	
											12-15-92	481.9	V	-	
											01-21-93	478.2	V	-	
											01-25-93	477.8	V	-	
											02-01-93	477.1	V	-	
											02-05-93	476.7	V	-	
U-7cd 1	370451116024102	370451	1160241	09-16-92	1,253.9	518.2	34.7	518.2	483.4	X	10-01-92	445.6	V	-	
											10-05-92	441.0	V	-	
											10-08-92	438.7	V	-	
											10-13-92	436.3	V	-	
											10-27-92	434.1	V	-	
											10-29-92	433.5	V	-	
											12-15-92	433.5	S	-	
											01-21-93	433.4	V	-	
											01-26-93	433.2	S	-	
											03-16-93	432.6	S	-	
											03-25-93	432.7	V	-	

**Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth of open interval			Measurement				
							Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status
UE-7n <sup>a</sup>	370556116000901	370556	1160009	07-14-76	1,332.0	672.1	608.1	672.1	64.0	P, X	10-13-92 12-03-92 02-05-93 02-17-93 03-29-93 04-22-93 05-04-93 07-13-93	600.1 600.5 600.5 600.6 600.5 600.3 600.2 600.3	V V V V V S S V	- - - - - - - -
AREA 11														
UE-11a	365259115571601	365259	1155716	09-04-82	1,081.1	426.7	182.6	426.7	244.1	X	10-14-92 11-24-92 01-27-93 02-24-93 03-25-93 04-06-93 06-28-93 07-29-93	344.9 344.9 344.9 344.9 344.9 345.0 344.8 344.8	V V V V V V V V	- - - - - - - -
AREA 12														
U-12 <sup>s</sup>	371342116125102	371342	1161251	03-15-66	2,070.8	447.1	3.7	451.1	447.4	X	05-17-93	286.8	V	-
UE-12t 6 <sup>a</sup>	371332116112802	371332	1161128	09-16-88	2,105.3	445.3	7.0	445.3	257.6	P, X	05-17-93	258.2	V	-
AREA 14														
UE-14b	365550116091101	365550	1160911	01-30-84	1,326.8	1,121.7	625.1	1,121.7	496.6	X	12-01-92 05-18-93	508.1 507.9	V V	- -
AREA 16														
UE-16f	370208116092402	370208	1160924	09-23-77	1,417.9	429.5	394.1	450.8	56.7	X	11-30-92 05-10-93	111.9 111.8	T T	- -
AREA 17														
TW-1 <sup>a</sup>	370929116132311	370929	1161323	00-00-80	1,876.3	1,125.9	582.2	740.7	67.1	P	05-17-93	446.3	V	-
UE-17a <sup>a</sup>	370425116095801	370425	1160958	09-23-76	1,431.3	367.9	227.1	370.0	66.7	P, X	05-18-93	193.6	T	-
AREA 18														
UE-18r	370806116264001	370805	1162641	01-24-68	1,688.0	1,502.7	496.5	1,525.2	1,028.7	X	05-18-93	416.0	V	-
UE-18t	370741116194501	370741	1161945	10-05-78	1,585.3	792.5	577.9	792.5	214.6	X	05-18-93 06-02-93	279.0 278.9	V S	- -
AREA 19														
U-19bh	371349116222001	371349	1162220	06-14-91	2,062.9	654.7	21.3	654.7	633.4	X	06-02-93 08-09-93	639.1 639.0	V V	- Q

**Table 1. Depth to water in wells and test holes at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land- surface altitude (meters)	Depth of open interval				Measurement				
						Hole depth (meters)	Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status
U-19bj	371736116184701	371736	1161847	05-28-92	2,144.3	656.2	17.4	656.2	638.8	X	10-07-92 06-03-93 07-14-93 09-09-93	648.6 649.6 649.7 649.8	V V V V	- - - -
U-19bk	371714116230301	371714	1162303	12-03-91	2,033.0	670.0	17.4	670.0	652.6	X	10-07-92 05-05-93 08-11-93 09-09-93	605.3 605.0 605.2 605.2	V V V V	- - - -
UE-19h	372034116222504	372034	1162225	01-17-92	2,066.5	695.9	624.8	695.9	68.1	P	06-02-93	643.3	V	-
AREA 20														
PM-1	371649116242102	371649	1162421	05-03-64	1,998.9	2,356.4	2,299.1	2,356.4	57.3	X	05-26-93	638.4	V	-
PM-2 <sup>a</sup>	372042116340501	372042	1163405	05-01-66	1,702.6	2,676.8	762.0	2,676.8	1,086.3	P, X	05-20-93 06-18-93 07-12-93 08-02-93 08-17-93	255.0 255.8 256.3 256.7 257.0	V V V V V	- - - - Q
U-20ax	371350116264701	371350	1162647	08-21-87	1,992.2	670.6	18.9	670.6	651.7	X	08-24-93 09-07-93 09-14-93 09-23-93 09-27-93	257.2 257.4 257.5 257.6 257.7	S T T T T	- - - - Q
U-20bg	371414116242901	371414	1162429	12-19-90	2,001.6	670.6	17.4	670.6	653.2	X	05-26-93	651.8 <sup>c</sup>	V	-
U-20n PS 1DD-H <sup>b</sup>	371425116252401	371425	1162524	05-15-85	1,971.4	922.0	812.3	912.9	100.6	P	10-26-92 05-05-93	650.6 650.7	V V	- -
UE-20bh 1	371442116243301	371442	1162433	09-29-91	2,023.0	856.5	590.1	856.5	266.4	X	05-23-93	624.8	V	-
UE-20n 1	371425116251902	371425	1162519	06-10-87	1,969.3	863.8	695.6	863.8	168.2	X	10-26-92 06-03-93 05-25-93	674.6 674.3 622.1	V V V	- - -
AREA 27														
TW-F	364534116065902	364534	1160659	06-12-62	1,262.8	1,036.3	960.1	1,036.3	76.2	X	07-21-93	529.3	V	-

<sup>a</sup> Topmost and bottommost intervals are not continuous.

<sup>b</sup> Water-level measurements corrected for borehole deviation from vertical.

<sup>c</sup> Borehole backfilled to 651.8 meters.

**Table 2. Depth to water in wells and test holes in vicinity of Nevada Test Site, Nye and Clark Counties, Nevada**

**Local hole identifier**--Identifier assigned by owner or U.S. Geological Survey; see section "Site Designations" in text.  
**USGS standard identification**--U.S. Geological Survey site designation; see section "Site Designations" in text.  
**Date hole completed**--Date that borehole construction work ceased that may have affected depth to water; see section "Measurements" in text.  
**Land-surface altitude**--Datum is sea level. Value may not represent current altitude; see section "Depth to Water" in text.  
**Hole depth**--Datum is land surface. Represents most recent available accessible depth; see section "Measurements" in text; --, depth unknown.  
**Depth to open interval**--Datum is land surface. Bottom most open interval may be deeper than present accessible hole depth; see section "Measurements" in text; --, interval unknown.  
**Type**--P, perforated or slotted casing; R, wire-wrapped screen; S, screen; X, open (uncased) hole.  
**Measurement**--Datum is land surface. Value may not represent static water level; see section "Depth to Water" in text.  
**Method**--A, air line; S, steel tape; T, electric tape; V, wire-line device.  
**Site status**--D, site was dry; Q, water-quality sample was collected; R, site was recently pumped; S, nearby site pumping; -, no observation.

Local hole identifier	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Measurement				
							Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status
Ralston Well	373320117090601	373320	1170906	--	1,449.6	124.7	--	--	--	--	11-18-92	93.5	T	-
											05-11-93	93.4	T	-
Hammel Mine	373228116472001	373228	1164720	--	1,688.6	37.5	--	--	X	11-20-92	36.2	T	-	
TPJ-1	370840116510101	370840	1165101	00-00-52	1,216.5	32.6	--	--	--	11-18-92	13.1	T	-	
										05-11-93	13.2	T	-	
TPJ-2	370753116502701	370753	1165027	--	1,220.7	--	--	--	--	11-18-92	17.6	T	-	
										05-11-93	17.6	T	-	
Gold Flat 2	372543116363501	372543	1163635	00-00-47	1,594.1	88.4 <sup>a</sup>	68.6	88.4	19.8	P	04-24-93	71.1	T	-
TTR Sulfide Mine	373446116433301	373446	1164333	--	1,868.4	--	--	--	--	X	11-19-92	17.1	T	-
											05-12-93	16.8	T	-
TTR Antelope Mine 1	373622116434601	373622	1164346	--	1,935.5	--	--	--	--	--	11-19-92	6.7	T	-
											05-12-93	6.0	T	-
TTR Antelope Mine 2	373622116434701	373622	1164347	--	1,937.3	--	--	--	--	--	11-19-92	8.2	T	-
											05-12-93	7.4	T	-
TTR Antelope Mine 3	373623116434701	373623	1164347	--	1,939.1	--	--	--	--	--	11-19-92	10.4	T	-
											05-12-93	9.6	T	-

**Table 2. Depth to water in wells and test holes in vicinity of Nevada Test Site, Nye and Clark Counties, Nevada--Continued**

Local hole identifier	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Measurement			
							Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method
TTR Dead Horse Well	374910116373001	374910	1163730	--	1,688.6	118.9 <sup>b</sup>	--	--	--	11-19-92 05-12-93	109.8 --	T T	- D
TTR EH-2 WW	374658116464102	374658	1164641	--	1,705.4	176.8	--	--	--	11-19-92 05-12-93	136.6 138.7	A A	- R
TTR EH-4	374619116435401	374619	1164354	11-03-83	1,663.6	149.4 <sup>c</sup>	45.7	149.4	103.7	P 05-12-93	96.2 96.1	T T	- -
TTR Sandia 2	374725116452701	374725	1164527	09-00-56	1,669.7	160.0	99.1	147.8	48.7	P 05-12-93	105.6 105.6	T T	- -
TTR Sandia 4	374739116453401	374739	1164534	07-02-59	1,666.6	176.8	107.0	142.0	35.0	P 05-12-93	103.0 103.0	T T	- -
STONE CABIN VALLEY													
TTR 3A WW	375045116460201	375045	1164603	03-04-80	1,634.3	245.4	163.7	245.4	81.7	X 05-12-93	62.6 62.3	T T	- -
TTR 3B WW	375054116460201	375054	1164603	01-11-85	1,633.7	91.4	44.2	86.6	42.4	S 05-12-93	36.7 33.4	A A	- -
TTR 3BB	375055116460201	375055	1164603	--	1,633.1	--	--	--	--	11-19-92 05-12-93	33.7 33.5	T T	- -
TTR EH-6	375139116460001	375139	1164605	11-17-83	1,632.2	163.1	0.0	94.5	94.5	P 05-12-93	30.2 30.0	T T	- -
TTR EH-7 WW	375310116472302	375310	1164723	09-01-89	1,628.5	201.2	92.7 <sup>d</sup>	198.1	105.4	R 05-12-93	28.9 28.9	T T	- -
TTR Reeds Ranch Well	375453116450501	375453	1164505	--	1,641.0	38.7 <sup>e</sup>	--	--	--	11-19-92 05-12-93	30.7 30.7	T T	- -
HOT CREEK VALLEY													
HTH-1	383734116124501	383735	1161245	07-23-67	1,832.2	1,126.2	45.7	1,117.1	413.0	P 05-11-93	163.1	T	-
HTH-2	383734116124502	383740	1161247	08-12-67	1,836.4	304.8	153.6	304.8	151.2	P 11-18-92 12-09-92 04-06-93 05-11-93 07-01-93 09-16-93	168.6 168.9 168.6 168.7 168.8 168.7	T T T T T T	- - - - - -
UC-1-P-2SR	383806116125951	383806	1161254	04-06-68	1,854.4	833.3	349.9	850.4	500.5	P 11-18-92 12-09-92 04-06-93 05-11-93 07-01-93 09-16-93	226.3 226.0 224.6 222.1 222.0 219.2	T T T T T T	- - - - - -

**Table 2. Depth to water in wells and test holes in vicinity of Nevada Test Site, Nye and Clark Counties, Nevada--Continued**

Local hole identifier	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Measurement				
							Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status
INDIAN SPRINGS VALLEY														
Army 2	363255115515801	363255	1155158	09-03-58	1,162.2	191.1	28.0	200.6	172.6	X	11-12-92 06-02-93	151.6 151.5	T T	- -
Army 3	363238115464601	363238	1154646	11-20-58	1,102.5	251.8	94.5	251.8	157.3	P, X	11-12-92 06-03-93	87.5 87.5	T S	- -
Cactus Spring 3	363422115433701	363422	1154337	--	995.2	30.5	25.3	30.5	5.2	P	11-12-92	10.6	T	-
USAF MW-20	363529115392101	363529	1153921	04-07-88	942.7	19.8	10.7	19.8	9.2	S	11-12-92 05-08-93	12.7 12.4	T T	- -
USAF MW-21	363529115391301	363529	1153913	04-07-88	943.1	22.9	13.7	22.9	9.2	S	11-12-92 05-08-93	13.2 13.0	T T	- -
USAF MW-22	363508115391701	363508	1153917	04-06-88	944.9	19.8	10.7	19.8	9.1	S	11-12-92 05-08-93	12.6 12.2	T T	- -
USAF Well 3	363452115405101	363449	1154053	01-11-85	954.0	182.9	64.0	182.9	118.9	S	11-12-92 06-10-93	20.9 20.2	T T	S -
USAF Well 62-1	363452115404401	363452	1154044	00-00-42	950.4	171.3	74.7	171.3	96.6	P, X	06-10-93	12.6	S	-
USAF Well 106-2	363447115404601	363447	1154046	06-16-83	954.9	133.2	40.5	127.4	86.9	P	12-15-92 04-09-93 06-10-93 09-21-93	19.8 19.6 19.3 20.1	S S T S	- - - -
TIKAPOO VALLEY (SOUTHERN PART)														
DDL-1	365711115115201	365711	1151152	10-01-86	977.8	128.0	--	--	--	--	12-16-92 12-29-92 04-02-93 05-28-93 06-10-93 09-07-93	48.2 48.2 48.5 48.2 48.9 48.2	T S S T S S	- - - - - -
DDL-2	365502115134101	365502	1151341	01-21-89	1,005.8	140.2	4.0	140.2	136.2	X	12-16-92 05-28-93	65.2 65.1	T T	- -
THREE LAKES VALLEY (SOUTHERN PART)														
USAF Alpha 2	363045115280201	363045	1152802	07-25-87	934.5	61.0	50.3 <sup>f</sup>	59.4	9.1	S	11-12-92 05-08-93	40.1 40.1	T T	- -
USAF Alpha 3	363135115281401	363135	1152814	07-27-87	931.8	64.0	47.2 <sup>g</sup>	62.5	9.1	S	11-12-92	41.4	T	-
USAF Well 2278-1	363205115335601	363205	1153356	01-01-73	975.4	107.6	73.2	107.6	34.4	P	06-10-93	34.1	T	-
LAS VEGAS VALLEY														
DR-1	363332115244001	363328	1152438	10-15-88	1,090.9	291.7	--	--	--	--	12-16-92 05-28-93	248.7 248.6	T T	- -

**Table 2. Depth to water in wells and test holes in vicinity of Nevada Test Site, Nye and Clark Counties, Nevada--Continued**

Local hole identifier	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Measurement																														
							Top (meters)	Bottom (meters)	Length open (meters)	Type	Date (month, day, year)	Depth to water (meters)	Method	Site status																										
South Black Hills-1	363212115240301	363212	1152403	02-24-87	1,059.2	211.5	202.7	219.5	9.1	S	10-08-92	177.0	T	-																										
											12-23-92	176.9	T	-																										
											02-18-93	176.8	T	-																										
											04-05-93	176.8	T	-																										
											05-05-93	176.8	T	-																										
USAF Well 2372-1	362830115270501	362830	1152657	--	969.3	91.4	--	--	--	--	06-07-93	176.8	T	-																										
											07-27-93	176.8	T	-																										
											09-16-93	176.8	T	-																										
											11-12-92	64.8	T	-																										
											12-15-92	64.7	S	-																										
Army 6A	363437116010801	363437	1160108	00-00-55	1,050.0	381.9	352.7	374.3	21.6	P	11-13-92	314.7	V	-																										
											06-21-93	314.5	V	Q																										
											PM 3-1	371421116333703	371421	1163337	02-06-92	1,774.9	653.5	584.9	653.5	68.6	P	05-20-93	444.7	V	-															
																										PM 3-2	371421116333704	371421	1163337	02-04-92	1,774.9	508.1	439.5	508.1	68.6	P	05-20-93	444.1	V	-

<sup>a</sup> Well depth sounded to 85.3 meters on November 26, 1989.

<sup>b</sup> Well depth sounded to 188.9 meters on April 18, 1990.

<sup>c</sup> Well also named TTR Sandia 8

<sup>d</sup> Gravel packed from 103.6 meters to 201.2 meters.

<sup>e</sup> Well depth sounded to 38.7 meters on May 12, 1993.

<sup>f</sup> Sand packed from 41.8 meters to 61.0 meters.

<sup>g</sup> Sand packed from 44.2 meters to 64.0 meters.

**Table 3. Monthly and annual ground-water withdrawals in 1993 from wells at Nevada Test Site, Nye County, Nevada**

RSN hole number--Well number assigned by Raytheon Services Nevada; see section "Site Designations" in text.

USGS standard identification--U.S. Geological Survey site designation; see section "Site Designations" in text.

Date hole completed--Date that borehole construction work ceased that may have affected depth-to-water; see section "Measurements" in text.

Land-surface altitude--Datum is sea level. Value may not represent current altitude; see section "Depth to water" in text.

Hole depth--Datum is land surface. Represents most recent available accessible depth; see section "Measurements" in text.

Depth of open interval--Datum is land surface. Bottommost open interval may be deeper than present accessible well depth; see text.

Type--P, perforated or slotted casing; X, open (uncased) hole.

Primary water-yielding unit--A, alluvium; C, carbonate rock; V, volcanic rock.

Ground-water withdrawals--Source: M, Reynolds Electrical & Engineering Co., Inc., water production reports.

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land- surface altitude (meters)	Hole depth (meters)	Depth to open interval			Primary water- yielding unit	Ground-water withdrawals			
							Top (meters)	Bottom (meters)	Length open (meters)		Type	Month	Millions of liters	Source
ASH MEADOWS SUBBASIN-AREA 5														
UE-5c WW	365011115584702	365011	1155847	00-00-66	980.2	817.5	335.3	817.5	365.8	P, X	A, V	January	4.05	M
												February	1.13	M
												March	1.70	M
												April	1.79	M
												May	4.01	M
												June	1.84	M
												July	1.84	M
												August	2.27	M
												September	2.12	M
												October	2.67	M
												November	1.97	M
												December	2.21	M
Total											27.60			
WW-5b	36480511580801	364805	1155808	05-07-51	942.4	274.3	213.4	274.3	61.0	P	A	January	0.0	M
												February	0.0	M
												March	0.0	M
												April	0.0	M
												May	2.15	M
												June	4.72	M
												July	25.22	M
												August	36.96	M
												September	17.15	M
												October	12.82	M
												November	8.36	M
												December	5.26	M
Total											112.64			

**Table 3. Monthly and annual ground-water withdrawals in 1993 from wells at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Primary water-yielding unit	Ground-water withdrawals		
							Top (meters)	Bottom (meters)	Length open (meters)		Month	Millions of liters	Source
WW-5c	364708115574401	364720	1155749	03-24-54	939.1	365.8	270.4	365.8	95.4	P, X	January	15.33	M
											February	32.82	M
											March	36.58	M
											April	35.04	M
											May	21.45	M
											June	27.56	M
											July	0.0	M
											August	2.62	M
											September	22.40	M
											October	17.18	M
											November	21.11	M
											December	6.96	M
Total											239.05		
ASH MEADOWS SUBBASIN-AREA 6													
WW-4	365418116012601	365418	1160126	11-18-81	1,097.9	450.8	287.1	450.8	163.1	P, X	January	19.05	M
											February	21.85	M
											March	25.68	M
											April	23.11	M
											May	33.12	M
											June	22.30	M
											July	34.39	M
											August	34.72	M
											September	14.46	M
											October	20.70	M
											November	18.86	M
											December	17.35	M
Total											285.59		
WW-4a	365412116013901	365412	1160139	02-21-90	1099.1	462.1	324.9	462.1	98.1	P, X	January	0.0	
											February	0.0	
											March	0.0	
											April	0.0	
											May	0.0	
											June	0.0	
											July	0.0	
											August	0.0	
											September	0.0	
											October	0.0	
											November	0.0	
											December	0.80	M
Total											0.80		

**Table 3. Monthly and annual ground-water withdrawals in 1993 from wells at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Primary water-yielding unit	Ground-water withdrawals			
							Top (meters)	Bottom (meters)	Length open (meters)		Type	Month	Millions of liters	Source
WW-C	365508116003502	365508	1160035	04-30-67	1,195.1	518.5	475.5	518.5	43.0	P, X	C	January	5.39	M
												February	4.27	M
												March	6.88	M
												April	12.74	M
												May	11.39	M
												June	4.50	M
												July	5.22	M
												August	11.51	M
												September	13.12	M
												October	5.01	M
												November	2.22	M
												December	1.73	M
												Total	83.98	
WW-C-1	365500116003901	365500	1160039	06-09-62	1,195.1	520.3	468.2	520.3	52.1	P, X	C	January	9.50	M
												February	4.96	M
												March	1.94	M
												April	0.75	M
												May	2.84	M
												June	4.49	M
												July	1.12	M
												August	1.06	M
												September	1.89	M
												October	3.29	M
												November	2.39	M
												December	1.50	M
												Total	35.73	
ASH MEADOWS SUBBASIN-AREA 16														
UE-16d	370412116095101	370412	1160951	03-05-81	1,427.7	914.4	349.0	914.4	319.4	P, X	C	January	11.22	M
												February	12.13	M
												March	13.33	M
												April	15.55	M
												May	11.45	M
												June	11.68	M
												July	14.64	M
												August	25.50	M
												September	19.17	M
												October	17.70	M
												November	15.83	M
												December	13.07	M
												Total	181.27	

**Table 3. Monthly and annual ground-water withdrawals in 1993 from wells at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval		Primary water-yielding unit	Ground-water withdrawals				
							Top (meters)	Bottom (meters)		Length open (meters)	Type	Month	Millions of liters	Source
ASH MEADOWS SUBBASIN-AREA 22														
Army 1 WW	363530116021401	363530	1160214	07-15-62	961.3	593.1	243.8	595.3	254.5	P, X	C	January 44.25 February 25.76 March 28.94 April 31.95 May 48.12 June 36.71 July 36.79 August 32.21 September 25.57 October 32.97 November 27.27 December 46.66 Total 417.20	M M M M M M M M M M M M	
ALKALI FLAT-FURNACE CREEK RANCH SUBBASIN-AREA 18														
WW-8 <sup>a</sup>	370956116172101	370956	1161721	01-07-63	1,735.8	567.5	381.0	1,673.4	874.5	P, X	V	January 6.42 February 8.05 March 10.60 April 7.81 May 10.58 June 11.29 July 14.77 August 12.50 September 10.44 October 8.38 November 11.08 December 6.62 Total 118.54	M M M M M M M M M M M M	
ALKALI FLAT-FURNACE CREEK RANCH SUBBASIN-AREA 19														
UE-19c WW	771608116191002	371608	1161910	06-30-75	2,143.7	2,587.4	737.9	2,587.4	1,849.5	X	V	January 0.0 February 0.0 March 0.0 April 0.0 May 0.0 June 26.88 July 0.0 August 0.0 September 0.0 October 0.0 November 0.0 December 0.0 Total 26.88	M M M M M M M M M M M M	

**Table 3. Monthly and annual ground-water withdrawals in 1993 from wells at Nevada Test Site, Nye County, Nevada--Continued**

RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Land-surface altitude (meters)	Hole depth (meters)	Depth to open interval			Primary water-yielding unit	Ground-water withdrawals		
							Top	Bottom	Length open		Month	Millions of liters	Source
							(meters)	(meters)	(meters)				
ALKALI FLAT-FURNACE CREEK SUBBASIN-AREA20													
U-20 WW	371505116254501	371505	1162545	07-22-85	1,971.4	996.1	692.2	996.1	253.9	P, X	V	January 0.0	M
											February	0.0	M
											March	0.0	M
											April	0.0	M
											May	0.0	M
											June	10.03	M
											July	46.71	M
											August	37.03	M
											September	12.07	M
											October	0.0	M
											November	0.0	M
											December	0.0	M
											<b>Total</b>	<b>105.84</b>	
ALKALI FLAT-FURNACE CREEK RANCH SUBBASIN-AREA 25													
J-12 WW	364554116232401	364554	1162324	08-00-68	953.4	347.2	241.7	310.6	63.1	P, X	V	January 3.71	M
											February	7.91	M
											March	4.71	M
											April	3.10	M
											May	2.69	M
											June	2.61	M
											July	6.21	M
											August	5.82	M
											September	15.30	M
											October	21.00	M
											November	8.80	M
											December	12.70	M
											<b>Total</b>	<b>94.56</b>	
J-13 WW	364828116234001	364828	1162340	01-00-63	1,011.3	1,063.1	303.6	1,009.5	308.5	P	V	January 5.85	M
											February	9.70	M
											March	8.35	M
											April	14.53	M
											May	11.99	M
											June	17.11	M
											July	20.27	M
											August	24.98	M
											September	15.34	M
											October	10.64	M
											November	12.73	M
											December	6.87	M
											<b>Total</b>	<b>158.36</b>	

<sup>a</sup> Cement plug set at 567.5 meters on January 7, 1983.

**Table 4.** Tritium concentrations in water samples from test holes at and in vicinity of Nevada Test Site, Nye and Clark Counties, Nevada

RSN hole number--Drill-hole number assigned by Raytheon Services Nevada; see section "Site Designations" in text.												
USGS standard identification--U.S. Geological Survey site designation; see section "Site Designations" in text.												
Date hole completed--Date the borehole construction work that may have affected water level ceased; see section "Measurements" in text.												
Land-surface altitude--Datum is sea level. Value may not represent current altitude; see section "Depth to Water" in text.												
Hole Depth--Datum is land surface. Represents most recent available accessible depth; see section "Measurements" in text.												
Depth of open interval--Datum is land surface. Bottom of open interval may be deeper than present accessible hole depth.												
Type--P, perforated or slotted casing; X, open (uncased) hole.												
Water sample--Water samples analyzed by Environmental Monitoring Systems Laboratory of U.S. Environmental Protection Agency.												
Depth sample collected--Depth below land surface from which water sample was collected using point sampler.												
Tritium concentration--Negative value of tritium concentration indicates that activity of sample was less than blank used in the calibration procedures; $\pm$ , measurement error.												
RSN hole number	USGS standard identification	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date hole completed (month, day, year)	Depth of open interval				Water sample			
					Land-surface altitude (meters)	Hole depth (meters)	Top (meters)	Bottom (meters)	Type	Date (month, day, year)	Depth sample collected (meters)	Tritium concentration (picocuries per liter)
NEVADA TEST SITE AREA 2												
U-2gk	370720116041601	370720	1160416	10-19-92	1,292.6	551.4	35.4	551.4	X	07-02-93	545.5	20.6 $\pm$ 8.6
NEVADA TEST SITE AREA 19												
U-19bh	371349116222001	371349	1162220	06-14-91	2,062.9	654.7	21.3	654.7	X	08-09-93	646.8	1.9 $\pm$ 9.5
NEVADA TEST SITE AREA 20												
PM-2	372042116340501	372042	1163405	05-01-66	1,702.6	2,676.8	762.0	1,853.2	P, X	08-17-93	257.6	316.0 $\pm$ 12.0
										08-17-93	304.8	318.6 $\pm$ 12.0
										08-17-93	609.6	20,350.0 $\pm$ 59.6
										08-17-93	765.0	23,532.0 $\pm$ 64.0
										09-27-93	304.8	418.1 $\pm$ 12.7
										09-27-93	609.6	27,676.0 $\pm$ 69.2
										09-27-93	765.0	18,315.0 $\pm$ 56.6
										09-27-93	1,066.8	21,016.0 $\pm$ 60.7
NEVADA TEST SITE AREA 25												
J-11	364706116170601	364706	1161706	07-19-57	1,049.4	405.1	327.6	395.6	P	06-21-93	330.7	-0.8 $\pm$ 8.4
										06-21-93	353.0	7.5 $\pm$ 8.4
INDIAN SPRINGS VALLEY												
Army 2	363255115515801	363255	1155158	09-03-58	1,162.2	191.1	28.0	200.6	X	06-16-93	155.4	3.9 $\pm$ 8.3
										06-16-93	189.0	3.3 $\pm$ 8.4
Army 3	363238115464601	363238	1154646	11-20-58	1,102.5	251.8	94.5	251.8	P, X	06-17-93	125.0	1.4 $\pm$ 8.4
MERCURY VALLEY												
Army 6A	363437116010801	363437	1160108	00-00-55	1,050.0	381.9	352.7	374.3	P	06-21-93	324.6	-2.6 $\pm$ 8.3