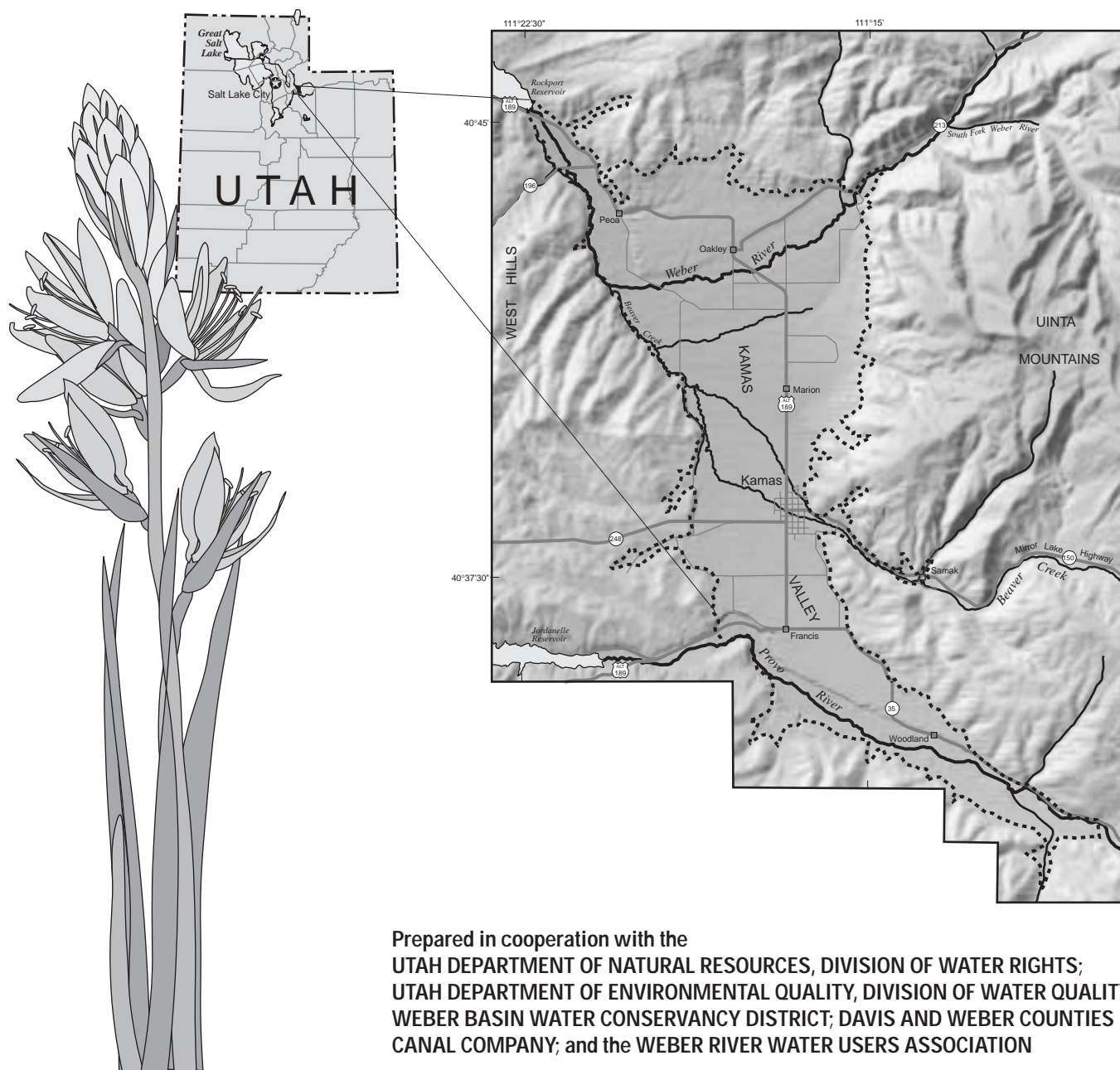


# Selected Hydrologic and Water-Quality Data for Kamas Valley and Vicinity, Summit County, Utah, 1997–2000

U.S. GEOLOGICAL SURVEY  
Open-File Report 01–155





**Cover:** Flower image is of *Camassia quamash*. The following information is from the book *Five Hundred Utah Place Names*, written by R.W. Leigh in 1961.

Before the arrival of the first European settlers, Kamas Valley is reported to have been a rolling grass and meadow land. On the meadow grew a species of plant known as *Camassia quamash* (common name: camas) of the lily family with blue or white flowers and succulent bulbs, similar to the hyacinth. The name Kamas is an early form of the word “camas”, which came into English from Chinook jargon and means “sweet.” Camas bulbs were a staple food of the Native Americans, prepared by steaming in heated pits and deposited in caches for winter provisions. In aboriginal times, camas also grew along the headwaters of the Weber River. Kamas Valley is named for this edible plant.

**Note:** Although similar in appearance, *Camassia quamash* is **not** the same as the white-flowered camas (*Zigadenus sp.*) known as “death camas,” which should **never** be eaten.

# **SELECTED HYDROLOGIC AND WATER-QUALITY DATA FOR KAMAS VALLEY AND VICINITY, SUMMIT COUNTY, UTAH, 1997-2000**

**By P.L. Haraden, L.E. Spangler, L.E. Brooks, and B.J. Stolp**

**U.S. GEOLOGICAL SURVEY**

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**Open-File Report 01-155**

**Prepared in cooperation with the  
UTAH DEPARTMENT OF NATURAL RESOURCES,  
DIVISION OF WATER RIGHTS;  
UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY,  
DIVISION OF WATER QUALITY;  
WEBER BASIN WATER CONSERVANCY DISTRICT;  
DAVIS AND WEBER COUNTIES CANAL COMPANY; and the  
WEBER RIVER WATER USERS ASSOCIATION**



**Salt Lake City, Utah  
2001**





**U.S. DEPARTMENT OF THE INTERIOR**

**GALE A. NORTON, Secretary**

U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

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For additional information write to:

District Chief  
U.S. Geological Survey  
2329 West Orton Circle  
West Valley City, Utah 84119

Copies of this report can be purchased from:

U.S. Geological Survey  
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*Additional information about water resources in Utah is available on the World Wide Web at  
<http://ut.water.usgs.gov>*

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## CONVERSION FACTORS, VERTICAL DATUM, AND ABBREVIATED WATER-QUALITY UNITS

Multiply	By	To obtain
acre-foot	0.0001233	cubic hectometer
	1,233	cubic meter
cubic foot per second	0.02832	cubic meter per second
	448.8	gallon per minute
foot	0.3048	meter
inch	25.4	millimeter
square mile	2.590	square kilometer

The unit cubic foot per second ( $\text{ft}^3/\text{s}$ ) is used in this report and also can be expressed as  $1 \text{ ft}^3/\text{s} = 1.9835$  acre-feet per day.

Water temperature is reported in degree Celsius ( $^{\circ}\text{C}$ ) which can be converted to degree Fahrenheit ( $^{\circ}\text{F}$ ) by using the following equation:

$$^{\circ}\text{F} = 9/5(^{\circ}\text{C}) + 32.$$

**Sea level:** In this report, “sea level” refers to the National Geodetic Vertical Datum of 1929—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

Chemical concentration and water temperature are reported only in metric units. Chemical concentration in water is reported in milligrams per liter ( $\text{mg/L}$ ), which expresses the solute weight per unit volume (liter) of water. For concentrations less than 7,000 milligrams per liter, the numerical value is about the same as for concentrations in parts per million (ppm). Specific conductance is reported in microsiemens per centimeter at 25 degrees Celsius ( $\mu\text{S}/\text{cm}$ ). Gross alpha and gross beta concentrations in water are reported as picocuries per liter ( $\text{pCi/L}$ ).

# SELECTED HYDROLOGIC AND WATER-QUALITY DATA FOR KAMAS VALLEY AND VICINITY, SUMMIT COUNTY, UTAH, 1997-2000

By P.L. Haraden, L.E. Spangler, L.E. Brooks, and B.J. Stolp

## INTRODUCTION

This report contains hydrologic and water-quality data collected in the Kamas Valley vicinity during a study from 1997 to 2000. The study area is in Summit County in north-central Utah and is part of the Middle Rocky Mountains Physiographic Province described by Fenneman (1931). Data were collected in Kamas Valley between the Uinta Mountains on the east and the West Hills on the west, the upper Weber River area, the Samak area along Beaver Creek, the Woodland area, and the Indian Hollow area. These areas, where population growth and water demand are concentrated, encompass about 70 square miles and include the Weber River, Beaver Creek, and Provo River drainages. Surface water is the dominant hydrologic resource. The combined average flow from these three drainages is about 345,000 acre-feet per year. Ground water is present in the unconsolidated deposits in Kamas Valley, in stream alluvium along Beaver Creek and the upper Weber River, and in the consolidated rocks surrounding Kamas Valley.

Kamas Valley and vicinity recently have been undergoing increasing residential development, in part the result of overflow from rapid development in the Park City and Snyderville Basin areas. In 1996, the population of Summit County was 23,988 (Shawn Eliot, Mountainland Association of Governments, written commun., 1998), an increase of 55 percent since 1990, and an increase of 135 percent since 1980. Much of that growth has been concentrated in the area around Park City, but with the construction of new highways into Kamas Valley and continued growth in Park City, development is increasing in Kamas Valley. Because the water needed to support this new development will probably come from ground water, one of the major concerns is water supply. Ground-water development has been and probably will continue to be limited to municipal and domestic use. Many households in the study area use private domestic wells and septic systems, and much of the new development is occurring

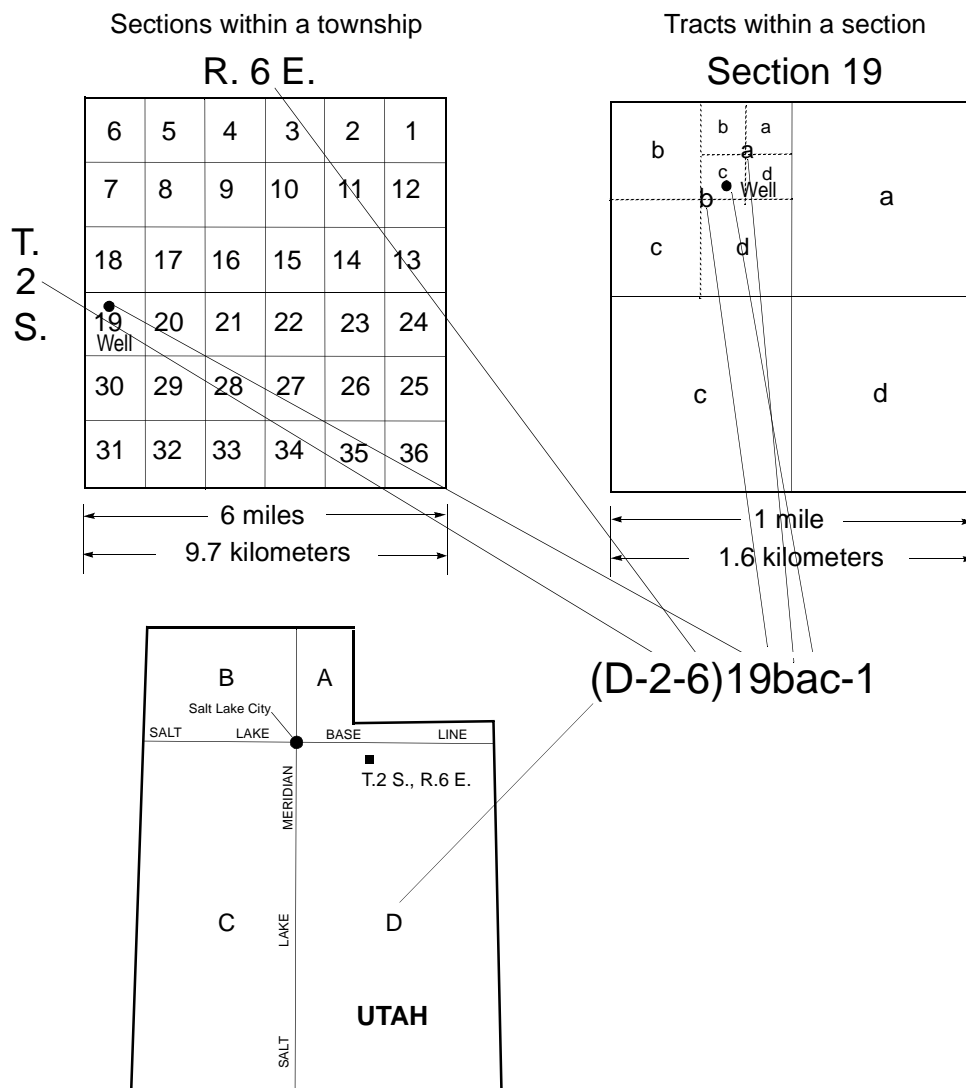
outside of communities with municipal water and waste-water systems. In addition, land use is changing from agricultural to large-lot subdivisions, ranchettes, and summer homes. As new houses are built and new wells and septic systems are constructed, the public and agencies with water-management responsibilities are concerned about the effects of additional development on ground-water levels and water quality.

Concern about ground-water withdrawals prompted the Utah Department of Natural Resources, Division of Water Rights, to initiate a 4-year study of the ground- and surface-water resources in the Kamas Valley area in cooperation with the U.S. Geological Survey. Data were collected to better understand the hydrologic system in the area and to assess the effects of increased ground-water withdrawals on ground-water levels, discharge from springs, and surface-water flows. Because of water-quality concerns, the Utah Department of Environmental Quality, Division of Water Quality, provided additional funding to collect baseline water-quality data at selected ground- and surface-water sites. Data for this study could not have been collected without the cooperation of local residents and officials of water companies and municipalities, who permitted access to their wells, property, and well data.

## Purpose and Scope

This report contains the hydrologic data collected during the Kamas Valley study. The locations of selected ground- and surface-water sites are shown on plate 1. The numbering system used in Utah for hydrologic-data sites is shown in figure 1. Well-completion data for 96 wells are listed in table 1. Drillers' logs for selected wells are listed in table 2. Water levels for selected wells are listed in table 3. Continuous water levels were recorded at two wells for two separate time periods and are shown in figure 2. Discharge and draw-down data for selected wells are listed in table 4. Discharge, temperature, specific conductance, and pH measured at selected streams and springs are listed in

The system of numbering wells and springs in Utah is based on the cadastral land-survey system of the U.S. Government. The number, in addition to designating the well or spring, describes its position in the land net. The land-survey system divides the State into four quadrants separated by the Salt Lake Base Line and the Salt Lake Meridian. These quadrants are designated by the uppercase letters A, B, C, and D, indicating the northeast, northwest, southwest, and southeast quadrants, respectively. Numbers designating the township and range, in that order, follow the quadrant letter, and all three are enclosed in parentheses. The number after the parentheses indicates the section and is followed by three letters indicating the quarter section, the quarter-quarter section, and the quarter-quarter-quarter section—generally 10 acres for a regular section<sup>1</sup>. The lowercase letters a, b, c, and d indicate, respectively, the northeast, northwest, southwest, and southeast quarters of each subdivision. The number after the letters is the serial number of the well or spring within the 10-acre tract. When the serial number is not preceded by a letter, the number designates a well. When the serial number is preceded by an “S,” the number designates a spring. A number having all three quarter designations but no serial number indicates a miscellaneous data site other than a well or spring, such as a location for a surface-water measurement site or tunnel portal. Thus, (D-2-6)19bac-1 designates the first well constructed or visited in the southwest 1/4 of the northeast 1/4 of the northwest 1/4 of section 19, T. 2 S., R. 6 E.



<sup>1</sup>Although the basic land unit, the section, is theoretically 1 square mile, many sections are irregular in size and shape. Such sections are subdivided into 10-acre tracts, generally beginning at the southeast corner, and the surplus or shortage is taken up in the tracts along the north and west sides of the section.

**Figure 1.** Numbering system used for hydrologic-data sites in Utah.

table 5. Hydrographs of selected streams and springs are shown in figure 3. Discharge, temperature, and specific conductance of water from springs, streams, and canals measured during seepage studies are listed in table 6. Daily mean discharge of the creek in Indian Hollow is listed in table 7 and the hydrograph is shown in figure 4. Daily mean discharge of Beaver Creek at Lind Bridge, Beaver Creek at Grist Mill, Beaver Creek at Weber-Provo Diversion Canal, Beaver Creek diversion to Weber-Provo Diversion Canal, and Beaver Creek at Rocky Point, as provided by the Utah Department of Natural Resources, Division of Water Rights (2000), is shown in tables 8 through 12, respectively.

Ground-water data were collected from existing municipal and private wells and from new wells completed during the study. Ground-water sites were selected on the basis of well depth, location, aquifer, and available historic data. Some historic data have been provided for purposes of comparison, some of which were published previously by Baker (1970). Herbert and others (2000) provided data for three long-term surface-water monitoring sites in or near the study area: Weber River near Oakley, Utah (station 10128500), Provo River near Woodland, Utah (station 10154200), and Provo River near Hailstone, Utah (station 10155000).

Water samples were collected from 63 sites in Kamas Valley, along Beaver Creek, and along the upper Weber River from 1997 to 2000. Water samples were collected from 39 wells and springs and 24 surface-water sites. Of the surface-water sites sampled, 17 were selected for nitrate screening only. Water-quality data also are presented for 10 wells that are used for public supply (Kenneth Bousfield, Utah Division of Drinking Water, written commun., 2000). Additional water-quality data for the Kamas Valley area have been collected by the Utah Department of Agriculture and Food (Mark Quilter, oral commun., 2001). Physical properties measured and chemical constituents sampled for each site are summarized in table 13 and results of analyses for all samples are presented in tables 14 through 18.

## Analyses and Methods

Water samples collected during this study were analyzed for physical properties, major and minor ions, selected trace elements, nutrients, dissolved-solids concentration, dissolved organic carbon, methylene blue active substances (MBAS or surfactants), pesticides and herbicides, radionuclides, and total and fecal

coliform bacteria. Procedures for the collection of water-quality data are described in Techniques of Water-Resources Investigations of the U.S. Geological Survey (Wilde and others, 1998-99). Physical properties (water temperature, pH, specific conductance), major ions, nutrients, dissolved organic carbon, MBAS, and total and fecal coliform bacteria were analyzed in water from all or most of the wells sampled. Nutrients were analyzed in water from all surface-water sites and nitrate was determined photometrically for selected sites. Nutrients analyzed included nitrogen (ammonia, nitrate, and nitrite) and phosphorus (total and orthophosphate). Trace elements were analyzed in water from 12 wells and 4 surface-water sites during the study. Trace elements were selected to correspond with the suite of metals established for drinking-water standards by the Utah Department of Environmental Quality (1995). In addition, boron, bromide, iron, and manganese were analyzed in water from virtually all sites sampled. Radionuclides (gross alpha and beta) were analyzed in water from nine wells, and pesticides and herbicides were analyzed in water from six wells and four surface-water sites during the study.

All water samples except total and fecal coliform bacteria were analyzed at the U.S. Geological Survey National Water Quality Laboratory (NWQL) in Denver, Colorado. Total and fecal coliform bacteria were analyzed at the Utah State Health Laboratory in Salt Lake City, Utah. Analytical methodology used at the NWQL is described in Techniques of Water-Resources Investigations of the U.S. Geological Survey (Fishman and Friedman, 1989).

Water samples were collected after the wells had been pumped for about 1 to 2 hours and water temperature, pH, and specific-conductance values were stable. Surface-water samples were collected mid-stream as grab samples. Water temperature, pH, specific conductance, and total alkalinity were determined in the field at the time of sample collection.

Four quality-assurance water samples were collected, processed, and submitted to the NWQL, along with routine water-quality samples collected during the study. Inorganic blank water samples were used to assess contamination during field processing of water samples. A field duplicate sample was collected to ensure consistency in the methods used to collect and analyze the water sample. Results of analysis for three inorganic blank samples and a duplicate sample are summarized in table 19.

Water levels in wells were measured with either an electrical sensor or a calibrated steel tape. Water-level measurements were made to the nearest 0.01 foot. Discharge from wells was determined by bucket and stopwatch. Stream discharge for flows less than about 0.50 cubic foot per second was measured with a 3-inch modified Parshall flume. Stream discharge for flows greater than 0.50 cubic foot per second was measured with a pygmy current meter. Methods for discharge measurements are outlined in *Techniques of Water-Resources Investigations of the U.S. Geological Survey* (Carter and Davidian, 1977; and Kilpatrick and Schneider, 1983).

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Because the information in the following table is presented on facing pages, this page is left blank.



**Table 1.** Records of selected wells in Kamas Valley and vicinity, Utah

[—, no data available]

Local well number: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Site ID: A unique number identifying a site in the U.S. Geological Survey database, originally based upon latitude and longitude.

Primary use of water: P, public supply; H, domestic; U, unused; S, stock; I, irrigation.

Formation: TYNS, Thaynes Limestone; MGNY, Mahogany Formation; ALVM, unconsolidated deposits; KLVN, Kelvin Formation; KTLY, Formation; WEBR, Weber Sandstone; PLZC, Paleozoic carbonates; RDPN, Red Pine Shale.

Type of opening: P, perforated; F, perforated with gravel pack; X, open hole; G, screen with gravel pack; S, screen; O, open end.

Other data available: L, drillers' log in table 2; C, chemical analyses in tables 13-18; W, water-level measurements in table 3; D, discharge

Local well number	Site ID	Owner	Year constructed	Primary use of water	Formation	Altitude of land surface (feet)
(A-1-7)27dcb-1	404719111082200	Aspen Mountain Water Co.	1973	P	TYNS	7,240
(A-1-7)33bab-2	404703111094600	Pine Mountains Mutual	1974	P	MGNY	7,120
(A-1-8)36bba-1	404708110594001	Pettigrew, Margorie	1984	H	ALVM	7,930
(D-1-5)10dda-1	404442111212901	Crandall, Curtis and Sherina	1998	U	KLVN	6,100
(D-1-5)13cdb-1	404346111195401	Woolstenhulme, Darwin and Beulah	1997	H	ALVM	6,420
(D-1-5)15acb-1	404415111215501	Simons, Scott	1996	H	KLVN	6,197
(D-1-5)15bda-1	404410111215101	Simons, Scott	1997	H	KLVN	6,256
(D-1-5)21aca-1	404322111225301	Green, Mark	1999	U	KTLY	6,660
(D-1-5)23dda-1	404253111201901	Stembridge, Wendell	1996	H	ALVM	6,220
(D-1-5)25dbb-1	404217111193701	Wright, Dale	1995	H	KTLY	6,300
(D-1-5)25dbd-1	404212111192501	Wright, Dale	1995	S	ALVM	6,310
(D-1-6)15acc-1	404407111150001	Wheelwright, Steven	1998	H	WDSD	6,660
(D-1-6)15acd-1	404410111145401	Leonard, Larry	1998	U	TYNS	6,650
(D-1-6)15acd-2	404411111145001	Fine, Lewis H. and Arlene	1998	U	TYNS	6,650
(D-1-6)16dbc-1	404356111161401	Maple Ridge Ranches	1998	I	NGGT	6,680
(D-1-6)17cca-2	404351111174601	Matheson, Robert	1981	U	KTLY	6,590
(D-1-6)17cdc-1	404345111173601	Buxton, Dale and Susan	1997	H	KTLY	6,570
(D-1-6)18ddb-1	404351111180901	Hunt, G. Robin	1985	H	ALVM	6,560
(D-1-6)19caa-1	404310111184101	Alston, Karen	1994	H	KTLY	6,460
(D-1-6)19dbd-1	404302111181501	Stevens, Jeff	1981	H	CONR	6,450
(D-1-6)19ddc-1	404249111181201	Stevens, Teresa	—	U	ALVM	6,410
(D-1-6)20abb-1	404338111172201	Call, John Reed	1975	H	—	6,565
(D-1-6)20bcb-1	404325111175401	Querry, Julie	1970	U	KTLY	6,521
(D-1-6)21cbb-1	404311111164501	Rydalch family	1980	H	ALVM	6,514
(D-1-6)22bdc-1	404318111151801	Town of Oakley	1997	U	WDSD	6,600

Keetley volcanics; WDSD, Woodside Formation; NGGT, Nugget Sandstone; CONR, unknown consolidated rock; HMBG, Humbug

and drawdown data in table 4.

Local well number	Depth of well (feet)	Casing		Type of opening	Top of open interval (feet)	Bottom of open interval (feet)	Water level		Other data available
		Diameter (inches)	Bottom (feet)				Above (-) or below land surface (feet)	Date measured	
(A-1-7)27dcb-1	320	12	100	P	100	320	—	—	L
		8	127						
		6	320						
(A-1-7)33bab-2	135	10	121	P	100	114	—	—	L,C
(A-1-8)36bba-1	68	8	68	P	50	68	—	—	L,C
(D-1-5)10dda-1	120	5	120	F	100	120	25.90	09-20-2000	L,W
(D-1-5)13cdb-1	120	6	100	X	100	120	60.81	09-20-2000	L,W,C
(D-1-5)15acb-1	430	6	225	G	195	225	59.43	09-25-2000	W,D,C
		5	370	S	160	370			
(D-1-5)15bda-1	360	5	350	F	190	350	158.80	02-03-2000	L,W
(D-1-5)21aca-1	350	8	23	P	280	340	174.83	02-03-2000	L,W
		6	340	—	—	—			
(D-1-5)23dda-1	70	8	70	O	—	—	11.04	09-21-2000	L,W,C
(D-1-5)25dbb-1	160	8	60	P	50	160	5.15	09-06-2000	C
		5.5	160						
(D-1-5)25dbd-1	18	8	18	O	—	—	1.44	07-12-1999	W
(D-1-6)15acc-1	140	8	60	G	80	140	40.31	08-20-1998	W,D,C
		5.5	140						
(D-1-6)15acd-1	160	8	60	P	100	160	34.10	08-22-1998	W
		5.5	160	—	—	—			
(D-1-6)15acd-2	140	8	15	S	60	140	26.01	09-21-2000	L,W
		6	140	—	—	—			
(D-1-6)16dbc-1	200	6	190	P	150	190	164.39	09-21-2000	L,W,C
(D-1-6)17cca-2	135	10	18	P	95	134	79.44	08-01-2000	L,W,D
		6	135	—	—	—			
(D-1-6)17cdc-1	92	8	51	P	57	87	39.05	05-12-1999	W
		6	92	—	—	—			
(D-1-6)18ddb-1	160	8	148	P	125	131	—	—	L,C
(D-1-6)19caa-1	190	6	127	S	135	190	87.57	11-01-2000	D
		4.5	190						
(D-1-6)19dbd-1	126	6	123	X	123	126	—	—	C
(D-1-6)19ddc-1	—	—	—	—	—	—	13.50	09-20-2000	W
(D-1-6)20abb-1	250	8	30	P	125	250	136.60	09-20-2000	L,W
		6	70	—	—	—			
		4	250	—	—	—			
(D-1-6)20bcb-1	206	6	206	P	100	200	66.75	09-20-2000	L,W,D
(D-1-6)21cbb-1	130	10	30	O	—	—	81.72	09-25-2000	W,D,C
		8	130						
(D-1-6)22bdc-1	1000	20	120	P	180	208	58.79	09-21-2000	L,W,D
		16	305	P	260	267			
		—	—	X	305	1,000			

**Table 1.** Records of selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Site ID	Owner	Year constructed	Primary use of water	Formation	Altitude of land surface (feet)
(D-1-6)22cbb-1	404310111153701	Dick, John	1993	S	ALVM	6,570
(D-1-6)22dbc-1	404304111150001	Town of Oakley	1998	P	HMBG	6,860
(D-1-6)28cba-1	404219111163201	Dick, John and Cassandra	1999	H	ALVM	6,471
(D-1-6)28cbc-1	404212111164601	Atkinson, Clay and Shanna	1998	H	ALVM	6,460
(D-1-6)29cbd-1	404211111174601	Struve, Preston	1990	S	ALVM	6,410
(D-1-6)29ccc-1	404157111175701	Wagstaff, Douglas	1993	S	ALVM	6,390
(D-1-6)32daa-1	404123111165101	Lewis, Travis and Stacie	1996	H	KTLY	6,460
(D-1-6)32dda-1	404112111165001	Stembridge, Thayne	1999	U	ALVM	6,450
(D-1-6)33dba-1	404125111160001	Packard, Troy and Susan	1998	H	ALVM	6,560
(D-1-6)33dba-2	404128111155701	Marion Waterworks Company	1992	P	ALVM	6,580
(D-1-6)33dcc-1	404107111160801	Marion Cemetery	—	I	—	6,580
(D-1-7)6abc-1	404602111120801	Hidden Lake Association	1992	P	NGGT	6,990
(D-2-5)2cbd-1	404025111211301	O'Very, Hal	1995	U	KTLY	7,180
(D-2-5)11bcd-1	403942111211501	Scott, Ben	1993	H	KTLY	6,960
(D-2-5)11dcc-1	403922111204301	Barnes, Van and Thelma	1994	H	KTLY	6,770
(D-2-5)13aaa-1	403914111191601	Tercha, Bernadette	1996	H	KTLY	6,505
(D-2-5)13adc-1	403854111191601	LaBronte, William	1996	H	KTLY	6,462
(D-2-5)13cad-1	403839111194301	Walter, Richard and Deborah	1994	H	KTLY	6,480
(D-2-5)14daa-1	403847111201601	Parsons, Bruce J.	1993	H	KTLY	6,620
(D-2-5)24ada-1	403802111190801	Ure Dairy Farm	1955	H	ALVM	6,440
(D-2-6)3bac-1	404050111151901	Henderson, Scott	1997	H	ALVM	6,840
(D-2-6)4dac-1	404027111155301	Kamas Hills Limited	1997	U	ALVM	6,554
(D-2-6)4dad-1	404024111154501	Kamas Hills Limited	1997	U	ALVM	6,683
(D-2-6)4dda-1	404021111154401	Kamas Hills Limited	1997	U	ALVM	6,732
(D-2-6)5ada-1	404045111165701	Wahlen, Nolan	1999	H	ALVM	6,440
(D-2-6)5dab-1	404031111170101	Peterson, Chad and Kristy	1999	H	ALVM	6,400
(D-2-6)6bcc-1	404037111190401	ReMillard, Mike	1975	H	CONR	6,320
(D-2-6)8ddd-1	403920111164901	Kirkham, Nancy	1998	H	ALVM	6,420
(D-2-6)9bbb-1	404008111164701	Brimhall, Robert and Karen	1998	H	ALVM	6,390

Local well number	Depth of well (feet)	Casing		Type of opening	Top of open interval (feet)	Bottom of open interval (feet)	Water level		Other data available
		Diameter (inches)	Bottom (feet)				Above (-) or below land surface (feet)	Date measured	
(D-1-6)22cbb-1	106	6	106	O	—	—	43.23	09-21-2000	L,W,C
(D-1-6)22dbc-1	1,840	20	30	G	1,420	1,830	(-) 61	10-13-1998	L,C,D
		10	900						
		6	1830						
(D-1-6)28cba-1	120	5	120	F	100	120	14.07	07-17-2000	D
(D-1-6)28cbc-1	120	5	120	P	100	120	4.95	08-05-1999	W,C
(D-1-6)29cbd-1	118	8	118	O	—	—	3.61	05-16-2000	L,W,D
(D-1-6)29ccc-1	119	6	119	O	—	—	—	—	D,C
(D-1-6)32daa-1	120	5	120	P	90	120	—	—	C
(D-1-6)32dda-1	120	6	120	P	110	120	55.01	09-21-2000	L,W
(D-1-6)33dba-1	250	5	250	G	230	250	97.35	09-08-1999	L,W
(D-1-6)33dba-2	246	12	130	P	145	238	—	—	C
		8	141	S	166	246			
		6	246						
(D-1-6)33dcc-1	—	8	—	—	—	—	145.25	09-25-2000	W
(D-1-7)6abc-1	300	8	240	P	115	119	—	—	L,C
				P	200	235			
(D-2-5)2cbd-1	465	8	55	G	205	265	392.50	09-25-2000	L,W
		5.5	265	X	265	465			
(D-2-5)11bcd-1	240	5	240	F	180	240	106.99	09-25-2000	L,W
(D-2-5)11dcc-1	160	5	160	P	140	160	27.8	07-12-1999	L,C
(D-2-5)13aaa-1	325	5	325	G	180	325	124.57	02-04-2000	L,W,D
(D-2-5)13adc-1	276	5	270	F	140	270	95.15	09-25-2000	L,W,D
(D-2-5)13cad-1	270	5	270	P	250	270	—	—	L,C
(D-2-5)14daa-1	262	5	255	F	218	258	43.90	09-25-2000	L,W
(D-2-5)24ada-1	58	12	30	O	—	—	—	—	L,C
		6.25	58						
(D-2-6)3bac-1	450	5.5	360	F	10	80	—	—	L,C
				X	360	450			
(D-2-6)4dac-1	225	8	190	X	190	225	57.19	01-24-2000	W,C
(D-2-6)4dad-1	385	8	109	X	365	385	54.56	09-21-2000	W,C
		6	365						
(D-2-6)4dda-1	400	8	109	G	368	380	103.71	09-25-2000	L,W
		6	385						
(D-2-6)5ada-1	100	8	100	P	80	100	29.25	06-22-2000	D
(D-2-6)5dab-1	120	5	120	F	100	120	17.08	07-13-2000	D
(D-2-6)6bcc-1	125	8	30	P	100	125	11.98	03-06-2000	L,W,C
		6	125						
(D-2-6)8ddd-1	120	6	120	P	110	120	2.61	08-06-1999	L,C,W
(D-2-6)9bbb-1	120	5	120	G	100	120	6.36	11-03-1999	L,W,C

**Table 1.** Records of selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Site ID	Owner	Year constructed	Primary use of water	Formation	Altitude of land surface (feet)
(D-2-6)16cda-1	403831111161401	Town of Kamas/Simpson Well	1973	P	WEBR	6,520
(D-2-6)16ddb-1	403833111155201	Town of Kamas/Hillside Well	1991	P	WEBR	6,660
(D-2-6)19bac-1	403812111184501	Lambert, George	1964	S	ALVM	6,420
(D-2-6)20ccc-1	403732111175501	Lambert, Walden	1893	U	ALVM	6,460
(D-2-6)20dcc-1	403731111172101	McCullough Investment Co.	1975	—	ALVM	6,491
(D-2-6)21cdd-1	403732111162001	Buckley, Jack	1977	U	ALVM	6,524
(D-2-6)21dcc-1	403732111161101	Goodworth, Vicki	1999	H	ALVM	6,533
(D-2-6)21dcc-2	403732111161001	Rider, Sam and Jessica	2000	H	ALVM	6,532
(D-2-6)21dcd-1	403732111160301	Stembridge, Glayde	2000	H	WEBR	6,537
(D-2-6)21ddb-1	403742111155201	Peterson, Howard and Susan	1996	U	WEBR	6,575
(D-2-6)23ccd-1	403731111142101	Darling, Travis	1996	H	PLZC	6,700
(D-2-6)25aad-1	403721111121601	Turner, Diana	1999	S	RDPN	6,910
(D-2-6)25caa-1	403658111125001	Saunders, Wallace	1964	H	ALVM	6,830
(D-2-6)25dba-1	403658111123401	Schilling, Bo/Scheer, Barb	1998	H	PLZC	6,870
(D-2-6)26aad-1	403726111135401	Smith, Dale	1965	S	ALVM	6,790
(D-2-6)26abb-1	403720111132401	Butcher, Kathlene	1995	H	CONR	6,740
(D-2-6)26abc-1	403721111135001	Samak Country Estates	1984	P	WEBR	6,760
(D-2-6)26bad-2	403719111135501	Prather, Rick and Penny	1995	U	WEBR	6,820
(D-2-6)27cbc-1	403655111153701	Hallum, Elva	1951	H	ALVM	6,611
(D-2-6)27ccc-1	403639111153701	Prescott, Max	1948	U	ALVM	6,620
(D-2-6)27ccd-1	403640111152401	Francis Town Water System	1979	P	WEBR	6,720
(D-2-6)28aab-3	403725111155201	Peterson, Howard and Susan	1998	U	WEBR	6,571
(D-2-6)28add-1	403710111154001	Gines, Lynette	1997	U	WEBR	6,622
(D-2-6)28ccc-3	403639111164601	Atkinson, Kay	—	U	ALVM	6,559

Local well number	Depth of well (feet)	Casing		Type of opening	Top of open interval (feet)	Bottom of open interval (feet)	Water level		Other data available
		Diameter (inches)	Bottom (feet)				Above (-) or below land surface (feet)	Date measured	
(D-2-6)16cda-1	420	20	20	P	40	120	46.29	09-20-2000	L,C,W,D
		16	126	P	124	233			
		12	281	P	252	272			
				X	281	420			
(D-2-6)16ddb-1	245	10	93	X	93	245	—	—	C
(D-2-6)19bac-1	40	12	40	P	30	40	6.43	09-25-2000	W,D
(D-2-6)20ccc-1	10	—	—	—	—	—	2.88	03-29-1984	W
(D-2-6)20dcc-1	124	8	62	P	118	123	2.19	08-31-2000	W
		6	124						
(D-2-6)21cdd-1	102	6	102	P	97	102	1.91	09-20-2000	L,W,D
(D-2-6)21dcc-1	120	8	120	P	100	120	5.86	07-03-2000	W
		4.5	120	S	100	120			
(D-2-6)21dcc-2	120	8	120	P	98	118	6.85	10-05-2000	W,D
		4.5	118	S	98	118			
(D-2-6)21dcd-1	102	6	100	P	80	100	9.27	10-05-2000	L,W
(D-2-6)21ddb-1	140	8	40	S	100	140	57.22	07-12-1999	L,W,C
		5	140						
(D-2-6)23ccd-1	323	6	260	S	260	270	-71	08-31-2000	C
		4.5	310	S	310	320			
(D-2-6)25aad-1	120	5	120	P	100	120	—	—	L,C
(D-2-6)25caa-1	105	6	105	P	96	101	—	—	L,C
(D-2-6)25dba-1	158	5	135	P	115	135	84.72	08-29-2000	L,D,C
(D-2-6)26aad-1	56	8	18	P	—	—	12	10-01-1965	C
		6	56						
(D-2-6)26abb-1	130	8	130	P	110	130	—	—	C
		5	—						
(D-2-6)26abc-1	300	16	80	P	125	135	—	—	L,C,D
		12	140	P	225	235			
		8	254	P	280	300			
		6	300						
(D-2-6)26bad-2	215	6	215	P	150	215	120.86	08-31-2000	L,W
(D-2-6)27cbc-1	42	6	42	O	—	—	6.04	07-12-1999	W
(D-2-6)27ccc-1	55	4	55	O	—	—	.33	09-20-2000	L,W,C
(D-2-6)27ccd-1	507	16	200	S	444	504	—	—	C,D
		10.75	343						
		8.6	504						
(D-2-6)28aab-3	85	8	50	G	65	85	31.17	10-05-2000	L,W
		5	85						
(D-2-6)28add-1	140	6	80	P	100	140	35.02	09-25-2000	L,W,D
		4.5	140						
(D-2-6)28ccc-3	30	12	—	—	—	—	17.66	09-25-2000	W

**Table 1.** Records of selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Site ID	Owner	Year constructed	Primary use of water	Formation	Altitude of land surface (feet)
(D-2-6)28ddc-2	403639111155501	Rhodes, Craig	—	U	ALVM	6,599
(D-2-6)29ada-1	403713111165101	White, E.R. and D.J.	—	I	ALVM	6,529
(D-2-6)29bcb-1	403715111175001	Mitchell, Chad	1998	H	ALVM	6,476
(D-2-6)29dcd-1	403639111170901	Atkinson, Austin	—	U	ALVM	6,543
(D-2-6)29ddd-2	403642111164901	Prescott, Glade	—	U	ALVM	6,555
(D-2-6)33abb-1	403638111160401	Crittenden, Bill	1961	U	ALVM	6,599
(D-2-6)33ada-1	403616111154001	Bates, Robert	1960	U	ALVM	6,624
(D-2-6)33cab-1	403610111162901	Rockhill, Craig	1996	H	ALVM	6,590
(D-2-6)33cbb-1	403608111164601	Atkinson, Eva	1955	U	ALVM	6,581
(D-2-6)34acc-1	403612111145801	Munford, Edward and Taunya	1997	U	WEBR	6,725
(D-2-6)34cbc-2	403558111153701	Simmons, Doyle	1950	U	ALVM	6,642
(D-2-6)34dcc-1	403546111145901	Fitzgerald, Mont B.	1980	I	ALVM	6,684
(D-2-6)34dcd-1	403548111144701	Anderson, Ryan	2000	H	KTLY	6,690
(D-3-6)1ccd-1	403456111130401	Woodland Town Water System	1995	P	WEBR	6,860
(D-3-6)2dbb-1	403516111135701	Elk Meadows Subdivision (Woodland)	1998	H	ALVM	6,760
(D-3-6)2dcd-1	403458111134301	Woodland Hills Subdivision	1977	P	WEBR	6,160
(D-3-6)3bdb-1	403527111151401	Boyack, Kimball and Koreen	1995	U	ALVM	6,688
(D-3-6)4aad-1	403535111154101	Blackett, Dennis	1996	I	ALVM	6,640

Local well number	Depth of well (feet)	Casing		Type of opening	Top of open interval (feet)	Bottom of open interval (feet)	Water level		Other data available
		Diameter (inches)	Bottom (feet)				Above (-) or below land surface (feet)	Date measured	
(D-2-6)28ddc-2	21	24	21	—	—	—	11.44	02-16-1999	W
(D-2-6)29ada-1	11	—	—	—	—	—	4.16	09-25-2000	W,C
(D-2-6)29bcb-1	290	8	84	P	200	240	25.70	11-28-2000	L,W,D,C
		6	240	X	240	290			
(D-2-6)29dcd-1	—	—	—	—	—	—	51.59	09-25-2000	W
(D-2-6)29ddd-2	—	—	—	—	—	—	19.56	02-16-1999	W
(D-2-6)33abb-1	55	6	55	O	—	—	4.97	09-25-2000	W,D
(D-2-6)33ada-1	60	6	60	O	—	—	17.93	10-05-2000	W
(D-2-6)33cab-1	190	5	190	P	150	190	—	—	L,C
(D-2-6)33cbb-1	107	6	107	O	—	—	49.81	09-25-2000	W
(D-2-6)34acc-1	165	5	162	F	122	162	122.27	02-03-2000	L,W,D
(D-2-6)34cbc-2	69	6	69	O	—	—	29.53	09-25-2000	W
(D-2-6)34dcc-1	104	6	73	P	80	104	36.32	09-25-2000	L,W
		4	104						
(D-2-6)34dcd-1	130	6.6	84	P	57	70	11.38	07-25-2000	D,C
(D-3-6)1ccd-1	300	12.5	76	—	—	—	—	—	C
		10	101						
(D-3-6)2dbb-1	180	8	100	P	80	100	—	—	L,C
		6	180	P	140	180			
(D-3-6)2dcd-1	330	16	100	P	135	145	—	—	C
		10	175	X	175	330			
(D-3-6)3bdb-1	100	6	100	P	80	100	62.33	09-25-2000	L,W
(D-3-6)4aad-1	180	5	180	P	150	180	—	—	L,C



**Table 2.** Drillers' logs of selected wells in Kamas Valley and vicinity, Utah

[See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah; gal/min, flow in gallons per minute; ft, feet; in., inch]

Thickness: In feet.

Depth: Depth to bottom of interval, in feet below land surface.

Lithology	Thickness	Depth
<b>(A-1-7)27dcb-1</b>		
<b>Log by Gardner Drilling Co.</b>		
Black loam .....	6	6
Silt, gravel, boulders .....	19	25
Gravel, boulders, white clay .....	10	35
Silt, gravel, boulders .....	30	65
Gravel, boulders, small water .....	3	68
Gravel, boulder, clay mixed .....	17	85
Gravel, boulders .....	5	90
Conglomerate .....	18	108
Conglomerate, white clay mixed .....	12	120
Limestone, fractured .....	75	195
Limestone, hard .....	5	200
<b>Log by Dave's Drilling (deepened)</b>		
Fractured limestone .....	100	300
Solid limestone .....	20	320
<b>(A-1-7)33bab-2</b>		
<b>Log by J.S. Lee and Sons</b>		
Clay, sand, gravel, top soil .....	2	2
Boulders .....	76	78
Gravel, boulders, carrying water .....	36	114
Bedrock, red shale .....	21	135
<b>(A-1-8)36bba-1</b>		
<b>Log by Dave's Drilling</b>		
Clay .....	5	5
Cobbles, boulders .....	5	10
Cobbles, boulders .....	10	20
Clay .....	5	25
Cobbles, boulders .....	10	35
Cobbles, boulders, water .....	10	45
Cobbles, boulders .....	23	68
<b>(D-1-5)10dda-1</b>		
<b>Log by Magill Drilling Co. Inc.</b>		
Clay, brown .....	23	23
Gravel, cobbles, boulders .....	21	44
Bedrock, gray, hard .....	18	62
Clay, red, sticky .....	16	78
Sandstone, red, mixed with clay layers .....	42	120
<b>(D-1-5)13cdb-1</b>		
<b>Log by Miller Drilling</b>		
Silt, sand, brown .....	1	1
Clay, silt, sand, gravel, cobbles, tan .....	37	38
Silt, gravel, cobbles, tan, water at 95 ft .....	82	120

Lithology	Thickness	Depth
<b>(D-1-5)15bda-1</b>		
<b>Log by Huntsman Drilling</b>		
Clay, silt, yellow .....	45	45
Volcanics, yellow .....	50	95
Shale, sandstone, red, purple, layered .....	110	205
Clay, shale, sandstone, gray, layered .....	20	225
Shale, multicolor, red, gray, orange, water ...	75	300
Shale, multicolor .....	50	350
Shale, multicolor, white .....	10	360
<b>(D-1-5)21aca-1</b>		
<b>Log by Zimmerman Well Service</b>		
Clay .....	3	3
Volcanics, brown .....	48	51
Volcanics, light brown .....	7	58
Volcanics, yellow .....	2	60
Volcanics, brown .....	42	102
Volcanics, yellow .....	169	271
Volcanics, gray .....	79	350
Fractured at 324-340 ft, 100 gal/min at 350 ft		
<b>(D-1-5)23dda-1</b>		
<b>Log by Schofield Drilling</b>		
Topsoil .....	1	1
Sand, gravel, cobbles .....	9	10
Sand, gravel, cobbles, small amount of clay	30	40
Sand, gravel, cobbles, water .....	30	70
<b>(D-1-6)15acd-2</b>		
<b>Log by Exterra</b>		
Cobbles, boulders .....	60	60
Quartzite, gray, water .....	40	100
Shale, red .....	20	120
Quartzite, gray, water .....	20	140
<b>(D-1-6)16dbc-1</b>		
<b>Log by Schofield Drilling</b>		
Clay, gravel, cobbles, boulders .....	20	20
Clay .....	10	30
Clay, gravel .....	10	40
Sandstone, red .....	55	95
Sandstone, red, busted up .....	5	100
Sandstone, red .....	70	170
Sandstone, red, water .....	30	200
<b>(D-1-6)17cca-2</b>		
<b>Log by Doxey Drilling</b>		
Clay, cobbles, dark .....	20	20
Cobbles, lava .....	10	30
Hardpan, some water at 30 ft. ....	10	40
Gravel, cobbles, lava, more water .....	10	50
Clay, cobbles .....	10	60
Shale, light color .....	20	80

**Table 2.** Drillers' logs of selected wells in Kamas Valley and vicinity, Utah—Continued

Lithology	Thickness	Depth	Lithology	Thickness	Depth
<b>(D-1-6)17cca-2—Continued</b>			<b>(D-1-6)22cbb-1</b>		
Clay, gravel, gray .....	10	90	<b>Log by Zimmerman Well Service</b>		
Cobbles, shale .....	10	100	Sand, gravel, cobbles, boulders, red .....	8	8
Shale, water .....	10	110	Sand, and gravel, red .....	4	12
Clay, gravel, tan .....	10	120	Sand, gravel, cobbles, brown .....	31	43
Cobbles, reddish, more water .....	10	130	Sand, gravel, cobbles, red water at 58 ft,		
Gravel, cobbles, hard .....	8	138	2 gal/min .....	43	86
<b>(D-1-6)18ddb-1</b>			Sand, gravel, cobbles, red, 40 gal/min .....	22	108
<b>Log by Huntsman Drilling</b>			<b>(D-1-6)22dbc-1</b>		
Clay, top soil .....	2	2	<b>Log by Lang Exploratory Drilling</b>		
Clay, sand, gravel, cobbles .....	38	40	Orthoquartzite, gray and brown, Weber		
Clay, sand, gravel .....	20	60	formation .....	300	300
Clay, sand, gravel, water .....	40	100	Quartzite, limestone, gray, Weber		
Clay, sand .....	20	120	formation .....	220	520
Clay, sand, hardpan .....	7	127	Claystone, maroon and brown, Morgan		
Clay, sand, gravel, water .....	10	137	formation .....	357	877
Clay, sand, hardpan, water .....	3	140	Shale, maroon, gray, and brown, Round		
Clay, sand, water .....	5	145	Valley formation .....	413	1,290
Clay, sand .....	15	160	Shale, carbonaceous, gray and black,		
<b>(D-1-6)20abb-1</b>			Doughnut formation .....	460	1,750
<b>Log by Petersen Brothers Drilling Co.</b>			Limestone, gray and black, Humbug		
Silt, topsoil .....	2	2	formation .....	90	1,840
Clay, sand, gravel .....	16	18	<b>(D-1-6)29cbd-1</b>		
Gravel, cobbles, boulders .....	22	40	<b>Log by 5/B Drilling</b>		
Clay, gravel, red .....	35	75	Topsoil, boulders .....	30	30
Clay, red .....	5	80	Sand, fine, gravel and boulders .....	20	50
Conglomerate, red .....	40	120	Gravel, boulders, hard drilling .....	30	80
Sandstone, red, some water .....	74	194	Sand, fine, gravel, and boulders .....	20	100
Sandstone, white, some water .....	21	215	Sand, gravel, coarse .....	18	118
Conglomerate, broken areas, water bearing .....	35	250	Gravel, coarse .....	6	124
<b>(D-1-6)20bcb-1</b>			<b>(D-1-6)32dda-1</b>		
<b>Log by Petersen Brothers Drilling Co.</b>			<b>Log by Schofield Drilling</b>		
Clay, silt, topsoil .....	4	4	Topsoil, black .....	2	2
Clay, gravel, cobbles .....	23	27	Sand, gravel .....	23	25
Clay .....	15	42	Clay, sand, gravel .....	15	40
Clay, cobbles, tight .....	54	96	Sand, gravel .....	25	65
Clay, conglomerate .....	5	101	Clay, sand, gravel .....	30	95
Sandstone, water bearing at 126-198 ft .....	99	200	Clay .....	10	105
<b>(D-1-6)22bdc-1</b>			Sand, gravel, water .....	15	120
<b>Log by Water Well Services</b>			<b>(D-1-6)33dba-1</b>		
Topsoil, black .....	6	6	<b>Log by Magill Drilling Co. Inc.</b>		
Clay, silt, cobbles, boulders, brown, water			Clay, gravel, cobbles, boulders .....	30	30
at 47 ft .....	110	116	Basalt, mixed with small clay layers, black		
Clay, very fine, gravel, brown .....	51	167	and red .....	26	56
Clay, silt, gravel, cobbles, brown .....	41	208	Clay, sandy, red .....	7	63
Clay, sticky, fine gravel, brown .....	14	222	Gravel, cobbles, boulders, mixed with small		
Clay, gravel, gray, in lenses .....	38	260	clay layers, red .....	93	156
Gravel, cemented .....	7	267	Clay, red .....	8	164
Clay, brown and gray .....	28	295	Gravel, cobbles, boulders mixed with clay		
Mudrock, brown, layers of hard and soft .....	47	342	layers, yellow, red .....	12	176
Hard rock, red and gray .....	44	386	Bedrock .....	3	179
Limestone, red and gray, hard .....	101	487	Gravel, cobbles, boulders mixed with small		
Woodside Shale, red .....	513	1,000	clay layers, red, yellow .....	7	186

**Table 2.** Drillers' logs of selected wells in Kamas Valley and vicinity, Utah—Continued

Lithology	Thickness	Depth	Lithology	Thickness	Depth
<b>(D-1-6)33dba-1—Continued</b>			<b>(D-2-5)13aaa-1—Continued</b>		
Clay, sticky, red .....	6	192	Sand, volcanic, gray, cemented, water, 2 gal/min .....	7	187
Clay, gravel, cobbles, boulders .....	58	250	Clay, silt, sand, boulder, volcanic, cemented ..	43	230
<b>(D-1-7)6abc-1</b>			Silt, sand, volcanic, cemented .....	75	305
<b>Log by Fenhaus Drilling</b>			Silt, sand, boulders, volcanic, cemented, water .....	20	325
Black dirt .....	6	6	<b>(D-2-5)13adc-1</b>		
Clay, red .....	09	15	<b>Log by Huntsman Drilling</b>		
Cobbles .....	1	16	Sand, basalt, gray .....	5	5
Clay, gravel .....	2	18	Basalt, gray .....	110	115
Hardpan .....	1	19	Basalt, gray, fractured with sand, water .....	161	276
Clay .....	1	20	<b>(D-2-5)13cad-1</b>		
Red clay .....	15	35	<b>Log by Huntsman Drilling</b>		
Reddish sandstone .....	20	55	Clay, silt, volcanic, light brown, volcanic tuff ..	20	20
Broken sandstone .....	15	70	Clay, silt, sand, volcanic, gray, volcanic tuff ..	20	40
Red clay .....	23	93	Clay, silt, sand, volcanic, gray, volcanic tuff ..	50	90
Broken sandstone, black/grey .....	14	107	Clay, silt, sand volcanic, gray, volcanic tuff ...	60	150
Softer red sandstone, 12 gal/min at 160 ft ....	59	166	Volcanic, gray, basalt, fractured .....	60	210
Hard red sandstone, 35-45 gal/min at 220 ft 134	300	300	Volcanic, gray, basalt, fractured .....	50	260
<b>(D-2-5)2cbd-1</b>			Water, volcanic, gray, basalt, fractured .....	10	270
<b>Log by Zimmerman Well Service</b>			<b>(D-2-5)14daa-1</b>		
Clay, brown-red .....	25	25	<b>Log by Huntsman Drilling</b>		
Clay, gravel, red .....	11	36	Volcanic tuff, gray .....	20	20
Clay, brown-red .....	16	52	Volcanic, yellow, with clay, silt, sand .....	55	75
Other, gray .....	38	90	Volcanic tuff with boulders, gray .....	85	160
Sandstone, brown .....	12	102	Volcanic tuff, gray .....	6	166
Sandstone, brown with red clay .....	103	205	Volcanic tuff with boulders, gray .....	84	250
Sand, brown .....	50	255	Volcanic tuff with boulders, gray, with water ..	12	262
Sand, black .....	35	290	<b>(D-2-5)24ada-1</b>		
Sand, brown .....	115	405	<b>Log by Uinta Basin Drilling Co.</b>		
Sand, gray, black, fractured .....	60	465	Water, gravel, sand, boulders .....	58	58
<b>(D-2-5)11bcd-1</b>			<b>(D-2-6)3bac-1</b>		
<b>Log by Huntsman Drilling</b>			<b>Log by Exterra</b>		
Volcanics, gray, intrusive .....	80	80	Clay, silt, boulder, red .....	10	10
Volcanics, light gray, intrusive .....	55	135	Clay, silt, boulder, red .....	10	20
Volcanics, gray, intrusive .....	45	180	Clay, silt, red .....	30	50
Volcanics, dark gray, intrusive, water .....	37	217	Clay, red .....	50	100
Volcanics, red, brown, gray, orange, intrusive, water .....	25	242	Clay, silt, red .....	50	150
<b>(D-2-5)11dcc-1</b>			Clay, silt, red .....	50	200
<b>Log by Huntsman Drilling</b>			Clay, silt, red .....	50	250
Volcanic, gray, basalt .....	60	60	Water, low permeability, clay, silt, sand, red ..	50	300
Volcanic, gray, basalt, conglomerate .....	60	120	Water, low permeability, clay, silt, sand, red ..	60	360
Volcanic, multicolor, basalt, conglomerate ....	20	140	Water, high permeability, other .....	90	450
Water, volcanic, multicolor, basalt, conglomerate .....	20	160	<b>(D-2-6)4dda-1</b>		
<b>(D-2-5)13aaa-1</b>			<b>Log by Zimmerman Well Service</b>		
<b>Log by Huntsman Drilling</b>			Clay, sand, gravel, red and brown .....	22	22
Clay, silt, sand, volcanic, gray, cemented .....	25	25	Clay, gravel, red .....	6	28
Clay, sand, volcanic, gray, cemented .....	45	70	Clay, gravel, tan .....	2	30
Clay, silt, sand, boulders, volcanic, gray, cemented .....	110	180	Clay, gravel, red .....	4	34
			Clay, gravel, brown .....	17	51

**Table 2.** Drillers' logs of selected wells in Kamas Valley and vicinity, Utah—Continued

Lithology	Thickness	Depth
<b>(D-2-6)4dda-1—Continued</b>		
Clay, sand, gravel, brown.....	12	63
Clay, gravel, gray-brown.....	1	64
Volcanic ash with mica.....	10	74
Gravel, volcanic ash, brown and red.....	29	103
Clay, sand, gravel.....	1	104
Quartzite.....	6	110
Siltstone, red, 15 gal/min at 125 ft.....	15	125
Clay, gravel, white, brown.....	26	151
Volcanics with siltstone ledges, red-brown ...	99	250
Siltstone, red, brown.....	43	293
Quartzite, tan.....	10	303
Siltstone, red, brown.....	21	324
Clay, white, brown, yellow, with red quartzite	51	375
Quartzite, purple.....	10	385
Clay, quartzite.....	15	400
<b>(D-2-6)6bcc-1</b>		
<b>Log by Petersen Brothers Drilling Co.</b>		
Clay, silt, topsoil.....	2	2
Gravel, cobbles, some water.....	24	26
Boulders, hardpan.....	4	30
Clay.....	20	50
Limestone.....	75	125
<b>(D-2-6)8ddd-1</b>		
<b>Log by Schofield Drilling</b>		
Black, topsoil.....	2	2
Sand, gravel, boulders.....	46	48
Clay, silt, sand, gravel.....	5	53
Sand, gravel, boulders.....	45	98
Silt, sand, gravel.....	12	110
Sand, gravel.....	10	120
<b>(D-2-6)9bbb-1</b>		
<b>Log by Magill Drilling Co. Inc.</b>		
Clay, brown.....	15	15
Gravel, cobbles, boulders.....	8	23
Clay, brown.....	12	35
Gravel, cobbles, boulders, yellow.....	46	81
Shale, brown.....	11	92
Gravel, cobbles, boulders with small red clay layers mixed.....	28	120
<b>(D-2-6)16cda-1</b>		
<b>Log by Gardner Drilling Co.</b>		
Silt, gravel.....	5	5
Silt, gravel, boulders.....	10	15
Silt, gravel, little water.....	5	20
Silt, gravel, boulders.....	15	35
Sand, gravel, boulders.....	5	40
Silt, gravel, boulders, water level at 23 ft. ....	20	60
Sandstone, (maybe quartz) gray, hard.....	35	95
Shale, red.....	20	115
Sandstone, (quartz), gray.....	25	140
Quartz, cracks, hard.....	10	150

Lithology	Thickness	Depth
<b>(D-2-6)16cda-1—Continued</b>		
Quartz, large crevice.....	20	170
Quartz, fractured.....	15	185
Quartz, fractured, small white clay.....	30	215
Quartz, fractured, loose rock 217-220 ft. ....	5	220
Quartz, light red.....	10	230
Quartz, light red, crevices.....	5	235
Shale, red.....	45	280
Sandstone and quartz.....	20	300
Sandstone and quartz, large crevices.....	5	305
(Sandstone, red.....	5	310
Quartz, large cracks.....	35	345
Sandstone or quartzite.....	20	365
<b>Log by Zimmerman Well Service (deepened)</b>		
Weber Sandstone, red, fracture at 390-401 ft 400 gal/min.....	55	420
<b>(D-2-6)21cdd-1</b>		
<b>Log by J. Gary Petersen and Sons</b>		
Silt, topsoil.....	2	2
Gravel, cobble, boulders, surface water.....	16	18
Clay, cobbles.....	10	28
Clay, sand, gravel, light brown.....	19	47
Sand, gravel, cobbles, boulders.....	21	68
Clay, cobbles, boulders.....	21	89
Clay.....	8	97
Gravel, water at 30 gal/min.....	5	102
<b>(D-2-6)21dcd-1</b>		
<b>Log by Schofield Drilling</b>		
Sand, gravel, cobbles, bounders.....	90	90
Sandstone, red and tan, fractured.....	12	102
<b>(D-2-6)21ddb-1</b>		
<b>Log by Schofield Drilling</b>		
Sand, gravel, cobbles.....	40	40
Clay and gravel.....	10	50
Sandstone, tan.....	53	103
Sandstone, tan with water.....	37	140
<b>(D-2-6)25aad-1</b>		
<b>Log by Magill Drilling Co. Inc.</b>		
Gravel, cobbles, boulder.....	22	22
Water, high permeability, shale, blue, hard layers small.....	98	120
<b>(D-2-6)25caa-1</b>		
<b>Log by J.G. Lee Drilling</b>		
Clay, boulders.....	94	94
Clay.....	2	96
Water, gravel, and boulders.....	5	101
Conglomerate.....	4	105
<b>(D-2-6)25dba-1</b>		
<b>Log by Magill Drilling Co. Inc.</b>		
Gravel, cobbles, boulders.....	56	56
Limestone, grey, firm.....	40	96

**Table 2.** Drillers' logs of selected wells in Kamas Valley and vicinity, Utah—Continued

Lithology	Thickness	Depth	Lithology	Thickness	Depth
<b>(D-2-6)25dba-1—Continued</b>			<b>(D-2-6)29bcb-1—Continued</b>		
Limestone, grey, fractured.....	9	105	<b>Log by Exterra (deepened)</b>		
Limestone, grey, firm .....	53	158	Missing description .....	6	90
<b>(D-2-6)26abc-1</b>			Sand, gravel, cobbles .....	30	120
<b>Log by Harvey Sales and Service, Inc.</b>			Gravel, cobbles.....	20	140
Topsoil .....	2	2	Gravel, cobbles, boulders.....	100	240
Clay, silt .....	16	18	Volcanics .....	50	290
Cobbles, boulders.....	28	46	<b>(D-2-6)33cab-1</b>		
Clay, hardpan, blue.....	84	130	<b>Log by Magill Drilling Co. Inc.</b>		
Silt, orange .....	6	136	Gravel, cobbles, boulder.....	18	18
Clay, hardpan, brown, sandstone ledges.....	90	226	Conglomerate, yellow/brown .....	172	190
Clay, sand, gravel, small 1/8-1/16-in. gravel..	15	241	<b>(D-2-6)34acc-1</b>		
Sandstone .....	5	246	<b>Log by Huntsman Drilling</b>		
Clay, brown .....	21	267	Clay, gravel, cobbles .....	20	20
Clay, sand, gravel, sandstone ledges.....	33	300	Sandstone, white and rose .....	60	80
<b>(D-2-6)26bad-2</b>			Sandstone, white, varies in hardness.....	80	160
<b>Log by Schofield Drilling</b>			<b>(D-2-6)34dcc-1</b>		
Topsoil, black .....	5	5	<b>Log by Dave's Drilling</b>		
Clay, with cobbles, boulders .....	15	20	Clay .....	10	10
Limestone, hard.....	80	100	Gravel .....	30	40
Limestone, busted up with water .....	25	125	Cobbles .....	30	70
Limestone, water .....	90	215	Bedrock .....	20	90
<b>(D-2-6)27ccc-1</b>			Gravel .....	13	103
<b>Log by W.D. Harkness</b>			<b>(D-3-6)2dbb-1</b>		
Soil.....	3	3	<b>Log by Exterra</b>		
Hardpan with boulders.....	35	38	Clay .....	5	5
Sandstone, red .....	14	52	Sand, gravel, cobbles .....	45	50
Gravel .....	3	55	Gravel, cobbles, boulder.....	25	75
<b>(D-2-6)28aab-3</b>			Water, gravel, cobbles, boulder .....	25	100
<b>Log by Schofield Drilling</b>			Clay, silt .....	50	150
Clay .....	15	15	Water, high permeability, sand, gravel,		
Clay, gravel .....	5	20	cobbles, boulder .....	30	180
Gravel, cobbles, boulders.....	30	50	<b>(D-3-6) 3bdb-1</b>		
Sandstone, tan .....	10	60	<b>Log by Schofield Drilling</b>		
Sandstone, tan, broken, water.....	25	85	Topsoil, black .....	3	3
<b>(D-2-6)28add-1</b>			Sand, gravel, cobbles .....	22	25
<b>Log by Exterra</b>			Gravel, cobbles, boulders.....	20	45
Clay, silt .....	10	10	Gravel, cobbles, boulders, water .....	55	100
Clay, silt, gravel .....	10	20	<b>(D-3-6)4aad-1</b>		
Gravel, cobbles.....	20	40	<b>Log by Magill Drilling Co. Inc.</b>		
Gravel, cobbles, boulders, water .....	40	80	Topsoil .....	7	7
Sandstone, red, water at 125 ft. ....	60	140	Gravel, cobbles, boulder.....	12	19
<b>(D-2-6)29bcb-1</b>			Bedrock .....	3	22
<b>Log by Exterra</b>			Gravel, cobbles, boulder.....	13	35
Clay .....	15	15	Conglomerate, yellow, two small red clay		
Clay, silt, sand, water, .....	10	25	seams.....	145	180
Sand, gravel .....	10	35			
Gravel, cobbles, water .....	20	55			
Cobbles, boulders, water .....	29	84			

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah

Local well number: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Water level: In feet above (-) or below land surface. F, flowing; I, interpolated.

Local well number	Date	Water level	Local well number	Date	Water level
(D-1-5)10dda-1	02-11-1999	24.03	(D-1-5)15acb-1	11-18-1998	103.54
	03-15-1999	23.73		12-09-1998	56.59
	04-14-1999	24.42		01-19-1999	69.90
	05-12-1999	23.16		02-11-1999	52.50
	06-17-1999	23.51		03-12-1999	34.21
	07-12-1999	24.27		04-14-1999	47.39
	08-05-1999	23.36		05-12-1999	66.14
	09-08-1999	22.22		06-17-1999	133.56
	10-06-1999	23.22		02-03-2000	136.36
	11-04-1999	23.58		02-22-2000	128.97
	12-16-1999	25.57		04-10-2000	136.58
	01-24-2000	25.34		05-22-2000	104.41
	02-22-2000	25.99		07-07-2000	94.94
	03-21-2000	26.37		07-27-2000	99.82
	04-10-2000	26.57		08-30-2000	23.68
	05-16-2000	24.40		09-25-2000	59.43
	07-03-2000	22.73	(D-1-5)15bda-1	11-18-1998	164.05
	07-27-2000	23.40		12-09-1998	159.34
	08-30-2000	23.60		01-19-1999	159.63
	09-20-2000	25.90		02-11-1999	164.09
				03-12-1999	158.89
(D-1-5)13cdb-1	10-09-1997	57.76		04-14-1999	158.45
	10-29-1997	62.26		02-03-2000	158.80
	12-12-1997	70.95	(D-1-5)21aca-1	03-12-1999	174.20
	01-08-1998	75.16		04-15-1999	173.27
	02-13-1998	80.27		05-12-1999	169.14
	03-11-1998	83.52		06-17-1999	170.87
	04-10-1998	85.47		07-12-1999	171.67
	05-12-1998	84.81		08-05-1999	171.85
	06-10-1998	75.32		09-08-1999	172.17
	07-13-1998	59.54		10-06-1999	172.50
	08-10-1998	54.22		11-04-1999	173.02
	09-09-1998	53.75		12-16-1999	173.91
	10-14-1998	58.54		02-03-2000	174.83
	11-13-1998	64.69	(D-1-5)23dda-1	10-21-1997	14.19
	12-09-1998	69.80		10-29-1997	15.13
	01-19-1999	76.65		12-11-1997	18.55
	02-11-1999	79.67		01-08-1998	17.95
	03-12-1999	83.42		02-13-1998	18.97
	04-14-1999	85.40		03-11-1998	19.06
	05-12-1999	84.32		04-10-1998	15.88
	06-17-1999	73.86		05-12-1998	10.38
	08-05-1999	54.57		06-10-1998	3.49
	10-06-1999	54.33		07-13-1998	3.85
	01-24-2000	76.41		08-10-1998	4.77
	02-22-2000	80.18		09-09-1998	5.50
	04-10-2000	85.06			
	05-16-2000	87.30			
	07-03-2000	76.72			
	08-01-2000	59.58			
	08-30-2000	58.82			
	09-20-2000	60.81			

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-1-5)23dda-1—Continued	10-14-1998	10.75	(D-1-6)15acd-1—Continued	08-20-1998	33.89
	11-13-1998	13.15		08-21-1998	33.93
	12-09-1998	16.30		08-22-1998	34.10
	01-19-1999	18.09	(D-1-6)15acd-2	08-11-1998	23.30
	02-11-1999	16.43		08-17-1998	23.61
	03-12-1999	17.41		08-19-1998	23.69
	04-14-1999	17.49		08-20-1998	23.74
	05-12-1999	15.57		08-21-1998	23.78
	06-17-1999	2.55		08-22-1998	23.87
	07-12-1999	3.47		10-29-1998	24.94
	08-05-1999	5.89		11-20-1998	25.24
	09-08-1999	5.25		12-09-1998	25.25
	10-06-1999	11.22		01-19-1999	25.43
	11-04-1999	13.27		02-11-1999	25.56
	12-16-1999	15.71		03-15-1999	25.63
	01-24-2000	17.52		04-14-1999	24.70
	02-22-2000	18.48		05-12-1999	21.43
	03-21-2000	18.11		06-22-1999	17.70
	04-10-2000	18.51		07-12-1999	20.81
	05-16-2000	7.50		08-05-1999	23.05
	07-03-2000	5.22		09-08-1999	23.98
	08-01-2000	6.71		10-07-1999	24.37
	08-30-2000	6.50		11-04-1999	24.79
	09-21-2000	11.04		12-16-1999	25.06
(D-1-5)25dbd-1	10-29-1997	2.14		02-04-2000	25.04
	12-11-1997	2.15		02-23-2000	25.31
	01-08-1998	2.03		03-21-2000	25.36
	02-13-1998	2.16		04-10-2000	25.04
	03-11-1998	1.99		05-17-2000	24.24
	04-10-1998	2.05		06-29-2000	24.99
	05-12-1998	1.79		08-01-2000	25.79
	06-10-1998	1.47		08-30-2000	25.77
	07-13-1998	1.59		09-21-2000	26.01
	08-11-1998	1.49	(D-1-6)16dbc-1	02-25-1999	194.90
	09-09-1998	1.57		04-15-1999	189.16
	10-14-1998	2.03		07-12-1999	156.13
	11-13-1998	2.20		09-08-1999	128.75
	03-12-1999	1.91		11-04-1999	148.27
	07-12-1999	1.44		12-16-1999	160.29
(D-1-6)15acc-1	08-11-1998	39.37		02-04-2000	179.75
	08-13-1998	39.57		02-23-2000	185.14
	08-17-1998	39.98		03-21-2000	191.49
	08-19-1998	40.19		04-10-2000	193.20
	08-20-1998	40.31		05-17-2000	197.60
(D-1-6)15acd-1	08-11-1998	33.52		06-29-2000	153.89
	08-13-1998	33.64		08-01-2000	136.77
	08-17-1998	33.83		08-30-2000	152.04
	08-19-1998	33.87		09-21-2000	164.39

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-1-6)17cca-2	03-01-1999	88.65	(D-1-6)20abb-1	03-01-1999	194.00
	03-12-1999	88.60		03-15-1999	197.01
	04-14-1999	87.62		04-15-1999	197.77
	05-12-1999	87.10		05-12-1999	193.00
	07-12-1999	80.26		06-22-1999	64.87
	08-05-1999	76.00		07-12-1999	55.14
	09-08-1999	82.66		08-05-1999	36.65
	10-07-1999	84.39		09-08-1999	49.64
	11-04-1999	85.79		10-07-1999	97.69
	12-15-1999	87.06		11-04-1999	126.58
	02-04-2000	88.25		12-16-1999	163.68
	02-23-2000	88.66		02-04-2000	187.05
	03-21-2000	89.00		02-23-2000	192.18
	04-10-2000	91.90		03-22-2000	197.88
	07-03-2000	81.30		04-10-2000	199.44
	08-01-2000	79.44		05-16-2000	194.40
(D-1-6)17cdc-1	01-29-1998	35.38		07-03-2000	56.14
	02-13-1998	35.29		08-01-2000	50.42
	03-11-1998	35.17		09-20-2000	136.60
	04-10-1998	34.63	(D-1-6)20bcb-1	03-01-1999	98.66
	05-12-1998	34.60		03-12-1999	99.20
	06-10-1998	34.77		04-14-1999	99.23
	07-13-1998	32.91		05-12-1999	99.20
	08-11-1998	34.40		06-22-1999	57.58
	09-09-1998	34.45		07-12-1999	49.11
	10-14-1998	35.49		08-05-1999	44.85
	11-13-1998	36.77		09-08-1999	38.34
	12-09-1998	40.66		11-04-1999	57.04
	01-19-1999	38.92		12-16-1999	86.49
	02-11-1999	39.03		02-04-2000	97.75
	03-12-1999	39.14		02-23-2000	99.15
	04-14-1999	38.97		03-21-2000	99.81
	05-12-1999	39.05		04-10-2000	100.01
(D-1-6)19ddc-1	03-02-1999	26.85		05-16-2000	101.55
	03-12-1999	26.70		07-03-2000	65.98
	04-15-1999	28.95		08-01-2000	53.04
	05-12-1999	26.67		08-30-2000	51.70
	06-22-1999	9.34		09-20-2000	66.75
	07-12-1999	5.54	(D-1-6)21cbb-1	03-02-1999	107.50
	08-05-1999	4.96		03-15-1999	108.81
	09-08-1999	8.26		04-15-1999	110.05
	10-07-1999	12.52		05-12-1999	109.48
	11-04-1999	8.60		06-22-1999	80.07
	02-22-2000	26.29		07-12-1999	74.30
	03-21-2000	27.51		08-05-1999	71.90
	04-10-2000	28.91		09-08-1999	73.13
	05-16-2000	23.01		10-07-1999	76.68
	07-03-2000	8.88		11-04-1999	82.39
	08-01-2000	9.35		12-16-1999	92.60
	08-30-2000	11.36		02-04-2000	103.72
	09-20-2000	13.50		02-23-2000	106.30



**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-1-6)21cbb-1—Continued	03-21-2000	109.29	(D-1-6)22cbb-1—Continued	02-11-1999	64.90
	04-10-2000	110.73		03-15-1999	67.95
	05-17-2000	106.33		04-14-1999	50.08
	06-29-2000	76.81		05-12-1999	30.24
	08-01-2000	73.68		06-22-1999	16.28
	08-30-2000	77.55		07-12-1999	27.69
	09-25-2000	81.72		08-05-1999	27.35
(D-1-6)22bdc-1	04-10-1998	66.82		09-08-1999	31.76
	05-12-1998	59.42		10-07-1999	36.69
	06-10-1998	47.53		11-04-1999	39.31
	07-13-1998	47.27		12-16-1999	51.61
	08-11-1998	51.90		01-25-2000	58.65
	09-09-1998	51.58		02-23-2000	63.28
	10-15-1998	57.61		03-21-2000	64.35
	11-13-1998	61.58		04-10-2000	53.10
	12-09-1998	63.58		05-17-2000	17.92
	01-25-1999	66.28		06-26-2000	23.35
	02-11-1999	67.10		08-01-2000	34.32
	03-15-1999	67.70		08-30-2000	39.61
	04-14-1999	62.89		09-21-2000	43.23
	05-12-1999	54.22	(D-1-6)28cbc-1	03-02-1999	24.34
	06-22-1999	42.34		03-12-1999	25.03
	07-12-1999	48.19		04-15-1999	17.38
	08-05-1999	49.11		05-12-1999	7.94
	09-08-1999	50.86		06-22-1999	3.59
	10-07-1999	54.20		07-12-1999	4.73
	11-04-1999	56.48		08-05-1999	4.95
	12-16-1999	61.13	(D-1-6)29cbd-1	10-29-1997	13.93
	01-25-2000	64.95		12-11-1997	15.16
	02-23-2000	66.23		01-08-1998	15.54
	03-21-2000	67.25		02-13-1998	16.09
	04-10-2000	65.92		03-12-1998	16.20
	05-17-2000	47.98		04-10-1998	12.14
	06-29-2000	47.14		05-12-1998	9.51
	08-01-2000	53.58		06-10-1998	3.64
	08-30-2000	56.60		07-13-1998	3.70
	09-21-2000	58.79		08-11-1998	7.54
(D-1-6)22cbb-1	01-29-1998	66.11		09-09-1998	5.09
	02-13-1998	67.76		10-14-1998	11.26
	03-12-1998	69.94		11-13-1998	11.77
	04-10-1998	64.37		12-09-1998	13.96
	05-12-1998	35.69		01-19-1999	16.23
	06-10-1998	21.40		02-11-1999	15.77
	07-13-1998	24.28		03-12-1999	15.75
	08-11-1998	30.98		04-14-1999	15.19
	09-09-1998	28.71		05-12-1999	6.65
	10-15-1998	41.20		06-22-1999	2.17
	11-13-1998	47.79		07-12-1999	3.83
	12-09-1998	51.10		08-05-1999	6.80
	01-19-1999	59.78		09-08-1999	20.55

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-1-6)29cbd-1—Continued	11-04-1999	12.11	(D-1-6)33dcc-1—Continued	06-22-1999	96.87
	12-16-1999	15.59		07-12-1999	96.74
	01-25-2000	16.07		08-06-1999	108.32
	02-22-2000	15.70		09-08-1999	118.19
	03-21-2000	15.42		10-07-1999	133.58
	04-10-2000	13.23		11-03-1999	139.41
	05-16-2000	3.61		12-22-1999	142.06
(D-1-6)32dda-1	08-23-1999	39.57		01-25-2000	142.34
	09-09-1999	42.94		02-22-2000	144.39
	10-07-1999	49.70		03-17-2000	147.16
	11-04-1999	52.83		04-10-2000	148.88
	12-22-1999	53.74		05-17-2000	131.52
	02-04-2000	53.43		06-29-2000	123.72
	02-23-2000	54.48		07-25-2000	135.23
	03-21-2000	56.54		09-25-2000	145.25
	04-10-2000	57.30	(D-2-5)2cbd-1	03-16-1999	390.66
	05-17-2000	44.67		04-16-1999	390.77
	06-29-2000	43.57		06-21-1999	389.68
	08-01-2000	50.25		07-12-1999	389.62
	08-30-2000	53.02		08-09-1999	389.68
	09-21-2000	55.01		09-13-1999	389.94
(D-1-6)33dba-1	12-22-1998	131.00		10-13-1999	390.13
	02-25-1999	119.54		11-08-1999	390.26
	03-15-1999	120.91		04-12-2000	391.54
	04-15-1999	122.19		05-22-2000	391.61
	05-13-1999	120.27		08-02-2000	392.04
	07-12-1999	78.89		09-25-2000	392.50
	09-08-1999	97.35	(D-2-5)11bcd-1	03-17-1999	101.89
(D-1-6)33dcc-1	08-27-1997	108.45		04-16-1999	79.73
	09-30-1997	126.94		05-13-1999	67.54
	10-29-1997	138.11		06-17-1999	69.59
	12-03-1997	138.56		07-12-1999	77.77
	01-08-1998	145.25		08-09-1999	83.54
	02-10-1998	147.18		09-13-1999	90.21
	03-11-1998	149.05		10-13-1999	94.91
	04-10-1998	144.64		11-08-1999	98.23
	05-06-1998	141.61		12-23-1999	103.25
	06-10-1998	103.97		02-04-2000	105.90
	07-13-1998	80.26		02-29-2000	106.62
	08-11-1998	95.94		03-17-2000	104.63
	09-09-1998	106.33		04-12-2000	92.25
	10-14-1998	123.07		05-22-2000	90.78
	11-13-1998	132.81		06-30-2000	96.02
	12-09-1998	138.35		08-02-2000	100.80
	01-25-1999	144.87		08-31-2000	104.40
	02-11-1999	145.92		09-25-2000	106.99
	03-15-1999	146.82			
	04-14-1999	145.49			
	05-12-1999	140.78			

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-5)13aaa-1	03-15-1999	122.61	(D-2-5)14daa-1—Continued	02-29-2000	28.15
	06-17-1999	122.84		03-17-2000	23.95
	07-13-1999	122.80		04-12-2000	27.12
	08-09-1999	122.83		05-22-2000	30.99
	09-09-1999	123.12		06-30-2000	36.02
	12-23-1999	124.52		08-02-2000	41.73
	02-04-2000	124.57		08-31-2000	42.96
(D-2-5)13adc-1				09-25-2000	43.90
	10-30-1997	92.43	(D-2-6)4dac-1	08-27-1997	59.55
	12-12-1997	93.09		09-09-1997	59.99
	01-15-1998	93.65		09-12-1997	59.95
	03-12-1998	93.80		09-30-1997	59.20
	04-10-1998	91.30		10-29-1997	58.12
	05-12-1998	88.57		12-03-1997	56.84
	06-15-1998	85.98		01-21-1998	55.64
	07-15-1998	90.15		02-13-1998	55.32
	08-13-1998	90.11		03-11-1998	55.09
	09-09-1998	91.98		04-10-1998	54.75
	10-29-1998	93.39		05-06-1998	54.50
	11-16-1998	93.66		06-11-1998	52.99
	12-15-1998	94.14		07-13-1998	51.32
	02-16-1999	94.06		08-11-1998	50.64
	04-13-1999	92.54		09-09-1998	50.28
	05-13-1999	92.03		10-15-1998	50.00
	06-17-1999	89.90		11-13-1998	49.62
	07-13-1999	90.24		12-09-1998	49.37
	08-09-1999	91.15		01-25-1999	50.68
	10-13-1999	94.07		03-15-1999	52.86
	11-08-1999	94.69		05-10-1999	52.48
	12-22-1999	95.14		07-13-1999	54.98
	02-01-2000	94.90		09-08-1999	54.09
	02-29-2000	94.72		11-03-1999	56.01
	03-17-2000	94.67		01-24-2000	57.19
	04-11-2000	94.53	(D-2-6)4dad-1	08-27-1997	58.53
	05-22-2000	91.48		09-09-1997	58.45
	06-30-2000	92.57		09-30-1997	58.60
	08-02-2000	94.69		10-29-1997	58.27
	08-31-2000	95.43		12-03-1997	58.20
	09-25-2000	95.15		01-21-1998	57.95
(D-2-5)14daa-1	02-16-1999	31.79		02-13-1998	57.81
	03-15-1999	19.47		03-12-1998	57.79
	04-13-1999	20.83		04-10-1998	57.68
	05-13-1999	11.40		05-06-1998	57.57
	06-17-1999	20.23		06-11-1998	57.25
	07-12-1999	24.32		07-13-1998	56.92
	08-09-1999	26.42		08-11-1998	56.76
	09-13-1999	29.06		09-09-1998	56.51
	10-13-1999	30.95		10-15-1998	56.20
	11-08-1999	31.89		11-13-1998	56.11
	12-23-1999	33.64		12-09-1998	56.18
	02-04-2000	33.89			

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)4dad-1—Continued	02-11-1999	56.05	(D-2-6)6bcc-1—Continued	03-29-1993	10.88
	03-15-1999	55.63		04-01-1994	11.76
	04-13-1999	55.74		03-28-1995	11.84
	05-10-1999	55.45		03-26-1996	11.34
	06-22-1999	54.83		03-28-1997	11.10
	07-13-1999	54.66		11-30-1997	11.87
	08-06-1999	54.46		12-26-1997	12.01
	09-09-1999	54.27		01-28-1998	11.86
	10-07-1999	54.21		02-26-1998	11.86
	11-03-1999	54.07		04-01-1998	10.86
	12-22-1999	54.24		05-25-1998	11.57
	01-24-2000	54.00		07-08-1998	11.92
	02-22-2000	54.05		08-12-1998	12.22
	03-17-2000	54.07		09-10-1998	11.97
	04-10-2000	54.05		10-29-1998	11.86
	06-29-2000	54.13		12-02-1998	11.93
	08-30-2000	54.67		12-30-1998	11.92
	09-21-2000	54.56		01-20-1999	12.01
(D-2-6)4dda-1	09-04-1997	104.44		03-02-1999	11.67
	09-15-1997	104.44	(D-2-6)8ddd-1	03-09-1999	11.59
	09-20-1997	104.56		03-15-1999	11.55
	09-25-1997	104.78		05-01-1999	11.62
	09-30-1997	104.84		05-30-1999	11.80
	10-05-1997	104.73		07-08-1999	12.06
	10-10-1997	104.54		07-12-1999	12.08
	10-15-1997	104.80		03-06-2000	11.98
	10-20-1997	104.56		02-25-1999	3.95
	10-29-1997	104.30		03-15-1999	2.57
	12-03-1997	104.05		04-15-1999	3.31
	10-15-1998	104.99		05-13-1999	1.37
	11-13-1998	105.04		06-22-1999	1.95
	03-15-1999	105.47		07-12-1999	2.26
	06-22-1999	104.34		08-06-1999	2.61
	07-13-1999	104.30	(D-2-6)9bbb-1	02-25-1999	7.16
	09-09-1999	104.03		03-15-1999	7.08
	11-03-1999	103.90		04-15-1999	7.37
	01-24-2000	103.56		05-13-1999	6.68
	02-22-2000	103.56		06-22-1999	4.12
	03-17-2000	103.59		07-12-1999	3.25
	05-17-2000	103.32		08-06-1999	3.83
	07-25-2000	106.81		09-09-1999	4.39
	09-25-2000	103.71		10-12-1999	6.15
				11-03-1999	6.36
(D-2-6)6bcc-1	09-23-1988	12.27	(D-2-6)16cda-1	10-02-1997	40.50
	03-31-1989	14.01		10-29-1997	41.21
	03-26-1990	11.35		12-11-1997	45.19
	09-19-1990	12.13		01-08-1998	47.48
	04-01-1991	12.00		02-10-1998	49.52
	09-14-1991	12.35		03-11-1998	50.69
	03-31-1992	12.19			
	09-08-1992	12.73			

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)16cda-1—Continued	04-07-1998	48.24	(D-2-6)19bac-1—Continued	04-11-2000	7.27
	05-06-1998	46.01		06-30-2000	6.58
	06-15-1998	41.51		08-31-2000	6.14
	07-14-1998	38.87		09-25-2000	6.43
	08-12-1998	39.07	(D-2-6)20ccc-1	04-04-1938	3.22
	09-09-1998	39.91		05-31-1938	3.02
	10-14-1998	39.14		08-27-1938	4.55
	11-13-1998	42.04		10-20-1938	3.85
	12-09-1998	44.49		12-13-1938	3.65
	01-25-1999	47.24		03-21-1939	2.32
	02-17-1999	47.60		05-01-1939	2.79
	03-15-1999	48.12		06-22-1939	3.20
	06-23-1999	39.66		08-29-1939	6.11
	07-13-1999	38.61		10-30-1939	5.66
	08-06-1999	39.12		01-08-1940	3.79
	09-09-1999	40.79		02-14-1940	3.76
	10-12-1999	41.59		03-20-1940	3.95
	11-08-1999	41.85		04-03-1940	3.53
	12-23-1999	46.26		04-16-1940	4.06
	02-01-2000	47.84		05-15-1940	2.76
	02-23-2000	48.17		06-13-1940	2.94
	03-22-2000	48.25		06-26-1940	5.37
	04-10-2000	48.14		07-20-1940	5.96
	05-17-2000	47.50		08-15-1940	7.00
	07-03-2000	41.72		08-20-1940	6.86
	08-01-2000	44.32		08-26-1940	6.64
	08-31-2000	45.16		09-16-1940	6.57
	09-20-2000	46.29		11-14-1940	4.80
(D-2-6)19bac-1	04-07-1998	5.43		11-30-1940	4.17
	05-06-1998	6.25		12-16-1940	4.78
	06-11-1998	5.15		01-12-1941	4.20
	07-15-1998	5.90		03-14-1941	3.81
	08-12-1998	6.44		03-17-1941	3.94
	09-09-1998	6.12		04-16-1941	3.80
	10-14-1998	6.46		05-16-1941	3.50
	11-16-1998	6.25		06-14-1941	2.2
	12-15-1998	6.70		07-16-1941	4.28
	01-25-1999	6.64		08-04-1941	4.8
	02-16-1999	6.32		08-16-1941	4.54
	03-12-1999	6.27		09-03-1941	4.88
	04-14-1999	6.61		09-16-1941	4.63
	06-21-1999	5.64		09-27-1941	5.04
	07-12-1999	6.26		10-13-1941	3.65
	08-09-1999	6.11		11-10-1941	4.20
	09-09-1999	6.52		11-24-1941	4.18
	10-13-1999	6.17		12-15-1941	4.14
	11-08-1999	6.75		01-13-1942	4.65
	12-15-1999	6.90		02-16-1942	4.55
	01-25-2000	6.50		03-16-1942	3.46
	02-29-2000	6.67		04-16-1942	4.30
	03-22-2000	6.73		05-15-1942	3.82

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)20ccc-1—Continued	06-15-1942	3.40	(D-2-6)20ccc-1—Continued	12-09-1959	4.92
	07-15-1942	4.40		03-21-1960	3.71
	07-24-1942	4.78		11-30-1960	4.04
	08-15-1942	5.5		03-21-1961	3.66
	09-14-1942	5.6		01-12-1962	3.91
	10-15-1942	6.37		03-08-1962	4.27
	10-21-1942	3.97		12-18-1962	3.80
	11-16-1942	5.28		03-06-1963	3.93
	12-12-1942	4.15		08-30-1963	2.89
	12-16-1942	5.8		12-09-1963	3.80
	01-13-1943	5.8		03-04-1964	4.28
	02-20-1943	3.82		10-20-1964	4.41
	03-31-1943	2.31		12-10-1964	3.93
	04-18-1943	4.25		03-08-1965	4.08
	05-18-1943	3.94		07-27-1965	3.97
	06-17-1943	4.12		10-18-1965	3.87
	07-15-1943	4.14		12-13-1965	3.71
	08-13-1943	5.00		03-16-1966	2.45
	09-14-1943	5.55		09-13-1966	3.71
	09-17-1943	5.79		04-15-1967	3.65
	10-15-1943	3.26		03-12-1968	4.02
	11-17-1943	4.30		09-18-1968	4.54
	12-10-1943	4.35		03-24-1969	3.76
	12-13-1944	4.50		09-18-1969	4.23
	03-23-1945	3.00		03-19-1970	4.33
	11-21-1945	3.57		08-21-1970	3.87
	03-30-1946	3.26		03-25-1971	2.81
	12-12-1946	3.78		09-10-1971	3.48
	04-02-1947	3.91		03-14-1972	4.50
	12-15-1947	3.31		09-29-1972	3.57
	03-26-1948	2.91		03-19-1973	3.28
	01-12-1949	4.44		09-10-1973	3.56
	04-04-1949	2.79		03-21-1974	3.62
	12-06-1949	3.88		09-13-1974	4.36
	04-06-1950	3.45		03-19-1975	3.13
	12-12-1950	3.67		09-09-1975	4.25
	04-04-1951	3.82		03-04-1976	3.34
	09-12-1951	3.42		09-07-1976	4.38
	12-27-1951	3.81		03-14-1977	3.96
	04-17-1952	2.60		09-08-1977	5.10
	12-29-1952	4.33		03-13-1978	2.83
	04-03-1953	4.07		09-11-1978	4.01
	12-09-1953	3.72		03-29-1979	2.33
	04-19-1954	4.12		09-25-1979	4.87
	12-08-1954	3.86		03-19-1980	2.60
	03-31-1955	2.91		09-05-1980	4.04
	12-12-1955	3.71		03-30-1981	2.73
	03-25-1957	3.19		09-28-1981	5.34
	12-09-1957	3.38		03-25-1982	3.97
	03-17-1958	4.25		09-30-1982	4.45
	12-18-1958	3.03		03-31-1983	2.89
	03-20-1959	3.47		09-28-1983	3.87
				03-29-1984	2.88

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)20dcc-1	03-19-1975	1.14	(D-2-6)20dcc-1—Continued	09-09-1998	2.38
	09-09-1975	1.79		10-14-1998	2.36
	03-04-1976	2.57		11-16-1998	1.41
	09-07-1976	2.89		12-15-1998	1.96
	03-14-1977	2.15		01-25-1999	1.95
	09-08-1977	3.46		03-02-1999	1.74
	03-13-1978	1.72		03-12-1999	1.97
	09-11-1978	1.47		05-13-1999	1.42
	03-29-1979	1.58		07-12-1999	2.47
	09-25-1979	3.41		08-06-1999	3.07
	03-19-1980	1.60		09-09-1999	2.75
	09-05-1980	3.06		11-08-1999	2.17
	03-30-1981	1.76		01-25-2000	1.67
	09-28-1981	3.20		02-22-2000	1.92
	03-25-1982	1.89		03-06-2000	2.09
	09-30-1982	2.73		05-22-2000	1.62
	03-31-1983	1.71		06-30-2000	2.14
	09-28-1983	2.07		08-31-2000	2.19
	03-29-1984	1.68	(D-2-6)21cdd-1	02-24-1999	1.49
	09-21-1984	2.03		03-15-1999	.96
	03-29-1985	1.81		04-16-1999	3.59
	09-20-1985	3.44		05-13-1999	.57
	03-20-1986	2.19		06-23-1999	-.99
	09-15-1986	3.26		07-12-1999	.58
	03-23-1987	2.14		08-06-1999	.30
	09-18-1987	3.43		09-09-1999	.12
	03-31-1988	1.97		10-12-1999	2.01
	09-23-1988	3.57		11-08-1999	2.64
	03-30-1989	2.04		12-15-1999	2.68
	09-14-1989	2.95		01-25-2000	1.27
	03-26-1990	2.50		02-23-2000	1.79
	09-19-1990	3.43		03-22-2000	2.74
	03-25-1991	2.10		04-10-2000	4.12
	09-14-1991	2.33		05-17-2000	.35
	03-31-1992	1.94		07-03-2000	.94
	09-08-1992	3.54	(D-2-6)21dcc-1	08-01-2000	1.46
	03-29-1993	1.18		08-31-2000	1.37
	03-30-1994	1.73		09-20-2000	1.91
	03-28-1995	1.84		02-23-2000	7.87
	03-26-1996	1.66		03-07-2000	7.88
	03-28-1997	1.58	(D-2-6)21dcc-2	04-10-2000	7.95
	08-27-1997	2.95		05-17-2000	6.15
	10-02-1997	2.60		07-03-2000	5.86
	10-29-1997	2.19		02-23-2000	7.74
	12-11-1997	2.02		03-07-2000	8.30
	01-08-1998	2.16		04-10-2000	8.29
	02-10-1998	2.12		05-17-2000	2.97
	03-11-1998	2.45		07-03-2000	4.01
	04-07-1998	1.76		08-02-2000	5.47
	05-06-1998	2.92		08-31-2000	5.52
	06-11-1998	1.57		10-05-2000	6.85
	07-15-1998	2.29			
	08-12-1998	3.22			

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)21dcd-1	02-23-2000	11.04	(D-2-6)21ddb-1—Continued	04-25-1998	70.91
	03-07-2000	11.35		04-30-1998	70.89
	04-11-2000	12.41		05-05-1998	70.48
	05-17-2000	4.45		05-10-1998	69.91
	07-03-2000	5.50		05-15-1998	60.06
	08-01-2000	7.57		05-20-1998	68.18
	08-31-2000	7.03		05-25-1998	67.22
	10-05-2000	9.27		05-31-1998	66.10
(D-2-6)21ddb-1	08-27-1997	58.75		06-05-1998	64.84
	10-02-1997	59.60		06-10-1998	63.55
	10-05-1997	59.63		06-15-1998	61.99
	10-10-1997	59.39		06-20-1998	60.89
	10-15-1997	59.85		06-25-1998	60.07
	10-20-1997	60.07		06-30-1998	59.48
	10-25-1997	60.33		07-05-1998	58.74
	10-30-1997	60.56		07-10-1998	58.01
	10-31-1997	60.58		07-15-1998	57.43
	11-05-1997	60.80		07-20-1998	56.92
	11-10-1997	61.06		07-25-1998	56.80
	11-15-1997	61.56		07-31-1998	57.09
	11-20-1997	62.11		08-05-1998	57.68
	11-25-1997	62.86		08-10-1998	58.26
	11-30-1997	63.64		08-15-1998	58.84
	12-05-1997	64.43		08-20-1998	59.42
	12-10-1997	65.22		08-25-1998	59.49
	12-15-1997	65.72		08-31-1998	59.70
	12-20-1997	66.46		09-05-1998	59.90
	12-25-1997	67.00		09-10-1998	60.01
	12-31-1997	67.67		09-15-1998	60.04
	01-05-1998	67.99		09-20-1998	59.80
	01-10-1998	68.59		09-25-1998	59.44
	01-15-1998	69.10		09-30-1998	59.29
	01-20-1998	69.53		10-05-1998	59.37
	01-25-1998	69.99		10-10-1998	59.13
	01-31-1998	70.47		10-15-1998	59.11
	02-05-1998	70.83		10-20-1998	59.49
	02-10-1998	71.18		10-25-1998	59.54
	02-15-1998	71.32		10-31-1998	60.28
	02-20-1998	71.68		11-05-1998	61.06
	02-25-1998	71.97		02-17-1999	70.36
	02-28-1998	72.20		03-15-1999	70.66
	03-05-1998	72.35		07-12-1999	57.22
	03-10-1998	72.66	(D-2-6)26bad-2	10-02-1997	120.27
	03-15-1998	72.79		11-05-1997	120.40
	03-20-1998	72.94		12-11-1997	120.46
	03-25-1998	72.82		01-08-1998	120.45
	03-31-1998	72.09		02-10-1998	120.51
	04-05-1998	71.53		03-12-1998	120.57
	04-10-1998	71.15		04-07-1998	119.25
	04-15-1998	71.03		05-06-1998	102.37
	04-20-1998	70.98		06-15-1998	111.96



**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)26bad-2—Continued	07-14-1998	111.74	(D-2-6)28aab-3—Continued	12-31-1998	33.14
	08-12-1998	116.89		01-05-1999	33.49
	09-09-1998	118.87		01-10-1999	33.85
	11-13-1998	120.05		01-15-1999	34.16
	12-09-1998	120.32		01-20-1999	34.31
	01-25-1999	119.40		01-25-1999	34.41
	02-16-1999	119.28		01-31-1999	34.52
	03-15-1999	119.38		02-05-1999	34.66
	04-13-1999	117.90		02-10-1999	34.55
	05-11-1999	104.25		02-15-1999	33.97
	06-16-1999	110.55		02-20-1999	34.14
	07-12-1999	116.30		02-25-1999	34.39
	08-06-1999	118.38		02-28-1999	34.61
	10-12-1999	120.44		03-05-1999	34.42
	12-22-1999	120.82		03-10-1999	34.37
	01-24-2000	120.67		03-15-1999	34.34
	03-17-2000	120.56		03-20-1999	32.80
	04-10-2000	119.90		03-25-1999	32.98
	05-17-2000	119.66		03-31-1999	33.64
	07-03-2000	120.00		04-05-1999	34.32
	08-31-2000	120.86		04-10-1999	34.82
				04-15-1999	35.20
(D-2-6)27cbc-1	02-24-1999	14.30		04-20-1999	35.45
	03-15-1999	13.87		04-25-1999	35.20
	07-12-1999	6.04		04-30-1999	34.77
(D-2-6)27ccc-1				05-05-1999	33.05
	04-16-1999	12.64		05-10-1999	31.48
	05-11-1999	11.95		05-15-1999	31.14
	06-23-1999	4.55		05-20-1999	30.49
	07-12-1999	F		05-25-1999	27.54
	08-06-1999	F		05-31-1999	28.42
	09-09-1999	F		06-05-1999	29.16
	10-12-1999	1.99		06-10-1999	29.83
	11-08-1999	5.75		06-15-1999	29.86
	12-15-1999	8.97		06-20-1999	29.37
	01-25-2000	11.15		06-25-1999	29.35
	02-23-2000	12.25		06-30-1999	24.80
	03-22-2000	13.27		07-05-1999	26.20
	04-11-2000	14.05		07-10-1999	27.61
	05-22-2000	5.35		07-15-1999	28.51
	06-30-2000	F		07-20-1999	22.70
	08-02-2000	F		07-25-1999	23.70
	08-31-2000	F		07-31-1999	24.60
	09-20-2000	.33		08-05-1999	25.50
				08-10-1999	25.72
(D-2-6)28aab-3	11-25-1998	30.43		08-15-1999	27.33
	11-30-1998	30.87		08-20-1999	27.85
	12-05-1998	31.25		08-25-1999	22.58
	12-10-1998	31.80		08-31-1999	26.11
	12-15-1998	32.04		09-05-1999	27.10
	12-20-1998	32.30		09-09-1999	27.42
	12-25-1998	32.84		09-10-1999	27.38

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)28aab-3—Continued	09-15-1999	27.77	(D-2-6)28aab-3—Continued	06-05-2000	28.69
	09-20-1999	28.13		06-10-2000	26.55
	09-25-1999	28.47		06-15-2000	28.09
	09-30-1999	28.97		06-20-2000	28.00
	10-05-1999	29.24		06-25-2000	28.58
	10-10-1999	29.56		06-30-2000	27.54
	10-15-1999	29.86		07-05-2000	27.84
	10-20-1999	30.50		07-10-2000	28.26
	10-25-1999	30.83		07-15-2000	28.44
	10-31-1999	31.26		07-20-2000	26.75 I
	11-05-1999	31.59		07-25-2000	28.51
	11-10-1999	31.74		07-31-2000	27.12
	11-15-1999	31.60		08-05-2000	29.20
	11-20-1999	31.54		08-10-2000	27.44
	11-25-1999	31.74		08-15-2000	28.60
	11-30-1999	31.76		08-20-2000	28.66
	12-05-1999	32.14		08-25-2000	28.74
	12-10-1999	32.46 I		08-31-2000	27.54
	12-15-1999	32.87 I		09-05-2000	28.02
	12-20-1999	33.14		09-10-2000	28.90
	12-25-1999	33.49		09-15-2000	29.58
	12-31-1999	33.74		09-20-2000	30.20
	01-05-2000	34.05		09-25-2000	30.48
	01-10-2000	34.27		09-30-2000	30.57
	01-15-2000	34.60			
	01-20-2000	34.18	(D-2-6)28add-1	02-24-1999	35.73
	01-25-2000	33.93		03-15-1999	35.99
	01-31-2000	34.10		05-11-1999	35.54
	02-05-2000	34.52		06-23-1999	33.45
	02-10-2000	34.78		07-13-1999	30.11
	02-15-2000	34.94		09-09-1999	27.86
	02-20-2000	34.69		10-12-1999	20.65
	02-25-2000	34.60		11-08-1999	23.84
	02-29-2000	34.75		01-25-2000	29.17
	03-05-2000	34.79		02-23-2000	30.20
	03-10-2000	34.92		03-22-2000	31.22
	03-15-2000	35.12		04-11-2000	32.12
	03-20-2000	35.17		05-17-2000	35.31
	03-25-2000	35.34		06-30-2000	31.29
	03-31-2000	35.54		08-01-2000	34.20
	04-05-2000	35.72		08-31-2000	31.72
	04-10-2000	35.95		09-25-2000	35.02
	04-15-2000	35.32			
	04-20-2000	34.90	(D-2-6)28ccc-3	03-15-1915	dry
	04-25-2000	34.84		08-10-1915	16.5
	04-30-2000	34.37		04-04-1938	26.93
	05-05-2000	33.16		05-31-1938	23.10
	05-10-2000	32.08		08-27-1938	23.58
	05-15-2000	31.40		10-20-1938	19.78
	05-20-2000	25.82		12-13-1938	25.44
	05-25-2000	27.70		03-21-1939	28.88
	05-31-2000	28.48		05-01-1939	23.36

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)28ccc-3—Continued	06-22-1939	9.23	(D-2-6)28ccc-3—Continued	04-18-1943	25.34
	08-29-1939	24.97		05-18-1943	16.90
	10-30-1939	25.29		06-17-1943	7.80
	11-20-1939	27.36		07-20-1943	16.46
	01-08-1940	28.95		08-13-1943	19.60
	02-14-1940	dry		09-12-1943	22.05
	04-16-1940	dry		09-17-1943	22.70
	05-15-1940	19.60		10-15-1943	20.10
	06-13-1940	14.2		11-17-1943	25.54
	06-26-1940	19.28		12-10-1943	27.00
	07-20-1940	23.84		04-14-1944	26.65
	08-20-1940	26.50		12-13-1944	25.67
	08-26-1940	dry		03-23-1945	dry
	09-16-1940	27.02		11-21-1945	23.70
	10-17-1940	23.92		03-30-1946	25.79
	11-14-1940	22.06		12-12-1946	26.13
	11-30-1940	25.72		04-02-1947	27.08
	12-16-1940	27.74		12-15-1947	26.44
	01-12-1941	29.05		03-26-1948	dry
	03-14-1941	dry		01-12-1949	26.37
	04-16-1941	dry		04-04-1949	21.50
	05-16-1941	25.20		12-06-1949	26.46
	06-14-1941	7.9		04-06-1950	21.77
	07-16-1941	16.54		12-12-1950	24.40
	08-04-1941	18.82		04-04-1951	dry
	08-16-1941	20.16		09-12-1951	14.62
	09-03-1941	21.14		12-27-1951	26.52
	09-16-1941	22.74		04-17-1952	13.37
	09-27-1941	24.12		12-29-1952	25.90
	10-13-1941	20.83		04-03-1953	27.22
	11-10-1941	23.30		12-09-1953	25.44
	11-24-1941	24.26		04-19-1954	dry
	12-15-1941	24.83		12-08-1954	23.65
	01-13-1942	27.8		03-31-1955	dry
	02-16-1942	28.72		12-12-1955	25.35
	03-09-1942	28.68		03-25-1957	dry
	03-16-1942	28.40		12-09-1957	26.14
	04-16-1942	25.96		03-17-1958	27.45
	05-15-1942	27.50		12-18-1958	26.48
	06-15-1942	11.14		03-20-1959	dry
	07-15-1942	14.70		12-09-1959	28.19
	07-24-1942	14.82		03-21-1960	dry
	08-15-1942	15.30		11-30-1960	dry
	09-14-1942	24.22		03-21-1961	dry
	10-15-1942	22.60		01-12-1962	dry
	10-21-1942	20.90		07-08-1998	8.06
	11-16-1942	25.72		08-13-1998	5.86
	12-12-1942	26.64		09-09-1998	6.00
	12-16-1942	27.27		10-14-1998	16.64
	01-13-1943	28.80		11-16-1998	22.89
	02-20-1943	24.22		12-15-1998	25.27
	03-31-1943	21.54		01-25-1999	25.17

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)28ccc-3—Continued	02-16-1999	23.75	(D-2-6)28ddc-2—Continued	09-16-1941	4.50
	03-12-1999	24.89		09-27-1941	4.11
	04-14-1999	24.78		10-13-1941	4.28
	05-11-1999	19.48		11-10-1941	7.74
	06-21-1999	7.98		11-24-1941	8.52
	07-12-1999	7.73		12-15-1941	10.8
	08-06-1999	6.71		01-13-1942	15.60
	09-09-1999	11.06		02-16-1942	15.40
	10-12-1999	20.87		04-16-1942	13.82
	01-25-2000	24.67		05-15-1942	14.03
	02-29-2000	26.37		06-15-1942	.76
	03-22-2000	27.00		07-15-1942	-.5
	04-11-2000	27.27		07-24-1942	-.22
	05-22-2000	8.91		08-15-1942	1.56
	06-30-2000	7.21		09-15-1942	5.02
	08-02-2000	9.03		10-15-1942	6.83
	08-31-2000	10.12		10-21-1942	7.24
	09-25-2000	17.66		11-16-1942	9.82
(D-2-6)28ddc-2	04-04-1938	12.6		12-12-1942	10.78
	05-31-1938	8.4		01-13-1943	19.70
	08-27-1938	3.0		03-31-1943	11.65
	10-20-1938	4.2		04-18-1943	10.92
	12-13-1938	9.38		05-18-1943	8.34
	03-21-1939	15.86		06-18-1943	F
	05-01-1939	8.83		07-20-1943	F
	06-22-1939	.07		08-13-1943	F
	08-29-1939	6.35		09-14-1943	1.70
	10-30-1939	8.81		09-17-1943	2.10
	01-08-1940	13.12		10-15-1943	2.40
	02-14-1940	16.04		11-17-1943	7.50
	03-19-1940	15.9		12-10-1943	9.98
	04-03-1940	14.46		04-14-1944	11.84
	05-15-1940	9.50		12-13-1944	9.50
	06-13-1940	1.30		11-21-1945	5.66
	06-26-1940	2.16		03-30-1946	12.88
	07-20-1940	4.90		12-12-1946	8.38
	08-20-1940	9.40		07-08-1998	1.62
	08-26-1940	10.08		08-13-1998	1.64
	09-16-1940	11.24		09-09-1998	1.65
	10-17-1940	7.35		10-14-1998	1.75
	11-14-1940	10.00		11-13-1998	5.01
	11-30-1940	10.24		12-14-1998	8.30
	12-16-1940	12.80		01-25-1999	11.40
	03-14-1941	dry		02-16-1999	11.44
	04-16-1941	17.50	(D-2-6)29ada-1	08-23-1966	3.86
	05-16-1941	12.9		07-08-1998	3.60
	06-14-1941	.4		08-13-1998	4.09
	07-16-1941	.3		09-14-1998	3.74
	08-04-1941	.64		11-16-1998	3.90
	08-16-1941	1.34		12-15-1998	5.08
	09-03-1941	2.92		03-12-1999	3.96

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)29ada-1—Continued	04-16-1999	5.26	(D-2-6)29dcd-1—Continued	11-08-1999	53.32
	05-13-1999	3.44		12-15-1999	54.11
	06-23-1999	3.76		01-25-2000	55.41
	07-12-1999	3.86		02-29-2000	56.68
	08-06-1999	4.23		03-22-2000	56.84
	09-14-1999	5.07		04-11-2000	55.95
	10-13-1999	5.03		05-22-2000	50.60
	11-08-1999	4.84		06-30-2000	44.32
	01-25-2000	3.70		08-02-2000	46.20
	03-22-2000	4.52		08-31-2000	47.47
	04-12-2000	5.80		09-25-2000	51.59
	07-03-2000	5.42	(D-2-6)29ddd-2	07-08-1998	6.07
	08-02-2000	4.10		08-13-1998	5.27
	08-31-2000	3.63		09-09-1998	5.26
	09-25-2000	4.16		10-14-1998	12.89
				11-16-1998	18.99
(D-2-6)29bcb-1	02-24-1999	5.19		12-15-1998	21.35
	03-12-1999	4.37	(D-2-6)33abb-1	01-25-1999	21.20
	04-16-1999	4.80		02-16-1999	19.56
	05-13-1999	.78		07-09-1998	2.20
	06-21-1999	2.01		08-13-1998	1.80
	07-12-1999	2.48		09-09-1998	2.12
	08-06-1999	1.63		10-14-1998	4.18
	09-09-1999	1.74		11-16-1998	8.23
	10-13-1999	2.62		12-14-1998	11.19
	11-08-1999	3.62		01-25-1999	14.54
	12-15-1999	5.71		02-16-1999	14.47
	01-25-2000	4.25		03-12-1999	15.19
	02-29-2000	4.70		04-14-1999	14.85
	03-22-2000	5.20		05-11-1999	12.35
	04-11-2000	5.83		06-21-1999	3.02
	05-22-2000	2.82		07-12-1999	2.92
	06-30-2000	2.08		08-06-1999	2.04
	08-02-2000	1.93		09-09-1999	2.45
	08-31-2000	1.82		10-12-1999	5.90
	<sup>1</sup> 11-28-2000	25.70		11-08-1999	8.35
(D-2-6)29dcd-1	07-09-1998	46.07		12-15-1999	11.63
	08-13-1998	47.27		02-03-2000	13.82
	09-09-1998	43.27		02-29-2000	14.41
	10-14-1998	50.52		03-22-2000	15.50
	11-16-1998	54.63		04-11-2000	16.21
	12-15-1998	55.64		05-22-2000	4.15
	01-25-1999	54.24		06-30-2000	2.90
	02-16-1999	54.25		08-02-2000	2.60
	03-12-1999	53.75		08-31-2000	2.77
	04-14-1999	53.75		09-25-2000	4.97
	05-11-1999	54.72	(D-2-6)33ada-1	07-08-1998	2.58
	06-21-1999	46.96		08-13-1998	2.08
	07-12-1999	43.90		09-09-1998	2.39
	08-06-1999	44.41			
	09-09-1999	44.70			
	10-12-1999	51.56			

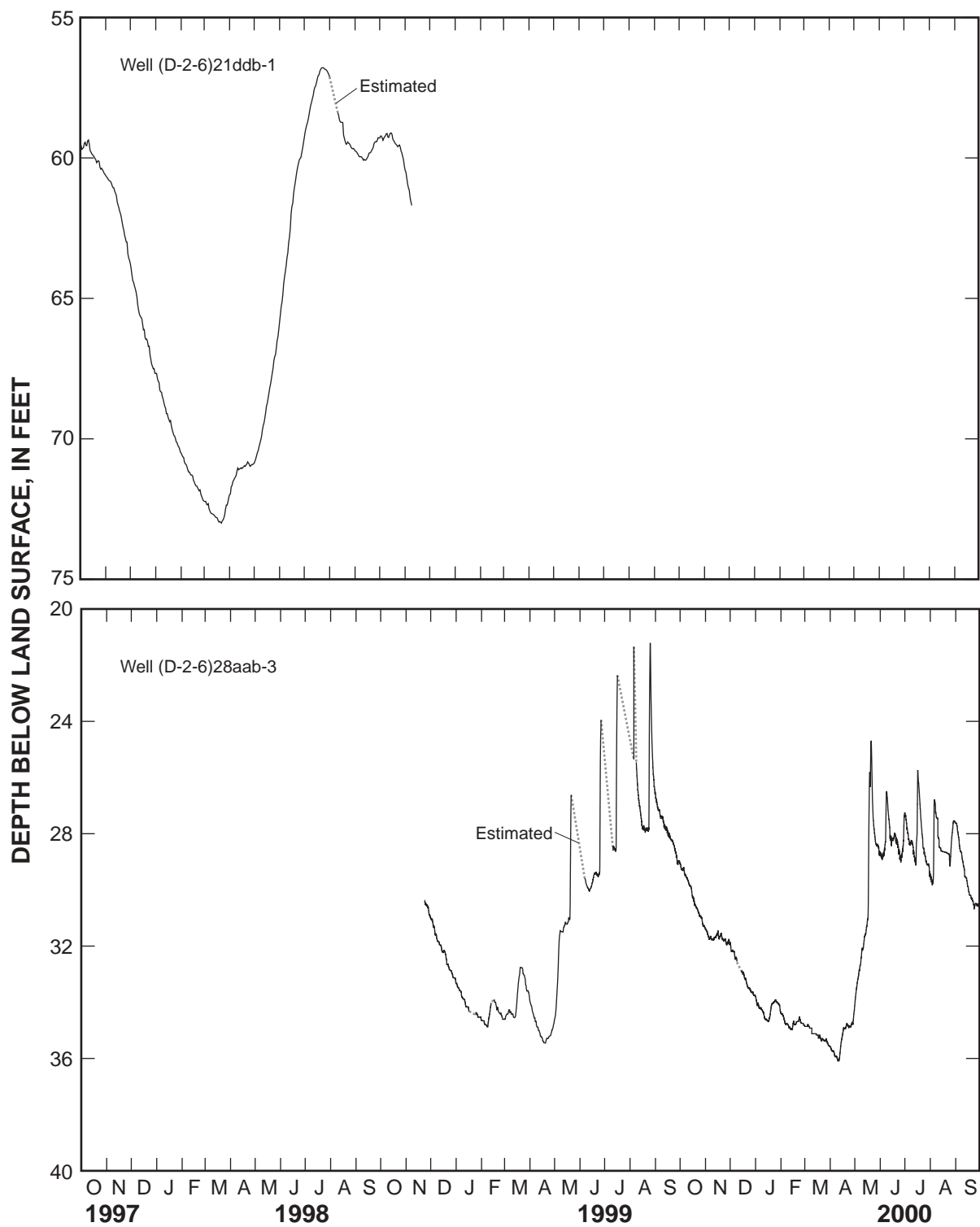
**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level	Local well number	Date	Water level
(D-2-6)33ada-1—Continued	10-14-1998	11.54	(D-2-6)34acc-1—Continued	04-16-1999	123.82
	12-14-1998	23.35		05-11-1999	123.70
	01-25-1999	26.75		06-23-1999	107.77
	03-12-1999	27.48		07-12-1999	104.80
	04-14-1999	28.30		08-06-1999	102.81
	05-11-1999	24.78		09-09-1999	101.70
	06-23-1999	2.61		10-17-1999	110.20
	07-12-1999	2.58		11-08-1999	114.79
	08-06-1999	2.68		12-15-1999	118.87
	09-09-1999	3.92		02-03-2000	122.27
	10-12-1999	13.93	(D-2-6)34cbc-2	02-16-1999	53.22
	11-08-1999	20.28		03-12-1999	54.67
	01-25-2000	26.54		04-16-1999	52.43
	02-29-2000	27.02		05-11-1999	52.28
	04-12-2000	29.59		06-23-1999	4.70
	05-22-2000	4.02		07-12-1999	5.52
	06-30-2000	1.97		08-06-1999	4.59
	08-02-2000	2.00		09-09-1999	7.12
	09-01-2000	5.39		10-12-1999	31.61
	10-05-2000	17.93		11-08-1999	39.39
(D-2-6)33cbb-1	07-08-1998	21.75		01-25-2000	48.91
	08-13-1998	32.59	(D-2-6)34dcc-1	02-29-2000	50.35
	09-09-1998	21.41		03-22-2000	51.76
	10-14-1998	45.74		04-11-2000	53.53
	11-16-1998	57.33		05-22-2000	6.87
	12-15-1998	62.48		06-30-2000	4.41
	01-25-1999	68.35		08-02-2000	4.17
	02-16-1999	68.66		08-31-2000	8.33
	03-12-1999	68.93		09-25-2000	29.53
	04-14-1999	67.46			
	05-13-1999	62.86		11-20-1997	51.94
	06-21-1999	33.50		12-11-1997	55.56
	07-12-1999	21.94		01-08-1998	59.16
	08-06-1999	29.57		02-10-1998	62.61
	09-09-1999	30.95		03-11-1998	64.88
	09-09-1999	31.20		04-07-1998	64.49
	10-12-1999	53.26		05-06-1998	62.22
	11-08-1999	60.01		06-11-1998	21.23
	12-15-1999	64.49		07-15-1998	15.03
	01-25-2000	69.14		08-12-1998	12.21
	02-29-2000	69.55		09-09-1998	24.00
	03-22-2000	69.48		10-14-1998	40.03
	04-11-2000	70.25		11-16-1998	49.80
	05-22-2000	46.17		12-14-1998	54.65
	06-30-2000	28.97		01-25-1999	60.58
	08-02-2000	20.00		02-16-1999	63.10
	08-31-2000	36.48		03-15-1999	65.07
	09-25-2000	49.81		04-14-1999	64.89
(D-2-6)34acc-1	02-24-1999	123.23		05-11-1999	64.42
	03-15-1999	123.94		06-23-1999	15.97
				07-12-1999	17.28

**Table 3.** Water level in selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Date	Water level
(D-2-6)34dcc-1—Continued	08-06-1999	15.13
	09-09-1999	17.75
	10-12-1999	39.44
	11-08-1999	48.34
	12-15-1999	55.14
	02-03-2000	61.58
	02-29-2000	63.69
	03-22-2000	65.21
	04-11-2000	66.17
	05-22-2000	24.94
	06-30-2000	15.46
	08-01-2000	14.97
	08-31-2000	19.03
	09-25-2000	36.32
(D-3-6)3bdb-1	02-24-1999	88.30
	03-12-1999	89.72
	04-16-1999	91.73
	05-11-1999	92.17
	06-23-1999	53.01
	07-12-1999	45.82
	07-06-1999	42.15
	09-09-1999	49.46
	10-12-1999	51.54
	11-08-1999	70.50
	12-15-2000	80.20
	02-03-2000	86.71
	02-29-2000	88.95
	03-22-2000	90.75
	04-11-2000	92.32
	03-22-2000	90.75
	04-11-2000	92.32
	05-22-2000	41.73
	06-30-2000	43.34
	08-02-2000	43.33
	08-31-2000	50.23
	09-25-2000	62.33

<sup>1</sup>Well deepened from 84 to 290 feet.



**Figure 2.** Water-level fluctuations in two wells, Kamas Valley, Utah.



**Table 4.** Discharge and drawdown of water from selected wells in Kamas Valley and vicinity, Utah

[All information reported in table is based on drillers' logs unless otherwise noted; gal/min, gallons per minute]

Local well number: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Formation: Modified from information on drillers' log. ALVM, unconsolidated deposits; NGGT, Nugget Sandstone; TCRK, Twin Creek Limestone; KLVN, Kelvin Formation; WDSO, Woodside Formation; KTLY, Keetley volcanics; HMBG, Humbug Formation; WEBR, Weber Sandstone; PLZC, Paleozoic carbonates.

Field checked: N, well not visited by U.S. Geological Survey personnel and not included in table 1; Y, location and well diameter verified by U.S. Geological Survey, additional construction information in table 1; A, discharge, drawdown, and pumping period measured by U.S. Geological Survey, additional construction information in table 1.

Local well number	Formation	Date discharge measured	Discharge (gal/min)	Drawdown (feet)	Pumping period (hours)	Diameter of interval (inches)	Field checked
<b>Unconsolidated deposits</b>							
(D-1-5)15aad-1	ALVM	08-03-1995	20	12	1	8	N
(D-1-5)25bdc-1	ALVM	12-10-1969	30	21	3	6	N
(D-1-5)25dbc-1	ALVM	11-1990	30	30	4	6	N
(D-1-6)21cbb-1	ALVM	12-01-1980	30	0	2	8	Y
(D-1-6)21ddd-1	ALVM	1990	40	6	1	6	N
(D-1-6)27bcb-1	ALVM	10-22-1999	12	5	4	5	N
(D-1-6)28	ALVM	08-10-1990	15	10	2	6	N
(D-1-6)28cba-1	ALVM	07-17-2000	15	5.34	4	5	A
(D-1-6)29cbd-1	ALVM	11-27-1990	20	15	5	8	Y
(D-1-6)29ccc-1	ALVM	11-02-2000	11	21.89	1.4	6	A
(D-1-6)34cca-1	ALVM	05-14-1992	20	30	1	6	N
(D-2-6)5ada-1	ALVM	06-22-2000	35	1.20	3.2	8	A
(D-2-6)5dab-1	ALVM	07-13-2000	15	1.13	1.8	5	A
(D-2-6)19bac-1	ALVM	11-29-1964	60	10	8	12	Y
(D-2-6)21cdd-1	ALVM	11-17-1977	37	6	1	6	Y
(D-2-6)21dcc-2	ALVM	10-02-2000	16	4.04	.6	4.5	A
(D-2-6)21ddc-1	ALVM	12-12-1998	20	3	4	5	N
(D-2-6)28cda-1	ALVM	09-09-1981	100	2	8	8	N
(D-2-6)29bcb-1	<sup>1</sup> ALVM	12-20-1998	100	5	2	6	Y
(D-2-6)29bcc-1	ALVM	05-05-1984	30	10	3	8	N
(D-2-6)29cbb-1	ALVM	02-05-1993	30	42	1	6	N
(D-2-6)30aaa-1	ALVM	08-26-1993	10	125	3	6	N
(D-2-6)30aad-2	ALVM	09-04-2000	20	57	1	8	N
(D-2-6)33abb-1	ALVM	04-09-1961	6	40	4	6	Y
<b>Consolidated rock</b>							
(D-1-5)13dba-1	NGGT	12-18-1995	20	33	1	5	N
(D-1-5)13dcb-1	TCRK	04-08-1996	100	127	1	8	N
(D-1-5)15acb-1	KLVN	10-10-1996	35	90	10	6	Y
(D-1-6)15acc-1	WDSO	08-20-1998	37	20	24	5.5	Y
(D-1-6)17cca-2	KTLY	08-11-1981	11	6	13	6	Y
(D-1-6)19bbc-1	KTLY	09-21-1999	12	5	4	8	N
(D-1-6)19caa-1	KTLY	11-01-2000	18	5.51	2	4.5	A
(D-1-6)20bcb-1	KTLY	06-01-1970	3	100	4	6	Y
(D-1-6)22bdc-1	WDSO	02-14-1998	240	120	35	16	Y
(D-1-6)22dbc-1	HMBG	10-11-1998	650	300	72	6	Y

**Table 4.** Discharge and drawdown of water from selected wells in Kamas Valley and vicinity, Utah—Continued

Local well number	Formation	Date discharge measured	Discharge (gal/min)	Drawdown (feet)	Pumping period (hours)	Diameter of interval (inches)	Field checked
<b>Consolidated rock—Continued</b>							
(D-1-6)34ccc-1	WEBR	02-19-1992	30	60	6	8	N
(D-2-5)13aaa-1	KTLY	11-08-1996	15	20	2	5	Y
(D-2-5)13adc-1	KTLY	05-12-1996	15	40	2	5	Y
(D-2-6)3cbc-1	WEBR	09-25-1999	50	90	2	5.5	N
(D-2-6)4cbc-1	KTLY	05-04-1992	20	10	1	8	N
(D-2-6)16cda-1	WEBR	03-21-1996	1,300	30	20	12	Y
(D-2-6)21acd-1	WEBR	09-25-1995	60	100	2	5	N
(D-2-6)21dbc-1	WEBR	09-20-1993	18	20	4	6	N
(D-2-6)25dba-1	PLZC	08-29-2000	10	6.51	1.7	5	A
(D-2-6)26aba-1	PLZC	06-12-1989	33	9	24	6	N
(D-2-6)26abc-1	WEBR	03-13-1985	125	105	48	12	N
(D-2-6)27ccd-1	WEBR	10-19-1979	219	67	8	8	N
(D-2-6)28add-1	WEBR	12-31-1997	30	65	1	4.5	Y
(D-2-6)29bcb-1	<sup>2</sup> KTLY	11-28-2000	36	30.09	2.5	6	A
(D-2-6)30aad-1	KTLY	04-16-1987	40	100	1	6	N
(D-2-6)32dba-1	KTLY	03-12-1987	15	60	1	5	N
(D-2-6)34acc-1	WEBR	07-26-1997	15	20	1	5	Y
(D-2-6)34dcd-1	KTLY	07-25-2000	27	10.17	2	6.6	A

<sup>1</sup>Well originally drilled to a depth of 84 feet and completed in alluvium.

<sup>2</sup>Well deepened in November 2000 to 290 feet and completed in alluvium and volcanics.

**Table 5.** Discharge, temperature, specific conductance, and pH of water from selected springs and streams in Kamas Valley and vicinity, Utah

[—, no data available; NA, not applicable]

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Site ID: A unique number identifying a site in the U.S. Geological Survey database, originally based upon latitude and longitude.

Formation: TYNS, Thaynes Formation; MRGN, Morgan Formation; MDSN, Madison Group.

Discharge: ft<sup>3</sup>/s, cubic feet per second; gal/min, gallons per minute; 1 ft<sup>3</sup>/s equals 448.8 gal/min.

Temperature: °C, degrees Celsius.

Specific conductance: µS/cm, microsiemens per centimeter at 25 degrees Celsius.

Location	Site ID	Name	Formation	Date measured	Discharge		Temperature (°C)	Specific conductance, field (µS/cm)	pH, field (standard units)
					(ft <sup>3</sup> /s)	(gal/min)			
(D-1-5)23aca	404319111203501	Marchant ditch	NA	11-03-1997	5.4		—	470	8.1
				03-19-1998	3.9		11.0	495	—
				04-17-1998	3.5		8.0	485	—
				05-12-1998	5.0		10.5	460	8.0
				06-11-1998	15		14.0	440	8.0
				07-13-1998	12		12.5	450	7.9
				08-10-1998	9.4		12.5	440	7.7
				09-14-1998	12		12.0	445	7.7
				10-29-1998	7.2		10.5	—	—
				11-16-1998	6.9		10.5	455	7.8
				12-17-1998	6.0		6.5	460	7.9
				01-20-1999	3.8		6.5	480	7.0
				02-18-1999	4.3		7.5	475	8.0
				03-15-1999	5.8		9.5	470	8.0
				04-12-1999	3.7		10.5	480	7.8
				05-11-1999	4.5		11.0	490	8.0
				06-16-1999	10		13.0	410	8.0
				07-15-1999	11		14.5	460	7.9
				08-11-1999	11		13.5	455	7.7
				09-14-1999	10		10.5	450	7.3
				10-06-1999	9.0		11.5	450	7.5
				11-09-1999	6.8		11.0	450	7.7
				12-28-1999	4.5		7.5	460	7.5
				02-01-2000	3.7		7.0	450	7.9
				02-18-2000	4.5		7.5	465	7.9
				03-16-2000	3.5		9.0	455	7.8
				04-12-2000	3.4		13.0	420	7.8
				05-18-2000	7.1		11.0	465	7.9
				06-29-2000	9.6		14.0	470	7.9
				07-27-2000	8.6		17.0	465	7.6
				09-01-2000	9.1		11.5	440	7.8
				09-29-2000	8.1		14.5	430	8.0
(D-2-5)13dba	403846111192601	Indian Hollow near Kamas, Utah	NA	10-10-1997	.23		12.0	340	7.8
				04-17-1998	5.2		7.0	170	—
				05-14-1998	3.8		—	—	—
				06-15-1998	1.3		14.5	230	8.2
				07-15-1998	.39		21.0	250	8.5
				08-13-1998	.38		15.5	280	8.4
				09-15-1997	.09		11.0	305	7.9

**Table 5.** Discharge, temperature, specific conductance, and pH of water from selected springs and streams in Kamas Valley and vicinity, Utah—Continued

Location	Site ID	Name	Formation	Date measured	Discharge		Temperature (°C)	Specific conductance, field (μS/cm)	pH, field (standard units)
					(ft <sup>3</sup> /s)	(gal/min)			
(D-2-5)13dba—Continued	Indian Hollow near Kamas, Utah	NA		09-24-1998	.10		10.0	—	—
				11-17-1998	.14		3.5	295	8.0
				12-16-1998	.06		.5	280	7.3
				01-20-1999	.08		1.0	280	7.9
				02-18-1999	.21		3.0	265	8.0
				03-17-1999	4.2		—	155	7.9
				03-29-1999	2.2		—	—	—
				04-13-1999	2.2		10.5	190	7.9
				05-06-1999	10		—	155	8.1
				06-21-1999	.67		16.0	250	8.4
				07-15-1999	.26		16.5	265	8.5
				08-11-1999	.10		16.0	285	8.4
				09-13-1999	.05		11.0	345	8.0
				10-05-1999	.06		6.5	300	7.4
				11-23-1999	.06		.0	335	8.4
				12-27-1999	.06		.0	300	7.0
				01-27-2000	.13		1.5	265	7.9
				02-18-2000	.23		4.5	250	7.7
				03-16-2000	.36		7.0	250	7.5
				04-11-2000	1.0		—	—	—
				04-12-2000	—		5.0	210	8.0
				04-25-2000	.84		—	—	—
				05-18-2000	.37		9.0	250	8.4
				06-28-2000	.03		22.0	245	9.0
				07-27-2000	.00		—	—	—
				10-01-2000	.00		—	—	—
(D-2-5)24cbb-S1	403755111200901	Heber Mitchell spring	TYNS	10-02-1997		6.4	10.5	690	7.3
				10-30-1997		6.6	10.0	680	7.3
				12-11-1997		6.4	9.5	730	—
				01-08-1998		6.7	9.0	720	—
				02-10-1998		6.8	9.0	730	—
				04-10-1998		7.7	9.0	740	—
				05-12-1998		8.4	9.0	690	7.4
				06-15-1998		7.5	9.5	730	7.2
				07-15-1998		8.2	10.0	730	7.4
				08-12-1998		6.9	10.0	770	7.2
				09-09-1998		5.8	10.5	760	7.2
				10-29-1998		4.6	11.0	575	—
				11-16-1998		7.2	10.0	720	7.4
				12-15-1998		8.7	9.5	700	7.6
				02-17-1999		6.2	8.5	740	7.5
				03-15-1999		14.3	8.5	760	7.3
				04-12-1999		10.4	8.5	750	7.4
				05-10-1999		8.4	—	770	7.4
				06-16-1999		7.7	9.5	790	7.5
				07-14-1999		7.1	10.0	780	7.4
				08-10-1999		6.0	10.0	770	7.4
				09-13-1999		5.2	10.5	760	7.4
				10-05-1999		5.3	10.5	800	7.4

**Table 5.** Discharge, temperature, specific conductance, and pH of water from selected springs and streams in Kamas Valley and vicinity, Utah—Continued

Location	Site ID	Name	Formation	Date measured	Discharge		Temperature (°C)	Specific conductance, field (μS/cm)	pH, field (standard units)
					(ft <sup>3</sup> /s)	(gal/min)			
(D-2-5)24cbb-S1—Continued		Heber Mitchell spring	TYNS	11-09-1999		5.0	10.0	760	7.3
				12-27-1999		5.0	9.5	740	7.0
				02-01-2000		5.0	9.0	740	7.4
				02-22-2000		5.5	9.0	750	7.3
				03-16-2000		6.2	9.0	760	7.5
				04-12-2000		7.1	9.0	690	7.3
				05-18-2000		6.8	10.0	770	7.3
				06-29-2000		6.0	10.0	820	7.1
				07-27-2000		5.0	11.0	780	7.2
				08-15-2000		3.5	11.0	740	7.4
				09-01-2000		4.4	11.0	790	7.1
				10-02-2000		4.3	11.0	770	7.4
(D-2-5)24cbd	403746111200401	City Creek near Kamas, Utah	NA	10-06-1997	.17		11.0	620	—
				04-17-1998	2.0		4.0	435	—
				05-14-1998	.71		—	—	—
				06-15-1998	.38		12.5	600	8.3
				07-15-1998	.22		25.0	600	8.7
				08-12-1998	.13		22.5	620	8.6
				09-09-1998	.07		17.5	620	8.4
				10-29-1998	.15		5.0	390	—
				11-16-1998	.11		4.0	—	—
				12-16-1998	.06		.0	580	7.9
				01-20-1999	.06		.5	580	8.2
				03-17-1999	2.4		4.0	360	8.1
				04-12-1999	.43		13.5	550	8.7
				05-06-1999	4.4		16.3	400	8.3
				06-16-1999	.28		22.5	700	8.8
				07-14-1999	.20		16.0	720	8.5
				08-10-1999	.01		19.0	690	8.5
				09-13-1999	.06		19.5	660	8.7
				10-05-1999	.06		14.5	670	8.7
				11-09-1999	.10		8.0	650	8.5
				12-28-1999	.11		.0	620	7.4
				01-27-2000	.11		.5	660	8.4
				02-22-2000	.17		1.5	1,120	8.1
				03-16-2000	.14		7.0	620	8.6
				04-12-2000	.18		11.5	740	8.7
				05-18-2000	.11		16.5	710	8.7
				06-28-2000	.03		—	590	8.9
				07-27-2000	.00		—	—	—
(D-2-6)3dcd-S1	404009111145601	Spring east of Marion, Utah	MRGN	09-11-1997		34.3	5.5	440	7.4
				09-30-1997		16.5	5.5	430	—
				11-05-1997		9.2	5.5	420	7.3
				06-11-1998		33.0	5.5	450	7.2
				07-14-1998		42.5	5.5	465	7.3
				08-11-1998		39.4	5.5	450	7.3
				09-14-1998		31.9	5.5	440	7.1
				10-15-1998		15.7	5.5	430	7.4

**Table 5.** Discharge, temperature, specific conductance, and pH of water from selected springs and streams in Kamas Valley and vicinity, Utah—Continued

Location	Site ID	Name	Formation	Date measured	Discharge		Temperature (°C)	Specific conductance, field (μS/cm)	pH, field (standard units)
					(ft <sup>3</sup> /s)	(gal/min)			
(D-2-6)3dcd-S1—Continued		Spring east of Marion, Utah	MRGN	11-17-1998		10.5	5.5	420	7.3
				12-14-1998		10.3	5.0	425	7.2
				02-25-1999		7.6	5.0	410	7.5
				04-12-1999		2.9	5.5	425	7.4
				05-10-1999		34.1	6.5	410	7.4
				06-16-1999		25.0	5.5	470	7.4
				07-14-1999		24.0	5.5	465	7.6
				08-10-1999		37.5	5.5	440	7.3
				09-13-1999		14.3	5.5	430	7.4
				10-05-1999		12.8	5.5	430	7.2
				11-09-1999		13.6	5.5	415	7.0
				02-22-2000		7.5	5.5	410	7.3
				03-17-2000		6.4	5.5	390	7.4
				04-13-2000		5.8	5.5	380	7.3
				05-22-2000		19.4	5.0	405	7.4
				06-25-2000		20.0	5.0	410	7.1
				06-29-2000		19.0	6.0	440	7.2
				07-25-2000		20.0	5.0	410	7.1
				09-01-2000		20.0	6.0	395	7.2
				09-29-2000		19.0	5.0	370	7.5
(D-2-6)23adc-S1	403757111133001	Overflow from Left Fork spring near Samak, Utah	MDSN	06-18-1998	5.3		6.5	310	7.6
				07-14-1998	2.4		6.5	—	—
				08-12-1998	.95		6.5	—	—
				09-14-1998	.45		6.5	400	7.4
				11-17-1998	.46		7.0	405	7.6
				12-16-1998	.83		6.5	410	7.4
				02-17-1999	.35		6.5	400	7.7
				03-15-1999	.11		6.5	420	7.7
				04-13-1999	.28		6.5	405	7.6
				05-11-1999	4.8		—	405	7.6
				06-16-1999	9.2		6.0	345	7.8
				07-14-1999	1.2		6.5	385	7.7
				08-10-1999	.67		6.5	390	7.1
				09-14-1999	.11		6.5	410	7.4
				10-06-1999	.15		6.5	380	7.1
				11-09-1999	.27		6.5	405	6.7
				02-01-2000	.14		6.5	395	7.7
				02-18-2000	.12		6.5	385	7.4
				03-17-2000	.00		5.5	385	8.0
				04-12-2000	.19		7.0	350	7.5
				05-18-2000	4.1		6.5	325	7.6
				06-28-2000	.05		8.0	370	7.5
				07-25-2000	.14		7.0	380	7.2
				09-01-2000	.17		7.0	390	7.5
				09-29-2000	.00		8.0	395	7.9

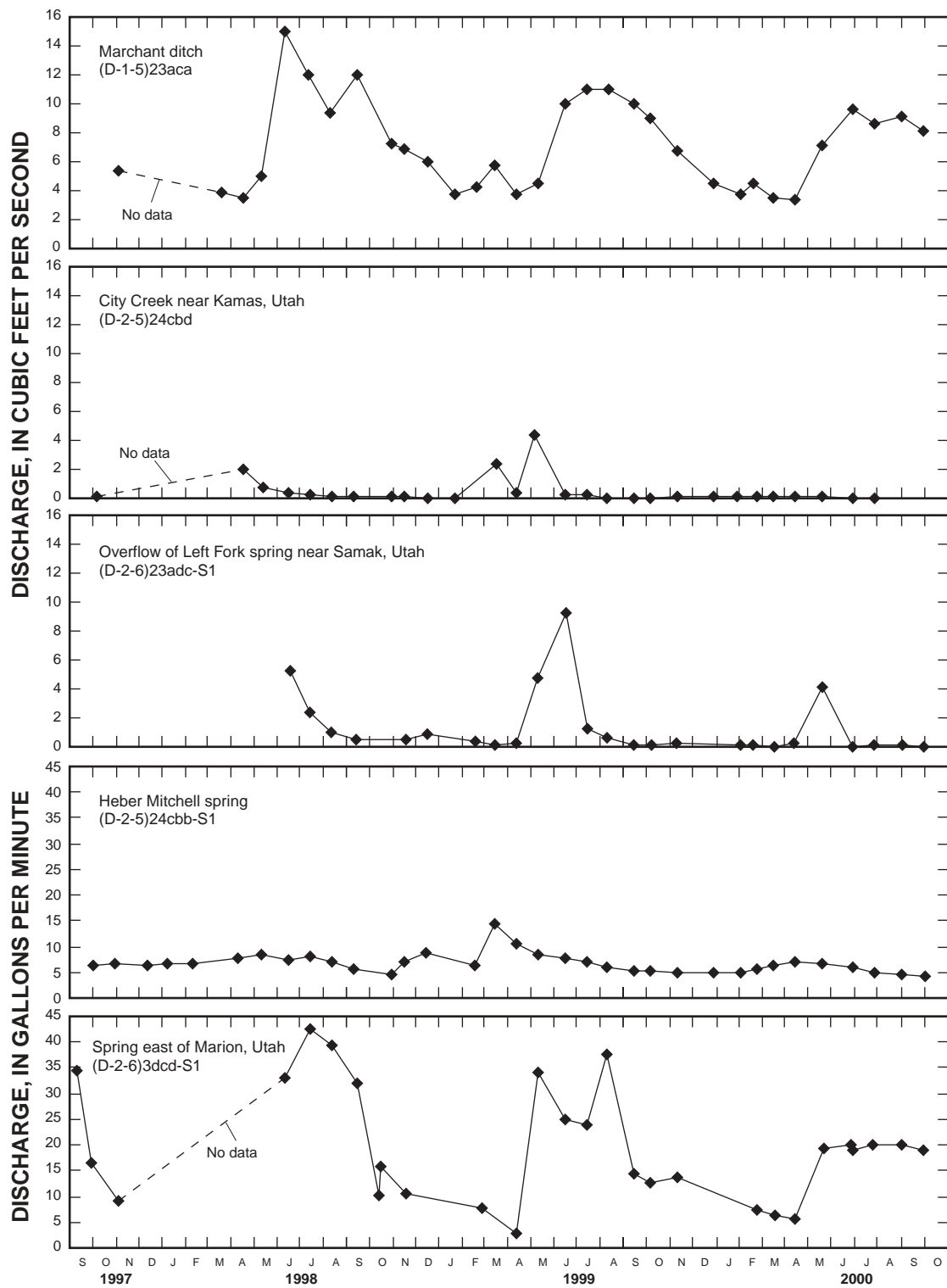


Figure 3. Discharge of selected streams and springs, Kamas Valley and vicinity, Utah.

**Table 6.** Discharge, temperature, and specific conductance of water from selected streams, springs, and canals during seepage studies in Kamas Valley and vicinity, Utah

[—, no data available]

Number of measurement site: Number indicates order in which seepage studies were conducted; refer to plate 1.

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Discharge: ft<sup>3</sup>/s, cubic feet per second.

Temperature: °C, degrees Celsius.

Specific conductance: µS/cm, microsiemens per centimeter at 25 degrees Celsius.

Number of measurement site	Location	Description of site	Discharge (ft <sup>3</sup> /s)	Temperature (°C)	Specific conductance, field (µS/cm)
<b>Weber River, November 2, 1998</b>					
37	(A-1-7)31dcb	Weber River	69.3	—	—
38	(A-1-7)31dcb	Inflow from unnamed spring	.72	6.5	395
39	(D-1-7)6bab	Inflow from Perdue Creek	.2	7.5	390
40	(D-1-6)1dad	Weber River	74.6	—	—
41	(D-1-6)12bdd	Weber River above South Fork Weber River	73.8	—	—
42	(D-1-6)12bdd	Inflow from South Fork Weber River	12.0	5.5	340
43	(D-1-6)15adb	Weber River at gaging station 10128500	85.4	—	—
44	(D-1-6)15caa	Outflow to New Field and North Bench Canal	1.97	—	—
45	(D-1-6)15cda	Weber River above Pinon Lane	85.7	—	—
46	(D-1-6)22bab	Outflow to Upper Marion Ditch	2.49	—	—
47	(D-1-6)22bab	Outflow to Lower Marion Ditch	.39	—	—
48	(D-1-6)15ccc	Inflow from Whites Creek	.51	7.5	510
49	<sup>1</sup> (D-1-6)21add	Outflow to Gibbons Ditch	<sup>2</sup> 0	—	—
50	<sup>1</sup> (D-1-6)21ada	Outflow to Boulderville Ditches	7.11	—	—
51	(D-1-6)21acd	Outflow to Peoa South Bench Canal	5.83	—	—
54	(D-1-6)21cca	Outflow to Weber-Provo Diversion Canal	34.7	—	—
55	(D-1-6)21ccb	Weber River above New Lane	30.8	—	—
<b>Weber River, November 3, 1998</b>					
37	(A-1-7)31dcb	Weber River	68.0	3.0	495
38	(A-1-7)31dcb	Inflow from unnamed spring	.65	—	—
39	(D-1-7)6bab	Inflow from Perdue Creek	.2	—	—
40	(D-1-6)1dad	Weber River	72.9	3.0	435
41	(D-1-6)12bdd	Weber River above South Fork Weber River	74.6	3.5	490
42	(D-1-6)12bdd	Inflow from South Fork Weber River	14.7	—	—
43	(D-1-6)15adb	Weber River at gaging station 10128500	96.4	3.5	500
44	(D-1-6)15caa	Outflow to New Field and North Bench Canal	1.91	—	—
45	(D-1-6)15cda	Weber River above Pinon Lane	86.6	4.0	490
46	(D-1-6)22bab	Outflow to Upper Marion Ditch	2.27	—	—
47	(D-1-6)22bab	Outflow to Lower Marion Ditch	.39	—	—
48	(D-1-6)15ccc	Inflow from Whites Creek	.51	—	—
49	<sup>1</sup> (D-1-6)21add	Outflow to Gibbons Ditch	<sup>2</sup> 0	—	—
50	<sup>1</sup> (D-1-6)21ada	Outflow to Boulderville Ditches	7.97	—	—
51	(D-1-6)21acd	Outflow to Peoa South Bench Canal	6.45	—	—
54	(D-1-6)21cca	Outflow to Weber-Provo Diversion Canal	32.6	—	—
55	(D-1-6)21ccb	Weber River above New Lane	29.0	—	—
<b>Weber River, November 4, 1998</b>					
37	(A-1-7)31dcb	Weber River	56.6	.5	300
38	(A-1-7)31dcb	Inflow from unnamed spring	.52	—	—
39	(D-1-7)6bab	Inflow from Perdue Creek	.2	—	—
40	(D-1-6)1dad	Weber River	60.2	.5	295
41	(D-1-6)12bdd	Weber River above South Fork Weber River	65.4	.5	280



**Table 6.** Discharge, temperature, and specific conductance of water from selected streams, springs, and canals during seepage studies in Kamas Valley and vicinity, Utah—Continued

Number of measurement site	Location	Description of site	Discharge (ft <sup>3</sup> /s)	Temperature (°C)	Specific conductance, field (μS/cm)
<b>Weber River, November 4, 1998—Continued</b>					
42	(D-1-6)12bdd	Inflow from South Fork Weber River	13.7	—	—
43	(D-1-6)15adb	Weber River at gaging station 10128500	87.9	1.5	305
44	(D-1-6)15caa	Outflow to New Field and North Bench Canal	1.54	—	—
45	(D-1-6)15cda	Weber River above Pinon Lane	75.1	—	—
46	(D-1-6)22bab	Outflow to Upper Marion Ditch	2.15	—	—
47	(D-1-6)22bab	Outflow to Lower Marion Ditch	.39	—	—
48	(D-1-6)15ccc	Inflow from Whites Creek	.38	—	—
49	<sup>1</sup> (D-1-6)21add	Outflow to Gibbons Ditch	<sup>2</sup> 0	—	—
50	<sup>1</sup> (D-1-6)21ada	Outflow to Boulderville Ditches	7.97	—	—
51	(D-1-6)21acd	Outflow to Peoa South Bench Canal	23.5	—	—
52	(D-1-6)21dba	Weber River below Peoa South Bench Canal	37.5	—	—
53	(D-1-6)21acd	Return flow from Peoa South Bench Canal	<sup>3</sup> 17.0	—	—
54	(D-1-6)21cca	Outflow to Weber-Provo Diversion Canal	30.3	—	—
55	(D-1-6)21ccb	Weber River above New Lane	26.7	—	—
<b>Beaver Creek, September 21, 1999</b>					
1	(D-2-7)19cad	Beaver Creek 2 miles above fish hatchery	6.06	8.5	75
2	(D-2-6)25dbb	Beaver Creek 1 mile above fish hatchery	6.61	9.5	83
3	(D-2-6)26abc	Beaver Creek above inflow from fish hatchery	5.62	13.0	475
4	(D-2-6)26abb	Beaver Creek below inflow from fish hatchery	9.87	—	—
5	(D-2-6)26abb	Beaver Creek below fish hatchery	10.7	12.0	255
6	(D-2-6)26baa	Inflow from Left-Hand Canyon below Samak Road	.70	14.0	400
7	(D-2-6)26baa	Inflow from Willow Springs	.49	15.0	450
8	(D-2-6)23cdd	Inflow from Left-Hand Canyon by trailers below Samak Road	1.30	13.5	395
9	(D-2-6)22dca	Beaver Creek at Lind Bridge	13.0	13.5	285
10	(D-2-6)21aaa	Beaver Creek at Grist Mill	10.9	14.5	300
11	(D-2-6)21aaa	Diversion at Grist Mill	5.06	—	—
12	(D-2-6)21aba	Thorn Creek diversion near elementary school	3.32	—	—
13	<sup>4</sup> (D-2-6)16cdd	Diversion near high school	.69	—	—
14	(D-2-6)16cdc	Diversion near bus shops	1.5	—	—
15	(D-2-6)17dda	Center Street diversion	.47	14.5	295
16	(D-2-6)17dac	Beaver Creek at Weber-Provo Diversion Canal	2.01	14.0	290
<b>Beaver Creek, September 22, 1999</b>					
1	(D-2-7)19cad	Beaver Creek 2 miles above fish hatchery	5.67	8.5	75
2	(D-2-6)25dbb	Beaver Creek 1 mile above fish hatchery	6.01	9.5	84
3	(D-2-6)26abc	Beaver Creek above inflow from fish hatchery	5.19	10.0	465
4	(D-2-6)26abb	Beaver Creek below inflow from fish hatchery	—	—	—
5	(D-2-6)26abb	Beaver Creek below fish hatchery	11.0	12.0	260
6	(D-2-6)26baa	Inflow from Left-Hand Canyon below Samak Road	.63	11.0	415
7	(D-2-6)26baa	Inflow from Willow Springs	.56	13.0	460
8	(D-2-6)23cdd	Inflow from Left-Hand Canyon by trailers below Samak Road	1.10	10.0	435
9	(D-2-6)22dca	Beaver Creek at Lind Bridge	13.1	13.0	290
10	(D-2-6)21aaa	Beaver Creek at Grist Mill	11.6	14.5	305
11	(D-2-6)21aaa	Diversion at Grist Mill	3.09	—	—
12	(D-2-6)21aba	Thorn Creek diversion near elementary school	3.51	—	—
13	<sup>4</sup> (D-2-6)16cdd	Diversion near high school	.10	—	—
14	(D-2-6)16cdc	Diversion near bus shops	1.17	—	—
15	(D-2-6)17dda	Center Street diversion	.86	—	—
16	(D-2-6)17dac	Beaver Creek at Weber-Provo Diversion Canal	2.58	14.0	295

**Table 6.** Discharge, temperature, and specific conductance of water from selected streams, springs, and canals during seepage studies in Kamas Valley and vicinity, Utah—Continued

Number of measurement site	Location	Description of site	Discharge (ft <sup>3</sup> /s)	Temperature (°C)	Specific conductance, field (μS/cm)
<b>Beaver Creek, September 23, 1999</b>					
1	(D-2-7)19cad	Beaver Creek 2 miles above fish hatchery	5.39	10.5	75
2	(D-2-6)25dbb	Beaver Creek 1 mile above fish hatchery	6.11	11.0	85
3	(D-2-6)26abc	Beaver Creek above inflow from fish hatchery	5.18	10.0	465
4	(D-2-6)26abb	Beaver Creek below inflow from fish hatchery	9.03	10.0	140
5	(D-2-6)26abb	Beaver Creek below fish hatchery	9.73	12.5	265
6	(D-2-6)26baa	Inflow from Left-Hand Canyon below Samak Road	.72	12.0	425
7	(D-2-6)26baa	Inflow from Willow Springs	.55	13.0	455
8	(D-2-6)23cdd	Inflow from Left-Hand Canyon by trailers below Samak Road	1.07	11.0	425
9	(D-2-6)22dca	Beaver Creek at Lind Bridge	12.8	13.0	290
10	(D-2-6)21aaa	Beaver Creek at Grist Mill	10.9	14.0	305
11	(D-2-6)21aaa	Diversion at Grist Mill	3.10	—	—
12	(D-2-6)21aba	Thorn Creek diversion near elementary school	3.53	—	—
13	<sup>4</sup> (D-2-6)16cdd	Diversion near high school	1.00	—	—
14	(D-2-6)16cdc	Diversion near bus shops	1.06	—	—
15	(D-2-6)17dda	Center Street diversion	.62	—	—
16	(D-2-6)17dac	Beaver Creek at Weber-Provo Diversion Canal	2.02	14.0	300
<b>Mid-valley inflows, October 13-15, 1999</b>					
17	(D-2-6)18cdc	City Creek	.47	—	—
18	(D-2-6)18dcd	Culvert	1.29	—	—
19	(D-2-6)18ddc	Culvert	.36	—	—
20	(D-2-6)20bab	North flowing ditch	.13	—	—
21	(D-2-6)20bab	East flowing ditch	.24	—	—
22	(D-2-6)17ddc	Ditch	.17	—	—
15	(D-2-6)17dda	Diversion from Beaver Creek at Center Street in Kamas	.70	—	—
16	(D-2-6)17dac	Beaver Creek at Weber-Provo Diversion Canal	3.88	—	—
23	(D-2-6)17aaa	Thorn Creek	.82	—	—
24	(D-2-6)8ddd	Culvert	<sup>5</sup> 0	—	—
25	(D-2-6)8dad	Culvert	.62	—	—
26	(D-2-6)8aad	Culvert	.12	—	—
27	(D-1-6)32add	Culvert	.34	—	—
28	(D-1-6)32aaa	Culvert	1.84	—	—
29	(D-1-6)30dcd	Culvert	.09	—	—
31	(D-1-6)30cdc	Culvert	.28	—	—
33	(D-1-6)31bcc	Culvert	.12	—	—
<b>Mid-valley outflows, October 15, 1999</b>					
30	(D-1-6)30cdd	Culvert	.10	—	—
32	(D-1-5)36aaa	Culvert	.32	—	—
34	(D-1-5)36daa	Culvert	.12	—	—
35	(D-1-5)36dad	Canal	9.08	—	—
36	(D-2-5)1aad	Beaver Creek at Rocky Point	<sup>6</sup> 35	—	—
<b>Weber-Provo Diversion Canal, October 9, 1999</b>					
56	(D-1-6)28ddb	Canal at first check dam	0	—	—
57	(D-2-6)4cdd	Inflow from sprinkler head	.19	—	—
58	(D-2-6)16bac	Canal at Rocky Slide near Kamas	.07	—	—
60	(D-2-6)17dac	Inflow from Beaver Creek	.04	9.5	325
61	(D-2-6)20bdd	Canal at second check dam	1.38	12.0	520
62	(D-2-6)30aab	Canal at third check dam	2.06	14.5	530
63	(D-2-6)30aab	Inflow from pipe downstream from third check dam	<sup>7</sup> 1.10	—	—
64	(D-2-6)30dca	Canal at Weber-Provo Diversion Canal near Woodland, Utah gaging station	<sup>6</sup> 4.10	—	—
65	(D-2-6)31aba	Canal at Provo Water Users Association Weir	<sup>6</sup> 2.23	—	—

**Table 6.** Discharge, temperature, and specific conductance of water from selected streams, springs, and canals during seepage studies in Kamas Valley and vicinity, Utah—Continued

Number of measurement site	Location	Description of site	Discharge (ft <sup>3</sup> /s)	Temperature (°C)	Specific conductance, field (μS/cm)
<b>Weber-Provo Diversion Canal, October 12, 1999</b>					
56	(D-1-6)28ddb	Canal at first check dam	0	—	—
57	(D-2-6)4cdd	Inflow from sprinkler head	.13	8.0	290
58	(D-2-6)16bac	Canal at Rocky Slide near Kamas	.02	15.5	210
59	(D-2-6)17dac	Canal upstream of Beaver Creek	0	—	—
60	(D-2-6)17dac	Inflow from Beaver Creek	.04	11.0	330
61	(D-2-6)20bdd	Canal at second check dam	1.19	13.0	530
62	(D-2-6)30aab	Canal at third check dam	1.94	14.0	540
63	(D-2-6)30aab	Inflow from pipe downstream from third check dam	.11	13.5	315
64	(D-2-6)30dca	Canal at Weber-Provo Diversion Canal near Woodland, Utah gaging station	<sup>6</sup> 3.57	16.5	455
65	(D-2-6)31aba	Canal at Provo Water Users Association Weir	<sup>6</sup> 2.06	13.0	470

<sup>1</sup> Measured at (D-1-6)21add.

<sup>2</sup> Estimated to be negligible.

<sup>3</sup> Calculated as difference between diversion of 23.5 ft<sup>3</sup>/s and measured non-return flow of 6.45 ft<sup>3</sup>/s.

<sup>4</sup> Measured at (D-2-6)21baa.

<sup>5</sup> No flowing water; only standing water.

<sup>6</sup> Estimated from gage reading.

<sup>7</sup> Estimated.

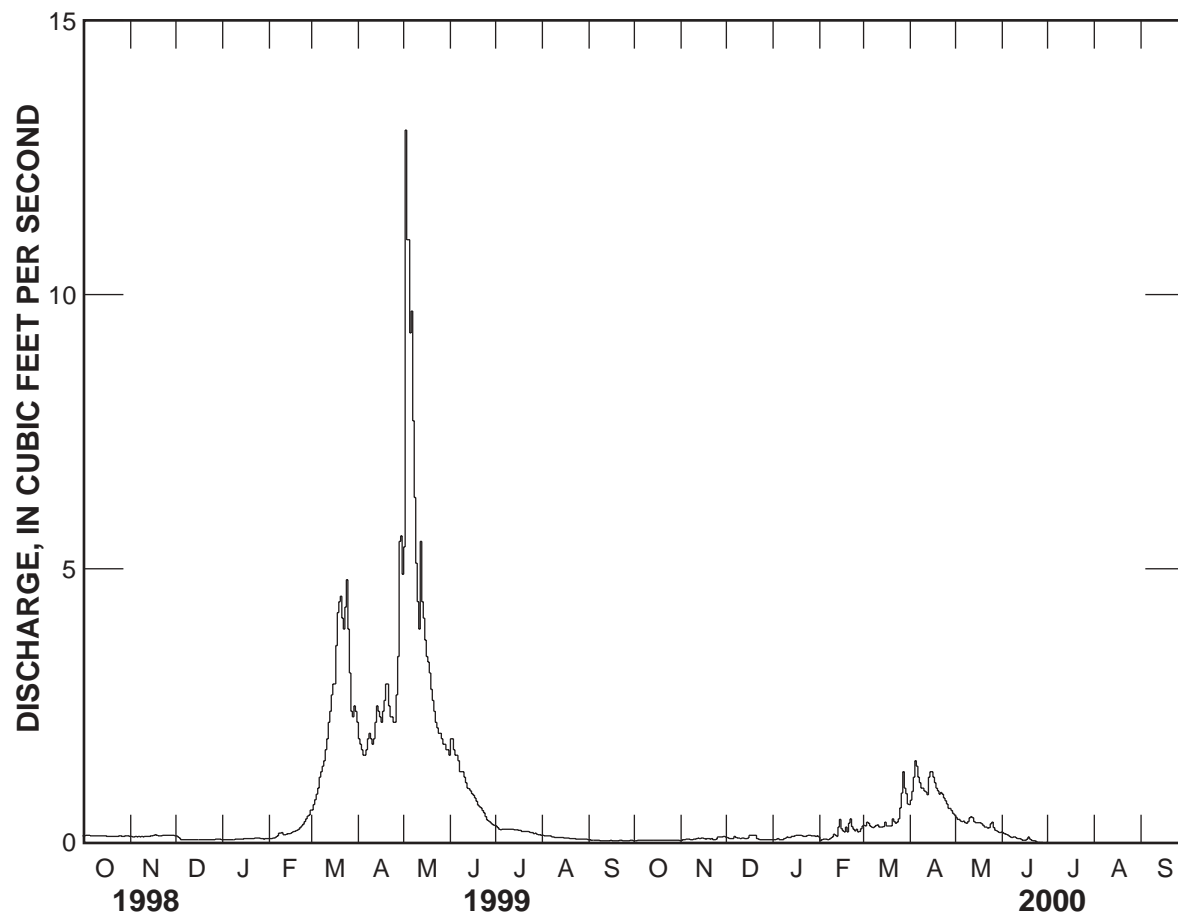
**Table 7.** Daily mean discharge of the creek in Indian Hollow near Kamas, Utah

[Gaging station operated by U.S. Geological Survey. Gaging station is located at (D-2-5)13dba. Discharge is in cubic feet per second (ft<sup>3</sup>/s); —, no data available; e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1999</b>												
1	0.13 e	0.12 e	0.13 e	0.06 e	0.08 e	0.60 e	2.2	4.9	1.6	0.32	0.14	0.06
2	.13 e	.12 e	.13 e	.06 e	.08 e	.60 e	1.9	5.4	1.9	.31	.14	.06
3	.14 e	.11 e	.11 e	.06 e	.08 e	.70 e	1.8	13	1.9	.28	.13	.05
4	.14 e	.11 e	.09 e	.06 e	.09 e	.79 e	1.7	11	1.7	.25	.13	.05
5	.14 e	.12 e	.06 e	.06 e	.09 e	.89 e	1.6	11	1.6	.24	.13	.05
6	.13 e	.11 e	.06 e	.06 e	.11 e	1.0 e	1.6	9.3	1.6	.25	.13	.05
7	.13 e	.12 e	.06 e	.06 e	.13 e	1.2 e	1.7	9.7	1.5	.25	.13	.05
8	.13 e	.11 e	.06 e	.06 e	.18 e	1.3 e	1.9	7.7	1.3	.25	.11	.05
9	.13 e	.12 e	.06 e	.06 e	.18 e	1.4 e	2.0	6.3	1.3	.25	.11	.04
10	.13 e	.11 e	.06 e	.07 e	.19 e	1.5 e	1.9	5.1	1.3	.25	.10	.04
11	.13 e	.12 e	.06 e	.07 e	.15 e	1.7 e	1.8	4.4	1.2	.25	.10	.04
12	.13 e	.12 e	.06 e	.07 e	.15 e	1.9 e	1.9	3.9	1.1	.25	.10	.04
13	.13 e	.12 e	.06 e	.07 e	.16 e	2.2 e	2.2	5.5	1.0	.25	.10	.04
14	.13 e	.12 e	.06 e	.07 e	.17 e	2.4 e	2.5	4.4	.99	.24	.10	.04
15	.13 e	.13 e	.06 e	.07 e	.17 e	2.7 e	2.4	4.1	.95	.24	.10	.04
16	.13 e	.13 e	.06 e	.08 e	.18 e	2.9 e	2.3	3.7	.90	.24	.09	.05
17	.12 e	.14 e	.06 e	.08 e	.20 e	2.9	2.2	3.4	.87	.23	.09	.04
18	.12 e	.15 e	.06 e	.08 e	.21 e	3.6	2.4	3.3	.82	.23	.09	.04
19	.12 e	.14 e	.06 e	.08 e	.22 e	4.2	2.6	3.1	.76	.21	.09	.04
20	.12 e	.13 e	.06 e	.08 e	.23 e	4.4	2.9	2.8	.69	.21	.08	.04
21	.12 e	.13 e	.06 e	.08 e	.25 e	4.5	2.9	2.6	.66	.21	.08	.04
22	.12 e	.13 e	.06 e	.08 e	.28 e	4.1	2.5	2.4	.64	.21	.08	.05
23	.12 e	.14 e	.06 e	.09 e	.31 e	3.9	2.3	2.2	.59	.21	.08	.05
24	.12 e	.14 e	.06 e	.09 e	.34 e	4.3	2.3	2.1	.55	.20	.07	.04
25	.13 e	.14 e	.06 e	.09 e	.39 e	4.8	2.2	2.0	.48	.19	.07	.04
26	.13 e	.14 e	.06 e	.09 e	.44 e	3.9	2.2	2.0	.42	.19	.07	.04
27	.12 e	.14 e	.06 e	.08 e	.49 e	3.1	2.7	1.9	.40	.17	.07	.04
28	.12 e	.14 e	.07 e	.08 e	.51 e	2.4	3.4	1.8	.38	.18	.07	.04
29	.13 e	.14 e	.07 e	.07 e	— e	2.3	5.5	1.8	.35	.16	.07	.05
30	.13 e	.14 e	.07 e	.08 e	— e	2.5	5.6	1.7	.33	.15	.07	.05
31	.13 e	—	.07 e	.08 e	—	2.4	—	1.7	—	.15	.07	—
<b>Monthly total (acre-feet)</b>	7.9	7.6	4.2	4.5	12	153	145	286	59	14	5.9	2.7
<b>Monthly mean (ft<sup>3</sup>/s)</b>	.13	.13	.068	.073	.22	2.49	2.44	4.65	.99	.23	.096	.045
<b>Yearly total (acre-feet)</b>	702											

**Table 7.** Daily mean discharge of the creek in Indian Hollow near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 2000</b>												
1	.04	.04 e	.11	.06 e	.11 e	.31	.70	.51	.20	.01	.00	.00
2	.04	.05	.10	.06 e	.04	.32	.78	.47	.19	.00	.00	.00
3	.04	.06	.09 e	.06 e	.06	.31	.94	.43	.17	.00	.00	.00
4	.05	.06	.08 e	.07 e	.07	.38	1.2	.43	.16	.00	.00	.00
5	.05	.07	.08 e	.08 e	.07	.36	1.5	.40	.15	.00	.00	.00
6	.05	.07	.08 e	.06 e	.07	.31	1.4	.39	.13	.00	.00	.00
7	.05	.07	.12	.06 e	.06	.29	1.2	.40	.11	.00	.00	.00
8	.05	.06	.10 e	.06 e	.07	.28	1.1	.37	.10	.00	.00	.00
9	.05	.06	.09 e	.08 e	.09	.30	1.0	.36	.11	.00	.00	.00
10	.05	.07	.09 e	.09 e	.11	.32	1.0	.39	.11	.00	.00	.00
11	.05	.07	.08 e	.11 e	.16	.33	.95	.46	.09	.00	.00	.00
12	.05	.08	.09 e	.10 e	.14	.29	.93	.48	.08	.00	.00	.00
13	.05	.09	.09 e	.10 e	.12	.29	.88	.46	.08	.00	.00	.00
14	.05	.08	.08 e	.12 e	.29	.29	1.2	.39	.07	.00	.00	.00
15	.05	.09	.08 e	.12 e	.43	.30	1.3	.37	.05	.00	.00	.00
16	.05	.09	.09 e	.13 e	.26	.38	1.3	.37	.05	.00	.00	.00
17	.05	.08	.14	.14 e	.22	.31	1.2	.37	.05	.00	.00	.00
18	.05	.07	.14	.14 e	.20	.31	1.1	.37	.07	.00	.00	.00
19	.05	.08	.14	.14 e	.29	.31	1.0	.35	.11	.00	.00	.00
20	.05	.08	.14	.14 e	.20	.31	.95	.32	.07	.00	.00	.00
21	.05	.07	.14	.13 e	.36	.44	.89	.29	.05	.00	.00	.00
22	.05	.08	.08 e	.12 e	.44	.39	.92	.29	.04	.00	.00	.00
23	.05	.06 e	.07 e	.12 e	.30	.36	.89	.27	.04	.00	.00	.00
24	.05	.06 e	.06 e	.13 e	.25	.38	.82	.28	.03	.00	.00	.00
25	.05	.07 e	.06 e	.14 e	.22	.44	.77	.35	.01	.00	.00	.00
26	.05	.11	.06 e	.14 e	.25	.64	.71	.38	.01	.00	.00	.00
27	.05	.11	.06 e	.13 e	.20	.91	.63	.28	.01	.00	.00	.00
28	.05	.11	.06 e	.13 e	.21	1.3	.63	.23	.01	.00	.00	.00
29	.05	.11	.06 e	.13 e	.26	1.0	.59	.22	.00	.00	.00	.00
30	.05	.12	.06 e	.12 e	—	.90	.54	.20	.00	.00	.00	.00
31	.05 e	—	.06 e	.13 e	—	.71	—	.19	—	.00	.00	—
<b>Monthly total (acre-feet)</b>	3.0	4.6	5.5	6.6	11	27	58	22	4.7	.02	.00	.00
<b>Monthly mean (ft<sup>3</sup>/s)</b>	.049	.077	.090	.11	.19	.44	.97	.36	.078	.00	.00	.00
<b>Yearly total (acre-feet)</b>	142											



**Figure 4.** Daily mean discharge of the creek in Indian Hollow near Kamas, Utah.

**Table 8.** Daily mean discharge of Beaver Creek at Lind Bridge near Kamas, Utah

[Gaging station operated and data provided by Utah Department of Natural Resources, Division of Water Rights. Gaging station is located at (D-2-6)22dca and is site number 9 on plate 1. Discharge is in cubic feet per second (ft<sup>3</sup>/s); —, no data available]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1997</b>												
1	—	—	—	12.4	12.0	14.7	—	110	246	42.6	20.8	15.1
2	—	—	—	13.0	12.0	15.8	—	96	229	44.6	18.3	15.7
3	—	—	—	14.8	11.9	16.8	—	90	220	42.5	16.5	16.4
4	—	11.2	—	14.0	11.8	17.7	65	95	231	40.4	25.6	16.1
5	—	12.1	—	13.1	11.9	18.8	61	109	212	37.5	34.4	15.5
6	—	10.2	—	12.8	11.7	20.2	57	126	185	33.2	21.2	16.0
7	—	10.6	—	12.7	11.9	22.1	57	145	173	29.5	19.4	14.9
8	—	10.4	—	12.9	11.7	23.4	58	161	174	28.1	18.0	13.9
9	—	10.6	—	12.7	11.6	23.6	60	177	174	27.1	17.8	13.5
10	—	10.6	—	12.7	11.6	25.6	58	200	235	25.8	20.4	13.9
11	—	10.5	—	12.9	11.6	29.2	56	225	165	25.4	22.2	14.5
12	—	10.7	—	13.0	11.7	32.5	54	241	139	29.3	22.0	14.8
13	—	11.0	—	—	12.1	35.2	53	247	126	26.6	22.3	13.9
14	—	11.1	—	—	12.0	37.1	55	235	114	24.5	19.9	13.4
15	—	10.1	—	—	12.0	34.3	58	255	105	23.7	18.5	13.6
16	—	10.4	—	—	12.0	30.3	70	266	95	21.7	17.8	15.9
17	—	9.4	—	—	11.8	37.0	92	278	93	22.2	17.9	13.6
18	—	11.4	11.9	—	11.9	43.9	117	308	93	22.9	16.9	16.2
19	—	12.0	12.0	—	11.7	47.1	128	282	91	23.4	14.8	25.2
20	—	12.4	11.8	—	11.9	48.7	133	264	83	23.1	14.6	20.8
21	—	12.0	11.7	—	11.2	44.3	140	253	73	21.9	18.2	18.9
22	—	21.1	11.9	—	10.4	45.3	121	226	66	22.2	17.8	16.8
23	—	16.0	11.8	—	10.4	47.2	112	—	70	25.9	15.4	15.0
24	—	12.7	11.7	—	10.2	49.0	106	—	62	26.1	14.8	14.4
25	—	12.7	11.7	—	11.1	51	96	—	57	22.6	16.2	14.9
26	—	—	12.0	—	—	53	97	—	52	21.6	15.3	20.6
27	—	—	12.0	—	—	79	112	122	48.8	20.3	13.8	18.6
28	—	—	12.0	—	—	49.6	99	115	45.6	22.3	14.8	16.2
29	—	—	11.8	—	—	34.5	143	117	43.0	22.6	15.7	14.6
30	—	—	12.0	—	—	—	116	138	40.5	21.9	14.2	12.8
31	—	—	12.2	11.9	—	—	—	203	—	21.8	15.2	—
<b>Monthly total (acre-feet)</b>	—	—	—	—	—	—	—	—	7,417	1,673	1,132	943
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	—	—	—	—	—	—	—	125	27.2	18.4	15.9

**Table 8.** Daily mean discharge of Beaver Creek at Lind Bridge near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Water year 1998												
1	12.5	13.3	—	10.1	11.0	11.2	26.6	144	204	108	30.4	16.1
2	13.0	12.4	—	10.7	11.0	11.2	24.0	155	214	101	29.7	17.4
3	14.6	12.2	—	10.7	11.1	11.3	23.2	174	211	94	27.8	15.7
4	13.5	12.2	—	10.8	11.4	11.2	23.2	185	192	86	23.9	15.5
5	13.5	12.0	—	10.9	11.3	11.1	22.1	155	141	78	23.2	15.2
6	13.3	11.9	—	10.7	10.7	11.3	22.5	140	117	67	22.4	15.2
7	13.9	11.8	—	10.7	11.1	11.3	21.6	137	108	59	21.9	15.7
8	14.7	11.8	—	10.8	10.9	11.3	21.0	138	101	55	21.0	15.3
9	14.1	12.1	—	10.8	10.8	11.3	20.5	143	104	51	22.2	14.5
10	14.0	11.8	—	10.8	11.0	11.3	23.6	147	102	57	21.6	15.6
11	15.8	12.0	—	11.0	10.9	11.4	30.8	130	101	56	22.4	15.6
12	15.6	11.9	—	11.2	10.7	11.8	33.8	120	109	62	20.3	15.2
13	15.0	11.9	—	11.3	10.7	12.5	29.5	116	126	58	19.2	16.0
14	15.2	11.1	—	10.9	10.8	13.1	28.7	104	125	55	18.4	15.0
15	15.6	10.2	—	11.2	11.0	14.1	27.5	102	126	52	18.2	14.2
16	15.7	11.5	—	11.6	11.1	15.1	26.1	96	128	49.3	18.2	14.0
17	15.6	11.3	—	11.6	10.8	15.0	24.1	94	123	46.4	17.6	13.9
18	15.3	11.2	—	11.6	10.8	14.0	24.9	100	147	43.2	18.0	13.8
19	15.0	11.2	—	11.6	10.5	13.4	26.2	109	180	41.4	18.4	14.1
20	15.0	11.5	—	11.6	11.0	14.1	31.5	126	194	41.7	17.4	14.4
21	15.2	11.3	—	11.6	11.0	15.2	43.1	183	190	40.3	17.7	15.5
22	15.0	10.8	9.9	11.5	11.2	16.9	61	150	198	40.7	16.9	16.5
23	15.4	11.2	9.9	11.3	11.0	21.5	91	124	194	—	16.4	15.9
24	16.4	11.0	9.9	11.3	11.1	33.2	113	114	173	—	16.2	15.2
25	15.2	11.1	9.9	11.3	10.7	43.0	97	116	155	47.8	17.5	15.2
26	15.2	11.0	9.9	11.2	11.2	44.9	91	136	147	47.9	20.0	15.3
27	15.6	11.0	9.9	11.3	10.8	45.4	97	136	134	42.3	21.5	14.6
28	13.8	11.5	10.0	11.0	11.3	38.6	102	158	124	45.9	17.0	14.4
29	12.9	10.8	10.0	11.0	—	31.9	109	182	121	37.8	16.1	14.4
30	12.7	—	10.0	11.0	—	28.0	127	197	114	34.3	15.8	14.7
31	13.4	—	10.0	11.0	—	27.1	—	198	—	32.5	15.4	—
Monthly total (acre-feet)	896	—	—	682	608	1,176	2,860	8,545	8,734	—	1,235	901
Monthly mean (ft <sup>3</sup> /s)	14.6	—	—	11.1	11.0	19.1	48.1	139	147	—	20.1	15.1



**Table 8.** Daily mean discharge of Beaver Creek at Lind Bridge near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water Year 1999</b>												
1	16.2	15.4	11.0	9.5	9.8	11.7	23.0	67	154	58	21.5	19.4
2	16.0	15.4	11.0	9.3	9.8	11.9	21.1	72	162	52	19.5	21.0
3	17.5	14.3	10.6	9.2	9.9	12.1	19.9	89	146	47.7	18.9	26.4
4	19.3	12.8	10.9	9.2	9.9	12.3	18.7	75	130	44.4	19.6	23.1
5	18.2	12.8	9.9	9.3	9.9	12.5	17.8	67	116	41.4	20.7	19.9
6	17.9	13.3	10.0	9.3	10.0	12.7	17.6	71	109	41.9	21.6	18.5
7	18.3	12.4	9.9	9.3	10.0	12.9	18.3	84	111	44.6	18.7	17.7
8	18.0	12.8	9.8	9.3	10.0	13.1	20.6	98	121	47.4	17.6	16.5
9	17.1	12.5	9.8	9.2	10.1	13.3	20.0	102	143	41.3	16.6	16.5
10	16.7	12.5	9.8	9.3	10.1	13.5	18.6	87	149	37.5	16.6	16.4
11	16.2	12.3	9.8	9.4	10.1	13.7	18.7	77	143	35.5	17.6	16.2
12	16.2	12.0	9.8	9.4	10.2	14.0	20.3	73	161	33.5	18.4	15.8
13	16.1	11.9	9.9	9.2	10.2	14.2	24.4	96	167	32.2	17.2	15.6
14	16.2	12.1	10.1	9.0	10.2	14.4	28.3	91	160	33.0	16.4	15.4
15	16.5	12.6	9.9	9.2	10.3	14.7	27.9	85	176	33.9	16.0	15.4
16	16.3	12.2	9.6	9.3	10.3	15.0	28.3	78	182	32.5	15.4	15.2
17	16.6	12.1	9.5	9.5	10.3	15.9	31.8	73	173	35.2	15.0	15.1
18	16.3	12.3	9.5	9.5	10.4	16.7	39.2	77	158	29.8	14.9	15.1
19	16.1	11.3	9.4	9.5	10.4	20.3	47.7	89	148	28.5	14.6	16.3
20	16.1	10.7	9.3	9.5	10.5	23.9	58	95	134	27.3	18.2	17.0
21	16.1	11.7	9.3	9.5	10.5	23.7	52	107	119	26.3	21.8	15.5
22	16.1	11.6	9.3	9.5	10.5	23.2	46.4	122	106	25.8	19.2	15.2
23	16.1	11.4	9.4	9.6	10.6	24.7	43.9	144	98	24.1	18.9	14.8
24	16.1	11.4	9.4	9.6	10.6	25.6	42.6	178	91	23.3	19.0	14.8
25	16.4	11.1	9.4	9.6	10.8	31.8	41.8	196	83	22.6	18.7	14.5
26	16.5	11.1	9.4	9.6	11.0	30.9	45.0	192	75	20.2	18.2	13.8
27	16.7	11.4	9.4	9.6	11.2	26.7	56	195	87	19.1	19.5	14.9
28	16.1	11.5	9.8	9.7	11.4	23.7	63	208	78	20.7	22.8	13.9
29	15.8	11.5	9.9	9.7	—	24.2	82	224	70	22.9	18.8	13.8
30	16.8	11.1	9.8	9.7	—	26.6	75	202	63	28.6	19.9	13.7
31	16.3	—	9.7	9.8	—	25.4	—	187	—	31.4	24.5	—
<b>Monthly total (acre-feet)</b>	1,026	729	604	579	573	1,141	2,118	7,137	7,564	2,067	1,143	986
<b>Monthly mean (ft<sup>3</sup>/s)</b>	16.7	12.2	9.8	9.4	10.3	18.6	35.6	116	127	33.6	18.6	16.6
<b>Yearly total (acre-feet)</b>	25,667											

**Table 8.** Daily mean discharge of Beaver Creek at Lind Bridge near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water Year 2000</b>												
1	13.6	12.7	11.4	10.8	9.7	9.2	20.9	73	66	18.9	9.7	11.2
2	13.6	12.1	10.6	10.8	9.7	9.3	23.4	82	72	17.1	9.6	10.9
3	13.5	10.7	11.1	10.7	9.6	9.8	27.9	94	65	15.9	9.4	9.5
4	13.5	10.0	10.6	10.7	9.6	11.0	35.9	108	59	15.7	9.5	9.0
5	13.5	10.2	10.8	10.7	9.5	11.9	45.8	117	54	15.2	9.4	8.5
6	13.7	9.8	11.6	10.6	9.4	11.3	44.9	106	49.2	14.8	8.8	9.2
7	13.4	9.8	11.6	10.6	9.4	11.7	41.7	99	45.0	14.3	8.8	9.5
8	13.4	9.8	11.1	10.6	9.5	11.7	44.5	87	42.2	13.7	9.1	9.7
9	13.3	9.7	10.8	10.5	9.6	11.8	47.8	79	43.4	13.8	9.3	11.0
10	13.3	9.7	11.0	10.6	9.8	11.4	46.0	74	46.8	13.8	9.6	10.0
11	13.2	9.8	11.0	10.6	10.1	11.8	45.4	74	43.2	13.7	9.1	9.6
12	13.1	9.8	11.1	10.5	9.9	12.2	49.4	70	40.0	12.7	8.6	9.3
13	12.9	9.3	11.2	10.4	9.7	12.1	52	63	38.4	12.3	8.3	8.9
14	13.1	9.5	11.2	10.3	9.8	12.6	63	59	37.4	12.1	8.4	7.8
15	12.9	9.9	11.2	10.3	10.0	12.8	55	57	34.8	12.2	8.8	7.6
16	12.8	10.4	11.2	10.9	9.8	12.4	49.8	60	32.1	12.2	9.6	7.5
17	12.8	10.7	11.6	11.0	9.9	13.3	46.9	57	30.7	12.2	8.8	7.9
18	13.2	10.7	11.3	11.7	9.7	13.1	49.3	57	31.4	11.0	8.9	8.2
19	13.0	10.5	11.3	14.4	9.4	13.0	45.5	53	36.9	10.2	12.2	8.6
20	12.9	10.8	11.3	13.4	9.7	13.4	42.0	58	31.9	10.0	9.9	8.7
21	13.0	10.7	11.5	12.3	10.2	13.1	41.2	69	28.2	10.7	9.1	9.2
22	12.9	10.8	11.2	11.3	10.3	13.9	44.3	86	26.7	10.7	9.0	12.3
23	12.8	9.6	11.1	10.6	9.7	15.3	47.8	102	24.6	10.7	9.5	13.2
24	12.8	10.0	11.1	10.8	9.4	16.0	47.3	107	23.6	10.8	10.3	12.3
25	12.6	10.2	11.1	10.9	8.8	16.7	45.4	120	22.5	11.2	9.5	12.2
26	12.6	11.1	11.0	10.8	8.8	19.4	49.5	136	22.3	11.5	10.3	11.6
27	12.5	11.5	11.0	10.1	8.9	23.0	57	104	22.6	10.9	12.1	11.1
28	12.6	11.3	10.9	9.2	8.9	25.3	69	97	20.2	10.5	9.2	10.8
29	13.8	11.2	10.9	9.2	9.0	22.7	78	96	17.6	10.5	8.4	11.3
30	12.5	11.4	10.9	9.1	—	21.8	72	85	17.5	10.0	9.4	11.7
31	12.8	—	10.9	9.3	—	20.3	—	73	—	9.5	10.5	—
<b>Monthly total (acre-feet)</b>	804	623	683	662	551	879	2,834	5,162	2,230	772	581	592
<b>Monthly mean (ft<sup>3</sup>/s)</b>	13.1	10.5	11.1	10.8	9.6	14.3	47.6	84	37.5	12.6	9.4	9.9
<b>Yearly total (acre-feet)</b>	16,373											

**Table 9.** Daily mean discharge of Beaver Creek at Grist Mill near Kamas, Utah

[Gaging station operated and data provided by Utah Department of Natural Resources, Division of Water Rights. Gaging station is located at (D-2-6)21aaa and is site number 10 on plate 1. Discharge is in cubic feet per second (ft<sup>3</sup>/s); —, no data available]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1997</b>												
1	—	10.6	12.0	12.9	12.6	12.7	44.4	113	208	45.3	22.2	14.5
2	—	11.9	9.0	13.6	12.4	13.0	40.7	94	198	47.3	19.8	15.4
3	—	15.0	10.0	16.0	12.2	12.0	42.7	85	192	45.1	19.0	16.2
4	—	13.0	9.9	14.8	12.0	11.8	46.8	90	198	43.4	27.5	15.9
5	—	12.6	14.5	13.3	11.9	11.9	43.0	109	183	40.9	37.6	14.9
6	—	10.6	14.1	13.4	11.8	12.4	39.6	126	163	37.5	25.3	15.7
7	—	10.5	10.6	13.6	12.1	12.4	39.9	143	153	35.6	23.4	14.5
8	—	10.9	12.6	13.9	11.9	12.3	40.9	154	152	34.7	21.7	14.1
9	—	11.2	16.2	13.5	12.2	11.9	43.6	167	153	33.5	21.3	14.6
10	—	11.6	15.4	13.7	12.2	12.3	42.2	182	193	32.0	23.4	17.7
11	—	11.2	11.3	13.9	12.1	13.5	40.7	200	148	31.1	24.4	18.0
12	—	11.3	10.5	13.1	11.8	15.0	39.6	216	130	34.1	23.3	18.2
13	—	12.4	13.5	12.9	12.1	17.3	39.6	222	120	31.6	23.6	17.2
14	—	13.9	11.9	12.6	12.4	16.3	42.1	215	107	29.4	21.1	17.7
15	—	12.5	12.6	12.3	12.1	17.6	45.1	227	98	28.7	19.7	18.2
16	—	10.1	14.5	12.3	12.4	18.6	56	235	90	26.3	18.7	22.0
17	—	9.4	11.9	12.5	13.0	21.0	74	247	88	28.0	18.5	18.3
18	—	11.6	17.1	12.5	12.3	22.2	96	275	88	28.4	17.1	20.7
19	—	13.1	12.4	12.6	12.7	28.4	108	256	87	28.4	15.1	31.9
20	—	12.0	15.8	13.4	12.4	37.7	113	242	79	27.4	16.1	26.7
21	—	12.9	16.7	12.6	12.3	46.2	121	231	72	25.9	19.0	24.8
22	—	22.2	12.3	12.7	12.2	51	107	209	68	26.1	18.0	21.5
23	—	16.1	11.4	12.4	12.2	54	99	193	71	29.0	15.4	19.1
24	—	13.1	11.9	12.5	13.3	55	95	192	65	29.2	16.0	16.8
25	13.4	13.0	12.7	13.3	12.8	45.7	85	165	59	24.7	16.2	15.2
26	11.5	10.7	13.1	13.3	13.8	47.5	88	138	55	23.4	14.9	20.6
27	12.1	13.7	12.0	12.1	13.5	48.1	103	112	53	22.2	13.4	19.7
28	14.9	22.6	11.4	13.0	12.6	45.2	131	106	49.5	23.5	14.4	16.8
29	12.9	16.9	11.5	12.0	—	42.2	144	107	47.5	24.1	15.3	15.5
30	13.2	10.7	11.9	12.3	—	43.6	119	126	43.9	23.3	13.5	14.5
31	11.3	—	12.1	13.0	—	47.4	—	174	—	23.1	14.8	—
<b>Monthly total (acre-feet)</b>	—	768	779	805	689	1,699	4,303	10,611	6,767	1,910	1,209	1,085
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	12.9	12.7	13.1	12.4	27.6	72	173	114	31.1	19.7	18.2

**Table 9.** Daily mean discharge of Beaver Creek at Grist Mill near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1998</b>												
1	14.3	11.8	12.5	10.8	11.4	12.4	28.5	137	168	97	31.1	16.2
2	15.2	11.1	12.3	11.2	11.4	12.4	26.7	144	175	90	30.2	17.6
3	16.6	11.2	11.7	11.2	11.7	12.5	25.6	158	178	82	28.7	15.2
4	14.8	11.1	11.4	11.2	12.0	12.5	25.7	167	164	75	26.3	17.3
5	14.1	10.9	11.8	11.3	11.9	12.3	24.7	144	128	69	25.8	18.3
6	13.9	11.0	11.9	11.0	11.7	12.6	25.0	132	105	61	25.0	18.0
7	14.6	11.1	12.2	11.0	11.9	12.3	24.5	129	92	58	24.5	18.3
8	16.5	11.2	12.3	10.9	11.9	12.0	24.0	129	85	54	23.8	17.1
9	15.8	11.6	12.2	11.0	11.8	12.0	23.7	131	87	49.6	24.8	15.8
10	15.8	11.6	12.0	10.9	11.8	12.2	26.0	132	84	55	24.0	18.1
11	17.9	12.1	11.5	11.1	11.9	12.4	32.2	117	83	54	25.0	18.2
12	17.6	12.3	11.3	11.2	11.9	12.9	35.0	104	91	60	22.8	17.8
13	16.4	12.2	11.1	11.5	11.9	13.7	31.5	101	109	57	21.8	19.1
14	17.0	11.6	11.1	11.4	12.0	14.5	30.7	88	108	53	21.1	17.2
15	17.2	11.1	11.1	11.5	12.2	15.6	29.9	86	110	50	20.6	15.9
16	17.0	11.8	11.0	11.5	12.3	16.7	28.9	79	112	47.4	20.6	15.2
17	16.7	12.2	10.9	11.9	12.1	17.2	27.3	77	108	44.9	19.8	14.5
18	16.1	12.3	10.9	11.9	12.1	15.4	27.6	81	128	42.8	20.1	13.9
19	15.5	12.6	10.9	12.1	11.9	14.6	28.8	90	158	41.5	20.3	13.5
20	15.5	13.1	10.7	11.9	12.3	15.3	32.7	105	171	40.4	19.3	13.7
21	15.6	13.0	10.7	11.8	12.4	16.4	42.9	150	169	40.0	19.3	15.1
22	12.2	12.7	10.6	11.6	12.7	18.9	58	127	175	40.6	18.5	16.9
23	12.8	13.1	10.6	11.5	12.6	23.6	86	105	172	39.6	17.7	16.3
24	14.5	12.8	10.6	11.5	12.7	34.0	113	94	156	43.5	17.2	15.5
25	13.1	13.0	10.5	11.3	12.3	42.2	100	94	142	45.6	18.4	15.2
26	13.2	14.8	10.4	11.4	13.1	44.0	93	113	137	45.8	21.5	15.3
27	14.1	13.3	10.4	11.2	12.9	44.5	99	114	128	41.3	22.8	14.4
28	11.7	13.9	10.4	11.2	12.6	38.9	104	130	115	44.0	18.2	13.8
29	10.8	12.6	10.6	11.4	—	33.4	111	150	112	37.8	16.9	13.6
30	10.7	12.9	10.7	11.3	—	30.1	124	163	105	34.9	16.4	14.4
31	11.5	—	10.8	11.4	—	29.2	—	164	—	33.1	15.7	—
<b>Monthly total (acre-feet)</b>	910	725	688	698	673	1,243	2,952	7,410	7,655	3,229	1,345	955
<b>Monthly mean (ft<sup>3</sup>/s)</b>	14.8	12.2	11.2	11.3	12.1	20.2	49.6	121	129	53	21.9	16.0
<b>Yearly total (acre-feet)</b>	28,483											

**Table 9.** Daily mean discharge of Beaver Creek at Grist Mill near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1999</b>												
1	15.9	14.7	11.7	10.2	10.1	11.6	22.4	63	143	51	22.6	15.7
2	15.6	14.7	11.6	10.2	10.0	11.3	21.1	67	149	46.3	20.5	16.8
3	17.4	13.6	11.3	10.0	10.1	11.3	20.2	84	138	42.0	19.9	21.1
4	19.2	11.5	11.6	9.9	10.1	11.3	19.1	69	121	38.8	20.4	18.6
5	18.1	11.7	10.7	9.9	10.0	11.1	18.3	62	109	37.0	21.3	16.3
6	17.5	12.3	10.5	9.9	10.0	11.0	18.0	66	101	37.2	22.0	15.2
7	17.7	11.6	10.7	10.0	10.1	11.2	18.4	78	100	40.1	19.2	14.5
8	17.4	12.3	10.5	10.0	10.4	11.1	20.6	93	107	42.7	18.3	13.5
9	16.5	11.9	10.8	9.8	11.4	11.1	20.5	98	125	37.7	17.3	13.5
10	16.0	12.1	10.5	9.8	12.2	11.1	18.5	82	131	35.0	16.6	13.5
11	15.5	11.8	10.3	9.9	11.8	11.2	19.0	73	126	33.1	17.5	14.6
12	15.3	11.5	10.4	10.0	10.8	11.1	20.2	68	139	31.8	17.3	15.2
13	14.7	11.5	10.5	9.9	10.8	11.3	23.4	91	144	30.7	15.7	15.0
14	14.7	11.8	10.6	9.9	10.9	12.0	27.8	85	136	31.6	16.5	15.0
15	15.4	12.7	10.3	9.9	10.8	13.4	27.5	79	150	32.8	16.6	14.9
16	15.5	12.4	10.3	10.0	10.8	14.4	27.7	72	160	31.7	15.9	14.7
17	15.8	12.3	10.3	10.0	10.7	15.5	30.3	68	151	34.8	15.7	14.8
18	15.4	12.7	10.3	10.2	10.6	16.8	36.3	71	134	29.2	15.9	15.0
19	15.1	11.4	10.3	10.3	10.4	19.7	43.8	82	127	26.7	16.5	15.9
20	14.8	11.2	10.3	10.4	10.2	22.7	53	88	116	25.6	19.8	16.9
21	14.5	12.0	10.3	10.4	10.4	23.0	49.8	100	103	24.9	23.8	15.2
22	14.5	12.0	9.7	10.3	10.4	22.4	43.8	115	92	25.0	20.3	14.1
23	14.6	11.7	9.9	10.3	10.2	23.6	41.4	134	82	24.2	17.1	12.4
24	14.6	11.9	9.4	10.4	10.3	24.3	40.4	164	76	23.6	15.7	12.4
25	14.9	11.6	9.3	10.2	10.8	29.4	39.8	187	69	22.9	15.3	12.4
26	15.2	11.8	9.3	10.4	10.9	30.1	43.1	181	63	21.3	15.9	12.1
27	15.3	11.9	9.7	10.2	10.6	25.7	54	186	72	21.7	18.0	12.7
28	14.8	12.1	10.1	10.2	10.8	22.8	61	201	65	23.2	17.3	12.2
29	14.6	12.1	10.2	10.1	—	23.0	77	215	60	24.6	15.1	12.2
30	16.0	11.7	10.1	10.1	—	25.4	71	196	55	28.7	16.0	12.2
31	15.6	—	10.3	10.1	—	24.7	—	181	—	32.0	19.8	—
<b>Monthly total (acre-feet)</b>	968	723	638	621	588	1,060	2,038	6,744	6,630	1,960	1,110	869
<b>Monthly mean (ft<sup>3</sup>/s)</b>	15.7	12.2	10.4	10.1	10.6	17.2	34.2	110	111	31.9	18.1	14.6
<b>Yearly total (acre-feet)</b>	23,949											

**Table 9.** Daily mean discharge of Beaver Creek at Grist Mill near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 2000</b>												
1	12.0	12.7	10.6	9.3	8.1	5.3	14.3	43.6	80	23.8	13.5	12.6
2	12.0	12.1	10.0	9.3	7.8	5.2	15.4	52	88	21.5	14.0	12.1
3	12.0	11.1	10.4	9.1	7.9	5.3	17.7	64	81	20.0	14.3	10.8
4	12.0	10.4	10.1	9.2	7.7	5.8	22.5	78	76	21.0	14.5	10.2
5	12.0	10.7	10.1	9.0	7.6	6.2	28.5	89	69	22.6	16.0	9.7
6	12.2	10.3	10.4	8.8	7.5	5.5	27.7	80	63	21.0	14.1	9.8
7	12.2	10.4	10.5	8.9	7.3	5.5	24.4	76	56	15.3	14.3	9.7
8	12.3	10.3	10.3	9.0	7.6	5.3	25.9	65	52	16.0	11.4	9.9
9	12.1	10.3	10.0	9.1	7.9	5.1	27.7	57	40.2	21.1	12.0	11.1
10	12.0	10.1	10.2	9.3	8.0	4.7	25.8	54	51	17.6	13.7	10.0
11	11.8	10.1	10.0	9.4	8.2	4.8	24.7	55	52	18.6	13.4	9.5
12	11.8	10.3	10.1	9.2	8.1	4.9	27.1	52	43.5	17.8	13.2	9.3
13	11.8	9.6	10.2	9.5	7.7	4.7	28.5	47.2	44.9	17.8	13.9	9.2
14	11.9	9.8	10.1	9.4	8.1	4.8	35.5	44.7	43.1	18.6	12.7	8.6
15	11.5	10.2	10.0	9.3	7.6	4.5	30.1	44.4	39.2	14.8	10.2	17.9
16	11.1	10.8	10.2	9.6	8.3	4.5	24.9	47.0	35.5	16.3	13.8	17.0
17	11.1	11.1	10.2	9.6	7.7	4.1	22.8	44.4	26.8	19.7	11.6	15.8
18	11.6	11.1	10.1	10.8	7.0	4.2	26.5	44.5	28.4	16.2	12.4	16.9
19	11.7	11.1	10.1	12.5	7.1	4.7	23.4	42.0	33.3	14.4	15.5	19.1
20	11.7	11.0	10.1	12.1	8.1	4.4	20.4	46.8	28.2	17.2	14.2	19.9
21	11.7	10.7	10.2	10.9	8.0	4.1	19.4	59	25.9	16.0	12.5	14.4
22	12.0	10.7	9.9	9.5	7.9	4.5	20.5	75	33.4	17.1	11.9	12.6
23	12.5	9.7	9.7	9.2	7.9	4.8	24.0	90	39.4	16.0	8.7	13.7
24	12.4	9.9	9.6	9.4	7.3	5.1	23.2	99	28.2	15.4	13.9	13.9
25	12.4	10.2	9.5	9.7	6.2	5.4	21.2	111	27.2	14.3	11.7	21.9
26	12.4	10.8	9.4	9.2	7.0	6.5	23.6	127	29.2	18.6	14.3	21.2
27	12.5	10.8	9.4	8.3	6.4	9.1	29.0	100	30.2	12.6	16.6	20.6
28	12.7	10.6	9.4	8.0	5.4	8.0	38.3	93	29.9	13.3	9.2	21.6
29	14.0	10.5	9.4	7.9	5.4	8.3	45.8	91	25.6	10.1	8.9	20.5
30	12.7	10.5	9.3	7.8	—	5.9	41.6	104	19.5	15.0	11.2	15.7
31	12.8	—	9.3	8.0	—	10.7	—	85	—	13.9	12.1	—
<b>Monthly total (acre-feet)</b>	744	630	612	576	430	341	1,548	4,285	2,616	1,058	793	843
<b>Monthly mean (ft<sup>3</sup>/s)</b>	12.1	10.6	10.0	9.4	7.5	5.6	26.0	70	44.0	17.2	12.9	14.2
<b>Yearly total (acre-feet)</b>	14,476											

**Table 10.** Daily mean discharge of Beaver Creek at Weber-Provo Diversion Canal in Kamas, Utah

[Gaging station operated and data provided by Utah Department of Natural Resources, Division of Water Rights. Gaging station is located at (D-2-6)17dac and is site number 16 on plate 1. Discharge is in cubic feet per second (ft<sup>3</sup>/s); —, no data available]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1997</b>												
1	—	3.9	4.2	4.1	3.3	4.7	23.2	59	94	10.7	4.9	—
2	—	3.9	4.0	4.5	3.4	3.3	20.2	51	88	9.8	5.0	—
3	—	4.1	3.8	5.6	3.1	1.73	19.9	49.0	89	9.6	4.8	—
4	—	4.2	3.8	5.1	3.0	5.0	20.2	52	85	9.1	8.2	—
5	—	5.3	3.8	4.8	2.8	4.3	18.2	61	74	8.3	11.5	—
6	—	4.3	3.7	4.8	2.7	1.98	16.6	66	68	7.2	6.2	—
7	—	4.5	2.8	4.8	2.5	2.1	16.6	71	61	6.7	4.9	4.2
8	—	4.5	4.1	4.1	2.4	2.2	17.0	78	60	6.5	4.5	4.2
9	—	4.6	4.2	2.6	2.3	2.2	18.5	84	60	6.7	4.4	4.0
10	—	4.7	5.0	4.2	2.2	2.4	18.1	89	79	6.4	5.6	3.7
11	—	4.8	4.8	4.4	1.23	2.7	17.8	96	68	6.3	5.7	3.5
12	—	4.9	4.4	6.5	.67	3.2	17.4	104	61	7.6	5.6	3.4
13	—	5.0	4.2	6.6	.74	3.9	16.8	108	56	7.3	6.0	3.0
14	—	5.2	3.7	6.6	.69	3.6	19.7	109	52	7.7	6.1	3.0
15	—	4.8	3.8	6.6	1.38	4.2	22.1	103	49.0	6.5	5.7	3.2
16	—	4.9	3.8	6.6	1.68	4.8	28.0	102	47.0	5.5	4.5	3.5
17	—	4.3	3.8	6.6	1.70	5.8	37.7	108	46.0	5.9	4.0	3.1
18	—	4.6	3.8	6.6	1.67	6.5	47.4	118	45.0	6.0	3.9	3.4
19	—	4.1	3.8	6.6	1.51	8.8	53	115	41.2	6.4	3.3	5.0
20	—	4.2	4.0	6.5	1.49	12.9	53	111	31.2	7.8	3.2	4.1
21	—	4.1	4.0	6.4	4.5	17.3	67	103	26.5	6.2	4.2	3.7
22	—	7.8	4.2	6.4	5.7	21.2	54	97	23.6	5.4	4.0	3.4
23	—	6.2	4.1	6.4	5.4	24.1	63	96	25.1	6.3	4.0	3.2
24	—	4.8	4.1	6.4	5.2	25.5	57	101	23.1	6.3	4.6	3.0
25	—	4.6	4.1	6.4	5.4	20.6	54	74	17.7	5.3	4.3	3.1
26	—	3.9	4.2	—	5.5	21.8	56	62	15.6	4.8	4.0	4.3
27	—	4.3	4.2	—	4.7	24.2	61	51	14.8	4.6	—	4.6
28	4.8	5.3	3.8	3.8	4.5	21.4	67	48.0	14.2	5.3	—	4.1
29	4.5	4.9	3.8	3.6	—	19.9	81	48.0	13.7	5.6	—	3.8
30	3.8	4.3	3.9	3.5	—	20.9	60	57	12.1	5.0	—	3.6
31	4.0	—	4.0	3.4	—	24.4	—	70	—	5.0	—	—
<b>Monthly total (acre-feet)</b>	—	280	246	—	162	650	2,224	5,041	2,858	412	—	—
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	4.7	4.0	—	2.9	10.6	37.4	82	48.0	6.7	—	—

**Table 10.** Daily mean discharge of Beaver Creek at Weber-Provo Diversion Canal in Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1998</b>												
1	3.5	3.1	3.9	4.7	5.4	5.1	14.7	267	84	36.7	10.1	3.6
2	3.7	2.7	3.8	5.6	5.4	5.2	13.4	192	92	33.4	9.9	3.9
3	4.0	2.7	3.5	5.6	5.5	5.4	12.6	212	83	28.9	9.6	3.6
4	3.7	2.7	3.5	5.5	5.5	5.4	12.6	237	76	25.4	8.7	3.2
5	3.5	2.7	2.8	5.6	5.6	5.1	11.9	177	53	22.8	8.4	3.3
6	3.2	2.7	3.3	5.5	5.3	5.5	12.1	144	40.4	19.2	8.4	3.2
7	3.7	2.8	3.8	5.5	5.6	5.3	11.3	140	36.5	17.1	8.3	3.5
8	4.0	2.7	3.9	4.5	5.5	5.3	10.5	129	35.1	16.4	7.7	3.4
9	4.1	2.7	3.9	3.5	5.3	5.0	10.1	124	36.0	14.3	8.3	2.9
10	4.4	2.8	3.8	4.4	5.2	5.4	10.7	117	31.1	16.1	8.1	2.7
11	5.4	2.9	3.8	5.3	5.3	5.5	13.2	92	26.9	15.7	8.1	2.6
12	5.1	2.9	3.8	5.4	5.3	5.7	14.3	77	30.0	18.2	6.7	2.5
13	4.6	2.9	3.9	5.5	5.3	6.1	12.3	71	36.2	17.1	6.2	2.6
14	5.0	2.8	2.8	5.5	5.3	6.4	14.9	55	35.8	15.6	6.1	2.5
15	5.5	2.3	2.2	5.5	5.3	6.7	21.2	51	37.6	13.6	5.8	2.4
16	5.3	1.98	3.1	5.5	5.4	7.2	10.4	41.6	41.0	13.2	4.9	2.2
17	5.1	3.0	4.0	5.7	5.3	7.4	9.5	39.0	52	12.3	4.1	2.2
18	5.0	3.0	5.1	5.7	5.2	6.7	9.5	40.3	66	11.8	5.3	2.1
19	4.9	3.1	5.1	5.8	4.9	6.3	9.9	46.3	83	11.5	5.1	2.2
20	4.7	3.3	5.2	5.7	5.2	6.7	11.6	55	89	11.4	5.3	2.4
21	5.0	3.3	5.2	5.5	5.2	7.2	16.6	122	86	11.1	5.2	2.6
22	3.8	3.1	5.2	10.5	5.4	8.2	—	94	89	11.1	5.0	3.0
23	3.2	3.6	5.2	8.7	5.2	10.4	—	56	87	11.6	4.9	2.9
24	3.4	3.4	5.2	5.5	5.3	16.5	—	42.8	77	14.1	4.8	2.9
25	3.1	3.4	5.2	5.5	5.1	25.4	—	40.6	68	15.1	4.5	3.0
26	3.1	3.3	5.2	5.5	5.3	28.2	—	51	67	15.1	5.5	3.3
27	3.3	3.3	5.2	5.5	6.2	28.3	—	54	60	14.2	5.4	3.2
28	2.9	3.9	5.2	5.5	5.2	23.6	—	60	52	16.2	4.2	3.2
29	2.8	3.7	4.3	5.5	—	19.1	—	74	51	13.6	3.9	2.8
30	2.7	3.9	2.1	5.5	—	16.1	—	93	41.4	11.7	3.7	2.7
31	3.0	—	3.3	5.5	—	15.2	—	90	—	11.0	3.6	—
<b>Monthly total (acre-feet)</b>	247	180	252	346	297	626	—	6,116	3,458	1,022	388	171
<b>Monthly mean (ft<sup>3</sup>/s)</b>	4.0	3.0	4.1	5.6	5.4	10.2	—	99	58	16.6	6.3	2.9



**Table 10.** Daily mean discharge of Beaver Creek at Weber-Provo Diversion Canal in Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1999</b>												
1	2.9	4.1	4.2	4.5	2.8	4.5	9.7	28.0	64	14.6	4.9	2.4
2	3.0	4.2	4.2	4.3	2.9	4.5	8.9	29.4	65	12.5	4.4	2.7
3	3.4	4.2	4.1	6.0	2.5	4.4	8.6	30.3	63	11.2	4.3	4.7
4	3.7	3.6	4.4	6.3	3.2	4.5	8.0	25.3	51	10.2	4.4	3.6
5	3.8	3.6	3.9	3.8	3.7	4.5	7.6	23.3	44.6	9.3	4.5	3.1
6	4.3	4.0	4.1	4.0	3.7	4.1	7.5	24.4	41.6	9.1	5.2	2.9
7	4.4	3.7	4.1	4.0	3.7	4.5	7.7	29.6	41.4	9.0	4.4	2.7
8	4.4	4.2	3.4	4.0	3.7	4.4	8.8	36.7	45.3	9.0	4.0	2.5
9	4.2	4.1	1.46	4.0	4.2	4.5	9.0	39.0	56	8.4	3.6	2.4
10	4.2	4.1	1.51	4.0	5.1	4.5	7.8	32.6	58	8.1	3.5	2.4
11	4.2	4.1	1.50	3.9	4.9	4.5	8.1	29.8	56	8.5	3.6	2.3
12	4.2	4.0	1.18	4.0	4.9	4.4	8.8	29.2	66	7.8	3.5	2.2
13	4.2	3.9	1.62	3.9	4.0	4.4	10.3	36.5	70	6.8	3.2	2.2
14	4.1	4.0	3.6	3.9	3.8	4.9	12.5	33.3	65	6.7	2.7	2.2
15	4.1	4.2	3.5	3.9	3.8	5.5	12.2	31.5	72	6.8	2.3	2.2
16	4.0	4.2	3.5	3.9	3.8	5.9	12.3	29.8	78	6.6	2.3	2.4
17	4.1	4.3	3.5	3.9	3.9	6.4	13.4	28.6	71	7.0	2.0	2.3
18	4.1	4.9	3.5	4.0	3.8	6.7	16.3	31.1	60	6.2	2.1	2.1
19	4.0	4.5	3.5	4.0	3.8	9.1	19.2	36.9	56	5.7	1.99	2.2
20	4.0	4.2	3.5	4.0	3.8	12.6	20.6	40.4	50	5.6	2.4	2.2
21	4.0	4.6	3.5	4.0	3.7	9.9	21.0	51	43.7	5.4	2.9	1.96
22	4.2	4.7	3.5	3.9	3.8	9.5	18.3	61	36.3	5.0	2.3	2.0
23	4.1	4.4	3.5	3.9	3.7	9.8	15.1	73	29.7	4.9	2.3	2.0
24	3.8	4.3	3.5	4.0	3.7	10.1	15.2	87	26.5	4.9	2.3	1.94
25	4.0	4.1	3.4	4.0	3.9	12.7	16.1	86	25.6	4.8	2.3	1.93
26	4.1	4.2	3.7	4.0	4.0	13.6	16.6	84	22.6	4.8	2.3	1.92
27	4.1	4.4	4.1	3.9	3.9	11.5	19.7	86	23.6	4.5	2.4	2.2
28	4.0	4.5	4.4	3.8	4.0	9.9	22.4	91	21.5	4.6	2.8	2.2
29	4.0	4.5	4.4	3.8	—	9.8	35.0	98	19.7	5.0	2.4	2.2
30	4.3	4.4	4.5	3.8	—	10.9	31.9	85	17.0	5.7	2.3	2.2
31	4.3	—	4.5	2.8	—	10.9	—	81	—	6.6	3.0	—
<b>Monthly total (acre-feet)</b>	246	250	214	249	212	451	850	2,994	2,853	447	191	143
<b>Monthly mean (ft<sup>3</sup>/s)</b>	4.0	4.2	3.5	4.1	3.8	7.3	14.3	48.7	47.9	7.3	3.1	2.4
<b>Yearly total (acre-feet)</b>	9,100											

**Table 10.** Daily mean discharge of Beaver Creek at Weber-Provo Diversion Canal in Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 2000</b>												
1	2.2	3.5	3.2	3.2	3.0	3.2	5.9	20.6	18.8	4.6	2.3	2.4
2	2.3	3.4	3.0	3.2	2.3	3.4	6.4	23.3	20.7	4.0	2.2	2.2
3	2.9	3.1	3.1	3.0	2.8	3.4	7.8	30.5	18.9	3.9	2.3	2.1
4	3.1	2.9	3.1	3.1	3.0	3.7	13.5	49.6	15.9	3.9	2.1	2.0
5	3.1	2.9	3.0	3.2	3.0	4.1	23.3	37.3	14.8	3.9	1.89	2.1
6	3.2	2.8	2.3	6.4	3.0	3.8	23.5	35.3	13.4	3.8	1.97	2.1
7	3.2	2.7	2.4	8.1	3.0	4.0	21.3	32.5	11.7	3.8	2.1	2.1
8	3.2	2.8	2.6	8.2	3.0	3.9	21.3	27.7	10.7	3.7	2.1	2.2
9	3.2	2.7	2.4	8.1	3.0	3.9	19.3	23.8	11.0	3.7	2.2	2.4
10	3.2	2.7	1.92	3.9	3.1	3.8	18.9	21.5	12.4	3.7	2.3	2.2
11	3.1	2.6	2.0	3.1	3.3	3.8	18.2	21.6	11.2	3.8	2.2	2.1
12	3.2	2.6	2.4	3.2	3.2	4.0	20.9	20.3	10.0	3.2	2.1	2.0
13	3.4	2.5	3.0	3.1	3.1	3.9	20.7	18.5	9.0	2.9	2.0	1.91
14	3.6	2.5	3.8	3.1	3.2	4.1	22.3	16.8	8.4	2.6	1.90	1.72
15	3.7	2.5	4.1	3.1	3.5	4.1	19.6	15.5	8.2	2.7	1.85	1.73
16	3.5	2.7	3.1	3.2	3.4	4.0	15.8	16.6	7.8	2.6	1.93	1.69
17	3.5	3.2	3.0	3.3	3.5	4.2	13.3	15.4	6.8	2.6	1.97	1.68
18	3.7	3.5	3.0	3.7	3.4	4.0	15.1	15.3	6.5	2.5	1.89	1.66
19	3.7	3.4	3.0	4.3	3.4	4.2	14.0	13.9	7.5	2.4	2.5	1.77
20	3.7	3.6	3.1	4.3	3.3	4.3	12.4	14.6	6.9	2.4	2.3	1.80
21	3.8	3.4	3.1	4.0	3.5	4.9	11.4	18.6	6.2	2.1	2.2	1.93
22	3.6	3.4	3.1	3.6	3.9	4.3	11.7	24.6	6.1	2.1	2.1	2.2
23	3.7	5.2	6.3	3.4	3.4	4.9	13.6	31.2	5.7	2.0	2.1	2.5
24	3.7	6.1	8.3	3.5	3.5	5.1	13.6	34.1	5.4	2.1	2.1	2.2
25	3.6	4.7	7.9	3.5	3.2	5.2	12.9	41.6	5.3	2.2	2.1	2.2
26	3.6	3.0	7.7	3.6	4.2	5.8	13.5	45.6	5.4	2.2	2.1	2.1
27	3.6	3.2	7.4	3.4	3.2	6.8	14.5	34.7	5.4	2.2	2.1	1.86
28	3.6	3.2	5.5	3.3	3.3	7.8	21.5	33.8	4.9	2.4	2.0	1.54
29	4.2	3.1	3.0	3.3	3.3	6.7	23.4	29.7	4.6	2.2	1.94	1.64
30	3.6	3.1	3.2	3.2	—	6.5	21.7	24.9	4.9	1.96	2.0	1.77
31	3.5	—	3.0	3.1	—	5.7	—	22.0	—	2.0	2.1	—
<b>Monthly total (acre-feet)</b>	209	192	230	243	186	281	975	1,609	564	179	129	119
<b>Monthly mean (ft<sup>3</sup>/s)</b>	3.4	3.2	3.7	4.0	3.2	4.6	16.4	26.2	9.5	2.9	2.1	2.0
<b>Yearly total (acre-feet)</b>	4,916											

**Table 11.** Daily mean discharge of Beaver Creek diversion to Weber-Provo Diversion Canal in Kamas, Utah

[Gaging station operated and data provided by Utah Department of Natural Resources, Division of Water Rights. Gaging station is located at (D-2-6)17dac and is site number 60 on plate 1. Discharge is in cubic feet per second (ft<sup>3</sup>/s); —, no data available]

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1997</b>												
1	—	—	—	—	—	—	—	47.9	55	—	—	—
2	—	—	—	—	—	—	—	45.3	53	—	—	—
3	—	—	—	—	—	—	—	42.6	52	—	—	—
4	—	—	—	—	—	—	8.7	44.7	51	—	—	—
5	—	—	—	—	—	—	8.8	49.5	46.3	—	—	—
6	—	—	—	—	—	—	8.5	52	42.1	—	—	—
7	—	—	—	—	—	—	10.4	56	38.1	—	—	—
8	—	—	—	—	—	—	11.4	58	36.6	—	—	—
9	—	—	—	—	—	—	7.6	62	36.5	—	—	—
10	—	—	—	—	—	—	3.9	66	41.5	—	—	—
11	—	—	—	—	—	—	3.9	72	35.5	—	—	—
12	—	—	—	—	—	—	3.9	77	32.5	—	—	—
13	—	—	—	—	—	—	3.7	78	30.5	—	—	—
14	—	—	—	—	—	—	4.9	79	27.0	—	—	—
15	—	—	—	—	—	—	13.5	74	23.4	—	—	—
16	—	—	—	—	—	—	25.6	74	17.4	—	—	—
17	—	—	—	—	—	—	32.6	77	16.3	—	—	—
18	—	—	—	—	—	—	41.3	91	15.2	—	—	—
19	—	—	—	—	—	—	45.5	90	13.3	—	—	—
20	—	—	—	—	—	—	45.4	86	9.9	—	—	—
21	—	—	—	—	—	—	47.7	77	7.8	—	—	—
22	—	—	—	—	—	—	45.5	67	7.0	—	—	—
23	—	—	—	—	—	—	45.3	61	3.6	—	—	—
24	—	—	—	—	—	—	44.5	58	1.09	—	—	—
25	—	—	—	—	—	—	42.5	53	.08	—	—	—
26	—	—	—	—	—	—	44.7	46.8	—	—	—	—
27	—	—	—	—	—	—	48.9	40.6	—	—	—	—
28	—	—	—	—	—	—	48.9	38.0	—	—	—	—
29	—	—	—	—	—	—	52	37.7	—	—	—	—
30	—	—	—	—	—	—	49.3	39.8	—	—	—	—
31	—	—	—	—	—	—	—	45.2	—	—	—	—
<b>Monthly total (acre-feet)</b>	—	—	—	—	—	—	—	3,739	—	—	—	—
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	—	—	—	—	—	—	61	—	—	—	—

**Table 11.** Daily mean discharge of Beaver Creek diversion to Weber-Provo Diversion Canal in Kamas, Utah—Continued

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1998</b>												
1	—	—	—	—	—	—	1.32	44.2	41.4	25.5	—	—
2	—	—	—	—	—	—	.00	44.8	42.3	24.2	—	—
3	—	—	—	—	—	—	.00	42.2	44.1	22.2	—	—
4	—	—	—	—	—	—	.00	42.6	40.8	20.5	—	—
5	—	—	—	—	—	—	.00	37.8	33.6	19.4	—	—
6	—	—	—	—	—	—	.00	35.3	29.8	16.9	—	—
7	—	—	—	—	—	—	.00	35.1	27.8	13.7	—	—
8	—	—	—	—	—	—	.00	35.6	26.5	7.8	—	—
9	—	—	—	—	—	—	.00	35.1	26.5	6.8	—	—
10	—	—	—	—	—	—	.00	34.3	24.2	7.2	—	—
11	—	—	—	—	—	—	.00	31.1	22.8	5.9	—	—
12	—	—	—	—	—	—	.00	28.6	23.7	7.2	—	—
13	—	—	—	—	—	—	.00	28.0	26.4	7.0	—	—
14	—	—	—	—	—	—	.00	26.5	26.1	6.5	—	—
15	—	—	—	—	—	—	.00	26.3	26.2	4.9	—	—
16	—	—	—	—	—	—	.00	25.1	27.1	4.7	—	—
17	—	—	—	—	—	—	.00	24.6	32.1	4.5	—	—
18	—	—	—	—	—	—	.00	25.1	35.5	4.1	—	—
19	—	—	—	—	—	—	.00	26.0	46.9	3.8	—	—
20	—	—	—	—	—	—	.00	27.7	57	3.6	—	—
21	—	—	—	—	—	—	2.8	38.2	57	3.4	—	—
22	—	—	—	—	—	—	7.9	35.9	57	3.5	—	—
23	—	—	—	—	—	.00	15.4	30.1	45.8	3.5	—	—
24	—	—	—	—	—	.00	24.2	28.4	41.5	5.0	—	—
25	—	—	—	—	—	3.1	23.5	26.3	38.8	—	—	—
26	—	—	—	—	—	2.9	18.5	23.4	38.4	—	—	—
27	—	—	—	—	—	3.0	21.2	24.7	35.9	—	—	—
28	—	—	—	—	—	3.4	22.9	28.5	32.5	—	—	—
29	—	—	—	—	—	2.4	26.2	32.5	32.3	—	—	—
30	—	—	—	—	—	1.61	32.4	42.3	28.0	—	—	—
31	—	—	—	—	—	1.39	—	45.7	—	—	—	—
<b>Monthly total (acre-feet)</b>	—	—	—	—	—	—	389	2,007	2,119	—	—	—
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	—	—	—	—	—	6.5	32.6	35.6	—	—	—

**Table 11.** Daily mean discharge of Beaver Creek diversion to Weber-Provo Diversion Canal in Kamas, Utah—Continued

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1999</b>												
1	—	—	—	—	—	—	—	13.0	43.2	7.2	—	—
2	—	—	—	—	—	—	—	13.1	46.9	7.4	—	—
3	—	—	—	—	—	—	—	15.1	51	3.9	—	—
4	—	—	—	—	—	—	—	12.5	48.2	.48	—	—
5	—	—	—	—	—	—	—	11.5	46.1	.27	—	—
6	—	—	—	—	—	—	—	11.5	44.5	.19	—	—
7	—	—	—	—	—	—	—	12.9	44.2	.18	—	—
8	—	—	—	—	—	—	—	14.6	45.6	.15	—	—
9	—	—	—	—	—	—	—	14.4	48.8	.04	—	—
10	—	—	—	—	—	—	—	12.2	49.3	.03	—	—
11	—	—	—	—	—	—	—	10.6	46.2	.28	—	—
12	—	—	—	—	—	—	—	9.8	47.6	.07	—	—
13	—	—	—	—	—	—	—	12.3	48.7	.00	—	—
14	—	—	—	—	—	—	—	11.1	46.6	.01	—	—
15	—	—	—	—	—	—	—	9.4	47.0	.00	—	—
16	—	—	—	—	—	—	—	8.3	44.8	.01	—	—
17	—	—	—	—	—	—	—	7.9	35.7	.18	—	—
18	—	—	—	—	—	—	—	8.0	28.1	.00	—	—
19	—	—	—	—	—	—	—	8.7	26.7	.00	—	—
20	—	—	—	—	—	—	—	8.9	24.8	.00	—	—
21	—	—	—	—	—	—	—	10.0	23.5	.00	—	—
22	—	—	—	—	—	—	—	11.0	20.9	.00	—	—
23	—	—	—	—	—	—	—	19.2	15.9	.00	—	—
24	—	—	—	—	—	—	—	27.3	11.9	.00	—	—
25	—	—	—	—	—	—	—	35.1	9.5	.00	—	—
26	—	—	—	—	—	—	.90	38.5	8.9	—	—	—
27	—	—	—	—	—	—	1.64	35.9	10.1	—	—	—
28	—	—	—	—	—	—	4.5	38.8	9.0	—	—	—
29	—	—	—	—	—	—	12.3	45.7	8.5	—	—	—
30	—	—	—	—	—	—	14.3	47.0	7.6	—	—	—
31	—	—	—	—	—	—	—	48.4	—	—	—	—
<b>Monthly total (acre-feet)</b>	—	—	—	—	—	—	—	1,156	1,962	—	—	—
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	—	—	—	—	—	—	18.8	33.0	—	—	—

**Table 12.** Daily mean discharge of Beaver Creek at Rocky Point near Kamas, Utah

[Gaging station operated and data provided by Utah Department of Natural Resources, Division of Water Rights. Gaging station is located at (D-2-5)1aad and is site number 36 on plate 1. Discharge is in cubic feet per second (ft<sup>3</sup>/s); —, no data available]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 1999</b>												
1	—	51	42.1	32.6	32.2	58	49.3	78	116	63	58	73
2	—	48.8	42.3	26.3	35.3	67	44.5	78	127	70	52	74
3	—	47.0	—	22.5	36.3	82	42.0	243	145	67	48.9	88
4	—	45.4	—	21.7	41.0	77	39.2	160	136	62	49.1	81
5	—	48.3	—	22.4	40.3	52	37.2	165	140	61	46.2	71
6	58	53	—	23.7	39.4	46.7	39.1	130	130	65	48.9	63
7	51	51	—	24.7	39.9	47.3	37.0	105	120	66	37.7	58
8	46.0	52	—	22.3	44.5	40.5	44.2	107	108	78	33.4	58
9	46.4	49.5	—	22.3	98	43.0	47.9	109	114	72	34.8	54
10	46.1	48.4	—	25.5	109	41.8	45.5	98	117	64	34.5	51
11	44.7	48.4	—	28.5	83	—	42.8	90	110	62	35.4	45.0
12	45.5	46.2	—	28.5	60	—	37.8	86	119	61	33.2	47.3
13	45.3	46.5	—	27.8	50	—	36.1	141	127	58	29.7	44.0
14	45.1	51	—	25.8	73	—	40.3	119	118	63	24.6	45.2
15	46.1	69	—	27.1	86	98	40.0	110	127	78	22.5	46.0
16	47.4	67	—	27.9	65	202	38.3	98	135	65	25.2	45.4
17	48.3	68	—	28.1	61	155	38.4	85	136	68	21.7	42.6
18	45.5	52	—	38.2	59	141	47.2	81	132	65	24.1	38.0
19	47.5	46.2	—	38.2	49.0	125	51	85	126	64	27.9	45.0
20	46.7	43.2	—	37.1	36.3	101	53	87	120	58	35.8	47.0
21	47.0	49.1	—	29.7	23.8	82	61	93	113	55	57	46.2
22	47.5	52	26.7	31.1	35.1	65	54	102	103	53	42.3	46.2
23	46.8	46.0	26.1	28.5	33.4	59	51	114	98	46.7	49.4	43.8
24	48.5	39.5	19.8	34.9	36.4	54	62	131	95	46.3	52	44.4
25	59	43.3	23.4	35.8	43.9	56	64	145	88	45.6	54	41.3
26	60	45.1	26.1	29.5	38.2	54	80	151	87	42.1	50	38.4
27	58	44.6	26.0	33.8	35.2	46.9	100	141	81	41.7	61	39.8
28	53	45.9	26.4	35.0	46.2	41.3	101	129	83	43.6	68	41.6
29	52	43.9	34.6	35.9	—	39.8	148	132	79	44.0	63	42.5
30	63	42.4	38.9	36.4	—	41.5	100	135	70	57	65	40.2
31	58	—	35.0	38.0	—	44.0	—	131	—	67	76	—
<b>Monthly total (acre-feet)</b>	—	2,945	729	1,824	2,837	—	3,318	7,258	6,743	3,675	2,700	3,058
<b>Monthly mean (ft<sup>3</sup>/s)</b>	—	49.5	—	29.7	51	—	56	118	113	60	43.9	51

**Table 12.** Daily mean discharge of Beaver Creek at Rocky Point near Kamas, Utah—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Water year 2000</b>												
1	35.5	35.3	34.9	28.5	23.2	37.4	31.1	54	73	33.7	21.8	42.2
2	35.9	35.1	33.3	28.0	26.7	35.5	32.1	46.2	78	33.6	17.9	44.4
3	38.2	33.8	32.3	28.0	30.0	33.6	35.0	58	71	29.6	17.4	30.4
4	39.1	32.4	34.5	28.5	28.5	33.8	38.9	55	73	26.8	18.2	27.6
5	39.2	31.5	34.1	29.5	28.3	34.6	47.4	60	67	25.8	19.4	25.2
6	39.2	32.7	37.1	31.4	31.5	34.3	50.0	70	61	27.0	19.1	25.5
7	42.2	32.2	39.2	30.5	32.8	34.2	44.8	82	58	31.5	18.4	27.3
8	39.8	32.5	35.5	30.3	32.1	33.1	44.9	93	53	35.0	18.4	29.0
9	40.4	33.6	36.4	30.8	39.0	36.9	46.2	91	46.1	32.3	19.8	33.6
10	38.6	32.8	36.9	32.7	44.8	43.2	45.4	80	49.1	33.8	20.4	30.6
11	37.8	32.4	36.3	32.7	60	41.1	40.1	110	46.3	34.2	17.6	28.1
12	35.2	32.8	37.0	31.9	59	46.9	39.6	124	46.3	28.5	17.0	27.6
13	35.4	31.8	34.2	32.5	46.7	37.1	39.1	103	47.7	25.7	16.9	27.2
14	34.6	32.0	36.9	29.7	95	35.6	59	86	44.3	27.4	17.0	23.6
15	35.0	32.6	36.8	31.8	84	40.2	63	76	39.4	32.3	16.5	20.9
16	32.9	33.2	37.9	47.5	51	39.2	51	69	39.9	34.2	20.1	21.6
17	33.2	32.8	39.9	65	55	35.9	44.1	62	44.2	32.5	19.6	21.8
18	33.9	32.9	38.0	108	54	36.2	46.9	72	49.9	30.9	20.3	22.9
19	34.0	32.2	38.0	166	44.0	36.6	44.8	74	58	32.6	27.3	23.8
20	35.2	34.3	37.7	97	45.9	32.3	41.3	74	54	29.3	23.1	24.4
21	34.9	34.3	36.3	96	55	45.3	39.0	74	46.9	29.3	21.0	30.7
22	33.9	34.7	35.2	53	64	42.4	38.4	86	43.8	29.5	22.5	38.3
23	34.2	28.8	33.3	33.3	44.1	36.8	50	91	48.2	25.5	26.3	48.9
24	34.1	29.1	31.5	35.4	42.5	32.5	48.3	97	47.6	25.2	27.0	62
25	31.7	32.9	31.2	68	38.2	30.8	42.6	117	37.9	27.4	24.0	48.0
26	30.7	40.2	29.3	62	37.2	31.1	42.8	139	33.4	25.8	30.4	37.4
27	30.1	38.0	29.2	36.8	46.8	34.1	46.0	121	31.4	24.5	36.3	33.7
28	30.2	36.3	28.7	24.4	48.4	39.6	54	103	29.9	23.1	26.4	31.0
29	32.2	37.0	28.8	23.4	43.0	35.8	65	101	27.3	23.4	22.1	29.0
30	33.9	35.5	28.0	22.3	—	35.6	64	96	29.8	23.4	27.1	28.2
31	36.4	—	27.8	23.0	—	31.4	—	78	—	25.1	37.2	—
<b>Monthly total (acre-feet)</b>	2,177	1,995	2,115	2,811	2,641	2,248	2,729	5,239	2,926	1,782	1,361	1,874
<b>Monthly mean (ft<sup>3</sup>/s)</b>	35.4	33.5	34.4	22.3	23.2	30.8	31.1	46.2	27.3	23.1	16.5	20.9
<b>Yearly total (acre-feet)</b>	29,898											

**Table 13.** Summary of physical properties and chemical data available for water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah

[Table 14, physical properties, major ions, and dissolved solids; Table 15, physical properties and nitrate; Table 16, nutrients, dissolved organic carbon, methylene blue active substances, and coliform bacteria; Table 17, trace elements and radionuclides; Table 18, pesticides and herbicides; X, data available; —, no data]

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Site ID: A unique number identifying a site in the U.S. Geological Survey database, originally based upon latitude and longitude.

Location	Site ID	Table 14	Table 15	Table 16	Table 17	Table 18
<b>Ground-water sites</b>						
<sup>1</sup> (A-1-7)33bab-2	404703111094600	X	—	X	X	—
(A-1-8)36bba-1	404708110594001	X	—	X	X	—
(D-1-5)13cdb-1	404346111195401	X	—	X	X	—
(D-1-5)15acb-1	404415111215501	X	—	X	X	—
(D-1-5)23dda-1	404253111201901	X	—	X	X	X
(D-1-5)25dbb-1	404217111193701	X	—	X	X	—
(D-1-6)15acc-1	404407111150001	X	—	X	X	—
(D-1-6)16dbc-1	404356111161401	X	—	X	X	—
(D-1-6)18ddb-1	404351111180901	X	—	X	X	—
(D-1-6)19dbd-1	404302111181501	X	—	X	X	—
(D-1-6)21cbb-1	404311111164501	X	—	X	X	—
(D-1-6)22cbb-1	404310111153701	X	—	X	X	—
<sup>1</sup> (D-1-6)22dbc-1	404304111150001	X	—	X	X	—
(D-1-6)28cbc-1	404212111164601	X	—	X	X	X
(D-1-6)29ccc-1	404157111175701	X	—	X	X	—
(D-1-6)32daa-1	404123111165101	X	—	X	X	—
<sup>1</sup> (D-1-6)33dba-2	404128111155701	X	—	X	X	—
<sup>1</sup> (D-1-7)6abc-1	404602111120801	X	—	X	X	—
(D-2-5)11dcc-1	403922111204301	X	—	X	X	—
(D-2-5)13cad-1	403839111194301	X	—	X	X	—
(D-2-5)24ada-1	403802111190801	X	—	X	X	X
(D-2-5)24cbb-S1	403755111200901	X	—	X	X	—
(D-2-6)3bac-1	404050111151901	X	—	X	X	—
<sup>2</sup> (D-2-6)4dac-1	404027111155301	X	—	X	X	—
(D-2-6)4dad-1	404024111154501	X	—	X	—	—
(D-2-6)6bcc-1	404037111190401	X	—	X	X	—
<sup>2</sup> (D-2-6)8ddd-1	403920111164901	X	—	X	X	—
(D-2-6)9bbb-1	404008111164701	X	—	X	X	X
<sup>1</sup> (D-2-6)16cda-1	403831111161401	X	—	X	X	—
<sup>1</sup> (D-2-6)16ddb-1	403833111155201	X	—	X	X	—
(D-2-6)21ddb-1	403742111155201	X	—	X	X	—
(D-2-6)23adc-S1	403757111133001	—	X	—	—	—
(D-2-6)23ccd-1	403731111142101	X	—	X	X	—
(D-2-6)25aad-1	403721111121601	X	—	X	X	—
(D-2-6)25caa-1	403658111125001	X	—	X	X	—
(D-2-6)25dba-1	403658111123401	X	—	X	X	—
(D-2-6)26aad-1	403726111135401	X	—	X	X	—
<sup>2</sup> (D-2-6)26abb-1	403720111132401	X	—	X	X	—
<sup>1</sup> (D-2-6)26abc-1	403721111135001	X	—	X	X	—
(D-2-6)27ccc-1	403639111153701	X	—	X	X	—



**Table 13.** Summary of physical properties and chemical data available for water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah—Continued

Location	Site ID	Table 14	Table 15	Table 16	Table 17	Table 18
<b>Ground-water sites—Continued</b>						
<sup>1</sup> (D-2-6)27ccd-1	403640111152401	X	—	X	X	—
(D-2-6)29ada-1	403713111165101	X	—	X	X	X
(D-2-6)29bcb-1	403715111175001	X	—	X	X	—
(D-2-6)33cab-1	403610111162901	X	—	X	X	—
<sup>2</sup> (D-2-6)34dcd-1	403548111144701	X	—	X	X	X
<sup>1</sup> (D-3-6)1ccd-1	403456111130401	X	—	X	X	—
(D-3-6)2dbb-1	403516111135701	X	—	X	X	—
<sup>1</sup> (D-3-6)2dcd-1	403458111134301	X	—	X	X	—
(D-3-6)4aad-1	403535111154101	X	—	X	X	—
<b>Surface-water sites</b>						
(A-1-7)27ddd	4047151111075901	—	X	—	—	—
(A-1-7)31dcb	404623111114401	—	X	—	—	—
(A-1-7)33aba	4047061111091801	—	X	—	—	—
(A-1-7)33baa	4047071111094301	X	X	X	X	—
(A-1-7)35aaa	10128000	—	X	—	—	—
(A-1-8)25cbc	404725110595201	—	X	—	—	—
(A-1-8)25ccb	404742110595101	—	X	—	—	—
(A-1-8)26daa	404735110595901	X	—	X	X	—
(D-1-5)10bdb	10129300	X	—	X	X	X
(D-1-5)23aca	404319111203501	X	X	X	X	X
<sup>3</sup> (D-1-6)12bdd	404459111131901	—	X	—	—	—
<sup>4</sup> (D-1-6)12bdd	404458111131901	—	X	—	—	—
(D-1-6)15adb	10128500	X	X	X	X	X
(D-2-5)1aad	404051111190901	—	X	—	—	—
(D-2-5)13dba	403846111192601	—	X	—	—	—
(D-2-5)24cbd	403746111200401	—	X	—	—	—
(D-2-6)17dac	403842111165901	—	X	—	—	—
(D-2-6)21aaa	403818111154201	X	X	X	X	X
(D-2-6)22dca	403742111145001	X	X	X	X	—
(D-2-6)23cdd	403731111135601	—	X	—	—	—
(D-2-6)25dbb	403700111123801	—	X	—	—	—
(D-2-6)26abb	403727111135501	—	X	—	—	—
(D-2-6)26baa	403724111135601	—	X	—	—	—
(D-2-7)19cad	403740111114801	—	X	—	—	—

<sup>1</sup>Results of chemical analysis reported by Utah Division of Drinking Water; analysis done by Chemtech-Ford Laboratory, Murray, Utah.

<sup>2</sup>Blank or duplicate quality assurance/quality control sample taken at site; see table 19.

<sup>3</sup>Weber River at South Fork.

<sup>4</sup>South Fork at Weber River.

Because the information in the following table is presented on facing pages, this page is left blank.

**Table 14.** Physical properties, concentration of major ions, and dissolved-solids concentration in water from selected

[μS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; deg. C, degrees Celsius; —, no data; L, value determined in the Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Location	Date	pH, water, whole, field (standard units)	pH, water, whole, lab (standard units)	Specific conductance, lab (μS/cm)	Specific conductance, field (μS/cm)	Temperature, water (deg. C)	Hardness, total (mg/L as CaCO <sub>3</sub> )	Hardness, noncarbonate, dissolved, lab (mg/L as CaCO <sub>3</sub> )	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Potassium, dissolved (mg/L as K)
<b>Ground-water sites</b>											
<sup>1</sup> (A-1-7)33bab-2	01-18-1978	—	7.7	270	—	—	172	—	45	14	1
(A-1-8)36bba-1	09-21-2000	6.2	6.8	37	34	8.0	12	—	3.2	.86	.39
(D-1-5)13cdb-1	07-27-2000	7.4	7.4	490	465	10.0	230	—	70	13	1.3
(D-1-5)15acb-1	07-20-2000	7.2	7.3	1,080	1,050	10.5	400	4	110	31	8.0
(D-1-5)23dda-1	05-30-2000	7.5	7.6	465	445	9.5	230	17	69	14	2.6
(D-1-5)25ddb-1	09-06-2000	7.4	7.5	440	420	12.0	220	38	64	14	1.2
(D-1-6)15acc-1	08-21-1998	7.5	8.1	255	280	8.5	210	—	58	17	.51
	05-31-2000	7.5	7.7	410	380	8.0	210	9	57	16	.44
(D-1-6)16dbc-1	07-26-2000	7.1	7.3	520	500	10.0	250	26	70	17	1.2
(D-1-6)18ddb-1	09-13-2000	7.3	7.4	600	570	9.0	270	28	78	19	1.9
(D-1-6)19dbd-1	08-24-2000	7.3	7.5	355	340	10.5	170	—	54	9.0	1.1
(D-1-6)21cbb-1	06-01-2000	7.4	7.5	485	465	10.0	250	8	67	19	.75
(D-1-6)22cbb-1	08-31-2000	7.8	7.8	300	290	8.0	140	—	41	9.6	.37
<sup>1</sup> (D-1-6)22dbc-1	10-11-1998	—	7.2	324	—	—	145	—	31	16	.9
(D-1-6)28cbc-1	06-14-2000	7.6	7.8	350	335	9.5	180	5	53	11	.49
(D-1-6)29ccc-1	08-21-2000	7.7	7.7	390	370	8.5	190	—	55	13	.53
(D-1-6)32daa-1	09-11-2000	7.6	7.7	360	345	8.5	180	2	54	10	.57
<sup>1</sup> (D-1-6)33dba-2	06-03-1992	—	6.7	642	—	—	274	—	84	16	1
<sup>1</sup> (D-1-7)6abc-1	09-28-1994	—	8.7	469	—	—	228	—	—	—	—
(D-2-5)11dcc-1	09-28-2000	7.2	7.3	330	325	10.0	150	1	43	9.6	.79
(D-2-5)13cad-1	06-13-2000	7.0	7.2	280	260	8.0	110	—	32	7.8	2.2
(D-2-5)24ada-1	05-15-2000	7.2	7.3	800	760	10.0	320	24	88	24	1.6
(D-2-5)24cbb-S1	08-15-2000	7.4	7.6	780	740	11.0	340	100	90	27	1.8
(D-2-6)3bac-1	11-30-1998	7.6	7.7	445	430	9.0	210	—	41	25	1.2
	05-18-2000	7.7	7.6	460	420	9.5	200	—	42	24	1.1
(D-2-6)4dac-1	08-28-2000	7.4	7.4	600	570	8.5	270	—	78	19	2.6
(D-2-6)4dad-1	09-09-1997	7.5	7.5	460	475	10.5	230	—	73	13	.29
(D-2-6)6bcc-1	05-24-2000	7.9	8.0	325	310	12.0	130	—	39	8.2	2.7
(D-2-6)8ddd-1	08-22-2000	7.6	7.6	425	420	9.0	210	6	55	16	.51
(D-2-6)9bbb-1	05-22-2000	7.1	7.5	420	400	9.5	200	2	62	11	.91
<sup>1</sup> (D-2-6)16cda-1	03-27-1996	—	—	451	—	—	214	—	62	16	1
<sup>1</sup> (D-2-6)16ddb-1	02-09-1991	—	7.5	—	—	—	257	—	<1	17	1
(D-2-6)21ddb-1	08-03-2000	7.3	7.4	355	335	9.5	150	1	48	8.1	1.2
(D-2-6)23ccd-1	08-31-2000	7.3	7.6	415	410	8.0	200	6	50	18	1.3
(D-2-6)25aad-1	09-27-2000	7.2	7.2	860	840	9.0	360	100	97	29	1.5
(D-2-6)25caa-1	09-28-2000	7.7	7.6	315	305	7.0	150	4	40	13	.51
(D-2-6)25dba-1	08-29-2000	7.5	7.6	510	480	8.5	250	0	59	24	.68
(D-2-6)26aad-1	11-02-2000	7.5	7.3	980	950	8.5	440	210	102	46	1.1
(D-2-6)26abb-1	10-03-2000	7.6	7.5	510	490	10.0	240	17	62	21	.68
<sup>1</sup> (D-2-6)26abc-1	12-07-1992	—	7.2	358	—	—	173	—	28	24	1
(D-2-6)27ccc-1	08-29-2000	7.5	7.5	420	410	8.0	190	13	52	14	1.4
<sup>1</sup> (D-2-6)27ccd-1	12-09-1988	—	7.6	—	—	—	238	—	88	4	1
(D-2-6)29ada-1	08-16-2000	7.2	7.4	610	580	11.0	240	17	74	12	1.9
(D-2-6)29bcb-1	<sup>2</sup> 06-21-2000	7.2	7.2	475	—	8.5	230	11	70	14	.71
	<sup>3</sup> 11-28-2000	7.6	7.6	450	430	7.5	220	—	60	17	1

ground-water and surface-water sites in Kamas Valley and vicinity, Utah

laboratory; <, less than stated value]

Date	Sodium, dis- solved (mg/L as Na)	Alkalinity, water, dis- solved, lab (mg/L as CaCO <sub>3</sub> )	Alkalinity, water, total, field (mg/L as CaCO <sub>3</sub> )	Bicarbon- ate, water, field (mg/L as HCO <sub>3</sub> )	Carbon- ate, water, field (mg/L as CO <sub>3</sub> )	Chloride, dis- solved (mg/L as Cl)	Fluoride, dis- solved (mg/L as F)	Silica, dis- solved (mg/L as SiO <sub>2</sub> )	Sulfate, dis- solved (mg/L as SO <sub>4</sub> )	Solids, residue at 180 deg. C, dis- solved (mg/L)	Solids, sum of con- stituents, dis- solved (mg/L)	
Ground-water sites												
01-18-1978	20	150	—	185	L	0	0	0.14	6	22	175	—
09-21-2000	1.6	—	13	16		0	.67	<.10	5.2	3.1	29	23
07-27-2000	14	240	240	293		0	6.4	.13	31	12	294	295
07-20-2000	73	390	353	431		0	80	.30	29	71	656	614
05-30-2000	7.0	210	213	259		0	11	.12	12	13	262	262
09-06-2000	5.0	180	217	264		0	6.5	.12	8.6	13	253	221
08-21-1998	4.5	136	—	—	—	3.5	<.10	8.2	10	—	—	183
05-31-2000	4.5	200	199	243		0	—	<.10	8.2	—	227	—
07-26-2000	7.9	220	217	264		0	17	.13	15	20	299	287
09-13-2000	15	240	245	299		0	21	.19	33	21	365	350
08-24-2000	2.3	180	178	217		0	2.0	.21	12	7.6	202	199
06-01-2000	3.5	240	239	291		0	5.4	<.10	10	15	271	266
08-31-2000	3.4	150	150	183		0	1.7	<.10	5.1	7.8	160	158
10-11-1998	4.8	149	—	181	L	<1	2	1.7	9.2	17	192	—
06-14-2000	2.4	170	157	191		0	3.3	.10	5.8	11	191	182
08-21-2000	2.7	190	187	228		0	5.6	<.10	6.5	9.6	213	207
09-11-2000	3.6	180	174	213		0	4.2	.12	9.2	7.9	202	198
06-03-1992	15	248	—	302	L	<1	7	.25	17	9	290	—
09-28-1994	6	230	—	281	L	<1	5	.10	—	26	257	—
09-28-2000	12	145	146	178		0	6.9	.14	37	16	213	216
06-13-2000	9.4	120	109	133		0	8.5	.11	35	8.1	183	171
05-15-2000	33	290	277	338		0	64	.31	37	24	467	444
08-15-2000	26	230	220	269		0	110	.15	28	16	473	428
11-30-1998	15	206	—	—	—	16	.19	19	6.7	252	250	
05-18-2000	13	210	211	257		0	17	.21	18	7.0	254	251
08-28-2000	17	300	292	356		0	16	.27	51	9.8	383	373
09-09-1997	6.3	234	—	—	—	7.6	.12	21	12	284	274	
05-24-2000	12	140	136	166		0	14	.10	41	6.6	213	209
08-22-2000	5.3	200	194	237		0	13	.10	9.8	7.7	234	228
05-22-2000	8.2	200	190	232		0	8.9	.22	16	10	242	234
03-27-1996	7	216	—	264	L	<1	12	.10	—	12	260	—
02-09-1991	12	202	—	246	L	<1	9	.12	15	5	440	—
08-03-2000	9.0	150	150	183		0	12	<.10	18	11	209	202
08-31-2000	4.0	190	192	234		0	3.8	.80	7.8	21	236	226
09-27-2000	33	260	256	312		0	84	<.10	15	71	499	487
09-28-2000	5.4	150	144	176		0	6.2	<.10	6.6	5.0	170	171
08-29-2000	7.0	240	244	297		0	9.3	.14	8.2	6.2	283	276
11-02-2000	25	230	224	273		0	171	.11	9.2	9.5	517	509
10-03-2000	13	220	224	273		0	25	.15	7.8	7.7	275	274
12-07-1992	4	184	—	224	L	<1	3	.16	10	9	206	—
08-29-2000	7.0	180	175	213		0	19	.13	27	7.4	249	235
12-09-1988	6	204	—	249	L	<1	11	.11	29	25	260	—
08-16-2000	35	220	212	258		0	58	.17	22	8.4	353	340
06-21-2000	6.1	220	203	248		0	14	.13	21	8.8	279	257
11-28-2000	6.7	220	—	—	—	7.5	.16	19	9.8	258	257	

**Table 14.** Physical properties, concentration of major ions, and dissolved-solids concentration in water from selected

Location	Date	pH, water, whole, field (standard units)	pH, water, whole, lab (standard units)	Specific conductance, lab ( $\mu\text{S/cm}$ )	Specific conductance, field ( $\mu\text{S/cm}$ )	Temperature, water (deg. C)	Hardness, total (mg/L as $\text{CaCO}_3$ )	Hardness, noncarbonate, dissolved, lab (mg/L as $\text{CaCO}_3$ )	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Potassium, dissolved (mg/L as K)
<b>Ground-water sites—Continued</b>											
(D-2-6)33cab-1	09-12-2000	6.7	7.0	225	205	9.0	100	10	29	7.6	.70
(D-2-6)34dcd-1	07-25-2000	7.0	6.9	395	385	10.0	170	34	52	10	1.3
<sup>1</sup> (D-3-6)1ccd-1	05-15-1996	—	—	410	—	—	200	—	50	14	1
(D-3-6)2dbb-1	09-07-2000	6.9	7.0	290	280	10.0	140	14	43	7.3	1.0
<sup>1</sup> (D-3-6)2dcd-1	12-27-1994	—	—	—	—	—	—	—	—	—	—
(D-3-6)4aad-1	08-21-2000	6.7	6.8	195	185	10.5	85	4	24	5.8	.88
<b>Surface-water sites</b>											
(A-1-7)33baa	08-14-2000	8.3	8.1	205	190	14.0	—	—	—	—	—
(A-1-8)26daa	09-21-2000	8.2	7.3	98	91	9.0	42	1	12	3.0	.47
(D-1-5)10bdb	08-14-2000	8.3	8.4	365	335	20.5	180	5	51	13	1.5
(D-1-5)23aca	09-01-2000	7.8	7.9	465	440	12.0	220	—	62	15	1.7
(D-1-6)15adb	08-11-2000	8.7	8.1	245	240	17.0	120	9	34	9.1	.33
(D-2-6)21aaa	03-12-2000	8.6	8.5	415	420	10.0	180	—	47	16	.72
	08-11-2000	8.6	8.3	340	340	16.0	170	12	45	14	.93
(D-2-6)22dca	09-07-2000	8.4	8.3	335	330	13.0	160	—	42	14	.64

<sup>1</sup>Results of chemical analysis reported by Utah Division of Drinking Water; analysis done by Chemtech-Ford Laboratory, Murray, Utah.

<sup>2</sup>Depth of well 84 feet; water sample from alluvium.

<sup>3</sup>Depth of well deepened to 290 feet; water sample from alluvium and volcanic rock.

## ground-water and surface-water sites in Kamas Valley and vicinity, Utah—Continued

Date	Sodium, dis- solved (mg/L as Na)	Alkalinity, water, dis- solved, lab (mg/L as CaCO <sub>3</sub> )	Alkalinity, water, total, field (mg/L as CaCO <sub>3</sub> )	Bicarbon- ate, water, field (mg/L as HCO <sub>3</sub> )	Carbon- ate, water, field (mg/L as CO <sub>3</sub> )	Chloride, dis- solved (mg/L as Cl)	Fluoride, dis- solved (mg/L as F)	Silica, dis- solved (mg/L as SiO <sub>2</sub> )	Sulfate, dis- solved (mg/L as SO <sub>4</sub> )	Solids, residue at 180 deg. C, dis- solved (mg/L)	Solids, sum of con- stituents, dis- solved (mg/L)
<b>Ground-water sites—Continued</b>											
09-12-2000	4.4	95	96	117	0	6.0	.77	26	6.1	137	141
07-25-2000	7.0	140	142	173	0	29	.21	36	9.5	253	238
05-15-1996	8	180	—	221	L	<1	.10	10	10	226	—
09-07-2000	3.7	120	121	147	0	11	.11	29	5.3	188	178
12-27-1994	9	—	—	—	—	—	.10	—	9	218	—
08-21-2000	3.4	81	79	97	0	6.4	.13	22	6.2	124	119
<b>Surface-water sites</b>											
08-14-2000	—	—	—	—	—	—	—	—	—	—	—
09-21-2000	1.8	41	41	51	0	.75	<.10	4.4	6.8	58	54
08-14-2000	7.3	—	176	214	—	7.9	.16	12	9.4	208	208
09-01-2000	7.8	230	224	273	0	5.1	.18	15	11	259	254
08-11-2000	1.9	—	115	140	—	1.7	.11	3.9	8.3	131	129
03-12-2000	11	—	—	—	—	25	.24	6.8	8.1	222	—
08-11-2000	5.4	—	158	193	—	7.4	.20	6.4	5.7	186	181
09-07-2000	4.2	170	165	202	<1	5.6	.18	6.4	6.0	191	180

**Table 15.** Physical properties and nitrate concentration in water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah

[deg. C, degrees Celsius;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; —, no data]

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Nitrate (as  $\text{NO}_3$ ) determined photometrically by Chemetrics cadmium reduction method.

Nitrate (as N) calculated from nitrate (as  $\text{NO}_3$ ).

Location	Site description	Date	Time	Temperature, water (deg. C)	pH (standard units)	Specific conductance ( $\mu\text{S}/\text{cm}$ )	Nitrate (mg/L as $\text{NO}_3$ )	Nitrate (mg/L as N)
<b>Ground-water site</b>								
(D-2-6)23adc-S1	Left Fork spring	10-27-1999	1215	7.0	7.5	395	3.0	0.68
<b>Surface-water sites</b>								
<b>Weber River</b>								
(A-1-7)27ddd	Weber River above Smith and Morehouse	10-26-1999	1350	5.0	8.4	275	2.0	0.45
(A-1-7)31dcb	Weber River at Weber Canyon Road	10-26-1999	1430	7.0	8.5	360	2.5	.56
(A-1-7)33aba	Smith and Morehouse Creek at Weber River	10-26-1999	1415	5.5	8.4	305	1.0	.23
(A-1-7)33baa	Weber River below Smith and Morehouse	10-26-1999	1405	6.0	8.4	290	1.5	.34
(A-1-7)35aaa	Smith and Morehouse Creek below reservoir	10-26-1999	1335	8.0	8.4	280	1.0	.23
(A-1-8)25cbc	Weber River at Dry Fork	10-26-1999	1240	5.0	7.7	160	2.0	.45
(A-1-8)25ccb	Holiday Park spring at junction with Weber River	10-26-1999	1300	8.0	—	430	2.0	.45
(D-1-6)12bdd	Weber River at South Fork	10-26-1999	1450	7.0	8.5	295	1.5	.34
(D-1-6)12bdd	South Fork at Weber River	10-26-1999	1455	7.0	8.6	315	1.0	.23
(D-1-6)15adb	Weber River near Oakley	10-26-1999	1515	6.5	8.6	305	1.5	.34
<b>Kamas Valley</b>								
(D-1-5)23aca	Marchant ditch	10-27-1999	1515	12.0	8.0	465	2.5	.56
(D-2-5)1aad	Beaver Creek at Rocky Point	10-27-1999	1600	11.0	8.7	385	3.0	.68
(D-2-5)13dba	Indian Hollow	10-27-1999	1415	7.5	8.1	295	1.5	.34
(D-2-5)24cbd	City Creek	10-27-1999	1400	10.0	8.6	640	1.0	.23
(D-2-6)17dac	Beaver Creek at Weber-Provo Diversion Canal	10-27-1999	1315	8.0	8.5	325	1.5	.34
<b>Beaver Creek</b>								
(D-2-6)21aaa	Beaver Creek at Grist Mill	10-27-1999	1240	9.0	8.6	320	2.0	.45
(D-2-6)22dca	Beaver Creek at Lind Bridge	10-27-1999	1250	9.0	8.5	310	2.5	.56
(D-2-6)23cdd	Inflow from Left-Hand Canyon below Samak Road	10-27-1999	1155	9.5	8.0	400	2.5	.56
(D-2-6)25dbb	Beaver Creek 1 mile above Samak fish hatchery	10-27-1999	1120	3.0	7.9	94	2.0	.45
(D-2-6)26abb	Beaver Creek below Samak fish hatchery	10-27-1999	1145	8.0	7.7	285	2.5	.56
(D-2-6)26baa	Inflow from Willow Springs	10-27-1999	1035	10.0	8.2	440	2.0	.45
(D-2-7)19cad	Beaver Creek 2 miles above Samak fish hatchery	10-27-1999	1100	3.0	7.6	82	1.5	.34

**Table 16.** Concentration of nutrients, dissolved organic carbon, methylene blue active substances, and coliform bacteria in water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah

[mg/L, milligrams per liter; mL, milliliter; <, less than stated value; E, estimated value; —, no data; ND, not detected]

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.  
Total and fecal coliform analyses done by Utah State Health Laboratory, Salt Lake City, Utah.

Location	Date	Nitrogen, ammonia, dis- solved (mg/L as N)	Nitrogen, ammonia+ organic, dis- solved (mg/L as N)	Nitrogen, NO <sub>2</sub> +NO <sub>3</sub> , dis- solved (mg/L as N)	Nitrogen, nitrite, dis- solved (mg/L as N)	Phos- phate, ortho, dis- solved (mg/L as PO <sub>4</sub> )	Phos- phorus, dis- solved (mg/L as P)	Phos- phorus, ortho, dis- solved (mg/L as P)	Carbon, organic, dis- solved (mg/L as C)	Methy- lene blue active sub- stances (mg/L)	Coliform, total, counts per 100 mL	Coliform, fecal, counts per 100 mL
<b>Ground-water sites</b>												
<sup>1</sup> (A-1-7)33bab-2	01-18-1978	—	—	0.80	0	—	—	—	—	0	—	—
(A-1-8)36bba-1	09-21-2000	<.020	<.10	.082	<.010	—	<.050	<.010	1.2	<.02	<2	<2
(D-1-5)13cdb-1	07-27-2000	<.020	<.10	.747	<.010	.11	.039 E	.035	.62	<.02	—	<2
(D-1-5)15acb-1	07-20-2000	<.020	.25	.283	<.010	.10	.051	.032	4.3	<.02	<2	<2
(D-1-5)23dda-1	05-30-2000	<.020	<.10	1.43	<.010	.10	.030 E	.034	1.1	<.02	<4	<2
(D-1-5)25dbb-1	09-06-2000	<.020	.10 E	.195	<.010	—	<.050	<.010	1.1	<.02	<10	<4
(D-1-6)15acc-1	05-31-2000	<.020	<.10	.198	<.010	—	<.050	<.010	.61	<.02	<4	<2
(D-1-6)16dbc-1	07-26-2000	<.020	<.10	2.07	<.010	.10	.036 E	.032	.91	<.02	<2	<2
(D-1-6)18ddb-1	09-13-2000	<.020	.10 E	3.24	<.010	.11	.030 E	.035	.95	<.02	<10	<4
(D-1-6)19dbd-1	08-24-2000	<.020	.10 E	.193	<.010	.17	.060	.056	.94	<.02	<10	<10
(D-1-6)21cbb-1	06-01-2000	<.020	.15	.590	<.010	.04	<.050	.012	.37	<.02	<4	<2
(D-1-6)22cbb-1	08-31-2000	<.020	<.10	.065	<.010	.05	<.050	.015	.63	<.02	<4	<2
<sup>1</sup> (D-1-6)22dbc-1	10-11-1998	<.2	—	<.1	<.005	—	—	<.01	—	<.05	ND	ND
(D-1-6)28cbc-1	06-14-2000	<.020	.10 E	.113	<.010	—	<.050	<.010	.61	<.02	<4	<2
(D-1-6)29ccc-1	08-21-2000	<.020	<.10	.299	<.010	—	<.050	<.010	.35	<.02	<10	<4
(D-1-6)32daa-1	09-11-2000	<.020	<.10	.478	<.010	.04	<.050	.014	.51	<.02	<10	<4
<sup>1</sup> (D-1-6)33dba-2	06-03-1992	<.1	—	1.19	.02	—	—	.81	—	<.4	—	—
<sup>1</sup> (D-1-7)6abc-1	09-28-1994	—	—	.39	<.39	—	—	<.02	—	—	—	—
(D-2-5)11dcc-1	09-28-2000	<.020	<.10	.509	<.010	.15	.042 E	.048	.55	<.02	<2	<2
(D-2-5)13cad-1	06-13-2000	<.020	.10 E	.281	<.010	.24	.089	.079	1.2	<.02	<4	<2
(D-2-5)24ada-1	05-15-2000	<.020	.10 E	1.21	<.010	.25	.101	.081	1.4	<.02	<2	<2
(D-2-5)24cbb-S1	08-15-2000	.002	.058	.435	0	—	.015	.021	—	—	<10	<4
(D-2-6)3bac-1	11-30-1998	—	—	.391	—	—	—	<.010	—	—	—	—
	05-18-2000	<.020	<.10	.458	<.010	—	<.050	<.010	.33 E	<.02	<4	<2
(D-2-6)4dac-1	08-28-2000	<.020	<.10	.158	<.010	.08	.030 E	.027	.36	<.02	<10	<50
(D-2-6)4dad-1	09-09-1997	—	—	.124	—	.06	—	.020	—	—	—	—
(D-2-6)6bcc-1	05-24-2000	<.020	<.10	.726	<.010	.10	.034 E	.033	.32 E	<.02	<4	<2
(D-2-6)8ddd-1	08-22-2000	<.020	<.10	.680	<.010	—	<.050	<.010	.42	<.02	<10	<4
(D-2-6)9bbb-1	05-22-2000	<.020	<.10	.705	<.010	.10	.034 E	.034	.45	<.02	<4	<2
<sup>1</sup> (D-2-6)16cda-1	03-27-1996	—	—	.72	<.01	—	—	.03	—	—	—	—
<sup>1</sup> (D-2-6)16ddb-1	02-09-1991	.1	—	.49	<.02	—	—	.05	—	—	—	—
(D-2-6)21ddb-1	08-03-2000	<.020	<.10	1.30	<.010	.27	.103	.089	.52	<.02	<10	<4
(D-2-6)23ccd-1	08-31-2000	.054	.10 E	<.050	.010	—	<.050	<.010	.26 E	—	<10	<2
(D-2-6)25aad-1	09-27-2000	.374	.39	.113	<.010	—	<.050	<.010	.28 E	<.02	<2	<2
(D-2-6)25caa-1	09-28-2000	<.020	<.10	1.13	<.010	—	<.050	<.010	.76	<.02	<2	<2
(D-2-6)25dba-1	08-29-2000	<.020	<.10	3.43	<.010	.03	<.050	.011	.55	<.02	<2	<2
(D-2-6)26aad-1	11-02-2000	<.041	<.10	1.67	<.006	—	<.060	<.018	.38	<.02	—	<2
(D-2-6)26abb-1	10-03-2000	<.020	<.10	.390	<.010	—	<.060	<.010	.46	<.02	<2	<2
<sup>1</sup> (D-2-6)26abc-1	12-07-1992	<.1	—	.47	<.01	—	—	<.1	—	<.4	—	—
(D-2-6)27ccc-1	08-29-2000	.229	<.10	<.050	<.010	.37	.063	.120	.65	<.02	<2	<2



**Table 16.** Concentration of nutrients, dissolved organic carbon, methylene blue active substances, and coliform bacteria in water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah—Continued

Location	Date	Nitrogen, ammonia, dis- solved (mg/L as N)	Nitrogen, ammonia+ organic, dis- solved (mg/L as N)	Nitrogen, NO <sub>2</sub> +NO <sub>3</sub> , dis- solved (mg/L as N)	Nitrogen, nitrite, dis- solved (mg/L as N)	Phos- phate, ortho, dis- solved (mg/L as PO <sub>4</sub> )	Phos- phorus, dis- solved (mg/L as P)	Phos- phorus, ortho, dis- solved (mg/L as P)	Carbon, organic, dis- solved (mg/L as C)	Methy- lene blue active sub- stances (mg/L)	Coliform, total, counts per 100 mL	Coliform, fecal, counts per 100 mL
<b>Ground-water sites—Continued</b>												
<sup>1</sup> (D-2-6)27ccd-1	12-09-1988	<.1	—	2.35	<.02	—	—	<.04	—	—	—	—
(D-2-6)29ada-1	08-16-2000	.012	.162	.021	.001	—	.009	.019	2.2	<.02	<10	<4
(D-2-6)29bcd-1	<sup>2</sup> 06-21-2000	<.020	.10	.145	<.010	.04	<.050	.014	1.6	<.02	—	—
	<sup>3</sup> 11-28-2000	<.041	<.10	.51	.003	—	<.06	.014	—	—	<2	<2
(D-2-6)33cab-1	09-12-2000	<.020	<.10	.748	<.010	.06	<.050	.018	.38	<.02	<10	<4
(D-2-6)34dcd-1	07-25-2000	<.020	.10 E	1.55	<.010	.17	.052	.057	.63	<.02	<1	<4
<sup>1</sup> (D-3-6)1ccd-1	05-15-1996	<.4	—	.48	<.01	—	—	.03	—	—	—	—
(D-3-6)2dbb-1	09-07-2000	<.020	<.10	.937	<.010	.12	.051	.038	.58	<.02	<10	<4
<sup>1</sup> (D-3-6)2dcd-1	12-27-1994	—	—	1.30	<.01	—	—	—	—	—	—	—
(D-3-6)4aad-1	08-21-2000	<.020	<.10	.544	<.010	.10	.035 E	.032	.63	<.02	<10	<4
<b>Surface-water sites</b>												
(A-1-7)33baa	08-14-2000	<.020	.10 E	<.050	<.010	—	.028	<.010	—	—	—	—
(A-1-8)26daa	09-21-2000	<.020	.10 E	<.050	<.010	—	<.050	<.010	1.5	<.02	40	32
(D-1-5)10bdb	08-14-2000	<.020	.19	<.050	<.010	.04	.025	.014	2.4	—	—	—
(D-1-5)23aca	09-01-2000	<.020	.15	.366	<.010	.09	.038 E	.028	1.6	<.02	268	42
(D-1-6)15adb	08-11-2000	<.020	.11	<.050	<.010	—	.003 E	<.010	2.2	—	—	—
(D-2-6)21aaa	03-12-2000	<.020	.10 E	.277	<.010	.04	.007	.013	1.2	—	—	—
	08-11-2000	.029	.16	.171	<.010	—	.010	<.010	2.2	—	—	—
(D-2-6)22dca	09-07-2000	<.020	.13	.291	.012	.03	<.050	.010	1.6	<.02	640	16

<sup>1</sup>Results of chemical analysis reported by Utah Division of Drinking Water; analysis done by Chemtech-Ford Laboratory, Murray, Utah.

<sup>2</sup>Depth of well 84 feet; water sample from alluvium.

<sup>3</sup>Depth of well deepened to 290 feet; water sample from alluvium and volcanic rock.

Because the information in the following table is presented on facing pages, this page is left blank.

**Table 17.** Concentration of trace elements and radionuclides in water from selected ground-water and surface-water sites in Kamas

[µg/L, micrograms per liter; mg/L, milligrams per liter; pCi/L, picoCuries per liter; E, estimated value; —, no data; &lt;, less than reported value; T, total concentration]

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Location	Date	Aluminum, dissolved, (µg/L as Al)	Arsenic, dissolved (µg/L as As)	Barium, dissolved (µg/L as Ba)	Boron, dissolved (µg/L as B)	Bromide, dissolved (mg/L as Br)	Cadmium, dissolved (µg/L as Cd)	Chromium, dissolved (µg/L as Cr)	Copper, dissolved (µg/L as Cu)
<b>Ground-water sites</b>									
<sup>1</sup> (A-1-7)33bab-2	01-18-1978	—	0	90	120	—	0	0	3.0
(A-1-8)36bba-1	09-21-2000	—	—	—	<16	<.010	—	—	—
(D-1-5)13cdb-1	07-27-2000	—	—	—	32	.032	—	—	—
(D-1-5)15acb-1	07-20-2000	12	5	294	226	.093	<1.0	<.80	4.9
(D-1-5)23dda-1	05-30-2000	13	1	109	8.9 E	<.010	<1.0	<.80	5.2
(D-1-5)25dbb-1	09-06-2000	—	<.9	—	20	.024	—	—	—
(D-1-6)15acc-1	05-31-2000	11	1 E	73	12 E	.020	<1.0	<.80	<1.0
(D-1-6)16dbc-1	07-26-2000	5.6	1	135	25	.022	<1.0	<.80	2.5
(D-1-6)18ddb-1	09-13-2000	—	—	—	45	.045	—	—	—
(D-1-6)19dbd-1	08-24-2000	—	—	—	14 E	.016	—	—	—
(D-1-6)21cbb-1	06-01-2000	—	—	—	24	.025	—	—	—
(D-1-6)22cbb-1	08-31-2000	—	—	—	<16	.018	—	—	—
<sup>1</sup> (D-1-6)22dbc-1	10-11-1998	<30	<5.0 T	90 T	<50 T	—	<1.0 T	<5.0 T	<10.0 T
(D-1-6)28cbc-1	06-14-2000	13	7	100	8.2 E	.011	1.7	<.80	7.5
(D-1-6)29ccc-1	08-21-2000	—	—	—	10 E	.036	—	—	—
(D-1-6)32daa-1	09-11-2000	—	—	—	12 E	.010	—	—	—
<sup>1</sup> (D-1-6)33dba-2	06-03-1992	—	<5.0 T	<20 T	<.1	—	<3.0 T	<10.0 T	<30.0 T
<sup>1</sup> (D-1-7)6abc-1	09-28-1994	—	6.2 T	90 T	—	—	<1.0 T	<7.0 T	<10.0 T
(D-2-5)11dcc-1	09-28-2000	—	.88	—	15	.027	—	—	—
(D-2-5)13cad-1	06-13-2000	7.6	1 E	44	20	.018	<1.0	<.80	7.1
(D-2-5)24ada-1	05-15-2000	—	4	—	47	.090	—	—	—
(D-2-5)24cbb-S1	08-15-2000	—	2	—	31	.080	—	—	—
(D-2-6)3bac-1	05-18-2000	—	—	—	37	.062	—	—	—
(D-2-6)4dac-1	08-28-2000	<1.0	3	180	32	.050	<1.0	<.80	<1.0
(D-2-6)6bcc-1	05-24-2000	13	1	53	22	.040	<1.0	<.80	<1.0
(D-2-6)8ddd-1	08-22-2000	—	—	—	17	.053	—	—	—
(D-2-6)9bbb-1	05-22-2000	13	1 E	72	27	.046	<1.0	.51 E	2.1
<sup>1</sup> (D-2-6)16cda-1	03-27-1996	—	<5.0 T	50 T	—	—	<1.0 T	1.0 T	8.0 T
<sup>1</sup> (D-2-6)16ddb-1	02-09-1991	—	<3.0 T	40 T	<500	—	<5.0 T	<50 T	<60 T
(D-2-6)21ddb-1	08-03-2000	22	2	62	34	.045	<1.0	<.80	22
(D-2-6)23ccd-1	08-31-2000	—	—	—	46	.044	—	—	—
(D-2-6)25aad-1	09-27-2000	—	—	—	48	.070	—	—	—
(D-2-6)25caa-1	09-28-2000	—	—	—	7.6 E	.022	—	—	—
(D-2-6)25dba-1	08-29-2000	—	—	—	14 E	.031	—	—	—
(D-2-6)26aad-1	11-02-2000	—	—	—	21	.041	—	—	—
(D-2-6)26abb-1	10-03-2000	—	—	—	11 E	.023	—	—	—
<sup>1</sup> (D-2-6)26abc-1	12-07-1992	—	4.0 T	<80 T	—	—	<4 T	<30 T	<30 T
(D-2-6)27ccc-1	08-29-2000	—	—	—	16	.017	—	<.80	—
<sup>1</sup> (D-2-6)27ccd-1	12-09-1988	—	<1.0 T	90 T	—	—	<1.0 T	<1.0 T	<10.0 T
(D-2-6)29ada-1	08-16-2000	—	—	—	32	.018	—	—	—
(D-2-6)29bcb-1	<sup>2</sup> 06-21-2000	5.2	1	108	24	.012	<1.0	<.80	1.1
	<sup>3</sup> 11-28-2000	—	.76	—	17	.029	—	—	—
(D-2-6)33cab-1	09-12-2000	—	—	—	21	<.010	—	—	—
(D-2-6)34dcd-1	07-25-2000	11	1 E	111	18	.029	<1.0	.89	1.1
<sup>1</sup> (D-3-6)1ccd-1	05-15-1996	—	<5.0 T	50 T	—	—	<1.0 T	<5.0 T	<10.0 T
(D-3-6)2dbb-1	09-07-2000	—	—	—	27	.024	—	—	—
<sup>1</sup> (D-3-6)2dcd-1	12-27-1994	—	<5.0 T	<100 T	—	—	<1.0 T	<7.0 T	89 T
(D-3-6)4aad-1	08-21-2000	—	—	—	11 E	.027	—	—	—
<b>Surface-water sites</b>									
(A-1-7)33baa	08-14-2000	8.0	0.47 E	64	7.7 E	—	<1.0	<.80	<1.0
(A-1-8)26daa	09-21-2000	—	—	—	<16	<.010	—	—	—
(D-1-5)10bdb	08-14-2000	<1.0	1	85	21	—	<1.0	<.80	<1.0
(D-1-5)23aca	09-01-2000	—	—	—	21	<.010	—	—	—
(D-1-6)15adb	08-11-2000	6.6	.47 E	71	9.2 E	—	<1.0	<.80	<1.0
(D-2-6)21aaa	03-12-2000	1.3	2	64	11 E	—	<1.0	<1.0	<1.0
	08-11-2000	1.6	1	60	16	—	<1.0	<.80	<1.0
(D-2-6)22dca	09-07-2000	—	—	—	12 E	<.010	—	—	—

<sup>1</sup>Results of chemical analysis reported by Utah Division of Drinking Water; analysis done by Chemtech-Ford Laboratory, Murray, Utah.<sup>2</sup>Depth of well 84 feet; water sample from alluvium.<sup>3</sup>Depth of well deepened to 290 feet; water sample from alluvium and volcanic rock.

## Valley and vicinity, Utah

Date	Iron, dissolved (µg/L as Fe)	Lead, dissolved (µg/L as Pb)	Manganese, dissolved (µg/L as Mn)	Mercury, dissolved (µg/L as Hg)	Selenium, dissolved (µg/L as Se)	Silver, dissolved (µg/L as Ag)	Zinc, dissolved (µg/L as Zn)	Gross alpha, dissolved (pCi/L as Th-230)	Gross beta, dissolved (pCi/L as Cs-137)
Ground-water sites									
01-18-1978	300	0	6.0	0	0	0	200	—	—
09-21-2000	280	—	12	—	—	—	—	—	—
07-27-2000	<10	—	<2.2	—	—	—	—	—	—
07-20-2000	7.9 E	<1.0	2.6	<.2	1	<1.0	67	<3.0	12
05-30-2000	<10	<1.0	4.5	<.2	<1	<1.0	82	—	—
09-06-2000	68	—	4.9	—	—	—	—	<3.0	<4.0
05-31-2000	<10	<1.0	<1.0	<.2	<1	<1.0	79	—	—
07-26-2000	<10	<1.0	3.7	<.2	<1	<1.0	48	<3.0	<4.0
09-13-2000	<10	—	<2.2	—	—	—	—	—	—
08-24-2000	<10	—	<2.2	—	—	—	—	—	—
06-01-2000	6.5 E	—	1.3 E	—	—	—	—	—	—
08-31-2000	<10	—	1.4 E	—	—	—	—	—	—
10-11-1998	110 T	<5.0 T	<10.0 T	<.2 T	4 T	<.5 T	<10.0 T	—	—
06-14-2000	<10	<1.0	<1.0	<.2 T	<1	<1.0	18	<3.0	<4.0
08-21-2000	13	—	5.0	—	—	—	—	—	—
09-11-2000	<10	—	<2.2	—	—	—	—	—	—
06-03-1992	320 T	<2.0 T	10.0 T	<1.1 T	<1.0 T	<8.0 T	9.0 T	—	—
09-28-1994	160 T	<5.0 T	35 T	<.2 T	<2.0 T	<2.0 T	20 T	—	—
09-28-2000	<10	—	<2.2	—	—	—	—	—	—
06-13-2000	<10	<1.0	<1.0	<.2	<1	<1.0	22	<3.0	<4.0
05-15-2000	20	—	1.2 E	—	—	—	—	—	—
08-15-2000	<10	—	<2.2	—	—	—	—	—	—
05-18-2000	<10	—	1.3 E	—	—	—	—	—	—
08-28-2000	<10	<1.0	1.1	<.2	.38 E	<1.0	128	<3.0	6.2
05-24-2000	8.8 E	<1.0	<1.0	<.2	<1	<1.0	14	—	—
08-22-2000	<10	—	<2.2	—	—	—	—	—	—
05-22-2000	<10	<1.0	<1.0	—	<1	<1.0	11	—	—
03-27-1996	10 T	<10.0 T	<2.0 T	<.2 T	<2.0 T	<2.0 T	8.0 T	—	—
02-09-1991	180 T	<8.0 T	<10 T	<1.0 T	<56 T	<10 T	<10 T	—	—
08-03-2000	<10	<1.0	<1.0	<.2	<1	<1.0	18	<3.0	<4.0
08-31-2000	3,700	—	56	—	—	—	—	—	—
09-27-2000	74	—	270	—	—	—	—	—	—
09-28-2000	<10	—	1.7 E	—	—	—	—	—	—
08-29-2000	<10	—	<2.2	—	—	—	—	—	—
11-02-2000	<10	—	2.8	—	—	—	—	—	—
10-03-2000	<10	—	<2.2	—	—	—	—	—	—
12-07-1992	<30 T	<1.0 T	<10.0 T	<.5 T	<2.0 T	<10.0 T	127 T	<2	<3
08-29-2000	<10	—	<2.2 T	—	—	—	—	—	—
12-09-1988	80 T	<1.0 T	<10.0 T	<.2 T	<1.0 T	<1.0 T	<10.0 T	—	—
08-16-2000	542	—	557	—	—	—	—	—	—
06-21-2000	53	<1.0	28	<.2	1 E	<1.0	29	<3.0	<4.0
11-28-2000	11	—	5.4	—	—	—	—	4.6	<4.0
09-12-2000	<10	—	<2.2	—	—	—	—	—	—
07-25-2000	<10	<1.0	23	<.2	<1	<1.0	155	4.4	6.9
05-15-1996	60 T	<5.0 T	<10.0 T	<.2 T	<2.0 T	<2.0 T	50 T	0	5
09-07-2000	29	—	4.7	—	—	—	—	—	—
12-27-1994	—	<5.0 T	—	<.2 T	<2.0 T	—	—	7	5
08-21-2000	<10	—	<2.2	—	—	—	—	—	—
Surface-water sites									
08-14-2000	—	<1.0	2.5	—	<1	<1.0	7.2	—	—
09-21-2000	13	—	1.7 E	—	—	—	—	—	—
08-14-2000	18	<1.0	12	—	<1	<1.0	8.8	—	—
09-01-2000	<10	—	6.5	—	—	—	—	—	—
08-11-2000	9.7 E	<1.0	2.5	—	<1	<1.0	6.2	—	—
03-12-2000	21	<1.0	7.4	—	<1	<1.0	3.7	—	—
08-11-2000	58	<1.0	15	—	<1	<1.0	2.3	—	—
09-07-2000	75	—	14	—	—	—	—	—	—

**Table 18.** Concentration of pesticides and herbicides in water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah

[µg/L, micrograms per liter; —, no data; <, less than stated value; E, estimated value; shaded values indicate detections]

Location: See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Location	Date	2,4,5-T, dis- solved (µg/L)	2,4-D, dis- solved (µg/L)	2,4-DB, water, filtered (µg/L)	2,6-Diethyl- aniline, water, filtered (µg/L)	3-Hydroxy- carbo- furan, water, filtered (µg/L)	Aceto- chlor, water, filtered (µg/L)	Acifluor- fen, water, filtered (µg/L)	Ala- chlor, water, dissolved (µg/L)	Aldicarb sulfone, water, filtered (µg/L)	Aldicarb sulfox- ide, water, filtered (µg/L)
Ground-water sites											
(D-1-5)23dda-1	05-30-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	<0.0020	<0.0900	<0.002	<0.100	<0.0210
(D-1-6)28cbc-1	06-14-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	<0.0020	<0.0900	<0.002	<0.100	<0.0210
(D-2-5)24ada-1	05-15-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	<0.0020	<0.0900	<0.002	<0.100	<0.0210
(D-2-6)9bbb-1	05-22-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	.0031 E	<0.0900	<0.002	<0.100	<0.140
(D-2-6)29ada-1	08-16-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	<0.0020	<0.0900	<0.002	<0.100	<0.0210
(D-2-6)34dcd-1	07-25-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	<0.0020	<0.0900	<0.002	<0.100	<0.0210
Surface-water sites											
(D-1-5)10bdb	08-14-2000	—	—	—	<0.0030	—	<0.0020	—	<0.002	—	—
(D-1-5)23aca	09-01-2000	<0.0400	<0.110	<0.100	<0.0030	<0.110	<0.0020	<0.0900	<0.002	<0.150	<0.0210
(D-1-6)15adb	08-11-2000	—	—	—	<0.0030	—	<0.0020	—	<0.002	—	—
(D-2-6)21aaa	08-11-2000	—	—	—	<0.0030	—	<0.0020	—	<0.002	—	—
Location	Date	Chlor- pyrifos, dissolved (µg/L)	Clopyr- alid, water, filtered (µg/L)	Cyana- zine, water, dis- solved (µg/L)	Dacthal- monoacid, water, filtered (µg/L)	DCPA, water, filtered (µg/L)	Deethyl- atrazine, water, dis- solved (µg/L)	Diazinon, dissolved (µg/L)	Dicamba, water, filtered (µg/L)	Dichlo- benil, water, filtered (µg/L)	Dichlor- prop, water, filtered (µg/L)
Ground-water sites											
(D-1-5)23dda-1	05-30-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	<0.0020	<0.002	<0.0430	<0.0700	<0.0320
(D-1-6)28cbc-1	06-14-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	<0.0020	<0.002	<0.0430	<0.0700	<0.0320
(D-2-5)24ada-1	05-15-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	<0.0020	<0.002	<0.0430	<0.0700	<0.0320
(D-2-6)9bbb-1	05-22-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	<0.0020	<0.002	<0.0430	<0.0700	<0.0320
(D-2-6)29ada-1	08-16-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	<0.0020	<0.002	<0.0430	<0.0700	<0.0320
(D-2-6)34dcd-1	07-25-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	<0.0020	<0.002	<0.0430	<0.0700	<0.0320
Surface-water sites											
(D-1-5)10bdb	08-14-2000	<0.0040	—	<0.0040	—	<0.0020	<0.0040	.004 E	—	—	—
(D-1-5)23aca	09-01-2000	<0.0040	<0.230	<0.0040	<0.0390	<0.0020	.0043 E	<0.002	<0.0430	<0.0700	<0.0320
(D-1-6)15adb	08-11-2000	<0.0040	—	<0.0040	—	<0.0020	<0.0020	<0.002	—	—	—
(D-2-6)21aaa	08-11-2000	<0.0040	—	<0.0040	—	<0.0020	<0.0020	<0.002	—	—	—
Location	Date	Linuron, water, filtered (µg/L)	Mala- thion, dis- solved (µg/L)	MCPA, water, filtered (µg/L)	MCPB, water, filtered (µg/L)	Methio- carb, water, filtered (µg/L)	Metho- myl, water, filtered (µg/L)	Methyl- azinphos, water, filtered (µg/L)	Methyl- parathion, water, filtered (µg/L)	Meto- lachlor, water, dissolved (µg/L)	Metri- buzin- sencor, water, dissolved (µg/L)
Ground-water sites											
(D-1-5)23dda-1	05-30-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.0170	<0.0010	<0.0060	<0.002	<0.004
(D-1-6)28cbc-1	06-14-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.0170	<0.0010	<0.0060	<0.002	<0.004
(D-2-5)24ada-1	05-15-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.0170	<0.0010	<0.0060	<0.002	<0.004
(D-2-6)9bbb-1	05-22-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.860	<0.0100	<0.0060	.005	<0.004
(D-2-6)29ada-1	08-16-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.0170	<0.0010	<0.0060	<0.002	<0.004
(D-2-6)34dcd-1	07-25-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.210	<0.0010	<0.0060	<0.002	<0.004
Surface-water sites											
(D-1-5)10bdb	08-14-2000	<0.0020	<0.005	—	—	—	—	<0.0010	<0.0200	<0.002	<0.004
(D-1-5)23aca	09-01-2000	<0.0020	<0.005	<0.170	<0.130	<0.0260	<0.160	<0.0010	<0.0060	<0.002	<0.004
(D-1-6)15adb	08-11-2000	<0.0020	<0.005	—	—	—	—	<0.0010	<0.0060	<0.002	<0.004
(D-2-6)21aaa	08-11-2000	<0.0020	<0.005	—	—	—	—	<0.0010	<0.0060	<0.002	<0.004

**Table 18.** Concentration of pesticides and herbicides in water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah—Continued

Location	Date	Aldicarb, water, filtered (µg/L)	Alpha BHC, dissolved (µg/L)	Atra- zine, water, dissolved (µg/L)	Ben- fluralin, water, filtered (µg/L)	Benta- zon, water, filtered (µg/L)	Bromacil, water, dis- solved (µg/L)	Brom- oxynil, water, filtered (µg/L)	Butylate, water, dissolved (µg/L)	Car- baryl, water, filtered (µg/L)	Carbo- furan, water, filtered (µg/L)	Chloram- ben, methyl- ester, water, filtered (µg/L)	Chloro- thalonil, water, filtered (µg/L)
Ground-water sites													
(D-1-5)23dda-1	05-30-2000	<.210	<.0020	.003 E	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
(D-1-6)28cbc-1	06-14-2000	<.210	<.0020	<.001	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
(D-2-5)24ada-1	05-15-2000	<.210	<.0020	<.001	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
(D-2-6)9bbb-1	05-22-2000	<.210	<.0020	.005	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
(D-2-6)29ada-1	08-16-2000	<.210	<.0020	<.001	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
(D-2-6)34dcd-1	07-25-2000	<.210	<.0020	.006	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
Surface-water sites													
(D-1-5)10bdb	08-14-2000	—	<.0020	<.004	<.0020	—	—	—	<.0020	<.0030	<.0030	—	—
(D-1-5)23aca	09-01-2000	<.610	<.0020	.005	<.0020	<.0350	<.0600	<.0400	<.0020	<.0030	<.0030	<.140	<.480
(D-1-6)15adb	08-11-2000	—	<.0020	<.001	<.0020	—	—	—	<.0020	<.0030	<.0030	—	—
(D-2-6)21aaa	08-11-2000	—	<.0020	<.001	<.0020	—	—	—	<.0020	<.0030	<.0030	—	—
Location	Date	Dieldrin, dissolved (µg/L)	Dinoseb, water, filtered (µg/L)	Disul- foton, water, filtered (µg/L)	Diuron, water, filtered (µg/L)	DNOC, water, filtered (µg/L)	EPTC, water, filtered (µg/L)	Ethal- fluralin, water, filtered (µg/L)	Etho- prop, water, filtered (µg/L)	Fenuron, water, filtered (µg/L)	Fluome- turon, water, filtered (µg/L)	Fonofos, water, dis- solved (µg/L)	Lindane, dissolved (µg/L)
Ground-water sites													
(D-1-5)23dda-1	05-30-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
(D-1-6)28cbc-1	06-14-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
(D-2-5)24ada-1	05-15-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
(D-2-6)9bbb-1	05-22-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0050	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
(D-2-6)29ada-1	08-16-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
(D-2-6)34dcd-1	07-25-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
Surface-water sites													
(D-1-5)10bdb	08-14-2000	<.001	—	<.0170	—	—	<.250	<.0040	<.0030	—	—	<.0030	<.004
(D-1-5)23aca	09-01-2000	<.001	<.0600	<.0170	<.0600	<.420	<.0020	<.0040	<.0030	<.0700	<.0600	<.0030	<.004
(D-1-6)15adb	08-11-2000	<.001	—	<.0170	—	—	<.0020	<.0040	<.0030	—	—	<.0030	<.004
(D-2-6)21aaa	08-11-2000	<.001	—	<.0170	—	—	<.0020	<.0040	<.0030	—	—	<.0030	<.004
Location	Date	Molinate, water, filtered (µg/L)	Napro- pamide, water, filtered (µg/L)	Neburon, water, filtered (µg/L)	Norflu- razon, water, filtered (µg/L)	Oryzalin, water, filtered (µg/L)	Oxamyl, water, filtered (µg/L)	P,P' DDE, dissolved (µg/L)	Parathion, dissolved (µg/L)	Pebulate, water, filtered (µg/L)	Pendi- methalin, water, filtered (µg/L)	Permeth- rin CIS, water, filtered (µg/L)	Phorate, water, filtered (µg/L)
Ground-water sites													
(D-1-5)23dda-1	05-30-2000	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-1-6)28cbc-1	06-14-2000	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-2-5)24ada-1	05-15-2000	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-2-6)9bbb-1	05-22-2000	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-2-6)29ada-1	08-16-2000	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-2-6)34dcd-1	07-25-2000	<.0040	<.0030	<.0700	<.0420	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
Surface-water sites													
(D-1-5)10bdb	08-14-2000	<.0040	<.0030	—	—	—	—	.0023 E	<.004	<.0040	<.0040	<.0050	<.0020
(D-1-5)23aca	09-01-2000	<.0040	<.0030	<.1400	<.0420	<.310	<.100	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-1-6)15adb	08-11-2000	<.0040	<.0030	—	—	—	—	<.0060	<.004	<.0040	<.0040	<.0050	<.0020
(D-2-6)21aaa	08-11-2000	<.0040	<.0030	—	—	—	—	<.0060	<.004	<.0040	<.0040	<.0050	<.0020

**Table 18.** Concentration of pesticides and herbicides in water from selected ground-water and surface-water sites in Kamas Valley and vicinity, Utah—Continued

Location	Date	Picloram, water, filtered (µg/L)	Prometon, water, dissolved (µg/L)	Pronamide, water, filtered (µg/L)	Propchlor, water, dissolved (µg/L)	Propanil, water, filtered (µg/L)	Propargite, water, filtered (µg/L)	Propham, water, filtered (µg/L)	Propoxur, water, filtered (µg/L)	Silvex, dissolved (µg/L)
Ground-water sites										
(D-1-5)23dda-1	05-30-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
(D-1-6)28cbc-1	06-14-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
(D-2-5)24ada-1	05-15-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
(D-2-6)9bbb-1	05-22-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
(D-2-6)29ada-1	08-16-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
(D-2-6)34dcd-1	07-25-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
Surface-water sites										
(D-1-5)10bdb	08-14-2000	—	<.0180	<.0030	<.0070	<.0040	<.0600	—	—	—
(D-1-5)23aca	09-01-2000	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0800	<.0600
(D-1-6)15adb	08-11-2000	—	<.0180	<.0030	<.0070	<.0040	<.0130	—	—	—
(D-2-6)21aaa	08-11-2000	—	<.0180	<.0030	<.0070	<.0040	<.0130	—	—	—
Location	Date	Simazine, water, dissolved (µg/L)	Tebuthiuron, water, filtered (µg/L)	Terbacil, water, filtered (µg/L)	Terbufos, water, filtered (µg/L)	Thiobencarb, water, filtered (µg/L)	Triallate, water, filtered (µg/L)	Triclopyr, water, filtered (µg/L)	Trifluralin, water, filtered (µg/L)	
Ground-water sites										
(D-1-5)23dda-1	05-30-2000	.0025 E	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
(D-1-6)28cbc-1	06-14-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
(D-2-5)24ada-1	05-15-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
(D-2-6)9bbb-1	05-22-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
(D-2-6)29ada-1	08-16-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
(D-2-6)34dcd-1	07-25-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
Surface-water sites										
(D-1-5)10bdb	08-14-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	—	.0050	
(D-1-5)23aca	09-01-2000	.0038 E	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020	
(D-1-6)15adb	08-11-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	—	<.0020	
(D-2-6)21aaa	08-11-2000	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	—	<.0020	

**Table 19.** Physical properties and concentration of major ions, nutrients, and trace elements for blank and duplicate samples processed at selected wells in Kamas Valley, Utah

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; µg/L, micrograms per liter; deg. C, degrees Celsius; <, less than stated value; E, estimated value; —, no data]

Location: Site at which quality-assurance sample was processed. See figure 1 for an explanation of the numbering system used for hydrologic-data sites in Utah.

Location	Date	pH, water, whole, lab (standard units)	Specific conductance, lab (µS/cm)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Potassium, dissolved (mg/L as K)	Sodium, dissolved (mg/L as Na)	Alkalinity, water dissolved, lab (mg/L as CaCO <sub>3</sub> )	Chloride, dissolved (mg/L as Cl)
<sup>1</sup> (D-2-6)4dac-1	08-28-2000	7.9	3	<0.020	<0.014	<0.24	<0.090	2.0	<0.29
<sup>2</sup> (D-2-6)8ddd-1	08-22-2000	7.9	430	55	16	.56	5.4	200	13
<sup>3</sup> (D-2-6)8ddd-1	08-22-2000	7.6	425	55	16	.51	5.3	200	13
<sup>1</sup> (D-2-6)26abb-1	10-03-2000	8.3	2 E	<.020	<.014	<.24	<.090	<1.0	<.29
<sup>1</sup> (D-2-6)34dcd-1	07-25-2000	8.0	5	.062	<.014	<.24	<.090	2.0	<.29
Location	Date	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO <sub>2</sub> )	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia+organic, dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> +NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, nitrite, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)
(D-2-6)4dac-1	08-28-2000	<.10	<.090	<.31	—	—	—	—	—
(D-2-6)8ddd-1	08-22-2000	<.10	9.8	7.7	<.020	<.10	.683	<.010	<.050
(D-2-6)8ddd-1	08-22-2000	.10	9.8	7.7	<.020	<.10	.680	<.010	<.050
(D-2-6)26abb-1	10-03-2000	<.10	<.090	<.31	<.020	<.10	<.050	<.010	<.060
(D-2-6)34dcd-1	07-25-2000	<.10	.12	<.31	—	—	—	—	—
Location	Date	Phosphate, ortho, dissolved (mg/L as P)	Solids, residue at 180 deg. C, dissolved (mg/L)	Aluminum, dissolved (µg/L as Al)	Arsenic, dissolved (µg/L as As)	Barium, dissolved (µg/L as Ba)	Boron, dissolved (µg/L as B)	Bromide, dissolved (mg/L as Br)	Cadmium, dissolved (µg/L as Cd)
(D-2-6)4dac-1	08-28-2000	—	<10	<1.0	<1	<1.0	<16	<.010	<1.0
(D-2-6)8ddd-1	08-22-2000	<.010	236	—	—	—	13 E	.070	—
(D-2-6)8ddd-1	08-22-2000	<.010	234	—	—	—	17	.053	—
(D-2-6)26abb-1	10-03-2000	<.010	<10	—	—	—	<16	<.010	—
(D-2-6)34dcd-1	07-25-2000	—	<10	23	<1	<1.0	9.4 E	<.010	<1.0
Location	Date	Chromium, dissolved (µg/L as Cr)	Copper, dissolved (µg/L as Cu)	Iron, dissolved (µg/L as Fe)	Lead, dissolved (µg/L as Pb)	Manganese, dissolved (µg/L as Mn)	Selenium, dissolved (µg/L as Se)	Silver, dissolved (µg/L as Ag)	Zinc, dissolved (µg/L as Zn)
(D-2-6)4dac-1	08-28-2000	<.80	<1.0	<10	<1.0	<1.0	<1	<1.0	<1.0
(D-2-6)8ddd-1	08-22-2000	—	—	<10	—	<2.2	—	—	—
(D-2-6)8ddd-1	08-22-2000	—	—	<10	—	<2.2	—	—	—
(D-2-6)26abb-1	10-03-2000	—	—	<10	—	<2.2	—	—	—
(D-2-6)34dcd-1	07-25-2000	<.80	<1.0	<10	<1.0	<1.0	<1	<1.0	9.8

<sup>1</sup>Blank sample.

<sup>2</sup>Duplicate sample.

<sup>3</sup>Environmental sample.



