

DATA USES AND FUNDING SOURCES FOR THE STREAM-GAGING PROGRAM IN UTAH

by R. W. Cruff

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# DATA USES AND FUNDING SOURCES FOR THE STREAM-GAGING PROGRAM IN UTAH

by R. W. Cruff

## ABSTRACT

This report documents the results of the first phase of a study of the cost effectiveness of the streamflow-information program in Utah. Data use, funding, and data availability are described for the streamflow stations operated by the U.S. Geological Survey; and a history of the stream-gaging program is given. During the 1984 water year, 214 continuous streamflow stations were operated on a budget of \$854,000. Data from most stations have multiple uses and all stations presently have sufficient justification for continuation.

## INTRODUCTION

The U.S. Geological Survey is the principal Federal agency collecting surface-water data in the United States, and the collection of these data is a major activity of the Water Resources Division of the Geological Survey. Much of the data are collected in cooperation with State and local governments and other Federal agencies. The Geological Survey presently (1984) is operating approximately 8,000 continuous-record streamflow stations throughout the Nation. Some of these records extend back to the 19th century. Any activity of long standing, such as the collection of surface-water data, should be reexamined at intervals, if not continuously, because of changes in objectives, technology, or external constraints. The stream-gaging activity no longer is considered a network of observation points, but rather it is an integrated information system in which data are provided both by observation and synthesis. The last systematic, nationwide evaluation of the streamflow-information program was completed in 1970 and is documented by Benson and Carter (1973).

The Geological Survey presently (1984) is undertaking another nationwide analysis of the stream-gaging program, with the objective of defining and documenting the most cost-effective means of furnishing streamflow information. The analysis will be in three phases. In the first phase, for every continuous streamflow station, the principal uses of the data will be identified and related to funding sources. In addition, continuous streamflow stations will be categorized as to whether the data are available to users on a real-time sense, on a periodic basis, or at the end of the water year.

The second phase of the analysis will involve identification of less costly alternate methods of furnishing the needed information, such as flow-routing models and statistical methods. The third phase of the analysis involves the use of Kalman-filtering and mathematical-programing techniques to define strategies for the operation of the necessary streamflow stations that minimize uncertainty in the streamflow records for given operating budgets.

This report covers only the first phase of the analysis-data use. The report is patterned after pilot studies for the states of Maine (Fontaine and others, 1984) and Nebraska (Engel and others 1984).

## HISTORY OF THE STREAM-GAGING PROGRAM

The stream-gaging program in Utah has evolved through the years as Federal, State, and local needs for surface-water data have increased. On October 2, 1888, Congress approved the Sundry Civil Appropriation Act, which provided \$100,000 for water-resources investigations by the U.S. Geological Survey. In March 1889 Congress made an appropriation of \$250,000 for further work of the Irrigation Survey, which included that of the Hydrographic Survey. Soon afterwards, in 1889, two hydrographers were assigned to the Utah Territory--F. H. Newell and T. M. Bannon. They established eight streamflow stations, of which three (Bear River near Collinston, Weber River at Gateway, and Spanish Fork at Castilla) are still in operation. By 1900, 15 continuous streamflow stations were in operation in Utah. (See figure 1.)

The stream-gaging program became cooperative in 1904 when the Utah State Engineer contributed \$100 to pay half of the salaries of gage observers at four streamflow stations. Formal cooperation between the U.S. Geological Survey and the State of Utah was started in 1909, with an annual appropriation of \$2,000 by the Utah Legislature to be used in cooperation with the Survey on a 50-50 basis. This grew to about \$5,000 by 1914. In 1914, an agreement between the State Engineer and the water users in the Sevier River basin increased the program, thus enabling the Survey to perform an investigation of the Sevier River and the canals diverting from it. This investigation was needed to obtain essential data for use by the State and the courts to adjudicate existing water rights and to determine the advisability of granting new rights. This study lasted until 1919.

In 1913, the Utah Power and Light Co. began an extensive water-power investigation and equipped 15 streamflow stations with water-stage recorders. The field data from these stations were furnished to the Geological Survey.

In May 1914, the U.S. Reclamation Service authorized the installation of three streamflow stations on the Green and Colorado Rivers and in October the installation of a streamflow station on the San Juan River near Bluff. The station on the San Juan was discontinued and the Colorado River station was reduced to a partial-record station in 1917.

In 1899 and 1900, 7 gaging stations were established in connection with an irrigation survey for the U.S. Indian Service on the Uintah Reservation. In 1918, the U.S. Indian Service allotted \$2,200 for 1918 and \$1,520 for each of the next 2 years for the Geological Survey to collect streamflow data in the Uinta Basin. By 1919, there were 102 streamflow stations (56 continuous) in Utah, with 70 of them equipped with recorders. With the Sevier River basin study ending, the number of streamflow stations was reduced to 58 (51 continuous) in 1920 and to 51 in 1924. This was then increased to 56 (52 continuous and 31 equipped with recorders) by 1928.

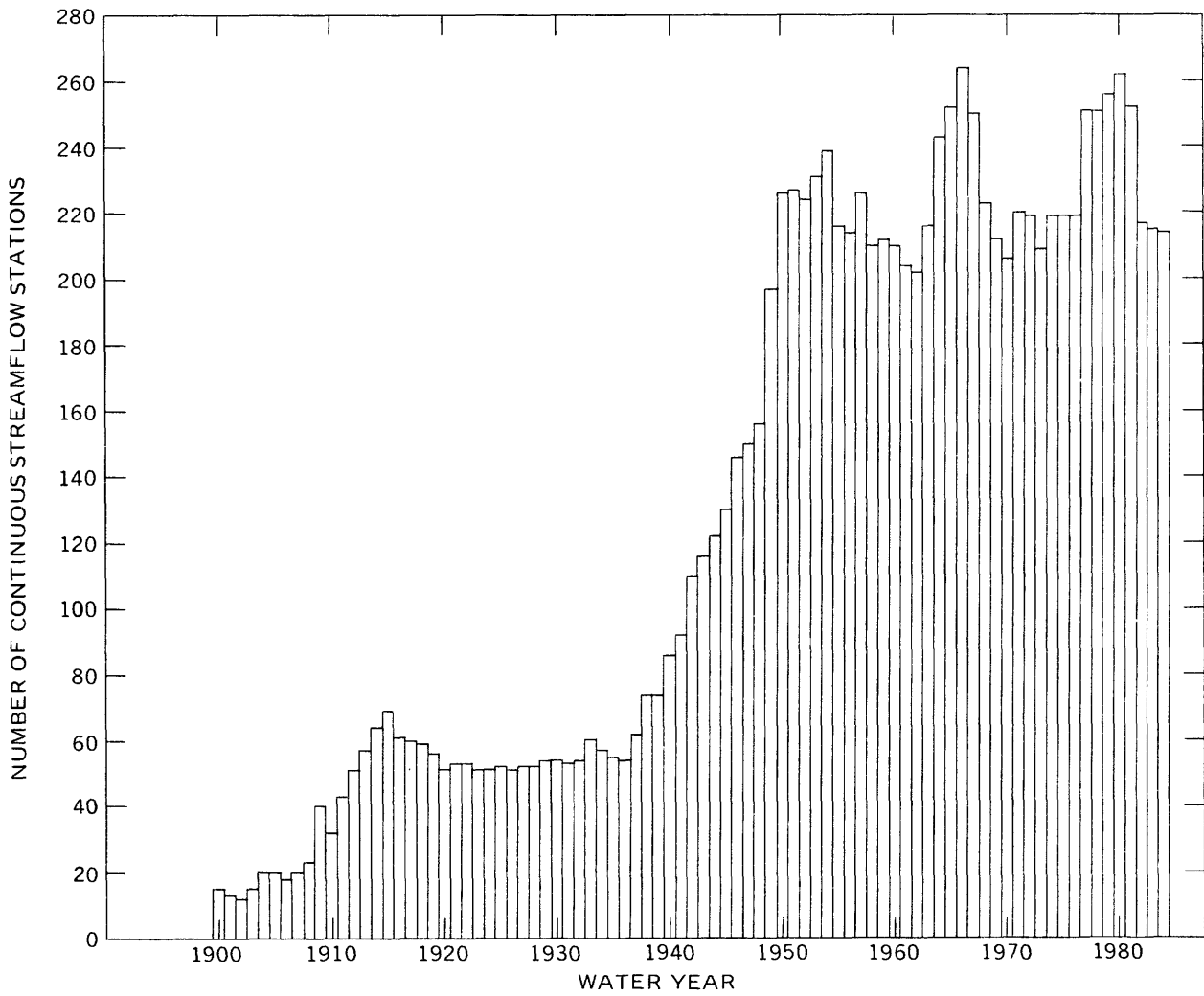


Figure 1.—History of continuous stream gaging in Utah.

Increasing interest in the Colorado River resulted in the reestablishment of one base streamflow station each on the Colorado, Green, and San Juan Rivers and the designation of the Green River at Green River, Utah, as a base streamflow station, with cooperation from several sources. Annual Congressional appropriations direct to the Geological Survey for these base streamflow stations was started in 1929. The record for the missing years later was estimated and published for the Colorado and San Juan Rivers.

Increased interest in the State's water resources between 1932 and 1939 brought an increase in the streamflow-station activity with 74 stations being maintained by 1939. Nearly all were equipped with recorders, and about 20 were financed in part by private contributions.

In 1942 and 1947, the cooperative program with the State Engineer was greatly increased; and in 1943, an investigation of the Bear River was begun. This involved 79 streamflow stations in the Bear River basin in Utah, Idaho and Wyoming. During 1939-47, funding for some of the increase in streamflow-station operation was provided by the Corps of Engineers and the U.S. Bureau of Reclamation.

Beginning in 1949, operation of a number of water-management streamflow-stations was begun. Most were operated for 2-8 years and by 1958 most had been discontinued. Starting in 1963, the State began to develop a State water plan. This resulted in the recommendation of many sites in Utah where streamflow data were needed for a better understanding of the hydrology of the State. During 1963-65 a number of these sites were instrumented and data collection begun. Also from 1963-68 about 23 streamflow stations were operated as part of a major study of the hydrology of Salt Lake Valley.

As streamflow data became available, the Utah Department of Transportation began using flood stages, discharges, and frequencies in the design of bridges and culverts. Need for design data also led to establishment in 1959 of a statewide network of crest-stage gages on small drainage basins. Data were collected at about 160 sites under this program until it was terminated in 1974.

In 1970, the Geological Survey, made a network evaluation of the streamflow program in Utah (Whitaker, 1971) as part of a nationwide effort. This resulted in the discontinuation of some of the streamflow stations that had been installed as a result of the State water plan after 10-20 years of data collection. Many of these streamflow stations have been replaced by others which were installed for the purpose of gaining information for a specific problem, such as the design of a proposed reservoir.

During the mid-1970's, the energy crisis in the United States led to consideration of the expansion of coal mining and the beginning of oil-shale mining in Utah. This in turn created the need for hydrologic data to be used as baseline information before mining-related development and to be used to monitor changes resulting from such development. In 1974, the U.S. Bureau of Land Management recognized the need for better knowledge of hydrology to aid in better management of the lands that they administer. Since then, Land Management has supported from 5-10 streamflow stations annually.

In 1974, the Geological Survey began a Federally-funded study to collect baseline-hydrologic information in the oil-shale area in northeast Utah. This involved the installation of 20 streamflow stations, some of which were operated until 1983. In 1978, a Federally-funded program was begun to monitor streamflow in areas of coal mining. This program was operated by contract, and by 1981 it included 19 streamflow stations. In 1982, the program was reduced to 7 streamflow stations which were continued in operation by Geological Survey personnel until 1984.

#### STREAM-GAGING PROGRAM IN 1984

During 1984, 214 continuous streamflow stations were operated by the Geological Survey in Utah and in the Bear River basin of Idaho and Wyoming. For convenience, the state may be divided into four major basins (fig. 2). These basins and the number of streamflow stations in each are the upper Colorado River Basin (89), the lower Colorado River Basin (13), the Great Basin (111), and the Snake River basin (1). The cost of operation of these continuous streamflow stations during fiscal-year 1984 was \$854,000. This study shows that data from most continuous streamflow stations have multiple uses and that all stations presently have sufficient justification for continuation.

Selected hydrologic data, including the station number, station name, drainage area, period of record, and average discharge for the 214 continuous streamflow stations are given in Table 1. Station identification numbers used throughout this report are the Geological Survey's eight-digit downstream-order station number.

#### USES, FUNDING, AND AVAILABILITY OF CONTINUOUS STREAMFLOW DATA

The relevance of a continuous streamflow station is defined by the uses made of the data produced from it. It may have been established for a specific use, but its availability has produced other uses. The uses of the data from each continuous streamflow station in Utah were identified by a survey of data users. The survey documented the importance of each continuous streamflow station and identified the ones that might be considered for discontinuation.

Data uses identified by the survey were categorized into nine categories, which are discussed in the following section. The sources of funding for each continuous streamflow station and the frequency at which data are available to users were also compiled and are discussed later in the report.

#### Data-Use Categories

The following categories were used to classify each known use of streamflow data for each streamflow station. A continuous streamflow station may be included in more than one category.





## Regional Hydrology

For data to be useful in defining regional hydrology, the stream flow must be largely unaffected by manmade storage or diversion. In this category of use, the effects of man on streamflow are not necessarily small, but the effects are limited to those caused primarily by land-use and climate changes. Large amounts of manmade storage may exist in the basin providing the outflow is uncontrolled. Data from continuous streamflow stations in this category are useful in developing regionally transferable information about the relationship between basin characteristics and streamflow.

Fifty-nine continuous streamflow stations in the Utah network are included in the regional-hydrology category. Seven of the stations are special cases in that one is designated as a hydrologic bench-mark and six are designated as index continuous streamflow stations. The hydrologic bench-mark continuous streamflow station is part of a national network of 57 continuous streamflow stations operated on watersheds that are relatively free from manmade alteration. The network is intended to define long-term trends. Index stations are used to prepare a national monthly summary of water conditions.

## Hydrologic Systems

Continuous streamflow stations that can be used for accounting, that is, to define current hydrologic conditions and the sources, sinks, and fluxes of water through hydrologic systems including regulated systems, are designated as hydrologic-systems stations. One hundred ninety-nine continuous streamflow stations in the Utah network are included in this category. They include continuous streamflow stations that are useful for defining the interaction of water systems, and they can be affected by diversions and return flows.

The hydrologic bench-mark and index stations also are included in the hydrologic-systems category because they are accounting for current and long-term conditions of the hydrologic systems that they gage. Many continuous streamflow stations in this category are used by the Utah Division of Water Rights for administration of water rights. Also included in this category are continuous streamflow stations used by the U.S. Bureau of Reclamation for accounting of regulated stream flow. The Colorado, Green, and San Juan Rivers essentially are parts of a regulated system, and continuous streamflow stations on these streams are in this category.

## Legal Obligations

Some continuous streamflow stations provide records of flows for the verification or enforcement of existing treaties, compacts, and decrees. This category contains those stations that the Geological Survey operates to satisfy such legal responsibilities. The Colorado River Compact designates the Geological Survey to operate continuous streamflow stations needed for the equitable distribution of water among the states of Colorado, Wyoming, Utah, Arizona, New Mexico, Nevada, and California. Nine continuous streamflow stations are used for this purpose. Also included in this category are

continuous streamflow stations that the Geological Survey has been asked to operate in cooperation with the Bear River Commission and other agencies. Thirty-one continuous streamflow stations in the Utah network are included in this category.

#### Planning and Design

Continuous streamflow stations in this category are used for the planning and design of a specific project (for example, a dam, levee, floodwall, navigation system, water-supply diversion, hydropower plant, or waste-treatment facility) or group of structures. Ninety-seven continuous streamflow stations are at least partly used under this category.

#### Project Operation

Gaging stations in this category are used, on an ongoing basis, to assist water managers in making operational decisions such as reservoir releases, hydropower operations, or diversions. The project-operation category generally implies that the data are routinely available to the operators within a reasonable time. For projects on large streams, data may only be needed every few days.

One hundred-six continuous streamflow stations are included in this category. Among these are stations used by the Utah Division of Water Rights for water-rights administration and the U.S. Bureau of Reclamation for irrigation projects reservoir operations and hydropower facilities.

#### Hydrologic Forecasts

Gaging stations in this category are used regularly to provide information for hydrologic forecasting. These include flood forecasts for a specific river reach and periodic (daily, weekly, monthly, or seasonal) flow-volume forecasts for a specific site or region. The hydrologic-forecasts category generally implies that the data are routinely available to the forecasters within a reasonable segment of time. On large streams, data only may be needed every few days.

Included in this category are those continuous streamflow stations that have been designated by the National Weather Service as being needed for flood forecasting. In addition to the needs of the National Weather Service, other agencies use the information from continuous streamflow stations during floods, particularly, County flood-control agencies and the U.S. Bureau of Reclamation. Of the 69 continuous streamflow stations in this category, 5 have direct access through telemetry equipment.

#### Water-Quality Monitoring

Continuous streamflow stations in this category are those where regular water-quality or sediment-transport monitoring is being conducted and where the availability of streamflow data contributes to the utility of or is essential to the interpretation of the water quality or sediment data. Forty-one continuous streamflow stations are included in this category. Continuous

streamflow stations operated as part of the National Stream-Quality Accounting Network (NASQAN) are included in this category. NASQAN stations are operated to define both areal variability and trends in stream quality.

One continuous streamflow station in this category is a hydrologic bench mark and 12 are NASQAN stations. Water samples obtained at bench-mark stations provide an indication of water-quality characteristics of streams that have been and probably will continue to be relatively free of manmade influence.

At other continuous streamflow stations in this category, water-quality monitoring is being conducted through funding of the Geological Survey or the U.S. Bureau of Reclamation or Land Management. The Utah Division of Water Resources also supports some continuous streamflow stations as part of their investigations of proposed reservoir sites.

#### Research

The 10 continuous streamflow stations in this category are operated for research or water-investigations studies. Typically, these only are operated for a few years. The need for continuation of these continuous streamflow stations will be reviewed when the research need is fulfilled.

#### Other

In addition to being included in one of the data-use categories described above, 3 continuous streamflow stations were designated in this category. These continuous streamflow stations are used primarily to correlate with short-term records collected at other streamflow stations. When sufficient length-of-record is obtained at the other sites, the need for them will be reviewed.

#### Funding

The three sources of funding for the streamflow-data program are:

1. Federal.--Funds that have been directly allocated to the Geological Survey.
2. Other Federal Agency.--Funds that have been transferred to the Geological Survey by other Federal agencies.
3. Federal-State cooperative.--Funds that come jointly from funding to the Geological Survey that is designated for cooperative matching and from a non-Federal cooperating agency. Funds from the cooperating agency may be in the form of direct services or cash.

The identified sources of funding pertain only to the collection of streamflow data. Sources of funding for other activities, particularly collection of water-quality data at the site, may not be the same as those identified herein.

### Frequency of Data Availability

Frequency of data availability is based on the interval at which the streamflow data may be furnished to the users. Three distinct possibilities exist. Data can be furnished by direct-access telemetry equipment for immediate use (includes both telephone-accessed equipment and satellite data-collection platforms); by periodic release of provisional data; or in publication format through the annual data report published by the Geological Survey for Utah (U.S. Geological Survey, 1983). These three categories are designated T, P, and A, respectively, in table 2. In the current Utah program, data for all 214 stations are made available through the annual report; data from 5 stations are available on an immediate-use basis; and data from 6 stations are released on a provisional basis monthly, and some data are released periodically on a provisional basis for most of the stations.

### Data-Use Presentation

Data-use and ancillary information are presented for each continuous streamflow station in table 2. The table contains numerous footnotes to expand the information conveyed.

### SUMMARY

The data from most streamflow stations in the Utah network have multiple uses. Many of the continuous streamflow stations are used on an ongoing basis for hydrologic systems and for project operation. Although stations may have been established for one specific purpose, the availability of the data have, in itself, produced other uses for the data.

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Table 1.--Selected hydrologic data for continuous streamflow stations in Utah

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09163675	Cottonwood Wash at I-70, near Cisco, Utah	170	April 1983-	--
09180000	Dolores River near Cisco, Utah	4,580 approx.	October 1950-	785
09180500	Colorado River near Cisco, Utah	24,100 approx.	January 1895-	7,563
09183000	Courthouse Wash near Moab, Utah	162	October 1949-September 1955, April-September 1957, July 1966-	1.86
09184000	Mill Creek near Moab, Utah	74.9	October 1914, February-November 1914, February-November 1915, February-March 1916, June 1916-June 1917, April-July 1918, April-July 1919, July 1949-September 1971, October 1972-March 1983-	14.3
09187550	Indian Creek below Bogus Pocket, near Monticello, Utah	262	March 1983-	--
09217900	Blacks Fork near Robertson, Wyoming	130 approx.	October 1937-July 1939, July 1966-	160
09234500	Green River near Greendale, Utah	19,350 approx.	October 1950-	2,087
09235600	Pot Creek above diversions, near Vernal, Utah	24.6	September 1957-	3.85
09261000	Green River near Jensen, Utah	29,660 approx.	October 1903-December 1904, June-August 1905, March-September 1906, July-October 1914, August-December 1915, October 1946-October 1979-	4,396
09261700	Big Brush Creek above Red Fleet Reservoir, near Vernal, Utah	77.2	October 1979-	--
09266500	Ashley Creek near Vernal, Utah	101	October 1911-April 1912, August-December 1912, October 1913-July 1954-	99.6
09267500	Mosby Canal near Lapoint, Utah	--		--

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09268500	North Fork of Dry Fork near Dry Fork, Utah	8.62	April 1946-	6.84
09268900	Brownie Canyon above sinks, near Dry Fork, Utah	8.24	October 1960-	13.2
09270500	Dry Fork at mouth, near Dry Fork, Utah	115	July 1954-	27.9
09275500	West Fork Duchesne River near Hanna, Utah	61.6	May-October 1904, August 1921-March 1922, October 1922-September 1923, October 1945-	49.1
09276000	Wolf Creek above Rhoades Canyon, near Hanna, Utah	10.6	October 1945- September 1984	7.68
09277500	Duchesne River near Tabiona, Utah	356	October 1918-	200
09277800	Rock Creek above South Fork, near Hanna, Utah	98.9	October 1965-	140
09278000	South Fork Rock Creek near Hanna, Utah	15.7	August 1953-	13.3
09278500	Rock Creek near Hanna, Utah	122	July 1949-September 1969, August 1974-	153
09279000	Rock Creek near Mountain Home, Utah	147	October 1937-	171
09279100	Rock Creek near Talmage, Utah	238	October 1963-	182
09279150	Duchesne River above Knight diversion, near Duchesne, Utah	623	April 1970-	360
09280400	Hobble Creek at Daniels Summit, near Wallsburg, Utah	2.89	October 1963- September 1984	2.96
09285000	Strawberry River near Soldier Springs, Utah	213	October 1942-September 1956, October 1963-	31.0
09286700	Current Creek below Current Creek Dam, near Fruitland, Utah	48.0	October 1983-	--
09287500	Water Hollow near Fruitland, Utah	13.8	April 1946-September 1984	5.71
09288000	Current Creek near Fruitland, Utah	140	October 1934-	46.0
09288150	West Fork Avintaquin Creek near Fruitland, Utah	56.1	June 1964-	15.5
09288180	Strawberry River near Duchesne, Utah	917	May 1968-	147
09288900	Sowers Creek near Duchesne, Utah	40.6	May 1964-	4.19

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09289500	Lake Fork River above Moon Lake, near Mountain Home, Utah	77.9	April 1933-September 1934, July 1942-September 1955, October 1963-September 1965, October 1965-	113
09291000	Lake Fork River below Moon Lake, near Mountain Home, Utah	112	September 1921-September 1934, April 1942-	127
09291200	Lake Fork River below Taskeech Dam site, near Mountain Home, Utah	138	October 1976-September 1984	92.8
09292500	Yellowstone River near Altonah, Utah	132	October 1944-	139
09295000	Duchesne River at Myton, Utah	2,643	October 1899-December 1902, April-December 1903, March-December, 1904, March-July and September-November 1905	512
09299500	Whiterocks River near Whiterocks, Utah	113	April-July 1906, April-December 1907, March-December 1908, April-December 1909, March-November 1910, July 1911-September 1899-December 1903, April-December 1907, March 1908-November 1910, October 1913-	123
09302000	Duchesne River near Randlett, Utah	4,247	October 1942-	582
09306395	White River near Colorado-Utah State Line	3,680 approx.	October 1976-	704
09306800	Bitter Creek near Bonanza, Utah	324	October 1970-	2.37
09306900	White River at mouth, near Ouray, Utah	5,120 approx.	April 1974-	710
09307200	Pariette Draw near Ouray, Utah	153	October 1975-September 1984	26.8
09307300	Pariette Draw at mouth, near Ouray, Utah	298	October 1975-September 1984	22.0



Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09308500	Minne Maud Creek near Myton, Utah	32	August 1950-September 1955, September 1957-	5.52
09309600	Fairview Tunnel near Fairview, Utah	--	July 1967-	--
09310000	Gooseberry Creek near Scofield, Utah	16.8	October 1930-September 1931, May 1940-	18.8
09310500	Fish Creek above reservoir, near Scofield, Utah	60.1	June-October 1931, April-September 1932, October 1938-	48.6
09310575	Boardinghouse Creek at mouth, near Scofield, Utah	2.04	November 1982-September 1984	--
09310600	Eccles Canyon near Scofield, Utah	5.5	October 1979-September 1984	--
09310700	Mud Creek below Winter Quarters Canyon, at Scofield, Utah	29.1	August 1978-September 1984	15.7
09312600	White River below Tabbyune Creek, near Soldier Summit, Utah	75.6	May 1967-	30.7
09312700	Beaver Creek near Soldier Summit, Utah	26.1	October 1960-	4.31
09312800	Willow Creek near Castle Gate, Utah	62.8	October 1962-	9.33
09313975	Soldier Creek below mine, near Wellington, Utah	17.7	September 1978-September 1984	--
09314250	Price River below Miller Creek near Wellington, Utah	956	April 1972-	117
09314280	Desert Seep Wash near Wellington, Utah	191	May 1972-	25.6
09314340	Grassy Trail Creek at Sunnyside, Utah	40.1	October 1978-September 1984	10.4
09314500	Price River at Woodside, Utah	1,540	September 1909-December 1910, January-August 1911, November 1945-	115
09315000	Green River at Green River, Utah	44,850 approx.	October 1894-October 1899, October 1904-	6,316
09316100	Floy Wash near Green River, Utah	56.6	April 1983-	--

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09317919	Crandall Canyon at mouth, near Huntington, Utah	5.7	October 1978-September 1984	--
09319000	Ephraim Tunnel, near Ephraim, Utah	--	September 1949-	--
09323000	Spring City Tunnel near Spring City, Utah	--	October 1949-	--
09324500	Cottonwood Creek near Orangeville, Utah	208	May 1909-July 1921, October 1921-September 1927, May 1932-September 1970, October 1975-September 1984	97.6
09326500	Ferron Creek (upper station) near Ferron, Utah	138	May 1911-September 1923, October 1947-October 1975-	67.9
09327550	Ferron Creek below Paradise Ranch, near Clawson, Utah	221	October 1975-	57.3
09328000	San Rafael River near Castle Dale, Utah	930	October 1947-September 1964, August 1972-	116
09328100	San Rafael River at San Rafael Bridge Campground, near Castle Dale, Utah	1,284	October 1975-	127
09328500	San Rafael River near Green River, Utah	1,628	May 1909-September 1918, September 1919-July 1920, October 1945-	152
09329050	Seven Mile Creek near Fish Lake, Utah	24.0	October 1964-	14.9
09330000	Fremont River near Bicknell, Utah	751	May 1909-December 1912, October 1937-September 1958, October 1976-	86.1
09330230	Fremont River near Caineville, Utah	1,208	March 1967-	68.7
09330410	Bull Creek near Hanksville, Utah	7.53	June 1983-	--
09330500	Muddy Creek near Emery, Utah	105	April-July 1909, July 1910-July 1914, June 1949-	38.9

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09331850	Convulsion Canyon near Emery, Utah	21.5	October 1980-September 1984	--
09331950	Christiansen Wash near Emery, Utah	13.6	August 1978-September 1984	3.48
09332100	Muddy Creek below Interstate Highway I-70, near Emery, Utah	418	October 1973-	20.1
09332700	Muddy Creek at Delta Mine, near Hanksville, Utah	841	October 1975-	29.1
09333500	Dirty Devil River above Poison Spring Wash, near Hanksville, Utah	4,159	June 1948-	99.1
09337000	Pine Creek near Escalante, Utah	68.1	July 1950-September 1955, July 1957-	4.80
09337500	Escalante River near Escalante, Utah	320	August 1909-April 1913, October 1942-September 1955, December 1971-October 1979-	15.5
09378100	North Creek above Ranger Station, near Monticello, Utah	8.68	October 1979-	--
09378200	Montezuma Creek at Golf Course, at Monticello, Utah	17.6	October 1979-	--
09378630	Recapture Creek near Blanding, Utah	3.77	October 1965-	1.48
09378650	Recapture Creek below Johnson Creek, near Blanding, Utah	50.2	October 1975-	10.4
09378700	Cottonwood Wash near Blanding, Utah	205	October 1964-	9.06
09379500	San Juan River near Bluff, Utah	23,000 approx.	October 1914-	2,542
09403600	Kanab Creek near Kanab, Utah	198	July 1959-September 1968 (peaks only), January 1979-	--
09404450	East Fork Virgin River near Glendale, Utah	69.2	October 1966-	21.9
09405420	North Fork Virgin River below Bulloch Canyon, near Glendale, Utah	29.6	October 1974-	20.1
09405450	North Fork Virgin River above Zion Narrows, near Glendale, Utah.	45.5	September 1984-September 1984	26.6

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
09405500	North Fork Virgin River near Springdale, Utah	344	May 1913-June 1914, June-November 1923, April-June, August and September 1925, October 1925-October 1925-	105
09406000	Virgin River at Virgin, Utah	934	April 1909-September 1971, October 1978-October 1915-June 1920, October 1964-	208
09408000	Leeds Creek near Leeds, Utah	15.5	March 1967-	7.97
09408150	Virgin River near Hurricane, Utah	1,499	July 1959-	251
09408400	Santa Clara River near Pine Valley, Utah	18.7	October 1953-	10.8
09408500	Santa Clara-Pinto diversion near Pinto, Utah	--	September 1962, October 1969-	3.77
09409880	Santa Clara River at Gunlock, Utah	271	August 1969-	29.4
09410100	Santa Clara River below Winsor Dam, near Santa Clara, Utah	378	December 1971-	32.4
09413200	Virgin River near Bloomington, Utah	3,831	September 1977-	372
10010400	East Fork Bear River near Evanston, Wyoming	34.6	October 1973-	54.6
10011200	West Fork Bear River at Whitney Dam, near Oakley, Utah	6.79	October 1963-	7.97
10011400	West Fork Bear River below Deer Creek near Evanston, Wyoming	52.2	October 1973-	45.0
10011500	Bear River near Utah-Wyoming State line	172	July 1942-	192
10015700	Sulphur Creek above reservoir, near Evanston, Wyoming	64.2	October 1957-	17.1
10015900	Sulphur Creek below reservoir, near Evanston, Wyoming	69.2	April 1958-	25.0
10019500	Chapman Canal at State line, near Evanston, Wyoming	--	April 1942-	19.8
10020100	Bear River above reservoir, near Woodruff, Utah	752	October 1961-	245
10020300	Bear River below reservoir, near Woodruff, Utah	784	October 1961-	237

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10020900	Woodruff Creek below reservoir, near Woodruff, Utah	50.0	October 1970-	28.2
10026500	Bear River near Randolph, Utah	1,616	October 1943-	204
10028500	Bear River below Pixley Dam, near Cokeville, Wyoming	2,032	October 1941-November 1943 October 1952-September 1956, May 1958-	--
10032000	Smiths Fork near Border, Wyoming	165	May 1942-	198
10038000	Bear River below Smiths Fork, near Cokeville, Wyoming	2,447	April 1954-	449
10039500	Bear River at Border, Wyoming	2,486	October 1937-	435
10041000	Thomas Fork near Wyoming-Idaho State line	113	October 1949-	56.2
10044000	Bear River at Harer, Idaho	2,839	June 1913-	529
10046000	Rainbow Inlet Canal near Dingle, Idaho	--	January 1922-	353
10046500	Bear River below Stewart Dam, near Montpelier, Idaho	2,853	January 1922-	45.7
10058600	Bloomington Creek at Bloomington, Idaho	24.0	October 1960-	29.8
10059500	Bear Lake Outlet Canal near Paris, Idaho	--	January 1922-	385
10068500	Bear River at Pescadero, Idaho	3,705	October 1921- September 1954, June 1969-	612
10072800	Eightmile Creek near Soda Springs, Idaho	22.6	October 1960-	17.1
10075000	Bear River at Soda Springs, Idaho	3,972	May-September 1896, May, June 1898, and October 1953-	676
10076400	Soda Creek at Fivemile Meadows, near Soda Springs, Idaho	51.7	October 1964-	16.1
10079500	Bear River at Alexander, Idaho	4,099	March 1911-	783
10084500	Cottonwood Creek near Cleveland, Idaho	61.7	November 1938-	32.4
10086500	Bear River below Utah Power & Light Co.'s tailrace, at Oneida, Idaho	4,456	October 1921-	849

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10090500	Bear River near Preston, Idaho	4,545	October 1889-December 1916, January-September 1917, October 1943-	897
10092700	Bear River at Idaho-Utah State line	4,881	October 1970-	1,260
10093000	Cub River near Preston, Idaho	31.6	March 1940--September 1952, October 1955-	85.3
10099000	High Creek near Richmond, Utah	16.2	April--September 1944, April-September 1945, April 1946 - September 1952, February 1971 - September 1972, October 1978-	34.7
10104700	Little Bear River below Davenport Creek, near Avon, Utah	61.6	October 1960-	57.9
10104900	East Fork Little Bear River above reservoir, near Avon, Utah	56.7	October 1963-	37.3
10106000	Little Bear River near Paradise, Utah	198	January 1937-	92.8
10108400	Logan Hyde Park & Smithfield Canal at head, near Logan, Utah	--	May 1963-	24.4
10109000	Logan River above State Dam, near Logan, Utah	214	June 1896-	133
10113500	Blacksmith Fork above Utah Power & Light Co.'s Dam, near Hyrum, Utah	268	October 1913-	129
10117000	Hammond (Eastside) Canal near Collinston, Utah	--	June 1912-	51.1
10117500	West Side Canal near Collinston, Utah	--	June 1912 to	246
10118000	Bear River near Collinston, Utah	6,267	July 1889 to	--
10126000	Bear River near Corrine, Utah	7,029	October 1949-September 1957, October 1963-	1,800
10126180	Sulphur Creek near Corrine, Utah	15.4	September 1971-	65.2
10127040	Salt Spring near Tremonton, Utah	--	July 1979-	--

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10127050	Salt Creek below Salt Spring, near Tremonton, Utah	--	July 1979-	--
10127100	Black Slough near Brigham City, Utah	31.1	September 1971-	47.8
10128000	Smith and Morehouse Creek near Oakley, Utah	33.8	October 1946-September 1947, October 1975-	56.8
10128500	Weber River near Oakley, Utah	162	October 1904-	221
10130000	Silver Creek near Wanship, Utah	25.8	October 1941-September 1946, July 1982-September 1984	7.0
10130500	Weber River near Coalville, Utah	435	April 1927-	205
10131000	Chalk Creek at Coalville, Utah	250	November 1904, March-November 1905, April 1927-	65.9
10133700	Threemile Creek near Park City, Utah	2.68	October 1963-September 1974, July 1982-September 1984	2.26
10133900	East Canyon Creek near Park City, Utah	80.0	June 1982-September 1984	--
10134500	East Canyon Creek near Morgan, Utah	144	October 1931-	55.0
10136500	Weber River at Gateway, Utah	1,627	November 1889-June 1893, July-December 1893, August 1894-September 1899, August-November 1900, January-October 1901, April-June 1903, July-August 1919, August 1920-	589
10137500	South Fork Ogden River near Huntsville, Utah	137	March 1921-	113
10139300	Wheeler Creek near Huntsville, Utah	11.1	October 1958-	10.2
10141000	Weber River near Plain City, Utah	2,081	January 1904-	532

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10141040	Hooper Slough near Hooper, Utah	13.0	March 1975-September 1977, September 1978-September 1984	15.4
10141400	Howard Slough at Hooper, Utah	20.6	October 1971-September 1984	28.2
10146400	Current Creek near Mona, Utah	73.8	June 1978-	37.8
10148200	Tie Fork near Soldier Summit, Utah	19.4	October 1963-	5.64
10150500	Spanish Fork at Castilla, Utah	652	September 1889-December 1890, April 1903-November 1917, May 1919-September 1925, January 1933-December 1903-	172
10152000	Spanish Fork near Lakeshore, Utah	675	September 1907, March 1909-December 1919, May 1920-September 1925, January 1938-	91.4
10153800	North Fork Provo River, near Kamas, Utah	24.4	August 1963-	40.2
10154200	Provo River near Woodland, Utah	162	August 1963-	222
10155000	Provo River near Hailstone, Utah	233	October 1949-	284
10159500	Provo River below Deer Creek Dam, Utah	547	May 1953-	368
10163000	Provo River at Provo, Utah	673	May 1903-June 1905, May 1933-September 1934, January 1937-January 1927-	198
10164500	American Fork above upper powerplant, near American Fork, Utah	51.1	January 1927-	55.9
10167000	Jordan River at Narrows, near Lehi, Utah	3,010	May-December 1904, July 1913-	381
10167230	Jordan River at 9000 South, near Midvale, Utah	3,160 approx.	December 1979-	--
10167300	Jordan River at 5800 South, near Salt Lake City, Utah	3,240	July 1965-September 1968, February 1974-March 1980, April 1980-	--
10170500	Surplus Canal at Salt Lake City, Utah	--	December 1942-	284



Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10171000	Jordan River at Salt Lake City, Utah	3,438	December 1942-	143
10172200	Red Butte at Fort Douglas, near Salt Lake City, Utah	7.25	October 1963-	4.50
10172550	Jordan River at 500 North, at Salt Lake City, Utah	3,562	October 1975-	201
10172630	Goggin Drain near Magna, Utah	--	October 1963- September 1968, October 1971-	188
10172650	Kennecott Drain near Magna, Utah	--	September 1984 October 1963- September 1967, October 1971- September 1984	98.4
10172700	Vernon Creek near Vernon, Utah	25.0	June 1958-	3.28
10172800	South Willow Creek near Grantsville, Utah	4.19	July 1963-	6.68
10172805	North Willow Creek near Grantsville, Utah	5.38	October 1979-	--
10172870	Trout Creek near Callao, Utah	8.19	October 1958-	5.74
10172952	Dunn Creek near Park Valley, Utah	8.72	May 1971-September 1973, October 1976-	6.21
10173450	Mammoth Creek above West Hatch Ditch, near Hatch, Utah	105	October 1964-	52.3
10174500	Sevier River at Hatch, Utah	340	June 1911-September 1928, June 1939-	127
10180000	Sevier River near Circleville, Utah	986	May-September 1912, April 1914- September 1927, October 1949-	148
10183500	Sevier River near Kingston, Utah	1,131	June 1914-	127
10183900	East Fork Sevier River near Rubys Inn, Utah	71.6	October 1961-	18.0
10189000	East Fork Sevier River near Kingston, Utah	1,207	March 1913-	78.2
10191500	Sevier River below Piute Dam, near Marysvale Utah	2,441	May-August 1911, May 1912-	215

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10194000	Sevier River above Clear Creek, near Sevier, Utah	2,707	May 1911-November 1916, April 1939-September 1955, October 1960-August 1957-	240
10194200	Clear Creek above diversions, near Sevier, Utah	164	July-September 1912, July 1914-October 1963-April-September 1914, April 1915-September 1916, October 1917-September 1919, November 1942-September 1955, October 1960-	34.4
10205000	Sevier River near Sigurd, Utah	3,375	October 1964-	102
10205030	Salina Creek near Emery, Utah	51.8	September 1916, October 1917-	18.4
10206000	Salina Creek at Salina, Utah	292	September 1919, November 1942-September 1955, October 1960-	24.2
10208500	Oak Creek near Fairview, Utah	11.8	September 1916, October 1917-	11.1
10215700	Oak Creek near Spring City, Utah	8.35	September 1919, November 1942-September 1955, October 1960-	11.0
10215900	Manti Creek below Dugway Creek, near Manti, Utah	26.4	October 1964-September 1974, October 1978-March 1912-	31.8
10217000	Sevier River below San Pitch River, near Gunnison, Utah	4,921	September 1911-October 1962-April 1914-October 1919, October 1942-	238
10219000	Sevier River near Juab, Utah	5,165	October 1964-	239
10219200	Chicken Creek near Levan, Utah	27.9	September 1916, October 1917-	7.91
10224000	Sevier River near Lynndyl, Utah	5,966	October 1964-	210
10224100	Oak Creek above Little Creek, near Oak City, Utah	5.58	September 1916, October 1917-	3.20

Table 1.--Selected hydrologic data for continuous streamflow stations in Utah--Continued

Station number	Station name	Drainage area (square miles)	Period of record	Average Discharge through 1983 water year (cubic feet per second)
10224300	Oak Creek below Big Spring, near Oak City, Utah	17.8	June 1979-	--
10234500	Beaver River near Beaver, Utah	91.0	June-September 1906, March 1914-	52.2
10237000	Beaver River at Adamsville, Utah	303	December 1913-	38.0
10239000	Beaver River at Rocky Ford Dam, near Minersville, Utah	535	December 1913-September 1936, April 1937-	39.2
10241470	Center Creek above Parowan Creek, near Parowan, Utah	11.6	October 1964-	6.43
10241600	Summit Creek near Summit, Utah	24.0	October 1964-	4.58
10242000	Coal Creek near Cedar City, Utah	80.9	May-September 1915 October 1915-July 1916, September 1916-July 1918, September 1918-September 1919, May 1935-September 1937, April 1938-	33.5
13077700	George Creek near Yost, Utah	7.84	July 1959-	8.07

Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding			
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability	
09163675	Cottonwood wash at I-70, near Cisco, Utah	1		2								2			A
09180000	Dolores River near Cisco, Utah	1	3 5	4								17			A
09180500	Colorado River near Cisco, Utah	7 *	1 3 5 7	4	5	7	3 5 7	6 7				17			A P T
09183000	Courthouse Wash near Moab, Utah	*	1 8					6 7						8	A
09184000	Mill Creek near Moab, Utah	1	1	1				1						1	A
09187550	Indian Creek below Bogus Pocket, near Monticello	1	1	2								2			A
09217900	Blacks Fork near Robertson, Wyoming	*	1											1	A
09234500	Green River near Greendale, Utah	1	5 7	4				6 7				17			A
09235600	Pot Creek above Diversions, near Vernal, Utah	1	1 8	1		8	8							8	A
09261000	Green River near Jensen, Utah	1	1 3 7	4				7				17			A
09261700	Big Brush Creek above Red Fleet Reservoir, near Vernal, Utah	1	1			7									A
09266500	Ashley Creek near Vernal, Utah	*	1 8		8									8	A
09267500	Mosby Canal near LaPoint, Utah	1	1											8	A
09268500	North Fork of Dry Fork near Dry Fork, Utah	1	1 8											8	A
09268900	Brownie Canyon Creek above sinks, near Dry Fork, Utah	*	1 8											8	A
09270500	Dry Fork at Mouth, near Dry Fork, Utah		1 8											8	A
09275500	West Fork Duchesne River near Hanna, Utah	1	1											9	A
09276000	Wolf Creek above Rhoades Canyon near Hanna, Utah	1	1											9	A

1. Utah Division of Water Resources
2. U.S. Bureau of Land Management
3. Forecasting--National Weather Service
4. Colorado River Compact or Upper Colorado River Compact
5. Reservoir operation--U.S. Bureau of Reclamation
6. NASQAN station
7. U.S. Bureau of Reclamation
8. Utah Division of Water Rights
9. Central Utah Water Conservancy District
17. U.S. Geological Survey





Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding					
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability			
09314250	Price River below Miller Creek, near Wellington, Utah		1											7			A
09314280	Desert Seep Wash near Wellington, Utah													7			A
09314340	Grassy Trail Creek at Sunnyside, Utah		10											17			A
09314500	Price River at Woodside, Utah	8	1		8									17	8		A
09315000	Green River at Green River, Utah	7*	1	3	5	7	4	5	7	3	5	7	6	17	2		A P T
09316100	Floy Wash near Green River, Utah		2		2									17			A
09317919	Crandall Canyon at mouth, near Huntingdon, Utah		10											17			A
09319000	Ephraim Tunnel near Ephraim, Utah		1	5	8		1		8								A
09323000	Spring City Tunnel near Spring City, Utah		5	8			8										A
09324500	Cottonwood Creek near Orangeville, Utah	1								3							A
09326500	Ferron Creek (upper station) near Ferron, Utah	8							8	3							A
09327550	Ferron Creek below Paradise Ranch, near Clawson, Utah												7				A
09328000	San Rafael River near Castle Dale, Utah		1														A
09328100	San Rafael River at San Rafael Bridge Campground, near Castle Dale, Utah		1														A
09328500	San Rafael River near Green River, Utah	7	1														A
09329050	Seven Mile Creek near Fish Lake, Utah	*	1							3				17			A
09330000	Fremont River near Bicknell, Utah		1				1										A
09330230	Fremont River near Caineville, Utah		1				1										A
09330410	Bull Creek near Hanksville, Utah						2								2		A

1. Utah Division of Water Resources
2. U.S. Bureau of Land Management
3. Forecasting--National Weather Service
4. Colorado River Compact or Upper Colorado River Compact
5. Reservoir operation--U.S. Bureau of Reclamation
6. NASQAN station
7. U.S. Bureau of Reclamation
8. Utah Division of Water Rights
10. Coal-area monitoring
17. U.S. Geological Survey

Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding						
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability				
09330500	Muddy Creek near Emery, Utah	*	1		7	8									17		8	A
09331850	Convulsion Creek near Emery, Utah		10												17			A
09331950	Christiansen Wash near Emery, Utah		10															A
09332100	Muddy Creek below Interstate Highway I-70, near Emery, Utah				7											7		A
09332700	Muddy Creek at Delta Mine, near Hanksville, Utah		1		7											7		A
09333500	Dirty Devil River above Poison Spring Wash, near Hanksville, Utah		1	4	7					3					17			A
09337000	Pine Creek near Escalante, Utah		1		1												1	A
09337500	Escalante River near Escalante, Utah		1		1												1	A
09378100	North Creek above Ranger Station, near Monticello, Utah		1		1												1	A
09378200	Montezuma Creek at Golf Course, at Monticello, Utah		1		1												1	A
09378630	Recapture Creek near Blanding, Utah	*	1		1												1	A
09378650	Recapture Creek below Johnson Creek, near Blanding, Utah		1		1												1	A
09378700	Cottonwood Wash near Blanding, Utah	*	1														1	A
09379500	San Juan River near Bluff, Utah	7	1	3	5	7	4	5	7	3	5	7	6	7	17		8	A P T
09403600	Kanab Creek near Kanab, Utah		1	8													1	A
09404450	East Fork Virgin River near Glendale, Utah	*	1		1												1	A
09405420	North Fork Virgin River below Bullock Canyon, near Glendale, Utah		1														1	A
09405450	North Fork Virgin River above Zion Narrows, near Glendale, Utah		1										1				1	A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
4. Colorado River Compact or Upper Colorado River Compact
5. Reservoir operation--U.S. Bureau of Reclamation
6. NASQAN station
7. U.S. Bureau of Reclamation
8. Utah Division of Water Rights
10. Coal-area monitoring
17. U.S. Geological Survey



Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote.  
 Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding						
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability				
09405500	North Fork Virgin River near Springdale, Utah	*	1	8		1	8									8		A
09406000	Virgin River at Virgin, Utah		1			1										1		A
09408000	Leeds Creek near Leeds, Utah		1							3						1		A
09408150	Virgin River near Hurricane, Utah		1			1				3						1		A
09408400	Santa Clara River near Pine Valley, Utah	*	1	8			8			3						8		A
09408500	Santa Clara-Pinto diversion near Pinto, Utah		1	8			8									8		A
09409880	Santa Clara River at Gunlock, Utah		1	11			11									11		A
09410100	Santa Clara River below Windsor Dam, near Santa Clara, Utah		1	8		1	8									8		A
09413200	Virgin River near Bloomington, Utah		1						12							1		A
10010400	East Fork Bear River near Evanston, Wyoming		1													12		A
10011200	West Fork Bear River at Whitney Dam, near Oakley, Utah		1							12						12		A
10011400	West Fork Bear River below Deer Creek, near Evanston, Wyoming		1			1	12									12		A
10011500	Bear River near Utah-Wyoming State line	12	*	1		1	12			3	12					12		A
10015700	Sulphur Creek above reservoir, near Evanston, Wyoming							12								12		A
10015900	Sulphur Creek below reservoir, near Evanston, Wyoming					12										12		A
10019500	Chapman Canal at State line, near Evanston, Wyoming		1			12										12		A
10020100	Bear River above reservoir, near Woodruff, Utah		1			12	1	12		1	12					12		A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
8. Utah Division of Water Rights
11. Santa Clara River water users
12. Bear River Commission

Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category											Funding						
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability					
10020300	Bear River below reservoir, near Woodruff, Utah		1	12		12	12				3						12		A
10020900	Woodruff Creek below reservoir, near Woodruff, Utah		1	12		12	12				12						12		A
10026500	Bear River near Randolph, Utah		1	12													12		A
10028500	Bear River below Pixley Dam, near Cokeville, Wyoming		1		12												12		A
10032000	Smiths Fork near Border, Wyoming	12	1		1	12					3	12					12		A
10038000	Bear River below Smiths Fork, near Cokeville, Wyoming		1		1								12				12		A
10039500	Bear River at Border, Wyoming		1	12		12					3	6	12				12		A
10041000	Thomas Fork near Wyoming-Idaho State line		1	12		12					3	12					12		A
10044000	Bear River at Harer, Idaho		1	12	1	13	12	3	12								13		A
10046000	Rainbow Inlet Canal near Dingle, Idaho		1	12		13	12										13		A
10046500	Bear River below Stewart Dam, near Montpelier, Idaho		1	12		13	12										13		A
10058000	Bloomington Creek at Bloomington, Idaho		12																A
10059500	Bear Lake Outlet Canal near Paris, Idaho		1	12		13	12										13		A
10068500	Bear River at Pescadero, Idaho		1		1	12	12												A
10072800	Eightmile Creek near Soda Springs, Idaho		12																A
10075000	Bear River at Soda Springs, Idaho		1	12	1	13	12										13		A
10076400	Soda Creek at Fivemile Meadows, near Soda Springs, Idaho		1	12		12											12		A
10079500	Bear River at Alexander, Idaho		1	12	1	13	12										13		A
10084500	Cottonwood Creek near Cleveland, Idaho		1	12		12											12		A
10086500	Bear River below Utah Power and Light Co.'s tailrace, at Oneida, Idaho		1	12	1	13	12										13		A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
6. NASQAN station
12. Bear River Commission
13. Federal Energy Regulatory Commission--Utah Power and Light Co.



Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding							
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability					
10128500	Weber River near Oakley, Utah	*	1			7	3							17				A	
10130000	Silver Creek near Wanship, Utah		5										8						A
10130500	Weber River near Coalville, Utah		1		8		3												A
10131000	Chalk Creek at Coalville, Utah		1		8		3												A
10133700	Threemile Creek near Park City, Utah					8							8						A
10133900	East Canyon Creek near Park City, Utah					8							8						A
10134500	East Canyon Creek near Morgan, Utah		1			8	3												A
10136500	Weber River at Gateway, Utah		1			7	3												A
10137500	South Fork Ogden River near Huntsville, Utah		1			8	3												A
10139300	Wheeler Creek near Huntsville, Utah	*	8			8													A
10141000	Weber River near Plain City, Utah		1	3	8	1	8					6	8						A
10141040	Hooper Slough near Hooper, Utah		1																A
10141400	Howard Slough at Hooper, Utah		1									1							A
10146400	Currant Creek near Mona, Utah		8			8													A
10148200	Tie Fork near Soldier Summit, Utah		1																A
10150500	Spanish Fork at Castilla, Utah		1	8		8													A
10152000	Spanish Fork near Lakeshore, Utah		8			8													A
10153800	North Fork Provo River near Kamas, Utah		1																A
10154200	Provo River near Woodland, Utah		1	7		1													A
10155000	Provo River near Hailstone, Utah		1	8		1	8												A
10159500	Provo River below Deer Creek Dam, Utah		1	8		8													A
10163000	American Fork at Provo, Utah		8			8													A
10164500	American Fork above upper powerplant, near American Fork, Utah	*	8			8	13	3							13				A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
5. Reservoir operation--U.S. Bureau of Reclamation
6. NASQAN station
7. U.S. Bureau of Reclamation
8. Utah Division of Water Rights
13. Federal Energy Regulatory Commission--Utah Power and Light Co.
17. U.S. Geological Survey

Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding				
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability		
10167000	Jordan River at Narrows, near Lehi, Utah	8 15	1 8 15	15	8 15	8 15	3 15					8			8	A
10167230	Jordan River at 9000 South, near Midvale, Utah							8							8	A
10167300	Jordan River at 5800 South, near Salt Lake City, Utah							8							8	A
10170500	Surplus Canal at Salt Lake City, Utah		1 15	15	15	15	3 15								15	A
10171000	Jordan River at Salt Lake City, Utah	15	3 15	15	15	15	15	6 15							15	A
10172200	Red Butte Creek at Fort Douglas, near Salt Lake City, Utah	16 *	15 16		15	15	3 15	16						17		A
10172550	Jordan River at 500 North, at Salt Lake City, Utah		3 15	15	15	15	15								15	A
10172630	Goggin Drain near Magna, Utah		1					1							1	A
10172650	Kennecott Drain near Magna, Utah		1					1							1	A
10172700	Vernon Creek near Vernon, Utah	*	1 8		1	8									8	A
10172800	South Willow Creek near Grantsville, Utah		1 8		1	8									8	A
10172805	North Willow Creek near Grantsville, Utah		1		1										1	A
10172870	Trout Creek near Callao, Utah	*	8			8									8	A
10172952	Dunn Creek near Park Valley, Utah		1												1	A
10173450	Mammoth Creek above West Hatch Ditch, near Hatch, Utah	*	1												1	A
10174500	Sevier River at Hatch, Utah	*	1 8		1 8 9	8	3								9	A
10180000	Sevier River near Circleville, Utah	*	1 8		8	8	3								8	A
10183500	Sevier River near Kingston, Utah		1 8		8	8	3								8	A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
6. NASQAN station
8. Utah Division of Water Rights
9. Central Utah Water Conservancy District
15. Salt Lake County
16. Hydrologic bench mark
17. U.S. Geological Survey

Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote. Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding					
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability			
10183900	East Fork Sevier River near Rubys Inn, Utah		8			8										8	A
10189000	East Fork Sevier River near Kingston, Utah		1 8			8				3						8	A
10191500	Sevier River below Plute Dam, near Marysvale, Utah		8		8					3						8	A
10194000	Sevier River above Clear Creek, near Sevier, Utah		8			8										8	A
10194200	Clear Creek above diversions, near Sevier, Utah		8			8				3						8	A
10205000	Sevier River near Sigurd, Utah		8			8				3						8	A
10205030	Salina Creek near Emery, Utah	*	1			8				3						1	A
10206000	Salina Creek at Salina, Utah		8			8										8	A
10208500	Oak Creek near Fairview, Utah	*	1													1	A
10215700	Oak Creek near Spring City, Utah		1													1	A
10215900	Manti Creek below Dugway Creek, near Manti, Utah		1													1	A
10217000	Sevier River below San Pitch River, Gunnison, Utah		8							3						8	A
10219000	Sevier River near Juab, Utah		1													8	A
10219200	Chicken Creek near Levan, Utah		8													8	A
10224000	Sevier River near Lynndyl, Utah	*	8													8	A
10224100	Oak Creek above Little Creek, near Oak City, Utah	*	1								6 8					1	A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
6. NASQAN station
8. Utah Division of Water Rights

Table 2.--Data-use funding, and data availability for continuous streamflow stations in the surface-water program--Continued

Data-use category: \* indicates probable use other than designated by footnote.  
 Frequency of data availability: A, annual data report; P, periodic release of provisional data; and T, telemetry.

Station number	Station name	Data-use category										Funding						
		Regional hydrology	Hydrologic systems	Legal obligations	Planning and design	Project operation	Hydrologic forecasts	Water-quality monitoring	Research	Other	Federal	Other Federal agency	Federal-State cooperative	Frequency availability				
10224300	Oak Creek below Big Spring, near Oak City, Utah		1												1			A
10234500	Beaver River near Beaver, Utah	*	8			8				8	3				8			A
10237000	Beaver River at Adamsville, Utah		8			8				8		6	8		8			A
10239000	Beaver River at Rocky Ford Dam, near Minersville, Utah		8			8				8	3				8			A
10241470	Center Creek above Parowan Creek, near Parowan, Utah	*	1												1			A
10241600	Summit Creek near Summit, Utah	*	1												1			A
10242000	Coal Creek near Cedar City, Utah	*	8			8				8	3				8			A
13077700	George Creek near Yost, Utah	*	8			8				8					8			A

1. Utah Division of Water Resources
3. Forecasting--National Weather Service
6. NASQAN station
8. Utah Division of Water Rights