ATLAS HA-199

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PRELIMINARY MAP OF THE CONTERMINOUS UNITED STATES SHOWING DEPTH TO AND QUALITY OF SHALLOWEST GROUND WATER CONTAINING MORE THAN 1,000 PARTS PER MILLION DISSOLVED SOLIDS

By
J. H. Feth and others

HYDROLOGIC INVESTIGATIONS
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PUBLISHED BY THE U. S. GEOLOGICAL SURVEY
WASHINGTON, D. C.
1965

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In this atlas, mineralized ground water is viewed presently as a source of water in some areas, but in much of the country as a source for future development. Mineralized water underlies large areas of the country, and its importance will grow as present supplies of fresh water are appropriated and developed. The potential uses fall in two main categories: (1) direct use in industrial processes, such as cooling, or for irrigation, where a moderate mineral content may not be a disadvantage; and (2) use after demineralization or dilution to whatever degree may be required by the intended user. It is clearly more efficient to produce and process water of moderate mineralization at points of use, where available in adequate amounts, than it is to process ocean water and pump it many miles from the sea.

The Geological Survey, as a part of its responsibility to describe the water resources of the United States, has surveyed the known occurrences of mineralized ground water in the conterminous United States. The results are shown on the maps (sheets 1 and 2).

This atlas was prepared to meet needs for information on the distribution and availability of mineralized water as expressed by Government agencies, private industries, and consultants. The maps are one step in providing an inventory of mineralized water of the Nation and will serve as a planning guide for further investigations and for development. They are necessarily generalized in many places owing to the complexity of the occurrence of the mineralized water, lack of detailed information for parts of the nation, and the difficulties inherent in attempts to put three-dimensional information on maps.

TERMINOLOGY

Mineralized water means different things to different people. Usage in this atlas follows that established in earlier publications of the Geological Survey (Winslow and Kister, 1956; Krieger, Hatchett, and Poole, 1957; Robinove, Langford, and Brookhart, 1958, Hood and Kister, 1962; Hood, 1963). The lower limit of 1,000 ppm (parts per million) used herein departs from the limit on dissolved-solids content, 500 ppm, recommended by the U. S. Public Health Service (1962, p. 7, 34) for water to be used in public supplies. It is recognized that persons become accustomed to higher concentrations and use water for domestic supply containing more than 1,000 ppm, and locally more than 2,000 ppm, of dissolved solids where less mineralized water is not available. The lowest concentration category illustrated in this atlas spans the range from 1,000 to 3,000 ppm. Where the dissolved-solids content exceeds about 2,000 ppm, the water is generally unsuited for domestic use. The other concentration ranges illustrated are as follows:

3,000-10,000 ppm

10,000-35,000 ppm

More than 35,000 ppm

DISTRIBUTION

Distribution in depth

Only the shallowest known bodies of mineralized water are shown on sheet 1. In many areas there is more than one zone of mineralized water, the concentration commonly increasing with depth. In some areas, bodies of mineralized water interfinger with fresh bodies of water so that fresh water is overlain by mineralized water. A symbol on the map calls attention to places where multiple zones of mineralized water have been detected, but places where fresh water underlies mineralized water are not designated separately.

Oil-field brines--a special case--are not illustrated on the map, because they are commonly found at depths greater than the shallower zones of mineralized water in any area, because they are industrial waste, and because they are being used increasingly for reinjection into oil-bearing strata to maintain petroleum production pressures. Many occur below shallower zones of less mineralized water.

Distribution of mineralized water by depth zones is shown on the map by line patterns. The zones illustrated are land surface to 500 feet, 500 to 1,000 feet, and more than 1,000 feet. It is reemphasized that only the uppermost occurrence of mineralized water is shown in this atlas.

Regional distribution

Approximately two-thirds of the conterminous United States is underlain by aquifers known to produce water containing at least 1,000 ppm of dissolved solids. Some of these aquifers are capable of producing large yields of mineralized water; other produce smaller amounts. Unless the yield of single wells is greater than 0.01 mgd (million gallons per day), that is 7 gpm (gallons per minute), the area was left blank on the map. Thus, areas where the yield from mineralized zones is unknown are left blank.

For ease of discussion, the country is divided into four regions, each of which differs from the others with respect to occurrence of mineralized water. The regions conform in a general way to the ground-water provinces delineated by Meinzer (1923, pl. 31), but several provinces have been combined and the boundaries simplified.

Atlantic and Gulf Coastal Plains: The Atlantic and Gulf Coastal Plains, including the Mississippi Embayment, form one of the four regions. In many places water occurs in two or more zones at successively greater depths. The oldest formations crop out inland and successively younger geologic units crop out toward the coast. Thus, water recharging the older rocks travels downdip, passing beneath progressively greater thicknesses of younger sediments, and is tapped by deep wells in areas near the coast. As distance of travel and depth of burial increase, the water generally is more mineralized.

Salty ground water is available in large quantities at shallow depths in most areas along the Atlantic Ocean and Gulf of Mexico.

This strip is not shown on sheet 1, however, because it is generally to narrow to show at map scale and because unlimited supplies of sea water are available for conversion without the necessity of drilling wells.

In general, the Atlantic and Gulf Coast regions are well watered. Supplies of fresh surface water are abundant, and in many places fresh-water aquifers capable of large yields overlie the zones of mineralized water. The mineralized water, therefore, represents largely a resource for development in the future. It may be of immediate interest to industry, however, because of (a) ready availability, (b) slight development to date, (c) consequent lack of competition for available supplies, and (d) its likelihood, as with ground water generally, to remain virtually constant in mineralization and temperature throughout the year. In some small areas within this region, fresh-water aquifers have been overdeveloped and sea-water encroachment is an immediate problem, but such areas are mostly too small to show on the map scale used here.

Midwest Interior: Lying north and west of the Appalachians, east of the Great Plains, adjacent to the Ozarks and Ouachitas, and south of the ancient rocks of Wisconsin is the midwest Interior. In general, this region is one of fairly heavy and uniform precipitation and adequate fresh water supplies. Much of the area north of the Ohio River has hard, but potable, supplies of ground water in sand and gravel deposits of glacial origin. Bedrock aquifers, in general, are of Paleozoic age and yield hard to very hard (hardness 200 to 1,000 ppm or more as $CaCO_3$) mineralized water at depths of 300 to 400 feet. The hard water from the bedrock aquifers in much of the area is undeveloped, but locally large amounts are used by industry for cooling and other purposes where high mineral content is of little consequence.

Great Plains: The Great Plains region flanks the Rocky Mountains on the east, extending from central Texas to the Canadian boundary. Supplies of mineralized ground water are available throughout virtually the entire area. There is a general shortage of water low in mineral content in the Great Plains, although locally, large supplies of less mineralized ground water overlie the aquifers that yield water containing more than 1,000 ppm of dissolved solids. Large amounts of mineralized water are used in this area, as ground water containing less than 1,000 ppm is not widespread. A few demineralization plants are now operating in the Great Plains; more may be expected.

Mountainous West: The mountainous West includes the Rocky Mountains and the area extending westward to the Pacific Coast. Within it are high plateaus, elongate mountain ranges, and intermontane basins. In the main--especially in the Southwest--it is an area of water shortage. Except for an area in northeastern Arizona, the uppermost mineralized water mapped lies within 500 feet of the surface. Locally, as in the Central Valley of California, mineralized water extends to depths of thousands of feet. In some places, very highly mineralized water occurs, but it is not illustrated because it is not known to be available in producible amounts.

Known areas of mineralized water are scattered and many of them are small. From the geologic history of the Basin and Range province--the large area of scattered mountain ranges and alluvial basins in Nevada and western Utah, southern Arizona, and New Mexico--it can be inferred that the alluvium in many or most of the basins contains mineralized water in its lower part. The Paleozoic and Mesozoic sedimentary rocks that lie beneath the alluvium in many of the basins also are likely to contain mineralized water. Except where shown, however, the depths to mineralized water and degree of mineralization of the water in the alluvium and bedrock are not well known.

The mountainous West is a region of strong contrasts. The high mountains receive 40 inches or more of precipitation per year; parts of the northern coastal ranges receive as much as 200 inches. In many of the mountain areas that receive abundant precipitation, ground water is scarce, but it is of excellent quality where present. On the Snake River Plain and parts of the Columbia Plateau, ground water is abundantly available and generally of good quality. Elsewhere, especially in the Southwest, many of the intermontane valleys receive little recharge from runoff or precipitation, and in some, the ground water is moderately to highly mineralized. In some, investigations or development have not progressed to the point that the water resources can be adequately evaluated as to either quantity or quality.

Unpatterned areas on map: Several large areas on sheet 1 are left blank, indicating that no mineralized ground water is known to occur in producible quantities. Included in these areas are the New England States, much of the Appalachian Mountains, parts of Minnesota, Wisconsin, Missouri and Arkansas, parts of the Colorado Plateau, and most parts of the western States.

Where precipitation is abundant, there has been little incentive to drill wells to depths where mineralized water might occur. In areas of low precipitation, exploration at depth has been delayed in part because population densities are small and the demand for water has not yet required deep exploratory drilling.

It is probable that wherever permeable rocks extend to depths of a few thousand feet, the deeper water-bearing zones are occupied by mineralized water. In time, therefore, the areas presently left blank on sheet

1 may be shown to have producible supplies of mineralized water. Sheet 1 thus represents the incomplete state of knowledge in 1964.

CHEMICAL TYPES

A second map (sheet 2) shows the chemical types of the mineralized ground water. The sources illustrated are generally the same as those identified by symbols on plate 1. The chemical-type symbols used are explained on the map (sheet 2).

The following cautions should be observed in any attempt to interpret the distribution of chemical types by regions:

1. The map symbols are diagrammatic rather than specific, in that if a single cation makes up 51 per cent or more of total major cations (on the basis of equivalents per million), only the color for that cation is shown in the upper half of the circle for that particular water sample; the same usage is followed for anions, shown in the lower semicircle. Thus, the importance of dominant ions tends to be overemphasized.

2. The representation is by no means complete. Only a fraction of the available analyses of mineralized ground waters are illustrated, in part for lack of space, in part because some analyses are incomplete and a definition of type cannot be made from the data, and in part because the compilation of analyses for this study was deliberately selective.

3. The sampling was not statistically designed, though it does represent the informed opinion of the compilers as to the principal chemical types found in the different regions.

4. Only the uppermost zone of mineralized water is represented. In many places, several zones of mineralized water are present, and the type and degree of mineralization commonly change with increasing depth.

Nearly 1,050 mineralized waters are represented by the symbols on plate 2. They probably give a reasonable preliminary definition of variations in chemical type in the shallowest zone of mineralized water. So long as the above qualifications are kept in mind, the following generalizations apply:

1. More than 40 chemical types are illustrated on plate 2. Their distribution among the four broad ground-water regions is summarized in table 1.

2. Water of the sodium chloride type is the most common in every region, making up more than 35 percent of all the analyses illustrated on the map. Sodium sulfate water is the next most abundant, followed very closely by calcium sulfate water, the proportions being roughly 14 and 13 percent of the total, respectively. Sodium bicarbonate water, representing about 10 percent of the total, is the fourth and only remaining chemical type that is noteworthy for its abundance.

3. The regional distribution of chemical types is notably varied in the mountainous West. Sodium chloride, sodium sulfate, and sodium bicarbonate waters account for 65 percent of the analyses represented. The calcium sulfate type accounts for about 2.5 percent. The remaining three-eighths of the analyses are distributed among 37 different chemical types of water. In the Great Plains, about 50 percent of the total analyses illustrated are characterized by sodium as the dominant cation, the principal types being sodium chloride, sodium sulfate, and sodium bicarbonate, in that order. Calcium sulfate waters make up about 20 percent of the total, however. In the midwest Interior, sodium chloride water is the principal type, more than 40 percent. The sodium chloride, sodium sulfate, and sodium bicarbonate types together make up about 55 percent of the total. The calcium sulfate type accounts for nearly 25 percent of the total; the remainder of the samples are rather broadly distributed among the other types. In the Coastal Plains, the sodium chloride, sodium sulfate, and sodium bicarbonate types make up more than 60 percent of the total. The calcium sulfate type makes up about 13 percent. The variety of water types is least in the Coastal Plains province, greatest in the mountainous West.

4. Only 5 of the more than 1,000 analyses show water of the calcium bicarbonate or calcium magnesium bicarbonate type, which is generally predominant in waters of lower mineral content. This fact is presumably due to the rather low solubility of calcium and magnesium carbonates.

5. All samples having 35,000 ppm or more of dissolved solids are of the sodium chloride type. In the range 10,000 to 35,000 ppm, 48 are of the sodium chloride type and 8 are of other types. These data and other observations (D. E. White, U. S. Geol. Survey, oral communication, 1964) show that virtually all ground water containing 20,000 ppm or more of dissolved solids is of the sodium chloride type.

The concentration of certain chemical types within regions is noteworthy. The dominance of waters of the sodium chloride type in the northern Appalachians, in eastern Kansas and northern Missouri, in the Mojave Desert, and in the Great Basin of eastern Nevada and western Utah undoubtedly represents a real condition, not merely bias in selecting analyses. The concentration of calcium sulfate and sodium sulfate waters in eastern South Dakota and adjacent areas and the abundance of sodium bicarbonate water in western North Dakota and eastern Montana likewise must represent regional characteristics that govern the types of mineralized water most commonly found.

Detailed studies of analytical results from individual basins in the Mojave Desert region of California show, however, that the dominant chemical type is by no means the only chemical type of mineralized water that is found. The same variation within relatively small areas exists elsewhere as well.

Sheet 2, though preliminary, constitutes a basis for useful generalizations. Much detailed work remains to be done, however, before a reasonably full representation of the chemical water types of the United States can be supplied.

The origin of some of the chemical types is easy to explain. The abundance of sodium chloride water beneath the Lower Peninsula of Michigan, for example, can be related reasonably to the known presence of thick deposits of bedded salt. The abundance of sodium chloride water in the Atlantic and Gulf Coastal Plains can be attributed either to remnant sea water in the pore spaces of the rocks--water that has not been displaced by fresh water since the sediments were deposited or were last invaded by the sea--or to sea water intruding aquifers from which the fresh water supplies have been removed faster than they could be replaced by recharge from precipitation. There are reasonably simple geochemical explanations for the formation of sodium bicarbonate water from preexisting solutions of different chemical character through exchange processes. The origin of some of the other types of water can be explained similarly. It is difficult, however, on the basis of information now available, to give a rational explanation for some of the waters found, of which calcium chloride, magnesium chloride, and magnesium sulfate types may be mentioned as examples.

VOLUMES AVAILABLE

It is not feasible to estimate the volumes of mineralized water in the United States on the basis of present information. Up to this time, mineralized water has been looked upon generally as a liability rather than an asset, so that estimation of yield has not even been considered. In most places, wells yielding mineralized water were intended to produce fresh water, and hence have been abandoned. Seldom have performance tests been made of saline-water aquifers.

In many regions the potential yield of mineralized water is large indeed. Along the Atlantic Coastal Plain, for example, most deep wells that reach mineralized water are capable of producing at least half a million gallons per day--some much more than that. Many individuals wells and springs that yield mineralized water throughout the country are capable of producing half a million to several million gallons per day. Many others, however, yield 0.01 mgd or less to about 0.5 mgd.

The potential yield of mineralized-water aquifers generally is poorly known. Knowledge of potential yield and of replenishment is essential to detailed planning for extensive use of mineralized ground water.

TABLES OF ANALYSES

The accompanying tables of representative chemical analyses (Table 2) include the data from which the maps were prepared. The analyses are arranged by location, from north to south and west to east within each State; the States are listed in alphabetical order.

The data shown in the tables were selected, first by the individuals who compiled the material in the various States, and second by the writer. Anaylses were selected so as to show the distribution and chemical character of the shallowest mineralized ground water in each area. By no means were all the available analyses of mineralized ground water included. For the purposes of this atlas, the analyses were further selected so as to show the wide variety in chemical types of mineralized water. Where several wells or springs in a small geographic area were closely similar in chemical type and overall mineral concentration, only one analysis was included in the table.

A majority of the analyses in the tables was made in laboratories of the U. S. Geological Survey. Most of the Survey's analyses were made by means of standard procedures (Rainwater and Thatcher, 1960) and are cited in standard form as to number and rounding of significant figures. Many other analyses, however, were made in State, municipal, or private laboratories throughout the country and during a long period of time. The analytical methods varied from laboratory to laboratory. The results of non-Survey analyses, therefore, are reported according to a variety of schemes governing the number and rounding of significant figures. These analyses have not been converted to Survey format.

A few discrepancies appear in the tables because of the variety of sources of information. Many analytical reports, for example, do not state whether the iron reported is "in solution when analyzed"; "total iron," which would include that in solution and that present in colloidal suspension; or iron determined in unfiltered samples, which would include the types named above in addition to iron present in precipitates or sediment or both. Reports of dissolved-solids residues do not always specify the temperature to which the residue was heated before being weighed. Some constituents present in oven-dried residues are unstable at higher temperatures and are driven off during heating. The temperature used in Geological Survey analyses is 180°C. It was not feasible to determine the temperature used in all the other laboratories from which analytical reports have been drawn.

The chemical character of water determines in part the uses to which the water may be put without treatment. The character and concentration are important considerations, too, in governing methods selected for treatment or demineralization, or both. The two maps, sheets 1 and 2, and the tables of analyses furnish an overall view of the occurrence, concentration, and chemical character of mineralized ground water in the 48 conterminous United States. The information presented does not provided detailed guides to planning use of mineralized ground water at specific localities. It does, however, indicate the extent and general chemical type of bodies of mineralized ground water that in most areas remain largely undeveloped. The importance of this resource in the national economy is likely to grow to major proportions within the next few decades.

ACKNOWLEDGMENTS

The mineralized-water maps are, in large measure, the product of many contributiors in the Water Resources Division of the Geological Survey, who are recognized below. In addition, much information was obtained from cooperating officials and agencies of many of the States. Their contributions are acknowledged with much appreciation. A substantial amount of data was readily available in published reports and unpublished records of the Geological Survey and the agencies--State, local, and Federal--that cooperate formally or informally with the Survey in its water studies. Special mention should be made of the contributions of William Back, who mapped the Atlantic Coastal Plain; of E. M. Cushing, who greatly assisted in coördinating the compilations made by

individual State offices in the Mississippi Embayment; and of F. A. Swenson, who coordinated the individual compilations made in eight of the Rocky Mountain and Great Plains States. C. W. Carlston of the Geological Survey furnished valuable background information and contributed to preliminary planning of the project.

The individual contributors by States are as follows:

Alabama	J. G. Newton.
Arizona	H. M. Babcock.
Arkansas	G. M. Hogenson.
California	J. S. Bader.
Colorado	D. L. Coffin, J. H. Irwin.
Idaho	R. J. Madison.
Illinois[1]	P. G. Olcott.
Indiana	R. J. Wolf.
Iowa	F. R. Twenter, R.W. Coble.
Kansas	W. G. Hodson.
Kentucky	H. T. Hopkins.
Louisiana	A. N. Turcan, Jr.
Michigan	K. E. Vanlier, John Rapp.
Minnesota	G. C. Straka.
Mississippi	J. W. Lang.
Missouri	G. M. Hogenson.
Montana	F. A. Swenson.
Nebraska	W. A. Buehrer.
Nevada	Duane Everett.
New Mexico	J. W. Hood, L. R. Kister, F. B. Titus, Jr.
New York	R. C. Heath, J. C. Kammerer.
North Dakota	Henry Trapp, Jr., Q. F. Paulson.
Ohio	S. E. Norris, Paul Drake, R. B. Stein.
Oklahoma	D. L. Hart, Jr.
Oregon	R. J. Madison.
Pennsylvania	Harold Meisler.
South Dakota	M. J. Ellis, D. G. Adolphson.
Tennessee	J. H. Criner.
Texas	A. G. Winslow.
Utah	C. A. Horr.
Washington	R. J. Madison.
West Virginia	Gerald Meyer, B. M. Wilmoth, T. M. Robison.
Wisconsin	P. G. Olcott.
Wyoming	M. E. Lowry, H. A. Whitcomb.

[1] All data for Illinois were supplied by the Illinois State Water Survey.

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Table 1.—*Frequency Table—Chemical Types of Mineralized Ground Water*

[Concentration ranges in parts per million]

Chemical type	Mountainous West				Great Plains				Midwest Interior				Coastal Plains			
	1,000–3,000	3,000–10,000	10,000–35,000	35,000	1,000–3,000	3,000–10,000	10,000–35,000	35,000	1,000–3,000	3,000–10,000	10,000–35,000	35,000	1,000–3,000	3,000–10,000	10,000–35,000	35,000
CALCIC																
Calcium chloride	6	5			1				5							
chloride sulfate	3					1										
sulfate	8	1			58	10			48	7	1		3			
sulfate chloride	1								1							
sulfate bicarbonate	1				1				1							
bicarbonate					2				2							
bicarbonate chloride									1							
bicarbonate sulfate									1							
Calcium magnesium chloride	3	3							1							
chloride sulfate	3															
sulfate	8	1			8	3			8	1			2			
sulfate chloride	1												1			
sulfate bicarbonate	1				1				1							
bicarbonate					1				1							
bicarbonate chloride					1											
Calcium magnesium sodium chloride						1										
sulfate						1										
Calcium sodium chloride	1								1				1	1		
chloride sulfate					2								1	1		
sulfate	10	2			11				3							
sulfate chloride	1				1											
bicarbonate									1							
bicarbonate chloride													1	1		
bicarbonate sulfate	1															
MAGNESIC																
Magnesium sulfate	4				2		1		2							
sulfate chloride									1							
bicarbonate	2															
Magnesium calcium chloride sulfate					1											
sulfate	2				1	1			3	1			2	1		
sulfate bicarbonate					1											
Magnesium sodium sulfate		2			2	1										
bicarbonate sulfate	1				1											
SODIC																
Sodium chloride	58	36	14	3	30	25	8	9	64	26	10	1	57	16	8	
chloride sulfate	3				4	1			3				1			
chloride bicarbonate	3	1							4	1			4	1		
chloride sulfate bicarbonate					1											
sulfate	56	13	1		38	10			11	8	3		4			
sulfate chloride	5		1		3				1	1			2			
sulfate bicarbonate	4	1			5	1										
bicarbonate	49	3	2		25	1			11				15			
bicarbonate chloride	2	1			7				4				1			
bicarbonate sulfate	3				2								1			
Sodium calcium chloride	4								2	1						
chloride sulfate	1				3				1				1			
sulfate	7	2			9	2			1	1						
sulfate bicarbonate	4	1							1							
bicarbonate chloride	1												1			
bicarbonate sulfate	1												1			
Sodium magnesium chloride	2				1								2			
chloride sulfate	2															
sulfate	3	2			4											
bicarbonate	1															
Total number of analyses	266	74	18	3	227	58	9	9	184	47	14	1	101	21	8	0

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH.*

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled month-day-year	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed, or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis.	Remarks
ALABAMA																							
345500N0871300.1	24	--	8–10–56	--	--	--	--	--	--	--	--	--	698	--	--	--	--	--	116	--	--	--	Field tests only.
345000N0874430.1	335	<0.01	6–18–56	--	0.00	--	16	17	875	(3)	892	3.0	900	3.0	0.9	--	--	--	110	0	3,800	8.3	
344700N0863630.1	150	.04	12– 4–58	--	.01	--	248	54	96	--	154	800	40	.4	.1	--	--	--	841	715	1,780	7.6	Strong sulfur odor.
344500N0875800.1	45	--	8– 3–29	--	12.3	--	590	332	96	--	524	2,218	218	--	.6	--	3,892	--	--	--	--	--	
343800N0873530.1	115	--	6–18–56	--	.00	--	44	71	2,180	(3)	1,230	290	2,700	7.5	15	--	--	--	402	0	9,400	7.6	
343200N0873930.1	153	--	2– 1–61	--	.02	--	11	14	1,120	--	1,230	1,260	55	12	2.5	--	--	--	85	0	4,412	8.4	CO_3 = 24
334930N0855400.1	76	--	4–28–58	--	.01	--	544	329	204	--	358	2,520	169	.0	70	--	--	--	2,710	4	4,320	7.6	
333800N0865900.1	80	1.00	10– 7–52	18	(t) 1.40	--	112	75	518	5.6	308	1,320	14	.3	3.1	--	2,220	2,300	588	336	2,910	6.9	Al = 2.1
332800N0865900.1	450	1.44	10– 9–52	14	(t) .25	--	111	74	603	8.5	324	1,540	9.0	.5	2.5	--	2,520	2,570	582	316	3,230	7.5	Al = 1.5
331500N0873000.1	150	.05	4– 5–63	20	(t) .56	0.04	258	85	48	3.9	262	852	5.2	.1	.1	0.06	1,410	1,540	996	780	1,790	7.1	PO_4 = 0.00
330400N0873800.1	270±	Flowing .09	1–20–55	--	(t) .1	--	--	--	--	--	--	--	1,477	--	--	--	--	--	648	--	--	--	Field tests only.
325230N0874400.1	595	Flowing .01	12–10–40	--	--	--	--	--	--	--	165	1.0	810	--	--	--	--	--	200±	--	--	--	
323300N0875130.1	190	Flowing .01	1–24–56	--	.05	--	18	7.1	630	(3)	620	2.0	658	2.0	.4	--	--	--	74	0	2,800	7.8	
322430N0850530.1	712	.08	5– 9–62	11	1.9	--	475	11	239	3.1	13	1,410	215	1.1	.0	--	--	2,370	1,230	1,220	2,880	6.4	
321300N0863600.1	850±	.01	12–12–55	--	.03	--	190	--	--	--	62	2.0	1,990	.0	1.5	--	--	--	584	533	6,060	7.0	
320730N0863430.1	765	.01	12–14–55	--	.00	--	6.7	--	--	--	770	.2	250	5.0	.9	--	--	--	27	0	1,880	8.4	CO_3 = 6.0
320300N0873200.1	760	.40±	3–31–53	--	(t) .10	--	--	--	--	--	412	21	300	3.6	2.6	--	--	--	13	0	1,580	8.3	CO_3 = 9.0
313100N0872100.1	1,233	.04	11–21–51	18	.02	--	3.3	2.1	411	4.3	573	11	280	1.0	1.2	--	1,040	1,010	16	0	1,720	8.5	Al = 4.7 CO_3 = 18
304300N0880100.1	210	.40±	7–29–54	9.8	(t) .33	--	21	23	447	6.3	334	70	620	.8	5.0	--	1,370	1,410	147	0	2,490	8.2	Al = 0.07
ARIZONA																							
360800N1113800.1	Springs	69	6–14–50	19	0.01	--	264	79	513	23	964	147	815	0.2	3.2	0.1	2,340	--	984	194	3,940	6.5	
360800N1101400.1	950	.01	2–28–52	6.1	--	--	17	4.7	258	(3)	457	205	22	1.6	.2	--	740	--	62	0	1,160	--	
353700N1110900.1	1,032	<.01	8–30–54	12	--	--	--	--	--	--	374	--	33	1.9	1.1	--	--	--	40	0	2,350	--	CO_3 = 14
351900N1101800.1	1,844	>.02	6–16–53	--	--	--	924	166	5,960	--	--	1,350	10,100	--	--	--	--	--	2,990	--	28,300	--	
350800N1110400.1	687	.30±	4–14–53	12	--	--	94	44	63	(3)	208	230	100	.2	.8	--	646	--	416	245	1,030	--	
343100N1115000.1	132	Not in use	3–25–59	14	--	--	518	4,110	22,500	(3)	209	59,800	3,260	--	--	--	90,300	--	18,200	--	--	7.7	
325626N1095118.1	56	.50	5–14–48	57	--	--	132	61	1,580	(3)	848	1,290	1,380	--	37	3.7	4,950	--	580	0	7,370	7.5	
335610N1142419.1	160	2.9	11– 2–62	26	--	--	302	118	594	(3)	280	970	915	--	2.1	.33	3,070	--	1,240	1,010	4,610	7.6	
334600N1104400.1	Springs	.14±	1–25–56	20	(t) 2.1	0.30	456	214	12,800	228	1,820	1,060	19,300	--	--	24	35,000	--	2,020	526	51,400	7.2	Density at 20° C= 1.026; PO_4= 0.2
332517N1122840.1	200	4.0	8–13–52	23	--	--	308	174	469	(3)	240	970	875	.8	76	--	3,010	--	1,480	1,290	4,450	--	
331928N1114800.1	250	5.4	5– 8–50	37	--	--	209	54	171	(3)	252	215	436	.5	61	--	1,310	--	744	537	2,220	7.5	
330929N1114738.1	202	2.1	9–25–41	--	--	--	171	50	352	(3)	250	270	640	1.7	5.0	--	1,613	--	632	--	2,780	--	
325919N1124846.1	945	2.5±	4–16–53	35	--	--	192	63	767	(3)	172	356	1,320	3.1	30	2.0	2,850	--	738	597	4,830	--	
325816N1132449.1	715	3.2	8– 7–57	67	--	--	99	31	723	(3)	174	1,100	445	4.6	25	--	2,580	--	374	232	3,730	8.2	
325744N1095606.1	90	1.0±	8– 7–46	--	--	--	652	209	1,900	(3)	398	1,420	3,360	.3	87	--	7,820	--	2,490	2,160	11,500	--	
325630N1132332.1	267	.84	8– 7–57	65	--	--	282	113	912	(3)	256	1,030	1,320	1.9	3.3	--	3,850	--	1,170	958	5,820	7.8	Salty taste.
325600N1092600.1	Well= 79 and springs	1.3±	8– 1–44	57	.55	--	355	17	1,596	74	168	99	3,030	4.1	1.0	.4	5,320	--	956	--	9,180	--	Thermal.
325407N1115037.1	289	2.1	6–20–41	--	--	--	482	107	688	(3)	178	1,266	1,110	1.1	133	--	3,870	--	1,640	--	5,520	--	
325259N1134114.1	900?	2.2	8–16–56	33	--	--	45	5.1	489	(3)	104	359	512	4.4	6.2	.8	1,510	--	134	48	2,500	7.5	
325029N1114222.1	238	1.1	9–25–41	--	--	--	192	36	253	(3)	307	483	300	--	--	--	1,415	--	627	--	2,190	--	
324500N1094300.1	1,216	.14	7–11–46	--	--	--	40	3.7	675	(3)	39	504	705	12	1.1	7.5	1,960	--	115	83	3,280	--	
324223N1143447.1	189	4.3	3– 4–63	25	--	--	212	61	435	(3)	346	287	810	--	.2	.3	2,000	--	780	496	3,390	7.9	
312122N1093515.1	340	1.4	6–16–48	31	--	--	68	57	661	(3)	251	774	550	1.6	21	--	2,310	--	404	166	3,600	7.7	CO_3 = 20

See footnotes at end of table

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids		Hardness as $CaCO_3$		Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
																	Calculated	Evaporated residue	Calcium magnesium[2]	Noncarbonate			
ARKANSAS																							
355700N0894730.1	2,960	0.10	1939	6.0	0.18	-----	820	1.2	4,020	-----	41	934	6,840	-----	0.0	-----	13,300	-----	2,060	101	-----	----	Missouri Geol. Survey analysis.
353330N0922645.1	85	-----	9-16-60	5.6	.00	-----	95	211	53	6.0	980	255	100	0.4	.0	-----	1,210	1,450	1,104	302	1,840	8.0	
353000N0941045.1	-----	-----	4- 4-58	-----	.01	-----	180	99	248	7.4	404	724	242	-----	.0	-----	1,700	1,860	856	525	2,370	7.2	
351530N0912545.1	86	1.7	8-17-54	-----	5.4	-----	243	72	615	-----	245	.4	1,430	-----	1.2	-----	2,870	-----	902	702	4,850	6.9	
350200N0942300.1	300	-----	5-14-46	9.2	3.4	-----	64	50	265	3.8	253	613	69	.1	1.2	-----	-----	1,240	365	-----	1,730	7.4	
345530N0915500.1	32	-----	8-18-54	-----	.04	-----	75	54	104	-----	15	2.6	450	-----	1.0	-----	694	1,040	409	396	1,530	----	
345315N0911130.1	420	-----	3- 8-50	15	.3	-----	35	10	397	5.0	460	11	410	.3	.9	-----	1,110	1,090	128	0	1,840	7.5	
344615N0904600.1	469	.72	12-19-49	14	.64	-----	45	13	334	11	422	23	395	.0	1.1	-----	1,050	1,000	166	0	1,810	8.0	
341845N0905145.1	1,400	.12	6-27-46	8.0	.6	-----	3.8	1.3	616	16	610	1.1	618	1.0	.8	-----	-----	1,570	15	0	3,520	7.8	
341130N0920430.1	40	-----	3-28-49	60	.43	-----	196	83	393	8.8	2.0	1,260	280	.6	58	-----	2,360	2,530	831	829	3,120	4.8	
340330N0930245.1	195	<.01	12- 6-62	7.8	1.1	0.04	754	196	3,680	80	65	2.0	7,560	.4	-----	-----	12,300	-----	2,690	2,640	19,900	7.4	Sulfides as H_2S = 0.0
335700N0915230.1	20	Not in use	9-18-56	-----	(t) 1.0	-----	-----	-----	-----	-----	0	2,560	345	-----	1.3	-----	-----	-----	-----	-----	4,230	----	
335615N0941100.1	25	-----	8-15-51	-----	.09	-----	-----	-----	-----	-----	30	116	695	-----	130	-----	-----	-----	-----	-----	2,650	----	
335615N0932130.1	400±	.04	4-18-51	-----	(t) .12	-----	-----	-----	-----	-----	436	187	920	-----	.4	-----	-----	-----	-----	-----	3,820	----	
333930N0915015.1	37	-----	10-15-54	-----	(t)14	-----	500	333	449	18	0	3,080	400	.4	-----	-----	4,780	5,330	2,620	2,620	5,490	----	
333545N0924730.1	600	Flowing <.01	4- 7-59	-----	.04	-----	27	6.0	569	12	294	.4	775	-----	1.0	-----	1,540	1,640	92	0	2,740	----	
333315N0935630.1	364	.01	8- 9-51	-----	(t).20	-----	-----	-----	-----	-----	202	1.0	450	-----	3.6	-----	-----	-----	-----	-----	1,740	----	CO_3=11
330730N0912500.1	76	2.9	2- -52	24	(t)18	-----	432	174	494	8.6	481	282	1,490	-----	1.5	-----	3,150	3,760	1,790	1,400	5,110	7.4	
CALIFORNIA																							
415300N1215600.2	107	-----	7-16-54	52	-----	-----	33	39	602	39	1,310	379	83	0.4	3.1	1.1	1,890	-----	243	-----	2,640	8.3	CO_3=10
414400N1222200.1	-----	-----	10- 5-53	86	7.4	-----	133	53	1,740	80	3,810	11	860	.4	12	14	4,870	-----	550	-----	7,400	7.4	
405600N1240700.1	-----	-----	9- 9-59	13	(t)21	-----	211	512	3,410	164	87	790	6,560	.0	-----	8.0	11,710	-----	2,630	2,579	18,400	7.5	
403900N1241400.1	38	-----	10- 5-59	14	-----	-----	161	189	152	5.5	214	31	900	.0	1.9	.0	1,560	-----	1,180	1,000	3,100	7.9	
392000N1231400.1	-----	-----	9-17-59	20	-----	-----	38	6.1	364	1.0	218	.0	524	.8	.1	83	1,144	-----	120	0	2,034	7.7	California Dept., Water Resources analysis.
391200N1220100.1	-----	-----	6-23-59	31	-----	-----	64	78	335	2.3	725	408	129	.0	.9	.75	1,430	-----	481	0	2,105	8.4	CO_3 =31; California Dept., Water Resources analysis.
385400N1214300.1	-----	-----	9- -59	30	-----	-----	131	117	505	3.4	199	35	1,260	.1	.5	.4	2,180	-----	810	647	4,280	7.7	
383100N1214200.1	-----	-----	8- 7-59	41	-----	-----	62	187	125	2.0	1,030	139	83	.3	110	2.2	1,260	-----	923	78	1,920	8.0	California Dept., Water Resources analysis.
381600N1223800.1	650	-----	9-29-49	-----	-----	-----	90	70	1,315	(3)	180	1,680	1,050	-----	-----	7.0	4,300	-----	510	-----	7,500	----	California University (Davis) analysis.
381500N1221900.1	50	-----	3- 1-51	1.4	10	2.3	324	270	242	7.2	27	1.5	1,700	.1	3.1	.11	2,570	-----	1,920	-----	5,020	6.4	
380700N1185600.1	Spring	-----	7- 6-60	120	-----	-----	51	63	625	60	1,700	72	232	1.3	3.5	8.0	2,060	-----	387	-----	3,000	6.9	California Dept., Water Resources analysis.
375700N1211900.1	-----	-----	9- 1-59	54	-----	-----	105	47	350	3.9	167	.0	768	.1	1.1	.85	1,410	-----	455	318	2,570	7.9	Do
374500N1212700.1	-----	-----	4-21-59	44	-----	-----	125	90	185	2.3	430	194	367	.2	32	1.5	1,250	-----	684	331	2,130	7.6	Do.

374400N1221300.1			6–29–59	37			283	186	192	9.4	176	87	948	0.0	2.4	0.3	1,740		1,140	996	3,190	7.6	
373900N1203700.1			10– –59	75			340	37	458	34	84	23	1,390	.5	1.6	.4	2,400		1,000	931	4,110	7.0	
365100N1212800.1			7–28–59	27			82	123	172	3.0	568	413	112	.4	7.6	1.4	1,240		710	209	1,840		CO_3 = 21; Cali- fornia Dept., Water Re- sources anal- ysis.
364200N1203300.1	1,830		7–14–59	44			53	43	317	3.8	223	634	103	.3	1.2	2.0	1,310		309	126	1,880	7.8	California Dept., Water Re- sources anal- ysis.
364100N1174900.1							173	45	1,125	19	81	905	1,490	.3	.0	3.9	3,765				6,135	7.6	Do.
364100N1170400.1			4– 9–52				16	38	598		765	458	290	1.1		4.2	2,250				3,640	8.1	Pacific Chemi- cal Consultants analysis.
363600N1201200.1	1,400						156	25	275		93	844	102			1.7	1,450		492		1,990	6.7	
355900N1171300.1	285				0.00		1,593	1,648	98,560	372	514	2,684	158,900	1.3	124	188		272,500			214,000	7.5	
355700N1200400.1	303		10– 5–55				145	88	241	3.6	90	930	52			.48	1,504		722		2,140	7.7	
354700N1195100.1	984		6– 4–59	33			80	72	675	8.0	351	803	592	.2	.5	.56	2,440		495		3,790	7.7	California Dept., Water Re- sources anal- ysis.
354100N1163900.1	Spring		6–15–63				49	7.0	510	9.0	198	488	370	7.5	40	4.8	1,580				2,430	7.4	Do.
352600N1190500.1	402		3– 6–61	20			145	8.4	307	4.0	240	607	151	.1	44	1.8	1,410		397		2,110	7.5	Do.
351900N1172800.1	160		10– 6–17	66	1.4		171	31	401	(3)	138	35	888				1,660	1,720	555				
350300N1191400.1	1,000		7–11–56	26			176	74	154	9.5	140	836	58	1.2	4.1	.8	1,410		745		1,840	7.6	
345900N1194300.1	294		4–28–42	32	1.1		272	112	101	8.8	168	1,150	21	.3	.5		1,930		1,140				
345800N1175300.1	200		1– 7–58	37	.08		23	6.0	384	4.5	275	132	400	2.0	2.1	.7	1,130		82		1,980	7.6	
343200N1154400.1	155	0.01	5–13–61	25			783	12	1,850	35	79	1,223	3,191	1.5	.4	8.4	7,207		2,008	1,943	10,650	7.3	Do.
342600N1162200.1	63		1–29–53				27	12	790	5.8	640	562	465	1.9			2,230		117		2,710	8.8	CO_3 = 43
341600N1143700.1	103		5–13–62	27			176	62	118	3.9	278	53	472	.5	8.1	.24	1,060	1,320	695	468	1,920	7.8	California Dept., Water Re- sources anal- ysis.
341400N1151000.1			6–16–52				640	45	7,425		101	1,103	11,700	9.0	6.8	.9		21,640			33,000	7.6	Do.
340800N1154800.1			12–17–57	5.0			73	8.0	428	7.0	128	563	294	6.0	.3	1.4	1,450	1,470	215		2,330	7.5	Do.
335100N1181700.1			10–21–58	25			121	44	173	6.4	329	412	117	.1	13	.08	1,067		483	213	1,627	7.7	Do.
335000N1162000.1			11–23–60	16			343	72	2,950	29	636	4,538	1,604	4.0	1.6	8.7	9,856		1,150	628	12,495	7.2	Do.
334300N1180100.1			5– 2–58				140	14	60	30	183	42	274	.4	1.8	.0	1,024		407	257	1,253	7.9	Orange County Dept., Agr., analysis.
331700N1193200.2	72		1–12–57				69	29	408	10	427	78	540	.4		.54	1,340		293		2,420	7.7	
331700N1193200.9	Spring		1–13–57				463	459	2,520	50	369	1,390	4,850	.4		1.9	9,920		3,040		15,300	7.8	
331500N1172400.1	300		4–17–61	4.5	.37		549	939	5,680	148	79	948	12,200	.0	2.2	1.6	20,500	22,300	5,230	5,160	32,200	7.1	
330900N1162200.1	60		1– 8–54				260	83	320	17	216	1,062	300		1.6		2,152		990	813	3,000	7.4	
330800N1145700.1			5–15–52				106	1.1	520		82	251	740	6.0	5.6	.8	1,670	1,692			2,960	7.8	California Dept., Water Re- sources anal- ysis.
324900N1165600.1			6–24–58	38			152	87	139	3.1	286	305	264	.2	138	.1	1,378		738	504	2,080	7.1	Terminal Test- ing Lab. Inc., analysis.
324500N1144000.1	Spring		12–30–53	0.0	0.0		464	484	3,000	34	273	2,491	5,050		0.0	1.2		11,950			14,700	7.0	
323400N1170300.1			6–26–58	10			157	85	600	4.5	684	276	875	0.8	.0	.59	2,384		740	180	3,968	7.7	California Dept., Water Re- sources analy- sis.
COLORADO																							
404903N1050503.1	1,500	0.01	3–22–61	16	0.0		232	90	238	6.6	198	1,230	12	0.4	1.4			2,020	949	786	2,450	7.4	
404844N1025311.1	30	2.16		19	.04		190	51	510	18	464	1,190	157	1.2	1.9	0.40		2,370	684	304	2,890	7.4	
404500N1061000.1	5,500±		6–14–61				70	23	4,363		6,808	765	2,000				10,910					8.5	CO_3 = 336; Shell Oil Co., analy- sis; CO_2 effer- vescence.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—**Continued**

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids		Hardness as $CaCO_3$		Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
																	Calculated	Evaporated residue	Calcium magnesium[2]	Noncarbonate			
COLORADO—Continued																							
403200N1075200.1	220	.01	5- 3-62	20	.02	0.00	28	6.8	929	22	2,330	28	138	3.6	7	1.3	-----	2,270	99	0	3,490	7.7	
403127N1032100.1	582	.18	7-31-62	-----	-----	-----	36	15	515	5.0	656	22	508	-----	-----	-----	-----	1,750	152	0	4,570	8.3	Shell Oil Co., analysis.
403000N1080700.1	-----	.01	7-15-58	1.4	-----	-----	26	7.8	1,140	(3)	2,320	3.3	470	-----	2.6	-----	-----	2,680	97	0	4,530	7.4	
402900N1044622.2	35	.29	7-27-59	18	.0	-----	200	146	180	2.2	400	1,050	40	1.4	23	.29	-----	2,060	1,100	772	2,370	7.2	
402800N1042900.1	37	.55	5-27-60	39	.09	-----	263	86	375	16	425	1,350	75	1.2	21	.54	-----	2,580	1,010	661	3,060	7.2	
402238N1043713.1	45	1.51	8- 8-59	45	.15	-----	228	110	336	4.8	502	1,070	116	1.9	15	.47	2,170	2,310	1,020	608	2,860	8.0	
402023N1033420.2	39	1.30	9-20-49	47	.80	-----	296	59	180	17	398	885	87	1.0	9.2	-----	-----	1,780	981	655	2,350	7.4	
400300N1035500.1	6,000+	.01-.03	5- -61	-----	-----	-----	62	24	3,381	-----	939	40	4,820	-----	-----	-----	8,790	8,900	-----	-----	-----	7.7	Analysis supplied by Phillips Petroleum Co.
395400N1064000.1	Spring	.01	6- 4-59	21	-----	-----	41	36	574	(3)	534	524	356	3.0	3.5	.79	-----	1,820	248	0	2,810	8.1	
395300N1064600.1	Spring	.01	6-24-63	36	.11	5.7	363	169	131	4.3	94	1,850	25	2.3	1.4	.15	-----	2,690	1,600	1,600	2,760	4.0	White precipitate on rocks.
395046N1045229.1	51	.42	9-20-55	21	-----	-----	985	355	1,300	11	182	579	4,250	.8	10	.25	7,600	8,380	3,910	3,760	12,800	7.2	
394919N1050542.1	1,740	.06	1- 7-56	14	.10	.00	6.0	1.2	492	3.4	584	18	408	2.2	.4	-----	1,230	1,230	20	0	2,170	7.6	CO_2 = 23; PO_4 = 0.00; Al = 0.2
394900N1081000.1	1,000	.32	5- 7-62	13	.01	.00	8.0	3.4	684	1.2	1,610	4.1	30	30	.4	.92	-----	1,610	34	0	2,500	8.3	CO_3 = 63
393200N1073600.1	12	.14	6- 4-59	15	-----	-----	85	36	285	(3)	706	291	66	.8	2.6	.07	1,130	-----	360	0	1,690	7.8	
393200N1072000.1	Thermal springs	2.9	6-19-55	.35	.02	.04	481	89	6,690	162	734	1,130	10,100	2.4	9.4	-----	19,100	19,000	1,570	964	29,100	6.4	Al = 0.3; PO_4 = 0.00; H_2S odor.
390600N1070200.1	Spring	.01	6- 1-59	33	-----	-----	644	.3	13	(3)	18	1,550	4.0	.8	.5	.01	2,250	-----	1,610	-----	2,260	7.4	
385700N1031800.1	7	.29	9-30-60	-----	-----	-----	151	51	300	12	400	821	35	1.0	.3	-----	1,570	-----	586	258	2,080	8.0	
383800N1023600.1	16	.29	9-20-60	-----	-----	-----	79	29	279	5.2	260	632	37	1.3	3.2	-----	1,190	-----	318	105	1,710	7.7	
382322N1050428.1	1,400	.09	7-27-62	15	3.2	-----	176	79	285	30	1,280	219	112	.6	.2	.16	1,550	-----	765	0	2,380	7.4	
382300N1085700.1	62	.32	4- 4-62	19	.36	.00	277	107	40	4.4	408	826	20	.4	17	.34	1,510	-----	1,130	795	-----	7.5	
382000N1085100.1	667	.87	4- -57	32	-----	-----	1,000	3,560	118,000	-----	-----	5,870	190,000	-----	.0	-----	-----	326,115	17,351	-----	-----	6.4	Analysis supplied by Utah Dept.,of Agriculture.
381600N1022900.1	51	.43	11-13-57	-----	-----	-----	141	80	524	6.5	234	1,390	115	1.6	6.2	-----	2,380	-----	681	489	3,190	7.5	
381500N1032700.1	1,120	.02	7-17-61	6.7	2.8	-----	1.2	1.2	541	2.7	501	630	48	3.2	1.8	.24	1,480	-----	8	0	2,240	8.1	Al = 1.0
381000N1023200.1	146	.56	11-12-57	-----	-----	-----	300	170	400	7.6	357	1,800	102	1.7	23	-----	2,980	-----	1,450	1,160	3,620	7.4	
380600N1032600.1	45	1.44	8-30-60	17	-----	-----	367	101	228	2.6	352	1,390	68	.9	25	.33	2,370	-----	1,330	1,040	2,780	7.3	
380300N1021300.1	-----	1.44	11-26-57	-----	-----	-----	416	161	725	9.4	263	2,670	200	.4	8.0	-----	4,320	-----	1,700	1,480	4,970	7.2	
380100N1084100.1	300	.01	11- -59	-----	-----	-----	16	39	940	5.6	348	1,710	60	1.5	1.2	-----	-----	3,000	200	0	4,180	9.1	CO_3 = 57
374600N1045500.1	2,175	0.03	10-11-49	23	-----	-----	13	5.5	871	(3)	1,442	31	452	-----	0.0	-----	2,160	-----	55	0	3,480	-----	
374600N1032500.1	108	.01	8-22-61	8.5	1.1	-----	32	15	2,370	15	588	4,490	125	1.7	7.8	.27	7,350	-----	114	0	8,960	7.9	
374300N1055600.1	10	Not in use	11-15-48	36	-----	-----	132	49	451	(3)	236	947	235	-----	1.0	-----	1,970	-----	531	338	2,750	-----	
373738N1054608.1	46	.10+	9-16-46	53	-----	-----	5.0	3.4	518	(3)	1,240	18	76	4.0	.0	.55	1,290	-----	26	0	1,850	-----	
373200N1045400.1	124	.01	12- 7-50	10	-----	-----	472	69	154	(3)	221	1,170	265	-----	29	-----	2,280	-----	1,460	1,280	2,780	7.7	
370800N1084300.1	1,346	.01	6- 4-57	-----	-----	-----	3.2	.5	740	2.2	1,600	6.2	215	10	-----	-----	1,760	-----	10	0	2,930	8.2	CO_3 = 6
370700N1080700.1	Spring	<.01	10-24-59	23	.06	.20	72	29	1,560	14	4,480	3.7	16	1.0	14	1.3	3,930	3,900	298	0	5,700	6.7	Al = 0.2; PO_4 = 0.33; Se = 0.00; Br = 0.00; I = 0.00

See footnotes at end of table.

DELEWARE

382400N0750400.1	1,706	----	1914	----	----	----	----	----	----	----	----	----	2,500	----	----	----	----	----	----	----	----	----	

FLORIDA

303800N0812700.3	1,826	----	9-3-59	----	----	----	170	101	----	----	----	403	864	----	----	----	3,050	----	841	----	----	----	
302000N0871000.1	180	Not in use	1-18-40	----	----	----	----	----	----	----	9.0	60	1,070	----	2.5	----	----	----	378	----	----	----	
301000N0823800.1	>1,000	----	8-21-39	----	0.16	----	263	154	----	----	227	1,068	25	----	----	----	----	2,000	1,297	1,111	----	7.1	Florida State Board of Health analysis.
295400N0813500.1	----	----	8-8-56	16	.61	----	228	107	11	2.6	98	830	16	0.5	.1	----	1,260	----	1,010	928	1,550	7.7	
294100N0812900.3	----	----	----	16	.36	----	354	250	1,070	20	120	850	2,250	.6	1.0	----	4,870	----	1,910	1,810	8,070	7.7	
294000N0813400.1	452	0.75	8-27-56	17	1.3	----	166	116	190	9.0	128	535	430	.5	.6	----	1,530	----	891	786	2,390	7.8	
292700N0811500.2	180	----	8-7-56	14	3.4	----	288	175	1,070	20	184	150	2,500	.0	1.5	----	4,310	----	1,440	1,290	7,890	7.5	
284000N0811000.1	125	Flowing .04	1-30-53	9.6	.05	----	108	71	632	14	142	188	1,170	.1	.7	----	2,410	----	562	----	4,060	----	
280000N0823000.1	432	----	3-10-49	29	.04	----	186	36	193	----	216	42	540	.1	1.0	----	1,130	----	612	----	2,140	7.5	
273100N0824300.2	----	----	11-20-50	8.6	5.0	----	1,260	1,590	13,100	(3)	201	1,710	25,500	.2	22	----	43,500	----	9,800	9,690	53,600	7.6	
272800N0823800.6	----	----	5-21-53	21	.59	----	326	135	412	(3)	160	803	925	1.9	.4	----	2,900	----	1,370	1,240	----	7.5	
272200N0823800.3	----	----	3-3-55	----	----	----	208	100	101	(3)	162	575	296	----	----	----	1,550	----	930	798	2,100	8.2	
272000N0822000.1	675	----	8-1-30	----	----	----	270	124	96	(3)	140	949	205	----	----	----	1,773	----	1,183	----	----	----	
272000N0822000.3	650	----	1-27-32	----	----	----	383	187	557	(3)	118	1,170	1,150	----	----	----	3,505	----	1,724	----	----	----	
271500N0805000.2	49	----	7-17-43	----	.08	----	184	31	225	(3)	730	5.0	335	----	.0	----	1,140	----	586	----	2,060	----	
271300N0805000.3	90	----	7-19-43	----	.04	----	120	38	501	(3)	470	288	610	----	.0	----	1,789	----	456	----	3,070	----	
271000N0803000.1	843?	Flowing .29	6-22-57	17	.11	0.00	131	94	545	14	164	215	1,150	.8	.0	----	2,250	----	714	----	4,040	7.4	Li = 2.0; PO_4 = 0.00
270500N0822000.1	368	.50	9-9-30	----	----	----	397	158	152	(3)	163	1,307	338	----	----	----	2,506	----	1,640	----	----	----	
270200N0821400.1	Spring	----	8-4-30	----	----	----	508	630	5,288	(3)	173	1,676	9,550	----	----	----	17,770	----	3,853	----	----	----	Source of analysis unknown.
270200N0802800.1	1,100	Flowing .11	3-25-58	19	.04	----	82	52	250	6.4	169	182	450	.8	.3	----	----	1,126	418	----	2,020	7.3	
265700N0810600.1	17	----	7-22-43	----	.10	----	103	40	241	(3)	528	129	268	----	.0	----	1,041	----	422	----	1,790	----	
264800N0804100.1	18	----	9-10-41	----	.05	----	237	128	862	(3)	849	661	1,140	----	----	----	3,450	----	1,118	----	5,430	----	
264100N0800300.1	1,080	----	10-28-40	----	----	----	140	181	1,354	(3)	186	481	2,400	----	----	----	4,650	----	1,094	----	8,100	----	
263600N0814800.1	810	Flowing .36	4-9-46	----	.03	----	86	71	272	(3)	180	302	450	----	1.0	----	1,270	----	506	----	2,230	7.4	
260600N0801300.1	314	----	12-23-41	----	----	----	110	139	1,650	(3)	300	333	2,720	----	----	----	5,100	----	846	----	8,940	----	
255300N0804500.1	446	----	10-29-40	----	----	----	101	122	917	(3)	231	465	1,470	----	----	----	3,190	----	754	----	5,660	----	
255200N0802300.1	90	----	3-18-41	----	----	----	200	156	1,380	(3)	294	342	2,520	----	----	----	4,740	----	1,140	----	8,400	----	
254600N0802700.2	32	----	10-4-40	----	----	----	183	220	1,790	(3)	206	655	3,120	----	----	----	6,070	----	1,360	----	10,500	----	
254500N0802700.1	83	----	10-31-40	----	----	----	460	1,070	8,810	(3)	230	----	15,800	----	----	----	28,400	----	5,540	----	44,000	----	
254400N0802200.1	1,950	----	10-15-40	----	----	----	214	464	3,650	(3)	129	1,030	6,520	----	----	----	11,900	----	2,440	----	19,500	----	

GEORGIA

345000N0851000.1	500	----	6-10-46	6.0	0.75	----	105	39	13	(3)	----	36	725	----	----	----	2,200	----	423	----	----	8.2	Georgia State Chemist analysis.
320200N0805400.1	1,260	----	9-4-58	39	.06	----	545	376	6,920	98	148	2,110	11,200	2.0	1.2	----	21,400	----	2,910	2,780	30,600	7.8	
Do.	900	----	do.	43	.09	----	205	243	3,290	83	211	1,360	4,730	2.6	1.1	----	10,100	----	1,500	1,330	15,300	7.8	
313000N0840500.1	----	----	----	14	----	----	4.3	1.8	463	29	1,152	1.4	69	----	----	----	1,160	----	18	0	----	----	
312500N0842000.1	5,500	Flowing?	10-15-57	15	.81	----	5.2	2.3	586	5.6	820	.0	435	2.6	7.6	----	1,470	----	22	0	2,490	8.4	CO_3 = 10
304000N0835000.1	1,625	Not in use	3-10-59	30	.1	----	244	68	5,320	(3)	276	1,870	7,300	.0	.0	----	24,200	----	888	----	----	7.5	Source of analysis unknown.

IDAHO

445050N1165730.1	150	<0.01	11-30-46	----	----	----	266	141	118	(3)	218	516	550	----	11	----	1,710	----	1,240	1,060	2,700	7.6	
435500N1122230.1	17	----	12-31-21	15	0.10	----	233	103	377	(3)	247	303	890	----	27	----	2,070	2,158	1,000	----	----	----	Organic matter = 75 ppm.
432530N1112550.1	Spring	----	8-26-39	12	.38	----	252	60	438	50	842	153	731	1.7	1.0	3.7	2,114	2,143	876	----	----	----	Precipitate of $CaCO_3$ and iron oxides in bottle.
432150N1114610.1	Spring	----	10-13-25	34	.38	----	92	23	2,806	(3)	2,406	3,045	910	----	Trace	----	8,095	8,246	324	----	----	----	Sample released gas bubbles when shaken.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location [1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium [2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
IDAHO—Continued																							
424045N1113610.1	Spring	0.72	9–18–57	84	1.5	-----	152	151	40	15	1,230	56	15	0.2	0.0	.12	1,120	1,060	1,000	0	1,720	6.1	Deposits travertine and iron oxides in alluvium.
421630N1143530.1	300	Flowing .01	1–18–57	-----	-----	-----	105	211	221	5.5	329	720	353	-----	227	.67	-----	-----	-----	-----	2,820	8.1	
421200N1121500.1	Spring	.02	9–19–31	11	.40	-----	273	65	1,285	(3)	963	12	1,978	-----	1.5	-----	4,100	4,198	949	-----	-----	-----	
420800N1122000.1	Spring	4.3	9–24–31	22	.32	-----	118	35	284	(3)	343	112	466	-----	.6	-----	1,206	1,258	438	-----	-----	-----	Warm spring.
420300N1121400.1	Spring	11.5	10–17–47	34	-----	-----	234	122	1,570	(3)	588	66	2,780	-----	30	-----	5,130	-----	1,090	604	8,760	-----	Warm spring (89°F).
420200N1124430.1	100±	-----	5–29–47	43	-----	-----	226	83	134	(3)	248	214	545	-----	2.0	-----	1,370	-----	906	702	2,330	-----	
420200N1122700.1	201	-----	do	21	-----	-----	292	149	93	(3)	205	114	880	-----	.1	-----	1,660	-----	1,340	1,160	2,980	-----	CO_3 = 8.9
ILLINOIS																							
420800N0880500.1	214	0.04	8–23–46	24	(t)0.3	0.0	183	110	131	-----	83	1,071	9.0	0.8	-----	-----	-----	1,599	-----	-----	-----	7.4	Illinois State Water Survey analysis.
414900N0875400.1	385	.40	5– 6–46	20	(t)2.9	.2	274	102	8.1	-----	490	672	18	.3	-----	-----	-----	1,374	-----	-----	-----	6.8	Do.
413030N0903030.1	1,600	1.37	10–17–47	-----	(t) .1	.0	71	31	256	-----	310	192	285	.9	-----	-----	-----	1,006	-----	-----	-----	-----	Do.
411800N0890400.1	1,645	.40	7–11–47	15	(t) .1	.0	57	21	458	-----	420	57	580	1.2	-----	-----	-----	1,422	-----	-----	-----	-----	Do.
411715N0881520.1	723	0.02	1959?	-----	0.7	0.1	-----	-----	-----	-----	342	-----	245	0.9	0.7	-----	-----	1,156	390	-----	-----	-----	Illinois State Water Survey analysis.
410830N0875130.1	1,043	-----	11–25–47	11	(t) .2	.0	116	59	257	-----	292	446	270	1.4	-----	-----	-----	1,354	535	-----	-----	7.3	Do.
410600N0895200.1	780	.11	9–10–42	11	(t) .3	.1	26	11	630	-----	545	239	560	-----	-----	-----	-----	1,744	111	-----	-----	7.6	Do.
410300N0880600.1	725	.02	12– 2–47	11	(t) .2	.1	71	36	344	-----	303	348	330	2.5	-----	-----	-----	1,298	325	-----	-----	7.5	Do.
405900N0890230.1	54	.01	6–13–47	20	(t) .4	.1	180	58	131	-----	224	729	20	.9	-----	-----	-----	1,255	690	-----	-----	-----	Do.
405800N0902130.1	2,473	2.90	1– 9–46	10	(t) .5	.0	68	26	382	-----	280	559	215	3.0	-----	-----	-----	1,399	279	-----	-----	-----	Do.
405130N0905200.1	891	.01	10–29–46	14	(t) .3	Trace	179	69	454	-----	254	1,192	195	5.5	-----	-----	-----	2,287	732	-----	-----	-----	Do.
400230N0910400.1	25	.02	3–26–48	25	(t)2.9	.6	229	74	31	-----	680	373	6.0	.3	-----	-----	-----	1,096	883	-----	-----	-----	Do.
394800N0875900.1	143	.04	7–15–49	23	(t)3.9	.0	63	24	343	(3)	640	0.0	370	.3	-----	-----	-----	1,162	225	-----	-----	-----	Do.
393300N0891730.1	130	.86	7–31–48	26	(t)2.2	.3	178	63	45	-----	400	382	42	.3	-----	-----	-----	1,019	704	-----	-----	7.1	Do.
383130N0894030.1	225	.04	3–24–48	13	(t) .1	Trace	3.7	1.1	497	-----	732	2.7	350	2.5	-----	-----	-----	1,256	14	-----	-----	8.6	Do.
INDIANA																							
414208N0865105.1	67	0.02	8–31–62	-----	-----	-----	-----	-----	280	-----	373	260	480	-----	-----	-----	1,443	-----	720	-----	-----	-----	Indiana State Board of Health analysis.
412238N0871952.1	53	.01	10–15–59	-----	2.0	-----	-----	-----	-----	-----	678	375	16	-----	-----	-----	1,098	-----	888	-----	-----	-----	
404430N0845630.1	206	.29	4–30–56	13	3.0	0.06	326	109	91	3.5	150	1,280	13	1.3	0.2	-----	1,910	2,000	1,260	1,140	2,180	7.4	Al = 0.2; Li = 2.4; Cu = 0.00; Zn = 0.00; PO_4 = 0.5.
401056N0864300.1	52	.04	4–25–63	-----	.1	-----	-----	-----	-----	-----	498	405	48	-----	-----	-----	1,059	-----	492	-----	-----	-----	
394726N0872338.1	550	.01	9–13–61	-----	.1	-----	-----	-----	-----	-----	459	365	3,120	2.0	-----	-----	5,886	-----	188	-----	-----	-----	
393021N0871508.1	382	.05	5–22–59	-----	.1	-----	-----	-----	-----	-----	1,693	25	1,080	-----	-----	-----	3,174	-----	48	-----	-----	-----	Methane present.
392446N0872344.1	77	.01	8–18–59	-----	<.1	-----	-----	-----	-----	-----	259	785	62	-----	-----	-----	1,414	-----	888	-----	-----	-----	CO_3 = 38
392034N0871926.1	301	.02	8–17–59	-----	.1	-----	-----	-----	-----	-----	1,200	12	148	-----	-----	-----	1,251	-----	8	-----	-----	-----	CO_3 = 149

See footnotes at end of table.

390941N0863159.1	175	.01	12–18–53	5.5	.02	.00	32	16	1,168	9.6	440	11	1,600	2.8	.4	-----	3,062	3,164	144	0	5,790	7.8	
390534N0872924.1	175	.01	2–18–60	7.0	.53	.07	5.2	4.4	1,600	7.6	1,320	8.4	1,670	2.0	.5	-----	3,960	3,910	31	0	6,760	8.1	Sr = 0.0
385535N0870119.1	252	.02	4– 8–57	6.9	.13	.03	.8	1.7	428	.6	811	2.2	114	4.5	.0	-----	1,010	1,020	9	0	1,680	8.8	CO_3 = 51
384500N0852230.1	185	.10	6–22–59	10	2.2	.00	93	51	675	19	342	12	1,150	1.3	1.4	1.4	2,180	2,820	442	161	4,360	----	PO_4 = 0.13; Br = 0.0; I = 0.0
382010N0862723.1	97	.01+	10–16–58	6.6	.03	.00	112	89	123	4.4	287	595	26	3.6	.0	-----	1,100	1,190	646	410	1,520	7.7	Al = 0.2; PO_4 = 0.0
IOWA																							
432330N0944930.1	400	0.96	11– 5–56	20	(t) 1.8	0.26	202	63	61	5.2	442	504	5.0	0.4	<0.4	-----	1,175	------	362	402	1,440	7.1	Iowa State Hygienic Lab., analysis.
430000N0960400.1	444	.04	7–15–36	-----	(t) 1.4	.50	416	100	131	(3)	315	1,284	25	1.5	.9	0.18	2,298	------	1,452	------	-------	7.1	PO_4 = 0.00; Iowa State Hygienic Lab., analysis.
423200N0944100.1	150	.22	3–13–62	30	(t) 3.8	.30	152	56	134	8.9	659	358	3.0	.5	<.4	-----	1,090	------	610	------	1,520	7.4	Iowa State Hygienic Lab., analysis.
422130N0924630.1	535	1.30	11–22–61	11	(t) .10	<.05	182	70	8.4	3.8	268	513	2.0	1.9	<.4	-----	1,029	------	743	------	1,280	7.6	Do.
422100N0940530.1	182	.01	10–22–42	-----	(t) 1.3	.0	232	60	80	(3)	586	506	8.0	.0	3.1	-----	1,242	------	836	------	-------	7.0	Do.
421000N0952700.1	348	.25	4– 4–62	22	(t) .12	.34	376	119	320	9.2	244	1,910	22	.4	<.4	-----	3,252	------	1,430	------	3,700	7.4	Do.
415900N0924630.1	936	.04	1– 9–53	-----	6.1	.0	90	38	396	13	212	961	54	1.8	3.1	-----	1,691	------	381	207	2,130	7.7	Do.
415200N0905530.1	1,500	.17	10–20–59	8.8	.44	<.05	110	32	264	18	288	324	295	1.0	18	-----	1,215	------	406	170	1,920	7.5	Do.
414800N0915130.1	765	.17	10–27–60	7.8	.06	.05	224	70	97	12	303	795	7.0	.3	.9	-----	1,518	------	847	599	1,790	7.7	Do.
414500N0913600.1	260	.03	11–20–59	16	.93	.83	526	163	42	13	383	1,740	5.0	.4	4.4	-----	2,950	------	1,984	1,670	2,880	7.1	Do.
414330N0944500.1	340	<.01	9– 3–38	-----	(t) 2.4	.15	451	240	399	(3)	471	2,328	65	2.0	.0	-----	-------	4,192	2,120	------	-------	6.8	Do.
414100N0931430.1	310	Flowing <.01	10– 4–46	-----	(t) .8	.0	191	85	491	(3)	272	1,504	32	2.8	.0	-----	-------	2,476	827	------	-------	7.9	Do.
413900N0951900.1	368	.72	8–25–60	19	(t) 2.7	.10	265	70	434	9.4	266	1,560	21	.4	.4	-----	2,664	------	948	------	2,750	7.7	Do.
413630N0921230.1	597	<.01	3– 3–58	5.4	.10	.05	333	128	398	22	307	1,900	36	.7	.4	-----	3,200	------	1,359	1,107	3,450	7.6	Do.
413000N0941830.1	247	.22	12–31–35	-----	(t) 1.7	.10	254	73	292	(3)	476	1,131	13	1.5	.02	.09	-------	2,098	938	------	-------	----	Do.
412800N0915000.1	1,715	.50	1–21–60	12	2.8	<.05	98	40	208	20	305	552	53	1.5	2.7	-----	1,181	------	409	159	1,670	7.8	Do.
412400N0922030.1	287	.06	11–18–57	12	1.5	.10	108	59	265	11	400	701	48	1.8	4.0	-----	1,490	------	513	185	1,920	7.3	Do.
411700N0932600.1	475	.03	4–27–56	8.4	(t) 3.0	.10	380	80	1,940	17	298	4,590	510	2.5	.0	-----	8,110	------	1,278	1,034	9,290	7.5	Do.
411430N0923900.1	227	.08	7–15–43	-----	------	15	1,048	727	4,023	(3)	-------	9,683	--------	1.0	-------	-----	-------	16,450	5,635	------	-------	4.4	Do.
411230N0942500.1	236	.01	12–22–53	-----	2.7	1.2	449	199	260	9.0	266	2,107	48	.3	.0	-----	3,655	------	1,940	1,722	-------	7.4	Do.
411100N0913000.1	451	<.01	1– 4–43	-----	(t) 2.6	-----	213	56	1,396	(3)	366	2,188	890	4.0	.0	-----	4,876	------	765	------	-------	7.4	Do.
410930N0954930.1	2,512	--------	11–12–50	-----	(t) 1.9	.7	106	47	445	(3)	173	700	420	2.4	.0	-----	1,942	------	464	------	2,660	7.6	Do.
410900N0923800.1	Spring	--------	Before 1911	96	880	-----	464	984	80	(3)	-------	15,112	8.0	-------	-------	-----	-------	18,900+	5,194	------	-------	----	"Very strongly acid," analyst unknown.
410030N0915700.1	158	.35	11–10–48	-----	(t) .7	.0	217	77	100	(3)	830	412	1.0	.2	.0	-----	1,271	------	860	------	-------	7.8	Iowa State Hygienic Lab., analysis.
405600N0910530.1	530	.01	2–19–59	5.6	.96	<.05	437	123	840	32	255	2,660	285	2.0	<.4	-----	4,850	------	1,599	1,390	5,600	7.8	Do.
405330N0924900.1	180	.02	10–30–46	-----	(t) 1.0	.0	83	43	257	(3)	481	480	12	.8	.0	-----	1,125	------	385	------	-------	7.6	Do.
405300N0945700.1	441	.01+	5– 1–47	-----	(t) 2.7	.0	50	28	1,395	(3)	390	602	1,578	1.0	.0	-----	3,911	------	246	------	-------	8.0	Do.
404800N0912130.1	69	.14	6–29–37	-----	------	1.0	387	66	142	(3)	281	1,086	77	1.0	.0	-----	1,447	------	1,238	------	-------	7.4	Do.
404800N0911600.1	1,932	1.00	12–11–43	-----	(t) .3	.0	99	36	247	(3)	288	470	126	1.7	.9	-----	1,156	------	397	------	-------	7.6	Do.
403930N0941400.1	300	.03	3–22–51	-----	3.3	.19	120	68	519	(3)	366	1,225	11	1.0	.0	-----	2,326	------	579	279	2,920	7.7	Do.
KANSAS																							
395740N0972500.1	253	--------	2– 4–42	-----	------	-----	22	8.0	357	(3)	444	188	214	0.0	1.1	-----	1,031	------	88	0	-------	----	Kansas State Board of Health analysis
394940N0962540.1	108	0.01+	12–12–51	21	(t) 32	-----	372	220	315	(3)	470	1,689	264	1.0	.4	-----	3,113	------	1,832	1,446	-------	----	Do.
394520N0975440.2	116	--------	7–31–42	-----	(t) 32	0.11	775	98	532	(3)	223	1,029	1,320	.6	469	-----	4,367	------	2,336	2,153	-------	----	Do.
394210N0953820.1	125	Not in use	4–19–62	5.0	(t) .99	.08	173	83	2,940	24	222	1,145	4,275	1.2	.4	-----	8,756	------	772	590	14,880	----	Do.
392953N0982242.1	Spring	--------	11– –54	6.0	(t) .52	.15	213	413	6,230	(3)	1,720	3,370	7,700	1.6	2.0	-----	18,800	------	2,230	------	-------	----	Do.
392830N0970540.1	Spring	.30+	3– 1–54	17	(t) .42	-----	608	83	60	(3)	432	1,530	25	1.5	.8	-----	2,540	------	1,860	1,500	-------	----	Do.
392710N0975430.1	390	Not in use	9–17–54	7.0	------	-----	180	438	6,656	(3)	1,591	3,210	8,560	1.6	1.8	-----	19,838	------	2,249	945	-------	----	Do.
391340N0981220.2	185	--------	7–19–55	8.5	(t) 3.8	-----	22	17	835	(3)	637	261	810	1.2	2.8	-----	2,272	------	125	0	-------	----	Do.
385910N0951610.1	190	Not in use	3–11–50	15	(t) 20	-----	615	257	7,338	(3)	237	279	12,800	.9	8.8	-----	21,430	------	2,590	2,396	-------	----	Do.
385730N1010200.1	1,230	--------	3–17–56	11	(t) 1.1	-----	3.3	1.5	449	(3)	720	0	271	6.0	1.2	-----	1,098	------	14	0	-------	----	Do.
385730N0991535.1	980	Not in use	1– –42	-----	.13	-----	38	36	1,395	(3)	426	435	1,750	3.0	.0	-----	3,870	------	243	0	-------	----	Kansas State Board of Health analysis; sample from interval 515–555 ft.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
KANSAS—Continued																							
384950N1001030.1	696	-------	7–20–53	10	(t) 0.20	----	4.5	2.2	434	(3)	562	176	213	5.6	4.4	-----	1,127	-----	20	0	-------	----	Kansas State Board of Health analysis.
384945N0985545.1	320	Not in use	5– 8–42	----	2.2	----	733	295	5,337	(3)	416	1,165	9,275	1.1	19	-----	17,035	-----	3,042	2,701	-------	----	Do.
384915N0954010.1	643	0.01	4–20–54	5.8	(t)11	----	3,006	1,155	22,680	(3)	76	1,636	42,400	-----	-----	-----	70,920	-----	12,247	12,185	-------	----	Do.
384240N0993600.1	555	-------	6–14–60	9.5	(t) .49	0.00	8.3	12	476	(3)	415	220	368	5.2	3.6	-----	1,307	-----	70	0	2,280	----	Do.
384010N0983050.1	260	-------	10–16–44	----	(t) 2.4	----	29	32	1,191	(3)	414	279	1,520	2.4	18	-----	3,281	-----	204	0	-------	----	Do.
381200N0983600.1	220	Not in use	5– –45	----	(t) 2.1	----	712	391	15,880	(3)	310	3,113	24,400	1.3	9.3	-----	44,660	-----	3,384	3,130	-------	----	Do.
380710N0991420.1	215	-------	8–23–44	----	(t) .58	----	42	26	491	(3)	337	129	610	2.0	5.8	-----	1,475	-----	212	0	-------	----	Do.
380700N0983700.2	168	Not in use	5– –45	----	(t) 3.4	----	491	233	9,550	(3)	255	1,923	14,700	.9	8.4	-----	27,032	-----	2,182	1,973	-------	----	Do.
380410N0984140.3	200	Not in use	---do----	----	(t) 5.6	----	954	416	22,442	(3)	139	3,341	34,950	1.6	5.3	-----	62,178	-----	4,090	3,976	-------	----	Do.
380230N0972510.1	62	Not in use	10–30–45	23	(t)14	----	1,880	274	2,896	(3)	283	230	8,250	.4	9.3	-----	13,704	-----	5,816	5,584	-------	7.1	Do.
380050N0994520.1	248	-------	8–12–46	5.4	(t) .36	----	40	25	549	(3)	346	126	690	3.0	2.2	-----	1,611	-----	203	0	-------	----	Do.
374840N0965705.1	65	-------	8–22–63?	----	------	----	492	127	-------	(3)	456	110	3,150	-----	8.4	-----	6,320	-----	1,750	------	-------	7.6	Do.
374000N0983420.1	45	Not in use	9–18–56	19	(t) .54	----	261	76	3,536	(3)	207	720	5,475	.3	13	-----	10,202	-----	964	794	-------	----	Do.
372840N0991130.1	190	Not in use	9– –41	----	5.8	.17	256	110	3,068	(3)	128	1,141	4,588	1.8	.8	-----	9,235	-----	1,090	985	-------	----	Do.
372722N0953030.1	240	-------	8–30–62	17	(t) .09	.12	232	102	179	3.0	407	875	84	1.1	49	-----	1,742	-----	998	664	2,350	----	Do.
372330N0971805.1	46	Not in use	5–16–44	----	------	----	1,606	1,174	57,930	(3)	173	7,828	89,750	-----	-----	-----	158,375	-----	8,832	8,690	-------	----	Do.
371820N0983320.1	45	Not in use	9– 1–45	18	(t)13	----	974	229	3,159	(3)	144	201	7,025	.2	6.2	-----	11,683	-----	3,371	3,253	-------	----	Do.
371440N0980540.1	70	-------	4–24–56	11	(t) .15	----	499	116	478	(3)	120	2,074	356	.9	1.8	-----	3,596	-----	1,722	1,624	-------	----	Do.
371400N1014650.1	600	-------	4– 9–62	25	(t) .03	.00	597	97	58	5.0	163	1,784	10	2.3	8.0	-----	2,667	-----	1,888	1,754	2,920	----	Do.
370910N0971030.2	12	-------	5– 2–56	9.0	(t) .25	----	771	146	1,158	(3)	273	1,943	1,980	.7	2.2	-----	6,144	-----	2,524	2,300	-------	----	Do.
370210N0982900.2	30	-------	4–25–56	12	(t) 1.4	----	256	146	1,308	(3)	487	1,525	1,400	1.7	146	-----	5,035	-----	1,238	838	-------	----	Do.
363200N1015500.1	1,140	-------	12–17–48	8.4	(t) 1.8	----	18	8.8	377	(3)	446	212	217	3.0	1.1	-----	1,065	-----	81	0	-------	----	Do.
362000N1002000.1	742	-------	9–16–48	8.6	(t) 3.4	----	4.8	2.6	447	(3)	470	207	248	6.0	2.6	-----	1,174	-----	22	0	-------	----	Kansas State Board of Health analysis; CO_3 = 16
KENTUCKY																							
384059N0843526.1	1,106	0.01	1948	----	53.6	----	41.5	28.1	-------	-----	-----	181	1,773	4.4	-----	-----	------	-----	------	------	-------	----	Kentucky Univ. Agr. Exp. Sta. analysis. Sulfides as Fe S = 40.8.
383856N0834557.1	260	.02	8– 8–56	----	.02	----	-----	------	-------	-----	-----	124	51	-----	-----	-----	666	-----	530	------	1,170	----	
382525N0845303.1	>900	.36	8–20–53	7.0	.29	0.00	138	64	1,400	32	324	394	2,120	4.0	0.1	-----	4,346	-----	607	------	7,390	7.6	
382246N0841209.1	135	<.01	4–17–53	----	.13	----	-----	------	-------	-----	708	58	670	.5	.4	-----	------	1,760	560	------	3,090	----	
381041N0850704.1	945	Flowing .14	1–21–53	5.0	1.5	.50	308	75	15	3.4	256	820	10	2.4	.8	-----	1,421	-----	1,080	------	1,660	7.6	
375934N0854956.1	124	.01	9–30–53	----	.25	----	-----	------	-------	-----	418	838	26	.2	.6	-----	------	1,216	1,212	------	1,930	----	
374425N0874233.1	180	.01	3–26–58	17	(t) .98	.18	121	34	730	4.3	822	1,170	92	.4	11	-----	2,590	2,570	442	0	3,530	7.0	Li = 2.0
374226N0875047.1	200	.01	11–17–58	10	.09	.08	2.1	.8	522	1.0	841	7.0	240	2.8	2.8	-----	1,240	1,270	8	0	2,130	8.5	CO_3 = 41
374135N0871930.1	507	.02	6–11–54	9.2	.89	.13	3.7	1.0	1,039	3.6	1,595	1.0	676	7.7	.5	-----	2,559	2,568	14	0	4,300	8.2	CO_3 = 30
373557N0845652.1	90	..01	8– 7–53	----	.23	----	-----	------	-------	-----	664	109	1,087	1.1	.1	-----	------	2,829	302	------	4,490	----	
372754N0823910.1	81	.04	2–18–55	----	.20	----	-----	------	514	-----	224	1.4	744	.5	.9	-----	1,600	-----	101	------	2,760	7.4	
372739N0864052.1	470	.04	6–15–54	----	.46	----	-----	------	-------	-----	1,292	8.2	498	4.0	.4	-----	2,180	-----	31	------	3,430	----	CO_3 = 51
372232N0852853.1	49	Not in use	9–17–62	----	(t) 1.1	----	-----	------	-------	-----	275	116	3,750	-----	-----	-----	7,240	-----	1,650	1,420	11,500	7.7	

371123N0860521.1	319	0.05	7– 7–61	----	0.48	----	-----	-------	------	-----	134	1,070	55	0.2	0.3	-----	1,250	------	1,180	1,070	1,990	7.0	
365904N0855721.1	300	1.44	9–12–55	----	.13	----	-----	-------	------	-----	866	3.5	505	3.9	.4	-----	1,790	------	15	0	2,840	8.4	CO_3 = 11; PO_4 = 0.21
364730N0861114.1	410	.14	9–13–50	----	(t) .15	----	-----	-------	------	-----	308	876	89	.4	.1	-----	1,230	------	1,130	------	1,960	----	
364408N0870936.1	160	.01	9–12–55	----	.42	----	-----	-------	------	-----	240	200	440	2.6	1.8	-----	1,320	------	649	452	2,090	7.3	PO_4 = 0.22
											LOUISIANA												
325215N0935855.1	275	0.43	11–11–59	15	(t) 0.05	0.01	35	4.6	356	3.2	448	1.4	370	0.7	0.9	0.79	1,010	1,010	106	0	1,800	7.8	PO_4 = 0.7
324705N0915425.1	807	2.16	2– 2–55	15	(t) .09	.01	2.4	.2	398	1.7	428	.3	369	.7	.5	.49	1,020	------	7	0	1,810	8.3	CO_3 = 9.0; PO_4 = 1.7
324140N0934435.1	318	-------	11–10–59	11	(t) .08	.01	7.8	2.8	557	3.1	708	2.6	464	4.0	.3	2.09	1,400	1,430	31	0	2,470	8.0	PO_4 = 0.7
324120N0915215.1	964	.13	1–14–60	13	.03	.00	2.1	.2	492	1.9	473	.4	476	1.2	.2	.91	1,230	1,230	6	0	2,160	8.3	PO_4 = 1.1
322745N0913150.1	371	-------	4– 7–61	12	(t) .15	.00	4.0	1.0	501	7.8	536	.4	478	.8	.3	.47	1,270	1,380	14	0	2,290	7.7	PO_4 = 0.0; field pH = 7.6
321610N0934910.1	320	.14	4–27–55	28	(t)29	.43	224	105	168	4.3	256	568	395	.2	2.2	.18	1,620	------	990	780	2,490	8.1	PO_4 = 0.0
320820N0930600.1	395	-------	5–14–56	15	(t) .08	.00	2.0	1.8	655	3.6	809	17	548	3.0	2.9	2.8	1,650	1,700	12	0	2,090	7.8	PO_4 = 1.2
320340N0930100.1	150	.01	5–14–56	18	(t) 5.2	.04	33	31	390	7.5	266	657	120	.3	2.4	.46	1,390	------	210	0	2,090	7.4	PO_4 = 0.01
314140N0932255.1	197	-------	9–24–59	11	(t) .04	.04	2.9	1.2	409	2.0	629	254	52	1.4	2.5	1.85	1,070	1,160	12	0	1,730	8.6	CO_3 = 28; PO_4 = 1.6
313350N0922530.1	291	.04	7– 2–62	31	(t) 6.4	.20	52	1.0	520	13	172	4.4	819	.1	.2	.51	1,530	1,570	134	0	2,890	6.8	PO_4 = 0.08
312805N0933430.1	449	.04	2–24–55	16	(t) .16	.00	1.2	.3	533	1.9	1,280	.1	23	3.6	.5	-----	1,260	1,300	4	0	2,030	8.5	CO_3 = 47; PO_4 = 5.6
310405N0920800.1	315	.01	11–13–57	18	(t) .18	.05	19	5.4	770	4.8	511	1.6	960	.9	1.0	.32	2,030	------	70	0	3,630	7.8	PO_4 = 0.10
305715N0921110.1	456	.03	10–14–59	13	(t) .34	.01	7.1	1.0	428	1.8	773	1.2	206	12	.1	1.25	1,050	1,120	22	0	1,770	8.0	PO_4 = 1.8
300820N0905940.1	196	-------	3– 8–57	22	(t) 3.2	.08	53	19	961	4.8	290	11	1,470	.3	.5	.29	2,690	2,660	210	0	4,830	7.4	CO_2 (calc.) = 18; PO_4 = 0.2
300125N0923825.1	701	.06	6– 6–63	23	(t) .35	.17	55	47	320	3.6	339	.0	536	.1	.0	.06	1,150	1,170	329	51	2,130	7.7	PO_4 = 0.05
295400N0900600.1	288	.25	1–14–55	38	(t) .73	.22	198	84	530	19	452	21	1,170	.1	.0	.25	2,280	2,630	840	470	4,080	7.5	
294825N0922020.1	554	.04	4–29–63	5.4	(t) 3.9	.10	175	171	773	13	386	.0	1,760	.3	.5	.19	3,090	3,710	1,140	822	6,030	7.7	PO_4 = 0.0
294615N0932855.1	836	.07	9–20–51	33	(t) 1.5	.0	32	14	769	2.8	340	3.3	1,080	.6	.5	.38	2,100	2,110	138	0	3,860	7.6	PO_4 = 0.0
294330N0924735.1	460	-------	2– 2–55	30	(t) 1.2	.01	48	19	408	4.5	416	2.1	547	.1	.2	.05	1,260	1,230	198	0	2,270	7.5	PO_4 = 0.19
294320N0911230.1	390	<.01	1–18–54	35	(t)17	----	183	74	562	12	515	.0	1,130	.2	.5	-----	2,250	2,510	761	339	4,130	7.3	
293755N0895700.1	400	Flowing <.01	9–19–50	27	(t) 1.4	----	79	77	939	34	694	.6	1,450	.2	.0	.50	2,950	2,990	514	-----	5,350	7.8	
											MARYLAND												
391000N0762000.4	------	0.43	7– 2–43	----	1.3	----	-----	-------	------	-----	486	380	4,120	----	1.2	-----	------	------	1,530	------	12,900	6.8	
391000N0762000.3	125	.09	9–14–43	----	1.3	----	-----	-------	------	-----	0	190	880	----	-----	-----	------	------	330	------	3,100	4.0	
391000N0762000.2	125	.09	6–19–44	----	1.6	----	-----	-------	------	-----	260	125	1,770	----	15	-----	------	------	765	------	6,040	8.3	
391000N0762000.1	------	.12	5–29–44	----	83	----	-----	-------	------	-----	545	560	4,950	----	-----	-----	------	------	1,710	------	15,200	7.0	
382500N0754500.1	305	.12	12– 9–52	55	3.0	----	9.0	6.2	438	14	820	163	170	1.0	.5	-----	1,270	------	48	------	2,030	8.5	
380500N0753000.1	1,500	.04	–07	----	------	----	-----	-------	------	-----	-----	-------	1,180	----	-----	-----	------	------	-------	------	------	----	Saline at 480 ft, fresh below 1,200 ft.
380000N0754500.1	362	-------	12– 8–52	58	.17	----	31	31	1,260	45	1,200	62	1,360	.7	.7	-----	3,440	------	205	------	5,780	7.6	
380000N0754500.2	165	-------	---do----	15	.11	----	40	39	273	26	470	162	278	.2	2.1	-----	1,080	------	260	------	1,810	7.9	
375800N0754600.1	994	.43	10–19–51	13	1.8	----	1.8	.9	437	8.0	910	65	100	5.6	1.8	-----	1,090	------	8	------	1,720	8.5	
											MICHIGAN												
471808N0882240.1	3,000	0.04±	8–18–59	15	0.25	0.44	134	2.8	179	6.5	81	31	466	0.1	3.8	-----	879	1,020	346	280	1,630	7.3	Pumped from mine shaft.
464548N0893200.1	500±	.01	8–20–59	----	.28	1.6	15,800	359	5,440	668	31	14	36,900	----	-----	-----	59,200	59,700	40,900	40,900	74,500	6.5	Density at 20°C = 1.044
461850N0853315.1	283	.01	8– 5–57	----	------	----	164	83	874	-----	-----	680	1,300	----	-----	-----	------	-----	750	-----	5,800	----	Flowing.
461840N0852130.1	Spring	.07	10– 9–57	12	.05	.03	521	28	13	1.9	145	1,240	23	.4	.2	-----	1,910	2,070	1,420	1,300	2,110	7.4	H_2S odor.
460635N0855552.1	117	.01	4– ?–32	8.8	.51	----	560	43	5.5	(3)	172	1,370	16	----	-----	-----	------	2,160	1,580	-----	-------	----	Flowing.
455630N0845422.1	47	.25	10–12–56	5.6	.02	.00	460	24	6.5	1.7	248	996	5.3	.4	4.1	-----	1,630	1,790	1,250	1,040	1,910	7.6	
452853N0844032.1	280	.01	8–19–50	----	.15	----	------	-------	------	-----	-----	--------	300	----	.0	-----	------	-----	1,475	-----	-------	----	Michigan Department of Health analysis.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
MICHIGAN—Continued																							
441621N0833100.1	137	0.32	11–12–54	9.0	0.64	.02	98	55	246	3.0	166	450	304	0.6	1.0	-----	1,250	1,310	471	335	1,940	7.8	Li = 3.4; Zn = 0.00; PO_4 = 0.0
440240N0830000.1	--------	.36	4–27–56	7.0	.50	----	216	10	315	5.9	248	324	525	1.0	.0	-----	------	1,666	580	-----	2,500	7.6	Michigan Department of Health analysis.
435030N0835820.1	170	.01	9–14–62	----	------	----	------	-------	------	-----	-----	410	1,300	----	-----	-----	------	-----	860	-----	5,000	----	Do.
432453N0843633.1	542	.35±	3–21–28	9.6	1.03	----	124	33	200	(3)	216	246	315	----	-----	-----	------	1,092	440	-----	-------	----	
431541N0823216.1	130	.22	10–22–58	8.0	.15	.00	30	13	425	4.0	264	0	610	1.3	.0	-----	------	1,226	130	-----	2,400	7.7	Do.
431539N0840921.1	235	.20	3–12–59	8.0	.60	.00	108	19	235	4.0	252	175	332	.5	.0	-----	------	1,014	350	-----	1,700	7.5	Do.
431500N0834740.1	156	.50±	3–27–63	7.0	.20	.00	71	18	485	5.9	290	150	670	.8	.0	-----	------	1,544	250	-----	2,900	7.7	Do.
430617N0844130.1	228	.20±	1– 3–57	10	.00	.00	158	45	184	2.3	220	300	345	.0	.0	-----	------	1,300	580	-----	1,800	7.4	Do.
430053N0834234.1	230	.65	9–16–54	----	------	----	------	-------	------	-----	286	256	1,080	----	-----	-----	------	-----	441	-----	4,110	----	
430014N0854109.1	300	.50	1–21–53	11	(t) 7.84	.00	920	238	3,380	49	219	492	7,020	----	-----	-----	12,660	-----	3,280	-----	19,170	7.1	
425637N0854107.1	50	.72	1–21–53	14	.72	.00	452	63	47	2.3	362	1,010	83	.1	.1	-----	1,965	-----	1,390	-----	2,230	7.1	
425208N0835351.1	284	.65	3–12–54	8.9	.23	.07	14	3.3	438	4.6	544	40	352	.6	.4	-----	1,150	1,150	50	0	2,010	8.1	
424406N0842900.1	407	.65	8–21–61	17	16	.30	188	62	11	1.6	550	270	15	.2	.0	-----	------	1,020	725	-----	1,200	7.0	Do.
415205N0832709.1	100	.10	8– 6–58	15	.60	.00	624	54	12	3.2	234	1,620	14	2.0	.0	-----	------	2,706	1,840	-----	2,500	7.2	Do.
MINNESOTA																							
485100N0964800.1	12	0.29	---------	19	0.5	----	172	89	278	50	547	105	603	----	5.7	-----	1,600	-----	795	-----	-------	----	Minnesota Geol. Survey analysis. Al = 4.4; PO_4 = 16
485100N0964800.2	300	-------	5– 6–54	12	4.3	----	589	227	3,680	64	237	923	6,650	1.0	1.3	2.9	12,300	12,800	2,400	2,210	19,900	7.2	
484300N0962400.1	150	-------	5–12–54	17	.07	----	172	158	118	30	726	300	273	.4	80	.18	1,510	1,660	1,080	485	2,380	7.3	
482500N0970000.1	250	Flowing .01	6– 9–56	24	7.2	----	296	170	2,680	45	276	621	4,670	1.0	2.9	3.3	8,660	9,040	1,440	1,210	14,600	7.3	
481700N0970300.1	250	Flowing <.01	6– 9–56	25	7.4	----	595	183	1,490	25	263	1,120	3,060	.4	1.2	3.0	6,640	7,100	2,240	2,020	10,700	7.0	
481200N0970700.1	209	Flowing	6– 9–56	13	.99	----	220	98	1,080	24	230	500	1,950	.6	1.5	2.8	4,000	4,240	950	761	6,910	7.5	
481200N0964500.1	158	-------	4– 6–54	23	(t) .33	0.01	34	22	391	6.0	280	114	479	.8	4.6	.89	1,210	1,210	175	0	2,160	7.7	
473200N0963100.1	372	-------	---------	10	1.0	----	17	9.0	449	47	320	29	571	----	-----	-----	1,368	-----	79	-----	-------	----	Minnesota Geol. Survey analysis. CO_3 = 9.6
471600N0911600.1	--------	-------	---------	----	.05	.0	------	-------	------	-----	-----	830	1,390	2.2	-----	-----	------	-----	430	-----	-------	7.3	Minnesota Dept. Health analysis.
465200N0911500.1	--------	-------	---------	----	.1	.07	------	-------	------	-----	-----	190	1,100	.0	-----	-----	------	-----	420	-----	-------	7.8	Do.
453500N0953700.1	124	-------	6–18–26	18	6.0	----	183	70	34	18	469	368	1.8	----	2.5	-----	------	1,046	744	-----	-------	----	Minnesota Geol. Survey analysis. Al = 1.7; PO_4 = 3.3
453400N0964800.1	400	Flowing < 0.01	10– 2–63	8.8	2.2	0.00	21	15	1,230	8.2	453	1,330	704	5.2	12	4.0	3,560	3,630	113	0	5,360	8.0	
452100N0962600.1	115	-------	10–17–63	27	11	.42	266	92	139	12	459	898	3.0	.2	9.1	.69	1,680	1,780	1,040	664	2,130	7.6	
450400N0962200.1	293	.01	10–17–63	6.3	5.0	.06	37	11	1,170	11	381	1,300	705	2.9	.3	4.3	3,440	3,470	139	0	5,240	8.1	
450300N0955800.1	140	-------	10–16–63	23	13	.16	322	167	58	10	494	1,160	1.0	.4	.3	.53	2,000	2,140	1,490	1,080	2,400	7.7	
444400N0943700.1	45	-------	9–13–07	4.0	3.0	----	267	123	25	(3)	360	452	280	-----	80	------	------	1,456	-------	------	-------	----	Minnesota Department of Health analysis.

443700N0955900.1	160	< .01	6–25–59	----	------	----	----	----	----	----	----	384	1,540	----	----	----	----	3,820	814	----	5,330	----	
442800N0950900.1	130	----	10–29–53	----	(t) .77	.22	----	----	----	----	----	935	22	----	----	----	----	1,930	994	----	2,230	7.4	
442800N0950200.1	230	----	10–29–53	----	(t) 13	1.5	----	----	----	----	----	520	4.0	----	----	----	----	1,240	702	----	1,550	7.6	
442500N0954800.1	95	.72	2–13–58	32	(t) 4.2	.17	210	66	98	9.2	463	611	4.0	.2	.0	----	1,260	1,310	796	416	1,650	7.4	
435300N0940900.1	486	----	11–14–06	22	----	----	170	58	85	(3)	455	470	14	----	----	----	----	1,037	----	----	----	----	
433000N0954100.1	87	.07	6–24–59	4.8	(t) 11	.00	337	111	38	12	532	938	.5	.1	.2	----	1,700	1,990	1,300	862	1,980	7.1	
											MISSISSIPPI												
335812N0902211.1	1,680	0.36	.2–23–40	12	0.09	----	4.5	1.4	704	9.8	645	1.7	725	----	0.5	----	1,785	1,814	17	----	----	----	CO_3 = 7.9
332103N0904746.1	1,792	0.1–0.5	1– 4–62	17	(t) .16	0.00	.0	.0	419	2.0	1,100	2.0	2.3	1.7	.0	----	996	1,030	0	0	1,590	8.2	PO_4 = 9.8
331535N0910109.1	464	.01	9– 9–58	6.0	(t) .20	----	16	2.9	752	5.7	572	.4	860	1.1	.6	----	1,930	2,080	52	0	3,420	8.1	
324914N0901500.1	1,772	----	3– 3–58	2.4	.0	----	.8	.0	536	----	----	0	2.0	4.0	----	----	----	1,233	2	----	----	8.1	Yazoo County Health Dept. analysis.
324823N0905531.1	1,900	Flowing .30±	2– 1–56	----	(t) .26	----	5.1	.6	1,060	13	1,300	3.8	860	4.0	1.5	----	2,590	2,680	15	0	4,490	7.9	Gas collects in well when valve is closed.
324608N0882804.1	1,378	.07	11– 4–54	----	(t) .21	----	3.2	.6	420	4.8	420	5.4	400	4.0	7.6	----	1,050	1,080	10	0	1,910	8.1	
321812N0901003.1	>1,000	.14	11–30–56	9.4	(t) .22	----	4.2	.7	898	9.8	1,940	7.6	245	7.0	1.3	----	2,150	2,260	14	0	3,400	8.3	CO_3 = 10
321137N0905919.1	1,100	----	3–20–62	7.0	(t) .26	.06	20	3.7	1,910	12	862	3.6	2,380	3.0	.2	5.9	4,820	4,870	65	0	8,430	8.6	CO_3 = 61; PO_4 = 0.5
312410N0911529.1	85	<.01	9–16–63	----	----	----	----	----	----	----	----	----	2,850	----	----	----	----	----	----	----	----	----	Field test only.
302627N0303242.1	1,220	Flowing ?	5–12–59	5.5	(t) .30	----	2.6	.3	421	4.7	536	.2	312	1.9	1.2	----	1,030	1,120	8	0	1,790	8.5	CO_3 = 20; slightly effervescent when sampled.
334846N0891732.1	1,470	<.01	12– 3–54	8.8	.08	----	4.8	1.7	412	5.6	466	1.0	380	7.0	2.4	----	1,050	1,070	19	0	1,890	7.9	
324530N0883335.1	1,311	1.1	10– 5–55	----	.17	----	47	12	1,510	18	378	.8	2,220	2.0	.1	----	4,000	4,140	166	0	7,360	8.0	
											MISSOURI												
403445N0930000.1	227	----	3–15–56	9.3	(t) 13.12	0.05	104	37	312	(3)	301	737	25	1.0	5.8	----	1,449	----	412	165	----	7.7	Missouri Geol. Survey analysis.
403315N0942130.1	216	----	8– 7–56	11	(t) .46	.00	112	32	388	(3)	245	975	50	.7	.2	----	1,805	----	412	212	----	7.5	Do.
403145N0951830.1	295	----	----	17	(t) 4.18	.00	288	100	334	(3)	259	1,446	61	.7	.0	----	2,580	----	1,133	920	----	7.4	Do.
403100N0951900.1	1,450	----	----	----	----	----	8.4	17	1,790	(3)	1,005	17	2,340	----	----	----	5,130	----	91	----	----	----	Do.
402615N0914700.1	400	----	3–30–34	8.4	3.13	----	104	44	288	(3)	148	810	14	----	.7	----	1,374	----	450	----	----	----	Do.
402430N0925945.1	1,779	----	9– –39	7.2	----	----	159	59	875	(3)	315	1,013	852	----	----	----	3,124	----	640	----	----	----	Do.
402100N0943345.1	1,600	0.02	1947	13	(t) .03	----	66	30	1,708	(3)	382	1,389	1,652	----	----	----	5,091	----	291	----	----	7.0	Do.
401130N0952215.1	----	.09	----	24	3.5	----	152	54	75	(3)	478	17	249	----	.4	----	1,091	----	600	208	----	7.2	Do.
400100N0950430.1	398	.04	----	7.2	----	----	31	19	1,788	(3)	470	1,314	1,642	----	----	----	5,118	----	155	----	----	----	Do.
394630N0931345.1	190	.02	9– –14	3.6	----	----	354	148	1,846	----	326	1,202	2,832	----	.4	----	----	6,808	1,490	----	----	----	Do.
394330N0944900.1	384	.02	6– 6–44	----	----	----	65	31	3,608	(3)	314	5.1	5,402	----	----	----	9,793	----	290	----	----	----	CO_3 = 38; Missouri Geol. Survey analysis.
394230N0913745.1	394	.02	8– –34	9.6	.95	----	389	162	2,998	----	285	1,135	4,579	----	.1	----	----	10,200	1,637	----	----	----	Missouri Geol. Survey analysis CO_3 = 10.
393315N0933600.1	When sampled 550	.02	6–25–51	8.0	(t) .08	----	4.7	2.9	762	----	672	254	501	----	----	----	1,917	----	621	.0	----	8.8	Missouri Geol. Survey analysis; CO_3 = 42.
393130N0924400.1	410	----	1950	6.0	(t) .14	----	434	224	3,426	(3)	336	1,306	5,292	----	----	----	12,225	----	2,005	1,729	----	8.5	Missouri Geol. Survey analysis.
392345N0912245.1	305	----	3– –37	5.6	1.45	.02	186	94	1,196	(3)	425	444	1,865	2.6	.0	----	----	4,341	348	----	----	----	Do.
392000N0932800.1	325	.02	8– 8–48	11	(t) 76	----	622	302	4,966	(3)	352	1,447	8,250	----	----	----	----	16,911	2,794	----	----	7.6	Do.
391415N0921700.1	----	.17	----	----	(t) 1.4	----	174	78	121	(3)	----	686	26	1.2	----	----	----	----	----	----	----	----	Missouri Division of Health analysis.
385945N0942200.1	475	----	7– –38	8.8	.60	----	319	189	8,277	(3)	465	.8	13,356	----	.0	----	----	23,625	1,572	----	----	----	Missouri Geol. Survey analysis.
383600N0943000.1	252	----	10–20–39	6.4	2.35	----	30	16	2,264	(3)	1,208	.2	2,828	----	.4	----	----	6,044	142	----	----	----	Do.
382030N0902245.1	370	----	2–20–61	----	(t) 7.31	----	----	----	----		284	199	2,185	.7	.0	----	----	4,783	----	----	----	7.4	Do.
381530N0934700.1	----	.30	----	----	----	----	115	55	453	(3)	----	112	804	.9	----	----	----	----	514	----	----	----	Missouri Division of Health analysis.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
MISSOURI—Continued																							
375315N0942100.1	189	----	6- -46	1.0	0.05	----	450	568	442	(3)	499	2,000	12	----	----	----	----	3,570	3,461	----	----	----	Missouri Geol. Survey analysis.
365130N0894145.1	780	----	----	----	----	----	----	----	----	----	----	48	1,339	----	----	----	----	2,679	----	----	----	----	Do.
364015N0895745.1	690	----	----	----	----	----	----	----	----	----	----	32	360	----	----	----	----	1,110	----	----	----	----	Do.
MONTANA																							
485958N1052000.1	220	0.02	1958	----	----	----	8.0	2.0	469	----	710	0.0	232	----	----	----	----	1,145	----	----	----	----	CO_3 = 84; Y.S. and B. Lab. (Billings) analysis.
485200N1095700.1	780	.01	1952	13	2.8	----	1.8	5.9	664	(3)	533	16.5	727	2.8	0.44	1.8	1,718	----	28	----	----	----	
484700N1043300.1	60	.29	1953	----	----	----	130	150	215	(3)	452	886	39	.4	35.2	----	1,920	----	940	----	----	----	Montana State Board of Health analysis.
484230N1083330.1	1,210	<.01	1960	10	.5	----	2.4	1.9	609	2.4	953	279	166	4.5	3.9	3.6	1,560	----	14	----	----	8.0	Y.S. and B. Lab. (Billings) analysis.
484000N1113600.1	1,700+	.10+	----	----	----	----	47	7.0	1,733	----	2,525	28	1,174	----	----	----	4,450	----	----	----	----	8.0	CO_3 = 96
483430N1090500.1	174	.14	1960	7.3	.12	0.0	1.0	.2	635	1.8	1,250	195	80	1.7	.0	----	1,580	----	4	0	----	8.6	CO_3 = 33; Al = 0.2
483400N1102500.1	1,070	.14	----	----	.16	----	3.2	1.7	813	(3)	934	2.0	636	2.0	----	----	1,965	----	----	----	----	----	Montana State Board of Health analysis.
483200N1094800.1	180	.15	1947	23	7.0	----	16	21	405	26	414	618	30	1.4	6.5	1.8	1,370	----	126	----	----	8.5	CO_3 = 18
483030N1084700.1	70	.15	1960	19	6.9	----	69	34	685	6.6	710	1,160	51	1.6	3.0	2.3	2,410	----	312	----	----	7.7	
482930N1073030.1	3,100	Flowing 1.25	1926?	----	----	----	700	115	301	(3)	163	2,315	272	----	----	----	----	3,872	----	----	----	----	
482900N1083400.1	145	.07	1960	18	5.9	----	60	26	898	5.3	1,030	978	287	1.0	7.0	1.6	2,880	----	258	----	----	7.6	
482500N1063200.1	1,150	.10	1955	13.5	.02	----	11	2.6	849	8.1	----	11	1,043	----	.1	----	----	2,974	38	----	----	8.06	
482010N1102900.1	453	.07	1947	11	----	----	3.0	1.7	839	5.6	502	3.7	760	2.0	.6	4.0	2,100	----	14	----	----	9.5	CO_3 = 214
481800N1101300.1	629	.07+	1947	7.1	.59	----	50	12	2,760	7.5	268	.3	4,200	.7	----	----	7,210	----	174	----	----	7.9	Al = 2.6
481200N1083800.1	112	1.15	----	----	2.8	----	102	42	147	(3)	424	358	13	.6	----	----	1,095	----	428	----	----	----	Montana State Board of Health analysis.
481000N1121700.1	2,800+	.10	----	----	----	----	103	44	2,039	(3)	3,030	.0	1,438	----	----	----	5,333	----	----	----	----	8.7	Y.S. and B. Lab. (Billings) analysis.
480930N1043100.1	80	1.0	7- -62	----	.2	----	148	62	613	(3)	780	1,240	12	.75	5.1	----	2,252	----	----	----	----	----	Analytical report from City of Culbertson-laboratory not known.
480400N1044600.1	684	.20	1947	16	.1	----	6.8	2.0	463	5.2	884	5.8	116	4.8	.2	.97	1,120	----	25	0	----	8.5	CO_3 = 59
480300N1060200.1	1,090	.50	1947	13	.51	----	16	5.1	1,420	18	772	1,820	458	1.8	.5	5.02	4,130	----	61	----	----	7.8	
480100N1040400.1	795	.20	1947	12	.05	----	9.7	4.4	784	81	1,950	9.1	52	3.0	.4	----	2,000	----	42	0	----	8.7	CO_3 = 72
475600N1103600.1	>2,300	.63	----	----	----	----	348	163	472	(3)	244	2,110	120	----	----	----	3,333	----	----	----	----	----	Y.S. and B. Lab. (Billings) analysis.
474430N1083200.1	>3,300	Flowing 1.44	----	----	----	----	166	53	494	(3)	142	1,488	30	----	----	----	2,271	----	----	----	----	7.3	Do.

473700N1041200.1	220	.20±	1949	14	.06	----	6.0	6.6	602	10	1,490	10	17	3.2	.5	----	1,500	----	42	0	----	8.2	CO_3 = 89
472900N1042100.1	38	.07	7–22–49	30	.17	----	98	90	218	2.4	694	456	8	.6	3.8	.76	1,250	----	46	----	----	8.0	
470700N1044300.1	105	.20	1949	17	.14	----	2.0	6.1	478	.8	852	216	14	2.4	3.8	1.15	1,230	----	30	----	----	8.6	CO_3 = 59
470300N1075300.1	5,705	Flowing .70	----	----	----	----	519	108	3,993	(3)	55	5,050	3,618	----	----	----	----	13,408	----	----	----	----	Y.S. and B. Lab. (Billings) analysis.
370000N1082100.1	1,700±	1.44	----	----	----	----	4.0	17	355	(3)	650	193	82	3.6	----	----	----	1,065	78	----	----	----	Montana State Board of Health analysis.
465600N10455000.1	412	.20±	1948	11	.02	----	4.5	1.0	733	4.8	1,950	2.4	24	1.4	.9	----	1,760	----	19	----	2,580	7.9	
464600N1043830.1	1,185	.20	1952	----	----	----	.0	.0	462	(3)	970	163	28	----	----	----	1,131	----	0	----	1,360	8.0	Analytical statement from Shell Oil Co.; laboratory not known.
463500N1085630.1	----	.14	1956	14	2.8	----	69	61	183	1.8	324	540	12	.4	1.1	.28	1,090	----	424	----	----	7.8	
462530N1073300.1	196	.14	1921	7.8	.18	----	15	4.5	925	(3)	860	1,215	19	----	3.8	----	2,675	----	56	----	----	----	CO_3 = 26
462100N1104700.1	----	Flowing .86	1954	29	----	----	290	67	8.6	5.8	170	820	3.0	2.4	----	----	1,410	----	999	----	----	7.2	
461830N1060900.1	434	.15±	1923	11	.20	----	4.0	2.9	433	(3)	927	3.3	64	----	.67	----	1,081	----	22	----	----	----	CO_3 = 72
461630N1071300.1	50	.15±	1921	24	.09	----	208	144	942	(3)	761	2,411	33	----	6.0	----	4,279	----	1,110	----	----	----	
461130N1080930.1	21	.02	1921	20	.18	----	79	80	248	(3)	488	622	9.0	----	.57	----	1,348	----	526	----	----	----	
460630N1040400.1	3,870	.04±	1952	----	----	----	31	.0	3,607	(3)	915	118	5,000	----	----	----	9,207	----	----	----	----	8.1	Y.S. and B. Lab. (Billings) analysis.
460600N1084800.1	97	.07±	1921	6.5	0.11	----	51	43	755	(3)	476	1,322	103	----	----	----	2,558	----	304	----	----	----	CO_3 = 8.4
460230N1090810.1	3,000	.15±	1921	12	2.0	----	4.4	1.4	869	(3)	1,952	12	164	----	----	----	2,064	----	17	----	----	----	CO_3 = 38
460000N1092200.1	4,470	.40±	1929?	----	----	----	374	64	331	(3)	350	1,305	225	----	----	----	2,810	----	----	----	----	----	
455900N1103800.1	150	.07	----	8.4	.0	.0	64	.5	289	.2	24	493	166	----	----	----	1,100	----	----	----	----	8.2	
455140N1064800.1	48	.07±	----	28	5.3	----	144	135	92	(3)	517	634	11	----	1.5	----	1,351	----	914	----	----	----	
454400N1074330.1	4,000	Flowing 3.0+	1953	18	1.5	----	665	136	14	24	180	1,980	4.0	4.0	.0	.14	3,260	----	----	----	----	7.6	
454130N1073000.1	22	Not in use	1953	28	.24	----	251	152	202	7.1	393	1,300	17	.5	.8	.89	2,380	----	1,250	----	----	7.4	
453220N1082600.1	35	.07±	1921	25	.17	----	276	142	228	(3)	486	1,167	100	5.5	----	----	2,444	----	1,270	----	----	----	
452100N1084800.1	787	Flowing 5.35	1961	11	.01	----	262	39	2.5	.8	233	619	.5	1.3	1.2	----	1,160	----	813	----	----	----	
451830N1072200.1	210	.75±	1953	8.8	.04	----	5.5	.1	406	1.1	455	480	13	.8	1.8	.54	1,160	----	14	----	----	8.5	
											NEBRASKA												
425000N1025945.1	43	0.29	----	----	----	----	119	47	53	----	396	----	144	----	----	----	----	1,104	----	----	1,400	8.1	Nebraska University analysis.
424707N0983200.1	785	.05±	----	----	----	----	161	42	135	21	224	575	60	2.4	0.1	----	----	1,170	----	----	1,570	7.2	
424715N0971645.1	32	.03	----	----	----	----	279	39	53	10	465	375	49	.4	149	----	----	1,280	----	----	1,670	7.2	
424345N0973015.1	760	.03	----	----	----	----	203	44	53	20	132	617	46	2.1	.0	----	----	1,130	----	----	1,400	7.3	
423135N0973615.1	270	----	----	----	----	----	169	86	116	17	356	685	9.5	.5	9.4	----	----	1,410	----	----	1,720	7.4	
421345N0962707.1	----	.29	----	----	----	----	194	17	91	----	193	475	90	----	----	----	----	1,163	----	----	----	----	Do.
420235N0970830.1	137	.72	----	----	----	----	164	50	74	12	396	432	9.5	.4	3.4	----	----	1,020	----	----	1,340	7.6	
414700N0962145.1	----	1.44	----	----	----	----	----	69	177	----	97	569	----	----	.3	----	----	1,164	----	----	----	----	Nebraska University analysis; CO_3 = 60.
410940N0983045.1	32	.11	----	----	----	----	200	47	40	24	350	182	49	.3	314	----	----	1,250	----	----	1,450	8.3	
410315N1020520.1	26	1.15	----	----	----	----	196	52	182	8.8	249	808	66	1.0	5.8	----	----	1,600	----	----	1,970	7.7	
410130N0960545.1	372	.10	----	----	----	----	11.4	7.9	1,014	----	681	750	698	8.7	----	----	3,070	----	----	----	----	----	Nebraska University analysis.
405430N0983700.1	55	.86	----	----	----	----	193	33	20	----	280	----	28	----	----	----	----	1,341	----	----	1,500	8.3	Do.
405145N0963945.1	35	.01	----	----	----	----	----	----	765	(3)	481	193	820	.9	----	----	----	2,250	----	----	3,500	7.2	Do.
404520N0994500.1	12	.11	----	----	----	----	131	30	167	13	314	488	30	.4	9.4	----	----	1,090	----	----	1,440	7.7	
403800N0973007.1	40	.03	----	----	----	----	298	87	91	9.2	497	865	6.5	.3	11	----	----	1,640	----	----	2,030	7.3	
403505N0962318.1	80	.01	----	----	----	----	180	88	135	9.0	328	671	81	.4	1.2	----	----	1,430	----	----	1,810	7.4	Do.
402530N0972451.1	43	----	----	----	----	----	195	27	86	6.0	442	398	7.0	.2	4.8	----	----	1,000	----	----	1,320	7.4	
402252N0961530.1	74	.03	----	----	----	0.25	196	74	66	(3)	449	542	4.0	.2	.0	----	----	1,210	----	----	1,560	8.1	Do.
400100N1015629.2	90	.14	----	----	----	----	221	74	108	(3)	339	708	52	.8	.8	----	----	1,440	----	----	1,830	7.9	Do.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
NEVADA																							
413000N1182600.1	Spring	<0.01	10– 7–60	51	------	----	30	6.3	455	9.9	948	204	69	9.8	0.4	1.3	------	1,290	100	0	1,900	8.1	
411700N1161400.1	Spring	.70	6–27–56	34	(t) 0.00	0.00	242	43	44	16	272	635	14	.5	.4	------	1,160	1,250	781	588	1,450	8.1	PO_4 = 0.5
411100N1183700.1	--------	<.01	6–19–45	-----	------	----	17	66	2,310	(3)	1,960	307	2,410	.8	4.7	------	6,080	------	------	------	9,740	----	
410700N1185100.1	--------	<.01	5– 3–61	70	------	----	11	5.6	786	15	1,150	95	500	3.9	1.1	7.9	2,000	2,070	50	0	3,280	8.2	
410100N1175400.1	22	.14	5– 1–62	-----	------	----	16	5.1	576	8.8	753	346	236	------	.9	1.7	1,560	------	61	0	2,400	8.2	
405900N1195200.1	--------	<.01	5– 6–61	23	------	----	345	122	1,140	40	196	2,070	1,160	.1	1.1	.51	5,000	5,160	1,360	1,200	6,860	7.3	
405600N1192000.1	150	--------	5– 3–61	76	------	----	18	4.6	386	16	336	205	250	7.9	.2	2.1	1,180	1,170	64	0	1,840	9.0	CO_3 = 40
405500N1190900.1	1,500	Not in use	5– 3–61	58	------	----	12	19	1,160	15	1,210	5.8	1,170	1.5	1.1	4.5	3,040	3,060	109	0	5,150	7.8	
405500N1182300.1	500	--------	2–26–61	60	------	----	7.2	2.4	391	6.6	570	88	210	2.9	.5	3.3	1,060	1,070	28	0	1,680	8.4	CO_3 = 9.0
405300N1175700.1	Spring	<0.01	4–24–62	-----	------	----	70	6.7	620	52	1,330	94	277	-----	-----	8.3	1,780	------	202	0	2,850	7.7	
405300N1174900.1	59	Not in use	11–28–61	-----	------	----	304	160	388	15	243	56	1,380	-----	-----	.1	2,420	------	1,420	1,220	4,630	7.6	
405200N1141200.1	1,500	<.01	1–29–43	23	.42	----	109	41	742	-----	------	33	1,234	.3	.0	------	2,450	------	443	------	------	7.1	Utah Dept. Agri. analysis.
404900N1142500.1	58	<.01	1–29–43	45	------	----	36	40	373	-----	322	355	287	1.7	-----	------	1,380	------	252	------	------	7.5	Nevada University analysis.
403900N1192200.1	Spring	1.40	5– 7–40	135	------	----	102	26	1,480	-----	227	353	2,020	-----	-----	------	------	4,140	362	------	------	----	
402500N1163100.1	Spring	.14	6–10–48	73	.03	----	53	43	319	(3)	980	117	44	5.9	.0	.4	1,140	------	309	------	1,750	----	
401700N1194500.1	--------	<.01	3–17–39	-----	------	----	86	47	492	-----	455	179	652	-----	-----	.52	1,730	------	------	------	2,920	----	Nevada University analysis.
401000N1192600.1	Spring	<.01	6–22–59	38	.23	0.00	23	3.3	824	25	744	149	775	2.9	4.1	3.4	2,220	2,240	70	0	3,670	----	
400800N1183000.1	44	--------	10–18–45	50	------	----	103	40	605	(3)	464	387	666	-----	-----	------	------	2,210	422	------	------	----	CO_3 = 7.0; Nevada Dept. Food and Drugs analysis.
400700N1192500.1	2	<.01	6–24–59	14	.10	.00	2.8	3.3	1,610	85	708	305	1,790	1.9	5.8	5.3	4,340	4,210	20	0	7,010	9.3	CO_3 = 159
400600N1175900.1	100	.01	5– 1–52	39	(t) 4.9	.0	325	234	200	20	104	473	1,160	.2	.5	.24	------	2,500	1,770	1,690	4,090	7.3	
400300N1183900.1	210	.65	4–17–36	58	------	----	------	-------	1,288		608	260	1,260	-----	-----	------	3,370	------	422	------	------	----	CO_3 = 151; Nevada Dept. Food and Drugs analysis.
400100N1192200.1	12	<.01	6–17–59	11	(t) .22	.00	4.2	4.5	4,190	158	744	918	5,290	2.8	5.1	8.8	11,100	10,900	29	0	17,200	8.7	CO_3 = 128
394700N1190100.1	--------	.86	6– 2–60	242	.08	.00	53	1.2	780	15	162	377	978	7.6	.4	------	2,540	2,330	138	4	4,090	7.3	Steam-power test well.
394200N1183000.1	367	.01	7–15–35	-----	------	----	11	-------	1,990	-----	974	3.0	2,520	-----	-----	15.9	5,020	------	------	------	8,750	----	Nevada University analysis.
393700N1184000.1	202	.01±	2–15–35	-----	------	----	0	0	472	-----	744	84	236	-----	-----	8.7	------	------	------	------	2,070	----	Do.
393400N1190500.1	135	--------	1–16–40	-----	------	----	102	42	282	-----	210	220	454	-----	-----	1.6	1,200	------	------	------	2,160	----	Do.
392600N1194300.1	--------	<.01	5–14–58	113	(t) .04	.00	63	46	313	31	264	151	511	.3	.8	.44	1,360	1,540	346	130	2,320	7.5	Field pH 6.6 at time of collection.
392100N1184500.1	104	.03	10– 6–28	-----	------	----	0	0	1,790	-----	1,810	0	1,710	-----	-----	------	4,390	3	------	------	7,100	----	Nevada University analysis.
391700N1182500.1	--------	--------	--------	51	------	----	5.0	2.0	14,250	26	3,290	3,550	12,760	-----	-----	------	------	35,200	------	------	------	9.5	CO_3 = 3,980; Source of analysis unknown.
391700N1181600.1	280	.02	7–24–63	71	------	----	11	1.8	364	4.7	544	179	127	2.6	.2	1.5	1,030	1,020	35	0	1,570	8.1	
391600N1155900.1	539	1.15	5– –45	33	------	----	78	64	420		549	720	105	-----	-----	------	------	1,720	457	------	------	----	CO_3 = 14; Source of analysis unknown.
391000N1191100.1	--------	<.01	10–15–59	100	.01	.00	37	8.7	256	12	80	566	45	7.6	.0	1.0	1,090	1,090	128	63	1,490	8.0	

390700N1183900.1	160	.01	6– 7–37	----	------	----	10	-------	510	----	287	160	519	-----	-----	1.18	1,340	------	-------	------	2,340	----	Nevada University analysis.
383100N1183600.1	423	.36	12–11–52	59	.07	.00	88	11	214	8.8	134	455	98	1.5	.3	2.1	------	1,000	264	154	1,430	7.7	
383000N1180000.1	250	<.01	10–30–60	58	------	----	286	96	279	36	493	1,250	68	.7	.3	.6	2,120	------	1,110	706	2,900	7.8	
380300N1180000.1	-------	Flowing <.01	4–24–57	47	(t) .27	.03	4.4	.1	1,300	86	97	254	1,680	2.3	.0	-----	3,600	3,660	12	0	6,410	9.3	CO_3 = 149; PO_4 = 0.7
375900N1180000.1	Spring	.02	5–24–57	23	(t) .80	.09	38	38	792	60	720	323	860	3.2	.0	9.8	2,500	2,630	254	0	4,280	7.9	
374800N1142400.1	110	.05	6–29–49	85	------	----	22	24	795	(3)	1,130	507	282	12	.0	1.0	2,280	------	154	0	3,390	----	CO_3 = 108
374400N1173900.1	-------	-------	10–13–13	----	------	----	278	65	993	----	635	227	1,660	-----	-----	-----	3,540	------	------	------	------	----	Nevada University analysis.
371600N1170000.1	-------	.01	3– 7–62	----	------	----	24	4.9	489	----	1,150	29	118	3.4	-----	-----	------	1,410	80	0	2,000	7.9	Nevada Dept. Health analysis.
363400N1142700.1	102	.01	10–11–49	----	------	----	161	88	228	(3)	544	552	168	-----	2.0	-----	1,470	------	764	318	2,200	----	
361700N1162200.1	8	Flowing <.01	8–18–62	28	.03	----	1.2	1.4	1,060	88	712	297	1,050	7.0	.2	.2	------	2,890	223	0	4,730	8.6	CO_3 = 64; PO_4 = 0.32; well in Ingo County, Calif.
360600N1150200.1	-------	.02	11–19–44	37	------	----	148	46	511	(3)	81	1,356	136	-----	-----	-----	------	2,360	559	------	-------	8.2	Nevada Dept. Food and Drugs analysis.
NEW JERSEY																							
390000N0745000.1	320	0.29	9– 4–52	26	1.9	----	98	56	167	(3)	108	14	520	-----	1.5	-----	------	------	475	------	1,820	7.1	
NEW MEXICO																							
365810N1033745.1	302	0.04	12– 5–55	----	------	----	------	-------	545	(3)	------	957	17	0.8	0.5	-----	------	------	27	------	2,670	10.7	OH = 27; CO_3 =66
363725N1063915.1	802	.14	11– 4–54	10	0.02	----	222	48	141	(3)	241	815	8.5	.4	.2	-----	1,370	------	752	------	1,740	7.0	
362600N1043940.1	39	.04	11–26–53	11	------	----	504	450	281	(3)	518	3,130	26	.0	.4	-----	4,660	------	3,110	------	4,820	----	
362030N1043940.1	Spring	.01	3– 8–46	----	------	----	346	152	128	(3)	332	1,390	30	.5	3.8	0.04	2,210	------	1,490	------	2,600	----	
361430N1042320.1	85	-------	5–14–46	----	------	----	293	69	200	(3)	305	739	130	.6	303	-----	1,880	------	1,010	------	2,470	----	
355550N1075610.1	3,275	Flowing .17	11–26–33	----	------	----	9	-------	662	----	260	1,090	76	.6	.0	-----	------	1,860	16	------	-------	----	
354730N1080330.1	800	Flowing .06	12–15–33	----	------	----	5	-------	776	(3)	446	1,070	160	1.6	.0	-----	------	2,130	20	------	-------	----	
353340N1075000.1	120	-------	8– –51	12	------	----	630	245	299	(3)	288	2,480	47	.5	427	-----	4,280	------	2,580	------	4,480	----	
352950N1085240.1	1,155	.69	12– 6–49	13	------	----	18	4.2	914	(3)	407	1,290	256	4.1	.9	-----	2,700	------	62	------	3,940	----	
352320N1055740.1	30	.83	9–24–48	11	------	----	171	65	95	(3)	209	677	15	1.2	.8	-----	1,140	------	694	------	1,490	----	
351645N1075900.1	500	2.16	5–10–46	----	------	----	178	47	155	(3)	429	462	98	.3	3.6	-----	1,160	------	638	------	1,700	----	
350702N1074900.1	77	<.01	12– 8–50	30	------	----	330	380	931	(3)	469	2,840	754	.7	3.1	-----	5,500	------	2,390	------	6,840	----	
350655N1062030.1	140	.01	6–15–62	----	------	----	86	96	319	(3)	772	564	58	.6	.0	-----	1,520	------	610	------	2,130	7.0	
350410N1044550.1	Spring	.04	9–19–40	----	------	----	554	46	29	(3)	92	1,490	6.0	-----	------	-----	2,170	------	1,570	------	2,280	----	
345115N1064200.1	64	1.87	8–14–51	30	------	----	203	32	139	(3)	465	441	70	.3	.3	-----	1,140	------	638	------	1,620	7.6	
343802N1065040.1	-------	<.01	4–24–56	24	------	----	322	119	221	(3)	166	1,230	252	.2	1.3	-----	2,250	------	1,290	------	2,960	7.2	
343610N1055200.1	100	-------	8– 1–50	24	------	----	624	125	505	(3)	570	1,660	685	.9	7.1	-----	3,910	------	2,070	------	5,050	----	
343207N1070700.1	Spring	.14	1– 5–50	24	------	----	138	67	887	(3)	354	471	1,250	.8	4.3	-----	3,020	------	620	------	5,200	----	
341230N1064900.1	112	1.44	12– 1–51	38	------	----	156	49	339	(3)	232	329	562	.4	1.1	-----	1,590	------	590	------	2,630	----	
341018N1032040.1	120	1.30	11– 1–55	53	------	----	167	55	139	(3)	194	528	160	1.9	7.4	-----	1,210	------	642	------	1,670	7.2	
340530N1090030.1	150	-------	12–22–33	----	240	----	1,540	832	1,110	(3)	------	644	6,760	-----	------	-----	11,100	------	7,250	------	-------	----	Contains equivalent of 19 ppm free sulfuric acid (H_2SO_4).
340050N1034340.1	150	.02	6–26–50	28	------	----	338	545	1,020	(3)	298	3,350	1,080	6.4	46	-----	6,560	------	3,080	------	8,280	----	
334156N1060408.1	810	.02	2–26–54	10	------	----	536	225	146	(3)	92	2,310	67	1.9	.2	-----	3,340	------	2,260	------	3,720	----	
334008N1055200.1	Spring	.14	10– 2–48	----	------	-----	339	64	230	(3)	224	1,080	210	1.0	2.9	------	2,040	------	1,110	------	2,350	----	
333004N1060940.1	100	.20	10–27–52	24	.01	-----	668	152	339	(3)	142	1,910	650	1.0	5.0	------	3,820	------	2,290	------	4,730	7.2	
331920N1053525	Spring	.35+	4–27–55	18	------	-----	240	84	11	(3)	266	649	52	.1	.8	------	1,190	------	944	------	1,570	7.1	
325910N1060120.1	407	1.20+	1–17–54	----	------	-----	196	77	175	(3)	227	624	245	-----	5.4	------	1,430	------	806	------	2,090	7.8	
324854N1055950.1	208	.01	10–18–54	2[illegible]	------	-----	540	253	362	(3)	244	2,100	545	.3	24	------	3,970	------	2,390	------	4,720	----	
323100N1035200.1	258	-------	6–19–40	----	------	-----	1,480	625	11,300	(3)	155	3,550	19,100	-----	------	------	36,100	------	6,260	------	52,600	----	
322635N1031000.1	350	.01	8– 1–42	16	.23	-----	50	31	555	7.6	360	855	208	1.8	.5	------	1,900	------	252	------	2,850	----	
322030N1040940.1	186	.72	10–26–46	----	------	-----	502	322	585	(3)	225	2,070	1,060	-----	16	------	4,670	------	2,580	------	6,100	----	
321534N1065815.1	1,200	.02	2–19–55	19	.02	-----	110	1.1	928	(3)	55	927	910	-----	3.3	------	2,930	------	279	------	4,640	8.6	
321515N1050840.1	300	.02	4–18–56	----	------	-----	220	95	6.2	(3)	222	698	19	1.1	18	0.29	1,170	------	940	------	1,530	7.2	
320954N1062020.1	1,208	.03	3–31–53	24	.00	-----	1,250	282	824	(3)	36	1,210	3,390	.0	------	------	7,000	------	4,280	------	11,000	6.7	

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
NEW MEXICO—Continued																							
320842N1085010	95	------	4–28–49	141	------	------	19	1.2	329	(3)	181	460	78	11	.9	.45	1,130	------	52	------	1,540	----	
320640N1050450.1	140	1.21	4–16–56	------	------	------	556	264	65	(3)	202	2,230	82	3.2	2.4	.48	3,300	------	2,470	------	3,530	7.1	
315303N1073340.1	615	.30±	8– 8–52	66	------	------	4.0	2.3	425	(3)	468	235	203	11	1.6	------	1,180	------	20	------	1,850	----	
301340N1041240.1	------	.72	7–11–45	------	------	------	574	125	79	(3)	190	1,710	126	------	5.8	------	2,710	------	1,950	------	3,030	----	
NEW YORK																							
445600N745800.3	230	< 0.01	8– 7–59	6.2	(t)15	0.87	1,720	947	3,750	152	198	2,020	10,100	3.1	26	------	------	20,200	8,190	8,030	27,500	8.3	
445400N745300.1	Spring	.01	12–10–57	8.8	(t) .93	.08	190	86	316	12	196	529	600	1.0	2.2	------	------	1,940	828	668	3,000	6.9	
431400N733500.1	137	.01	2– 6–46	------	45	<.01	------	------	------	------	------	7.0	480	------	------	------	------	3,080	------	------	------	6.9	New York Department of Health analysis.
431300N785900.1	48	------	6–18–48	11	(t) .79	------	124	145	106	4.2	396	416	140	.2	150	------	------	1,390	906	------	1,990	8.2	CO_3 = 23
430800N785000.1	62	.13	10–10–60	9.3	.73	.1	244	52	29	(3)	360	516	36	.9	.9	------	------	1,200	824	529	1,490	6.9	
430600N783400.1	48	------	8–16–63	10	(t) .07	.03	300	96	17	1.9	240	914	20	1.5	.5	------	------	1,500	1,140	948	1,820	7.1	
430400N752700.1	71	.01	3–16–55	9.7	(t) .19	.00	48	22	317	(3)	318	220	262	1.0	5.2	------	------	1,090	210	0	1,920	8.6	CO_3 = 20
430300N765900.1	371	.86	5– 3–56	15	(t) 4.4	.16	2,040	487	11,600	107	91	2,650	21,200	1.2	25	------	38,200	------	7,090	7,020	54,000	6.7	
430300N760900.1	240	.22	4–13–53	7.0	.03	.07	368	78	10	4.4	370	840	64	.2	7.6	------	------	1,560	1,240	936	2,090	7.0	
430300N734800.1	420	.02	8– 7–38	13	1.8	------	623	197	2,030	380	3,870	------	2,970	------	------	------	------	------	------	------	------	6.2	Analysis reportedly by "S Drexler".
430100N773000.1	179	.04	7–18–51	19	(t) 1.4	.00	504	76	12	2.5	188	1,380	1.6	.2	1.4	------	------	2,100	1,570	1,420	2,210	7.4	
430100N771600.1	82	.09	8–22–52	12	(t)12	------	564	82	4.8	2.0	258	1,490	6.2	1.5	.4	------	------	2,360	1,740	1,530	2,440	7.1	
425500N742500.1	315	.06	6–20–46	------	1.0	<.01	------	------	------	------	------	0	3,750	------	------	------	------	8,660	------	------	------	7.9	New York Department of Health analysis.
425200N785100.1	180	.43	6–19–51	15	(t) .08	------	212	124	197	13	500	560	350	.4	.4	------	------	1,720	1,040	630	2,310	6.8	
425000N764400.1	Spring	.05	10–25–48	------	.25	<.01	------	------	------	------	------	1,020	170	------	------	------	------	2,180	------	------	------	7.1	Do.
424600N740300.1	160	<.01	6–14–46	------	1.0	.01	------	------	------	------	------	0	450	------	------	------	------	1,140	------	------	------	8.9	Do.
424000N742800.1	300	.04	11–19–45	------	2.0	.25	------	------	------	------	------	434	140	------	------	------	------	1,160	------	------	------	7.4	Do.
422800N770800.1	36	------	8–12–50	------	.10	<.01	------	------	------	------	------	624	48	------	------	------	------	1,510	------	------	------	7.1	Do.
421100N771100.1	88	.01	8–16–50	------	1.0	.30	------	------	------	------	------	<.3	1,350	------	------	------	------	2,490	------	------	------	7.1	Do.
421000N764400.1	196	------	6–12–56	7.5	(t) .11	.03	22	3.7	447	1.5	337	1.8	550	.6	.1	------	------	1,230	70	0	2,320	7.9	
421000N735500.1	104	.01	10– 3–52	------	.10	.13	------	------	------	------	------	499	35	------	------	------	------	1,050	------	------	------	7.3	Do.
420200N791600.1	188	------	7– 7–61	------	(t) .20	------	------	------	------	------	------	------	670	------	------	------	------	1,610	142	------	2,670	----	
403621N734417.1	306	.12	4–17–56	19	(t)146	1.8	230	174	580	15	0	139	1,890	.0	2.8	------	------	3,630	1,600	1,600	5,930	3.4	
NORTH CAROLINA																							
354600N0771200.1	400	0.72	2–16–48	22	0.39	------	2.0	3.7	386	(3)	444	156	235	0.9	0.2	------	1,050	------	20	------	------	7.8	
353200N0763500.1	410	.86	2–26–51	40	.09	------	41	39	538	(3)	514	80	655	1.3	.1	------	1,630	------	263	------	2,840	7.5	
353000N0761000.1	250	------	1906	------	------	------	------	------	------	------	------	------	2,860	------	------	------	------	------	------	------	------	----	
352700N0761900.1	100	------	10–14–48	------	.10	------	47	67	488	(3)	658	31	625	------	.2	------	1,700	------	393	------	------	7.6	
351200N0795000.1	130	------	2–28–55	17	8.2	0.07	48	29	447	8.4	579	1.5	536	1.2	.2	------	1,680	------	------	------	------	8.1	Al = 0.1; Cu = 0.12; Zn = 0.05
345500N0782000.1	330	Not in use	2–21–49	------	------	------	------	------	------	------	590	------	1,070	------	------	------			69	------	------	----	
344500N0772500.1	138	.11	1– 4–50	45	.10	------	9.9	5.3	380	(3)	504	17	310	1.3	.5	------	1,020	------	46	------	1,730	7.8	
342800N0781700.1	------	Not in use	9–22–53	9.3	.71	------	26	25	823	(3)	254	44	1,200	.4	1.2	------	2,390	------	168	------	4,280	7.1	
342200N0775300.1	339	Flowing .01	2– 4–53	16	.12	------	7.5	7.6	777	(3)	926	53	650	2.7	1.2	------	2,020	------	50	------	3,410	8.0	
341000N1775000.2	836	<.01	1902	------	------	------	------	------	------	------	------	------	7,840	------	------	------	------	------	------	------	------	----	
341000N0775000.1	------	------	1905	5.6	8.4	------	598	40	6,440	9.0	868	26	10,400	------	------	------	------	17,634	------	------	------	----	

										NORTH DAKOTA													
485900N1031900.1	253	Flowing 0.05	5–21–21	33	(t) 0.27	----	22	8.0	617	(3)	1,464	85	100	----	3.8	----	----	1,620	88	0	----	----	
485200N0022000.1	22	Not in use	8–28–51	16	----	----	407	2,410	2,720	(3)	805	15,400	107	2.0	1.1	----	----	24,100	10,900	10,200	18,400	7.8	North Dakota State analysis.
485000N1013400.1	415	.01±	9– 8–47	8.0	----	----	65	18	2,300	14	261	1.5	3,520	.0	2.2	2.1	----	6,220	236	0	10,700	8.2	CO_3 = 34
483700N0972600.1	450	Flowing?	10–26–54	7.4	(t) 17	----	1,320	535	13,600	268	201	2,470	23,300	1.6	----	----	----	44,300	5,490	5,330	57,400	7.0	
482500N0972500.1	320	Flowing	5–23–51	11	(t) .78	----	49	28	1,760	18	867	618	1,940	2.8	18	----	----	4,880	238	0	7,980	7.5	
482300N0974400.1	494	Not in use	4–29–21	14	(t) .50	----	29	17	1,637	(3)	866	988	1,420	----	----	----	----	4,575	142	0	----	----	Do.
481900N1022400.1	190	.07	1951	----	.10		9.0	19	775	(3)	920	910	4.0	----	2.1	----	2,170	----	100	----	----	----	CO_3 = 46; North Dakota State analysis.
481500N1011900.1	160	1.00±	2– 1–40	26	3.0	----	52	27	247	(3)	648	105	153	.5	----	----	----	1,262	316	----	----	----	North Dakota State analysis.
480500N0991500.1	40	----	7–12–46	----	1.2	----	420	170	66	(3)	230	1,300	200	----	----	----	2,320	----	1,750	----	----	----	North Dakota State analysis; CO_3 = 48.
480100N0981400.1	116	.01	7–11–47	----	1.2	----	70	36	520	----	600	380	330	----	----	----	----	1,690	320	----	----	----	North Dakota State analysis; CO_3 = 62.
475700N0970400.1	254	.14	3–15–47	----	3.1	----	404	38	1,648	(3)	215	1,141	2,400	1.0	----	----	----	6,062	1,165	----	----	8.0	North Dakota State analysis.
474100N0970900.1	415	Flowing	7– 8–61	----	1.2	----	517	415	1,292	42	268	2,152	1,488	8.0	6.1	2.9	----	7,470	932	----	----	7.5	Do.
473800N0971900.1	425	----	9–13–56	----	1.4	----	227	99	770	54	124	1,290	1,130	1.5	.3	2.3	3,640	4,160	972	870	----	7.8	North Dakota State analysis; CO_3 = 0.
472900N1002600.1	22	----	----	25	(t) 4.0	1.0	49	7.2	454	----	842	117	230	3.0	3.5	----	----	1,271	160	0	----	----	North Dakota State analysis.
471800N0981700.1	55	----	6– 8–21	12	(t) 3.0	.05	173	96	115	----	484	483	99	.2	53	----	----	1,330	833	436	----	----	Do.
471100N0981200.1	24	----	----	20	.4	----	162	153	25	----	385	588	73	.2	71	----	----	1,469	1,034	718	----	----	Do.
471100N0972700.1	364	Flowing	10–22–53	----	.4	----	80	28	1,080	29	217	1,340	736	1.3	63	----	----	3,500	317	----	----	----	North Dakota State analysis; CO_3 = 14.
465500N1033200.1	515	Flowing	----	56	2.4	0.05	11	22	458	----	863	290	14	1.6	6.7	----	----	1,403	123	0	----	----	North Dakota State analysis.
465400N0971200.1	430	Flowing	7– 1–21	12	(t) .48	----	12	7.3	938	(3)	344	1,091	492	----	9.5	----	----	2,767	60	0	----	----	Do.
465100N0995500.1	120	----	6–15–21	46	(t) .72	----	150	62	101	(3)	561	366	6.0	----	----	----	----	1,038	629	169	----	----	Do.
463824N0970106.1	235	----	11–17–47	----	1.5	----	207	55	370	(3)	159	484	493	----	----	----	----	1,780	745	----	----	----	North Dakota State analysis; CO_3 = 46.
462300N1022000.1	378	----	----	17	.0	0	5.1	2.8	502	----	1,290	15	23	3.2	3.5	----	----	1,227	24	0	----	----	North Dakota State analysis.
462300N0982800.1	121	----	----	21	(t) 3.0	1.4	104	49	330	----	571	482	152	.0	3.1	----	----	1,580	478	10	----	----	Do.
461500N1001400.1	56	----	----	24	(t) .7	0.6	97	40	290	----	426	621	28	.2	1.0	----	----	1,323	409	60	----	----	Do.
460600N0973800.1	168	----	----	20	(t) .9	0.4	183	76	277	----	515	820	72	.2	5.7	----	----	1,688	764	342	----	----	Do.
460300N0963500.1	113	.04	8–23–51	----	.5	---	54	28	130	(3)	600	<1.0	27	.1	9.0	----	550	----	250	----	----	----	
											OHIO												
414300N0835100.1	180	<0.01	8–30–50	12	0.20	----	114	58	451	(3)	626	1.6	700	0.4	0.2	----	----	1,690	523	----	3,020	7.6	
411400N0824312.1	40	Not in use	5– 8–63	11	6.4	0.87	302	134	235	12	458	1,140	177	.5	2.9	----	2,250	2,300	1,300	930	2,860	7.1	
413042N0830818.1	137	.58	8– 2–54	11	.05	----	544	177	26	4.2	246	1,830	46	1.8	.0	----	2,762	3,018	2,090	1,884	3,030	7.2	Sulfides as H_2S = 3.9.
412400N0824800.1	Spring	7.2	9–11–52	9.8	.11	.00	560	44	5.0	1.4	312	1,250	13	1.2	.0	----	----	2,194	1,580	----	2,350	7.4	
412300N0834530.1	89	----	8– 7–63	9.5	.32	.03	189	74	95	27	104	802	45	1.7	1.1	----	1,300	1,250	777	692	1,630	7.3	
412300N0805618.1	115	----	6–17–63	7.0	.65	.13	22	6.6	384	4.9	186	158	420	.3	3.4	----	1,100	1,120	82	0	1,990	8.1	
411800N0830942.1	73	----	5–29–63	12	.74	.06	203	84	72	3.9	192	796	18	.7	1.2	----	1,290	1,380	853	695	1,630	7.2	ABS (Alkyl Benzene Sulfonate) = 0.0.
411800N0813520.1	185	----	1–14–52	6.6	.20	.00	12	3.5	1,000	3.9	704	263	935	1.2	3.9	----	----	2,576	44	----	4,460	7.6	
411700N0814718.1	275	.01	1–15–52	8.4	.17	.00	56	34	288	4.0	474	223	211	.5	.1	----	----	1,060	280	----	1,700	7.5	
411700N0810240.1	146	<.01	5–26–53	10	3.5	.00	42	14	468	8.4	508	.6	520	.2	.1	----	----	1,350	162	0	2,450	7.5	
411600N1824948.1	212	Not in use	7– 5–61	6.9	.23	.01	320	27	6.3	2.6	285	662	10	.6	1.8	----	1,180	1,240	910	677	1,460	7.1	ABS = 0.0; phosphorus as PO_4 = 0.15; NO_2 = 0.00; ammonia nitrogen as NH_4 = 0.4.

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
OHIO—Continued																							
411600N0830245.1	Spring	--------	6– 4–58	13	0.06	0.00	609	68.	12	2.5	345	1,460	10	1.2	0.2	-----	2,360	2,510	1,810	1,530	2,550	7.1	Sr = 12; Li = 1.7; strong sulfide odor.
411400N0814942.1	167	0.03	9–20–60	10	.50	.05	39	7.8	353	4.0	510	168	220	.8	2.5	-----	1,060	1,000	130	0	1,780	7.4	Li = 0.00
411300N0812642.1	100	--------	2–18–49	5.5	.56	-----	223	83	133	(3)	484	705	38	.3	2.4	------	-------	1,490	898	501	1,820	7.5	
410700N0811054.1	175	.04	5–26–53	11	.77	.00	98	31	328	5.6	484	136	380	.2	.0	------	-------	1,225	374	------	2,150	7.7	
410230N0822903.1	70	.01	3– 5–59	8.2	.28	.05	9.5	3.6	780	8.0	522	428	596	1.1	7.0	------	2,100	2,140	38	0	3,500	7.9	
410200N0825848.1	85	<.01	7– 7–61	10	.45	.06	318	77	169	10	384	1,140	3.0	1.2	.1	------	1,920	2,010	1,110	796	2,310	7.4	Sulfides as H_2S = 49
410200N0810150.1	108	--------	7–10–62	9.6	2.0	.08	169	88	218	7.4	722	616	23	.6	.1	------	1,490	1,490	784	192	2,080	7.3	Sulfides as H_2S = 0.0
410000N0810930.1	55	<.01	5–27–53	12	1.6	.18	150	89	23	7.0	324	505	10	.2	1.0	------	-------	1,068	740	------	1,330	6.9	
405700N0844635.1	60	.02	6–26–63	11	1.0	.06	155	72	76	2.2	116	690	18	1.5	1.4	------	1,080	1,180	683	588	1,430	7.2	
405300N0822800.1	28	--------	5–27–56	16	.58	.15	220	111	26	4.6	507	578	6.1	.4	.5	------	1,213	1,308	1,005	590	1,600	7.4	
405230N0824200.1	162	--------	4–11–51	9.0	.35	-----	34	7.3	475	(3)	898	97	220	.3	.2	------	-------	1,330	116	------	2,190	7.5	
404200N0843905.1	134	--------	8– 6–63	17	3.9	.03	225	95	76	12	200	892	18	.7	2.8	------	1,440	1,490	953	789	1,780	7.4	
404200N0832338.1	60	.03	11– 8–61	15	2.5	.09	218	112	59	5.6	392	750	30	1.6	.3	------	1,390	1,460	1,000	684	1,790	7.3	Sulfides as H_2S = 0.0
403700N0821700.1	350	.06	5–19–59	2.7	.08	.03	109	60	3,420	11	166	3.1	5,240	.4	26	------	8,950	-------	519	383	16,000	6.9	NO_2 = 0.00
404200N0842000.1	55	.03	4–11–63	15	.31	.01	160	86	44	3.6	408	431	42	1.0	.8	------	985	1,040	753	418	1,410	7.1	
403430N0844618.1	119	--------	4– 7–53	16	2.6	.00	140	101	42	2.2	430	479	6.0	1.1	.6	------	-------	1,058	765	------	1,350	7.1	
403230N0842335.1	100	--------	4–24–63	14	8.2	.08	186	125	43	1.7	335	778	10	1.6	2.4	------	1,330	1,440	979	704	1,720	7.3	
402300N0825000.1	72	.03	3– 8–63	14	3.6	.14	243	84	54	4.1	436	592	66	.3	.4	------	1,280	1,330	952	594	1,730	7.3	
401300N0832030.1	165	.01	3– 6–63	10	1.0	.06	190	85	40	2.5	294	632	8.0	1.2	2.2	------	1,120	1,160	824	583	1,480	7.8	
400845N0830650.1	116	.01	2–23–63	12	5.4	.17	532	348	51	8.3	631	2,210	11	1.1	.5	------	3,490	3,670	2,760	2,240	3,670	6.8	
400830N0825030.1	75	.01	4–10–62	15	2.3	.29	149	120	150	8.3	591	549	120	1.5	.3	------	1,410	1,430	866	381	2,000	7.5	Sulfides as H_2S = 12
400200N0822500.1	134	.01	10–31–57	11	8.3	3.0	778	297	366	5.3	280	26	2,560	-----	2.0	------	4,200	4,470	3,160	2,940	7,730	7.0	
395800N0830200.1	196	.36	5–16–63	14	5.4	.12	290	92	61	4.9	518	646	80	.4	.8	------	1,450	1,570	1,100	678	1,950	7.0	
395300N0830500.1	465	.58	10–23–54	10	.36	.00	424	124	51	5.8	316	1,219	84	2.3	.4	------	2,077	2,231	1,568	1,309	2,460	7.0	Sulfides as H_2S = 3.6
395200N0805000.1	78	.36	4–12–61	15	.78	.03	218	33	71	1.2	442	440	17	.1	4.6	------	1,020	1,030	680	318	1,400	7.5	
394000N0831730.1	60	--------	1–18–54	14	5.4	.00	232	50	31	2.7	394	520	.9	2.2	.0	------	1,052	1,116	784	462	1,390	7.3	
393000N0830700.1	138	.02	8–28–62	8.9	1.3	.02	179	82	34	5.6	350	538	10	.1	.1	------	1,030	1,130	784	497	1,400	7.1	
392800N0820230.1	--------	--------	4– 8–63	8.4	.04	-----	4.8	4.3	641	2.8	735	43	550	-----	1.2	------	1,620	1,600	30	0	2,840	7.7	
392230N0835300.1	143	.02	8–11–59	6.9	2.2	.22	67	36	400	8.7	271	5.2	690	1.8	.9	------	1,350	1,390	315	93	2,600	7.9	
391800N0825030.1	70	<.01	4–23–63	8.3	8.0	.20	160	286	249	10	600	1,460	54	.1	2.6	------	2,530	2,630	1,580	1,080	3,080	8.0	
391700N0830530.1	75	<.01	8–29–62	12	.34	.14	353	238	72	5.7	438	1,570	12	.2	.6	------	2,480	2,720	1,860	1,510	2,800	7.1	
390500N0801200.1	130	.01	7–17–62	9.0	2.2	.00	55	18	537	13	408	.4	720	.6	.8	------	1,560	1,540	211	0	2,870	7.7	
384430N0830200.1	71	<.01	7–23–62	8.1	2.0	.30	233	58	1,890	48	398	1.4	3,350	.3	------	------	-------	6,260	821	494	10,200	7.5	
OKLAHOMA																							
364700N0991500.1	Springs	"Seeps"	3– 3–59	-----	------	-----	1,640	707	119,000	(3)	36	4,190	185,000	-----	------	------	310,000	317,000	7,000	6,970	217,000	6.4	
364500N0981700.1	Springs	"Seepage"	5– 4–59	-----	------	-----	------	------	71,300	------	82	------	114,000	-----	------	------	-------	-------	5,310	5,240	181,000	6.9	
363900N0950700.1	1,139	--------	3–10–50	12	0.10	----	38	23	372	27	124	28	620	2.2	4.5	------	1,190	1,210	189	88	2,210	7.9	
362900N0990200.1	75	--------	9–11–56	26	.00	-----	660	98	65	2.6	516	1,570	36	.6	28	0.18	2,740	2,790	2,050	1,630	2,910	7.2	
361700N0955500.1	83	--------	7–13–48	-----	------	-----	31	59	641	(3)	470	271	685	.2	5.5	------	1,970	1,960	322	0	3,330	----	CO_3 = 46
360700N0965200.1	40	--------	6–18–50	-----	------	-----	207	121	150	(3)	132	139	355	-----	728	------	1,760	2,020	1,010	906	2,750	----	
355600N0982600.1	Spring	1.44	7–12–45	-----	------	-----	490	34	36	(3)	45	1,270	49	-----	17	------	1,920	2,120	1,360	------	------	----	
354400N0960400.1	243	--------	5–23–48	12	------	-----	6.8	4.7	575	(3)	528	12	585	.7	.2	------	1,460	1,450	36	0	2,580	----	

353400N0985709.1	60	.22	5-26-51	22	.00	----	450	115	31	3.6	179	1,420	20	.7	19	----	2,170	2,390	1,600	1,450	2,410	7.4	
353200N0973300.1	815	.40	4-16-43	12	.03	----	3.8	1.2	413	4.4	436	93	296	2.9	.9	2.2	1,077	1,066	14	----	1,830	8.7	CO_3 = 35
351400N0964100.1	753	.22	12-10-47	----	----	----	186	33	79		132	601	25	.5	1.0	----	990	1,080	600	492	1,360	----	
350100N0995600.1	Springs	.20±	12- 9-58	----	----	----	1,540	1,790	98,700		20	2,890	158,000	----	----	----	263,000	266,000	11,200	11,200	211,000	6.7	Density at 20°C = 1.199
344500N0994400.1	155	1.44	10- 5-53	16	.00	----	584	219	274	6.6	292	2,210	260	.7	14	2.2	3,730	3,960	2,360	2,120	4,190	7.2	
343100N0975700.1	802	.22	12-13-44	----	----	----	11	2.9	397	13	337	270	235	.4	2.8	----	1,130	1,130	40	----	2,000	8.1	CO_3 = 16
343000N0965800.1	350±	Flowing 1.10±	1957	----	----	----	82	40	321	(3)	332	30	540	----	----	----	----	1,200	----	----	2,300	8.2	
341700N0990600.1	38	.43	9-29-58	----	----	----	188	175	501	(3)	496	598	885	----	3.0	1.2	2,600	2,910	1,190	784	4,210	7.4	
335500N0952700.1	1,000±	Flowing .09	3-11-51	----	----	----	146	38	1,080	(3)	304	324	1,620	----	3.3	----	3,360	3,350	520	271	5,810		
OREGON																							
454445N1225825.1	4,426	Flowing 0.01	11-18-55	34	(t) 0.33	0.86	1,610	24	8,340	28	16	4.4	15,200	----	----	----	25,200	28,800	4,120	4,100	40,000	6.8	
453235N1224910.1	576	.32	3-24-54	----	----	----	----	----	----	----	----	----	908	----	----	----	----	----	800	----	3,060	----	
452235N1232415.1	93	----	4-19-51	19	(t) .25	1.5	1,980	113	824	12	51	30	5,010	0.2	----	2.1	8,010	8,450	5,400	5,360	13,300	7.0	
445955N1224550.1	225	.09	7-20-62	54	.64	----	99	11	282	14	110	15	585	.7	1.6	.89	1,120	----	292	202	2,030	7.4	PO_4 = 0.03
445550N1171420.1	Spring	----	9-26-24	99	2.89	----	217	70	1,029	(3)	3,113	324	131	----	.0	----	3,401	3,421	830	----	----	----	Precipitate containing iron (2.55 ppm), calcium (1.33 ppm), and magnesium (0.8 ppm) in bottle.
443400N1231045.1	295	.01	10-12-28	15	1.0	----	324	62	1,450	14	100	1.9	2,956	----	.0	----	4,872	4,967	1,064	----	----	----	
434855N1171440.1	30	.36	9-23-58	52	.10	.00	170	45	173	12	506	362	121	.3	17	----	1,200	1,220	610	194	1,720	7.0	
434235N1221715.1	Thermal spring	.01	3-26-58	68	.07	.00	460	1.0	1,100	27	236	253	1,990	3.4	.0	11	3,935	4,310	1,190	960	7,070	6.9	
433845N1231750.1	Spring	.14	9- 3-57	17	.0	.00	7,080	.0	3,900	13	6.0	2.1	18,800	----	.0	7.8	----	33,000	----	----	40,900	7.1	
433750N1230515.1	Spring	.01	9- 3-57	19	.0	.00	480	29	810	8.2	76	1.2	2,100	.0	9.3	3.0	3,500	4,360	1,320	1,260	6,270	7.6	
433320N1185510.1	16	.02	8-31-31	----	----	----	154	43	234	(3)	498	387	109	----	131	----	1,303	----	561	----	----	----	
431630N1190140.1	13	Not in use	5-18-32	----	----	----	327	348	3,150	(3)	1,172	5,020	2,065	----	----	----	11,490	----	2,244	----	----	----	
425000N1173800.1	265	----	10-29-58	52	----	----	195	32	885	19	392	1,620	254	----	257	----	3,510	3,580	620	298	4,560	7.5	
424200N1203930.1	Thermal spring	.03	10- 8-48	96	(t) .04	----	1.4	.4	399	6.8	374	111	285	2.2	.1	1.0	1,120	1,130	5	0	1,760	8.5	CO_3 = 30; Siliceous deposits near spring.
424100N1194130.1	600	.29	8-13-48	67	.07	----	42	46	402	24	748	226	246	.5	1.2	3.5	1,420	1,390	294	0	2,190	----	
422425N1231805.1	202	----	7- -45	----	----	----	998	18	2,230	(3)	25	534	4,850	.0	----	----	8,640	----	2,560	2,540	14,000	7.4	
421115N1223805.1	----	----	4-20-51	68	.12	.00	132	74	1,410	65	2,660	14	1,140	.0	.9	.40	4,210	4,200	634	0	6,490	6.5	
420350N1202800.1	3,000	Flowing .43	11- 2-50	64	(t) .54	.00	5.0	12	546	36	1,520	1.1	39	.4	1.5	6.6	1,450	1,420	62	0	2,150	7.9	
PENNSYLVANIA																							
415400N0801600.1	54	Not in use	7-22-29	----	----	----	18	----	596	(3)	404	3.0	716	----	1.4	----	----	1,488	49	----	----	----	
411334N0801305.1	112	0.03	10-26-57	6.8	(t) 0.72	----	37	9.5	480	49	330	1.5	620	0.1	.4	----	1,370	----	132	0	2,470	7.4	
410700N0791000.1	280	----	10-11-29	8.5	(t) 1.69	----	49	12	368	12	197	8.1	593	----	1.9	----	----	1,155	172	----	----	----	
410035N0802814.1	309	<.01	9-23-59	8.8	(t) .16	----	3.3	1.9	470	5.0	788	7.9	270	1.5	.2	----	1,160	----	16	0	770	7.7	
405700N0785800.1	170	----	10-10-29	16	(t) 10.54	----	188	37	935	18	167	72	1,761	----	65	----	----	3,186	622	----	----	----	
403900N0800400.1	60	----	Before 1930	13	(t) .64	----	24	9.8	476	4.6	188	2.8	705	----	.5	----	----	1,358	100	----	----	----	
403900N0802300.1	200	----	10- 6-28	10	(t) 10.98	----	40	12	1,415	23	862	3.3	1,868	----	1.5	----	----	3,826	149	----	----	----	
402200N0801300.1	425	.06	Before 1930	14	(t) .75	----	140	44	3,109	17	422	14	4,925	----	----	----	----	8,595	530	----	----	----	
402000N0793700.1	280	.40±	Before 1930	10	(t) 5.1	----	70	27	835	12	510	4.9	1,200	----	1.5	----	----	2,458	286	----	----	----	
400400N0801000.1	90	.05±	Before 1930	7.3	(t) .22	----	2.8	2.1	445	9.6	867	3.8	198	----	2.9	----	----	1,116	16	----	----	----	
395859N0750551.1	55	.14	9-27-54	8.9	(t) 6.3	----	127	29	356	(3)	136	208	625	.3	.2	----	1,550	----	436	325	2,600	6.9	
395532N0751209.1	78	.87	2-24-54	39	(t) 44	----	118	95	81	2.8	188	510	108	.2	.8	----	1,210	----	685	531	1,580	6.8	
395300N0801000.1	118	.10±	Before 1930	10	(t) .19	----	33	12	589	11	447	3.1	752	----	.0	----	----	1,654	132	----	----	----	
SOUTH CAROLINA																							
334000N0785000.1	587	0.58	10-31-53	20	0.10	----	4.6	2.5	368	(3)	706	1.4	162	5.2	0.0	----	944	----	22	----	1,580	8.1	
332000N0791500.1	1,344	.58	9-29-49	17	.66	----	6.4	3.0	874	(3)	1,260	1.8	625	3.8	2.5	----	2,190	----	28	----	3,670	7.7	
330000N0801500.1	925	.09	11-28-50	5.2	2.5	----	2.5	1.2	630	(3)	993	.8	400	.5	.8	----	1,540	----	11	----	2,560	8.1	
321700N0803500.1	90	.09	4-17-44	----	----	----	----	----	----	----	244	36	645	----	----	----	----	----	342	----	----	----	
321600N0804000.1	315	2.59	4- 6-44	----	----	----	----	----	----	----	----	----	3,000	----	----	----	----	----	----	----	----	----	

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
SOUTH CAROLINA—Continued																							
320900N0804400.1	740	Not in use	9– 5–58	43	0.05	-----	90	122	1,420	54	260	760	1,950	2.5	1.0	------	4,620	-------	726	513	7,490	8.1	
320800N0805100.1	692	Not in use	12– 5–58	32	.06	-----	41	23	355	20	157	184	480	1.3	.1	------	1,220	-------	197	57	2,150	8.4	CO_3 = 7.0
SOUTH DAKOTA																							
455518N0981129.1	1,000	Flowing 0.01	11–28–61	9.4	1.5	0.00	12	5.6	904	11	582	612	695	4.3	0.5	3.4	2,540	2,540	53	0	4,050	7.8	
455407N1012050.1	220	.07	8– –58	-----	.1	.0	5.0	10	396	2.8	791	216	12	.8	.0	------	1,082	-------	53	------	-------	8.3	S. Dakota Department of Health analysis.
455000N0971903.1	Spring	.29	10– –60	-----	.0	.0	199	62	175	11.3	376	749	33	.5	1.5	------	1,595	-------	754	------	-------	7.5	Do.
454630N0993702.1	2,400	.29	4– –60	-----	1.5	.0	342	103	152	22.2	188	1,321	64	3.6	.0	------	2,305	-------	1,281	------	-------	7.6	Do.
453847N0970619.1	Spring	.36	10– –60	-----	.3	.2	163	65	40	5.7	233	559	2.0	.4	1.5	------	1,089	-------	675	------	-------	7.7	Do.
453612N0974923.1	1,000	.06	10– –60	-----	1.6	.0	13	4.0	865	18.0	459	1,225	223	8.0	1.5	------	2,601	-------	51	------	-------	8.5	Do.
453448N1033148.1	103	.07	8– –59	-----	.2	.0	10	3.0	412	4.7	760	279	6.0	.8	.0	------	1,121	-------	37	------	-------	8.9	Do.
453117N0975234.1	1,200	.01	7–26–60	11	2.4	-----	8.6	3.3	772	9.8	331	1,150	172	4.1	.3	2.8	2,300	2,320	35	0	3,340	7.5	
452811N0972325.1	88	.01	10– –58	-----	.0	.0	252	66	29	6.7	428	586	8.0	.4	4.5	------	1,285	-------	902	0	-------	7.3	S. Dakota Department of Health analysis.
451848N0990825.1	1,265	.01±	8– 9–62	10	.10	.01	7.0	4.5	787	11	844	330	485	3.1	.7	5.5	2,060	2,070	36	0	3,370	8.0	
451643N1001126.1	1,930	.03	8–15–62	13	3.1	.03	18	9.5	1,900	11	778	.5	2,450	.9	2.3	5.8	4,800	4,800	84	0	8,390	8.1	
451215N1035151.1	4,000	.72	6–26–52	29	(t) .07	-----	135	35	285	-----	178	363	405	1.2	2.9	------	1,340	-------	481	0	2,160	7.5	
450305N1013605.1	260	.04	5– –59	-----	.2	.0	26	7.0	823	11.0	464	366	783	.7	.0	------	2,304	-------	93	------	-------	7.5	S. Dakota Department of Health analysis.
445243N0974403.1	511	.36	5– –61	-----	2.0	.1	78	28	745	10.9	642	1,096	194	.4	.0	------	2,562	-------	316	------	-------	7.5	Do.
445014N1002017.1	1,640	.01	8– 9–62	12	4.2	.03	29	14	1,710	21	712	.8	2,240	.8	1.5	5.4	4,390	4,370	132	0	7,690	7.8	
444552N1015023.1	2,385	Flowing .29	4– 9–59	21	(t) .04	.01	7.3	2.7	2,000	5.6	1,680	1.3	2,110	3.3	1.6	6.2	-------	4,990	29	------	8,340	7.9	
443952N1034132.1	715	.07	8– –60	-----	1.4	.0	220	64	43	7.1	227	694	4	.5	.0	------	1,300	-------	817	------	-------	7.5	S. Dakota Department of Health analysis.
443539N0972807.1	1,360	.06	11– –55	-----	6.0	.2	8.0	8.0	1,043	(3)	488	1,228	442	4.6	.0	------	3,004	-------	63	------	-------	8.1	Do.
443331N1020448.1	2,445	Flowing .03	8– 3–62	25	.07	.02	3.6	.7	1,010	4.5	1,480	2.0	762	3.8	.8	4.0	2,540	2,630	12	0	4,360	8.1	
443000N1013248.1	2,090	.07±	8– 9–35	11	-------	-----	70	23	2,512	-----	127	4,554	632	-----	-----	------	7,870	-------	269	------	-------	----	
441906N0964810.1	65	.72	10– –60	-----	7.0	1.0	191	59	24	3.1	362	419	19	.4	.2	------	1,015	-------	732	------	-------	7.2	S. Dakota Department of Health analysis.
440957N0981026.1	140	1.08	7– 6–61	30	3.7	.25	115	.2	302	12	656	354	49	.3	.5	.39	1,190	1,190	288	0	1,760	8.1	
440925N1004755.1	1,500	Flowing .07	2–18–59	17	.16	.01	9.5	.4	1,300	7.0	1,570	.0	1,110	2.2	1.4	6.3	3,230	3,250	25	0	5,440	7.8	
440458N0990936.1	1,125	Flowing .11	9–21–61	11	3.8	.03	469	51	91	16	168	1,296	78	3.1	.1	.24	2,000	2,200	1,380	1,240	2,420	7.2	
440324N1031542.1	700	.06	11–24–58	28	3.5	-----	130	266	201	-----	258	1,351	25	-----	-----	------	2,541	-------	1,524	------	-------	----	S. Dakota School of Mines analysis reported in hypothetical compounds, recalculated to concentrations in ppm.

440052N0975200.1	135	Flowing .03	9–23–60	26	1.1	.37	67	133	249	14	263	965	74	.7	.0	.96	1,660	1,790	715	499	2,250	7.4	
440000N0970602.1	40	.36	10– -60	-----	1.4	1.4	228	179	227	20.3	290	639	635	.4	.2	-----	2,456	-----	1,313	-----	-----	7.4	S. Dakota Department of Helath analysis.
434749N0992255.1	720	Flowing .22	7–11–62	11	2.1	.21	364	81	113	21	159	1,120	129	3.5	.1	.19	1,920	2,070	1,240	1,110	2,370	7.0	
434542N0991146.1	865	Flowing .07±	5– 9–60	9.8	9.7	.09	414	94	88	20	167	1,280	107	2.8	.0	.17	2,110	2,240	1,420	1,280	2,480	7.0	
434002N1031108.1	3,000	Flowing .04	5– 6–60	21	.30	.01	635	84	13	5.0	149	1,780	3.0	.9	.1	.07	2,620	2,820	1,930	1,810	2,680	7.1	
433010N0974655.1	450	.01	4– -58	-----	3.4	.6	29	148	99	15.5	500	1,058	2.0	1.8	1.5	-----	2,092	-----	1,352	-----	-----	7.1	
432630N1032910.1	Springs	7.2	12–17–58	30	.00	.00	227	38	112	9.0	233	609	108	.8	.7	-----	1,250	1,200	722	532	1,610	7.1	
432140N1033150.1	Springs	7.0±	11– 1–57	22	(t) .03	.00	568	92	54	6.2	235	1,540	62	.9	.6	.19	2,530	2,460	1,800	1,600	2,700	7.0	H_2S odor.
431903N0981834.1	400	.12	9– -57	-----	.4	.0	58	17	520	17.6	354	703	245	1.2	.0	-----	1,767	-----	215	-----	-----	7.7	S. Dakota Department of Health analysis.
430410N1024729.1	60	.01	11–29–62	42	1.7	1.4	330	72	278	26	350	1,340	18	.7	.4	.42	2,280	2,360	1,120	833	2,680	7.1	
430123N0963748.1	138	.03	11– -54	-----	.0	.0	212	82	21	(3)	427	583	12	.4	2.5	-----	1,270	-----	864	-----	-----	7.3	S. Dakota Department of Health analysis.
425052N0965811.1	320	Flowing .01	7– 7–61	10	2.3	.19	255	43	51	16	160	685	46	2.4	.3	.17	1,190	1,310	813	682	1,590	7.1	
TENNESSEE																							
363649N0865213.1	71	-----	10– 9–27	19	1.3	-----	353	135	92	-----	225	1,307	82	-----	1.2	-----	-----	2,101	1,436	-----	-----	-----	Sulfides as H_2S = 20.
363444N0861905.1	100	0.01	10–19–27	25	.0	-----	505	148	699	24	700	2,282	336	-----	.1	-----	-----	4,502	1,869	-----	-----	-----	Sulfides as H_2S = 379.
363256N0871814.1	Spring	-----	10– 4–27	8.0	.38	-----	366	173	294	10	400	1,474	295	-----	.1	-----	-----	2,970	1,624	-----	-----	-----	Sulfides as H_2S = 116.
363122N0871735.1	162	-----	10– 4–27	14	6.89	-----	382	132	3.6	1.3	228	1,224	2.2	-----	.2	-----	-----	1,948	1,496	-----	-----	-----	
362650N0863849.1	Spring	<.01	10–20–27	24	1.5	-----	479	90	16	(3)	180	1,353	28	-----	2.1	-----	-----	2,236	1,565	-----	-----	-----	Sulfides as H_2S = 20.
362634N0865626.1	119	-----	10– 9–27	19	1.8	-----	282	39	9.0	-----	293	611	3.5	-----	3.2	-----	-----	1,158	864	-----	-----	-----	Tennessee Geol. Survey analysis.
362500N0871030.1	140	.02	-----	-----	1.0	-----	384	112	7.0	-----	178	1,119	12	3.0	-----	-----	-----	2,288	1,408	-----	-----	7.0	CO_3 = 18; Source of analysis unknown.
362342N0861905.1	Spring	<.01	10–18–27	18	1.5	-----	484	65	631	16	298	1,128	1,005	-----	3.8	-----	-----	3,497	1,475	-----	-----	-----	Sulfides as H_2S = 31.
362017N0872009.1	65	-----	10– 4–27	13	2.8	-----	163	95	75	5.1	190	771	2.3	-----	.7	-----	-----	1,238	797	-----	-----	-----	Sulfides as H_2S = 11.
361958N0865900.1	105	.01	-----	-----	.5	-----	295	4.0	12	-----	108	622	18	1.3	-----	-----	1,130	-----	754	-----	-----	6.9	CO_3 = 6.0; Source of analysis unknown.
361824N0871944.1	40	Not in use	10– 8–27	26	2.0	-----	603	60	45	(3)	152	1,644	14	-----	1.1	-----	-----	2,505	1,754	-----	-----	-----	Sulfides as H_2S = 22.
361429N0862211.1	Spring	-----	10–16–27	16	.53	-----	487	306	207	16	541	2,348	37	-----	.2	-----	-----	3,880	2,472	-----	-----	-----	
361359N0873117.1	65	Not in use	10– 7–27	2.4	29	-----	496	208	82	6.2	184	1,988	31	-----	4.0	-----	-----	3,195	2,093	-----	-----	-----	Sulfides as H_2S = 31.
361305N0870326.1	120	-----	10–10–27	19	3.2	-----	625	221	2,996	7.0	153	3,652	3,425	-----	.5	-----	-----	10,688	2,468	-----	-----	-----	Tennessee Geol. Survey analysis.
361217N0865543.1	97	-----	9–13–27	9.7	1.4	-----	139	62	459	16	270	1,174	131	-----	.0	-----	-----	2,160	602	-----	-----	-----	
361136N0865004.1	94	-----	9–14–27	18	.32	-----	423	159	695	21	332	2,268	424	-----	.1	-----	-----	4,372	1,750	-----	-----	-----	Sulfides as H_2S = 34.
361048N0864735.1	3,000±	Flowing .01	10–10–27	45	1.5	-----	382	117	1,066	52	298	585	2,085	-----	8.0	-----	-----	4,306	1,435	-----	-----	-----	Sulfides as H_2S = 22.
360008N0861452.1	152	Not in use	10–14–27	13	2.34	-----	580	533	8,785	133	383	118	15,700	-----	.0	-----	-----	26,410	3,600	-----	-----	-----	Sulfides as H_2S = 86.
355108N0830930.1	135	.09	8–12–48	-----	32	-----	217	64	107	(3)	205	812	5.5	-----	-----	-----	1,500	-----	804	620	1,545	7.8	CO_3 = 9.8
355037N0865802.1	45	-----	10–11–27	9.6	1.3	-----	354	208	3,008	42	286	4,459	2,375	-----	4.1	-----	-----	10,920	1,738	-----	-----	-----	Sulfides as H_2S = 40.
355031N0862537.1	175	-----	9–15–27	11	.21	-----	106	28	322	8.4	588	26	406	-----	.0	-----	-----	1,240	380	-----	-----	-----	Sulfides as H_2S = 75.
354318N0874746.1	137	Not in use	8–12–30	6.8	.7	-----	83	39	903	15	194	1,538	402	-----	20	-----	-----	3,121	367	-----	-----	-----	
353730N0872230.1	84	-----	9– 3–30	11	2.0	-----	669	407	5,490	(3)	279	5,200	6,830	-----	5.3	-----	-----	19,160	3,340	-----	-----	-----	

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—**Continued**

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
TENNESSEE—Continued																							
353022N0861824.1	155	----	10–20–30	12	3.6	----	1,724	138	9,870	24	240	4,420	15,250	----	3.2	----	----	30,830	4,868	----	----	----	Tennessee Geol. Survey analysis.
351711N0863215.1	66	----	11–12–30	18	2.7	----	1,438	104	935	20	361	3,492	1,460	----	2.3	----	----	7,724	4,015	----	----	----	Do.
350930N0900130.1	2,656	Flowing 0.05	9–26–27	16	.4	----	3.2	1.0	432	(3)	1,068	1.8	16	----	.0	----	----	1,026	12	----	----	----	Memphis City analysis.
350058N0873500.1	315	----	4– 9–21	12	.3	----	104	44	1,245	26	593	324	1,764	----	1.0	----	----	3,857	440	----	----	----	Sulfides as H_2S = 104; Tennessee Geol. Survey analysis.
TEXAS																							
353040N1021500.1	250	0.04	1–20–48	13	0.2	----	22	12	434	6.0	806	295	60	1.4	0.5	2.1	1,240	1,260	104	----	1,840	7.5	
343700N1000430.1	100	1.30	9–26–53	18	----	----	608	158	256	----	162	1,890	460	----	7.2	.5	3,480	----	2,170	2,030	4,120	7.5	
343320N1002530.1	Spring	2.60	5– –43	----	----	----	1,495	293	17,100	(3)	126	4,190	26,700	----	----	----	49,800	----	4,940	----	69,600	----	Density at 20°C = 1.035.
335500N1013200.1	825	.22	9–29–52	8.7	----	----	206	89	4,990	----	398	863	7,320	1.4	----	2.1	13,700	----	880	554	22,200	7.7	Density at 20°C = 1.007; Br = 0.0; I = 0.0.
332230N1002500.1	Spring	.13	5–11–61	----	----	----	1,880	1,400	82,200	370	16	3,060	133,000	----	----	----	222,000	----	10,400	10,400	151,000	6.1	Density at 20°C = 1.169.
324840N0980630.1	202	<.01	3– 9–31	----	----	----	200	158	974	(3)	606	2,308	260	----	1.2	----	4,200	----	1,148	----	----	----	Crazy Water Co. well.
324640N1012700.1	63	Flowing <.01	8–25–48	10	----	----	112	76	1,020	(3)	570	1,620	460	----	1.2	----	3,580	3,700	574	----	5,220	----	
322300N0965030.1	2,950	.36	1– –43	21	.07	----	5.4	2.1	429	7.2	494	112	288	1.7	3.0	----	1,131	1,145	22	----	----	8.4	CO_3 = 18
322300N0945230.1	906	.50	10– 3–41	----	----	----	4.4	3.9	636	(3)	604	23	630	.5	----	----	----	1,600	27	----	----	----	
315940N1050840.1	154	4.20	5–25–54	18	----	----	276	103	55	----	226	925	55	2.2	8.5	.26	1,550	1,720	1,110	927	1,890	7.4	
314630N1023900.1	700	----	10–12–48	8.0	----	----	9.7	6.2	692	(3)	568	484	395	----	4.2	----	1,890	1,910	----	----	3,040	----	CO_3 = 14
314240N1033600.1	246	----	12–16–40	----	----	----	637	248	369	(3)	68	2,030	880	----	1.2	----	4,200	----	2,610	----	5,430	----	
312720N1032430.1	115	1.44	10–21–30	14	.04	----	763	204	1,091	16	116	2,251	1,919	----	.4	----	6,316	6,592	2,744	----	----	----	
311620N1033000.1	135	2.16	3– 7–50	32	----	----	614	232	1,180	(3)	195	2,210	1,840	----	6.5	.88	6,210	6,420	2,490	----	8,370	7.2	
311340N0970030.1	2,709	1.15	6–13–44	25	.14	----	55	17	491	12	433	802	66	3.1	.0	----	1,680	1,700	208	----	2,440	7.8	
311300N1015630.1	170	.07	9–22–48	8.2	.10	----	150	117	276	7.6	312	919	165	3.0	15	1.6	1,820	1,950	856	----	2,430	7.2	
305640N1034700.1	Spring	----	1–30–41	23	.05	----	184	78	405	18	284	612	570	.5	1.0	.15	2,031	2,099	780	----	3,120	----	
302040N0963100.1	198	.22	11– 2–39	----	(t) 2.53	----	69	3.5	587	(3)	492	222	585	.5	3.6	----	1,713	1,807	187	----	----	7.9	
300940N0965740.1	210	.17	3–22–52	34	----	----	248	92	350	(3)	337	557	640	----	.2	.70	2,090	2,310	998	722	3,390	7.4	
294600N1000420.1	150	.01	10–12–53	19	----	----	588	121	42	(3)	234	1,740	35	1.6	.0	----	2,660	2,860	1,960	1,770	2,810	7.7	
294010N0951030.1	1,676	Not in use	9– 9–53	18	(t) .08	----	6.0	2.1	436	1.7	618	.7	305	4.8	.2	.25	1,100	1,110	24	0	1,950	8.6	CO_3 = 25
293620N0955730.1	600±	Flowing <.01	6–11–43	12	.07	----	11	8.0	519	(3)	829	3.0	358	.6	.0	----	1,320	1,339	60	----	----	8.6	
292140N0950400.1	884	2.59	9–24–52	29	----	----	46	16	578	(3)	340	2.0	820	.4	.2	----	1,660	1,630	181	0	2,960	7.9	
291610N1003320.1	1,408	1.00	8–28–59	16	.0	0.02	672	67	15	2.7	170	1,740	10	2.6	.0	.16	2,610	----	1,950	1,810	2,590	6.6	
291000N0994620.1	604	1.44	4– 4–56	22	----	----	170	34	152	8.8	238	321	273	----	.9	.11	1,110	1,160	564	369	1,760	7.4	
290850N0991940.1	300	.01	8–23–51	14	----	----	48	31	991	(3)	586	393	1,070	----	4.0	----	2,840	2,870	248	0	4,830	7.8	
285600N0990400.1	130	.17	6–18–32	----	.12	----	152	23	269	(3)	234	259	415	----	14	----	1,247	----	474	----	----	----	
282930N0991240.1	385	.50	5–29–63	19	(t) 5.7	----	109	73	250	13	450	584	118	.1	.0	1.3	1,390	----	572	203	1,940	7.0	
282100N0962430.1	333	----	11–18–53	17	(t) .16	----	45	35	837	(3)	506	75	1,120	.7	2.0	----	2,380	2,360	256	0	4,200	7.8	
273600N0982630.1	615	.18	3– 7–45	29	.02	----	41	17	364	12	297	231	338	.8	20	----	1,200	1,220	172	----	2,060	7.8	
273600N0982630.2	450	.02	3– 6–45	18	(t) 4.6	----	52	12	1,660	32	322	7.8	2,520	.2	2.2	----	4,460	4,470	180	----	8,320	7.5	
264000N0985400.1	204	----	9–20–50	26	----	----	74	7.9	2,640	(3)	311	885	3,390	----	----	14	7,190	----	217	----	11,400	7.5	Density at 20°C = 1.002.

262920N0974650.1	1,054	1.45	9–23–53	16	.01	----	26	8.4	771	4.3	166	830	570	2.4	.0	5.8	2,320	2,340	100	0	3,650	7.9	
261730N0974730.1	697	1.30	1–16–52	32	----	----	135	81	1,230	----	309	975	1,450	.8	.5	5.4	4,060	4,140	670	417	6,380	7.4	
UTAH																							
415944N1125243.1	400	----	9–12–55	----	----	----	316	85	518	34	152	103	1,380	----	----	----	----	----	1,140	1,010	4,200	----	
414141N1125540.1	Springs	1.8	4–19–60	29	0.01	----	119	67	1,330	56	210	155	2,280	----	2.8	0.34	4,140	----	572	400	7,690	7.9	
412931N1121044.1	500	----	8–21–53	----	----	----	56	62	998	108	1,620	14	1,090	----	----	----	3,350	----	394	0	5,300	----	
411649N1120315.1	354	----	4– 7–55	----	----	----	81	21	428	63	221	9.1	788	0.1	----	----	1,570	----	289	108	2,870	----	
404956N1115447.1	----	----	6–26–47	19	----	----	181	57	501	(3)	114	15	1,180	----	1.9	----	2,010	----	686	592	3,700	----	
404440N1123846.1	Spring	4.5	4– 4–61	5.5	.01	----	144	88	2,890	103	218	352	4,720	----	13	----	8,430	----	722	543	14,300	7.5	
403555N1122555.1	300	----	4– 4–41	24	.04	----	195	78	160	4.2	198	45	665	.0	1.8	----	1,370	----	807	645	----	----	
403528N1113749.1	472	----	8–13–58	33	----	----	425	156	122	(3)	544	1,150	225	----	7.5	----	2,390	----	1,700	1,250	2,960	7.1	
401659N1100211.1	700	----	7– 6–58	7.4	2.5	----	184	74	1,560	(3)	272	774	2,220	----	1.3	----	4,950	----	765	540	8,050	7.5	
401308N1091354.1	5,640	----	9–10–57	----	----	----	3	2	2,660	(3)	5,710	2	704	----	----	----	6,180	----	16	0	----	----	Source of analysis unknown.
401134N1094626.1	30	----	7– 9–58	14	2.0	----	134	65	162	(3)	556	427	38	----	.8	----	1,110	----	602	146	1,590	7.4	Do.
401041N1125539.1	330	----	9–19–57	46	.00	0.00	32	16	326	12	274	94	385	.5	10	----	1,030	----	146	0	1,800	7.9	
400455N1094048.1	55	----	7– 7–58	15	----	----	540	201	2,290	(3)	248	3,590	2,250	----	47	----	9,060	----	2,180	1,970	11,500	7.3	
395511N1115647.1	335	----	10–19–55	41	.15	----	322	88	118	(3)	135	522	468	.5	164	----	2,000	----	1,190	1,080	----	----	
393338N1122241.1	----	----	3–23–59	32	----	----	126	94	250	(3)	245	250	555	----	2.5	----	1,430	----	702	501	----	7.5	
392905N1115338.1	Spring	----	8–22–39	12	.10	----	187	60	68	(3)	317	483	68	----	----	----	1,220	----	714	453	----	----	
390608N1114835.1	62	----	9– 3–57	22	1.0	.03	192	143	271	9.5	458	902	228	.6	48	----	2,040	----	1,070	692	2,960	7.5	
384929N1123325.1	100	----	11–20–44	----	----	----	354	287	761	(3)	317	1,610	1,260	----	.6	----	----	----	2,060	1,800	6,400	----	
384559N1102735.1	Spring	----	10–28–58	10	----	----	303	126	36	(3)	181	1,120	14	.2	.2	----	1,840	----	1,280	1,110	1,960	8.4	CO_3 = 11
383756N1103346.1	----	----	10–30–58	13	----	----	481	642	339	----	408	3,900	105	.2	41	----	6,360	----	3,840	3,510	5,640	7.6	
382958N1093907.1	----	----	2–22–39	----	94	----	56,100	26,200	26,230	----	----	12	205,700	----	----	----	316,600	----	----	----	----	----	Source of analysis unknown.
382453N1104147.1	----	----	6–28–52	14	3.0	----	101	7.1	869	(3)	193	281	1,220	----	----	----	2,730	----	282	123	----	8.0	
381020N1131201.1	Thermal spring	----	11– 3–50	119	.05	----	72	9.8	358	61	360	473	218	6.7	.1	----	1,490	----	220	0	2,170	----	
375326N1102427.1	Thermal spring	----	7– –56	----	----	----	250	151	876	(3)	389	1,530	1,390	----	----	----	----	----	1,240	926	6,890	7.3	
374305N1130531.1	138	----	8– 5–60	23	.01	----	212	91	28	3.7	298	666	20	.1	.5	.08	1,190	----	904	660	1,520	7.5	
374055N1134000.1	----	----	5– 5–59	81	.00	----	71	10	315	(3)	96	624	118	----	11	----	1,280	----	219	140	1,740	7.5	
371134N1131627.1	Thermal spring	----	8–15–50	9.3	----	----	816	197	2,430	(3)	1,290	1,940	3,580	----	----	----	9,610	----	2,850	1,790	13,900	----	H_2S odor. Deposits travertine.
VIRGINIA																							
374000N0801500.1	Spring	1.44	4– 2–28	----	----	----	400	----	95	----	777	466	30	----	33	----	----	----	757	----	----	----	
373000N0762700.1	822	----	6–11–18	57	8.0	----	9.0	20	1,646	(3)	1,051	234	1,820	----	5.0	----	4,308	----	104	----	----	----	
372500N0763000.1	810	----	2–12–41	17	.09	----	4.6	1.9	528	16	773	60	345	2.8	.9	----	1,360	----	19	0	----	----	
372200N0762000.1	460	----	6–14–18	52	----	----	8.4	8.3	711	(3)	920	65	550	1.0	1.2	----	1,881	----	55	0	----	----	
372000N0763000.1	716	Flowing .07	1906	20	1.0	----	23	14	1,190	(3)	544	155	1,630	----	----	----	----	3,420	----	----	----	----	
371000N0762800.1	480	----	2– 7–41	----	----	----	----	----	----	----	454	54	522	2.3	----	----	----	----	22	0	----	----	
371000N0762000.2	----	----	Before 1910	39	4.9	----	46	26	1,826	----	628	216	2,500	----	----	----	----	5,008	----	----	----	----	
371000N0762000.1	610	<.01	1906	----	----	----	----	----	----	----	----	----	1,400	----	----	----	----	----	----	----	----	----	
370000N0762000.4	417	----	10–15–18	----	----	----	4.0	4.5	390	(3)	621	58	216	----	----	----	1,130	----	28	----	----	----	
370000N0762000.3	760	----	2–26–42	----	----	----	----	----	----	----	452	52	660	2.2	----	----	1,650	----	24	----	----	----	
370000N0762000.2	492	----	10–16–42	----	18	----	----	----	----	----	724	300	2,200	.9	----	----	----	----	240	----	----	----	
370000N0762000.1	475	----	11–21–41	----	----	----	----	----	----	----	546	112	1,050	1.4	----	----	----	----	40	----	----	----	
370000N0762000.1	550	1.9	7– 7–42	17	.21	----	4.5	2.3	454	9.0	475	56	409	2.9	----	0.8	1,200	----	20	----	----	----	
365900N0762700.1	820	----	8– 5–40	----	----	----	----	----	----	----	686	80	1,680	.9	----	----	----	----	76	----	----	----	CO_2 = 4.3
364500N0761500.1	----	----	1891	10	----	----	5.0	1.7	415	21	----	43	351	----	----	----	----	1,090	----	----	----	----	
364000N0761700.1	605	.40±	1938	11	----	----	----	----	----	----	627	32	260	----	----	----	----	1,140	21	----	----	----	Shepard Laboratory analysis.
WASHINGTON																							
485540N1222615.1	375	0.07±	3– 1–60	----	----	----	180	250	----	----	120	----	4,500	----	----	----	----	----	1,500	----	14,500	7.5	
481305N1224055.1	240	.14	9–29–60	27	(t) 0.69	----	90	152	73	16	682	230	150	0.2	0.0	----	1,070	1,100	849	289	1,720	7.7	
472215N1192850.1	66	----	10–19–60	41	.05	----	145	68	76	9.9	304	468	50	1.4	3.1	----	1,010	1,060	642	392	1,370	7.7	PO_4 = 0.10
471735N1226100.1	207	.50	6– 2–60	41	(t) .78	----	54	81	572	5.1	83	174	1,050	.1	.1	----	2,020	2,100	470	402	3,550	6.6	PO_4 = 0.04
471620N1220115.1	1,461	Flowing <.01	10– 3–63	11	(t) 9.5	----	40	20	4,260	34	2,290	.7	5,330	----	37	----	10,900	----	182	0	17,200	7.2	PO_4 = 0.05; "flows brine and natural gas".

See footnotes at end of table.

Table 2.—*Standard or partial analyses of water (by U.S. Geological Survey except as noted) in parts per million except specific conductance and pH*—Continued

Well or spring location[1]	Depth of well (feet)	Yield (mgd)	Date sampled (month-day-year)	Silica (SiO_2)	Iron (Fe). In solution when analyzed, or state not reported, except (t) total iron.	Manganese (Mn). In solution when analyzed or state not reported.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Evaporated residue	Hardness as $CaCO_3$: Calcium magnesium[2]	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH of sample at time of analysis	Remarks
WASHINGTON—Continued																							
470425N1225140.1	84	----	7– 1–60	----	----	----	----	----	----	----	144	----	1,795	----	----	----	----	----	795	----	6,420	----	
465025N1193835.1	16	0.76	8–27–51	----	----	----	43	73	317	55	909	245	107	----	----	0.04	----	----	407	----	2,000	7.6	U.S. Bureau of Reclamation analysis.
464600N1240200.1	73	----	----	----	----	----	----	----	----	----	----	----	1,840	----	----	----	----	----	----	----	----	----	
463410N1231720.1	270	.01	10–14–58	14	(t) 1.0	----	188	.1	341	5.5	32	12	840	----	0.1	----	1,390	1,550	470	444	2,980	6.8	
WEST VIRGINIA																							
403507N0803829.1	892	Not in use	7–15–44	----	(t) 430	----	6,750	1,520	23,058	280	117	420	52,350	----	----	----	----	85,400	----	----	----	----	Data from W. Virginia Geol. Survey.
392005N0785359.1	530	<0.01	12–15–42	----	(t) .0	----	49	.0	2,410	----	403	.0	3,720	----	----	----	6,582	6,258	----	----	----	----	W. Virginia Pulp and Paper Co. analysis.
390735N0812957.1	541	<.01	1–28–44	----	----	----	7,300	1,900	32,600	260	28	.0	69,000	----	----	----	----	113,200	----	----	----	----	Data from W. Virginia Geol. Survey.
385758N0801554.1	4,396	<.01	10–15–37	----	----	----	400	100	2,500	----	1,330	----	2,500	----	----	----	----	3,270	----	----	----	----	Do.
384955N0820505.1	1,800±	<.01	4–23–41	----	(t) 32	----	12,100	2,138	36,423	423	9.0	346	83,647	----	----	----	----	138,840	----	----	----	----	Do.
384705N0795454.1	1,816	<.01	3–18–41	----	(t) 6.7	----	3,200	940	34,000	4,500	122	900	64,000	----	----	----	----	112,000	----	----	----	----	Do.
384039N0805730.1	2,140	----	10–29–41	----	(t) 105	----	16,800	2,800	44,150	480	31	675	106,000	----	----	----	----	167,600	----	----	----	----	Do.
394318N0801227.1	59	.01	2–24–49	6.8	(t) 5.6	----	23	5.8	887	5.6	544	13	1,120	0.3	0.2	----	----	2,360	82	----	4,260	7.6	
393420N0795054.1	322	<.01	3– 2–42	----	----	----	----	----	----	----	446	6.0	5,150	----	----	----	----	----	660	----	----	----	
393333N0805949.1	78	.06	4–21–52	21	(t) .24	0.0	176	30	194	3.3	374	82	422	.1	4.5	----	----	1,170	565	----	1,960	6.9	
393213N0801251.1	3,000	<.01	10– 1–37	----	(t) 5,800	----	8,340	1,820	27,100	160	32	44	69,300	----	----	----	----	108,900	----	----	----	----	Data from W. Virginia Geol. Survey.
392844N0805247.1	218	<.01	10–21–60	7.2	(t) .04	.01	69	36	500	4.0	410	85	675	.5	.5	----	----	1,580	320	0	2,840	7.2	
391907N0794137.1	173	<.01	12–17–62	----	(t) .5	----	----	----	----	----	----	----	1,565	----	----	----	----	----	171	----	----	7.0	
391440N0802151.1	230	<.01	10–25–41	7.8	(t) 1.4	----	18	4.4	596	2.6	398	5.8	720	2.4	3.0	----	----	1,580	63	----	----	8.1	
382929N0815523.1	182	.01	6– 6–59	8.4	(t) .03	.00	3.2	.5	464	1.5	687	4.8	310	6.0	.9	----	----	1,190	10	0	2,020	8.3	CO_3 = 8.0
381939N0813545.1	225	.17	1940	10	(t) 2.8	----	64	----	1,885	----	290	4.0	3,070	----	----	----	----	5,383	----	----	----	----	
381236N0812523.1	135	.25	6– –54	6.0	(t) 23.2	----	136	33	934	----	176	12	1,664	----	----	----	----	2,963	460	----	----	6.8	W. B. Abele analysis.
WISCONSIN																							
464344N0920515.1	600	0.03	7–21–54	----	----	----	----	----	----	----	----	70	693	0.75	----	----	----	1,558	410	----	----	7.6	Wisconsin State Lab Hygiene analyis.
462955N0905412.1	90	Not in use	8– –48	----	(t) 0.7	0.0	972.5	65	1,470	----	----	180	4,050	.3	----	----	----	7,494	2,010	----	----	7.35	Do.
441428N0882455.1	590	.03	5–22–62	----	(t) 3.2	----	234	39	----	----	290	498	4.0	----	----	----	1,010	----	1,253	----	1,230	7.8	
441416N0873839.1	600	----	2–15–49	----	(t) .2	.0	246	62	----	----	----	630	99	.65	----	----	----	1,382	785	----	----	7.3	Wisconsin State Lab. Hygiene analysis.
434520N0874249.1	1,470	Flowing?	1– 8–47	----	(t) 1.6	.0	733	201	2,170	----	----	2,000	4,070	1.9	----	----	10,004	----	2,980	----	----	6.9	Do.
434400N0874830.1	115	----	5–29–45	----	(t) .1	.0	18.7	6.2	----	----	----	600	202	.5	----	----	----	1,398	70	----	----	7.3	Do.
431100N0875630.1	159	----	----	16.8	(t) 2.0	.0	450	43	182	13.8	----	1,025	175	1.4	----	----	2,440	----	1,372	----	----	7.45	Do.
431100N0875530.1	150	----	----	7.6	(t) 1.4	.0	545	61	1,637	25	----	2,250	1,888	2.3	----	----	6,690	----	1,716	----	----	7.25	Do.
430247N0910751.1	990	Flowing <.01	1915±	----	(t) 1.1	.0	139	28.5	----	----	----	500	1,084	.9	----	----	----	2,768	540	----	----	7.3	Do.

WYOMING

445100N1082100.1	965	Flowing 0.22	10-13-25	14	0.21	-----	3.5	4.6	572	-----	766	503	34	-----	0	------	-------	1,570	28	------	-------	----	CO_2 = 43
445000N1044400.1	125	.01	10-28-56	9.6	.74	-----	58	21	486	10	339	1,020	7.0	0.4	.0	0.27	1,780	1,820	231	0	2,530	7.6	
444700N1064100.1	87	.02	6-13-62	7.1	(t)25	0.30	470	519	800	13	801	4,080	45	.7	------	------	-------	6,620	3,310	2,650	-------	7.4	
444100N1090000.1	34	--------	10- 5-50	10	(t) 9.1	-----	170	198	444	5.6	181	1,890	81	1.5	3.8	.3	2,900	3,220	1,240	1,090	3,430	7.3	
443100N1082300.1	36	1.30	8- 8-57	44	.20	-----	96	35	248	1.7	428	550	9.5	4.2	15	.22	1,210	1,210	384	33	1,660	7.7	
442100N1064300.1	145	.01	10-27-60	13	.72	.04	76	10	296	1.9	479	484	7.8	.1	1.4	.08	1,130	1,170	232	0	1,650	8.0	
441600N1075200.1	70	.01	9-12-47	9.0	.04	-----	368	163	36	11	324	1,320	28	.0	2.5	------	-------	2,100	1,590	1,320	2,490	7.5	
441300N1061000.1	31	.09	10-27-60	11	5.0	-----	302	87	287	8.5	271	1,220	194	.4	.8	.21	2,240	2,370	1,110	888	2,860	7.4	
435800N1075800.1	425	.43	9-22-54	7.0	1.6	.02	41	9.9	710	5.3	190	1,300	105	1.0	72	------	2,340	2,340	143	0	3,290	7.9	
434300N1081800.1	--------	.22	10-28-49	32	.05	-----	350	134	460	5.6	442	1,880	37	1.2	7.9	.53	3,130	3,310	1,420	1,058	3,620	7.4	CO_3 = 43
434300N1063900.1	24	.03	8-19-50	13	7.0	-----	395	197	610	6.8	565	2,280	215	.4	2.3	------	4,000	4,250	1,790	1,330	4,500	7.1	
432700N1061100.1	950	.04	5-24-63	65	.37	-----	30	1.5	378	-----	431	475	12	1.4	.6	------	1,200	1,240	81	0	1,740	8.6	CO_2 = 20
431600N1084000.1	100	.02	8-14-50	10	-------	-----	33	.5	459	1.3	78	990	8.5	.8	.8	.10	1,540	1,550	85	21	2,180	7.5	
425000N1110000.1	Spring	.03	5-10-62	-----	-------	-----	404	78	1,440	156	892	1,086	1,885	0	------	2.90	5,490	-------	1,330	------	4,300	6.8	140°F. Large tufa deposits.
424200N1052500.1	35	.01	8-16-50	24	6.9	-----	80	21	690	26	708	1,080	98	.8	.7	.66	2,370	2,470	287	0	3,320	7.6	
423700N1063700.1	2,550±	.05	3-17-55	-----	-------	-----	9	--------	912	-----	1,745	52	200	-----	------	------	-------	2,696	-------	------	-------	9.0	CO_3 = 143; analytical lab. not known.
423000N1093800.1	200	.01	5-28-58	20	-------	-----	21	.9	562	(3)	136	1,090	22	-----	.8	------	1,780	-------	55	------	2,520	7.3	
422500N1075800.1	> ,300	.05	5-17-54	-----	-------	-----	32	10	2,927	10	1,147	460	3,475	-----	------	------	8,204	-------	-------	------	-------	7.8	Sinclair Oil and Gas Co. analysis; CO_3 = 120.
421600N1101200.1	100	.01	5-27-58	10	-------	-----	25	52	370	(3)	516	459	125	-----	.7	------	1,300	-------	274	------	1,950	8.0	
415100N1075600.1	105	.01	5-21-63	10	(t) .56	.00	192	23	323	2.1	144	1,140	14	.1	1.6	.08	1,780	1,850	572	454	2,330	7.4	
414100N1084800.1	90	.01	7-17-58	12	-------	-----	184	85	45	(3)	332	588	16	.3	.5	------	1,090	-------	810	------	1,480	7.2	
413100N1094100.1	30	.01	7-25-58	17	-------	-----	135	47	161	(3)	432	421	60	.4	.8	------	1,050	-------	528	------	1,530	----	
412600N1102300.1	62	.01	7-18-58	6.8	-------	-----	37	32	462	(3)	346	388	380	1.8	1.6	------	1,480	-------	225	------	2,420	7.7	
412500N1053500.1	100	.01	4-29-43	-----	-------	-----	271	105	14	(3)	138	958	13	0	11	------	1,440	-------	1,108	------	-------	----	
412300N1074700.1	400	.03	7-29-58	8.6	-------	-----	224	95	437	(3)	294	1,540	39	.1	.4	------	2,490	-------	950	------	3,040	7.8	
410800N1040700.1	7,500±	.05	11-27-51	-----	-------	-----	52	14	2,052	-----	1,476	109	2,362	-----	------	------	-------	5,064	-------	------	-------	7.6	Analytical lab. not known.
410600N1081200.1	<500	.02	7-11-63	14	(t) .03	.01	.5	.5	391	.7	487	379	20	1.7	.1	.32	1,090	1,100	3	0	1,670	9.0	CO_3 = 48
410100N1092100.1	Spring	.01	5-24-59	12	-------	-----	39	16	719	(3)	115	1,520	30	2.0	1.4	------	2,400	-------	327	------	-------	7.9	

[1] First six digits give latitude in degrees, minutes, and seconds north; seven digits following "N" give longitude in degrees, minutes, and seconds west. Single digit following period is number assigned to wells or springs in sequence as they are recorded within the area defined by the coordinates.

[2] Most older analyses report "total hardness" rather than "calcium magnesium hardness." In most waters the two are virtually synonymous. Total hardness, however, may include that caused by alkaline earths other than calcium and magnesium, and by other hardness-producing constituents such as iron, other metals, and acidity.

[3] Potassium is reported with sodium. In analyses such as these, the alkalis are reported as equivalent to the difference (expressed as sodium) between the sum of equivalents per million of the anions and the sum of calcium plus magnesium, also in equivalents.

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