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Dissolved-Mineral Inflow to Great Salt Lake and Chemical Characteristics of the Salt Lake Brine: Part 1- Selected Hydrologic Data

D. C. Hahl

C. G. Mitchell

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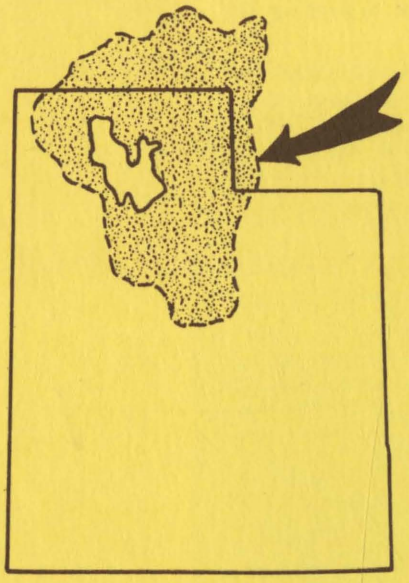
PART I *1963*

UTAH GEOLOGICAL AND MINERALOGICAL SURVEY
affiliated with
THE COLLEGE OF MINES AND MINERAL INDUSTRIES
University of Utah, Salt Lake City, Utah



DISSOLVED-MINERAL INFLOW TO GREAT SALT LAKE

and Chemical Characteristics of the Salt Lake Brine

Part I:

Selected Hydrologic Data

Prepared by
The United States Geological Survey
in cooperation with
The College of Mines and Mineral Industries
University of Utah, Salt Lake City, Utah
$1.75

UTAH GEOLOGICAL AND MINERALOGICAL SURVEY

The Utah Geological and Mineralogical Survey, authorized by act of the Utah State Legislature in 1931, became a reality in 1941 and functioned for eight years within the Department of Publicity and Industrial Development. By law it was transferred from the Department of Publicity and Industrial Development, and since July 1, 1949, it has functioned under the aegis of the College of Mines and Mineral Industries, University of Utah.

The *Utah code, Annotated, 1953 Replacement Volume 5*, Chapter 36, 53-36-2, provides that the Utah Geological and Mineralogical Survey "shall have for its objects":

1. "The collection and distribution of reliable information regarding the mineral resources of the State.

2. "The survey of the geological formations of the State with special reference to their economic contents, values and uses, such as: the ores of the various metals, coal, oil-shale, hydro-carbons, oil, gas, industrial clays, cement materials, mineral waters and other surface and underground water supplies, mineral fertilizers, asphalt, bitumen, structural materials, road-making materials, their kind and availability; and the promotion of the marketing of the mineral products of the State.

3. "The investigation of the kind, amount, and availability of the various mineral substances contained in State lands, with a view of the most effective and profitable administration of such lands for the State.

4. "The consideration of such other scientific and economic problems as, in the judgment of the Board of Regents, should come within the field of the Survey.

5. "Cooperation with Utah state bureaus dealing with related subjects, with the United States Geological Survey and with the United States Bureau of Mines, in their respective functions including field investigations, and the preparation, publication, and distribution of reports and bulletins embodying the results of the work of the Survey.

6. "The preparation, publication, distribution and sale of maps, reports and bulletins embodying the results of the work of the Survey. The collection and establishment of exhibits of the mineral resources of Utah.

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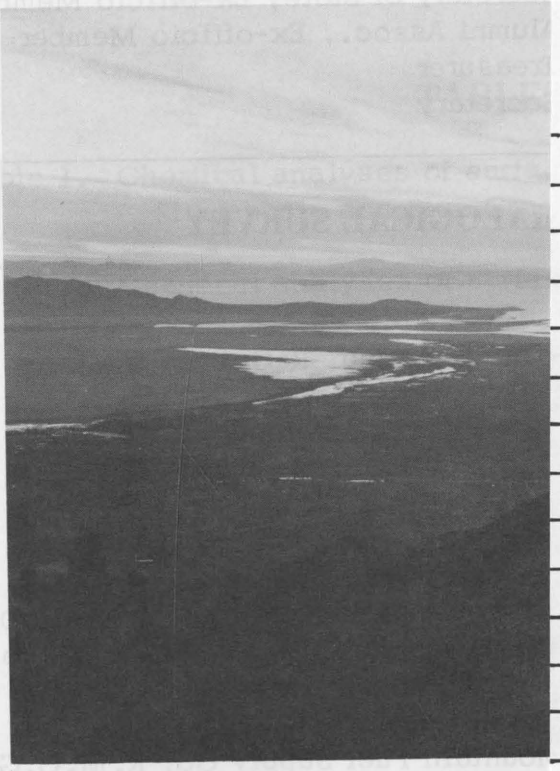
DISSOLVED-MINERAL INFLOW TO GREAT SALT LAKE AND CHEMICAL CHARACTERISTICS OF THE SALT LAKE BRINE

PART I: SELECTED HYDROLOGIC DATA

by D. C. Hahl and C. G. Mitchell
U. S. Geological Survey



View toward Fremont Island fro...
Antelope Island and Promontory P...

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CONTENTS

ILLUSTRATION

TABLES

DISSOLVED-MINERAL INFLOW TO GREAT SALT LAKE AND CHEMICAL CHARACTERISTICS OF THE SALT LAKE BRINE

PART I: SELECTED HYDROLOGIC DATA

by D. C. Hahl and C. G. Mitchell
U. S. Geological Survey

INTRODUCTION

This report presents the data collected for a study of the dissolved-mineral load contributed by surficial sources to Great Salt Lake, Utah. The study was conducted by the U.S. Geological Survey in cooperation with the University of Utah during the period from July 1959 through June 1962, and is part of an overall investigation of the Great Salt Lake basin by the University. Financial support for the study was provided by the U.S. Geological Survey and by the University of Utah Research Fund and Uniform School Fund. Some of the data presented in this report were obtained as part of cooperative programs between the Geological Survey and other agencies.

The study was conducted under the immediate supervision of J. G. Connor (to July 1961) and R. H. Langford (from August 1961), district chemists in charge of water-quality investigations in Utah by the U.S. Geological Survey. A. J. Eardley, Dean, College of Mines and Mineral Industries, University of Utah, represented the University in the cooperative study and in review of the findings. Personnel of other Geological Survey offices in Salt Lake City and Logan, Utah, aided in the collection of samples and provided water-discharge data. The sampling program in the lower Bear River was carried out by personnel of the Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior. Local observers sampled the lower Jordan River and the Weber River at Gateway.

The basic data were obtained to define the chemical composition of streams, drains, and springs discharging into the Great Salt Lake area and to define the chemical composition of the lake brine itself. Most of the data included in this report were obtained during a period when inflow to the lake was low and when the water surface of Great Salt Lake was at or near its lowest recorded level. The basic data are grouped in seven tables; each table includes data for several sources within the unit represented by the table. Mean daily discharges are given for sampling sites located at or near gaging stations, and measurements of instantaneous discharge or estimates of discharge are given for other sampling sites. For analyses of samples of lake brine

collected south of the railroad fill, the stage of Great Salt Lake is reported to the nearest 0.05 foot based on records collected at the Salt Lake Co. Boat Harbor. Lake stage is not reported for analyses of samples collected north of the railroad fill because of suspected differences in water-surface elevation between the two parts of the lake. The location of each sampling site is reported to the nearest section and is keyed by number to the map on Plate 1.

The criteria used in collecting the samples included: 1) selection of sampling sites to insure adequate mixing of upstream tributary waters at the sampling section, 2) selection of the most representative sampling point with regard to the stream cross section, and 3) scheduling the sampling frequency to ascertain accurately the yearly average concentration.

Each sample was analyzed according to methods commonly used by the Geological Survey (Rainwater and Thatcher, 1960). Iodide was determined by a modification of the method of Rossum and Villarrus (1960). Density was determined if the specific conductance exceeded 10,000 micromhos. Great Salt Lake brine samples were diluted with distilled water prior to analysis.

Weighted-average analyses shown for sites where comprehensive investigations were conducted were calculated by weighting determined concentrations with water discharge. Correlations between specific conductance, discharge, and concentrations of specific dissolved constituents were used to estimate concentrations for periods of missing record.

Many of the terms used in the field of hydrology are defined in texts and reports such as those by Hem (1959) and by Langbein and Iseri (1960). However, for convenience, some of the terms used in this report are defined as follows:

Cubic feet per second (cfs): A unit expressing rates of discharge. One cubic foot per second is equal to the discharge of a stream of rectangular cross section 1 foot wide and 1 foot deep, flowing water an average velocity of 1 foot per second.

Density: The mass per unit volume expressed in grams per liter at 20° C.

Dissolved solids (calculated): The sum of the concentrations in ppm of determined constituents, bicarbonate being converted to carbonate by dividing by 2.03 before summation.

Dissolved solids (residue on evaporation): The solids remaining when a sample is evaporated to dryness and heated at 180° C for one hour. This may include some water of hydration.

Great Salt Lake area: That area occupied by the lake body and its surrounding shore, the outer perimeter of which is marked generally by the closest sampling points to the lake on the lake's tributaries.

Parts per million (ppm): The unit expressing the concentration of constituents on a weight-to-weight basis, usually in milligrams of constituent per kilogram of solution. For waters of low mineralization the unit is nearly equal to milligrams of constituent per liter of solution.

Specific conductance: A measure of the ability of a water to conduct an electrical current expressed in micromhos per centimeter at 25° C. Specific conductance is directly related to the concentration of ions in solution and can be used as an empirical measure of the dissolved-solids content of a water.

Weighted average: The water discharge-weighted average concentration for the water year. It is computed by summing the products obtained by multiplying each individual determined concentration by the fraction of the annual water discharge represented by that determined concentration.

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Table 1 — Chemical analyses of surface water in the Bear River basin and Blue Creek Valley

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
1. Bear River near Utah-Wyoming State line (Sec. 30, T. 3N., R. 10E., Utah)																					
1961																					
Feb. 14.....	d 34	6.9	0.0	0.03	38	11	.....	2.4	0.7	.....	164	0	7.0	4.0	....	0.00	0.5	.....	152	263	7.9
June 20.....	d 304	3.2	.....	....	7.2	4.4	.....	1.2	.4	.....	0	0	40	.5	....	.....	.6	0.16	50	180	3.75
2. Mill Creek at Utah-Wyoming State line (Sec. 17, T. 3N., R. 10E., Utah)																					
1961																					
Feb. 14.....	d 8.5	6.1	0.1	0.02	42	19	.....	3.0	1.2	.....	220	0	11	3.0	....	0.00	0.5	.....	189	342	8.0
June 20.....	d 13.3	4.9	.....	....	45	6.8	.....	2.1	.4	.....	167	0	7.4	1.0	....	.....	.4	0.18	149	260	7.9
3. Sulphur Creek above reservoir, near Evanston, Wyo. (Sec. 35, T. 14N., R. 119W.)																					
1961																					
Feb. 14.....	d 3.4	16	0.4	0.13	81	44	.....	37	9.0	.....	422	0	85	32	....	0.01	1.5	.....	523	834	7.6
June 20.....	d .5	3.6	.....	....	51	32	.....	27	3.3	.....	328	0	27	15	....	.....	.7	0.24	334	566	7.6
4. Sulphur Creek below reservoir, near Evanston, Wyo. (Sec. 28, T. 14N., R. 119W.)																					
1961																					
June 20.....	d 28.0	10	.....	....	51	33	.....	31	5.6	.....	241	7	91	23	....	.....	0.6	0.22	383	600	8.3
5. Bear River 8 miles southeast of Evanston, Wyo. (Sec. 7, T. 14N., R. 119W.)																					
1958																					
Mar. 6.....	e 65	7.0	.....	....	47	13	.....	3.4	....	.....	194	6	8.6	2.5	0.4	.....	0.2	.....	c 183	318	8.4
6. Yellow Creek near Evanston, Wyo. (Sec. 21, T. 5N., R. 8E., Utah)																					
1958																					
Mar. 6.....	0	18	.....	....	74	33	.....	33	....	.....	360	6	30	42	....	.....	0.6	.....	c 414	707	8.3
1961																					
June 21.....	d 6.8	5.5	.....	....	54	14	.....	10	1.3	.....	223	0	24	9.5	....	.....	.4	0.19	230	405	7.8
7. Bear River 8 miles northwest of Evanston, Wyo. (Sec. 13, T. 16N., R. 121W.)																					
1958																					
Mar. 7.....	e 100	7.7	.....	....	57	19	.....	11	....	.....	244	8	20	9.5	....	.....	0.3	.....	c 252	448	8.4
8. Bear River near Woodruff, Utah, (Sec. 20, T. 18N., R. 120W., Wyo.)																					
1961																					
Feb. 15.....	d 57	4.0	0.1	0.01	50	17	.....	14	1.5	.....	230	0	17	17	....	0.01	0.1	.....	238	411	8.1
June 19.....	d 93.6	6.7	.....	....	43	17	.....	21	2.5	.....	216	0	14	22	....	.....	2.9	0.18	241	413	7.8
9. Woodruff Creek near Woodruff, Utah (Sec. 28, T. 9N., R. 6E.)																					
1961																					
Feb. 13.....	d 8.3	4.6	0.1	0.00	64	15	.....	8.1	0.7	.....	248	0	22	11	....	0.01	0.6	.....	244	427	8.0
June 19.....	d 5.9	7.0	.....	....	52	19	.....	7.9	.7	.....	226	3	16	9.5	....	.....	.2	0.17	220	387	8.3

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
10. Big Creek near Randolph, Utah (Sec. 10, T. 10N., R. 6E.)																					
1961																					
Feb. 13	d 4.0	5.6	0.1	0.00	60	17	.....	6.4	1.1	....	258	0	15	11	.....	0.00	0.5	.....	233	419	8.0
June 21	d 2.1	6.7	.....	....	40	16	.....	7.8	.7	....	200	0	9.1	10	.....	....	.6	0.14	184	338	8.0
11. Bear River near Randolph, Utah (Sec. 7, T. 12N., R. 8E.)																					
1958																					
Mar. 7	130	6.3	.....	....	61	26	.....	29	.....	....	278	10	30	35	.....	....	0.3	.....	c 335	600	8.4
1961																					
Feb. 13	d 58	5.3	0.1	0.02	54	22	.....	26	2.2	....	262	0	29	27	.....	0.02	.0	.....	296	514	8.0
June 19	d 24	13	.....	....	71	35	.....	48	2.7	....	370	0	51	52	.....	....	.3	0.22	455	769	7.2
12. Rock Creek near Fossil, Wyo. (Sec. 4, T. 21N., R. 118W.)																					
1961																					
July 20	d 2.1	7.4	.....	....	72	32	.....	16	2.3	....	286	0	98	13	.....	....	0.4	0.15	377	622	7.8
13. Twin Creek at Sage, Wyo. (Sec. 7, T. 21., R. 119W.)																					
1958																					
Mar. 7	7	11	.....	....	101	46	.....	63	.....	....	290	6	271	42	.....	....	0.3	.....	c 683	1,030	8.5
1961																					
Feb. 15	d 3.8	8.8	0.3	0.05	95	37	.....	44	4.1	....	246	0	232	33	.....	0.01	1.0	.....	583	857	7.8
June 21	d 3.6	5.8	.....	....	54	34	.....	37	2.2	....	174	0	176	25	.....	....	.4	0.23	c 430	659	7.9
14. Sublette Creek near mouth, near Cokeville, Wyo. (Sec. 21, T. 24N., R. 119W.)																					
1958																					
Mar. 7	e 10	23	.....	....	79	29	.....	18	.....	....	288	10	74	9.5	.....	....	0.3	.....	c 384	643	8.4
15. Spring Creek near Cokeville, Wyo. (Sec. 5, T. 24N., R. 119W.)																					
1958																					
Mar. 7	e 20	8.7	.....	....	68	18	.....	9.6	.....	....	184	12	80	9.0	.....	....	0.6	.....	c 296	493	8.5
16. Smiths Fork near Border, Wyo. (Sec. 33, T. 27N., R. 118W.)																					
1961																					
Feb. 15	d 66	5.3	0.0	0.01	59	14	.....	2.7	0.7	....	182	0	58	2.0	.....	0.01	0.3	.....	224	376	8.0
June 21	d 175	4.5	.....	....	52	12	.....	3.8	.8	....	176	0	37	3.0	.....	....	.5	0.15	196	338	7.4
17. Smiths Fork near Cokeville, Wyo. (Sec. 5, T. 24N., R. 119W.)																					
1958																					
Mar. 7	e 120	7.7	.....	....	63	15	.....	7.5	.....	....	180	8	62	9.0	.....	....	0.4	.....	c 261	441	8.4
18. Bear River below Smiths Fork, near Cokeville, Wyo. (Sec. 28, T. 25N., R. 119W.)																					
1961																					
Feb. 16	d 156	6.7	0.1	0.01	64	20	.....	20	1.8	....	238	0	64	20	.....	0.03	0.1	.....	324	526	8.0
June 22	d 134	6.8	.....	....	61	18	.....	15	1.3	....	219	0	56	17	.....	....	2.1	0.16	288	479	7.5

See footnotes at end of table.

Table 1.--Chemical analyses of surface water in the Bear River basin and Blue Creek valley--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
19. Bear River at Border, Wyo. (Sec. 15, T. 14S., R. 46E., Idaho)																					
1961																					
Feb. 16.....	d 185	7.9	0.1	0.00	68	19	.....	21	1.8	.....	242	0	67	22	....	0.01	0.2	.....	331	540	8.0
June 22.....	d 109	5.9	.....	....	61	19	.....	18	1.3	.....	217	0	65	21	....	.....	.3	0.16	296	500	7.5
20. Thomas Fork near Wyoming-Idaho State line (Sec. 19, T. 28N., R. 119W., Wyo.)																					
1961																					
Feb. 16.....	d 10.0	9.9	0.1	0.02	80	21	.....	232	1.5	.....	250	0	67	360	....	0.02	2.7	.....	919	1,620	7.9
June 23.....	d 11.9	8.4	.....	....	63	18	.....	150	1.0	.....	242	0	47	215	....	.....	.2	0.17	619	1,120	7.7
21. Montpelier Creek at irrigators weir, near Montpelier, Ida. (Sec. 31, T. 12S., R45E.)																					
1961																					
Feb. 16.....	d 5.7	9.5	0.1	0.00	69	18	.....	7.5	0.7	.....	233	0	66	5.0	....	0.01	0.4	.....	284	463	7.8
June 23.....	d 7.0	9.5	.....	....	55	16	.....	6.9	.8	.....	201	2	49	3.0	....	.....	.4	0.18	235	395	8.3
22. Bear Lake Hot Spring northeast corner of Bear Lake, Bear Lake County, Ida. (T. 15S., R. 44E.)																					
1955																					
July 18.....	e 2	110	.....	....	138	56	.....	173	43	0.0	73	0	806	80	5.5	.....	4.2	1.2	c 1,450	1,860	8.2
23. Bloomington Creek near Bloomington, Ida. (Sec. 20, T. 14S., R. 43E.)																					
1961																					
Feb. 17.....	d 12.9	5.2	0.1	0.02	46	18	.....	2.3	0.7	.....	228	0	6.0	3.0	....	0.00	0.6	.....	184	342	7.7
June 23.....	d 16.7	5.0	.....	....	43	19	.....	2.4	.6	.....	219	0	5.8	3.0	....	.....	.1	0.17	174	327	8.1
24. Eightmile Creek near Soda Springs, Ida. (Sec. 20, T. 10S., R. 42E.)																					
1961																					
Feb. 17.....	d 1.3	5.7	0.1	0.01	57	12	.....	2.8	0.7	.....	231	0	8.2	4.0	....	0.01	0.3	.....	194	356	7.9
June 23.....	d 13.0	5.8	.....	....	46	7.3	.....	2.3	.4	.....	172	0	5.8	3.0	....	.....	.2	0.16	148	269	7.9
25. Cottonwood Creek near Cleveland, Ida. (Sec. 34, T. 12S., R. 40E.)																					
1961																					
Feb. 9	d 6.2	13	0.0	0.00	57	9.0	.....	5.9	1.2	.....	213	0	13	7.0	....	0.00	0.2	.....	202	350	8.0
July 25	d .4	13	.....	....	60	11	.....	8.6	1.4	.....	228	0	14	10	....	.....	1.2	0.15	224	391	7.8
26. Mink Creek below Dry Fork, near Mink Creek, Ida. (Sec. 33, T. 13S., R. 41E.)																					
1961																					
Feb. 9	d 24.3	4.1	0.1	0.00	52	4.1	.....	2.0	2.1	.....	176	0	7.4	3.0	....	0.03	1.7	.....	150	280	7.8
July 25	d 18.8	5.2	.....	....	43	11	.....	2.3	.6	.....	182	0	4.9	4.0	....	.....	1.6	0.15	152	280	8.1
27. Bear River near Preston, Ida. (Sec. 36, T. 14S., R. 39E.)																					
1961																					
Feb. 9	d 59.6	16	0.1	0.00	89	44	.....	49	8.6	.....	451	0	74	50	....	0.01	1.6	.....	546	913	8.1
July 25	d 135	12	.....	....	41	72	.....	52	6.8	.....	430	0	83	58	....	.....	.9	0.22	537	910	7.7

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
28. Cub River near Preston, Ida. (Sec. 5, T. 15S., R. 41E.)																					
1961																					
Feb. 9	d 15.5	4.3	0.0	0.01	44	13	.....	1.7	0.7	.....	193	0	6.4	2.5	....	0.01	1.3	.....	155	292	8.1
July 25	37	4.6	.....	....	44	12	.....	1.7	.4	.....	192	0	4.5	2.0	....	.....	.4	0.14	157	293	8.2
29. South Fork Little Bear River near Avon, Utah (Sec. 14, T. 9N., R. 1E.)																					
1961																					
Feb. 28	d 17	9.1	0.1	0.01	52	20	.....	6.5	1.2	.....	228	8	11	10	....	0.01	0.4	.....	229	400	8.4
July 31	d 13.3	8.4	.....	....	46	21	.....	6.4	1.0	.....	242	0	9.5	8.5	....	.....	.3	0.14	211	388	7.7
30. Little Bear River near Paradise, Utah (Sec. 20, T. 10N., R. 1E.)																					
1961																					
Feb. 28	d 44	9.3	0.1	0.01	62	22	.....	8.2	1.5	.....	282	0	18	12	....	0.02	1.7	.....	274	470	8.1
July 31	d 9.6	19	.....	....	72	26	.....	13	3.0	.....	337	0	21	14	....	.....	6.4	0.14	332	568	7.9
31. Little Bear River near Hyrum, Utah (Sec. 6, T. 10N., R. 1E.)																					
1961																					
Feb. 28	d 2.4	25	0.1	0.03	58	23	.....	12	3.8	.....	286	4	12	14	....	0.02	0.4	.....	286	481	8.2
July 31	d 4.7	20	.....	....	59	25	.....	12	4.7	.....	306	0	17	14	....	.....	1.1	0.15	293	506	7.8
32. Utah Power and Light Co.'s Tailrace near Logan, Utah (Sec. 36, T. 12N., R. 1E.)																					
1961																					
Jan. 11	70	6.2	.....	....	54	16	.....	2.7	0.3	.....	234	0	11	4.0	....	0.01	0.7	.....	190	358	8.0
Feb. 23	d 68	3.8	0.1	0.00	51	18	.....	2.8	.7	.....	229	0	11	4.0	....	.01	.6	.....	193	355	8.0
33. Logan River above State dam, near Logan, Utah (Sec. 36, T. 12N., R. 1E.)																					
1961																					
Feb. 23	d 12.0	5.4	0.0	0.00	56	22	.....	4.4	0.7	....	249	0	27	6.0	....	0.00	1.2	.....	234	418	7.9
Aug. 9	d 16.6	5.6	.....	....	59	17	.....	3.0	.5	....	244	0	19	3.5	....	.....	.5	0.16	215	398	7.5
34. Blacksmith Fork above Utah Power and Light Co.'s dam, near Hyrum, Utah (Sec. 8, T. 10N., R. 2E.)																					
1961																					
Feb. 28	d 56.0	6.7	0.1	0.02	54	19	.....	3.9	1.1	.....	244	0	13	5.0	....	0.02	1.5	.....	213	380	8.1
July 31	d 51	5.6	.....	....	46	18	.....	4.2	.7	.....	234	0	9.5	2.0	....	.....	.7	0.15	197	364	7.8
35. Bear River near Collinston, Utah (Sec. 27, T. 13N., R. 2W.)																					
1952																					
Mar. 18	2,630	15	.....	0.03	56	45	.....	43	6.3	....	363	0	54	52	0.3	.....	1.1	0.08	455	759	8.2
1961																					
Jan. 11	945	16	.....	....	76	41	.....	59	11	....	399	0	58	84	....	0.01	1.9	.....	530	928	7.8
Feb. 8	d 1,400	13	0.1	.00	74	35	.....	61	9.1	....	369	0	53	77	....	.02	1.8	.....	498	864	8.0
Aug. 9	d 25.4	13	.....	....	48	65	.....	179	12	....	404	0	74	263	....	.....	.8	.26	850	1,530	7.5

See footnotes at end of table.

Table 1.--Chemical analyses of surface water in the Bear River basin and Blue Creek valley--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs) a	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
36. Malad River at Tremonton, Utah (Sec. 2, T. 11N., R. 3W.)																					
1960																					
Apr. 19	.....	26	.....	0.02	133	63	3.1	689	54	0.6	464	0	229	1,110	....	0.05	2.6	0.39	c 2,540	4,440	8.1
Oct. 12	.....	20	.....	....	108	55	.....	721	71	....	489	0	123	1,160	....	.03	3.5	.....	c 2,510	4,430	7.4
1961																					
Jan. 11	.....	24	.....	....	61	54	.....	593	43	....	284	0	124	980	....	.04	2.1	.....	c 2,030	3,590	7.7
Apr. 6	.....	28	0.3	.02	156	71	.....	745	56	....	478	0	279	1,190	....	.05	1.8	.....	c 2,780	4,740	8.1
July 26	.....	.....	.....	....	.....	....	.....	....	....	....	.....	....	.....	.....	....	.....	....	.....	3,010	5,320	....
37. Bear River at Corinne, Utah (Sec. 6, T. 9N., R. 2W.)																					
1959																					
June 29	100	14	.....	....	72	46	.....		550	....	366	0	84	835	....	.....	2.0	.....	c 1,780	3,170	7.9
Sept. 30	900	13	.....	0.01	67	44	.....	153	13	0.0	372	0	65	235	0.3	.....	2.6	0.13	756	1,360	8.2
Dec. 11	1,000	14	.....	.00	58	47	.....		128	....	388	0	61	165	....	.....	1.8	.....	670	1,170	7.7
1960																					
Jan. 6	700	13	.....	.02	79	46	.....	194	17	.0	406	0	72	300	....	0.02	2.1	.21	928	1,670	7.6
Apr. 19	1,900	9.2	.....	.10	59	25	0.0	87	7.9	.0	269	3	41	135	....	.01	1.4	.10	510	905	8.3
June 16	100	17	.....	.08	74	52	.....	750	40	....	348	0	101	1,210	....	.07	2.0	.39	2,440	4,300	7.7
July 19	100	11	.....	.13	69	63	.....	939	51	....	352	0	122	1,540	....	.05	1.9	.37	3,040	5,240	7.6
Sept. 22	100	18	.....	....	71	51	.....		256	....	402	0	84	370	....	.02	3.9	.....	1,060	1,840	8.0
Oct. 12	100	17	.....	....	90	55	.....	730	44	....	416	0	117	1,180	....	.05	6.3	.....	2,470	4,310	8.0
Oct. 17	d 800	17	.....	....	64	49	.....	168	16	....	383	7	70	250	....	.02	2.5	.....	815	1,420	8.2
Dec. 2	d 1,300	15	.....	....	71	44	.....	153	14	....	383	0	69	235	....	.01	1.9	.....	790	1,380	8.0
1961																					
Jan. 11	1,300	13	.....	....	80	43	.....	190	19	....	400	0	64	295	....	.02	4.1	.....	904	1,600	8.1
Apr. 6	1,100	....	.....	....	.....	....	.....	....	....	....	.....	....	.....	.....	....	.....	....	.....	703	1,220	....
July 26	d 100	....	.....	....	.....	....	.....	....	....	....	.....	....	.....	.....	....	.....	....	.....	2,540	4,590	....
38. Black Slough southeast of Corinne, Utah (Sec. 10, T. 9N., R. 2W.)																					
1960																					
Jan. 6	.....	10	.....	0.00	75	47	.....	336	19	0.0	352	0	67	550	....	0.01	5.2	0.18	c 1,280	2,320	7.8
39. Bear River at Bear River Bay Bird Refuge, near Brigham City, Utah (Sec. 26, T. 9N., R. 4W.)																					
1959																					
June 30	.....	6.6	.....	....	64	56	.....		782	....	326	0	99	1,220	....	.....	1.2	.....	c 2,390	4,230	8.1
Oct. 1	1,500	16	.....	0.01	72	44	.....	221	17	0.0	384	0	75	340	0.3	.....	3.0	0.15	966	1,720	8.1
Oct. 5	1,200	17	.....	.....	67	41	.....		175	....	372	0	66	240	....	.....	2.3	.....	779	1,380	8.0
Oct. 12	900	16	.....	....	61	43	.....		179	....	342	10	63	250	....	.....	2.0	.....	788	1,400	8.4
Oct. 19	900	15	.....	....	65	41	.....		167	....	372	0	62	230	....	.....	1.8	.....	757	1,340	8.1
Oct. 26	800	14	.....	....	68	43	.....		222	....	376	0	64	320	....	.....	1.7	.....	938	1,660	8.2
Nov. 2	900	13	.....	....	69	43	.....		192	....	391	0	62	270	....	.....	1.5	.....	853	1,520	7.9
Nov. 9	1,100	13	.....	....	71	41	.....		191	....	387	0	60	270	....	.....	.4	.....	840	1,500	7.8
Nov. 16	900	13	.....	....	74	40	.....		214	....	386	0	59	310	....	.....	.3	.....	921	1,640	7.8
Nov. 23	1,200	15	.....	0.01	62	46	.....		198	....	378	0	63	280	....	.....	3.9	.....	862	1,540	8.0
Nov. 30	900	11	.....	.02	42	60	.....		175	....	394	0	67	238	....	.....	3.7	.....	806	1,420	7.8
Dec. 1-10	900	16	.....	.01	63	55	.....		249	....	420	0	74	355	....	.....	3.7	.....	1,030	1,820	7.8
Dec. 11-15	1,000	15	.....	.01	67	48	.....		197	....	406	0	76	265	....	.....	6.6	.....	868	1,560	7.8

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs) [a]	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
39. Bear River at Bear River Bay Bird Refuge, near Brigham City, Utah (Sec. 26, T. 9N., R. 4W.)--Continued																					
1959																					
Dec. 22	1,000	12	.....	0.02	61	48	.....	178	....		388	0	67	245	....	.....	3.1	.....	806	1,450	8.0
Dec. 29	1,100	13	.....	.03	53	43	.....	163	....		306	14	73	220	....	0.01	1.0	.....	702	1,280	8.5
1960																					
Jan. 5	1,200	14	.....	.01	49	40	.....	141	....		294	6	58	200	....	.02	2.4	.....	642	1,180	8.3
Jan. 11-17	1,100	14	.....	.05	74	41	.....	158	....		384	0	62	225	....	.01	.8	.....	753	1,370	8.1
Jan. 18-22	900	16	.....	.01	67	47	.....	196	....		388	0	59	288	....	.02	.8	.....	832	1,520	8.0
Jan. 27	1,100	16	.....	.00	83	43	.....	239	....		410	0	69	352	....	.01	2.1	.....	1,000	1,820	8.1
Feb. 1-8	1,000	15	.....	.00	73	41	.....	164	....		376	0	60	238	....	.02	2.1	.....	768	1,400	8.1
Feb. 12-14	1,600	11	.....	.09	63	41	.....	148	....		352	0	61	208	....	.02	2.4	.....	716	1,290	7.9
Feb. 16	1,100	16	.....	.01	61	45	.....	161	....		352	0	67	232	....	.02	2.9	.....	763	1,370	8.1
Feb. 26	800	14	.....	.00	66	47	.....	197	....		384	0	70	282	....	.02	.5	.....	873	1,580	8.2
Mar. 5-9	2,200	18	.....	.00	62	33	.....	97	....		280	22	52	125	....	.01	3.9	.....	548	954	8.8
Mar. 16-21	1,400	21	.....	.00	71	36	.....	131	....		338	10	68	170	....	.02	4.8	.....	684	1,180	8.4
Mar. 23	1,100	22	.....	.00	59	40	.....	131	....		287	27	69	170	....	.03	4.8	.....	668	1,140	8.8
Mar. 24-29	2,200	21	.....	.00	57	33	.....	97	....		251	27	57	125	....	.01	4.5	.....	550	944	8.8
Mar. 30-Apr. 5	2,500	21	.....	.00	74	35	.....	108	....		358	0	64	140	....	.01	4.1	.....	613	1,060	8.0
Apr. 8-12	2,700	21	.....	.00	63	28	.....	85	....		298	0	51	110	....	.01	3.5	.....	505	879	8.2
Apr. 15-18	2,200	16	.....	.00	58	25	.....	75	....		246	14	38	100	....	.01	3.0	.....	444	775	8.5
Apr. 19-25	1,700	14	.....	.01	61	27	.....	90	....		294	0	38	125	....	.01	1.7	.....	519	918	7.6
May 1-4	2,100	14	.....	.01	60	26	.....	90	....		274	6	45	120	....	.01	1.4	.....	493	870	8.3
May 5-16	1,600	13	.....	.00	55	26	.....	82	....		236	18	37	110	....	.01	2.4	.....	465	802	8.6
May 17-20	600	11	.....	....	58	24	.....	129	....		272	0	37	185	....	.03	2.3	.....	566	997	7.8
May 21-28	100	12	.....	....	59	27	.....	175	....		248	12	41	265	....	.04	2.6	.....	726	1,270	8.5
May 29-June 4	100	11	.....	....	59	37	.....	360	....		252	8	54	570	....	.06	3.8	.....	1,280	2,250	8.4
June 5-11	100	10	.....	....	71	49	.....	757	....		254	24	75	1,200	....	.06	4.1	.....	2,380	4,120	8.6
June 12-22	100	10	.....	....	64	54	.....	828	....		316	0	86	1,300	....	.08	4.4	.....	2,590	4,530	7.9
June 23-July 13	100	8.1	.....	....	63	54	.....	841	....		324	0	102	1,300	....	.08	4.8	.....	2,570	4,490	7.7
July 14-20	100	4.6	.....	....	61	66	.....	1,050	....		302	24	122	1,620	....	.11	3.4	.....	3,280	5,680	8.6
July 21-31	100	5.0	.....	....	63	71	.....	1,060	....		376	0	120	1,650	....	.10	1.9	.....	3,290	5,710	8.0
Aug. 1-11	100	6.2	.....	....	64	74	.....	1,020	....		394	0	127	1,580	....	.09	3.4	.....	3,220	5,560	8.2
Aug. 12-20	100	7.2	.....	....	74	73	.....	1,090	....		398	0	131	1,700	....	.09	3.6	.....	3,370	5,800	7.8
Aug. 21-Sept. 4	100	12	.....	....	74	69	.....	1,110	....		394	0	133	1,720	....	.08	2.9	.....	3,420	5,900	8.1
Sept. 5-10	100	15	.....	....	63	70	.....	798	....		402	0	122	1,220	....	.05	3.2	.....	2,530	4,390	8.1
Sept. 11-18	100	12	.....	....	67	88	.....	1,120	....		422	0	200	1,700	....	.12	2.2	.....	3,540	6,010	8.2
Sept. 19-20	100	15	.....	....	58	109	.....	1,310	....		436	35	261	1,950	....	.18	1.8	.....	4,040	6,780	8.5
Sept. 22-26	100	17	.....	....	56	66	.....	641	38	....	373	9	116	995	....	.04	4.2	.....	2,130	3,750	8.3
Weighted average 1960 water year [r]	875	16	.....	....	65	39	.....	180	....		346	0	62	257	....	0.02	2.8	.....	792	1,400	....
1960																					
Oct. 1-9	100	13	.....	....	53	113	.....	1,170	71	....	577	17	258	1,760	....	0.15	3.1	.....	3,780	6,300	8.4
Oct. 10-13	100	24	.....	....	50	105	.....	1,090	62	....	552	0	241	1,630	....	.14	2.9	.....	3,490	5,900	8.2
Oct. 16-22	700	15	.....	....	63	58	.....	308	24	....	389	16	95	450	....	.04	3.7	.....	1,230	2,140	8.4

See footnotes at end of table.

Table 1.--Chemical analyses of surface water in the Bear River basin and Blue Creek valley--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs) [a]	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
39. Bear River at Bear River Bay Bird Refuge near Brigham City, Utah (Sec. 26, T. 9N., R. 4W.)--Continued																					
1960																					
Oct. 23-27	700	15	.....	....	61	59	.....	313	22	....	399	5	92	450	....	0.04	3.9	.....	1,260	2,190	8.3
Oct. 30-Nov. 4	700	17	.....	....	64	39	.....	177	15	....	350	14	68	250	....	.02	1.8	.....	796	1,400	8.4
Nov. 5-10	900	14	.....	....	64	43	.....	138	13	....	368	0	60	205	....	.02	1.5	.....	719	1,250	7.9
Nov. 11-21	1,000	12	.....	....	67	43	.....	140	13	....	378	0	66	200	....	.01	3.4	.....	734	1,280	7.9
Nov. 22-27	1,200	16	.....	....	77	46	.....	297	22	....	388	0	80	455	....	.02	6.1	.....	1,200	2,100	7.7
Nov. 28-Dec. 3	1,000	16	.....	....	72	40	.....	153	14	....	378	0	64	230	....	.02	3.3	.....	775	1,370	8.0
Dec. 4-8	800	16	.....	....	75	43	.....	182	16	....	362	10	75	280	....	.02	3.0	.....	875	1,520	8.3
Dec. 9-17	900	11	.....	....	71	47	.....	170	14	....	371	14	71	250	....	.02	3.0	.....	832	1,450	8.4
Dec. 18-25	1,000	15	.....	....	69	45	.....	144	13	....	386	0	69	215	....	.02	3.6	.....	756	1,310	8.0
Dec. 26-31	900	18	.....	....	75	47	.....	222	16	....	400	0	72	345	....	.03	4.7	.....	1,000	1,750	8.0
1961																					
Jan. 1-9	500	13	.....	....	83	40	.....	190	19	....	411	0	62	295	....	.02	.2	.....	910	1,590	7.8
Jan. 10-12	1,100	13	.....	....	77	44	.....	179	17	....	400	0	66	276	....	.02	1.2	.....	861	1,560	7.7
Jan. 13-16	800	15	.....	....	77	39	.....	166	18	....	384	0	60	255	....	.02	1.9	.....	813	1,440	7.7
Jan. 17-21	1,100	14	.....	....	67	40	.....	159	13	....	358	0	61	245	....	.01	1.9	.....	765	1,350	8.2
Jan. 22-23	400	9.5	.....	....	72	36	.....	137	12	....	330	12	55	210	....	.01	1.8	.....	700	1,240	8.4
Jan. 24-Feb. 5	900	15	.....	....	79	38	.....	177	15	....	375	0	59	280	....	.02	1.7	.....	844	1,490	8.1
Feb. 6-11	900	9.3	.....	....	72	35	.....	172	14	....	323	11	56	265	....	.03	1.1	.....	794	1,400	8.4
Feb. 12-15	1,500	14	.....	....	63	36	.....	105	11	....	326	12	55	145	....	.01	1.9	.....	605	1,040	8.3
Feb. 16-21	1,500	17	.....	....	73	34	.....	103	12	....	359	0	53	145	....	....	4.9	0.14	617	1,080	7.7
Feb. 22-Mar. 3	1,200	20	.....	....	79	36	.....	139	14	....	386	0	56	205	....	....	4.2	.15	743	1,320	7.7
Mar. 4-8	1,200	17	.....	....	57	38	.....	156	15	....	296	14	63	232	....	....	3.6	.15	740	1,320	8.6
Mar. 9-20	1,100	17	.....	....	70	39	.....	127	14	....	371	0	61	188	....	....	3.7	.15	694	1,240	8.2
Mar. 21-25	1,500	18	.....	....	65	37	.....	126	13	....	318	12	60	185	....	....	4.7	.15	678	1,200	8.5
Mar. 26-Apr. 2	1,500	15	.....	....	59	38	.....	112	12	....	296	15	56	160	....	....	4.1	.13	604	1,080	8.6
Apr. 3-7	1,200	19	.....	0.01	80	37	.....	139	15	....	386	0	63	200	....	....	2.8	.15	b 732	1,300	8.0
Apr. 8-11	800	16	.....	.00	66	38	.....	151	13	....	338	3	59	225	....	....	3.4	.15	b 739	1,320	8.3
Apr. 12-21	1,300	14	.....	.02	59	32	.....	112	11	....	298	0	44	165	....	....	1.8	.13	b 581	1,050	8.2
Apr. 22-29	100	13	.....	.01	66	31	.....	104	11	....	327	0	46	150	....	....	2.6	.13	b 577	1,040	7.9
Apr. 30-May 5	400	13	.....	....	66	29	.....	105	11	....	321	0	41	155	....	....	2.8	.16	571	1,030	8.2
May 6-15	100	12	.....	....	68	41	.....	242	17	....	346	0	70	370	....	....	2.3	.20	984	1,780	7.7
May 16-21	100	10	.....	....	79	55	.....	627	29	....	338	0	83	1,040	....	....	2.4	.31	2,140	3,850	8.1
May 22-29	100	9.7	.....	....	66	50	.....	690	30	....	308	0	83	1,090	....	....	3.1	.32	2,230	4,020	8.2
May 30-June 16	100	8.6	.....	....	58	63	.....	719	35	....	294	24	99	1,140	....	....	4.1	.36	2,360	4,220	8.7
June 17-July 2	100	9.3	.....	....	67	63	.....	695	36	....	408	0	111	1,090	....	....	2.3	.37	2,300	4,120	8.0
July 3-10	100	9.4	.....	.01	64	71	.....	1,010	52	....	379	0	128	1,620	....	....	2.9	.49	3,230	5,720	8.2
July 11-16	100	8.6	.....	.02	60	72	.....	927	50	....	377	0	129	1,490	....	....	4.7	.49	3,020	5,380	8.1
July 17-23	100	7.4	.....	.02	57	60	.....	627	37	....	377	0	120	988	....	....	3.3	.39	2,150	3,900	8.0
July 24-Aug. 3	100	8.9	.....	.02	58	77	.....	856	46	....	412	0	124	1,380	....	....	3.2	.43	2,850	5,050	8.0
Aug. 4-31	100	....	.....	....	....	....	.....	....	....	....	....	....	....	1,440	....	....	....	.....	.....	5,110	....
Sept. 1-26	100	....	.....	....	....	....	.....	....	....	....	....	....	....	1,100	....	....	....	.....	.....	4,140	....
Weighted average 1961 water year [r]	619	15	.....	....	68	42	.....	217	17	....	366	0	67	327	....	....	3.1	.....	936	1,660	....
1961																					
Nov. 8	40	13	.....	0.12	71	42	.....	163	15	....	392	0	59	235	0.3	....	2.1	0.19	b 785	1,420	7.9

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
40. Blue Spring Creek at bridge on State Highway 83, Box Elder County, Utah (Sec. 32, T. 11N., R. 5W.)																					
1959																					
June 29	.....	19	.....	....	112	68	.....	1,810		....	538	20	426	2,530	....	....	10	8.1	c 5,270	8,640	8.4
Sept. 30	d 5	26	.....	0.04	98	36	.....	941	34	0.5	350	16	202	1,380	2.0	....	1.7	.40	c 2,910	5,130	8.5
1960																					
Apr. 19	d 3.1	26	.....	.04	128	72	4.4	1,430	41	.9	397	24	372	2,150	....	0.09	1.7	.55	c 4,440	7,710	8.5
1961																					
Apr. 6	.....	21	0.5	.03	184	126	.....	2,540	65	....	551	0	715	3,740	....	.10	12	....	c 7,690	12,400	8.0

c Calculated from determined constituents.
d Discharge measured at time of sampling.
e Estimated.
r Represents 100 percent of runoff for water year. Includes data estimated for periods of missing records.

a Discharges given were estimated from streamflow records for gaging station at Collinston, Utah, unless otherwise indicated.
b Includes 0.0 ppm manganese (Mn).

Table 2 — Chemical analyses of surface water in the Weber River basin, Utah

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
41. Weber River near Oakley (Sec. 15, T. 1S., R. 6E.)																					
1959																					
Oct. 1-8	75.1	6.0	.....	....	46	11	.....	4.3		....	170	4	17	4.0	....	....	0.2	.....	174	292	8.3
Oct. 14-21	94.8	4.5	.....	....	38	8.8	.....	4.6		....	146	0	14	4.0	....	....	.2	.....	183	250	7.8
Nov. 14-25	63.2	4.6	.....	....	38	9.7	.....	2.8		....	154	0	12	2.2	....	....	.3	.....	150	264	8.1
Nov. 26-Dec. 31	51.1	5.7	.....	....	42	11	.....	2.3	0.7	....	146	10	14	2.5	.....	0.00	.1	0.04	160	290	8.4
1960																					
Jan. 1-31	45.8	6.0	.....	....	44	11	.....	2.3	.6	....	160	7	15	2.5	....	.00	.2	.06	168	308	8.4
Feb. 1-Mar. 5	42.4	5.0	.....	....	46	12	.....	2.3	.6	....	168	6	15	2.0	....	.00	.2	.02	172	314	8.4
Mar. 6-25	59.1	5.1	.....	....	46	11	.....	2.8	.3	....	178	0	16	2.0	....	....	.3	.01	178	308	7.8
Apr. 6-21	195	4.7	.....	....	35	7.3	.....	2.4	.3	....	131	0	12	2.0	....	....	.4	.02	137	233	7.7
Apr. 22-May 9	219	3.9	.....	....	37	7.1	.....	3.1	.3	....	139	0	12	3.0	....	....	.2	.03	140	237	8.0
May 10-12, 15-30	620	3.7	.....	....	25	4.1	.....	1.8	.3	....	91	0	7.2	2.0	....	....	.2	.02	98	158	8.0
June 20-July 7	187	3.6	.....	....	30	5.4	.....	1.8	.5	....	110	0	6.6	1.5	....	....	.1	.04	108	186	7.4
July 8-Aug. 4	114	4.2	.....	....	37	7.8	.....	1.9	.5	....	142	0	9.7	1.0	....	....	.1	.03	136	240	7.8
Aug. 5-31	54.0	4.5	.....	....	45	10	.....	2.1	.5	....	177	0	10	2.0	....	....	.3	.02	162	290	7.9
Sept. 1-30	44.9	5.1	.....	....	48	11	.....	2.9	.5	....	186	0	14	2.0	....	....	.2	.01	174	313	7.8
Weighted average 1960 water year [r]	155	4.1	.....	....	31	6.0	.....	2.3	.4	....	116	0	9.5	2.2	....	....	0.3	0.03	118	199	....
1960																					
Oct. 16-Nov. 14	49.1	4.5	0.0	0.01	51	12	.....	2.7	1.2	....	188	4	17	4.0	....	.01	0.2	.....	163	325	8.4
Nov. 15-Dec. 15	48.4	5.0	.0	.00	46	12	.....	2.4	1.2	....	181	0	18	3.0	....	.00	.1	.....	153	302	7.9
Dec. 16-Jan. 13, 1961	38.1	6.0	.0	.01	50	13	.....	2.7	1.1	....	196	0	19	3.0	....	.01	.5	.....	197	327	8.1
1961																					
Jan. 14-Feb. 21	40.6	5.1	.0	.01	52	12	.....	2.4	.8	....	201	0	19	3.0	....	.00	.0	.....	186	328	8.0
Feb. 22-Mar. 10	41.7	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	220	360	....
Mar. 11-Apr. 11	54.6	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	183	320	....
Apr. 12-30	86.2	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	140	236	....
June 10-14	229	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	102	161	....
July 15-Aug. 16	53.1	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	163	276	....
Aug. 17-Sept. 16	49.5	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	154	279	....
Sept. 24-30	102	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	.....	199	....
Weighted average 1961 water year [r]	92.5	4.3	.....	....	37	7.9	.....	2.3	0.4	....	140	0	11	2.2	....	....	0.3	.....	134	240	....
42. Weber River near Coalville (Sec. 20, T. 2N., R. 5E.)																					
1959																					
Sept. 30	121	13	.....	....	73	18	.....	16		....	274	0	43	13	....	....	0.6	.....	317	508	8.2
Oct. 13-31	33.6	11	.....	....	79	18	.....	15		....	286	0	50	14	....	....	.3	.....	336	547	7.8
Nov. 11-19	31.9	9.8	.....	....	76	18	.....	12		....	273	0	48	11	....	....	1.1	.....	328	531	8.2
Dec. 11	32	11	.....	....	71	15	.....	11	1.9	....	235	10	33	10	....	0.00	.6	0.05	284	490	8.5
1960																					
Jan. 10-16	32.1	9.5	.....	....	....	16	.....	11	1.9	....	....	0	46	11	....	.00	.4	.06	300	502	8.2
Feb. 8-29	40.3	12	.....	....	72	17	.....	12	2.0	....	226	12	49	12	....	.00	.9	.03	305	504	8.5
Mar. 14	69	13	.....	....	81	15	.....	12	2.4	....	240	0	79	13	....	....	.3	.04	347	545	7.7
Apr. 4-11	105	12	.....	....	55	11	.....	8.8	2.0	....	189	0	33	10	....	....	.3	.03	233	377	7.6
May 1-5	83.0	9.3	.....	....	57	13	.....	8.8	2.0	....	213	0	31	10	....	....	.4	.03	241	391	8.1

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
42. Weber River near Coalville (Sec. 20, T. 2N., R. 5E.)--Continued																					
1960																					
May 18-24	19.1	9.4	.....	....	69	16	.....	11	2.7	....	247	6	33	14	....	....	0.3	0.04	292	469	8.4
June 21-25.....	278	6.0	.....	....	49	10	.....	6.0	1.4	....	192	0	13	6.0	....	....	.2	.05	193	327	8.1
July 11-31.....	146	7.9	.....	....	52	11	.....	6.4	1.4	....	206	0	11	6.5	....	....	.4	.06	204	347	7.8
Aug. 15-23.....	230	9.3	.....	....	54	12	.....	7.0	1.8	....	219	0	12	6.0	....	....	.5	.03	212	360	7.7
Sept. 20-30.....	30.0	11	.....	....	64	15	.....	11	2.2	....	262	0	16	9.0	....	....	.6	.05	258	441	7.9
Weighted average 1960 water year [r]	95.6	9.0	.....	....	56	12	.....	8.0	1.7	....	212	0	23	8.0	....	....	0.4	0.04	230	385	....
1960																					
Oct. 17-Nov. 16...	48.3	8.5	0.1	0.01	68	16	.....	11	2.1	....	264	0	27	11	....	0.00	0.1	.....	260	453	7.7
Nov. 17-Dec. 17...	53.4	13	.1	.01	83	17	.....	12	2.3	....	250	4	77	12	....	.00	.6	.....	325	538	8.3
Dec. 18-Jan. 13, 1961.....	57.6	11	.1	.01	75	15	.....	10	2.6	....	260	0	45	11	....	.01	1.0	.....	303	486	7.9
1961																					
Jan. 14-Feb. 17...	47.8	12	.2	.14	73	17	.....	10	2.4	....	264	0	43	11	....	.01	1.0	.....	311	482	8.2
Feb. 18-Mar. 13..	61.0	....	.....	....	....	....	.....	....	....	....	....	....	.....	.....	....	....	....	.....	258	459	....
Apr. 28-May 12...	17.5	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	254	451	....
May 30-July 27...	154	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	249	422	....
Aug. 1-20.....	39.4	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	260	443	....
Aug. 21-Sept. 30..	58.5	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	259	452	....
Weighted average 1961 water year [r]	71.1	9.8	.....	....	66	15	.....	10	2.3	....	245	0	34	9.4	....	....	0.6	.....	270	445	....
43. Chalk Creek at Coalville (Sec. 8, T. 2N., R. 5E.)																					
1959																					
Sept. 30.....	25	8.3	.....	....	80	23	.....	29		....	348	0	20	36	....	....	1.5	.....	384	643	7.9
Oct. 13-31.....	17.3	8.0	.....	....	82	24	.....	31		....	348	0	20	44	....	....	1.3	.....	384	670	7.6
Nov. 1-30.....	13.5	6.2	.....	....	82	25	.....	37		....	354	0	18	55	....	....	1.1	.....	412	721	7.9
Dec. 1-31.....	11.9	7.0	.....	....	....	25	.....	35	1.9	....	....	.....	20	51	....	0.01	.7	0.07	402	720	8.4
1960																					
Jan. 1-31.....	13.7	7.6	.....	....	....	21	.....	34	2.1	....	....	.....	18	50	....	.01	.4	.06	376	679	8.3
Feb. 1-Mar. 5....	17.9	7.4	.....	....	76	22	.....	32	1.8	....	322	0	18	45	....	.01	.5	.05	366	655	7.9
Mar. 6-7, 10-20, 29-31.....	44.9	7.8	.....	....	71	20	.....	24	2.4	....	296	0	21	33	....	....	.3	.04	334	573	7.7
Apr. 1-30.....	64.7	7.9	.....	....	70	18	.....	13	1.7	....	291	0	14	18	....	....	.3	.04	295	504	7.8
May 1-8.....	89.6	7.9	.....	....	70	19	.....	14	1.5	....	296	0	17	18	....	....	.5	.03	300	506	8.0
May 15-23.....	154	5.4	.....	....	57	17	.....	8.8	1.3	....	238	5	13	10	....	....	.4	.03	246	408	8.4
June 11-30.....	33.3	8.4	.....	....	82	23	.....	23	2.4	....	359	0	18	30	....	....	.6	.06	370	639	7.7
July 1-31.....	9.2	12	.....	....	106	32	.....	45	3.6	....	447	0	36	63	....	....	4.3	.10	531	896	7.7
Aug. 1-31.....	6.3	12	.....	....	107	32	.....	45	3.5	....	446	0	38	64	....	....	4.2	.12	532	897	7.8
Sept. 1-Oct. 9.....	7.6	9.5	.....	....	100	32	.....	61	3.0	....	430	0	35	91	....	....	4.7	.11	550	949	8.0
Weighted average 1960 water year [r]	34.8	7.3	.....	....	78	22	.....	26	2.0	....	334	0	19	37	....	....	1.5	0.07	360	633	....
1960																					
Oct. 10-Nov. 10...	13.8	8.4	0.1	0.00	89	24	.....	34	1.5	....	368	0	23	51	....	0.01	1.4	.....	401	723	7.8
Nov. 11-Dec. 8....	15.9	8.7	.1	.01	89	24	.....	38	2.8	....	349	8	26	59	....	.02	2.0	.....	416	737	8.3
Dec. 9-31.....	12.1	8.8	.1	.02	84	25	.....	38	2.7	....	357	0	22	58	....	.02	2.5	.....	423	725	8.1

See footnotes at end of table.

Table 2. --Chemical analyses of surface water in the Weber River basin, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
43. Chalk Creek at Coalville (Sec. 8, T. 2N., R. 5E.)--Continued																					
1961																					
Jan. 1-31	8.9	7.4	0.1	0.01	88	26	.....	49	2.6	....	372	0	27	75	....	0.03	6.6	.....	477	809	8.0
Feb. 1-28	11.8	.....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	459	802	....
Mar. 1-23, 25-31	30.1	.....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	347	618	....
Apr. 1-30	28.1	.....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	293	536	....
June 1-17	26.5	.....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	306	558	....
Aug. 1-31	4.7	.....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	517	915	....
Sept. 1-30	4.4	.....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	.....	542	960	....
Weighted average 1961 water year [r]	16.7	7.8	.....	....	87	25	.....	37	2.4	....	372	0	23	55	....	....	1.9	.....	420	738	....
44. Weber River near Echo (Sec. 25, T. 3N., R. 4E.)																					
1959																					
Sept. 30	273	10	.....	....	68	16	.....	19		....	271	0	29	18	....	....	0.5	.....	294	492	7.8
Oct. 20	.7	7.3	.....	....	70	16	.....	18		....	264	0	31	22	....	....	.2	.....	302	511	7.5
Nov. 16	.5	7.0	.....	....	67	17	.....	17		....	261	0	28	22	....	....	1.3	.....	298	516	7.9
Dec. 11	.5	9.9	.....	....	....	16	.....	17	1.9	....	....	.....	31	24	....	0.01	.1	0.07	303	538	8.2
1960																					
Jan. 12	.6	9.1	.....	....	....	16	.....	17	1.6	....	....	.....	32	24	....	.01	.1	.07	310	547	8.2
Feb. 16	.5	9.3	.....	....	75	16	.....	18	1.9	....	276	0	29	24	....	.01	.8	.03	315	546	7.9
Mar. 15	.6	10	.....	....	75	17	.....	16	1.7	....	280	0	34	22	....	....	.1	.02	320	538	7.8
Apr. 11	.7	8.6	.....	....	69	16	.....	17	1.7	....	254	0	35	22	....	....	1.3	.03	302	508	7.9
May 3	6	8.9	.....	....	68	17	.....	16	2.5	....	261	0	37	19	....	....	.6	.05	306	502	7.8
May 20	460	8.3	.....	....	69	15	.....	15	2.4	....	256	0	36	18	....	....	.1	.04	298	489	8.1
June 22	398	8.1	.....	....	66	16	.....	13	2.1	....	254	0	29	16	....	....	.2	.05	280	471	7.8
July 18	515	7.6	.....	....	61	14	.....	11	2.1	....	240	0	21	12	....	....	.2	.05	256	430	7.8
Aug. 16	398	7.9	.....	....	60	15	.....	11	2.2	....	240	0	20	12	....	....	.5	.06	249	429	7.6
Sept. 30	102	9.5	.....	....	67	18	.....	16	2.2	....	278	0	24	18	....	....	.3	.10	292	502	7.7
Nov. 2	.5	9.9	0.0	0.00	73	17	.....	18	2.1	....	257	9	34	24	....	.01	1.0	.....	299	521	8.4
Dec. 1	.5	11	.1	.00	76	18	.....	18	2.1	....	282	0	35	25	....	.01	1.1	.....	306	546	7.8
Dec. 28	.5	12	.0	.01	75	18	.....	19	2.3	....	279	0	38	26	....	.01	1.5	.....	334	548	7.8
1961																					
Jan. 31	.5	11	.0	.01	80	16	.....	18	1.8	....	287	0	37	25	....	.01	1.0	.....	334	548	8.0
Feb. 28	.5	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	335	557	....
Mar. 30	.5	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	311	529	....
Apr. 30	114	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	321	544	....
June 13	385	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	264	455	....
Aug. 3	158	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	284	483	....
Sept. 5	167	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	328	552	....
45. Farmington Diversion at Gateway (Sec. 27, T.5N., R. 1E.)																					
1960																					
Oct. 14	.....	13	.....	....	88	19	.....	23	2.8	....	296	0	59	30	....	0.01	4.1	.....	392	634	7.6

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
46. Weber River at Gateway (Sec. 27, T. 5N., R. 1E.)																					
1959																					
Oct. 1-31	94.2	11	.....	0.01	63	20	.....	21	2.7	....	256	0	37	27	....	....	1.5	0.06	a 310	533	8.0
Nov. 1-30	60	10	.....	....	76	19	.....	22	2.7	....	294	0	41	28	....	....	1.7	.07	349	593	8.1
Dec. 1-31	57.2	11	.....	....	70	20	.....	22	2.3	....	268	0	43	28	....	....	2.3	.07	331	568	8.1
1960																					
Jan. 1-31	53.1	12	.....	....	67	19	.....	21	2.3	....	260	0	41	26	....	0.00	1.8	.07	a 322	544	8.1
Feb. 1-29	75.9	10	.....	....	67	20	.....	22	1.9	....	259	5	41	28	....	.00	2.7	.06	328	554	8.3
Mar. 1-20	268	14	.....	....	62	15	.....	20	2.9	....	227	0	34	26	....	....	3.4	.07	288	479	8.2
Mar. 21-31	568	14	.....	....	42	9.2	.....	12	2.1	....	152	0	22	14	....	....	2.4	.05	192	321	7.7
Apr. 1-5	372	13	.....	.02	51	12	.....	14	1.8	....	150	18	29	18	....	....	2.4	.07	a 232	380	8.9
Apr. 6-25	553	12	.....	.02	37	7.3	.....	10	1.2	....	132	0	20	12	....	....	1.8	.05	a 169	279	7.7
Apr. 26-May 3.	342	9.4	.....	.03	46	10	.....	13	1.4	....	168	0	27	16	....	....	1.5	.05	a 214	352	7.9
May 4-17	532	9.6	.....	....	36	7.1	.....	9.8	1.4	....	129	0	18	12	....	....	1.3	.....	162	275	7.7
May 18-31	650	12	.....	....	65	16	.....	16	2.4	....	243	0	35	21	....	....	1.3	.....	288	480	8.2
June 1-30	473	12	.....	....	65	17	.....	17	2.4	....	252	0	35	21	....	....	1.6	.08	297	502	7.8
July 1-31	428	13	.....	.00	64	17	.....	16	2.3	....	249	0	33	20	....	....	1.6	.07	a 306	484	7.8
Aug. 1-31	381	12	.....	....	63	16	.....	17	2.5	....	242	0	33	20	....	....	1.6	.04	286	478	8.1
Sept. 1-30	245	9.3	.....	....	70	18	.....	18	2.5	....	262	0	40	22	....	....	1.1	.05	312	527	7.9
Weighted average 1960 water year [r]	275	12	.....	....	58	14	.....	16	2.2	....	219	0	31	19	....	....	1.7	0.06	266	442	....
1960																					
Oct. 1-31	111	11	.....	0.00	67	18	.....	23	2.7	....	255	2	43	26	....	....	2.3	0.07	a 317	535	8.3
Oct. 14 [b]	132	13	.....	....	78	19	.....	22	2.6	....	279	0	53	28	....	0.03	1.5	.....	368	589	7.9
Nov. 1-30	61.6	15	.....	.00	71	19	.....	23	2.6	....	272	0	42	28	....	....	2.9	.07	a 326	554	8.2
Dec. 1-31	57.2	14	.....	....	62	18	.....	22	2.6	....	241	0	42	29	....	....	3.0	.06	312	524	8.1
1961																					
Jan. 1-31	49.5	14	.....	.00	75	20	.....	22	2.3	....	302	0	44	27	....	....	3.1	.05	a 349	577	8.0
Feb. 1-28	71.2	14	.....	....	77	18	.....	21	2.7	....	277	0	42	29	....	....	3.2	.04	344	574	8.0
Mar. 1-31	89.9	15	.....	....	68	16	.....	21	2.5	....	236	9	38	27	....	....	2.3	.05	318	525	8.4
Mar. 30 [b]	98	12	.....	....	74	16	.....	10	2.0	....	259	0	49	10	....	....	.2	.03	302	497	7.8
Apr. 1-6	136	8.4	0.2	.09	53	12	.....	16	2.1	....	176	6	34	22	....	.00	1.5	.....	233	400	8.5
Apr. 7-30	116	9.4	.....	....	59	16	.....	19	2.2	....	218	0	36	24	....	....	1.2	.14	a 280	471	7.9
May 1-31	281	13	.....	....	60	16	.....	18	2.2	....	228	0	36	24	....	....	1.5	.06	278	468	7.9
June 1-30	325	14	.....	....	64	19	.....	19	2.5	....	259	0	37	24	....	....	1.6	.19	305	522	8.0
July 1-31	275	13	.....	.01	70	19	.....	19	2.2	....	264	0	37	25	....	....	1.3	.06	a 307	523	7.9
Aug. 1-31	164	14	.....	....	63	22	.....	18	2.8	....	264	0	41	24	....	....	1.4	.06	316	535	7.8
Sept. 1-30	109	15	.....	....	75	17	.....	28	2.7	....	281	0	42	30	....	....	2.6	.07	352	564	7.9
Weighted average 1961 water year [r]	143	13	.....	....	66	18	.....	20	2.4	....	255	0	39	25	....	....	1.8	0.09	308	518	....
47. South Branch of South Fork Ogden River at Huntsville (Sec. 13, T. 6N., R. 1E.)																					
1961																					
Jan. 12	f 9.2	7.9	.....	....	63	16	.....	9.2	1.0	....	238	0	15	20	....	0.01	2.1	.....	250	436	8.0
Apr. 6	f 20	8.2	0.1	0.04	55	14	.....	11	.8	....	210	0	17	20	....	.00	3.6	.....	228	404	7.9
July 27	f 4.5	....	.....	....	....	....	.....	....	....	....	....	....	....	.....	....	....	....	....	.....	238	445	....

See footnotes at end of table.

Table 2.--Chemical analyses of surface water in the Weber River basin, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
48. North Branch of South Fork Ogden River at Huntsville (Sec. 13, T. 6N., R. 1E.)																					
1961																					
Apr. 6	f 17	5.3	0.1	0.02	55	14	.....	6.5	1.3	....	215	0	14	10	....	0.01	1.9	.....	209	372	8.1
July 27	f 2.2	.....	.....	....	....	....	.....	....	....	....	....	....	....	....	....	....	....	.....	225	420	....
49. South Fork Ogden River at Huntsville (Sec. 13, T. 6N., R. 1E.)																					
1961																					
Jan. 12	g 14	6.1	.....	....	65	15	.....	5.8	0.9	....	242	0	13	10	....	0.01	1.2	.....	238	417	8.2
50. North Fork Ogden River near Huntsville (Sec. 3, T. 6N., R. 1E.)																					
1961																					
Apr. 6	20	6.9	0.1	0.02	31	6.3	.....	4.9	0.8	....	102	0	15	9.0	....	0.00	5.3	.....	127	225	7.7
51. Middle Fork Ogden River at Huntsville (Sec. 1, T. 6N., R. 1E.)																					
1961																					
Apr. 6	32	9.2	0.1	0.07	71	20	.....	13	1.3	....	302	0	15	17	....	0.01	3.2	.....	292	521	8.0
July 27	0	.....	.....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	....	.....	267	483	....
52. Geertsen Creek near Huntsville (Sec. 1, T. 6N., R. 1E.)																					
1961																					
Apr. 6	.....	6.3	0.2	0.08	19	3.4	.....	3.7	1.5	....	60	0	11	6.5	....	0.00	2.5	.....	87	138	7.5
53. Pineview Reservoir near Ogden (Sec. 16, T. 6N., R. 1E.)																					
1960																					
Oct. 14	.....	8.5	.....	....	46	11	.....	6.0	1.6	....	176	0	14	10	....	0.03	8.7	.....	192	329	7.4
54. Wheeler Creek near Huntsville (Sec. 16, T. 6N., R. 1E.)																					
1960																					
Oct. 14	.7	7.8	.....	....	55	21	.....	9.9	1.1	....	256	0	23	13	....	0.00	0.0	....	254	444	8.1
1961																					
July 27	1.4	.....	.....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	....	.....	194	369	....
55. Ogden River below Thiokol Training Center, near Ogden (Sec. 17, T. 6N., R. 1E.)																					
1961																					
Jan. 12	e 5	8.0	.....	....	60	19	.....	9.5	1.6	....	256	0	25	14	....	0.00	1.2	.....	264	451	8.0
July 27	.....	.....	.....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	....	.....	184	355	....
56. Spring below Thiokol Training Center, near Ogden (Sec. 17, T. 6N., R. 1E.)																					
1961																					
Jan. 12	.....	11	.....	....	102	29	.....	37	6.0	....	238	0	194	51	....	0.01	0.2	.....	553	848	7.5
57. Weber River near Plain City (Sec. 8, T. 6N., R. 2W.)																					
1959																					
June 30	98	11	.....	....	73	19	.....	43		....	290	0	38	52	....	....	4.0	.....	c 383	654	8.0
Oct. 1-3	371	12	.....	0.01	74	18	.....	33	4.9	0.0	288	0	35	44	0.3	....	3.0	0.10	361	622	8.0

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
57. Weber River near Plain City (Sec. 8, T. 6N., R. 2W.)--Continued																					
1959																					
Oct. 6-9, 22-29....	115	9.6	.....	....	72	22	.....	60		....	301	0	39	76	....	....	7.1	.....	443	756	7.5
Oct. 10-21.....	148	8.8	.....	....	71	19	.....	53		....	283	0	36	70	....	....	5.4	.....	412	716	7.3
Nov. 13-30.....	117	8.5	.....	....	73	22	.....	64		....	320	0	36	78	....	....	1.0	.....	455	800	7.6
Dec. 5-31.....	107	13	.....	....	75	22	.....	65	7.7	....	255	21	40	88	....	0.01	14	0.18	480	840	8.7
1960																					
Jan. 1-10.....	102	11	.....	0.00	74	25	.....	62	6.8	0.0	312	0	59	84	....	.01	4.6	.19	472	828	7.3
Jan. 11-16, 26-31..	142	12	.....	....	73	23	.....	67	8.0	....	273	10	40	96	....	.01	8.1	.16	480	848	8.5
Feb. 1-7, 12-29...	143	11	.....	....	73	26	.....	66	8.5	....	289	10	43	94	....	.01	6.9	.05	485	852	8.6
Mar. 11-20	333	12	.....	....	75	24	.....	59	7.2	....	309	0	48	80	....	....	3.6	.12	476	806	7.5
Apr. 5-13.....	760	8.9	.....	.01	42	11	0.0	17	2.6	.0	148	0	25	25	....	.00	2.8	.05	208	357	7.5
Apr. 14-18.....	553	10	.....	....	45	9.7	.....	19	2.2	....	160	0	24	26	....	....	2.0	.04	226	377	7.5
Apr. 26-May 11 ..	345	4.9	.....	....	46	11	.....	23	2.7	....	174	0	27	30	....	....	1.1	.07	242	409	7.3
May 14-June 13...	51.2	11	.....	....	67	21	.....	60	7.4	....	276	0	36	82	....	....	11	.13	446	753	7.8
June 14-30.....	23.7	12	.....	....	76	24	.....	61	8.3	....	312	0	37	88	....	....	13	.13	485	824	7.6
July 1-18	19.9	14	.....	.02	81	22	.....	65	8.4	....	342	0	32	86	....	.02	3.0	.18	492	843	7.4
July 19-31	17.8	15	.....	....	78	24	.....	72	9.3	....	334	0	34	98	....	....	17	.17	523	886	7.7
Aug. 1-31.....	42.5	13	.....	....	70	21	.....	58	8.6	....	304	0	33	74	....	....	16	.10	452	770	7.6
Sept. 1-Oct. 9	54.1	14	.....	....	75	23	.....	50	8.3	....	312	0	32	66	....	....	18	.06	446	757	7.4
Weighted average 1960 water year [r]	170	9.5	.....	....	60	17	.....	39	5.0	....	237	0	33	54	....	....	5.1	0.8	346	593	....
1960																					
Oct. 24-Nov. 9....	267	11	0.1	0.02	67	16	.....	30	4.3	....	257	0	28	43	....	0.01	2.6	.....	316	562	7.5
Nov. 10-30.....	140	12	.1	.02	78	23	.....	60	8.1	....	299	6	45	85	....	.01	8.8	.....	466	811	8.3
Dec. 1-Jan. 15, 1961	115	11	.1	.00	80	21	.....	62	7.6	....	318	0	47	85	....	.02	8.8	.....	493	823	7.9
1961																					
Jan. 16-Feb. 28 ...	123	12	.1	.00	77	21	.....	64	7.4	....	300	0	45	90	....	.02	9.4	.....	486	821	7.6
Mar. 1-15	116	.....		....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	487	839	....
Mar. 16-31	189	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	433	743	....
Apr. 1-9.....	186	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	339	582	....
Apr. 20-May 31...	14.0	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	633	1,100	....
June 1-30.....	10.3	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	619	1,050	....
July 1-31	6.3	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	483	837	....
Aug. 1-31.....	3.0	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	628	1,090	....
Sept. 1-18	4.0	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	682	1,200	....
Weighted average 1961 water year [r]	83.7	11	.....	....	73	21	.....	52	6.9	....	300	0	38	73	....	....	....	.....	447	766	....
1961																					
Nov. 8.....	e 20	14	.....	0.92	80	28	.....	109	11	....	371	0	40	149	0.5	....	0.4	0.19	h 608	1,090	7.5
58. Walker Slough below Plain City (Sec. 29, T. 6N., R. 2W.)																					
1960																					
July 18.....	.....	13	.....	0.02	48	21	.....	77	16	....	326	0	35	60	....	0.01	1.0	0.26	434	711	8.1
Oct. 14.....	.....	12	.....	....	28	30	.....	132	23	....	356	14	55	97	....	.08	.6	.....	555	945	8.5

See footnotes at end of table.

Table 2.--Chemical analyses of surface water in the Weber River basin, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
58. Walker Slough below Plain City (Sec. 29, T. 6N., R. 2W.)--Continued																					
1961																					
Jan. 12	.....	19	.....	....	46	26	.....	137	19	....	428	0	39	95	....	0.09	7.0	.....	589	1,000	7.7
Apr. 5	.....	15	0.2	0.04	43	33	.....	159	22	....	382	49	54	115	....	.08	.8	.....	679	1,110	8.9
59. Weber River at Ogden Bay Bird Refuge below Plain City (Sec. 11, T. 5N., R. 3W.)																					
1959																					
June 30	.....	15	.....	....	70	21	.....	60		....	324	0	48	52	....	....	1.7	.....	c 427	707	8.0
Oct. 1	.....	15	.....	0.01	70	23	.....	66	8.7	0.0	314	0	46	81	0.3	....	3.6	0.15	465	799	7.9
1960																					
Jan. 6	.....	12	.....	.01	71	28	.....	72	9.6	.3	338	0	58	86	....	0.02	8.1	.18	517	875	7.5
Apr. 13	.....	8.8	.....	.01	41	11	0.0	20	2.6	.0	149	0	26	31	....	.00	2.6	.06	217	380	7.5
July 18	.....	16	.....	.02	52	26	.....	84	17	....	354	0	47	69	....	.04	1.6	.28	492	802	8.0
Oct. 14	.....	12	.....	....	62	36	.....	147	23	....	384	0	90	178	....	.03	1.8	.....	736	1,280	7.7
1961																					
Jan. 12	.....	14	.....	....	81	22	.....	76	7.5	....	316	0	46	105	....	.01	12	.....	521	904	7.4
Apr. 5	.....	8.1	0.2	.03	63	33	.....	141	18	....	386	6	67	158	....	.06	.9	.....	693	1,180	8.5
July 27	.....	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	.....	....	.....	816	1,400	....
60. Hooper Slough near Hooper (Sec. 13, T. 5N., R. 3W.)																					
1960																					
July 18	.....	21	.....	0.05	54	36	.....	101	24	....	431	0	66	76	....	0.04	1.8	0.42	611	943	7.9
Oct. 14	.....	28	.....	....	67	46	.....	110	20	....	520	0	87	77	....	.04	3.0	.....	677	1,120	7.9
1961																					
Jan. 12	.....	28	.....	....	62	55	.....	132	17	....	556	0	83	94	....	.04	11	.....	732	1,220	8.0
Apr. 5	.....	19	0.2	.06	59	54	.....	121	14	....	496	20	83	78	....	.05	7.3	.....	694	1,130	8.4
July 27	.....	.....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	.....	....	.....	1,270	2,040	....
61. Howard Slough near Hooper (Sec. 30, T. 5N., R. 2W.)																					
1959																					
June 30	.....	17	.....	....	63	32	.....	83		....	368	20	60	50	....	....	0.6	.....	c 507	823	8.4
Oct. 1	.....	16	.....	0.02	67	36	.....	74	14	0.2	437	0	58	55	0.4	....	.5	0.21	532	894	8.0
1960																					
Jan. 6	.....	29	.....	.06	53	60	.....	105	15	.0	540	0	86	65	....	0.03	9.1	.28	678	1,100	8.0
Apr. 13	.....	13	.....	.01	34	50	0.6	137	17	.4	403	32	94	93	....	.04	5.2	.37	687	1,130	8.8
July 18	e 7	20	.....	.02	57	27	.....	95	21	....	401	0	54	75	....	.04	1.3	.35	553	889	7.8

c Calculated from determined constituents.
e Estimated.
r Represents 100 percent of runoff for water year. Data for periods of missing record were estimated.
a Includes 0.0 ppm manganese (Mn).
b Not included in weighted average.
f Discharge recorded at gaging station located about one mile upstream from sampling site.
g Discharge represents combined flow at gaging stations of North and South Branches. Water stage recorders located about one mile upstream from sampling site.
h Includes 0.8 ppm manganese (Mn).

Table 3 — Chemical analyses of surface water draining the area between the Weber and the Jordan River basins, Utah

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
62. North Fork Kays Creek above Hobbs Reservoir (Sec. 2, T. 4N., R. 1W.)																					
1961																					
Apr. 5	.....	8.1	0.2	0.13	52	15	.....	20	2.4	....	184	4	39	27	....	0.02	0.8	.....	260	435	8.4
63. Kays Creek below Hobbs Reservoir (Sec. 21, T. 4N., R. 1W.)																					
1960																					
Oct. 14	.....	9.8	.....	....	30	44	.....	74	9.3	....	368	0	55	54	....	0.01	0.4	.....	449	782	8.1
64. Kays Creek near mouth, near Layton (Sec. 31, T. 4N., R. 1W.)																					
1959																					
June 30	e 10	25	.....	....	71	40	.....	93		....	460	0	75	58	....	....	12	.....	c 600	975	8.0
Oct. 1	e 2	18	.....	0.02	76	28	.....	53	5.9	0.0	344	14	54	47	0.4	....	5.8	0.14	464	769	8.4
1960																					
Jan. 7	e 2	18	.....	.00	77	47	.....	108	7.5	.0	526	0	91	72	....	0.03	11	.23	673	1,120	8.1
Apr. 13	.....	11	.....	.01	55	65	1.1	152	17	.2	502	26	106	130	....	.05	18	.34	842	1,400	8.5
Apr. 13[a]	.....	20	.....	.01	77	50	.8	114	10	.2	515	8	94	86	....	.03	15	.25	728	1,200	8.3
July 18	.....	23	.....	.01	75	35	.....	71	9.8	....	408	0	69	50	....	.03	20	.18	551	877	8.0
Oct. 14	.....	13	.....	....	75	27	.....	44	5.2	....	342	0	60	40	....	.04	2.5	.....	434	725	7.7
1961																					
Apr. 5	.....	21	0.2	.02	56	65	.....	158	13	....	484	37	110	124	....	.06	17	.....	829	1,360	8.6
July 27	(b)	.....	.....	....	....	....	.....	.....	.....	....	.....	.....	....	.....	....	....	....	.....	324	571	....
65. Holmes Creek near Kaysville (Sec. 25, T. 4N., R. 1W.)																					
1960																					
Oct. 14	1.6	7.5	.....	....	10	3.4	.....	4.2	0.7	....	45	0	8.4	5.0	....	0.00	0.4	.....	53	96.3	7.3
1961																					
Jan. 20	1.3	7.1	0.0	0.01	8.8	3.9	.....	6.2	.7	....	44	0	9.5	5.5	....	.01	1.4	.....	70	97.2	7.2
Feb. 14	1.8	6.6	.0	.00	8.0	4.4	.....	6.6	.2	....	43	0	8.0	5.5	....	.00	.2	.....	67	95.0	7.3
Apr. 18	2.8	.....	.....	....	....	....	.....	.....	.....	....	.....	.....	....	5.5	....	....	....	.....	....	96.4	....
66. Holmes Creek near mouth, near Kaysville (Sec. 4, T. 3N., R. 1W.)																					
1959																					
June 30	e 10	13	.....	....	72	23	.....	55		....	334	0	62	40	....	....	1.2	.....	c 430	709	8.0
Oct. 1	.....	14	.....	0.03	71	26	.....	47	5.5	0.0	325	14	48	40	0.4	....	2.7	0.13	426	708	8.3
1960																					
Jan. 7	.....	15	.....	.07	63	40	.....	94	6.4	.0	442	0	74	63	....	0.03	5.6	.18	581	966	7.9
July 18	d 1.0	13	.....	.02	70	22	.....	37	4.6	....	308	0	45	33	....	.01	2.2	.13	387	629	8.2
Oct. 14	.....	.....	.....	....	44	26	.....	49	7.2	....	262	0	59	44	....	.00	.1	.....	365	624	8.2
1961																					
Apr. 5	.....	9.0	0.3	.19	61	29	.....	78	7.6	....	382	0	54	56	....	.03	2.8	.....	486	825	7.9
July 27	.....	.....	.....	....	....	....	.....	.....	.....	....	.....	.....	....	....	....	....	....	.....	277	494	....
67. Haight Creek near Kaysville (Sec. 14, T. 3N., R. 1W.)																					
1959																					
June 30	.....	15	.....	....	71	19	.....	62		....	362	0	48	30	....	....	0.8	.....	c 424	664	7.8
Oct. 1	.....	17	.....	0.09	86	35	.....	75	11	0.0	520	0	34	46	0.5	....	1.6	0.15	562	925	7.9

See footnotes at end of table.

Table 3. --Chemical analyses of surface water draining the area between the Weber and the Jordan River basins, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
67. Haight Creek near Kaysville (Sec. 14, T. 3N., R. 1W.)--Continued																					
1960																					
Jan. 7	.....	13	.....	0.05	95	45	.....	87	10	0.0	618	0	51	46	....	0.03	4.7	0.14	660	1,080	7.7
Apr. 13	.....	.....	.....	.16	70	37	1.1	77	14	.0	478	0	48	51	....	.02	2.2	.17	563	931	8.0
July 18	e 0.2	15	.....	.02	81	30	.....	54	8.6	....	438	0	35	35	....	.02	.9	.16	487	787	7.6
1961																					
Apr. 5	.....	6.4	0.2	.03	72	35	.....	73	7.4	....	460	0	44	43	....	.02	.4	.....	510	838	8.1
July 27	.....	.....	.....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	....	.....	548	937	....
68. Farmington Creek above diversions, near Farmington (Sec. 18, T. 3N., R. 1E.)																					
1960																					
July 9	4.0	10	.....	0.01	12	2.4	.....	7.6	1.2	....	49	0	11	7.0	....	0.00	0.4	0.04	75	109	7.5
Oct. 14	2.1	12	.....	....	16	3.2	.....	6.9	.5	....	58	0	12	8.5	....	.01	.5	.....	80	136	7.8
1961																					
Jan. 20	2.3	8.0	0.0	.01	13	4.9	.....	8.1	.5	....	56	0	14	7.8	....	.00	.1	.....	98	128	7.1
Feb. 14	2.4	10	.0	.02	12	4.9	.....	8.2	.4	....	54	0	13	8.0	....	.01	.6	.....	79	127	7.4
Apr. 18	13	.....	.....	....	....	....	.....	....	....	....	....	.....	....	7.0	....	....	....	.....	.....	102	....
69. Farmington Creek at Farmington Bay Bird Refuge, near Farmington (Sec. 26, T. 3N., R. 1W.)																					
1959																					
Oct. 1	.....	17	.....	0.02	63	17	.....	36	8.0	0.0	242	22	30	34	0.3	....	1.4	0.12	342	574	8.4
1960																					
Jan. 7	.....	14	.....	.01	40	14	.....	22	5.2	.0	174	0	29	22	....	0.01	14	.04	252	413	7.0
Apr. 13	d 30.7	8.1	.....	.04	13	2.4	0.0	7.1	1.7	.0	48	0	11	8.0	....	.00	1.5	.06	79	123	7.3
1961																					
Apr. 5	.....	16	0.1	.14	42	11	.....	23	2.1	....	171	0	33	20	....	.01	2.6	.....	232	389	7.7
July 27	.....	.....	.....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	....	.....	310	502	....
70. Davis Creek above diversion, near Farmington (Sec. 30, T. 3N., R. 1E.)																					
1960																					
Oct. 13	e 2	13	.....	.....	13	4.4	.....	7.9	1.1	....	57	0	12	8.5	....	0.01	0.2	.....	78	131	7.4
1961																					
Apr. 5	e 3	8.9	0.2	0.06	22	6.3	.....	10	1.5	....	78	0	20	14	....	.00	1.7	.....	121	205	7.5
71. Davis Creek near mouth, near Farmington (Sec. 25, T. 3N., R. 1W.)																					
1959																					
June 30	e 10	11	.....	....	61	16	.....	31		....	240	0	55	22	....	....	0.4	.....	c 314	489	7.9
Sept. 29	.....	20	.....	0.05	43	13	.....	27	3.5	0.0	190	0	34	24	0.3	....	3.2	0.08	261	416	8.1
1960																					
Jan. 6	e 10	17	.....	.23	37	11	.....	22	1.6	.0	154	0	33	18	....	0.00	4.2	.08	221	369	7.2
Apr. 13	e 2.7	13	.....	.01	23	6.8	0.0	14	1.2	.0	86	0	25	14	....	.00	2.5	.04	146	236	7.5
July 9	e .1	22	.....	..01	48	9.7	.....	26	2.9	....	189	0	33	22	....	.01	4.7	.10	268	415	7.5
Oct. 14	.....	18	.....	....	48	14	.....	28	2.8	....	206	0	40	25	....	.01	1.8	.....	285	450	7.8
1961																					
July 27	.....	.....	.....	....	....	....	.....	....	....	....	....	.....	....	....	....	....	....	.....	220	381	....

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
72. Ricks Creek above diversions, near Centerville (Sec. 5, T. 2N., R. 1E.)																					
1959																					
June 30	1.5	11	.....	....	44	13	.....	39		....	222	0	37	18	....	....	4.0	.....	c 275	423	7.7
1961																					
Jan. 20	.5	13	0.0	0.00	11	4.1	.....	7.9	0.5	....	50	0	11	7.2	....	0.00	1.0	.....	83	117	7.5
Feb. 14	.6	12	.0	.00	11	3.6	.....	8.2	.6	....	43	0	16	7.5	....	.00	.1	.....	85	120	....
Apr. 18	1.5	.....	.....	....	....	....	.....	....	....	....	....	.....	....	7.0	....	....	....	.....	....	110	....
73. Parrish Creek above diversions, near Centerville (Sec. 8, T. 2N., R. 1E.)																					
1960																					
Oct. 13	.30	13	.....	....	25	6.8	.....	14	2.0	....	103	0	20	13	....	0.00	0.1	.....	132	235	7.7
1961																					
Jan. 19	.29	15	0.0	0.01	14	6.1	.....	11	.5	....	66	0	14	12	....	.00	.1	.....	107	161	7.2
Feb. 14	.37	14	.0	.01	15	5.4	.....	11	1.2	....	69	0	14	11	....	.01	.6	.....	93	163	7.4
Apr. 18	1.22	.....	.....	....	....	....	.....	....	....	....	....	.....	....	9.0	....	....	....	.....	....	131	....
74. Centerville Creek above diversions, near Centerville (Sec. 8, T. 2N., R. 1E.)																					
1959																					
July 1	1.3	13	.....	....	51	13	.....	17		....	193	0	32	16	....	....	0.0	.....	c 237	389	7.9
Oct. 1	1.0	16	.....	0.02	16	4.9	.....	11	1.9	0.0	74	0	14	11	0.1	....	.5	0.05	98	172	7.9
1960																					
Oct. 13	1.1	9.8	.....	....	46	11	.....	15	1.8	....	166	0	31	22	....	0.00	.2	.....	210	365	7.9
1961																					
Jan. 19	.9	12	0.0	.02	16	5.8	.....	13	.7	....	78	0	14	12	....	.00	.1	.....	110	177	7.3
Feb. 14	1.1	15	.0	.01	16	6.6	.....	12	1.0	....	54	0	36	10	....	.02	.5	.....	117	186	6.9
Apr. 18	2.0	.....	.....	....	....	....	.....	....	....	....	....	.....	....	10.	....	....	....	.....	....	156	....
75. Centerville Creek near mouth, near Centerville (Sec. 12, T. 2N., R. 1W.)																					
1959																					
Sept. 29	.....	18	.....	0.06	53	17	.....	30	28	0.2	246	0	53	31	0.3	....	13	0.09	350	613	7.4
76. Stone Creek above diversions, near Bountiful (Sec. 21, T. 2N., R. 1E.)																					
1961																					
Jan. 19	0.7	11	0.0	0.01	17	8.0	.....	12	0.5	....	82	0	15	12	....	0.00	0.0	.....	118	185	7.8
Feb. 14	.9	13	.0	.01	17	7.1	.....	12	1.0	....	82	0	16	10	....	.00	.6	.....	103	180	7.7
Apr. 19	2.8	.....	.....	....	....	....	.....	....	....	....	....	.....	....	10	....	....	....	.....	....	150	....
77. Wards Creek above diversions, near Bountiful (Sec. 21, T. 2N., R. 1E.)																					
1960																					
Oct. 13	.....	11	.....	....	21	6.1	.....	13	0.8	....	90	0	16	12	....	0.00	0.1	.....	114	202	8.0
78. Holbrook Creek above diversions, near Bountiful (Sec. 28, T. 2N., R. 1E.)																					
1960																					
Oct. 13	e 2	12	.....	....	27	9.2	.....	12	1.1	....	115	0	19	14	....	0.02	0.1	.....	138	249	7.8
79. Mill Creek at Mueller Park, near Bountiful (Sec. 33, T. 2N., R. 1E.)																					
1961																					
Apr. 19	5.9	.....	.....	....	....	....	.....	....	....	....	....	.....	....	19	....	....	....	.....	....	324	....

See footnotes at end of table.

Table 3.--Chemical analyses of surface water draining the area between the Weber and the Jordan River basins, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue on evaporation at 180° C)	Specific conductance (micromhos at 25° C)	pH
80. Mill Creek above diversions, at Orchard Drive, Bountiful (Sec. 30, T. 2N., R. 1E.)																					
1959																					
July 1.....	f 2.9	11	.....	....	68	15	.....	19		....	252	0	36	20	....	....	0.8	.....	c 294	496	7.9
1961																					
Jan. 19	f 1.1	9.2	0.0	0.01	37	12	.....	9.8	0.5	....	159	0	15	12	....	0.00	.1	.....	178	300	8.2

c Calculated from determined constituents.
d Discharge measured at time of sampling.
e Estimated.

a Sample collected one mile upstream in Sec. 32, T. 4N., R. 1W.
b No measurable flow.
f Discharge recorded at Mueller Park gage located about 2 miles upstream from sampling site.

Table 4 — Chemical analyses of surface water in the Jordan River basin, Utah

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs) [f]	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH
81. Spanish Fork at Castilla (Sec. 12, T. 9S., R. 3E.)																					
1961																					
Sept. 13	69	21	.....	....	67	25	.....	49	4.0	....	278	0	85	46	....	....	2.1	0.25	a 426	695	8.1
Sept. 21	88	20	.....	....	67	25	.....	44	3.1	....	274	0	84	40	....	....	.9	.28	a 412	674	8.0
82. Jordan River at narrows, near Lehi (Sec. 26, T. 4S., R. 1W.)																					
1957																					
Oct. 31	17	21	.....	....	103	78	.....	244		....	264	0	404	332	....	....	3.9	.....	1,320	2,050	7.4
Dec. 3	20	33	.....	....	107	63	.....	180		....	300	0	304	250	....	....	2.4	.....	1,090	1,740	7.4
1958																					
Feb. 18	96	16	.....	0.02	75	59	.....	157		....	254	0	280	190	....	....	7.1	.....	909	1,530	7.5
Apr. 7	20	18	.....	....	116	83	.....	213		....	319	0	398	295	....	....	2.2	.....	1,280	2,070	7.9
May 5	298	15	.....	....	67	54	.....	163		....	237	0	250	201	....	....	3.8	.....	871	1,440	7.4
June 10	704	16	.....	.05	65	57	.....	168	16	....	244	0	264	218	0.6	....	3.6	0.36	b 958	1,510	8.1
Aug. 4	798	19	.....	....	59	64	.....	205		....	217	0	303	255	....	....	.9	.....	1,010	1,700	7.5
Sept. 2	786	21	.....	....	55	66	.....	213		....	194	12	313	260	....	....	.2	.....	1,040	1,710	8.4
83. Jordan River above Surplus Canal at Salt Lake City (Sec. 14, T. 1S., R. 1W.)																					
1959																					
Oct. 1-16	316	15	.....	....	156	66	.....	207		....	174	0	525	295	....	....	6.9	.....	1,360	2,080	7.3
Oct 17-23	262	18	.....	....	162	72	.....	208		....	200	0	548	295	....	....	1.4	.....	1,400	2,150	7.0
Oct. 24-29	249	18	.....	....	164	67	.....	214		....	217	0	523	300	....	....	5.7	.....	1,400	2,130	7.4
Oct 30-Nov. 3	275	21	.....	....	165	66	.....	203		....	233	0	504	290	....	....	1.0	.....	1,360	2,090	7.2
Nov. 4-12	236	21	.....	....	165	63	.....	206		....	238	0	494	290	....	....	.7	.....	1,360	2,040	7.1
Nov. 13-17	249	20	.....	....	173	65	.....	208		....	225	0	520	300	....	....	4.4	.....	1,400	2,140	7.0
Nov. 18-24	203	20	.....	....	165	61	.....	201		....	218	0	505	280	....	....	2.8	.....	1,340	2,040	6.8
Nov. 25-Dec. 1	223	16	.....	0.05	148	70	.....	194		....	218	0	482	278	....	....	7.9	.....	1,300	2,020	7.9
Dec. 2-12	236	19	.....	.04	149	72	.....	198		....	210	0	500	282	....	....	12	.....	1,340	2,060	7.9
Dec. 13-17	222	19	.....	.07	149	70	.....	198		....	180	0	524	278	....	....	6.8	.....	1,330	2,050	7.4
Dec. 18-25	226	19	.....	.04	150	69	.....	196		....	222	0	491	272	....	....	6.0	.....	1,310	2,050	7.6
Dec. 26-31	225	20	.....	.14	151	72	.....	196		....	204	0	515	280	....	....	3.7	.....	1,340	2,060	7.7
1960																					
Jan. 1-9	213	19	.....	.07	163	69	.....	204		....	320	0	464	272	....	0.04	5.2	.....	g 1,350	2,070	7.4
Jan. 10-14	251	21	.....	.07	164	77	.....	219		....	258	0	520	312	....	....	12	.....	1,450	2,220	7.3
Jan. 15-21	219	19	.....	.08	153	76	.....	195		....	234	0	499	285	....	....	21	.....	1,350	2,090	7.3
Jan. 22-29	219	17	.....	.02	150	70	.....	207		....	244	0	488	280	....	.02	12	.....	1,340	2,000	7.4
Jan. 30-Feb. 2	223	19	.....	.00	152	70	.....	198		....	240	0	475	280	....	.02	14	.....	1,330	2,010	7.4
Feb. 3-10	216	16	.....	.00	157	72	.....	182		....	222	0	496	270	....	.02	3.9	.....	1,310	2,010	7.3
Feb. 11-17	207	17	.....	.00	144	72	.....	180		....	200	0	479	268	....	.03	12	.....	1,270	1,990	7.3
Feb. 18-24	184	17	.....	.00	141	72	.....	180		....	158	0	508	262	....	.03	11	.....	1,270	1,960	7.4
Feb. 25-Mar. 4	192	17	.....	.01	146	73	.....	189		....	208	0	482	278	....	.03	14	.....	1,300	2,020	7.3
Mar. 5-10	226	17	.....	.02	144	73	.....	181		....	204	0	486	265	....	.02	11	.....	1,280	2,010	7.2
Mar. 11-18	232	20	.....	.00	139	77	.....	195		....	222	0	488	275	....	.03	11	.....	1,310	2,030	7.0
Mar. 19-23	222	17	.....	.45	149	78	.....	213		....	238	0	519	295	....	.03	6.3	.....	1,390	2,160	7.1
Mar. 24-Apr. 2	258	16	.....	.04	111	83	.....	188		....	188	0	478	260	....	.03	9.1	.....	1,240	1,950	6.8
Apr. 3-8	245	15	.....	.00	147	70	.....	194		....	202	0	504	270	....	.03	8.4	.....	1,310	1,980	7.0
Apr. 9-13	275	14	.....	.01	125	52	.....	142		....	168	0	394	200	....	.02	4.9	.....	1,010	1,550	7.0

See footnotes at end of table.

Table 4.--Chemical analyses of surface water in the Jordan River basin, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs) [f]	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH
83. Jordan River above Surplus Canal at Salt Lake City (Sec. 14, T. 1S., R. 1W.)--Continued																					
1960																					
Apr. 14-23	201	18	.....	0.18	143	64	.....	175	....		159	0	501	245	....	0.02	4.3	.....	1,230	1,830	6.6
Apr. 24-30	240	16	.....	.00	141	54	.....	161	....		188	0	412	235	....	.02	8.0	.....	1,120	1,710	7.5
May 1-5	214	20	.....	.00	151	62	.....	192	....		202	0	463	280	....	.03	6.7	.....	1,280	1,910	7.6
May 6-11	282	15	.....	.00	112	48	.....	143	....		180	0	346	195	....	.02	7.9	.....	962	1,490	7.6
May 12-18	354	11	.....	.00	85	36	.....	114	....		146	0	242	165	....	.02	3.6	.....	735	1,150	7.4
May 19-25	300	14	.....	.00	117	54	.....	155	....		168	0	383	220	....	.02	4.1	.....	1,030	1,590	7.4
May 26-31	267	14	.....	.00	112	49	.....	139	....		160	0	365	190	....	.02	3.5	.....	955	1,460	7.5
June 1-9	353	14	.....	.00	111	46	.....	136	....		176	0	330	190	....	.01	4.4	.....	921	1,420	7.5
June 10-16	346	13	.....	.01	131	57	.....	171	....		176	0	437	235	....	.03	5.6	.....	1,140	1,740	7.4
June 17-24	293	16	.....	.01	139	66	.....	204	....		212	0	469	280	....	.04	7.5	.....	1,290	1,960	7.5
June 25-30	246	17	.....	.00	139	68	.....	205	....		208	0	477	285	....	.04	6.9	.....	1,310	1,990	7.5
July 1-7	262	19	.....	.01	151	69	.....	219	....		222	0	505	300	....	.04	6.9	.....	1,380	2,060	7.6
July 8-14	261	18	.....	.01	139	72	.....	212	....		240	0	467	295	....	.03	6.9	.....	1,330	2,060	7.4
July 15-23	240	21	.....	.01	148	71	.....	218	....		235	0	493	300	....	.04	6.9	.....	1,380	2,090	7.5
July 24-29	262	19	.....	.02	139	73	.....	218	....		225	0	482	305	....	.05	8.1	.....	1,360	2,080	7.5
July 30-Aug. 7	249	18	.....	.02	146	74	.....	232	....		254	0	479	325	....	.05	9.0	.....	1,410	2,160	7.5
Aug. 8	302	20	.....	.01	168	69	.....	243	....		227	0	537	340	....	.05	9.7	.....	1,500	2,270	7.4
Aug. 9-21	220	21	.....	.04	149	76	.....	218	....		213	0	511	315	....	.05	9.3	.....	1,410	2,140	7.7
Aug. 22-23	286	16	.....	.03	156	75	.....	224	....		164	0	571	315	....	.05	11	.....	1,450	2,170	7.3
Aug. 24-Sept. 3	245	17	.....	.29	151	66	.....	213	....		247	0	458	300	....	.05	9.7	.....	1,340	2,040	7.2
Sept. 4-9	257	18	.....	1.3	146	70	.....	221	....		214	0	502	305	....	.06	7.1	.....	1,380	2,090	7.3
Sept. 10-16	256	19	.....	....	154	68	.....	223	....		196	0	517	310	....	.05	17	.....	1,410	2,110	6.9
Sept. 17-20	292	19	.....	....	155	73	.....	216	....		168	0	558	305	....	.05	12	.....	1,420	2,150	7.6
Sept. 21-30	230	19	.....	....	154	69	.....	207	....		218	0	494	295	....	.04	11	.....	1,360	2,070	7.0
Weighted average 1960 water year [r]	249	17	.....	....	144	67	.....	194	....		207	0	474	273	....	....	7.7	.....	1,280	1,960	....
1960																					
Oct. 1-8	224	18	.....	....	156	74	.....	203	....		160	0	559	295	....	0.05	6.1	.....	1,390	2,070	6.6
Oct. 9-13	278	18	.....	0.26	168	83	.....	245	....		384	0	451	360	....	.05	1.5	.....	1,520	2,380	7.2
Oct. 14-20	249	22	.....	.03	172	71	.....	214	....		238	0	518	315	....	.05	8.3	.....	1,440	2,170	7.0
Oct. 21-27	244	22	.....	.02	162	66	.....	199	....		316	0	414	295	....	.05	2.8	.....	1,320	2,050	7.4
Oct. 28-Nov. 3	230	23	.....	1.7	165	71	.....	197	....		154	0	578	285	....	.04	3.3	.....	1,400	2,090	6.4
Nov. 4-10	237	17	.....	....	156	68	.....	185	14	....	311	0	398	290	....	.02	5.5	.....	1,290	1,980	7.7
Nov. 11-16	235	20	.....	....	168	73	.....	202	18	....	302	0	465	310	....	.06	1.8	.....	1,410	2,140	7.2
Nov. 17-26	221	23	.....	....	164	66	.....	185	15	....	322	0	416	295	....	.02	4.9	.....	1,330	2,050	7.6
Nov. 27-29	235	17	.....	....	160	71	.....	205	16	....	257	0	470	310	....	.03	5.7	.....	1,380	2,100	7.5
Nov. 30-Dec. 8	224	23	.....	....	152	68	.....	181	15	....	317	0	403	285	....	.03	2.8	.....	1,290	2,010	7.4
Dec. 9-15	220	22	.....	....	164	72	.....	178	15	....	195	0	523	280	....	.03	9.1	.....	1,360	2,060	7.1
Dec. 16-23	217	21	.....	....	164	74	.....	184	15	....	214	0	514	295	....	.04	5.1	.....	1,380	2,090	7.1
Dec. 24-31	213	22	.....	....	168	63	.....	175	14	....	319	0	396	290	....	.03	6.6	.....	1,300	2,010	7.4

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)[f]	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH
83. Jordan River above Surplus Canal at Salt Lake City (Sec. 14, T. 1S., R. 1W.)--Continued																					
1961																					
Jan. 1-8.....	200	19	.....	....	160	68	.....	182	16	....	287	0	423	295	....	0.04	3.9	.....	1,310	2,030	7.1
Jan. 9-12.....	214	20	.....	....	152	72	.....	186	14	....	282	0	433	300	....	.05	3.6	.....	1,320	2,070	7.2
Jan. 13-19.....	196	17	.....	....	168	71	.....	180	13	....	148	0	565	290	....	.04	11	.....	1,390	2,090	6.8
Jan. 20-27.....	189	23	.....	....	160	65	.....	177	13	....	294	0	396	290	....	.02	11	.....	1,290	1,990	7.5
Jan. 28-Feb. 2..	183	21	.....	....	156	67	.....	176	12	....	240	0	457	280	....	.08	.5	.....	1,290	1,970	7.0
Feb. 3-11.....	189	21	0.2	0.01	164	60	.....	167	13	....	286	0	391	285	....	.02	9.4	.....	1,260	1,920	7.5
Feb. 12-14.....	217	19	.3	.02	174	69	.....	181	14	....	184	0	533	305	....	.03	12	.....	1,410	2,090	8.1
Feb. 15-23.....	207	20	.2	.01	158	72	.....	175	13	....	292	0	402	285	....	.02	10	.....	1,290	1,960	7.8
Feb. 24-Mar 3..	210	22	.4	.01	166	68	.....	186	14	....	198	0	510	295	....	.03	12	.....	1,380	2,060	7.2
Mar. 4-10.....	205	23	.3	.02	160	65	.....	174	14	....	266	0	422	285	....	.03	12	.....	1,300	1,990	7.2
Mar. 11-16.....	201	22	.4	.03	167	69	.....	179	14	....	142	0	549	285	....	.04	12	.....	1,380	2,040	6.6
Mar. 17-23.....	197	19	.3	.07	156	68	.....	178	13	....	290	0	398	285	....	.03	4.4	.....	1,280	1,970	7.3
Mar. 24-31.....	202	23	.4	.14	147	67	.....	174	13	....	288	0	398	275	....	.03	4.0	.....	1,250	1,940	7.6
Apr. 1-6.....	187	18	.....	....	164	61	.....	192	15	....	233	0	452	300	....	....	5.4	.....	1,330	2,030	7.0
Apr. 7-12.....	181	19	.....	....	159	70	.....	184	14	....	140	0	540	298	....	....	14	.....	1,380	2,060	6.9
Apr. 13-21.....	174	17	.....	....	172	44	.....	166	13	....	202	0	441	262	....	....	4.3	.....	1,230	1,860	6.9
Apr. 22-27.....	160	19	.....	....	154	65	.....	152	12	....	125	0	525	252	....	....	15	.....	1,260	1,900	6.7
Apr. 28-May 2..	145	18	.....	....	153	51	.....	152	11	....	273	0	356	245	....	....	13	.....	1,140	1,770	7.4
May 3-12.....	170	14	.....	....	149	64	.....	169	15	....	91	0	565	268	....	....	5.0	.....	1,300	1,960	6.4
May 13-19.....	206	15	.....	....	138	70	.....	179	16	....	160	0	498	282	....	....	9.2	.....	1,290	1,960	6.7
May 20-25.....	167	16	.....	....	142	65	.....	165	15	....	143	0	509	255	....	....	6.3	.....	1,250	1,930	6.7
May 26-31.....	159	12	.....	....	128	49	.....	149	12	....	263	0	320	220	....	....	4.6	.....	1,030	1,620	7.4
June 1-9.....	140	15	.....	....	142	63	.....	173	16	....	105	0	525	250	....	....	7.7	0.27	1,240	1,910	7.0
June 10-16.....	163	15	.....	....	133	65	.....	194	16	....	286	0	369	285	....	....	8.1	.31	1,230	1,950	7.4
June 17-22.....	132	17	.....	....	147	71	.....	197	17	....	105	0	575	290	....	....	5.1	.28	1,370	2,090	6.8
June 23-29.....	115	16	.....	....	135	67	.....	197	17	.....	279	0	391	288	....	....	17	.33	1,270	2,010	7.3
June 30-July 7...	151	18	.....	....	148	75	.....	209	18	.....	69	0	643	308	....	....	3.7	.35	1,460	2,200	6.5
July 8-15.....	156	19	.....	....	148	71	.....	223	19	.....	289	0	436	332	....	....	7.7	.36	1,400	2,190	7.3
July 16-20.....	126	18	.....	....	139	69	.....	202	18	.....	120	0	552	278	....	....	11	.31	1,350	2,050	6.8
July 21-27.....	121	17	.....	....	141	75	.....	229	20	.....	282	0	447	332	....	....	2.4	.39	1,400	2,190	7.2
July 28-Aug. 1..	118	18	.....	....	143	67	.....	204	16	.....	302	0	392	295	....	....	5.6	.34	1,290	2,030	7.5
Aug. 2-11.....	140	19	.....	....	136	64	.....	186	16	.....	286	0	391	280	....	....	3.7	.33	1,240	1,960	7.5
Aug. 12-31.....	124	....	.....	....	....	....	.....	....	....	.....	....	.....	....	302	....	....	....	.....	.....	2,110	....
Sept. 1-30.....	147	....	.....	....	....	....	.....	....	....	.....	....	.....	....	290	....	....	....	.....	.....	2,050	.....
Weighted average water year 1961[r]	182	19	.....	....	157	68	.....	185	15	.....	245	0	459	290	....	....	6.6	.....	1,320	2,030	....
1961																					
Nov. 2.....	105	22	.....	7.2	161	69	.....	194	16	.....	256	0	490	292	1.7	....	2.1	0.34	1,380	2,120	6.8

See footnotes at end of table

Table 4. --Chemical analyses of surface water in the Jordan River basin, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH
84. Surplus Canal at U.S. Highway 40, at Salt Lake Municipal Airport (Sec. 32, T. 1N., R. 1W.)																					
1959																					
June 26	.....	20	.....	....	148	75	.....	222		....	238	0	490	320	....	....	8.9	.....	1,400	2,120	7.8
Sept. 29	.....	21	.....	0.00	154	71	.....	211	16	0.0	270	0	464	325	1.0	....	7.9	0.36	1,400	2,150	7.6
1960																					
Jan. 6	.....	21	.....	.00	160	67	.....	192	17	.1	274	0	466	290	....	0.03	12	.33	1,360	2,090	7.7
85. Jordan River at mouth, at Woods Cross (Sec. 21, T. 2N., R. 1W.)																					
1959																					
July 1	.....	19	.....	....	117	59	.....	200		....	252	0	371	265	....	....	6.0	.....	1,160	1,780	7.7
Sept. 29	.....	20	.....	0.05	131	65	.....	181	15	0.2	248	0	404	280	0.8	....	8.8	0.25	1,230	1,930	7.5
Oct. 12	.....	18	.....	....	146	63	.....	179		....	217	0	458	250	....	....	5.7	.....	1,230	1,970	7.6
Oct. 19	.....	12	.....	....	164	63	.....	221		....	243	0	482	315	....	....	1.5	.....	1,380	2,060	7.3
Oct. 27	.....	18	.....	....	167	66	.....	208		....	234	0	507	295	....	....	4.1	.....	1,380	2,120	7.4
Nov. 2	.....	17	.....	....	164	68	.....	231		....	234	0	509	330	....	....	2.7	.....	1,440	2,210	7.7
Nov. 9	.....	16	.....	....	165	66	.....	227		....	234	0	505	325	....	....	2.7	.....	1,420	2,210	7.8
Nov. 16	.....	20	.....	....	157	66	.....	203		....	240	0	477	290	....	....	2.9	.....	1,330	2,050	7.2
Nov. 24	.....	17	.....	.38	143	66	.....	196		....	226	0	472	262	....	....	7.1	.....	1,270	1,980	7.5
Nov. 30	.....	20	.....	.05	140	72	.....	184		....	238	0	456	265	....	....	4.7	.....	1,260	1,960	7.5
Dec. 8	.....	16	.....	.07	146	70	.....	198		....	224	0	491	272	....	....	2.1	.....	1,310	2,010	7.9
Dec. 14	.....	17	.....	.36	142	66	.....	187		....	232	0	443	270	....	....	.3	.....	1,240	1,980	7.5
Dec. 21	.....	18	.....	.17	140	67	.....	202		....	244	0	464	270	....	....	.3	.....	1,280	1,980	....
Dec. 28	.....	16	.....	.04	143	72	.....	188		....	210	0	468	280	....	0.03	8.4	.....	1,280	2,030	7.4
1960																					
Jan. 4	.....	15	.....	.01	152	75	.....	189		....	294	0	453	272	....	.03	3.1	.....	1,300	2,020	7.9
Jan. 6	.....	19	.....	.01	160	71	.....	193		....	302	0	447	278	....	....	7.1	.....	1,320	2,050	7.4
Jan. 14	.....	17	.....	.00	136	62	.....	211		....	221	5	410	305	....	.03	11	.....	1,270	2,020	8.3
Jan. 18	.....	17	.....	.01	156	73	.....	210		....	203	7	509	305	....	.03	9.2	.....	1,390	2,130	8.4
Jan. 25	.....	19	.....	.00	150	69	.....	204		....	211	0	482	295	....	.03	13	.....	1,340	2,080	7.5
Feb. 1	.....	14	.....	.01	120	74	.....	206		....	240	0	423	290	....	.03	8.3	.....	1,250	1,960	8.0
Feb. 8	.....	10	.....	.00	130	77	.....	193		....	218	0	459	285	....	.02	2.4	.....	1,260	1,980	8.1
Feb. 22	.....	18	.....	.05	139	62	.....	275		....	873	0	18	330	....	.06	2.9	.....	1,270	2,170	7.5
Feb. 29	.....	12	.....	.04	127	65	.....	315		....	922	0	9.5	355	....	.05	2.3	.....	1,340	2,330	7.5
Mar. 7	.....	17	.....	.01	120	54	.....	236		....	400	0	264	305	....	.05	3.9	.....	1,200	1,950	7.8
Mar. 14	.....	12	.....	.01	119	57	.....	217		....	202	0	385	305	....	.02	7.7	.....	1,200	1,900	7.8
Mar. 21	.....	13	.....	.04	120	62	.....	207		....	206	0	395	300	....	.08	1.7	.....	1,200	1,990	7.8
Mar. 28	.....	8.7	.....	.02	111	68	.....	268		....	196	0	426	375	....	.04	5.7	.....	1,360	2,160	8.1
Apr. 11	.....	15	.....	.01	123	44	.....	122		....	277	0	267	175	....	.01	.4	.....	884	1,390	7.2
Apr. 13	.....	14	.....	.03	115	45	.....	122		....	188	0	314	180	....	.02	2.4	.....	884	1,370	7.1
Apr. 18	.....	14	.....	.01	139	47	.....	143		....	248	0	338	210	....	.01	.9	.....	1,020	1,580	7.3
Apr. 25	.....	16	.....	.00	139	48	.....	147		....	257	0	342	210	....	.01	.6	.....	1,030	1,580	7.2
May 2	.....	14	.....	.00	143	52	.....	172		....	238	0	386	245	....	.02	.9	.....	1,130	1,750	7.4
May 9	.....	15	.....	.00	109	46	.....	122		....	202	0	305	170	....	.01	3.0	.....	870	1,360	7.2
May 23	.....	9.8	.....	.00	114	53	.....	161		....	136	0	423	210	....	.03	3.6	.....	1,040	1,610	7.0

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH
85. Jordan River at mouth, at Woods Cross (Sec. 21, T. 2N., R. 1W.)																					
1960																					
May 30	.....	22	.....	0.08	131	55	.....	167	....	....	258	0	375	225	....	0.03	1.5	.....	1,110	1,690	6.9
June 6	.....	14	.....	.01	95	46	.....	149	....	....	202	0	289	200	....	.01	.3	.....	897	1,420	7.0
June 13	.....	14	.....	.00	139	65	.....	196	....	....	208	0	468	270	....	.02	4.9	.....	1,270	1,930	7.3
June 20	.....	16	.....	.00	149	66	.....	192	....	....	236	0	474	265	....	.02	.3	.....	1,280	1,950	7.1
July 4	.....	9.2	.....	....	168	69	.....	253	....	....	216	0	567	340	....	.05	4.5	.....	1,520	2,280	8.1
July 11	.....	16	.....	....	123	59	.....	251	....	....	402	0	257	345	....	.12	12	.....	1,260	2,240	7.4
July 18	.....	18	.....	....	112	64	.....	402	....	....	1,040	0	59	355	....	.22	4.1	.....	1,530	2,770	7.2
Aug. 8	.....	17	.....	....	140	69	.....	217	....	....	214	0	488	295	....	.04	5.7	.....	1,340	2,030	7.3
Aug. 16	.....	14	.....	....	325	131	.....	544	....	....	338	0	1,170	735	....	.11	3.4	.....	3,090	4,340	7.2
Aug. 23	.....	17	.....	....	156	63	.....	228	....	....	270	0	461	310	....	.03	3.2	.....	1,370	2,080	7.1
Aug. 30	.....	16	.....	....	143	66	.....	219	....	....	266	0	431	305	....	.03	9.4	.....	1,330	2,070	7.4
Sept. 6	.....	17	.....	....	136	68	.....	210	....	....	220	0	455	295	....	.04	8.4	.....	1,300	2,010	7.5
Sept. 12	.....	17	.....	.02	117	61	.....	202	....	....	256	0	391	255	....	.05	7.6	.....	1,180	1,860	7.6
Sept. 19	.....	17	.....	.01	135	64	.....	222	....	....	286	0	428	285	....	.08	2.1	.....	1,300	2,010	7.2
Sept. 26	.....	18	.....	.01	156	74	.....	226	....	....	227	0	528	315	....	.04	4.4	.....	1,440	2,180	7.1
Oct. 3	.....	19	.....	.03	159	68	.....	207	....	....	190	0	528	295	....	.04	7.5	.....	1,380	2,080	7.3
Oct. 10	.....	17	.....	.09	236	83	.....	233	....	....	254	0	703	345	....	.06	10	.....	1,760	2,500	7.3
Oct. 17	.....	15	.....	.33	248	91	.....	228	....	....	268	0	742	350	....	.06	7.8	.....	1,820	2,560	7.1
1961																					
Jan. 10	.....	21	.....	....	156	61	.....	189	15	....	300	0	391	300	....	.04	8.7	.....	1,300	2,000	7.4
Apr. 5	.....	21	.....	....	151	65	.....	183	14	....	284	0	393	290	....	....	7.8	.....	1,270	1,960	7.4
July 25	.....	....	.....	....	....	....	.....	....	....	....	....	.....	....	.....	....	....	....	.....	a 1,240	1,930	....

r Represents 100 percent runoff for water year. Includes estimated data for periods of missing record.

a Residue on evaporation at 180° C.

b Includes 0.0 ppm manganese (Mn).

f Discharges given for site 83 are combined discharge of Surplus Canal and Jordan River at Salt Lake City. Water-stage recorders located about 1,100 feet and 1,500 feet downstream, respectively, from sampling site, which is 700 feet upstream from Surplus Canal diversion dam.

g Includes 0.2 ppm bromide (Br) and 0.0 ppm nitrite (NO_2).

Table 5 — Chemical analyses of water from springs around the shore of Great Salt Lake and on Antelope Island, Utah.

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
86. Duck Spring about ten miles south of Kelton (Sec. 8, T. 10N., R. 11W.)																						
1960																						
Sept. 23.....	.....	19	0.4	0.02	168	134	.....	2,780	102	....	134	0	313	4,740	....	0.12	10	.....	8,340	14,100	6.9	1.002
87. Mos Spring about seven miles south of Kelton (Sec. 33, T. 11N., R. 11W.)																						
1960																						
Sept. 23.....	e 0.1	19	0.4	0.00	200	182	.....	3,560	158	....	249	0	386	6,120	....	0.06	10	.....	10,800	17,700	7.4	1.003
88. Skull Spring about six miles south of Kelton (Sec. 19, T. 11N., R. 11W.)																						
1960																						
Sept. 23.....	e 0.5	42	0.3	0.00	322	169	.....	6,700	241	....	299	0	738	11,000	....	0.12	12	.....	19,400	29,900	7.5	1.009
89. Twenty-one Seeps about five miles southwest of Kelton (Sec. 7, T. 11N., R. 11W.)																						
1960																						
Sept. 23.....	(a)	23	0.3	0.01	586	168	.....	8,430	346	....	202	0	327	14,600	....	0.11	12	.....	24,600	37,400	7.4	1.013
90. Black Butte Springs about three miles southwest of Kelton (Sec. 6, T. 11N., R. 11W.)																						
1960																						
Sept. 23.....	(a)	14	0.3	0.00	516	123	.....	6,650	273	....	204	0	222	11,500	....	0.10	15	.....	19,400	30,400	7.2	1.010
91. West Locomotive Spring in Locomotive Springs area (Sec. 36, T. 12N., R. 10W.)																						
1959																						
Sept. 30.....	.....	47	.....	0.00	114	50	.....	744	53	0.5	206	0	91	1,360	0.2	....	2.3	0.25	2,560	4,660	7.9	.....
1960																						
Jan. 5.....	.....	43	.....	.00	114	49	.....	786	57	.8	198	0	91	1,430	....	0.02	3.0	.31	2,670	4,900	7.5	.....
Apr. 19.....	.....	43	.....	.01	112	51	3.8	746	52	.5	200	0	89	1,380	....	.01	2.5	.23	2,570	4,630	7.9	.....
Oct. 12.....	.....	46	.....	....	122	52	.....	861	60	....	208	0	93	1,570	....	.02	2.8	.....	2,920	5,240	7.6	.....
92. Baker Spring in Locomotive Springs area (Sec. 36, T. 12N., R. 10W.)																						
1959																						
Sept. 30.....	.....	30	.....	0.00	125	51	.....	493	27	0.2	220	0	88	970	0.1	....	2.3	0.16	1,900	3,410	7.9	.....
1960																						
Jan. 5.....	.....	33	.....	.00	120	54	.....	494	27	.6	215	0	89	970	....	0.01	2.4	.16	1,900	3,470	7.7	.....
Apr. 19.....	.....	36	.....	.00	119	57	3.1	502	27	.0	218	0	90	980	....	.01	3.1	.16	1,920	3,510	7.7	.....
Oct. 12.....	.....	37	.....	....	125	54	.....	483	28	....	216	0	87	960	....	.01	1.5	.....	1,890	3,390	7.5	.....
1962																						
Jan. 9.....	.....	.....	.....	....	.....	....	.....	.....	....	....	....	.....	....	.....	....	....	....	.....	.....	3,460	....	.....
93. West Lake in Locomotive Springs area (Sec. 11, T. 11N., R. 10W.)																						
1960																						
Apr. 19.....	.....	37	.....	0.01	122	54	3.2	722	48	0.3	204	0	96	1,370	....	0.01	2.8	0.26	2,550	4,620	8.0	.....
July 19.....	.....	37	.....	.03	127	52	.....	748	51	....	206	0	99	1,390	....	.01	2.6	.31	2,610	4,640	7.6	.....

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
94. Bar M. Spring in Locomotive Springs area (Sec. 1, T. 11N., R. 10W.)																						
1959																						
June 29	.....	37	.....	....	126	72	.....		946	....	224	0	148	1,650	....	....	1.6	.....	3,090	5,450	7.8	.....
Sept. 30	.....	36	.....	0.02	133	61	.....	865	32	0.4	213	0	119	1,560	0.1	....	2.1	0.18	2,910	5,250	7.5	.....
1960																						
Jan. 5	.....	31	.....	.01	139	65	.....	1,120	45	.4	210	0	184	1,960	....	0.02	4.0	.30	3,650	6,430	7.8	.....
Apr. 19	.....	31	.....	.00	131	60	5.0	833	36	.0	209	0	113	1,550	....	.01	2.8	.20	2,860	5,190	8.0	.....
July 19	.....	31	.....	.03	130	66	.....	930	37	....	212	0	120	1,680	....	.02	2.5	.21	3,110	5,420	7.7	.....
Oct. 12	.....	33	.....	....	127	69	.....	910	35	....	209	0	118	1,640	....	.02	1.6	.....	3,050	5,400	7.7	.....
1962																						
Jan. 9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,000	.....	.....
95. Teal Spring in Locomotive Springs area (Sec. 12, T. 11N., R. 10W.)																						
1959																						
Sept. 30	.....	36	.....	0.01	109	63	.....	1,280	55	0.4	213	0	156	2,180	0.2	....	2.7	0.32	3,990	7,120	7.8	.....
1960																						
Jan. 5	.....	34	.....	.01	115	66	.....	1,340	60	.5	212	0	159	2,280	....	0.03	3.5	.29	4,160	7,400	7.9	.....
Apr. 19	.....	29	.....	.01	119	67	5.8	1,330	56	.5	210	0	155	2,280	....	.03	2.8	.34	4,140	7,690	7.9	.....
96. Sparks Spring in Locomotive Springs area (Sec. 5, T. 11N., R. 9W.)																						
1959																						
June 29	.....	38	.....	....	110	73	.....		1,180	....	232	0	188	1,960	....	....	2.0	.....	3,660	6,470	7.7	.....
Sept. 30	.....	29	.....	0.00	117	68	.....	1,150	49	0.5	231	0	161	1,960	0.3	....	1.5	0.27	3,650	6,540	7.2	.....
1960																						
Jan. 5	.....	35	.....	.02	107	66	.....	1,160	47	.5	227	0	169	1,970	....	0.02	2.5	.34	3,670	7,980	7.7	.....
Apr. 19	.....	32	.....	.00	109	66	5.3	1,130	51	.2	225	0	152	1,970	....	.01	2.2	.27	3,620	6,570	7.6	.....
97. East Lake in Locomotive Springs area (Sec. 7, T. 11N., R. 9W.)																						
1959																						
June 29	.....	17	.....	....	124	162	.....		2,790	....	62	8	349	4,690	....	....	7.1	.....	8,180	14,100	8.6	1.001
1960																						
Apr. 19	.....	23	.....	0.02	76	83	4.7	1,270	58	0.2	186	6	154	2,150	....	0.03	1.3	0.33	3,910	7,240	8.3	.....
July 19	.....	16	.....	.01	186	179	.....	3,440	140	....	59	0	389	5,970	....	.11	11	.92	10,400	16,700	7.6	1.003
98. Large spring near abandoned salt plant, about 3 miles east of Locomotive Springs area (Sec. 10, T. 11N., R. 9W.)																						
1959																						
June 29	e 3	21	.....	....	604	1,040	.....		26,400	....	107	0	2,660	42,800	....	....	73	.....	73,700	92,100	6.9	1.049
Sept. 30	e 3	17	.....	0.00	626	1,010	.....	26,300	1,170	5.9	166	0	2,640	43,100	1.5	....	83	9.4	75,000	94,000	7.1	1.050
1960																						
Jan. 5	e 2	17	.....	.03	572	1,010	.....	25,900	1,120	9.9	145	0	2,610	43,800	....	0.51	105	8.7	75,200	97,200	6.6	1.051
Apr. 19	.....	19	.....	.01	603	1,040	.....	27,100	1,130	....	38	0	2,630	43,400	....	.47	155	8.9	76,100	99,700	6.4	1.050
July 19	.....	19	.....	.02	611	1,040	.....	27,100	1,070	....	105	0	2,670	43,700	....	.60	100	9.1	76,400	91,300	6.5	1.050
99. Small spring near abandoned salt plant, about three miles east of Locomotive Springs area (Sec. 10, T. 11N., R. 9W.)																						
1959																						
June 29	e 1	20	.....	....	533	839	.....		21,000	....	133	0	2,100	34,100	....	....	79	.....	58,700	77,200	7.1	1.038
Sept. 30	.....	20	.....	0.01	509	875	.....	21,400	969	5.6	181	0	2,190	35,600	1.2	....	59	8.1	61,700	81,300	7.4	1.039
1960																						
Apr. 19	.....	18	.....	.02	553	916	.....	23,100	934	....	69	0	2,300	37,800	....	0.37	136	7.9	65,800	86,400	6.9	1.043

See footnotes at end of table.

Table 5. --Chemical analyses of water from springs around the shore of Great Salt Lake and on Antelope Island, Utah--Continued

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
100. Hansel Creek at State highway 83, about eleven miles east of Locomotive Springs area (Sec. 2, T. 11N., R. 8W.)																						
1959																						
June 29	.....	12	.....	....	216	126	.....	4,020		....	353	12	277	6,520	....	....	11	.....	11,400	18,600	8.3	1.003
Sept. 30	.....	5.2	.....	0.03	168	97	.....	3,200	106	1.0	246	0	234	5,330	1.4	....	8.7	0.86	9,270	15,700	7.8	1.001
1960																						
Apr. 19	.....	4.3	.....	.02	125	73	.....	2,270	75	....	312	0	172	3,770	....	0.06	13	.70	6,660	11,800	7.6	1.000
101. Spring east side Promontory Point (Sec. 16, T. 7N., R. 5W.)																						
1959																						
June 29	e 1	13	.....	....	132	66	.....	1,180		....	254	0	181	1,960	....	....	2.7	.....	3,660	6,480	7.9	.....
Sept. 30	e 1	13	.....	0.00	130	66	.....	1,140	37	0.4	248	0	174	1,950	0.1	....	2.9	0.21	3,640	6,480	7.8	.....
1960																						
Jan. 5	.....	16	.....	.00	96	50	.....	1,150	42	.7	245	0	172	1,850	....	0.02	3.8	.44	3,500	6,330	8.2	.....
102. Yogurt Springs at State highway 83 (Sec. 11, T. 10N., R. 5W.)																						
1959																						
Sept. 30	.....	39	.....	0.03	853	327	.....	10,900	526	5.6	447	0	153	19,400	1.2	....	12	4.3	32,400	48,600	6.6	1.020
103. Hooper Hot Springs west of Hooper (Sec. 27, T. 5N., R. 3W.)																						
1960																						
Apr. 13	.....	30	.....	0.01	524	99	.....	2,450	239	....	220	0	59	5,090	....	0.07	17	1.0	8,620	15,000	7.5	.....
104. Seep north of Kays Creek near Layton (Sec. 36, T. 4N., R. 2W.)																						
1960																						
Jan. 7	.....	21	.....	0.02	38	31	.....	72	7.0	0.4	316	0	46	51	....	0.02	6.8	0.17	b 432	722	7.8	.....
105. Spring in West Lady Finger Spring area, Antelope Island (Sec. 30, T. 4N., R. 3W.)																						
1960																						
July 28	.....	16	.....	....	170	39	.....	703		....	155	0	63	1,360	....	....	3.2	.....	2,430	4,430	7.5	.....
106. Spring in East Lady Finger Spring area, Antelope Island (Sec. 30, T. 4N., R. 3W.)																						
1960																						
July 28	.....	34	.....	....	46	11	.....	197		....	182	0	17	300	....	....	1.7	.....	696	1,280	7.6	.....
107. Seep in East Lady Finger Spring area (Sec. 30, T. 4N., R. 3W.)																						
1960																						
July 28	.....	25	.....	....	190	63	.....	1,060		....	177	0	115	1,960	....	....	2.1	.....	3,500	6,310	7.2	.....
108. Beacon Springs Horse Trough 7.7 miles north of ranch house, on Antelope Island (Sec. 32, T. 4N., R. 3W.)																						
1960																						
May 7	.....	14	.....	....	42	10	.....	56	2.4	....	114	0	59	87	....	....	2.6	0.05	b 339	585	7.4	.....
109. Spring 4.2 miles north of ranch house, on Antelope Island (Sec. 16, T. 3N., R. 3W.)																						
1960																						
May 7	.....	14	.....	....	105	34	.....	250	15	....	360	0	47	434	....	....	3.8	0.23	1,080	1,960	7.8	.....

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
110. Stream 3.3 miles north of ranch house, on Antelope Island (Sec. 21, T. 3N., R. 3W.)																						
1960																						
May 7	e 0.5	18	.....	....	36	11	.....	49	1.1	....	146	0	38	59	....	....	3.8	0.06	b 288	493	7.6	.....
111. Ranch House Spring at ranch house, on Antelope Island (Sec. 10, T. 2N., R. 3W.)																						
1960																						
May 7	.....	42	.....	....	64	21	.....	149	15	....	202	0	46	263	....	....	8.0	0.12	b 733	1,260	7.7	.....
112. Spring 1-1/2 mile south of ranch house, on Antelope Island (Sec. 15, T. 2N., R. 3W.)																						
1960																						
May 7	.....	54	.....	....	62	23	.....	175	18	....	274	0	68	250	....	....	7.0	0.16	b 798	1,350	8.0	.....
113. Mill Pond Spring at U.S. Highway 40, at Mills Junction (Sec. 16, T. 2S., R. 4W.)																						
1958																						
Aug. 22	.....	25	.....	....	76	41	.....	288		....	242	0	144	450	....	....	4.6	.....	1,150	1,990	7.6	.....
1959																						
Sept. 29	e 5	15	.....	0.00	106	42	.....	321	8.0	0.0	268	0	251	480	0.0	....	4.5	0.16	1,360	2,320	8.0	.....
1960																						
Jan. 5	e 15	13	.....	.00	106	47	.....	347	9.0	.0	275	0	255	535	....	0.02	5.1	.20	1,450	2,450	7.7	.....
Apr. 12	d 7.0	12	.....	.00	104	46	1.8	325	8.3	.2	266	0	263	495	....	.01	5.1	.16	1,390	2,440	8.1	.....
July 8	d 9.1	15	.....	.02	106	44	.....	329	8.7	....	262	0	265	480	....	.01	3.8	.22	1,380	2,310	7.6	.....
Oct. 11	d 3.4	12	.....	....	99	45	.....	307	9.1	....	270	0	250	450	....	.02	4.3	.....	1,320	2,260	7.9	.....
1961																						
Jan. 10	.....	14	.....	....	109	42	.....	317	8.4	....	278	0	253	460	....	.03	4.9	.....	1,360	2,250	7.7	.....
Apr. 4	.....	11	0.1	.00	99	47	.....	315	7.8	....	272	0	253	460	....	.01	2.8	.....	1,340	2,270	8.1	.....
July 25	.....	.....	.....	....	....	....	.....	.....	.....	....	....	.....	....	....	....	....	....	.....	b 1,340	2,250	....	.....
114. Spring 1.3 miles east of Big Spring, near Timpie (Sec. 10, T. 1S., R. 7W.)																						
1960																						
Jan. 5	e 15	11	.....	0.00	211	117	.....	4,420	155	1.2	225	0	504	7,060	....	0.03	8.4	1.3	12,600	20,700	7.4	1.006
115. Big Spring at Timpie (Sec. 9, T. 1S., R. 7W.)																						
1959																						
Sept. 28	e 8	7.9	.....	....	102	97	.....	2,890		....	132	22	352	4,550	....	....	9.7	.....	8,100	14,000	8.8	1.001
Sept. 29	.....	10	.....	0.00	136	79	.....	2,730	97	1.8	214	0	327	4,360	0.2	....	13	0.98	7,860	13,000	7.7	1.000
1960																						
Jan. 5	d 6.1	9.5	.....	.01	138	81	.....	2,810	106	1.0	223	0	345	4,550	....	0.05	10	.91	8,160	13,700	7.6	1.001
Apr. 12	d 4.6	7.1	.....	.01	134	80	.....	2,850	103	....	174	0	351	4,670	....	.06	12	.95	8,300	14,400	7.5	1.001
July 8	d 7.1	7.0	.....	.01	144	73	.....	2,790	99	....	206	0	332	4,500	....	.04	14	.85	8,060	13,200	7.7	1.002
Oct. 1	e 6	15	0.2	.00	146	73	.....	2,830	98	....	194	0	349	4,590	....	.07	9.7	.....	8,210	13,800	8.0	1.001
Oct. 11	d 2.3	9.0	.2	.00	139	77	.....	2,800	93	....	205	0	345	4,510	....	.06	10	.....	8,090	13,500	7.7	1.001
1961																						
Jan. 10	d 6.4	11	.2	.00	142	81	.....	2,840	100	....	220	0	353	4,600	....	.06	10	.....	8,250	13,800	7.7	1.002
Apr 4	.....	5.5	.2	.01	144	88	.....	2,890	103	....	218	0	352	4,720	....	.05	13	.....	8,430	14,300	7.8	1.001

d Discharge measured at time of sampling.

e Estimated

a No measurable flow.

b Residue on evaporation at 180° C.

Table 6 — Chemical analyses of water from drains and sewage canals along the southeast shore of Great Salt Lake, Utah

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
116. Cudahy Packing Plant drain at North Salt Lake (Sec. 2, T. 1N., R. 1W.)																						
1959																						
July 1	.....	18	.....	....	109	27	.....		584	....	736	0	34	720	....	....	1.5	.....	1,860	3,240	8.0	.....
Sept. 29	.....	15	.....	0.08	103	22	.....	463	19	0.0	660	0	12	660	1.4	....	1.6	0.16	1,630	2,980	7.1	.....
117. Standard Oil Refinery drain at North Salt Lake (Sec. 10, T. 1N., R. 1W.)																						
1959																						
July 1	.....	17	.....	....	67	11	.....		188	....	444	0	35	155	....	....	1.5	.....	692	1,170	8.0	.....
118. Salt Lake City sewage canal at Cudahy Lane, near North Salt Lake (Sec. 4, T. 1N., R. 1W.)																						
1959																						
July 1	45	14	.....	....	135	47	.....		449	....	446	0	280	600	....	....	2.6	.....	1,750	2,910	7.9	.....
July 1[a]	45	25	.....	....	147	54	.....		470	....	0	0	7,130	660	....	....	4.1	.....	8,630	31,800	1.20	1.000
Sept. 29	45	16	.....	0.12	141	46	.....	418	23	0.3	368	0	305	670	1.0	....	1.3	0.47	1,810	3,100	7.1	.....
1960																						
Jan. 6	45	18	.....	.07	218	55	.....	667	32	.2	318	0	427	1,140	....	0.12	.7	.61	2,710	4,760	7.8	.....
Feb. 8	45	16	.....	.08	149	49	.....	481	26	.4	492	0	164	750	....	.18	.5	.57	1,880	3,500	7.7	.....
May 9	45	15	.....	.21	139	48	.....	444	22	....	516	0	254	630	....	.04	1.5	.64	1,850	3,080	7.5	.....
July 8	45	22	.....	.23	144	45	.....	427	23	....	602	0	138	630	....	.05	1.8	.69	1,770	2,990	7.6	.....
Oct. 17	45	17	.....	....	159	54	.....	478	21	....	286	0	301	810	....	.12	2.9	.....	2,000	3,400	7.0	.....
1961																						
Apr. 5	45	18	0.5	.26	197	76	.....	755	30	....	388	0	502	1,190	....	.16	.8	.....	2,980	4,940	7.3	.....
119. Goggin Drain south of U.S. Highway 40, near Salt Lake City (Sec. 5, T. 1S., R. 1W.)																						
1961																						
Apr. 4	.....	9.5	0.4	0.03	99	110	.....	1,090	41	....	314	55	934	1,280	....	0.17	1.0	.....	3,790	5,920	8.8	.....
July 25	e 3	.....	.....	....	....	....	.....	.....	....	....	....	....	....	.....	....	.....	....	.....	b 1,800	2,700	....	.....
120. Kennecott drain at U.S. Highway 40, near Saltair (Sec. 3, T. 1S., R. 3W.)																						
1959																						
June 26	e 22	25	.....	....	240	141	.....		1,440	....	126	0	805	2,380	....	....	16	.....	5,110	8,240	7.1	.....
Sept. 29	e 150	28	.....	0.01	136	89	.....	552	35	0.2	236	0	489	875	9.8	....	4.2	0.50	2,340	3,900	7.5	.....
1960																						
Jan. 5	e 90	30	.....	.07	216	97	.....	850	36	.7	252	0	562	1,380	....	0.05	11	.41	3,310	5,540	7.3	.....
Apr. 12	e 40	34	.....	.04	248	112	.....	1,080	59	.5	114	0	738	1,860	....	.05	3.0	.38	4,190	7,040	6.7	.....
July 8	e 100	37	.....	.04	204	102	.....	817	49	....	184	0	636	1,350	....	.10	7.2	.49	3,300	5,270	7.0	.....
Oct. 11	d 113	32	.....	....	228	111	.....	786	53	....	107	0	754	1,330	....	.06	48	.....	3,410	6,790	6.9	.....
1961																						
Jan. 10	d 60.4	69	.....	....	261	102	.....	796	42	....	106	0	697	1,400	....	.08	7.1	.....	3,440	5,620	6.6	.....
Apr. 4	d 37.9	63	0.8	.09	273	102	.....	1,100	53	....	12	0	764	1,920	....	.12	2.8	.....	4,310	7,210	5.0	.....
July 25	e 40	.....	.....	....	....	....	.....	.....	....	....	....	0	....	.....	....	....	....	.....	b 4,390	6,760	....	.....
Nov. 3	e 50	46	.....	.86	303	108	.....	1,130	59	....	121	0	789	1,890	29	....	25	.....	4,440	7,200	6.5	.....
Dec. 20	d 151	.....	.....	....	....	....	.....	1,240	....	....	....	.....	811	2,050	....	....	....	.....	.....	7,750	6.6	.....

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Strontium (Sr)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids (calculated)	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
121. Garfield Smelter drain at U.S. Highway 40, near Saltair (Sec. 17, T. 1S., R. 3W.)																						
1959																						
Sept. 29.....	e 1	14	.....	0.04	207	67	.....	866	26	0.3	240	11	437	1,430	0.4	....	3.0	0.26	3,180	5,390	8.4	.....
1960																						
Jan. 5.....	e 7	55	.....	2.3	448	27	.....	920	28	.4	0	0	3,040	1,590	....	0.05	6.7	.64	6,160	16,100	1.70	1.001
Apr. 12.....	e 5	29	.....	3.1	390	58	.....	946	24	....	0	0	2,420	1,670	....	.14	13	.17	5,600	11,300	1.85	1.001
July 8.....	e 3	35	.....	3.9	432	76	.....	1,680	43	....	0	0	2,650	2,910	....	.21	14	.28	7,890	16,000	1.70	1.001
1961																						
Apr. 4.....	.....	92	16	24	348	63	.....	1,140	42	....	0	0	4,070	2,090	....	.13	8.6	.....	7,970	22,700	1.70	1.001
July 25.....	e 1	.....	.....	....	....	....	.....	.....	....	....	.....	.....	.....	.....	....	....	....	.....	b 7,390	16,700	....	1.001
Dec. 20.....	d 3.0	.....	.....	....	....	....	.....	1,380	....	....	0	0	1,390	2,250	....	....	....	.....	.....	11,300	2.20	.....

d Discharge measured at time of sampling.
e Estimated.
a Sample collected ten minutes after truck dumped waste.
b Residue on evaporation at 180° C.
f Includes 0.7 ppm manganese (Mn).

Table 7 — Chemical analyses of water from Great Salt Lake, Utah

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Altitude of water surface above mean sea level	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180° C	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20° C)
122. Three-fourths of a mile east of Lakeside, south of railroad fill (Sec. 23, T. 6N., R. 9W.)																					
1959																					
June 26[a]	4,195.70	5.2	....	....	428	8,690	95,900		....	352	22,600	157,000	....	....	109	.....	285,000	.....	176,000	8.0	1.217
1960																					
Apr. 12	4,195.30	4.9	....	0.03	293	7,170	84,100	4,030	....	304	15,600	142,000	....	0.32	84	.27	253,000	253,000	186,000	7.8	1.192
Apr. 12[f]	.....	5.7	....	.05	327	9,040	85,000	5,460	....	353	18,100	149,000	....	.44	82	34	267,000	279,000	187,000	....	1.214
123. About six miles west of Promontory Point, south of railroad fill (Sec. 27, T. 6N., R. 6W.)																					
1930																					
Mar. 30	4,201.0	....	....	....	361	5,780	69,200	3,380	....	221	11,500	120,000	....	....	....	.....	b 210,000	.....	.....	....	1.162
1959																					
June 29[f]	.....	5.3	....	....	330	7,560	94,000		....	307	19,300	153,000	....	....	92	.....	274,000	.....	178,000	8.0	1.213
Sept. 30[f]	.....	5.4	....	0.07	461	8,150	88,200	4,640	56	317	21,300	147,000	7.4	....	109	28	270,000	288,000	182,000	7.7	1.217
1960																					
Jan. 5.[f]	.....	4.9	....	.07	302	8,770	82,500	5,340	46	334	12,100	150,000	....	0.60	69	36	259,000	284,000	192,000	7.5	1.209
Apr. 19[f]	.....	5.3	....	.06	314	8,320	87,600	5,140	....	328	16,900	152,000	....	.33	82	32	271,000	278,000	190,000	7.7	1.212
Apr. 19[g]	4,195.30	5.0	....	.04	302	7,190	80,800	4,230	....	307	16,300	138,000	....	.30	75	28	247,000	256,000	187,000	7.7	1.194
July 19[f]	.....	4.9	....	.08	266	9,440	85,300	5,570	....	368	22,200	149,000	....	.52	90	35	272,000	284,000	172,000	7.7	1.221
July 19	4,194.45	5.2	....	.06	317	7,640	86,600	4,430	....	323	18,600	150,000	....	.49	61	30	268,000	279,000	174,000	7.7	1.214
Oct. 12	4,193.30	5.0	....	.05	326	8,670	90,500	4,720	....	340	20,300	150,000	....	.46	69	34	275,000	281,000	173,000	7.5	1.218
1961																					
Jan 11	4,193.35	5.4	2.6	.03	285	8,600	83,000	4,450	....	349	16,700	148,000	....	.45	98	.....	261,000	273,000	177,000	7.6	1.208
Apr. 6	4,193.80	....	....	....	....	.....	.....	....	....	....	....	.....	....	....	....	.....	.....	269,000	180,000	....	1.205
Nov. 8	4,191.60	7.0.	....	.11	265	9,390	84,900	5,250	....	398	22,100	147,000	....	....	154	.....	269,000	280,000	179,000	....	1.210
124. Northwest of Antelope Island, about one-eighth mile south of Egg Island (Sec. 25, T. 4N., R. 4W.)																					
1960																					
July 28	4,194.30	4.9	....	0.05	295	8,450	87,900	4,930	....	325	19,000	152,000	....	0.44	69	31	273,000	280,000	176,000	7.6	1.218
125. Northeast of Antelope Island, Lady Finger Springs beach area (Sec. 29, T. 4N., R. 3W.)																					
1960																					
July 28[b]	4,194.30	5.4	....	0.06	280	8,930	88,800	5,330	....	379	20,700	150,000	....	0.49	60	34	274,000	280,000	173,000	7.5	1.219
126. At middle of bay between Antelope Island and mainland, west of Syracuse sewage treatment plant (T. 4N., R. 3W.)																					
1960																					
July 28	4,194.30	4.8	....	0.07	291	8,660	89,400	4,670	....	383	19,600	151,000	....	0.49	69	33	274,000	280,000	174,000	7.5	1.217
127. At middle of bay between Antelope Island and mainland, west of Farmington Canyon (T. 3N., R. 2W.)																					
1960																					
July 28	4,194.30	6.1	....	0.04	380	4,830	52,200	2,650	....	341	11,400	86,900	....	0.47	75	20	159,000	165,000	146,000	7.3	1.119
128. At middle of bay between Antelope Island and mainland, west of Bountiful Peak (T. 3N., R. 2W.)																					
1960																					
July 28	4,194.30	5.7	....	0.03	387	5,670	53,600	3,030	....	358	12,400	93,600	....	0.49	88	23	169,000	180,000	152,000	7.4	1.128
129. West of Antelope Island																					
1954																					
Oct. 13.[h]	4,197.25	6.5	...	i 2.2	407	6,940	86,500	4,070	36	263	17,700	143,000	14	....	85	24	259,000	268,000	165,000	7.4	1.198
Oct. 13[j]	4,197.25	4.9	...	i 3.6	388	7,000	88,200	3,980	40	228	17,800	143,000	14	....	74	....	261,000	268,000	165,000	7.5	1.199

(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Altitude of water surface above mean sea level (feet)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180° C	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
130. East of Saltair, at intake to Morton Salt Co. (Sec. 34, T. 1N., R. 3W.)																					
1959																					
June 26	4,195.70	7.7	.....	....	439	6,420	83,800		....	277	16,900	136,000	....	....	65	.....	244,000	.....	175,000	8.1	1.185
1960																					
Feb. 5[k]	4,194.70	9.3	.....	0.02	234	3,950	43,600	2,450	15	256	7,660	74,000	....	0.40	96	17	132,000	136,000	143,000	8.1	1.095
131. At Salt Lake County Boat Harbor, outside breakwater (Sec. 17, T. 1S., R. 3W.)																					
1958																					
Apr. 6	4,197.05	6.2	2.4	0.00	241	7,200	83,600	4,070	23	251	16,400	140,000	4.2	....	....	30	m 254,000	262,000	168,000	7.4	1.197
1960																					
Feb. 29	4,194.85	5.2	.....	.08	280	7,570	85,400	4,810	33	313	14,600	146,000	....	.50	92	32	259,000	264,000	190,000	7.6	1.201
Apr. 12	4,195.30	6.1	.....	.03	324	7,060	78,100	4,130	....	297	15,400	136,000	....	.37	75	27	241,000	247,000	186,000	7.7	1.187
May 15	4,195.30	6.4	.....	.04	310	6,920	78,000	3,810	....	297	16,300	135,000	....	.32	79	28	241,000	252,000	171,000	7.7	1.190
June 1	4,195.15	6.2	.....	.08	321	6,930	79,700	4,040	....	283	16,600	136,000	....	.31	75	28	244,000	253,000	172,000	7.6	1.191
July 8	4,194.60	5.2	.....	.07	315	7,450	85,800	4,260	....	317	18,200	148,000	....	.46	69	29	264,000	274,000	174,000	7.8	1.210
July 15	4,194.50	4.7	.....	.05	343	7,940	90,100	4,770	....	308	18,200	151,000	....	.28	91	31	273,000	275,000	178,000	7.5	1.215
Aug. 1	4,194.25	5.8	2.5	.03	325	7,490	85,700	4,050	....	315	17,900	143,000	....	.26	71	.....	259,000	266,000	178,000	7.4	1.208
Aug. 15	4,194.00	5.9	.....	.05	324	7,930	92,200	4,660	....	315	18,300	147,000	....	.35	69	31	271,000	271,000	176,000	7.6	1.212
Sept. 1	4,193.65	5.3	.....	.06	319	8,170	91,700	4,790	....	322	19,300	151,000	....	.44	69	31	276,000	278,000	175,000	7.6	1.218
Sept. 15	4,193.60	5.0	.....	.05	314	8,240	90,900	4,640	....	322	19,400	149,000	....	.42	69	32	273,000	279,000	175,000	7.6	1.218
Oct. 11	4,193.30	5.5	.....	.05	324	8,400	89,400	5,040	....	332	20,200	151,000	....	.43	69	32	275,000	278,000	173,000	7.6	1.217
Nov. 30	4,193.20	5.0	2.6	.02	303	7,380	77,800	4,230	....	331	17,700	133,000	....	.42	86	.....	241,000	244,000	175,000	7.7	1.189
Dec. 15	4,193.30	5.5	2.6	.02	288	8,410	86,900	4,670	....	340	18,000	148,000	....	.45	80	.....	267,000	276,000	177,000	7.6	1.212
1961																					
Jan. 17[n]	4,193.40	22	1.8	.36	233	1,060	15,900	989	....	21	5,510	25,300	....	.20	73	.....	49,100	49,300	63,400	5.7	1.033
Feb. 1	4,193.40	5.7	2.6	.05	315	8,220	83,500	4,540	....	338	15,300	146,000	....	.45	103	.....	258,000	269,000	178,000	7.6	1.203
Feb. 15	4,193.50	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	273,000	181,000	....	1.205
Mar. 1	4,193.60	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	256,000	179,000	....	1.192
Mar. 15	4,193.70	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	268,000	180,000	....	1.202
Apr. 4	4,193.80	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	266,000	179,000	....	1.200
Apr. 17	4,193.70	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	272,000	180,000	....	1.206
May 1	4,193.65	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	273,000	179,000	....	1.208
May 16	4,193.50	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	277,000	179,000	....	1.211
May 31	4,193.40	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	281,000	180,000	....	1.214
June 30	4,193.05	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	284,000	179,000	....	1.216
July 25	4,192.55	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	285,000	178,000	....	1.215
Aug. 1	4,192.45	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	282,000	180,000	....	1.215
Aug. 15	4,192.25	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	281,000	180,000	....	1.216
Sept. 5	4,191.75	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	284,000	178,000	....	1.217
Sept. 18	4,191.70	....	.....	.....	....	.....	.....	.....	....	....	.....	.....	....	....	....	.....	.....	275,000	178,000	....	1.210
132. At intake to Solar Salt Plant, north of Burmester (Sec. 20, T. 1N., R. 5W.)																					
1959																					
June 26	4,195.70	4.2	.....	.....	463	6,980	97,700		.....	290	18,500	158,000	....	....	93	.....	282,000	.....	176,000	8.0	1.212
Sept. 29	4,194.50	6.5	.....	0.02	436	7,210	81,900	3,820	45	266	18,400	135,000	5.9	....	94	21	247,000	258,000	181,000	7.5	1.194

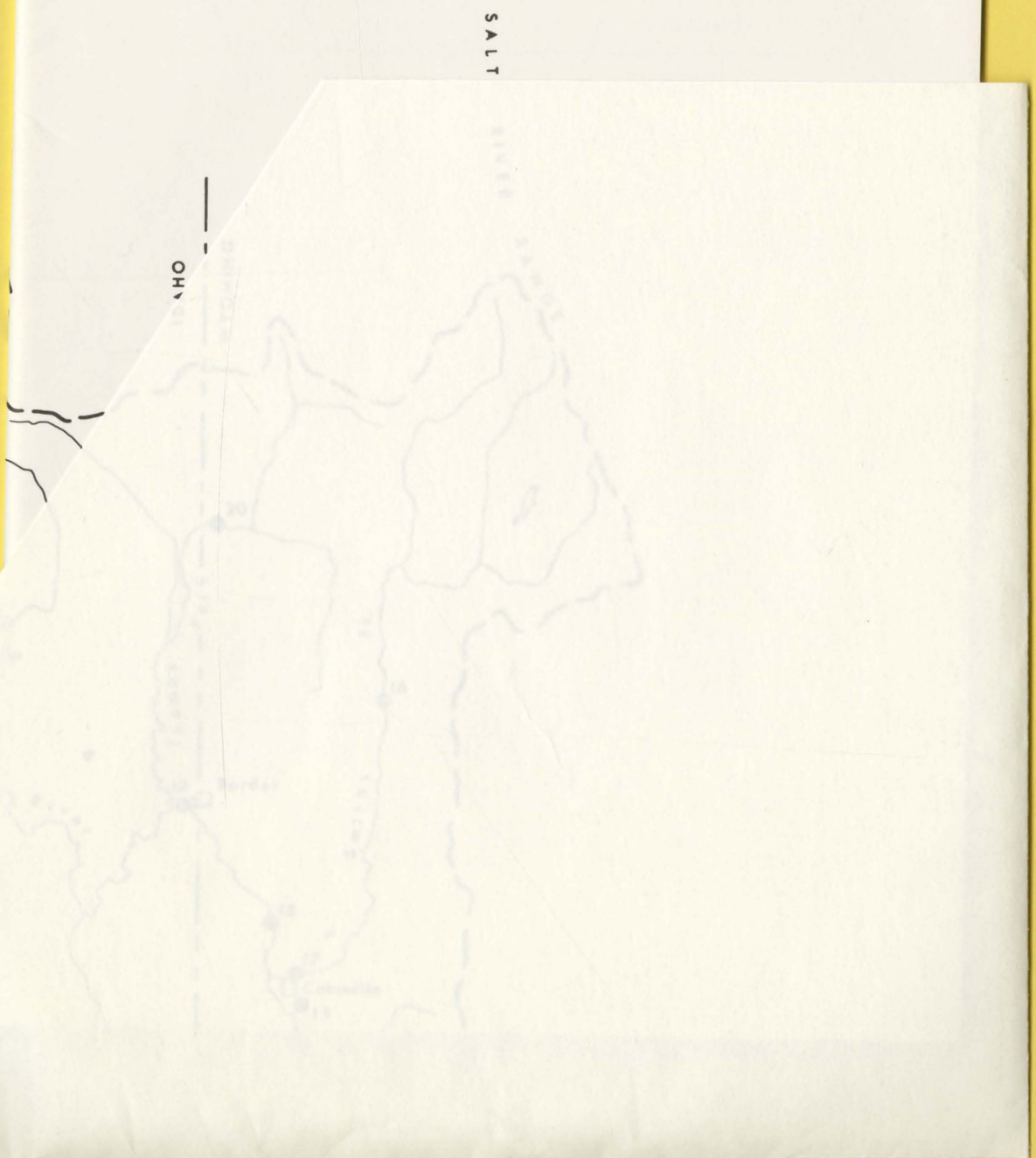
See footnotes at end of table.

Table 7. --Chemical analyses of water from Great Salt Lake, Utah--Continued

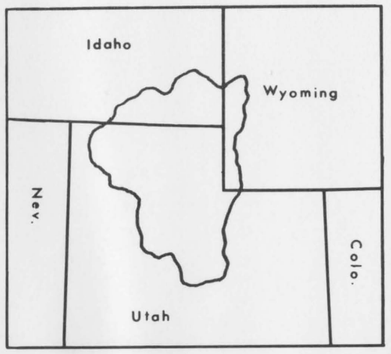
(Concentration of dissolved constituents and dissolved solids given in parts per million)

Date of collection	Altitude of water surface above mean sea level (feet)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Iodide (I)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180°C	Specific conductance (micromhos at 25° C)	pH	Density (grams per ml. at 20°C)
132. At intake to Solar Salt Plant, north of Burmester (Sec. 20, T. 1N., R. 5W.)--Continued																					
1960																					
Jan. 5.....	4,194.50	5.5	.....	0.06	274	8,210	81,800	4,940	49	325	6,900	150,000	....	0.56	96	33	252,000	264,000	195,000	7.5	1.199
Feb. 29.....	4,194.85	5.2	.....	.02	317	7,150	78,000	4,300	29	287	13,100	137,000	....	.50	93	28	240,000	244,000	187,000	7.6	1.186
Apr. 12.....	4,195.30	5.0	.....	.03	323	7,230	80,600	4,130	....	308	15,700	142,000	....	.30	83	28	250,000	262,000	188,000	7.7	1.198
July 8.....	4,194.60	5.2	.....	.07	330	7,720	84,300	4,460	....	326	18,700	150,000	....	.45	69	30	266,000	279,000	174,000	7.6	1.216
Oct. 11.....	4,193.30	4.9	.....	.05	313	8,320	90,100	4,660	....	328	19,900	150,000	....	.46	86	32	274,000	278,000	174,000	7.5	1.218
1961																					
Jan. 10.....	4,193.35	5.6	2.6	.02	320	8,510	87,000	4,780	....	350	12,300	152,000	....	.50	98	....	265,000	274,000	178,000	7.5	1.207
Apr. 4.....	4,193.80	....	....	....	....	.....	.....	.....	....	....	.....	.....	....	....	....	....	.....	277,000	181,000	....	1.210
July 25.....	4,192.55	....	....	....	....	.....	.....	.....	....	....	.....	.....	....	....	....	....	.....	283,000	177,000	....	1.219

a Composite of two samples, one collected north the other south of railroad fill.
b Includes 9 ppm bromide (Br).
f Sample collected north of railroad fill.
g Minerals precipitating from lake brine.
h Sample collected near water surface.
i Determined by thiocyanate method.
j Sample collected from 24 foot depth.
k Includes water from nearby flowing well.
m Includes 0.0 ppm ammonium (NH_4), 0.07 ppm arsenic (As), 86 ppm bromide (Br), and 0.01 ppm nitrite (NO_2).
n Includes water from Garfield drain.



UTAH GEOLOGICAL AND
MINERALOGICAL SURVEY



INDEX MAP

DEEP CREEK MTS.
PORTNEUF RANGE
Bear River
Eightmile Cr.
Soda Springs
24
Cottonwood Cr.
25
Cleveland
26
Minkcreek
Malad City
27
Preston
28
Cub R.
Bloomington
23
RANGE
Malad River
BEAR LAKE
IDAHO
UTAH
RAFT RIVER MTS.
GROUSE CREEK MTS.
Deep Cr.
Snowville
Locomotive Springs
National Wildlife Refuge
90
89
88
87
86
91
92
93
94
95
96
97
98
99
Hansel Valley
100
Spring Bay
Blue Spring Cr.
40
102
PROMONTORY
Tremonton
36
Newton Res
35
Collinston
WASATCH
Logan R.
Logan
32
33
Bear River
Hyrum
31
Hyrum Res
30
34
Blacksmith Fork
Paradise
Avon
Corinne
37
38
Brigham City
10

DEEP CREEK MTS.

PORTNEUF RANGE

SALT RIVER RANGE

IDAHO

WYOMING

WASATCH

RANGE

PROMONTORY

Soda Springs

Bear River

Eightmile Cr.

24

Cottonwood Cr.

25 Cleveland

26

Minkcreek

Malad City

27

28

Preston

Cub R.

Malad River

Deep Cr.

Snowville

Valley

Springs Wildlife Refuge

91 92 93 94 95 96 97 98 99

Hansel 100

Spring Bay

Blue Spring Cr.

40 102

Corinne 37

38 Brigham City

Neuston Res

35

Collinston

Tremonton 36

Bear River

Logan 32 33

Logan R.

31 Hyrum

Hyrum Res

30

34 Blacksmith Fork

Paradise

Avon

Montpelier 21

Bloomington 23

Bear River

22

BEAR LAKE

Thomas Fork

20

19 Border

Smiths Fk.

16

18

17 Cokeville

15

14

Rock Cr.

Twin Cr.

12

13 Sage

Fossil

11

Bear R.

Randolph

10

Woodruff

8

IDAHO

UTAH

RAFT RIVER MTS.

GROUSE CREEK MTS.

HOGUP MTS.

NEWFOUNDLAND MTS.

Deep Cr.

Snowville

Locomotive Springs National Wildlife Refuge

Hansel Valley

Spring Bay

GREAT SALT LAKE

PROMONTORY MTS.

LAKESIDE MTS.

Blue Spring Cr.

Bear River

Tremonton

Collinston

Newton Res

WASATCH

Logan R

BEAR LAKE

Logan

Hyrum

Hyrum Res

Blacksmith Fork

Paradise

Avon

Corinne

Brigham City

Bear River Bay Migratory Bird Refuge

Plain City

Promontory Point

Railroad fill

Lakeside

Ogden Bay Migratory Bird Refuge

Ogden

Hooper

Weber R.

Kaysville

Farmington

Farmington Bay Bird Refuge

Antelope Island

Bountiful

Pine View Res

Huntsville

North Fk.

Middle Fk.

South Fk.

Ogden R.

Echo

Coalville

Chalk

Rockport Lake

Oakley

Timpie

Burmester

Mills Junction

SALT LAKE CITY

East Canyon Cr

RANGE

Weber R

Last Cr

Rand

Woo

10

9

90 89 88 87 86

91 92 93 94 95 96 97 98 99 100

40 102

35 36 37 38 39

31 30 34 29

50 51 52 55 56 53 54 47 48 49

57 58 59 60 61 103

45 46 62 63 65 104 64 66 67 68 69 70 71 72 73 74 75 76,77 80 79 78 85 116 118 117 84 119 83

44 43 42 41

101

122 123

124 125 126 107 105 106 108 109 110 127 128 129 111 112

132 130 131 120 121 115 114 113

Snowville
Deep Cr.
Bear River
Newton Res
WASATCH
Logan R
BEAR LAKE
Rock Cr.
Twin Cr.
Sage
Fossil
Springs Wildlife Refuge
Hansel Valley
Blue Spring Cr.
Collinston
Tremonton
Bear River
Logan
Bear R.
Randolph
Spring Bay
Hyrum
Hyrum Res
Blacksmith Fork
Paradise
Avon
Woodruff
GREAT
PROMONTORY MTS.
Corinne
Brigham City
Bear River Bay Migratory Bird Refuge
North Fk. Middle Fk. S. Fk.
Plain City
Pine View Res
Huntsville
Evanston
Railroad fill
Promontory Point
Lakeside
Ogden Bay Migratory Bird Refuge
Ogden
Hooper
Last Cr
Weber R
Bear R
SALT LAKE
LAKESIDE MTS.
Kaysville
Farmington
Farmington Bay Bird Refuge
Antelope Island
Bountiful
Echo
Chalk Cr.
Coalville
WYOMING
UTAH
East Canyon Cr
RANGE
SALT LAKE CITY
Rockport Lake
Timpie
Burmester
Mills Junction
Oakley
Evanston
UINTA MTS.

NEWFOUNDLAND

CEDAR MTS.

STANSBURY MTS.

LAKE

SALT

LAKESIDE MTS.

OQUIRRH MTS.

Migratory Bird Refuge

Hooper

Weber R.

Kaysville

Farmington

Farmington Bay Bird Refuge

Antelope Island

Bountiful

Timpie

Burmester

Mills Junction

Tooele

SALT LAKE CITY

WASATCH RANGE

Echo

Chalk

Coalville

Rockport Lake

Oakle

Heber

Deer Creek Res

Lehi

Provo R

Provo

UTAH LAKE

Spanish

Castilla

Diamond Cr

Fork

Thistle Cr

EXPLANATION

70 Sampling site, number refers to site number in tables of basic data.

10 0 10 20 miles

scale

N

LAKE SIDE MTS.

SALT LAKE

Migratory Bird Refuge

Hooper

Weber R.

Kaysville

Farmington

Farmington Bay Bird Refuge

Antelope Island

SALT LAKE CITY

RANGE

East Canyon Cr

Weber R

Echo

Chalk Cr.

Coalville

Rockport Lake

Weber R

Oakley

Beaver Cr.

Provo R.

UINTA MTS.

Beat R

WYOMING

UTAH

Timpie

Burmester

Mills Junction

STANSBURY MTS.

Tooele

OQUIRRH MTS.

WASATCH

Heber

Deer Creek Res

Lehi

Provo R

Provo

UTAH LAKE

Spanish Fork

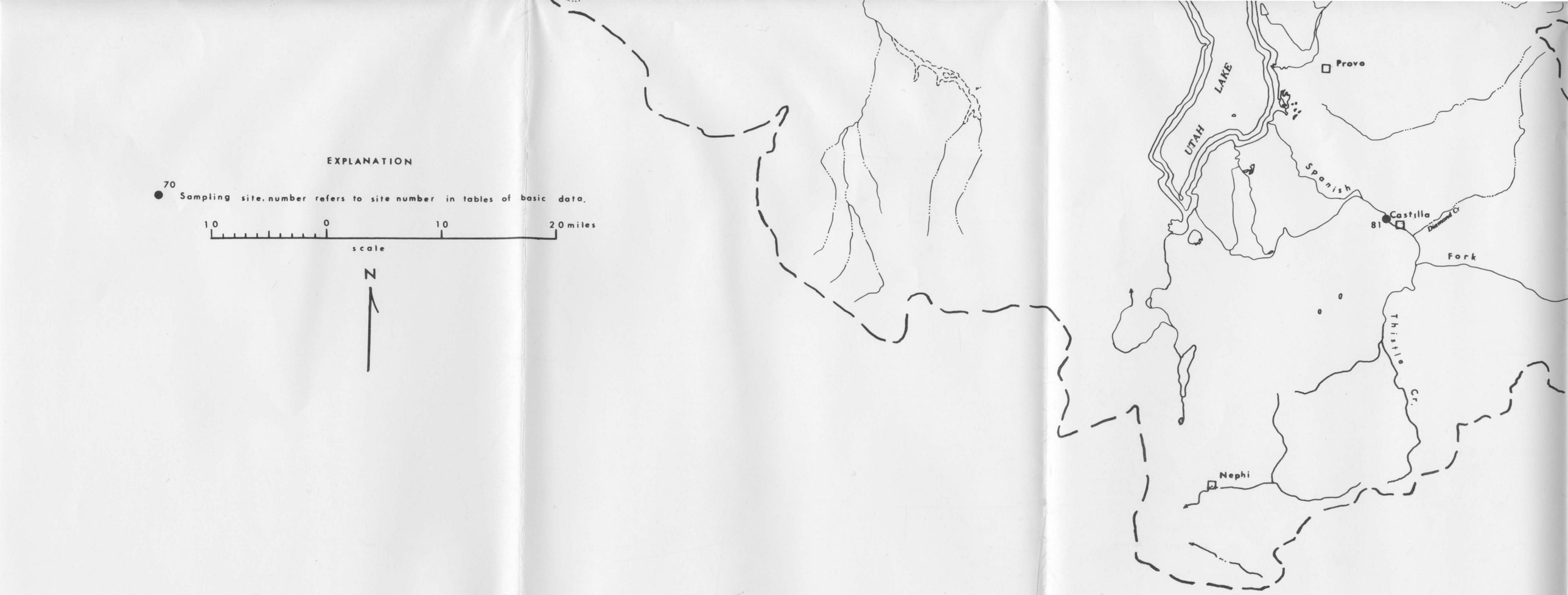
Castilla

Diamond Cr

Thistle Cr.

sic data.

20 miles



Base adapted from Sectional Aeronautical Charts by the U.S. Coast and Geodetic Survey

MAP OF GREAT SALT LAKE BASIN SHOWING WATER-QUALITY SAMPLING SITES

asic data.

20 miles

MAP OF GREAT SALT LAKE BASIN SHOWING WATER-QUALITY SAMPLING SITES

Prepared by the U.S. Geological Survey in cooperation with the University of Utah.
1963