

UTAH AND HER WATER SUPPLY.

Census Bureau Furnishes Irrigation Statistics for State For 1902.

OUR GREAT WATER SHEDS.

Total Area Supplied from All Sources 711,854 Acres, to Per Cent Increase in Three Years.

Special Correspondence.
Washington, D. C., May 8.—The United States census bureau has given out the following preliminary statement concerning irrigation in Utah in 1902:

The Wasatch mountains, extending from the southwestern to the central part of Utah, thence northward, divide the state into two regions which differ in soil, climate and topography. Western Utah belongs to the great interior basin, where the streams are small and intermittent, depending almost entirely upon melting snow for their supply. In this part of the state are several short ranges of mountains, extending in the same general direction, between which are valleys of varying width. Some of these are barren, such as the Great Salt Lake desert and the Sevier desert. Eastern Utah is a region of high canyon carved plateaus, with spurs and transverse ranges of mountains. It is drained by the Colorado and its tributaries. Between the plateaus and the canyons many of the streams flow far below the general level in narrow channels or gorges. The mean altitude is 6,100 feet, while the irrigated lands have an elevation which ranges from a little more than 4,200 feet around Great Salt Lake to about 7,000 feet in some of the higher valleys.

The soil is arid, much of it alkaline, some sections being beyond reclamation. In the valleys it is sedimentary, while on the mesas it is hard clay and rocky, but with sufficient water is very fertile. The average annual precipitation is 11.1 inches. Approximately one-third of the total for the year occurs during the five months of the growing period, May to September, inclusive. Snow covers the greater part and the farmers estimate their water supply more by the snowfall in the mountains than by the rainfall during the growing season. The precipitation in 1902 was 3.6 inches below the normal, and the light snowfall in the mountains accounts for the shortage in the water supply and for the relatively low per cent of increase in number of acres irrigated since 1899.

WATER SUPPLY.
All readily available sources have long since been utilized, and as the agricultural population is rapidly increasing, systems must be installed for controlling the spring floods and other waters now going to waste in the small streams and rivers before the irrigated acreage can be greatly extended. Many reservoirs have already been constructed and several projects of considerable magnitude are now being considered by the reclamation service of the federal government.

GENERAL STATISTICS.
In 1902, the area supplied with water from all sources in the state was 711,854 acres, an increase of \$1,851 since 1899, or 13.9 per cent for the three years. The increase for the 10 years ending 1902 was 18.8 per cent. From 1892 to 1902 the number of farms on which irrigation was reported increased from 19,241 to 21,418, or 19.5 per cent. The cost of construction increased from \$3,565,292 to \$7,232,582, or 27.3 per cent, while the aggregate of main canals and ditches increased from 2,838 miles to 3,881 miles, or 37.1 per cent. Of the total irrigated area, 687,830 acres belonging to 20,462 farms were supplied with water from streams; 20,465 acres on 734 farms from springs; and 2,849 acres on 222 farms from headgates, reservoirs and 3,704 miles of main canals and ditches for the 1,219 stream-systems was \$7,069,776, an average first cost of \$10.28 per irrigated acre; the 136 spring-systems cost \$139,542, an average of \$5.72 per irrigated acre, while the 222 well-systems were constructed at a cost of \$43,503, or \$15.27 for each acre irrigated.

DRAINAGE BASINS.
With the exception of a small area along the northeast corner of the north, the part of Utah lying east of the Wasatch mountains is drained by the Colorado and its tributaries. West of these mountains are several streams which discharge their waters into lakes or rivers, the most important of which are Bear, Weber and Jordan rivers in the northern and Sevier river in the central part.

JORDAN-UTAH LAKE DRAINAGE BASIN.
Jordan river is the outlet of Utah Lake and carries its overflow through the divide into the valley of the Great Salt Lake. The river is about 40 miles long and its waters are utilized to irrigate one of the most fertile and beautiful valleys in the whole Rocky mountain region. Its principal tributaries

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are Big and Little Cottonwood creeks, which enter the coast of Utah from the Wasatch mountains, is drained by the tributaries of this large river. Besides the Green and Grand, with their affluents, the other large tributaries in Utah are San Juan river, in the southeastern corner of the state; Rio Virgin, in the southwestern, and Fremont and Escalante rivers, which enter the main stream from the northward.

These streams usually carry a much larger volume of water than can be utilized because of the narrow valleys and the distance of the water below the level of the land. In 1902, 92,575 acres belonging to 2,984 farms were irrigated from all sources within the drainage basin. The 298 systems represented a construction outlay of \$599,924, an average of \$19.37 per irrigated acre. The aggregate length of main canals and ditches was 371 miles. In 1902, 92,575 acres belonging to 2,984 farms were irrigated from all sources within the drainage basin. The 298 systems represented a construction outlay of \$599,924, an average of \$19.37 per irrigated acre. The aggregate length of main canals and ditches was 371 miles.

SEVIER RIVER DRAINAGE BASIN.
Sevier river rises on the plateau 7,500 feet above the sea in southern Utah, flows northward for 200 miles through valleys between the mountain ranges and then turns abruptly to the west and south, entering Sevier lake where its waters evaporate or sink below the surface. Its principal tributaries are San Pitch river, entering from the south, and South and East Forks of Sevier river.

In 1902, water from all sources within the drainage basin was utilized to irrigate 131,048 acres belonging to 3,424 farms. The 74 systems, including 4,411 miles of main canals and ditches, represented a total construction cost of \$328,681, or \$8.90 per irrigated acre. Sprinkles within this drainage basin supplied 29 systems, which irrigated 4,083 acres of 227 farms. The total construction cost was \$29,891, an average of \$9.77 per irrigated acre. There were 80 well-systems constructed at a cost of \$17,688. Eighty farms, with an irrigated area of 1,010 acres, were thus supplied at an average construction cost of \$16.47 per irrigated acre.

BEAR RIVER DRAINAGE BASIN.
Bear river heads in the northern corner of the Utah-Nevada border, crosses into Utah for a short distance in the northeastern corner and, after making a large semi-circular northwestern turn, flows through parts of Wyoming and Idaho, again enters Utah 50 miles west of the eastern boundary. Here it flows into the Cache valley, where it receives the water of Little Bear river and its tributaries. Near the center of the west side of this valley the river passes through Bear river canyon into Bear river valley, which it traverses between high bluffs, and flowing into Great Salt Lake. Many small tributaries, heading high in the mountains, furnish a steady supply to the main stream all along its course.

In 1902, 142 irrigation systems were supplied from all sources within the drainage basin in Utah and 141,616 acres belonging to 3,150 farms were irrigated. The necessary irrigation works, including 616 miles of main canals and ditches, were constructed at a cost of \$2,337,638, an average of \$16.93 per irrigated acre. The 41 spring-systems, representing a construction cost of \$206,254, headed in the main stream and irrigated 35,660 acres belonging to 680 farms, an average of \$42.47 per irrigated acre. The aggregate length of main canals and ditches was 164 miles. The 41 systems, supplied with water from Logan river and tributaries represented a total construction cost of \$163,170 for the 168 miles of main canals and ditches and other irrigation works. There were 35,592 acres belonging to 1,208 farms thus irrigated at an average first cost of \$42.50 per irrigated acre. Other tributaries of Bear river irrigated 84,420 acres on 1,020 farms, almost as many acres as the main stream. The 51 systems, including 134 miles of main canals and ditches, represented a construction outlay of \$117,812, an average of \$2.43 per irrigated acre. Water from springs was utilized through 27 systems having 50 miles of main canals and ditches to irrigate 5,910 acres on 228 farms. The systems were constructed at an initial cost of \$52,730, an average of \$8.91 for each acre irrigated. Fourteen well-systems irrigated 129 acres belonging to 14 farms. The total construction cost of the well-systems was \$1,672, an average cost of \$12.96 per irrigated acre.

WEBER RIVER DRAINAGE SYSTEM.
The headwater tributaries of Weber river rise on the northeastern slope of the Uinta Mountain range. The river, with a course of about 125 miles, flows northward into Great Salt Lake. Of its tributaries, Ogden river and East Canyon creek are the most important. The valleys, except in the lower course of the main stream, are very narrow and the irrigated lands are in long strips close to the streams.

In 1902, there were 252 systems supplied with water from all sources in the drainage basin, and 80,117 acres belonging to 2,770 farms irrigated. The aggregate length of main canals and ditches was 429 miles of main canals and ditches, were constructed at a cost of \$249,432, an average of \$13.99 per irrigated acre. There were 42 farms supplied with water from springs. The 13 systems were constructed at an initial cost of \$7,485, an average of \$14.65 for each of the 510 acres irrigated. Twenty-nine well-systems irrigated 205 acres belonging to 29 farms. These systems represented a construction outlay of \$2,800 for wells, pumping plants, reservoirs, etc., an average cost of \$13.67 per irrigated acre.

COLORADO RIVER DRAINAGE BASIN.
The Colorado river is formed by the

CONTEST OVER FAIR ESTATE SETTLED.

Suit of Hannah E. Nelson Against Mrs. Oelrichs and Mrs. Vanderbilt Dismissed.

AMOUNT PAID IS UNKNOWN.

Basis of Litigation Was, Who Died First, Charles L. Fair or His Wife? Both Killed Accidentally.

New York May 11.—By consent of the plaintiffs the action against Mrs. Theresa Oelrichs and Mrs. Virginia Vanderbilt, brought by Hannah E. Nelson, mother of Mrs. Charles L. Fair, was dismissed here today in the state supreme court. A final judgment was rendered in favor of the defendants. Mr. and Mrs. Charles L. Fair were killed in an automobile accident in France in 1902.

In a statement issued after the judgment had been entered the attorneys for Mrs. Nelson and her family made it known that a settlement satisfactory to both sides had been effected. They announced also that, by common consent of the persons interested, the sum paid in settlement would not be made public.

The action was brought in February, 1903, to set aside the settlement made at San Francisco in August, 1902, between Mrs. Nelson and her family and Mrs. Oelrichs and Mrs. Vanderbilt, sisters of Charles L. Fair, relative to the settlement of the estates of Mr. and Mrs. Fair. Under this settlement Mrs. Nelson received \$125,000, and members of her family who were plaintiffs with her in the action received smaller sums, varying according to their relationship, from \$10,000 to \$1,000.

Charles L. Fair left an estate valued at about \$7,000,000, and it was maintained by the Nelsons that he died before the wife, to whom he had willed his entire estate in case she survived him. The plaintiffs allege that they had been induced by fraud and misrepresentation on the part of the defendants to accept the sum paid them and that they did not learn until afterward that Mr. Fair died first.

Mrs. Oelrichs and Mrs. Vanderbilt maintained that Mr. Fair died after his wife, and that under the provisions of his will the property became theirs.

During the course of the action several commissions were appointed and testimony was taken at the scene of the accident in France, in this city and in San Francisco. Much of this testimony was conflicting. Two French witnesses, Louis and Alfred J. McRann, testified in this city that they saw the accident and that Mr. Fair was killed instantly, while Mrs. Fair lived several minutes. These witnesses were brought on their return to Paris because of their testimony, and on a charge of perjury were convicted and sentenced to three years' imprisonment. In their statement the attorneys for Mrs. Nelson say they were moved to agree to a settlement by the conflicting nature of the evidence in the case, the great expense of the litigation, and by the fact that Mrs. Nelson was advanced in years and desired to be relieved of the strain of further fighting the case.

In accounting for the willingness of the defendants to reach a settlement the attorneys said in part: "The technical allegation of fraud in the complaint was extremely distasteful to Mrs. Oelrichs and Mrs. Vanderbilt. Neither of them had taken any personal part in arranging the details of the San Francisco settlement, and both had presumed that everything had been done properly and to the satisfaction of every one concerned."

CAPT. PORTER DEAD.
He Was One of the Pioneers of Montana.

Great Falls, Mont., May 11.—Capt. Sheldon T. Porter, one of the pioneers of this state and reputed to be the original G. A. R. man of the northwest, died at 10 o'clock this morning, aged 71 years. The deceased came to the state about 25 years ago. During the Civil war he served as first lieutenant in the First battery of the 1st at Connecticut light artillery. In 1868 when the G. A. R. was organized at Deatur, Ill., he was one of the charter members.

Firing on British Mission.
New York, May 12.—An irregular rifle fire on the British mission to Tibet was kept up from Jong all through Sunday according to a Times dispatch from Gyang Tse. One mission follower was wounded in the hip and died a few hours later. Finally, mounted infantry went out and drove in the Tibetan horsemen, inflicting a small loss. The Tibetans were visible in large numbers in all parts of Jong but made for cover when the British opened a long range fire.

COLLUSION CHARGED.

Purpose Was to Get Case Into a Federal Court.

Chicago, May 12.—Collusion on the part of the complainant in the 75 cent gas case in order to make the United States circuit court take jurisdiction of a question which it already had refused to take, was charged today by the city of Chicago to the bill of Darius O. Mills, a stockholder in the People's Gas, Light & Coke company. Mills' case was filed after Judge Grosscup decided that he had no jurisdiction to pass upon the power of the city to regulate the price of gas when the question was presented in a suit by the gas company. He ruled in this case, however, that the gas company has no contract to charge a uniform price of \$1 for gas in Chicago, and his decision was affirmed.

When Mills filed his bill the city interposed a demurrer, but Judge Grosscup took jurisdiction on the ground that Mills is a resident of California and a diversity of citizenship existed. He decided that the right to regulate the price of gas is vested in the state and not in the city, and the answer just filed is a step toward securing a review of his decision.

Lost Schooners Sighted.
Portland, Or., May 12.—A special to the Oregonian from Victoria, B. C., says: Capt. O'Leary reports from Clayquot, west coast of Vancouver island, that he saw the Victoria fishing schooner Triumph at sea on April 25. He did not think to her, but is positive it was the Triumph. Deserter from the sailing schooner Oscar and Hattie arrived at Ladysmith on the steamer Santa Ana and say they saw the sailing schooner Umbria in Yakutat bay nine days ago. Both schooners had been given up for lost. The triumph is provisioned for a year and is supposed to have sailed north without reporting on the west coast.

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