

**OFFICIAL OFFICE COPY**

FIRST BIENNIAL REPORT

OF THE

State Board of Irrigation

OF THE

STATE OF NEBRASKA,

FOR THE

YEARS 1895 AND 1896.

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PREPARED BY

W. R. AKERS,

*Secretary State Board  
of Irrigation.*

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NEBRASKA STATE  
HISTORICAL SOCIETY

LINCOLN:  
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1897.

OFFICE STATE BOARD OF IRRIGATION, }  
LINCOLN, NEB., November 30, 1896 }

*To His Excellency, Silas A. Holcomb, Governor:*

DEAR SIR:—In accordance with the provisions of Section 10, House Roll No 443, of the Legislature of 1895, I herewith hand you my biennial report of the doings of this Board from the time of the organization of the same on the 24th day of April, 1895, to the last day of November, 1896.

Very respectfully submitted,

W. R. AKERS,  
*Secretary.*

STATE BOARD OF IRRIGATION.

SILAS A. HOLCOMB, - - - - - *Governor.*  
A. S. CHURCHILL, - - - - - *Attorney General.*  
H. C. RUSSELL, - *Com. Public Lands and Buildings.*

OFFICERS OF THE BOARD.

SILAS A. HOLCOMB (Governor) - - - *President.*  
W. R. AKERS, - - - - - *Secretary.*  
E. T. YOUNGFELT, - - - *Assistant Secretary.*  
ADNA DOBSON, }  
FRANK BACON, } - - - - - *Under Secretaries.*

# NEBRASKA STATE HISTORICAL SOCIETY REPORT.

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At the time Hon. R. B. Howell, first engineer and secretary of this Board, retired from the same, he made a true and accurate report of the business transacted by the Board up to that time, which I publish herewith in full, and simply add to the same by bringing it up to November 30, 1896. I also add to my report several special reports made to me by Adna Dobson, in cases where he had been specially authorized to make investigations and report his findings to me. Also a report of stream gauging by Assistant Secretary, Emil T. Youngfelt and Prof. O. V. P. Stout of the United States Geological Survey. I desire to say in this connection, that I made arrangements with Prof. O. V. P. Stout, of the State University whereby I secured double work; in other words, by furnishing him an assistant in the person of Mr. Youngfelt. I received the benefit of the work of both these able engineers, and the Professor received a like benefit. At least one-half or more of the expenditures was borne by the United States government. I have also selected some valuable papers read at the several Irrigation Associations in the state, touching the history of irrigation and irrigation legislation, and by permission of President Wolfenbarger, who has copyrights on the same, I publish them. It is earnestly hoped that these publications may prove both interesting and valuable to the people of the state who may be interested in irrigation. There are a number of features in connec-

tion with irrigation which would have been profitable to have investigated, but which I have been unable to do for want of time and means with which to work, among which might be mentioned irrigation by wind-mills and artesian wells. There is more of this kind of irrigation than is generally known by the people of the state, and some very credible work has been done in this way. Some men have made more money during the year 1895 from a single wind-mill plant than neighboring farmers have been able to make from a farm of 160 acres without irrigation. It is hoped that farmers will continue to erect wind-mills and reservoirs wherever they are unable to secure ditches. The fact is, that the office has been handicapped during the past year for want of funds. It will be noticed by reference to the report of Hon. R. B. Howell, that the expense account for stationery, postage, etc., was overdrawn \$26.00 when he left the office. There was no money with which to pay stenographers for the last several months, and the money to pay two stenographers, buy postage and stationery, was collected from the people, which is wrong, and it is hoped that the next legislature may see it to be in the interest of the state to make a liberal appropriation, in order that these several investigations may be fully carried out. A continuance of stream gauging should be kept up for several years, and much field work should be done in order to locate, plat, and map all sites where water could be stored in reservoirs in order that the waters that are otherwise wasted may be conserved, and the area irrigated thereby could at least be doubled.

I think it proper in this connection to give a general history of irrigation in our state as far as possible, and I have asked a number of gentlemen to write brief his-

tories of irrigation in their respective counties, but as yet have received none. However, if they come in in time, I will incorporate them in this report. I do this in hope that the people of the state in general may see what has been done by others, and seeing and knowing what others have done will be encouraged to greater exertion themselves, and the business of irrigation will be greatly stimulated and more widely spread over our state.

Probably the first irrigation in the state was that practiced at Sidney by the United States government. Here a small ditch was constructed for the purpose of irrigating the trees surrounding Fort Sidney and the lawns in front of the officers' quarters and the barracks of the men. This, however, did not do much to educate the minds of Nebraskans to the belief that irrigation could be used in this state for the irrigation of ordinary crops. The water for this ditch was taken from the Lodge Pole creek. A number of gentlemen, however, along the creek at a later date, began to take out small ditches from this creek for purpose of irrigating grass land, and a large amount of grass land was actually irrigated, and still it did not seem to occur to any one that it could be practically used to raise ordinary crops. A little later on, in 1884, I am informed, an eccentric individual, one Lord Ogelvie, of Colorado (claimed to be an English nobleman), constructed a ditch in the neighborhood of North Platte, taking water from the North Platte river some miles above that city, and watering a large amount of land on the peninsula between the two Platte rivers. But the people of the neighborhood did not share his enthusiasm and the ditch was not used for practical irrigation until about the year 1890, and then only by a few men who came from Colorado, and in 1891, when there was a considerable rain fall, these men were

merely made a laughing stock by men who had reasonable success in farming where there were no ditches. But the tide is now turned and the men under this ditch and other ditches constructed since that time, have been continually successful in crop raising and are fast becoming successful farmers. I had the pleasure of visiting this locality during the crop season this past summer, and I am obliged to confess that I never in my life saw finer crops of wheat, oats, and corn, in fact, all kinds of farm products.

The progress of irrigation in Lincoln county has been phenomenal as well as in Dawson and other counties in the state, and I think I am not putting it too strongly when I say, that never in the history of irrigation countries has the art progressed so rapidly or made such rapid strides in any country in the world. As early as 1886 there were some small canals built for irrigating hay land along the Republican Valley, but not until 1890 were steps taken by W. D. Williams to take out water for irrigation on a large scale. The franchise of this ditch was afterwards purchased by the Culbertson Water Power and Irrigation Company, and a large ditch was constructed costing over \$140,000, and other ditches were immediately constructed covering nearly all the bottom lands along the Republican River, among which is the Meeker Ditch and many smaller ones. I simply desire to say that all of these enterprises have been crowned with success, and the only question in any of them is the water supply, which is more limited in this valley than most parts of the state where irrigation is practiced. But large fields of alfalfa and other crops which are grown in great abundance are making farming a great success in this valley. The first irrigation in the state of Nebraska for general crops was practiced in Scott's Bluff county, where a few

gentlemen from Colorado made a settlement and organized the Farmers' Canal Company, and incorporated under the laws of the state of Nebraska, and at once commenced the construction of a small ditch. The country over which this ditch was to be built was very rough, and the projectors met with many obstacles which rendered the construction very difficult. But, as I now intend to publish in this report a letter written by me and published in the *World-Herald*, which gives the history of Scott's Bluff county, I will leave the further history in this county to that description.

#### THE LETTER.

The valley of the North Platte through Scott's Bluff county varies from two to six miles in width on each side of the river, is a splendid sandy loam, and is capable of producing any kind of crops grown in this altitude or latitude in any country in the world. But, as I am asked to write the history of irrigation, I will leave the productiveness of the soil to someone else; suffice it to say, that, in my opinion, there is no finer country in Nebraska or any where in our latitude for farming, than the great Platte valley under a proper and economic system of irrigation. Irrigation is the life, the salvation of western Nebraska, and is the hope of eastern Nebraska. The people in this country in 1888 and 1889 were miserably poor, having emigrated from eastern Nebraska, Iowa, and Kansas, in order to secure the benefits of the homestead act, and believing that irrigation would not be necessary, or rather knowing absolutely nothing about irrigation, they undertook to farm, and for two or three years there was enough rain to produce partial crops, in fact, in some localities, very good crops. But in the years following, there was a terrible drouth.

These people, as a rule, "had lost no irrigation ditch," and were not in search of a place to irrigate, and when one who had some idea of what irrigation meant would dare to suggest that irrigation would solve the question uppermost in their minds, as to whether western Nebraska could ever be made a farming country, you could hear such expressions as the following: "If I have to irrigate, I will emigrate instead." "How long will it take to build a ditch to irrigate this valley?" "We will all be dead." "If I have to put so much money in a ditch in order to have a farm, I will go back to where God irrigates," and a thousand and one other expressions, many of them more forcible, if less elegant, than the above. But in the years of 1887, 1888, and 1889, the drouths were quite universal, and the all absorbing question was, "Will western Nebraska ever be a farming country?" There were those who were ready to say no, because they did not desire that it should be, and there were those who said yes, we have been through the same thing in eastern Nebraska, and the history of eastern Nebraska will repeat itself in western Nebraska, and there were a few who dared to say, Without irrigation farming must be a failure in this part of Nebraska.

In regard to the history of irrigation in Scott's Bluff county, I have to say, that in the fall of 1887 a few gentlemen who had been residents of Colorado and there learned something of the benefits of irrigation, among whom were C. W. Ford, the present county clerk of the county, John W. Weeks, who is also still a resident in the county and is the owner of one of the best irrigated farms in the county, John Richards, now a resident of Colorado, and a few others, incorporated the Farmers' Canal Company and commenced the construction of a small canal. The first act after incorporating was the

filing of a notice of appropriation of which the following is a copy:

*To Whom it May Concern:*

NOTICE OF APPROPRIATION.

Notice is hereby given that the Farmers' Canal Company of Cheyenne county, organized under the laws of the state of Nebraska, have appropriated a sufficient amount of water to be taken from the North Platte river at a point near where the section line of section 10, township 23, range 58, comes in contact with said river bank to fill a canal forty feet wide at the bottom, and to convey water to the depth of four feet. Dated this 16th day of September, 1887.

(SIGNED.)

W. R. AKERS,  
*President.*

Attest:

G. W. FORD,  
*Secretary.*

Filed for record this 19th day of September, 1887, at 9 o'clock A.M. and recorded in book two of miscellaneous record at page 195.

F. H. DECASTRO,  
*County Clerk.*

This is the first paper filed in the state of Nebraska, making a claim to water for irrigation purposes, and is the first step taken to make a legal appropriation of water in the state, though there had been some earlier attempts to irrigate in the state, all of which have heretofore been mentioned so far as they have come to the knowledge of the writer. The country over which the Farmers' Canal was to be constructed was very rough. The people, all non-believers in the business of irrigation and opposed entirely to the idea of irrigation, made the enterprise move very slowly, and long before the Farmers' Canal had water to use for irrigation the drouth had convinced many of

the inhabitants of the valley that irrigation was essential, and little groups of men formed in different parts of the county for the purpose of constructing small ditches. The first public demonstration which the writer knows of was a public meeting called at Minitare, at which a number of irrigationists congregated and discussed the question of building a ditch the entire length of the valley on which the Farmers' Canal is now being constructed. The proposition, however, met with much opposition, and the only result of this meeting was the organization of the Minitare Ditch Company, the leading members of which were George W. Fairfield, Theodore Harshamn, A. W. Mills, and others. This company moved along with wonderful push, and by the summer of 1888 had their ditch constructed some six or eight miles in length, and are entitled to the honor of having the first ditch in the North Platte valley in Nebraska, which made a practicable and profitable use of water for the production of crops. By this time the people were being rapidly converted to the belief that irrigation was necessary, and other enterprises were started. First in point of time was the Winter's Creek ditch, starting some seven or eight miles above Minitare, and covering something like seven or eight thousand acres of the very finest land in the state of Nebraska. This company was organized, as I remember it, with Thomas Reeves as president, Lot L. Feltham, secretary. Its membership at the time of commencement of construction consisted of sixteen members, among whom were the above number and others. A ditch was commenced on the 5th day of December, 1888, and on the first day of the next May, 1889, the water was conducted the entire length of the ditch, which was ten miles. While there were but sixteen members to start, before spring there were about thirty interested, and immediately all hands commenced

farming, and from that day the question of successful irrigation was settled, and there never has existed a doubt in the mind of anyone in Scott's Bluff county as to the utility and practicability of irrigation. I desire to add that the men who built this ditch still reside under the line of the ditch, and are fast becoming the most successful farmers in the state. The country, which was nothing but a desert, is now one of the most beautiful farming countries in the state of Nebraska.

Immediately after the opening of the Winter's Creek ditch, another group of farmers became interested and said, "Well, if these Winter's Creek fellows can build a ditch so easily, we can also build one." And as a result, the Enterprise Ditch Company was organized with William Barber as president and Chas. A. Simmons as secretary. Their aim was to cover about 12,000 acres of beautiful valley land, and the ditch was to be twenty-three miles in length. This was a much more difficult ditch to construct, owing to the length, than the Winter's Creek, and no more people to do it; consequently it took a longer time to finish the work. The work of surveying was commenced in the middle of the winter, some time, I think, after the new year of 1889, and the ditch was not used for watering crops until July, 1890, and was then in an unfinished condition. In fact, this ditch has never been fully completed until very recently. In the first place it was sixteen feet in width on the bottom, which was found to be too small to accommodate the land under it, and it is now enlarged to a twenty-four foot ditch, carrying two and one-half feet of water. The country was very new and the people miserably poor, and this work progressed necessarily very slowly. With the Minitare Winter's Creek and the Enterprise ditches at work raising fine crops on all the land cultivated, the irrigation crank of a few years

ago had nothing to do but to listen to the croaking of the men who before had been enemies of irrigation, and hear them tell how they had always been the strongest advocates of irrigation in the country. In fact, to hear some of the former enemies of irrigation and doubting Thomases talking of the trials and adversities which the early irrigationists had to contend with, one would imagine that he had struck the original irrigationists himself. All right, let it be so. It was always so. Even when "Sallie killed the bear," her husband had to be included, and it was "I and Sallie who killed the bear."

With these educational forces at work, the people soon became of one mind, and one ditch organization after another sprung into existence on each side of the river, and from the Wyoming line on the west to the eastern side of the county, all the land is now under ditch and practically all of it reclaimed from its desert condition and is now a great oasis in the desert. Immediately after the events above recorded the people of Mitchell Valley on the south side of the river and west of Scott's Bluff organized the Mitchell Ditch Company, and constructed a very fine ditch twenty-four feet wide on the bottom and twenty-five or twenty-seven miles in length, covering perhaps 20,000 acres of very fine land. The greater part of the ditch was built by stockmen who had some means, and it was pushed with greater vigor than any ditch which had ever been constructed in the country. The same has been true of the country under this ditch. The country has been developed faster than any part of the county and it is now in fine condition, and the people are among the most prosperous in the state. The sod houses of the past are fast giving place to large, fine, frame houses and barns, and the country is fast assuming the appearance of an old settled country. Some of the farmers, or ranchmen as they

are called in western Nebraska, are growing rich from the products of their farms. I might mention one or two instances under this ditch that I think will compare in profits with any farming country anywhere to be found, one of which is the sale of a farm by one Herman Beasley to four young men who assisted him in his haying operations, none of whom had any money, Beasley agreeing to take his pay from the proceeds of the farm, allowing so much per ton for hay and so much per bushel for alfalfa seed. Now, at the end of three years, the young men have their farm practically paid for, and all from the proceeds of the farm itself.

Another instance is the alfalfa seed crop of John R. Stitts this year, 1896. He had forty acres of alfalfa and from this he took an average of thirteen bushels and three pecks of seed per acre, which is worth at least \$3 per bushel, besides a crop of hay. It is fair to say that the hay crop and the straw will pay all the expense of cutting and thrashing the seed, which will leave him \$41.55 clear profit on his land per acre, or an interest of ten per cent on \$410.50 per acre. I have no doubt if you had offered John \$40 per acre for his land before he cut this crop you would have got it.

While these events were going on in the west end of the county, the people in the east and middle were not idle. The people of Gering built a nice little ditch and undertook to fill it from the river by means of an immense steam pump, and they did irrigation in this way and irrigated a considerable amount of land, and fully demonstrated that they were the right kind of material, and that they were thorough converts to the belief in irrigation. But they also demonstrated that irrigation in this mode was much more expensive than from the river by the use of open ditches. They disposed of their pump

and boiler and opened the ditch to the river, and now have a nice tract of country covered by what is known as the Central Ditch, and good crops are raised each year. Also farther east, on each side of the river, other enterprises sprung into existence, and in April, 1889, the Castle Rock Irrigation Company was organized and commenced the construction of a very fine canal, heading some four or five miles east of Gering, the county seat of Scott's Bluff county, and running about seventeen miles east and south-east along the edge of the Bluff, and covering about 10,000 acres of very fine bottom lands. This ditch is constructed on a somewhat different plan from the rest of the ditches in the immediate neighborhood. It is eighteen feet on the bottom for the first nine miles and then divides, and for the rest of the distance there are two ditches, each about eight feet on the bottom, and carries about three feet of water in depth. On the north side of the river, near the east line, the people of Bayard have constructed a fine ditch heading in Scott's Bluff county, and traversing the county and into Cheyenne county, covering the beautiful town of Bayard. I examined this ditch during the past summer and found it to be one of the very best constructed ditches in the state, covering a fine country, and for the length of time the same has been constructed, I think is doing excellent work, and I venture the prophecy that it will not be long until the farms will be among the best in the country. On this ditch, at or near the town of Bayard, is a most excellent chance to drop a water power sufficient to do manufacturing on a large scale, and the water, after passing the wheels and making the power can be used for irrigation. Thus, the water power will be inexpensive or practically a find to the owners of the ditch, and I very much mistake the character of the man at the head of the enterprise, if in

the near future they do not have a power developed that will astonish even the projectors of this enterprise. About the 20th of March, 1893, Yorrick and Carroll Nickols commenced the construction of the Ramshorn ditch, in the western part of Scott's Bluff county, and rapidly pushed the same to completion. Some time before the ditch was finished it was incorporated and several other parties became interested and assisted in the construction. A very nice ditch was built, covering some 2,000 acres of land. The ditch was constructed by Mr. A. B. McCosky, engineer, and has been a success. I see no good reason for the name of this ditch, it being as straight as contour ditches usually are. I desire to say in a general way that the county has probably 75,000 acres of land under ditch, not more than one-fourth of which has ever been broken out and cultivated, owing to the poverty of the people, who started to irrigate after they had eaten up all they took with them, and who were reduced to such poverty that nearly every man who engaged in the building of a ditch in the county was compelled to place a mortgage on his team to procure the means with which to feed his team and family while he worked. When you take into account the fact that the county never had 500 voters, and that not one-half the voters or land owners are interested in irrigation, and that they were poorer than jack rabbits in summer, I say that the few irrigationists of Scott's Bluff county have accomplished more than I ever saw done by the same number of men in any country in my life. Think of 75,000 acres of desert transformed to a veritable garden and under 148 miles of ditch (and when I say ditch, I mean ditch), for all the ditches of the county are large, fine ditches. One hundred and forty-eight miles built and owned by less than 200 men, and no debt upon them. You ask, "how this

was done?" I answer, by organizing stock companies, selling the stock to individuals, and they paying for it almost entirely in work. In other words, these 200 men have created \$250,000 in wealth, simply dug out of the ground. No bonds, no debt—the best way to build a ditch in any county.

The Farmers' Canal, before spoken of, was sold by the original proprietors, owing to the cost of construction, to several gentlemen whom it was believed at the time were able to build it at once; but the truth very soon developed that these men did not have the money, and were unable to get it to finish the ditch. However, this company has done an immense amount of work, and the ditch is so far constructed as to make it a sure thing in the near future. The company has constructed one of the finest head-gates in the northwest at a cost of about \$12,000. The gate has a front opening of about one hundred and fifty-six feet, and is controlled by twenty-seven head-gates, and is capable of taking in an eight-foot head of water. The ditch is to be sixty feet in width on the bottom and is intended to carry eight feet of water in depth. The first mile is completed sixty feet wide on the bottom, and from there for twenty miles it is finished to thirty feet on the bottom. This ditch is seventy-one miles in length, and will probably when finished be eighty-five miles in length, and will cover about 150,000 acres of the very finest land in the state. When a railroad is built in this valley, and this ditch and the Laramie and Scott's Bluff on the south side of the river, which is to cover over 100,000 acres, and which is now being pushed along by the enterprising citizens of Gering is finished, the valley below is destined to be the finest part of the state of Nebraska. And I predict that these things are all in the near future. The development of irrigation has been mar-

velous in Nebraska, and is still in its infancy. When all the waters are taken and used for irrigation, and our people understand the real value of irrigation, and begin the work of storing the waters that are now run to waste, and spread it over the highlands and divides, then Nebraska will be truly great. Let every lover of Nebraska, regardless of what his business may be, join the throng of irrigationists, and let us not stop or let the interest abate until we have saved and used all the water which flows through our state, and then the millenium will have come to us.

Following is the report of Hon. R. B. Howell on retiring from this office:

OFFICE STATE BOARD OF IRRIGATION, }  
LINCOLN, NEB., April 1, 1896. }

*To the Honorable State Board of Irrigation:*

GENTLEMEN—The ten months that have elapsed since the State Board of Irrigation entered upon the active discharge of its functions and duties have been occupied largely by the work of organization deemed essential to the future usefulness of the department.

After the induction of the administrative officers of your Honorable Board into office, transcripts of notices of appropriation filed with the various county clerks of the state, in compliance with the general irrigation law of 1889, were collected from forty-four different counties. These transcripts formed about 1,000 pages of transcript, setting forth in a meager manner the claims of 780 alleged appropriators of the public waters of the state.

To each of those claimants of record, blank claim affidavits of a form and character prescribed by your engineer and secretary were then forwarded for the purpose that they might properly be filled out and returned for the

more definite information of the board, respecting appropriations actually made. Statistics from 400 of these claim affidavits filed on or before the 31st day of December, 1895, show that there were under construction in this state, on or before April 4, 1895, when the present irrigation law became effective, some 2,219 miles of canal, estimated to cost when completed, \$2,752,390 covering 1,061,017 acres of land. Of this total mileage, 1319 miles have been completed at an expense of \$1,456,369.

As soon as the collection of claim affidavits had proceeded to the point deemed necessary, the state was divided into watersheds, and the adjudication of the various claims represented undertaken.

Hearings for the purpose of giving claimants an opportunity to be heard by the board in support of their alleged appropriations were first held within the watershed of the Republican river, and upon the conclusion of the work therein the watersheds of the Elkhorn and the Loup rivers were taken up in the order indicated.

These hearings were set for and covered twenty-seven different counties, forming a docket of 373 cases, 353 *in re*, and twenty contests. Of these 373 cases, 220 have been reviewed and passed upon by your engineer and secretary, leaving the docket still encumbered with 153 cases.

In addition to the claim affidavits above enumerated, 289 applications for permits to appropriate the public waters of the state have been filed with the board since its creation. Statistics from 220 of this number filed on or before the 31st day of December, 1895, show that the total additional mileage of canals proposed subsequent to April 4th, of last year, amounted to 2,112 miles, estimated to cost \$6,209,285, covering 2,367,689 acres.

None of these applications have been granted, thus far, as directed by your honorable board by resolution, adopted

May 16, 1895. The same being held in this office for record until such time as the adjudication upon each watershed effected have proceeded to such a point that the board may deem itself justified, because of an apparent unappropriated supply of water, in granting the same.

In the conduct of this work, the expenditures of the Board, exclusive of the salary of the engineer and secretary, have been as follows: under secretaries, appropriation \$3,200; expended, \$1,416; additional assistants, appropriation \$1,200; expended, \$607; expenses of Board, appropriation \$1,000; expended, \$546; stationery, instruments, postage, etc., appropriation \$600; expended, \$626.95.

The fees charged up for taking and transcribing testimony, copying records, etc., amount to \$280.55, of which \$195.30 has been collected, and is on deposit in the name of the Board with the Columbia National Bank of Lincoln.

The Board at this time finds itself with much upon its hands and much additional work before it. During the coming year adjudications must be carried on, streams gauged, waters divided among the numerous claimants therefor, and portions of the state mapped, for the purpose of showing the course of the various canals to which water has been allowed.

Unfortunately the appropriations made by the last legislature for the use of the Board were not at all commensurate with the work entailed. Therefore, if this department falls short during the coming year of meeting the expectations of those interested in the development of irrigation in this state, it will be largely due to the inadequate appropriations made for the necessary expenses of carrying on a work of the magnitude of that in hand.

In closing this brief synopsis of the work begun and accomplished during the first ten months' of this Board's

existence, I would suggest that as the law establishing the State Board of Irrigation, like most new creations, has some defects, and as the same should be rectified by the next legislature, I therefore would recommend that a commission of five persons be designated by the Board to act without compensation, for the purpose of investigating and suggesting to your Honorable body such amendatory legislation as it may be deemed desirable by said commission for the Board to recommend to the next legislature.

I am, sirs, very respectfully, your obedient servant,

(SIGNED.)

R. B. HOWELL.

At the present time to-wit.: November 30, 1896, there was 975 cases on the appearance docket of which number forty-one are contests, leaving 934 cases *in re*. In these 934 cases there are 540 claim affidavits filed, leaving 414 cases unsupported by any proof of validity and are treated as cases abandoned. Of the 940 cases the testimony has been taken and written in 920 cases. In the forty-one contests, thirty-four have been heard, leaving about twenty cases on the docket to be yet disposed of. There are about ten claim affidavits on file in which the testimony has not been taken for the reason that they have been filed after the hearing was held. Of the 975 cases on the docket, 340 have been disposed of by the opinion of the secretary and reviewed by the Board, with the exception of two contests which have been filed since the sitting of the Board, leaving on the docket to be disposed of 635 cases at this date.

There are on file in the office 361 applications for permits to appropriate the waters of the state, few of which have been acted upon. In the conduct of this work, the expenditures of the Board, exclusive of the salaries of the engineer and assistant, has been as follows:

Under secretaries, appropriation, \$3,200; expended, \$2,636.25.

Additional assistance, appropriation, \$1,200; all expended.

Expenses of Board, appropriation, \$1,000; expended, \$813.02.

Stationery, instruments, etc., appropriation, \$600; all expended.

Fees collected from individuals for taking testimony, copying records, etc., \$437.55, of which \$379.75 has been collected and the remainder is still unpaid, and has all been expended in the payment of salaries for stenographers, postage, and stationery.

W. R. AKERS,  
*Secretary.*

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## HISTORY OF IRRIGATION IN DAWSON COUNTY.

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H. O. SMITH.

A history of irrigation in Dawson county is the history of a long, bitterly waged war against ignorance and prejudice as well as poverty. At the beginning, a very large proportion of the people, both business men and farmers of the best class, were thoroughly imbued with the idea, that to completely ruin the reputation of western Nebraska it was only necessary to publish the fact that irrigation was required or practised in raising crops. In the minds of these men, born and raised in the agricultural states of the Mississippi valley and east, irrigation was associated with a barren desert region, where people struggled along on a few acres of ground, producing a

little fruit and a few vegetables. Probably it was profitable, but it was not their idea of farming. Real farming consisted in raising an immense acreage of wheat, corn, rye, oats, barley, the chief products. The greater the acreage, the greater the farmer. It was better to farm 640 acres for a bare living, or less, than to farm forty acres and have a bank account. This idea of farming large areas has made more business for the sheriff than any other branch of industry. Examples of a perfect success in that line are so rare as to be only exceptions that go to prove the rule of general failure.

It has taken time, patience, perseverance, energy, and push to overcome this prejudice, and to bring about the success already attained by irrigation in this county and community.

That success is assured there is no question. Even in the season of 1896, when the rainfall was about normal, and its distribution through the season of growth nearly all that could be asked, the difference between irrigated and non-irrigated crops has been so marked, so pronounced in favor of irrigation, that the most skeptical have to acknowledge that the question is practically settled. I will hereafter quote a few of the instances of which I have personal knowledge.

The first attempt to introduce irrigation into Dawson county was made in the fall of 1890 by a company that asked no concessions and professed a willingness to pay for all the rights acquired by them; but the opposition they met with, not only from those along the line proposed, whose lands, while they might not have been helped, could not possibly have been injured by the ditch, was so strong and persistent, that after nearly a year of expensive and wearying struggle the company gave up the fight, pocketed its losses, and retired. Since that time,

many who were most strenuous in their opposition have seen their mistake, and have acknowledged that if this company had been allowed to carry out their enterprise, Dawson county would have been spared the disgrace of having to appeal to the people of the east for food a few years later.

In regard to this appeal I would say, that it came largely from a class of people who require assistance nearly every winter, and who usually receive it from the more thrifty and prosperous of this immediate vicinity; but the partial failure of 1893, and almost total failure of 1894, has reduced this latter class to circumstances that would not stand a division.

The season of 1891 was very unfavorable to irrigation. Never since the settlement of this country had there been so much rain—such a continual downpour. The ground became so thoroughly saturated that, though in the following season, 1892, the precipitation was much below the amount usually required to produce a crop, fairly good crops were raised. The following year, 1893, we returned to our normal condition, alternating between hope and despair. Long continued drouths, during which the farmers watched the crops with one eye and the heavens with the other; occasional showers that caused the stunted and dust-choked crops to revive and take on a new lease of life, shooting up under the influence of a little moisture and proving the abundant fertility of the soil, and filling the hearts of the husbandmen with the hopes of a continued era of moisture, and the assurance of a full granary. He could pay the interest on that mortgage and hold his home, a little home, a while longer. Vain hope! The dry weather predominated and the harvesters were dragged wearily over fields yielding barely enough for bread and seed, so that the regular

routine could be followed next year. Sowing in hope, cultivating in doubt, and harvesting in despair. For persistence, pluck, and endurance, commend to me the farmer of western Nebraska.

During the winter and spring of 1893-4 agitation of the question of irrigation was resumed. It began to be regarded as a paramount question. Opposition went down before the light of reason, common sense, and experience. Meetings were held at the various school houses over the county and the gospel of irrigation was preached to all.

In June preliminary surveys were made, and in July The Farmers' and Merchants' Irrigation Company was organized and incorporated. The company was purely a local one, its capital stock exceedingly limited and its expectations not large. It has, by pluck, perseverance, energy, and with the assistance of eastern capital developed into what is probably one of the largest, most complete, and perfect systems of irrigation ditches in all the country. It covers 60,000 acres of the most fertile and productive land that the sun ever shone on. It has eighty-three miles of canal and principal branches completed and in operation. In its construction nearly a million cubic yards of earth were moved, and over one million one hundred thousand feet of lumber have been used. It has acquired nearly nine hundred acres of land in right of way alone. It is a grand success, and proves conclusively that no country on earth is better adapted to the application of water or possesses more natural advantages in the way of natural slopes and productive soil than the valley of the Platte River, in Dawson county.

Active work on the construction of the Farmers' and Merchants' ditch was begun in August, 1894, and pushed forward as rapidly as possible. The enterprise was a

gigantic one for men to undertake, who were entirely without experience in that line. They had to learn as they went along with the work.

There is one mistake common to enterprises of this kind that this company were shrewd enough to avoid—the mistake of thinking that money could be saved in engineering. From the start a thoroughly competent engineer was employed and kept on the work till it was completed, and to this fact is the success of the enterprise largely attributable. Mistakes in engineering are always costly and frequently irreparable. A good engineer knows what he is worth and will not work cheap. A cheap man guesses at his value, and guesses at his work, too, and the best guessers cannot guess right all the time. A company that puts a costly enterprise in the hands of a guesser don't have to guess at the result; it is an assured failure.

On the 27th day of June, 1895, just one year from the day that the appropriation of water was filed by this committee, the head-gates were opened, and the water started down the ditch. About fifty-three miles were completed at this time. The progress of the water was necessarily slow. Drops and checks had to be filled slowly and packed carefully. It was not till the sixth day of July that water from the ditch could be applied to its proper use, and then only for two or three days.

Notwithstanding the care used in the introduction of water, accidents would happen. The soft, loose, dry dirt seemed to dissolve like sugar before the water. Banks melted away, drops and checks that had sheet piling sunk six feet in the ground and wings extending eight to ten feet out in the banks, raised up, turned over, and absolutely refused to "stay put." Owing to difficulties of this kind, it was not till early in August water could

be used effectually. I will state here that these difficulties, once overcome, were never met with again. When the ground once became soaked and packed, it remained firm.

By this time the small grain was beyond redemption. The yield was very small. On the whole it amounted to about the usual "feed and seed" crop. Mr. James Carr had about twenty acres of rye, a volunteer crop. He did not consider it worth cutting, in fact he had turned his stock in on it. On the 6th of July, having first got permission from the company, he turned the water in on it, letting it run where it would, making no attempt to control it. The rye took a new start, in fact put on new growth, and in August he harvested and thrashed out of it 260 bushels of rye. The same fall he gave the same ground a thorough and complete soaking from the ditch, and again sowed it to rye. Without using any water after that, he cut and thrashed the following (this) season 800 bushels of rye. I don't think the eye of man ever beheld a prettier sight than that field of rye. Imagine, if you can, how it looked to the farmers who had for years seen nothing but the poor, stunted, shriveled growth, such as is common to the country. It stood at least six feet high, and as compact and even as a floor. Every summer breeze that swept over it carried waves of color across that even surface that would have delighted the eye of an artist; but the best of them could not have transferred its whole beauty to the canvas. Only nature can paint such pictures.

At this time (August, 1895) when water was ready to be applied to the fields, the corn was badly damaged. The growth was stunted, and though the time had come for the ears to shoot, very few had started. In many cases the tassel was dead and dry; not altogether, but a large proportion.

The farmers were not ready for the water. They had made no preparation for it, they did not know when to expect it, and doubted, even when it was at their door. But everything else was abandoned and all started in to save their corn. Water was furnished abundantly, the fields drank it up greedily and were soaked; men, women, and children worked days, nights, and Sundays. There was no time to lose. During the month of August, without any previous preparation, more than 5,000 acres of corn were watered. Did it pay? The results made some of the farmers fairly delirious. Ears shot out of the stunted stalks like magic. They formed and grew almost while you were looking at them. It was no "feed and seed" crop this time. It was principally surplus. It was a pleasure to see how gaily they waltzed up and paid for their water. Considering the condition of the crop at the time that the water was applied the results were wonderful. In many fields the ears appeared to be half as long as the stalk. Croakers said it wouldn't mature, but it did, and made good sound corn. The yield varied according to conditions. Very few fields went under forty bushels to the acre, many went sixty bushels, the average was probably about fifty bushels. Of the crops not irrigated the same year, and same conditions existing, many yielded from ten to twelve bushels, and very many nothing.

Thus ended the first chapter of irrigation in Dawson county. The company pushed on the work of construction, completing the system to its present proportions in July, 1896. There still remains room for considerable extension over a very rich territory, which can be made whenever the company sees fit.

I will give further along some of the results of the present year. One thing has been proved conclusively,

and that is, that under irrigation Dawson county's productions are not to be confined to staple products. Fruit, both large and small, vines, alfalfa, sugar beets, celery, and other products susceptible of more intense and profitable cultivation can be raised with an assurance of success equal to the staples.

While the Farmers' and Merchants' system was still in its infancy, a dozen or more thrifty and enterprising farmers living southwest of the city of Lexington near the Platte river, joined forces and constructed a ditch, a little more than half a mile long into a natural draw that parallels the river at an average distance of about a mile, for six miles from the point where ditch and draw intersect. The banks of this draw are considerably higher than the land on each side. (There are two peculiarities of the draws, or dry water courses, of the Platte valley, or nearly all of them. First, they do not run towards the river, but parallel to it for long distances, in some instances from twenty-five to thirty miles; second, the banks are higher than the adjoining territory on each side.) To get the water out of this draw, dams are constructed at intervals, which raises the surface of the water above the level of the fields, which generally have a regular slope away from the draw. This is known as the Farmers' ditch, and proved a very successful and cheap method of irrigation. M. Delahunty, in the season of 1895, sowed sixty bushels of wheat on forty acres. Three acres of this were not irrigated and were not harvested, not being worth the cost. The remaining thirty-seven acres yielded 1,402 bushels, and sold for two cents per bushel above the market price for wheat on the day of sale. In the summer of 1895 I visited the farm of Mr. Delahunty and found fruit trees, apples, cherries, plums, and apricots loaded with luscious fruit. In the season he had

raspberries, strawberries, and currants in abundance. All the fruit in this part of the country was killed by late frosts in the spring. I asked Mr. Delahunty how he saved his, and he simply pointed to the small laterals winding about among the trees. This orchard never yielded before in quantities worth mentioning, though some of the trees were more than fifteen years old. It was not in cultivation but in grass, therefore the best results were not attained.

All the crops raised under this ditch were excellent, and I heard of some that exceeded the yield of Mr. Delahunty, but I did not get the exact figures, so do not attempt to quote them.

The Cozad Irrigation Company's system was constructed during the fall of 1894 and spring of 1895. Its head is about ten miles above the head of the Farmers' & Merchants', running in about the same general direction, and covering the territory lying between the two systems. This system is a very complete and well constructed one, and the territory covered is extremely fertile and productive.

Next above the Cozad system, and covering the territory between, is the Gothenburg Power & Irrigation Company's ditch. This ditch is an extension of the canal built some years ago, for power purposes, and is still used for lighting the town of Gothenburg, and running two flooring mills. The irrigation ditch starts from the lake north of the town and extends in a northeast direction, a distance of about twenty miles.

On a large island in the Platte river is a ditch about five miles long, owned by Booker and Ralston, the two principal land owners on the island.

South of the river is the "Six Mile Ditch," owned and operated by the farmers owning the land covered. Still

south of this lies the Gothenburg South Side Irrigation Ditch. This ditch starts in Lincoln county, west of Dawson, and extends into this county where about fifteen miles have been constructed and about as much more contemplated. This district is organized under a modification of the Wright law of California, enacted by the Legislature of Nebraska in 1895, and embraces a territory of about 25,000 acres, beautifully situated and very rich.

East of this, and still on the south side, is the Orchard & Alfalfa ditch, about twenty-five miles long, completed and in successful operation, and owned principally by the farmers along its course.

On the north side again lies the Platte Valley Ditch. This, like the Farmers' Ditch, runs from the river into a natural draw, the same one used by the Farmers', but lower down the water is drawn out in the same way.

East of this still lies the Elk Creek Ditch. This ditch runs from the river in a northeast direction about ten miles to the county line between Dawson and Buffalo counties.

Back in the northwest corner of the county, and comprising all the territory in the Platte Valley north and west of the Gothenburg ditch, is the Lincoln and Dawson Counties' Irrigation District. This district, like the Gothenburg South Side, is organized under the modification of the Wright law and has voted bonds to the amount of \$275,000. Under the recent favorable ruling of the supreme court of the United states, on that law, they expect to sell the bonds and proceed at once to the construction of the ditch.

Below I give a tabulated statement of the ditches in this county:

CONSTRUCTED.	LENGTH.	CAPACITY.
	Miles.	Acres.
Farmers' & Merchants' .....	83	60,000
Farmers' .....	8	3,500
Cozad .....	40	30,000
Gothenburg .....	20	12,000
Booker & Ralston .....	5	1,500
Six Mile Ditch .....	8	2,000
Gothenburg South Side .....	15	20,000
Orchard and Alfalfa .....	25	20,000
Platte Valley .....	15	8,000
CONTEMPLATED.		
Elm Creek .....	10	8,000
Lincoln and Dawson County .....	30	40,000
Gothenburg South Side, Extension...	15	10,000
Cozad, Ext .....	20	10,000
Farmers' & Merchants' Extension....	15	10,000
Farmers' & Merchants' South Side...	15	12,000

All of this work has been done since 1894, and all these ditches draw their supply from the Platte river. The question naturally arises. Is the supply adequate to the demand? Is it ample?

A word of explanation.

The Platte valley enters Dawson county at the northwest corner and leaves it at the southeast corner. It is forty-five miles long and averages ten miles in width. It has an area of over 400,000 acres, all of which is fertile and nearly all susceptible of irrigation.

The Platte river flows through this valley, and one-fourth the width of the valley from the bluffs on the south side. It is a wide, shallow stream, having a fall of more than seven feet to the mile. Its average width is

nearly a mile. It has a sandy bottom, and the level of the water over the whole valley is practically the same as in the river, and has the same fall towards the Missouri valley. The depth to water in any part of the valley simply indicates the height of that point above the river. A ditch constructed with one-fourth of the fall of the river, which is ample, will leave the river at an angle of from fifty to sixty degrees, and sometimes even more. No dam is required to take the water from the river, a simple opening with gates to control the flow and keep out the sand are all that is required. The water is rich in silt and sediment, furnishing food as well as drink to all the plant life with which it comes in contact.

About thirty miles west of Dawson county the river divides into the North and South Platte. The South Platte originates in the eastern slopes of the Rocky mountains in Colorado. Its drainage area is limited and in a country where the annual precipitation is comparatively small. Notwithstanding, a very large proportion of the water used for irrigation in Colorado is derived from this source. The North Platte, the principal source from which our supply is taken, rises in Western Colorado and flows north into Wyoming and east to the Nebraska line, a distance of more than six hundred miles. Its drainage area ranges from three to four hundred miles in width, and the annual precipitation is enormous. Its source is through narrow valleys into which open mountain gorges innumerable, that contain the heavy snows of the long winters that prevail in that region. These immense snow drifts are the storage reservoirs provided by nature to supply the river with water for summer use. Nature despises waste as she hates a vacuum. But a very small proportion of the valleys beyond the Nebraska line of susceptible of irrigation. This

enormous amount of water is delivered to Nebraska almost intact, and at the time exactly when it is most needed for agricultural purposes.

If not for use, for what?

Having provided so liberally in this direction, nature naturally limits the supply from above. Other and less favored communities require that.

The normal flow of the river at this point has been variously estimated at from 2,000 to 5,000 second feet. Accurate measurements have never been made in this county. In April the regular rise begins, gradually increasing till the middle of June or first of July, when the maximum is reached, without, however, the usual accompaniment of eastern rivers, overflows, and damaging floods. The great fall and extreme width of the river bed carries off this enormous volume of water, without loss or damage, except the waste of precious material.

The flow at this time has been estimated as high as 30,000 second feet, sufficient, on the basis established by law in Nebraska, one second foot to seventy acres, to water 2,100,000 acres, five times the total area of the valley in Dawson county. From the time last named, the flow is gradually diminished, till the minimum is reached, generally the latter part of August. Some seasons, especially after a long, hot spell, the bed of the river becomes dry, the evaporation from the broad, shallow stream being enormous. That it is largely due to evaporation is indicated by the fact that a few cool or cloudy days brings the water back, and when the cool days of the latter part of September or October comes the flow becomes normal, regardless of rainfall. Local rains have no perceptible effect on the river except when it is at the extreme low mark, and then I have known it

to raise more than a foot in one night, when the amount of rainfall would not warrant a raise of an inch.

Is the supply sufficient for the ditches constructed and contemplated? I say, yes; and for many more.

That it is deficient at a time when it is not needed is immaterial. That it is ample at the time most needed, and that the source is unfailing, is very material. Spring and summer irrigation should be completed early in August. October irrigation is invaluable.

Does irrigation pay?

Does it pay to raise three bushels of grain on the ground that has only raised one?

Does it pay to raise products that are six, eight—yes, ten times—more profitable than grain?

Does it pay to increase your business threefold and your profits in proportion?

Does it pay to have an income, instead of an outgo; to have a bank account instead of a mortgage; to be happy, prosperous, and contented, instead of being ground down and soured by poverty.

Granted that these things do pay, then it pays to irrigate. I have about a dozen apple trees in my door yard that are fourteen years old, and till this year have never borne. They have blossomed and fruit has set, but never attained more than half growth. In the fall of 1895 I gave the ground a thorough soaking, and twice again during the summer, and I had a good crop of very large apples, mostly Ben Davis, and as fine flavored as any I ever ate.

I have also a small patch of alfalfa, about two and a half acres. It was sowed in 1894, and the stand was very poor, in fact so poor that in the fall of 1895 I concluded to plow it under the following spring; but I wanted the ground wet up, and turned the water on. In

the spring the stand had improved so much that I concluded not to plow it up. On the 30th day of May I cut it; on the 30th day of June I cut it again, and being busy did not turn on the water at once as I intended. It stood two weeks and did not grow an inch. I turned on the water, and again in the middle of August I cut it for the third time, and again watered it, and about the first of October I cut it for the fourth time, getting in all over sixteen tons of the very best of feed. The stand now is as good as any one could ask.

Mr. H. V. Temple has also a small patch alongside of mine, planted at the same time, and the same size. He cut two crops of hay and let one go to seed, from which he got nine and a half bushels of seed, worth in the market five dollars (\$5.00) a bushel. This was practically off from less than two acres, as a part of the field got water by accident at a time that spoiled it for seed; besides, he had the feed from which the seed was threshed, which is excellent horse feed.

Mr. Anton Abel, out of 450 acres of corn, watered over two hundred acres. The watering was not very well done, as he had not prepared for it; but his average yield of irrigated corn was sixty bushels per acre, and non-irrigated, all on the same land and on exactly the same conditions, yielded from nothing to fifteen bushels per acre. His irrigated wheat went from twenty-five to thirty bushels, and non-irrigated from five to ten bushels. He also raised a fine crop of apples.

Mrs. Mary White cut twenty tons, seven hundred fifty pounds of alfalfa from ten acres, the first crop after sowing, from one watering the previous fall. Her second cutting was still larger, but was not weighed. She also gathered twenty-five bushels of corn from a measured acre, non-irrigated, which was a very large yield, and

seventy-five bushels from a measured acre in the same field, that was irrigated twice.

F. J. Rosenberg harvested 1,660 bushels of wheat from fifty acres, of which only thirty-five acres had been irrigated the previous fall. He estimated that his yield on the land irrigated was over forty bushels.

Frank Fagot's corn went seventy bushels; H. Menke's seventy-five bushels; S. Butler's seventy-five bushels, and his spring wheat twenty-five bushels, whereas the general average of spring wheat was not over six bushels.

I could fill a book with these examples, but I am reminded that my space is limited. In 1896 but few beets were planted, as the factory at Grand Island could get all it could use nearer home. In 1895 the crop was the poorest generally ever known in the state, the percentage of saccharine being generally very low, ranging from ten to twelve percent. That year five acres were raised on the farm of E. B. Smith and irrigated twice. They yielded 100 tons of beets that tested sixteen percent of saccharine, and netted \$4.20 per ton at the station here. Mr. E. F. Stephens, the President of the State Horticultural Society, stated at the Irrigation Convention at Lexington that "apple trees that, under ordinary conditions, produce fruit bi-annually only, would with proper irrigation produce annually." This statement is supported by the experience of Mr. Delahunty, who raised a good crop in 1895, and from the same trees a better crop in 1896.

We feel that a very material change is taking place in Dawson county. We believe that an era of prosperity is now upon us, that will soon be heralded over the whole country, and irrigation will be the prime and principal factor in the movement.

LEXINGTON, NEB., November 28, 1896.

## IRRIGATION IN LINCOLN COUNTY.

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BY E. F. SEEBERGER.

Lincoln county has been working steadily on her irrigation enterprises, until now she has more miles of completed irrigation canals than any other county in the state. The total length of completed main canals is 250 miles, built at a cost of over a quarter of a million dollars and covering about 200,000 acres of lands. To the main canal mileage may be added about 250 miles of main lateral ditches that would only need the additional feature of a head in the river to acquire the dignity of a main canal. Present developments of irrigation enterprises assure another 250 miles of main lateral ditches that will be constructed within the next six months. By the close of the irrigation season of 1897 the county will have a foundation on which to base future agricultural developments under irrigation not equaled by any other county in the United States. These are strong statements, but they are borne out by the facts, and they stand as a monument to the enterprise of "the man from Nebraska" especially when you consider that the greater portion of this work was done during the hardest times in the history of the West,

The first irrigation idea to take practical effect in Nebraska was brought from the land across the sea by Mr. John Burke, who settled in Lincoln county, near old Fort McPherson, in the early sixties. In the spring of 1866 he constructed a ditch about four miles long, which tapped the Platte river, on its south bank, about fifteen miles west of the present site of the city of North Platte. This ditch has long since been abandoned, but the banks are yet clearly defined, and the settlers, who came

here many years ago to fight Indians and kill buffalo remember well of seeing the water flow to the farm of Mr. Burke, where the patch of vegetables and corn thrived under its influence in a manner never before thought of by them. This was the shadow that foretold the coming of a great system, and the land then irrigated by this pioneer ditch is now covered by a canal forty miles in length that is built to supply 50,000 acres of land.

The first incorporated ditch company in the state was organized in 1871 by Col. Josiah B. Park, the father of Mr. W. L. Park, of North Platte, and Mr. Guy C. Barton, now of Omaha. This company constructed a ditch from a point about three miles west of North Platte, on the north bank of the South Platte river, and extended to the city. Many fine trees are still standing to bear evidence of its beneficent existence. It was used for a few years and did good, but a succeeding few seasons of heavy rains brought on a period of nearly ten years of inactivity in this line.

The North Platte Canal must be credited with presenting to our people the first practical demonstration on a large scale of the value of the artificial application of water to the soil. The results have been a revelation to our people, and have stimulated them to the prodigious enterprises in this direction that are being carried forward with such commendable zeal. This canal was constructed by the North Platte Irrigation & Land Company in 1883 and 1884, and has been in constant and ever-increasing use since that time. Its headgate and diversion works are located on the south bank of the North Platte river, four miles northeast of the town of Sutherland. It has a total length of twenty-five miles, covering 25,000 acres of the rich alluvial soil of the delta between the North and South Platte rivers, near their

confluence. It empties into the river at a point due north of the city of North Platte. The many fine farms and happy homes under this canal are owned by prosperous farmers, many of whom came to this country a few years ago without a cent. They are here to tell for themselves of the advantages of irrigation farming in Nebraska over sky farming in any other place on earth. That later undertakings in the line of irrigation are not doubtful or uncertain experiments is demonstrated by the farms and orchards under this canal. It shows what a rich and prosperous country this will be when a few more years have added to the development and cultivation of the lands under newer canals.

In 1893 and 1894 three of Lincoln county's progressive farmers, David Hunter, Alex. Neilson, and John Conway, built the Sutherland & Paxton canal. This is one of the large canals of the state, built by three men, who, while not as rich as scores of our other farmers, had the remarkable energy and enterprise to undertake the work and the staying qualities to bring it to a very successful completion. This canal heads in Keith county, in the North Platte river, follows the north edge of the bluffs as far east as Sutherland; thence takes a southerly direction through the bluffs in a thirty-foot cut, and returns west along the southern edge of the bluffs for about four miles. It is thirty miles long, has first-class diversion and distributing works, and covers over 30,000 acres of especially fine land. As an evidence of the productiveness of the soil and the efficiency of the canal, their magnificent crop record of 1895 and 1896 speaks for itself.

Col. W. F. Cody and Mr. Isaac Dillon, who own large and valuable tracts of land adjoining and near North Platte, appropriated water from the North Platte river for

their canal in December, of 1893. This canal was completed in 1894, and as a result about 10,000 acres of land in the vicinity of North Platte has been put under cultivation. It heads about ten miles above North Platte, covering the Cody and Dillon ranches, and then extending along the north side of the city east to the point at the junction of the North and South Platte. It is about thirteen miles long, and heading in a very favorable location in the North river it furnishes a splendid supply of water to its patrons.

The Paxton & Hershey Irrigating Canal & Land Company constructed their canal in 1894, and about 9,000 acres of land is now under cultivation under it and being put in a high state of cultivation. This company has erected about forty comfortable houses on their lands, and they are all occupied by a thrifty and progressive people. This canal is sixteen miles long and heads twenty-four miles west of North Platte in the North Platte river. It has a large head-gate, 125 feet wide, and is well constructed and giving good satisfaction.

The Keith canal heads on the north bank of the North Platte river, two miles east of North Platte, and covers the land in the valley along the north side for ten miles, placing about 3,000 acres in a condition to farm successfully. It was built in 1894 and 1895 by M. C. Keith, and is owned by him.

In the summer and fall of 1894 a number of our progressive citizens and farmers began the construction of the Farmers' & Merchants' Canal for the purpose of watering lands on the delta south of the Union Pacific railway, and that immediately adjoining North Platte on west, south, and east. This canal opens up about 10,000 acres directly tributary to the city, covering lands easily fertilized and especially adapted in the most part to small

farming and gardening. It is about eighteen miles long, heading in the North Platte river, about fourteen miles west of North Platte. The first practical trial of the irrigation district law, known as the Wright law, passed by our legislature two years ago, will be made under this canal, as it is now the property of the Suburban Irrigation District, organized in 1896. Under this law a district was formed, comprising about 10,000 acres of land susceptible to irrigation by this canal; bonds were issued and sold, and the canal is now being completed and will be ready in every detail at the beginning of the irrigating season in 1897. The canal became the property of the Suburban District by purchase from the original company, many of the stockholders of which own farms in the district to be irrigated by it.

The big South Side Canal is rapidly nearing completion. Some water was run in it last season out of the South Platte, and some by arrangements with other canals. For 1897 it will be supplied through its own head from both the North and South Platte rivers. It was a long pull, and it is proving a strong pull by a lot of farmers on the south side of the south river, whose splendid soil needed but the magic touch of water to make it the most productive. This canal was built at a very large outlay of money and work, without any aid to its builders but their own limited means and about \$10,000 donation bonds. It is forty-two miles long, heads in the North Platte river about twenty-six miles west of North Platte, crossing the South Platte river by a flume, or rather an inverted syphon, probably the most expensive undertaking of the kind in irrigation works. This syphon is sunk below the bed of the river. It has a cross section of nearly fifty square feet, is 1800 feet long and cost over \$12,000. At this point on the south river another head-

gate has been provided to permit the use of water from the south river. The canal covers 40,000 acres of the fertile lands lying along the south side of the valley. Its estimated cost is \$100,000. The waste water from this canal will flow back into the river about sixteen miles east of North Platte.

Beginning the good work where the South Side Canal leaves off, the Farmers' Canal heads in the Platte river six miles east of North Platte and runs nearly forty miles, crossing in its course the United States' military reservation at Cottonwood Springs, known as Fort McPherson. This canal is being completed now, and will have over 30,000 acres of land under it. The work was commenced in the fall of 1894 by the farmers in that territory. In the winter of 1895 and '96 they organized the Gaslin Irrigation District and have voted \$85,000 to complete the works. These bonds have been approved by the court and since the recent decision on the Wright law by the United States supreme court they are valuable property and should find a ready market.

Another district canal is that of the Maxwell Irrigation District. Bonds for \$24,000 have been voted and the contract for the completion of the canal has been let. A great portion of the work is now done. The canal will head on the north bank of the Platte river, about fourteen miles east of North Platte. It will be twelve miles long and will cover 20,000 acres.

Flowing into the North Platte river from the north, and about twenty miles west from North Platte is the Birdwood creek. It is a perennial stream, with no marked fluctuations and having a discharge of about 150 cubic feet of water per second. Within its limits no better irrigation stream can exist, and the Birdwood Canal,

tapping it as it does, gets the benefit of its steady flow. The canal was built by Messrs. John Bratt & Co. in 1894 and 1895. It is about twenty-five miles long, and covers 10,000 acres of land on the north edge of the valley.

There are numerous other canals in Lincoln county, of smaller dimensions or with less territory. Among these are the Hall & Hubbard canal, about five miles long, on the north side of the North river, heading just north of North Platte, completed in 1895; the Murphy canal, taking its water from Pawnee creek, north of the Platte and near Maxwell; this is now being extended and will be six or seven miles long when completed; the Gus Smith canal on the North river, three miles east of North Platte; the McCollough canal, five miles long, on the north side of the Platte river, heading two miles east of the town of Maxwell; Appleford canal on Brady Island, about five miles long; the Dikeman canal, four miles long, heading on the north side of North river, opposite the town of Hershey. Bratt's Fremont Creek Canal, on the south side of the South river opposite North Platte, is about four miles long. The Pawnee canal, owned by Mr. M. C. Keith, about three miles long, and the Martin Holcomb canal, about five miles long, both taking water from Pawnee creek. The Hinman & Alexander canal is now being built, and is the latest undertaking in the line of irrigation construction. It taps East Birdwood creek and will be seven miles long when completed. Besides these the Gothenburg Power canal heads in this county on the north side of the Platte and flows through about five miles of the county and into Dawson county, and the Lincoln & Dawson County canal, on the south side of the river taps the Platte seven miles west of the east county line.

These are the canals that have been built and are being completed in Lincoln county. They cover an irrigation territory fifty miles long and from three to twenty miles wide, averaging six miles in width, giving us 300 square miles of irrigated lands. Land enough, when properly cultivated, to support 25,000 people who can live without the dread of drouth, and with the knowledge that success will crown their efforts.

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## THE STRUGGLE AND TRIUMPH OF IRRIGATION IN NEBRASKA.

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BY HON. M. A. DAUGHERTY, OGALALLA.

[This paper read by Hon. M. A. Daugherty, at the State Irrigation Association held in Sidney in the fall of 1895, is published by permission of A. G. Wolfenbarger, President of the Association, who has a copyright on the same in the "Nebraska Irrigation Annual, 1896.]"

Less than one hundred years ago an envious critic, speaking of our national literature said: "Who reads an American book?" But to-day we can boast of a literature as distinctly national as that of any on the globe. American books are read by the millions of all lands. All this has been accomplished in less than half a century.

Less than half a dozen years ago little was thought or known of irrigation in Nebraska. It was almost impossible to interest any one in the subject; but now it is a popular theme, and what has been done for our national literature in the past in so short a time is now being done for *irrigation*. It is a leading topic in the daily press, in the periodicals, and in all the agricultural journals of our land. It is subject for discussion of scientific agriculture in conventions, international, national, state, and district. It is the theme for the states-

man, and is well worthy his best efforts. Courts have and must recognize it, not by weighing irrigation statutes within technical lines of construction, but upon the broad plane of fair construction of constitution and statutes. We regret that Judge Ross of the United States bench of California did technically construe the Federal Constitution, as against the people of that and other states, or, as has been more aptly put by another, "Judge Ross measured the possibilities of an empire by the yard-stick of the confines of a municipality."

With a new invasion which came to this part of the "Great American Desert" in 1883 and 1884 came people from the rain belt states, and many also from the eastern part of our own state. These settled upon the public lands, pinning their faith and hope to such a change of climatic conditions as those which had taken place in their own experience in new countries. They conceived the idea that they had but to wait a short time until the beautiful table-lands of this western half of Nebraska would yield as rich return for their labors as did the lands from whence they came. The struggle was heroic and challenges the admiration of all, as does any like body of pioneers who go forth to subdue the wilds of nature. They plowed, sowed, and cultivated, but reaped no return when the harvest came. Heroically the work was repeated the next year and the next with the same result. Yet through these early years to speak of irrigation as the solution for crop raising was to invite condemnation upon oneself. One hardly dare advance such a theory in Nebraska, although in 1889 the St. Raynor law was passed permitting water-rights, but few were taken. Not until 1890 was irrigation considered by any great number of persons to be the means by which western Nebraska could be saved. Though in 1884 and 1885 Lord Ogilvie,

of Denver, headed a company which built in those years the first large canal in Nebraska, namely, the one in Lincoln county. The water from it was not used to any extent until 1890, which year several used it, reaping great returns in harvest, which fact so aroused the people of that locality that irrigation has become most popular and has made wonderful progress.

Probably the terrible drouth of 1890 did more to pave the way for a general movement in the matter of irrigation than any other one thing. Mr. W. E. Smythe, then of the *Omaha Bee* and founder of the *Irrigation Age*, was the pioneer of the organized movement which began in Nebraska and has spread until it is national, old Faneuil Hall in Boston sending out from a great meeting held there, presided over by Edward Everett Hale, words of cheer to speed on the good work in the West. Through the instrumentality of Mr. Smythe, a call was issued for an irrigation convention to be held at Ogalalla, Neb., in January, 1891. Invitations were sent to Representative Parnell, of the fifty-third district, and to Senator J. K. Stevens, of the thirtieth district, who were present, as were also a number of delegates from western counties. The meeting was given up to a discussion of irrigation legislation. Mr. Parnell had already introduced in the house a bill which failed to embody the legislation required. The result of the meeting at Ogalalla was a call for a state irrigation convention, to be held in Lincoln, Neb., February 11, 1891, to which convention delegates were appointed. A district meeting was also to be held at McCook, Neb. Thus Ogalalla bears the honor of having the first organized meeting for the cause of irrigation in the state.

The first state irrigation convention was called to order at 2 P. M., February 11, in Representative Hall, Lincoln,

Nebraska. At this convention there were delegates in attendance from thirty-six counties. Ex-Governor R. W. Furnas was elected president and Walt. M. Seeley, secretary. The important work of the convention was the appointing of a committee to prepare and present a bill on irrigation. J. K. Stevens, C. H. Meeker, L. Masses, Henry St. Raynor, L. B. Carey, W. E. Smythe, E. J. Short, J. R. Brotherton, Thomas Stimson, Thomas Beck, O. P. Mason, W. D. Wildman were appointed. These gentlemen prepared a bill and reported it to the convention, which adopted it, and it was then introduced as a substitute for the original Parnell bill. The committee to whom it was referred reported it back for passage as substituted. The bill was ordered printed February 23, 1891, and was put upon its final passage March 21, 1891, receiving thirty-four votes for to thirty-two against, thirty-three not voting. This failure of a constitutional majority ended all hope of legislation during the session of 1891. The bill prepared by this committee, and afterwards known as the "Parnell bill," is the one finally passed, and stands upon the statute books to-day with but little modification.

The convention at Lincoln also appointed a committee of five to arrange for an interstate convention to be composed of delegates from the states of Nebraska, Kansas, Wyoming, Colorado, North Dakota, South Dakota, Texas, and the territories of Oklahoma and New Mexico. The convention was held in the state of Kansas in 1892.

In 1893 a convention was held in North Platte, at which time was organized the State Irrigation Association. A constitution and by-laws was adopted and Hon. I. A. Fort was made its first president and J. G. P. Hildebrand, secretary. The next state meeting was held in Omaha in March, 1894, and the next one in Kearney in

1895. I might add that in addition to these meetings a national convention was held at Los Angeles, California, in September of 1893, and another at Albuquerque, New Mexico, September 16 to 21, 1895.

Early in the session of the winter of 1893 the friends of irrigation again appeared on the scene and prepared a bill similar to the bill defeated in the former session. It was introduced by Senator Darner, of Dawson county. While no particular fight was made upon the bill in the session of 1891, it was now fought with bitterness in committee stages as well as in the session. This, too, by localities in the western portion of the state where it should have had its staunchest friends; but this, as we understand it now, was done through a misapprehension. The bill was defeated on a test vote in committee of the whole, and the friends of the bill had to be content with securing a simple amendment to the St. Raynor law, which permitted water rights to be filed on streams twenty feet wide and over. This delay proved disastrous, the two succeeding years being years of calamity to the whole state, which calamity could have been averted had the asked for legislation been granted at a time so sorely needed. State appropriations had to be made owing to the cry of distress which arose from the people of the western half of the state.

True, the condition of many of our people was a serious one, yet the entire state has suffered a set-back from which even yet it has not recovered. Even the curse of the grasshopper year was not so great as that upon the state given it by the press East and West during the past year, in its overdrawn advertisement of our condition. Unprincipled solicitors, too, went through the land, overstating our condition, relating stories that many of our people were dying of want and their bones left

bleaching upon the prairie; others were sustaining life by subsisting upon prairie dogs. Stories like these could not help but bring the blush of shame to our own cheeks, and we can hardly realize the effect it must have had upon the minds of strangers. The result of all this has been that Nebraska has lost her credit abroad, and has suffered much in material advancement, even more than in any former period of her history.

Could our legislators have but foreseen such a disaster to the state as a loss of forty-two per cent of its live stock industry in a single year, which fact has been shown in the report of the Secretary of the South Omaha Stock Yards Company, they would not have refused the legislation pleaded for by the people. Now the people of the eastern portion of the state are as zealous in regard to irrigation as are we of the west, and no longer do we hear the foolish objection made that irrigation laws will ruin Nebraska, as it will advertise to the world the fact of our lack of sufficient rainfall, or the objection, even more foolish, that of overproduction, so as to ruin competition with the older portions of the state.

In the campaign of 1894 we entered upon the final struggle for irrigation legislation in this state. Senator Akers of the thirtieth senatorial district made it the issue of his campaign, as did also Representative Harris, and many other members of the legislature from the western portion of the state, upon the Republican ticket. The result was a triumphant election and a great stride was taken towards the desired goal. When the legislature convened in January last, at Lincoln, there were five republican members of the lower house, and two republican members of the Senate from the sixth congressional district *directly* interested in irrigation. This representation was happily in line with the majority in both

bodies of the legislature, and with a unity of purpose and agreement among themselves, they stood a small but Spartan band for irrigation. They did nobly, and we are glad to honor them. They led in the election of the speaker, they aided in the organization of the Senate, and in turn were rewarded with the chairmanship of the Committee on Irrigation, in the House, in the person of Mr. Myers, of Rock county, and the balance of the committee appointed were the friends of irrigation. In the Senate like success attended their efforts. Senator Akers, the champion of the irrigation law upon our statute books to-day, was made chairman of the Irrigation Committee, and had with him on that committee a following loyal to the cause. Thus organized for the fight, success seemed assured. The bill was introduced by Mr. Akers in the Senate, and by Mr. Myers in the House, and was considered by a joint committee of both bodies. It was attacked by covert means and opposed in committees, but was piloted by its friends safely through committee and on to its final passage in the Senate without serious opposition. But in the House opposition arose from an unexpected quarter, namely, from the home of irrigation, Lincoln county, which was the means of almost defeating the bill. The cause of the opposition was fear that the present law would interfere with an enterprise already undertaken. This fear was groundless, as has been since demonstrated by the decision of the supreme court.

The bill weathered the storm and became a law April 4, 1895. Under its provisions the State Irrigation Board was organized and immediately entered upon its duties. The Alfalfa Irrigation District was the first organized under the new law. Taking advantage of its provisions, a bill was filed in the district court to test the constitutionality of the law. The lower court held the law valid,

as subsequently did the supreme court of this state. Thus the work begun by friends of irrigation in 1890 and 1891 was brought to a successful finish. Yet we must not stop here. A great work is before us. We must carry the fight into our national Congress, and there secure legislation for the regulation of interstate waters, the providing for the survey of reservoirs for storage of surface waters, etc. By hard, persistent labor we have been enabled to overcome difficulties which seemed at first almost insurmountable in the way of irrigation in this our beloved state, and we have reason to believe that what has been done for irrigation here can, by the use of the same means, be accomplished in our legislative halls at Washington and in our supreme court as well.

While the struggle for legislation was on the people were not idle. Astonishing progress has been made in the construction of canals and the putting of large acreage under crop conditions. There is now completed and under construction 1,990 miles of canals, and there are already completed 1,195 miles. The cost of constructing said canals has been \$1,399,281. The territory now covered by water for irrigation amounts to over nine hundred thousand acres. The irrigable acreage in crops in 1894 was 50,730. This was increased in 1895 to 141,482. The outlook for a still greater increase in 1896 is most promising.

REMINISCENCES AND REALIZATION OF  
NEBRASKA.

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WEST OF THE 100TH MERIDIAN, FROM 1874 TO 1896—A  
PERIOD OF TWENTY-TWO YEARS.

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BY EDWARD M'LERNON.

One bright May morning in the year 1874, I stood waiting. O, how anxiously, the opening of the United States Land Office in the city of North Platte. A land boom was in full blast, which accounted for my being there. Had it been otherwise, I should no doubt have been elsewhere, eagerly listening to the seductive tales of the land agent, in some other part of the Great West, where Uncle Sam, in his princely way, gives free homes to all. Armed with a description furnished by Mr. E. Sandison, one of the smoothest of his class, for which the paltry sum of ten dollars was cheerfully paid, I succeeded in homesteading and timber-claiming 320 acres of land, in town 12, range 24, about twenty miles west from this city of Lexington. O how rich I felt! The prospective owner of 320 acres in my own right forever! My enthusiasm and ambition were worked up to their greatest tension. I plowed, and sowed, and built, as long as my money lasted. Then I called a halt, of course—to see where I was at. I soon found out. The spring and early summer were very hot and dry. I had been so busy heretofore that I scarcely noticed it. Now when my pockets were empty I began to think of the winter coming on. My crops were burned up by the deadly simoon, and the air was full of grasshoppers, so I heard the old settlers say, and that they would alight

later on and take everything. These predictions proved only too true. There was not much to take, and it did not take them long. I took one long, last look at my 320 acres of land, breathed one deep *sigh*, from the depths of my empty pocket book, and started in search of a school district minus a teacher.

A brother pedagogue, whom old timers here well remember, J. A. Emsley, as bright a man as ever wielded the birch, was located near me, on section four. When everything had dried up and was being blown away—excepting what the hoppers carried away—and he was preparing to go back to his wife's folks, he printed a large placard which remained in a conspicuous place in the station at Willow Island for many years afterwards. It ran thus: "*For Sale*—The southwest quarter of section four, town twelve, range twenty-four. *This land is admirably adapted to irrigation.* For further particulars enquire of J. A. Emsley."

Bad years followed in uninterrupted succession. The famous Cozad colony, which proudly boasted to represent a capital of a million and a-half of dollars, was absorbed and wafted off on the wings of the wind, almost as easily as Emsley and myself with our few hundreds. Had John J. Cozad known then what *we know now*, and had spent the money used in building sod bridges across the Platte river, hoping to make the thing navigable, in irrigating canals, such as now cross his broad acres, he would be now what he aspired to be then, the richest man in the state of Nebraska.

But, as in the days of Pharaoh, these seven years of famine (1874 to 1881) were succeeded by seven years of great abundance (1882 to 1890). The flood-gates of heaven were opened and the timely rains and the dews fell, until under the bright canopy of heaven there was

not a fairer land than Nebraska west of the 100th meridian. The southwest quarter—4, 12, 24—before referred to, would, I was confidently informed, have sold for from \$25 to \$30 per acre without improvements. What it would bring to-day, many here present know better than I; but I venture to say, that no better or truer description of it could be written than that penned by my friend Emsley in 1874: "*This land is admirably adapted to irrigation.*" And so it goes. As it was in the beginning, so was it twenty-two years ago, so is it now, and so shall it ever be, until the next great upheaval reverses the existing order of things in nature. If we had a Pharaoh to dream, a Joseph to interpret, a supreme monarch, whose proclamation to build barns and save the surplus against the years of famine could be enforced, a people willing to be coerced for their own good, then, perhaps, we could afford to laugh at irrigation cranks, refuse to invest in irrigation enterprises, despise the small tract of land which one man can profitably cultivate, detest the hard work of both mind and body required to become successful irrigators, and take Dame Nature just as she is, for better or for worse.

In 1881, I located at Sidney, nearly two hundred miles west, then a country of cattle and sheep ranches. In 1885, the farmers, lured on by the rains and the dews which fell on a soil as fertile as any on top of earth, took the entire country, and the cattle man had to go. Some very strong colonies were planted in Cheyenne county—then large enough for an empire in itself—the area being almost 6,000,000 of acres. Notable among these was a colony of Dunkards, about fifty families in all. They located on a divide immediately south of the town of Sidney. Several built residences costing from \$1,500 to \$3,000, with barns and outbuildings which would do

credit to any country. All were comfortably fixed, and if any one lacked he was promptly assisted by his friends and neighbors. They fenced their land, and nearly every one had a windmill. They were well supplied with good heavy eastern horses, and the best and most improved machinery, all of which they shipped in car lots. Some brought their houses framed, all ready to set up. A large church building was erected in the center of the colony, neatly painted outside, and well furnished and seated with plain, substantial furniture.

Hardworking, thrifty, economical, temperate, and intelligent, weighted down with none of the vices, and possessed of all the virtues which we regard as essential to success, located upon a soil as rich as any on the face of the earth, can we wonder that not one of these people ever doubted that he had indeed found a goodly land—that here he could live, and here would he slumber, awaiting the sound of the trumpet calling the children of men before the judgment seat. It is with feelings of the deepest sorrow that I record the fact that all these good people have abandoned their farms. Some have taken lands in the valleys under irrigation, and have gone to work with renewed energy, but the larger number were too much discouraged to think of making another effort, and very foolishly, I think, went East to commence the battle of life anew.

I have endeavored thus far to show from personal experience and observation, covering a period of nearly twenty-two years that dry land farming that is depending entirely on the natural rainfall is very risky at all times, and in the end is sure to bring failure, with all the misery and wretchedness which follow in its train.

In the few minutes which I have yet remaining, I will try to impress upon your minds more deeply the fact

that irrigation is a grand success; and I here and now urge upon every man, yea, and every woman too, to commence, if they have not already done so, to learn the science and the art of soil culture with the proper and timely application of water. The ladies will find that it is just what they need to know in the cultivation and care of house plants and the flower garden.

The merchants, clerks, mechanic or professional man will be surprised and delighted to find how pleasantly and profitably time, which otherwise hangs heavily on his hands, can be employed on a city lot. His doctor's bill and his grocer's bill will be very materially reduced, and the children naturally interested in whatever interests father, will become active helpers in the work, learn useful lessons of industry, and in sweet communion with nature learn to love their homes and home surroundings and influences much better than the city streets and corner groceries.

To those of you who are wondering whether my preaching and practice agree, I would say that I use a city block, and a windmill that lifts, in a brisk wind, about thirty barrels of water an hour. I confess, that if I had only one-half the land and one fourth as much water, and could increase my work two-, three-, or fourfold, the results would be much greater.

In the month of February last, I furnished by request for one of the leading daily newspapers of Omaha, a brief history of irrigation in Cheyenne County, to which was added six letters by farmers, who are engaged in irrigation work, written over their own signatures. As conditions then and now are not materially changed, I will read a few extracts from this report, and also from the farmers' letters. This report was prepared by me with great care, knowing full well that I would be called upon to

verify the statements contained therein. The farmers are men of culture and intelligence, and have no object in making misleading statements, or indulging in exaggerations.

SIDNEY, Cheyenne County, Neb., February, 1896.—It is with some degree of diffidence that I accept the task of writing the "History of Irrigation in Cheyenne County," for the reason that if I give the record of the men who have been successful, some of your eastern readers will put me down as a monumental liar—or a land agent, desirous of fleecing credulous victims—while perhaps others more charitable will ascribe it to the hallucinations of a diseased intellect. Let me, however, assure your readers that I am only a plain grocer, who can see no illegitimate gain in the distance, other than the few pounds of sand I might be able to mix with the prospective customer's sugar.

The first irrigation ditch constructed in the county, and probably in the state, was built by General Dudley, U. S. A., in 1871. And old Fort Sidney is one of the most beautiful spots in the state, thanks to Uncle Sam and his brave boys in blue. Massive trees, two or three feet in diameter, and upwards of fifty feet in height, skirt the beautiful walks and drives, and ten acres of land, manured, watered, and intensely cultivated, has produced more beets, turnips, cabbage, onions, and "garden sass" than any fifty acres in the state from 1871 to 1894, when the fort was abandoned. The "boys" always took first prize at the state fair when they sent down an exhibit. Each company used two and a-half acres, and a friendly rivalry was indulged in to see which could show the best garden. They supplied 250 enlisted men, besides the officers and their families, with all the vegetables re-

quired, and sold hundreds of dollars worth every year in the town.

#### TWO HUNDRED AND FIFTY MILES OF CANAL.

There are in this county over 250 miles of ditch, varying in size from the Belmont canal, which is a good-sized river in itself, to the tiny creek fed by springs at the base of the foothills.

It would be impossible, in the space allotted me, to more than refer to a few of the farmers under this great system, most of whom are, however, only learning the A, B, C of irrigation. But the strides made in this science are truly wonderful, the results from year to year being expressed by geometrical, rather than arithmetical progression.

On the Lodge Pole creek, from its head to its mouth, a distance of over 150 miles, before irrigation was started, there were only three natural hay bottoms that would cut about a ton to an acre on a good year. Now it is almost one continuous line of hay ranches, cutting from one to three tons per acre; prosperous looking farm houses built of our native stone, and barns and outbuildings of the same material, which cost little besides the labor, surrounded with groves of trees, approached from all sides by roads of nature's own formation, as hard and level as the best city artificial pavements. Above, the blue vault of heaven without a cloud; around, the bracing ozone-laden, life-giving air which has the effect of driving the doctors south, and, permeating through all, the continual sunshine.

#### BEGAN WITH FOUR ACRES.

William Krueger came to Sidney from Wisconsin in 1879, and bought four acres of land just west of the orig-

inal town site. He was a practical gardener and horticulturalist. The first year netted him enough to pay for his land, and in the year 1895 he told me that he took in \$2,500 in cash. He has now 3,000 acres eight miles east of Sidney, every foot of which can be irrigated, which he bought, fenced, built dams, irrigating ditches, buildings, sheds, corrals, planted trees, made a beautiful lake and stocked with cattle and horses of the choicest breeds, and all this was done with money made from this four acres. Every foot was made to produce, and every kind of plant and tree, and shrub and flower, that grows in this latitude was to be found there in the rankest luxuriance.

ONE HUNDRED AND NINETY-SEVEN DOLLARS PROFIT FROM A  
HALF ACRE.

L. A. Ganson, of Lodge Pole, reports that in 1894, on first back-setting, he sold from seventy square rods (ten rods less than one half acre) vegetables to the amount of \$197, and used all he wanted for a family of six, both for summer and winter. He watered with a windmill, depth of well 101 feet. He says his son is located on the valley, and uses a large pump and windmill and irrigates about seven acres, and is proportionately successful, but could not give me the exact figures.

It sounds well to talk or write of large yields in farm produce, but unless this produce can be marketed in the shape of beef, pork, mutton, or poultry, there is not much money in it.

THE STOCKGROWER'S PARADISE.

This is the stockgrower's paradise at the present time, has been in the past, and most folks say, always will be.

Mr. F. Kurth, who lives ten miles southeast of Sidney, on the highest point of the divide, has two windmills and raises a fine garden.

TALL TALES, BUT ALL TRUE.

He is among the first in market with vegetables. The dry year of 1890 he had a twenty-four-pound cabbage on exhibition. A few days ago he said to me: "Well, get out your book and see what I owe."

"Been making a raise?" I said.

"Yes, sold the steers."

"How many?" I asked.

"Five hundred and eighty-six dollars worth, and they didn't cost us a cent."

Some of our eastern or southern friends might try to figure out how many bushels of corn or oats at fifteen cents a bushel, or how many bushels of apples at twenty-five cents a bushel they would have to raise to show a net gain equal to Mr. Kurth's steers.

Mac Radcliffe informs me that he cuts 100 tons of hay on his ranch on Cedar creek on land that, without irrigation, would not feed a goat. He cultivates a good big garden every year, could not give amounts produced, but has plenty for home consumption, frequently sells, and feeds the surplus to stock. He raises strawberries, raspberries, gooseberries, and currants in great abundance. He had cabbages last year weighing from twenty-four to twenty-six pounds. His rye went twenty-eight bushels to an acre. He had one apple tree that produced about half a bushel of No. 1 winter apples, and a pear tree that had four pears on it.

Charles Trognitz, ex-sheriff of Cheyenne county, and known over the state as "Old Sleuth," having run more criminals to cover during his term of office than any

other man in the state, has retired to the peaceful pursuits of farming and stock-raising on a large scale just west of the town of Sidney.

He has one of the most commodious, comfortable, and solid residences in the county, built of native stone, and luxurious in all its appointments. He is an enthusiast on irrigation. He has a large orchard set out with a varied assortment of fruit trees, with shrubbery and small fruit in abundance. He had one-fourth of an acre this year that produced 125 bushels of carrots. One-half acre produced five tons of cabbage. He is also an enthusiast on sugar beet culture.

He says that in hogs is where the money is. He has been feeding his hogs sugar beets and field peas, which he says is A1 feed.

L. H. Bordwell raised 10,000 pounds of cabbage on two-fifths of an acre of sub-irrigated land last season.

I have interviewed over twenty-five farmers on the subject of irrigation, besides those here recorded, some on the table lands, where windmills were used, and some on the bottoms, also by windmills, and all report good success. I have also interviewed as many or more who are under the large ditches, who also report grand results, but most of those who used water last season for the first time say that their success would have been greater had they used less water, and all proclaim that "irrigation is a grand success."

Hon. J. M. Adams, register of the U. S. land office, who has lived in Cheyenne county since the sixties, furnished an able and exhaustive article. I make a few extracts.

#### VAST AREAS RECLAIMED.

Irrigation has already reclaimed vast areas of this section of the country, far in excess of the hopes and

expectations of any persons when they first determined to make the experiment, for such irrigation was considered to be until a short time ago. Under irrigation vast fields of yellow grain, heavy with its burden of ripening fruit, vast meadows of waving grasses, which makes hay of the finest and most nutritious quality, and corn, most luxuriant in its growth and yield, are to be seen where but a few short years ago none of us ever expected to see anything growing, other than the short prairie grasses. Water and man's work have made these wondrous changes in nature's appearance, and still the end is far off. After allowing a bold stream to flow past my house and through my lands in its untrammelled course to the sea for years and years, I at last concluded to apply at least a portion of this water to irrigating purposes, and after beginning on a very small scale, experimenting, I may say, which resulted so much beyond my greatest expectations, I have become an enthusiast upon the subject, so much so that from a small beginning in 1892 I now have about 200 acres receiving the benefits of irrigation, and am filled with regret that lack of water compels me to stop at this.

With me the use of irrigation has been applied to hay crops exclusively, with the small exception of perhaps an acre of land used for gardening, and I have increased my yield from 100 tons in 1892 to 400 tons in 1895, principally off of about 125 acres of land, as the balance of the land only received the water for the first time late last season, and is partly seeded to that great forage crop, alfalfa. A large proportion of this land has been made into meadow land solely by using water upon it, it being at the beginning almost bare of vegetation, having been pastured until the stock had worn away every vestige of roots by traveling so constantly over the land. The first

season's application of water is wonderful, causing grass to spring up and spread out over the land, making it perfectly safe to count upon having a well matted meadow by the fall, out of what was almost bare soil in the spring, as well as yielding as high as three-quarters of a ton of good hay to the acre. From this time on an increased yield can safely be expected, the limit to which I know not. On lands that are well grassed to begin with greater and quicker results are realized.

#### GARDEN RESULTS.

The results from gardening have been particularly satisfactory and abundant, but as I have not kept an accurate record I cannot give exact figures; but upon a small tract of perhaps an acre of ground I have raised in abundance all kinds of vegetables, far exceeding in size and quality any I ever saw raised under other conditions. The yield has been ample to keep the ranch supplied throughout the year with potatoes, cabbage, onions, beets, and all short season vegetables, frequently supplying from twelve to fifteen different varieties at one time. The soil being mellow and fruitful, it seems as though any seed will grow, and grow luxuriantly, when furnished with proper care and plenty of water seasonably. Irrigation seems to render one independent of the seasons in growing vegetables in this climate, as every spring and summer vegetable can be kept maturing from spring until killed by frost in the fall, with good cultivation and re-planting. I know that cabbage can be made to yield, per acre, 40,000 pounds; onions, 400 to 500 bushels; potatoes, 300 to 500 bushels; and other vegetables at the same ratio.

J. D. Brubaker, who was one of the colony of Dunkards before referred to, writes thus:

## A GREAT SUCCESS.

CAMP CLARK, Cheyenne County, Neb., January 16.—  
Two years ago the writer located on a new tract of land that had no laterals constructed on it, or connected to the main canal. The sod was not broken where the experiment was to be made. The first crop sold off the land, after breaking sod, netted the first cost of the land.

The second year I tried an experiment with one-quarter of an acre of cabbage, the produce sold from the same netted \$50, at the prevailing low price of vegetables, being about one-third of the price in preceding years, owing to the large amount that was raised under irrigation in the immediate vicinity. From one-quarter of an acre of onions I raised 100 bushels of marketable onions. At the present low price they would represent a net cash value of \$100 per acre.

Potatoes gained over last year on new ground 300 per cent, of fine quality. Second crop on same ground.

Beets raised at the rate of thirty tons per acre. Being no market for them, they were fed to stock. Hogs thriving and doing well on part rations of beets.

Experimented with one acre of beans, which yielded eighteen pounds of choice beans, worth, net, \$12.

Cereals did well, wheat yielding from twenty-five to thirty-eight bushels per acre.

The forage crop, alfalfa, yielding three heavy crops during one season, averaging about five or six tons per acre.

As a whole, the right application of water will make crops an assured certainty, as well as many fold greater than without it.

## DUTY OF WATER.

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BY W. R. AKERS.

No question is so perplexing to the irrigator, and none so often asked by parties who are inquiring after irrigation, as, "What is the duty of water?" or, in other words, "How much water does it take to irrigate a specified tract of land?" The duty of water means the area that can be irrigated by one cubic foot of water per second of time, this being the unit of measurement adopted by nearly all irrigation states. In our state the law fixes the maximum of water that may be allowed to a tract of land at one cubic foot per second of time for each seventy acres of land to be irrigated. Whether this amount is sufficient or whether it is in excess of the amount required is yet to be determined.

At the time the law was being framed and the amount of water to be allowed was being fixed, there was a difference in the minds of engineers in the state as to what the amount should be, many of them insisting that one cubic foot per second was sufficient for the irrigation of 100 acres of land. This was thought by others to be entirely too high a duty to be placed upon water, and others argued that one cubic foot per second was not too much water to be used on fifty-four acres of land. This difference of opinion arose, no doubt, on account of the locality in which the engineers received their education. In some states, as for instance in Colorado, at an early date the duty of water was fixed at about one cubic foot for each fifty-four acres of land. In other words, the unit of measurement adopted in Colorado when they first began their irrigation enterprises was one miner's inch to each acre of land to be watered. This was about equivalent to fifty or fifty-four acres to one cubic foot.

The miner's inch varies very greatly in different localities, owing to the pressure or head that is allowed. Some states adopt a four-inch pressure, others a five-inch, and some even a six-inch pressure. In some states the pressure is declared to be the measurement from the center of gravity to the top surface of the flowing water. In others it is declared to be a certain distance above the top of the orifice through which the waters flow. There is another difference, which is in the construction of the orifice through which the water is to flow. In one locality the orifice may be only one inch in height, and as many inches in width as the number of inches of water requires. In others the orifice must be a square, in which case there would be a great difference in pressure, as will be readily seen. Suppose, for instance, that one orifice is one inch in height and sixteen inches in width, and another orifice which is calculated to deliver the same amount of water should be four inches square, you will readily see that the pressure on the first orifice would be three inches greater than the pressure on the last orifice, placing the water at the same level, and the first orifice would deliver a large amount of water in excess of what the second would deliver, and so we conclude that the miner's inch is not a safe measurement to be established as a standard.

In other parts of the country the unit of measurement was fixed in cubic feet per second. Hence, the difference in measurement in different parts of the country and different states have made a difference in the amount of water which they allow for the irrigation of certain tracts. Some of the states have established the unit at one cubic foot of water for each 100 acres of land to be irrigated. In Wyoming, from whose laws ours are largely copied, the duty was fixed at not to exceed one cubic foot of water

per second of time to each seventy acres of land to be irrigated.

The writer of this article, having lived and irrigated in Colorado, was rather prejudiced in favor of the Colorado system, and the Colorado measurement of water; but after making inquiry as to the workings of the law in Wyoming, and knowing the character of the soil and climate of the state of Wyoming to be very nearly the same as that of Nebraska, consented to the adoption of the same standard used in Wyoming for the measurement of water, and the amount of water to be used in Nebraska.

It is a very difficult question to settle by theory alone, and I think that practice is the only thing that will settle the question for us. There are so many things to be taken into account. In fact, we may find that the duty of water will vary very greatly in different parts of our own state. I am quite sure that we shall find this to be true. Conditions are so different, even in our own state, that it would be impossible to say that the duty of water could be absolutely fixed. For instance, in the western part of the state the duty differs greatly from the east. The climate differs very materially, and the soil is entirely of a different nature, being more porous in the west than in the east, and there is nothing, perhaps, that makes a greater difference in the amount of water necessary to be used in irrigating a particular tract than the porosity of the soil. The soil in the western portion of the state is very much more sandy than in the eastern part, and under the rays of the summer sun becomes very much more heated, and consequently drier, and will absorb a great deal more water than in the central or eastern parts of the state.

There is also a great difference between the two sections, in the precipitation. From the eastern line of Ne-

braska, as you go west the precipitation diminishes. Hence, the farther west in the state the greater the amount of water required for irrigation.

There are various other elements that enter into this discussion, which we have neither time nor space at this time to notice. It is thought, however, that we are safe in fixing our standard of duty at not to exceed one cubic foot per second for each seventy acres of land to be watered, and then, if we find in time that by trial and experience, certain portions of the state do not require this amount of water, when the time comes for the final adjudication of the waters of the state, a higher duty may be placed on water in the central or eastern part of the state or even in the west if it can be done without danger.

Of one thing we are very certain, if our authorities are at all reliable, that in all irrigating countries early irrigators place too low a duty on water, and, as a result, all use entirely too much, simply because they had it to use, and by so doing, in many instances they deteriorated their land and reduce their productiveness by entirely too liberal an application of water to their lands; and there are many instances of later appropriation where they were compelled and forced to practice the strictest economy in the use of water, rendered necessary by prior appropriations, and these people who have been, as they supposed, so unfortunately situated, have in many instances produced much better crops than their neighbors who were not limited, and hence used water in an extravagant manner.

Thus it will be seen that an abundant water supply has been proven to be an absolute damage to the man who had it and used it. Another disadvantage of having an abundant water supply arose from the fact that a great many farmers who are thus situated seek to make water

perform a double duty, by first furnishing the moisture necessary for the production of plant life, and afterwards by seeking to compel the water to take the place of proper cultivation. This is one thing that ought to be carefully guarded against, and never suppose for an instant because you have water to irrigate, that you do not need to cultivate. Immediately after irrigation all crops that grow in rows should be cultivated just as soon as the ground is dry enough to work, which should not be longer than two or three days. The ground should not be kept so wet as to interfere with thorough cultivation. Crops that are sown broadcast or crops that require flooding should not, ordinarily, be irrigated until the crop covers and shades the ground. Otherwise, the ground is liable to bake. What is termed "watering up crops" should always, if possible, be avoided. It is true that farmers sometimes have been compelled to water their crops before they come up and have reaped very fair results, but the crop is liable to stand a long time before it does much growing. The ground is sure to bake, and the crops be very much retarded in their growth. A very much better plan than this is to water the land thoroughly immediately before plowing, then as soon as possible after plowing the grains should be sown and such a thing as irrigating the crop up will not be necessary.

Then again, crops differ very materially as to the amount of water necessary to water them. Oats, for instance, require a larger amount of water than wheat, and wheat requires more than rye or barley, and any of these require more than buckwheat, and generally all crops which have to be flooded require more water than crops which are planted in rows. Some kinds of crops, however, that are planted in rows, require a large amount of water to secure the best results. Then others, vegetables,

for instance, cabbage, cauliflower, and vines of all kinds require a large amount of water, while corn, sugar cane, potatoes, and many vegetables, require much less. Orchard and fruit trees require less water than any other kind of crops, and a much higher duty may be required of water in their cultivation than anything else, and yet, while they require so little, there is nothing which shows better results, or a greater difference between those irrigated and those which are not irrigated.

There is, perhaps, nothing which causes a greater loss of water, and consequently a lowering of duty, than is obtained by employing unskilled laborers as irrigators. Sometimes it is found impossible to secure any other kind of labor, especially in countries where irrigation is only beginning to be practiced. A farmer who has any considerable amount of irrigation to do had better pay a skillful irrigator \$25 per month than to have an unskilled man at \$20; or \$30 per month than to have an unskilled man at \$25. In countries where irrigation is entirely new Ditch Companies could well afford to hire a skillful man to go from farm to farm for the purpose of teaching the farmers how to prepare their lands, construct their laterals, and in many cases actually apply the water to the land. I believe if they were to do so, they would greatly increase the duty of water, and upon the duty of water depends the success of every irrigating enterprise. As water becomes scarce, the price increases in proportion, and the greater the number of acres watered by the ditch, the greater the profit to the man or company who furnishes the water. If the duty of water could be increased from seventy acres to 100 acres to the cubic foot per second of time, the value of the ditch would be increased one-third; and I believe this result would be reached at once, and perhaps exceeded, by having a good,

skillful man among the farmers for the first two years, and at the same time the farmer would secure better crops. I believe, also, that a half-dozen farmers could well afford to hire a skillful irrigator to go from farm to farm instructing them how to prepare their grounds, laterals, etc. No doubt many men who never have used water for irrigation before have taken hold of this art without instructions, and have succeeded very fairly; but who could say what the difference might have been had these same men had the instructions of a skillful irrigator to begin with.

Another way in which the duty of water may be greatly increased is to use it in the fall and winter season when there are no crops on the ground, and but few people are using the water for irrigation. This method has at least two advantages. The farmer gets his irrigating done at the season of the year when he is not busy with his crops, and saves the time that it necessarily takes to irrigate during the summer season, which he may use to advantage in the cultivation of his crops and other work about the farm, and in doing this he stores the water in the ground that would otherwise make its escape to the sea, and could never be recovered, thus leaving the entire flow of the river during the irrigating season to be used on their lands, and in this way alone, the duty of the water may be doubled. I have known some instances where grounds were thoroughly irrigated in the fall and the next year a good crop was raised without any irrigation whatever, when at the same time, crops in the immediate neighborhood that had not been irrigated at all were a total failure. This plan simply lengthens the irrigation season which is ordinarily three months, and may as readily be extended to six or even nine months.

Any ditch company which undertakes to sell water to farmers can well afford to encourage the farmers to use the ditch just as many months in the year as it can be safely used, and not to run water all the time on the same tracts of land, but to keep it in motion and moving from one tract to another and covering just as much land as possible during the fall and winter, which will save just that much water for next season, and thereby increase the area of land which the ditch can water, and, consequently, the value of the ditch.

I know of one instance of fall and winter irrigation which has proven contrary to all my former teachings and instructions in regard to this matter; in Colorado, and I mention it in order that it may be investigated and learned, if possible, whether the former teaching of the farmers of Colorado has been at fault, or whether it is true. It used to be said in Colorado that if one wished to destroy a field of alfalfa, or wanted to get rid of it, you could do so by irrigating it late in the fall and freezing it out. In the fall of 1895, John R. Stillts, of Gering, Nebraska, had a forty-acre tract of alfalfa, which he watered late in the fall, and it froze, as I am informed, until the ground was covered with ice, but it was not killed. It came up in the spring of 1896, and grew nicely, and without any irrigation whatever he raised and thrashed from this piece of alfalfa thirteen bushels and three pecks of seed per acre. I state this just as it was told me by the sister of Mr. Stillts, and, knowing all the parties, I have not the slightest doubt that it is perfectly reliable. I understand that Mr. Stillts intends to water this same tract in the fall of 1896, which will thoroughly determine the question whether this teaching of the Colorado farmers was correct or incorrect. Any one who has any curiosity in regard to this matter may

write John R. Stilts, of Gering, Nebraska, and I have no doubt that he will take great pleasure in answering any questions that may be asked.

Let every ditch company, and everyone who is in any way interested in increasing the duty of water, keep the water moving from place to place on their farms just as many months in the year as they can run water; and with this storage of water in the ground, and the storage of water in reservoirs and natural basins, which the Almighty seems to have scattered all over portions of Nebraska and made into natural reservoirs, which man has only to put the finishing touches on to make great natural storage basins for water, the duty of water may be much more than doubled in the state of Nebraska, and the millions and millions of cubic feet of water that are now lost every year by escaping to the sea would be saved up and held in reserve for the production of crops in the day of need. It is estimated now by conservative men who have been engaged in the measurement of the waters of the state, that there is sufficient water flowing in the streams of the state to water at least 3,000,000 acres of land, and with this storage of waters in the ground and these artificial reservoirs, thereby doubling the water supply, we could safely say that we could irrigate 6,000,000 acres of land. What would the state of Nebraska be with 3,000,000 acres of irrigated lands, and with 6,000,000 she would be the queen of all the states. Let us hope that we shall not be compelled to wait long to see this.

Other very important objections to the too liberal use of water are the malarias that are caused by the too thorough saturation of the soil as well as the raising of alkali to the surface which has been accumulating for centuries. On all alkali lands water should be used as sparingly as possible and not a drop more should be put

on to them than is absolutely required for the maturing of crops. In a number of places in Nebraska, and especially in the valley of the Platte, the land is so strongly impregnated with alkali as to render it absolutely worthless for the production of ordinary crops after it has been watered from two to three years in a careless manner. I have at the present time in mind a beautiful tract of land in the Platte Valley, which, after having been irrigated or absolutely flooded with water for two years, became so covered with alkali as to render it as white as the sheet of paper on which I am writing this description, and absolutely valueless for the production of crops. This might have been avoided by a more careful use of water and better drainage of the land. In all probability the alkali would have raised even with careful irrigation, but it would have taken many more years to render it useless. I am asked if there is any way of reclaiming these alkali lands. So far as I am individually concerned, I have never seen any very badly alkali lands reclaimed, but I have studied this matter somewhat, and from the theories of others who have written on the subject, I learn that it may be greatly benefited by first draining it carefully, cutting drains through the land at a considerable distance below the surface where it is to be applied, say two feet in depth, and after doing this run water upon the land and let it stand a few days until it brings up a large amount of alkali, and then, having everything arranged, use a large head of water and flood the entire land quickly, opening all drains to let the water and alkali be carried away rapidly to the stream. This plan is said to work very well and to greatly reduce the amount of alkali on the land. Another plan is to raise sugar beets upon alkali lands. I have been informed by a gentleman in Washington, that in their state they have lands that are

so strong as to be worthless for cropping, which they reclaimed in about three years' time by planting them to sugar beets. The beets make an enormous yield and are of a very fair quality, and in about three years the land is reclaimed to such an extent that any kind of crops may be raised upon it. After farming in other crops for a few years it will be necessary, I am told, to again go back to beets and reclaim the land. Again, sugar beets grow best on grounds where there is a considerable amount of alkali. However, there is no doubt that the ground may be too strong to be the very best for sugar beets, but with this knowledge in our possession, if our people encourage the growing of sugar beets, and use their lands in this way, we shall be able to reclaim our lands entirely, and at the same time raise very profitable crops.

#### SUGGESTIONS FOR DEVELOPMENT OF THE UNDERFLOW.

I have noticed a letter published in the *Sidney Telegraph* of January, 1897, describing a very novel plan of irrigating the Lodge Pole country, which strikes me as though there must be something in it, and the idea is entirely new, so far as I know, for raising water from the ground, though the principle is very old. Following is the letter in full:

#### A PRACTICAL SUGGESTION.

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MR. J. R. YOUNG'S IDEA OF IRRIGATING BY MEANS OF THE SYPHON PRINCIPLE.

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LODGE POLE, NEB., December 26.

*Editor Telegraph:*

DEAR SIR—I wish to call your attention to a plan I have thought of for irrigating this valley, by means of

which I think the desert can be made to blossom, to some extent at least.

There is an inexhaustible supply of water from fifteen to twenty-five feet beneath the surface, called the under-flow. This underground stream, like other western rivers, is fed by storm waters and never failing mountain streams or springs, and percolates beneath the surface of this fertile little valley at quite a rapid rate. There is a fall of from fifteen to twenty feet per mile, and the water is generally in coarse gravel and large orifices of hard pan.

The plan which I wish to suggest is to apply the principle of the syphon, and the procedure would be something as follows: sink a well, either by digging the entire distance to water, or by the cheaper and better method, where water is found in the gravel strata, by boring and sinking a sand point or drive well point, provided with a valve opening upward at the upper end of the point, or about the surface of the water. Extend the upright pipe to within a few feet of the surface of the ground, at which point a T should be attached, at the right angle of which attach the discharge pipe, to be laid in a trench. This pipe should be extended far enough down the valley to obtain the necessary fall. Then close the lower end of the discharge pipe and fill the syphon from the upper end, and you will have a continual flow of water day and night without further expense.

By continuing the pipe, instead of emptying it into a ditch, the water may be delivered into railroad or private tanks.

In some of the irrigation districts of California, all the water is distributed through mains and pipes instead of ditches.

This plan, briefly stated, could of course be improved and enlarged upon. To obtain a sufficient supply of

water for all purposes more wells could be sunk and more pipes laid, to be emptied into one large discharge pipe, or allowed to continue separate and empty into a main ditch, as was found most practicable.

By this means I believe sufficient water can be obtained to irrigate nearly every foot of land in the valley of the Lodge Pole, and furnish power for manufacturing enterprises besides, and thus make homes for thousands.

Hoping these remarks may be the means of awakening an interest in a subject of vital importance to the denizens of these regions, as well as to many others, I remain,

Most respectfully,

J. R. YOUNG.

This experiment could be tested very cheaply, and I think it worth while for some one who is interested in the Lodge Pole valley to make the test. Of course it would not work unless the creek had a considerable fall, but if, as Mr. Young says, the stream has a fall of from fifteen to twenty feet per mile, the discharge pipe would only require to be about one mile in length where the water was from fifteen to twenty feet from the surface, to bring the lower end of the plane to a level. It might, however, be tested without laying the pipe the full length by inserting the pipe into a hole dug in the ground at a distance from where the well is sunk. For instance, the water at the head is fifteen feet. From the surface lay the pipe down the stream, say one-half mile, and then dig another hole say ten feet deep and insert the pipe until the lower end is lower than the water in the first well; plug up the lower end and fill the syphon from the top and start it to running. I apprehend that the only trouble that could arise if the supply of water is sufficient would be the accumulation of air in the apex of the syphon. This, how-

ever, will not amount to a great deal as the tap can be taken off and the syphon filled with water, which will take but a short time, and then the syphon will run a long time before the air will again affect the flow.

I have for a long time thought of a plan somewhat different for watering the Lodge Pole Valley. It is generally conceded that there is an abundant underflow in the valley, and the valley has a wonderful fall. My plan has been to dig an open ditch down to sheet water and run it out to a level and then conduct it in ditches wherever desired. But I supposed the underflow was only from six to eight feet from the surface, and if so, and the fall is from fifteen to twenty feet per mile, the ditch would only be from eight to ten feet deep at the head and would come out to a grade in much less than a mile, and I still think that there are many places in the Lodge Pole valley where the water will be found as shallow as six or eight feet. In such cases if a ditch were opened up from eight to ten feet deep at the head, and given a wide head, a considerable underflow might be developed, and much of the valley be brought under irrigation in this way. There is another country in Nebraska in which much water might be secured by ditching. The country referred to is in Brown and Cherry counties. I have not had an opportunity to personally inspect this country, but from information gathered from intelligent gentlemen at Johnstown, Brown county, I learn that there is a vast country called the "Lake Country" in Cherry county, west of Plum creek, where there is a chain of small lakes extending over a large area, and besides the lakes there is a large country in which the water comes almost to the surface of the ground. If ditches were cut from one lake to the other, and rather deep ditches cut through this land where the water comes so close to the surface, all leading

to one main ditch, and thus conducting the water to Plum creek, I have no doubt that a large body of water could be secured, and from Plum creek it could be taken out in ditches and a great country in the neighborhood of Johnstown and Ainsworth covered and reclaimed. And besides the land reclaimed from its desert condition, the land drained would be greatly benefited. It is to be hoped that some enterprising person or persons living in these and neighboring places will take this matter up and experiment upon the lines suggested until they are fully demonstrated.

W. R. AKERS.

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## Report of Assistant Secretary.

*Hon. W. R. Akers, Secretary State Board of Irrigation:*

SIR—I have the honor to transmit herewith a report of the progress of that part of the work of the State Board of Irrigation assigned to me since my appointment as assistant secretary to the Board last April. Owing to the magnitude of the work, the short time that has elapsed since its commencement, and the limited amount of the appropriation at the Board's disposal, this report is necessarily incomplete. I shall endeavor however, to set forth briefly the results obtained thus far. The stream gaugings are presented in tabulated form showing the mean daily discharge at each regular gauging station. Following these is a list of gaugings made of various smaller streams, creeks, and canals, at other places than the established gauging stations. A few tables have been computed giving the discharge through measuring boxes and over measuring weirs, together with short remarks as to their construction and use. It has been the aim to present these matters in a popular way, and therefore technical terms have as far as possible been excluded from the remarks and explanations.

Very respectfully,

E. T. YOUNGFELT,

*Assistant Secretary.*

The state is divided into two water divisions numbered No. 1 and No. 2, respectively. Water division No. 1 comprises all irrigable lands drained by the Platte rivers and their tributaries lying west of the mouth of the Loup river; and also all lands lying south of the Platte rivers and drained by other streams. Water division No. 2 comprises all lands not included in water division No. 1. For the purpose of better classifying the claims and applications for water, these divisions have been subdivided into water districts; each water district comprising a distinct and separate watershed. The first work undertaken and begun after assuming my duties as Assistant Secretary was to make maps of the different water districts or watersheds of the state, beginning with those in which irrigation was most extensively carried on, on a scale sufficiently large to show all the streams, creeks, and water courses, irrigation canals and ditches, etc. This work has been carried on intermittently and at times when not engaged in field operations. The scale to which these maps are made is one-half inch to the mile, with the exception of the map of the Loup river watershed, which was drawn on a scale of one-third of an inch to the mile, in order to have that territory comprised in one map. The data from which the maps have been compiled is taken mainly from the township plats of the United States Government Survey on file in the office of the Commissioner of Public Lands and Buildings. Thus far five of these maps have been nearly completed, viz., the Republican river, the Platte river, the Loup river, the Lodge Pole creek, and the White river watersheds. The largest of these maps, the Platte river watershed, is sixteen feet long and three feet wide, and the smallest, the White river watershed, is four and one-half feet long and two feet wide. These maps, in addition to streams

and water courses, show section and township lines, boundaries of counties, railroads, towns, and villages, and when complete will also show the location of irrigation works, ditches and canals, the number and date of their priority, the amount of water granted by the Board to each canal, and the irrigable lands under them, thus serving as a condensed record on matters of irrigation development on file in this office. The delineation of the maps is first made on drawing paper, then a copy is made on transparent cloth (traeing cloth) from which blue prints and photolithographic prints can be made. A set of blue prints accompany this report.

#### MEASUREMENT OF WATER IN NATURAL STREAMS.

One of the most important duties of the Board of Irrigation is to obtain information regarding the quantity of water flowing in the streams of the state. For this purpose measurements have been made of all the important rivers and a number of smaller streams and tributaries. The results which we are at this time able to present are the fruit of a scheme of co-operation with the hydrographic division of the United States Geological Survey, to which this office became an active party in the early part of last summer. Commencing in 1894, stream measurements have been made and gauging stations maintained by the hydrographic division of the United States Geological Survey, under the direction of F. H. Newell, as chief of the division. From the first he has had actively associated with him the department of civil engineering of the State University and the Nebraska Agricultural Experiment Station. In this connection it is but proper to mention that this office has received very substantial assistance from Prof. O. V. P. Stout, of the State University, and the work has also been greatly facilitated

through the uniform courtesy of railway and canal companies. For additional information in regard to the water supply, reference is made to bulletins 131 and 140 of United States Geological Survey, and to the Report of the State Board of Agriculture for 1895, and also to the Nebraska Irrigation Annual, 1896.

The importance, or rather, necessity, of obtaining a complete and continuous record of the flow of water in the streams of the state cannot be overestimated. In the first place this record will serve as a basis for this Board in rendering decisions upon the applications for the use of water for irrigation purposes. Then the persons who are directly interested in irrigation will get much valuable and useful information from a study of this record, particularly so in the matter of making estimates for construction of reservoirs for storing the surplus water and that which runs to waste during the seasons when irrigation is not carried on. With an increasing demand for water and a consequent increase in its value, this information will be of greater importance. From a scientific point of view it will also be of some value in connection with meteorological observations, in throwing some light on the laws that govern the fluctuations of the flow of water.

The methods followed in taking measurements or gauging the streams are in the main the same as those adopted by the United States geological survey. A favorable place for a gauging station is selected on the stream to be measured, at a point where the current is straight for some little distance above and below the station. A graduated rod is securely fastened on the bank of the stream, or to a bridge pier, or other convenient place, in such a position that the height of water in the stream can be read on the rod. The operations in taking a measure-

ment consist of finding the area of the cross-section of water and its velocity of flow. Having obtained these two quantities the discharge in cubic feet per second is equal to the product of the area expressed in square feet multiplied by the velocity expressed in feet per second. The area is obtained by measuring the width of the stream and the depth of water at a series of points (preferably at uniform distances) in a line perpendicular to the current of the stream. The velocity is most correctly ascertained by the use of an instrument called a current meter. This instrument consists mainly of a wheel that is made to revolve by the impact of the current, and the number of revolutions are recorded, either on a series of small wheels driven directly by a cog and vane wheel, or by some contrivance whereby the revolutions of the meter are recorded audibly. The relation that the number of revolutions of the meter bears to the velocity of flow is called the rate of the meter. This rate is usually ascertained by drawing the meter through still water over a known distance and noting the time and the number of revolutions. This operation is performed several times at varying speed. Then the distance through which the meter is drawn, divided by the time, gives the velocity of the meter through the water; and the number of revolutions of the wheel, divided by the time, gives the rate of motion of the wheel. The ratio of these two is the coefficient or number by which the registrations of the meter are multiplied to obtain the velocity of the current. A very good and portable meter, and one which has been almost exclusively used by the writer is "Price's Patent Acoustic Current Meter." This instrument can be used in depths of from three inches to ten or twelve feet, in streams of moderate velocity. The price of this instrument is \$50.00. A rough approximation of the velocity

may be obtained by throwing a floating body in the stream and noting the time of passage over a known distance. About .8 of the maximum surface velocity will represent the mean velocity of the water. This, however, is only applicable to ditches and canals and small streams of uniform cross-section. In wide and shallow streams no constant relation exists between the maximum surface velocity and the mean velocity of the water.

In order to get a continuous record of the discharge, an observer is engaged at each gauging station who makes daily observations of the height of water on the rod. Once a month or oftener an actual measurement of the discharge is made, at the same time noting the river height on the rod. After a series of measurements have been made at various river heights comprising high and low water and intermediate stages, a table of discharges corresponding to the river height can be computed, it being considered that a recurrence of the same river height corresponds to the same discharge. This assumption would be practically true if the bed of the stream always remained constant, but this condition does not exist in any of the important streams of this state. At times sand and silt are deposited, and at other times scouring takes place, thus decreasing and increasing the area of the cross-section, and consequently the discharge, especially during and after floods. Therefore it has often been difficult to determine the correct relation between gauge height and discharge. But although the discharge given in the tables for any particular day may vary considerably from the truth, the average for any longer period of time, as, for instance, one month will give a very close approximation.

In tables No. 1 to No. 16, inclusive, are presented the mean daily rates of discharge at the established gauging

stations. The unit of measurement is the cubic foot per second of time. Table No. 17 contains the measurements at the gauging stations, from which the rating and the previous tables have been computed. Table No. 18 is a collection of all the gaugings of streams in Nebraska made at other points than the regular gauging stations. This table contains all the data that the writer has been able to collect from his own measurements, from previous publications, and from persons who have made measurements of the flow in streams.

A description of the regularly established gauging stations is given herewith:

INDUSTRIAL COLLEGE,  
UNIVERSITY OF NEBRASKA,  
LINCOLN, January 15, 1897. }

*Hon. W. R. Akers, State Engineer and Secretary State Board of Irrigation, Lincoln:*

DEAR SIR—Pursuant to your request of a few days ago, I hand you herewith descriptions of the regularly established gauging stations which have been maintained in the state of Nebraska by the United States Geological Survey, and which have constituted the most important contribution of the survey toward the scheme of co-operation with your department.

Very truly yours,

O. V. P. STOUT.

PALISADE STATION ON FRENCHMAN RIVER.

During the open season of 1895 and 1896, the daily observations of river height have been taken immediately above the bridge of the Burlington & Missouri River Railroad, about three-fourths of a mile above the railroad station at Palisade, Neb. Until November 1, 1896, the

observer was Mr. J. M. Reed, a farmer living at a distance of about seventy-five yards from the gage. Mr. Reed removed to another county and his place as observer was taken by Mr. A. J. Koontz.

The gage consists of an oak stick, two by four inches and about fourteen feet long. One end is buried in the sand, and the rod is fastened by lag screws to two six by eight inch cross-ties about five feet long, each bedded and covered. This rod is in a small recess of the bank and is inclined at an angle of  $30^\circ$  to the horizontal, the foot marks being two feet apart along the rod. The seven foot mark on the rod is 0.89 foot below the top of the screw thread on the bottom of the east side of the north pile of the second bent from Palisade. This elevation was verified on June 18, 1896.

The channel is of loose sand, and is nearly straight at this locality. During 1896 nearly all discharge measurements have been made at a section 300 feet below the bridge.

On June 18, 1896, two supplementary gages were added to this station, one above and one below the main gage. The distances from the main gage are about 325 and 300 feet respectively.

These supplementary gages consist of iron pipe driven deeply into the sandy bed of the river close beside the right bank. Observations are taken by measuring the distance of the surface of the water from the top of the pipe. The elevations of the tops of the pipe at the upper and lower gages are 2.24 feet and 1.46 feet respectively above zero of the main gage.

This station was temporarily discontinued on December 1, 1895, observations being resumed in the spring of 1896.

## WAUNETA STATION, ON FRENCHMAN RIVER.

This station was established in 1895. It was intended to supplement, and perhaps to replace the station at Palisade, the banks being much more suitable, and the general character of the river being such that it was thought possible to obtain some stable relation between gage height, and discharge. This, however, was not realized. No relation could be obtained which would apply to more than a small part of the season.

The gauge is at a point 100 yards below the Wauneta mill. The gauge rod consists of a piece of oak two by four inches, and twelve feet long. The lower end is buried in the sand of the bottom, and the upper end is fastened to the bent at the edge of the water.

The bed of the river is composed of sand and silt. One of the bench marks is the stone step of a concrete house, which stands below the gauge on the right bank, the elevation of this being 20.99 feet above zero of the gauge. On August 12, 1896, the zero of the gauge was lowered one foot. A second bench mark is the top of a stake at the northwest corner of the lot in which this house stands, this being 21.33 feet above the zero of the gauge.

The observer at this station during 1895-96, was W. W. Fisher, justice of the peace.

## SUPERIOR STATION ON REPUBLICAN RIVER.

This station was established on June 20, 1896, about one mile westerly from Superior. It is on the left bank of the river, about twenty-five feet above the iron highway bridge. A dam and the head of the mill race are only a short distance below the bridge. The observer, E. E. Cady, lives in Superior. The gauge consists of an

oak piece two by four inches and ten feet long. The gauge is inclined at an angle of thirty degrees to the horizontal and the foot marks are placed two feet apart to correspond to this inclination. The rod is fastened to cross ties which are bedded in the bank of the river. This location is on the outside of an easy bend on the river. The bed of the river is of mud and sand. The top of the rim of the up stream cylinder of the north pier is 15.42 feet above zero of the gauge.

A daily record of observations from June 20 to December 1, 1896, was kept.

#### CAMP CLARKE STATION, ON NORTH PLATTE RIVER.

The gauge is located on the right bank about forty feet above the bridge. The observer is Mr. Robert H. Willis, county surveyor of Cheyenne county. His house is about one mile from the gauge. The rod is of oak, two by four inches, ten feet long. The face is inclined thirty degrees to the horizontal, and the foot marks are two feet apart along the rod. The rod is fastened to well bedded cross-ties and to vertical stakes.

The channel here is straight, and the bed is of loose, coarse sand.

A spike driven horizontally in the northeast side of the down stream pile of the bent on the north end of the first truss span of the bridge is 7.55 feet above zero of the gauge. The southeast corner of the window sill at the front of the store is 9.71 feet above zero of the gauge.

Daily observations of river height have been made since June 28, 1896.

#### NORTH PLATTE STATION ON NORTH PLATTE RIVER.

This station was established in 1894. The gauge is a rod placed on one of the piles in a bent near the left bank

of the river, on the Union Pacific Railway bridge. The gauge is vertical and marked to tenths of a foot. The top of the east rail directly over the gauge is twelve feet above the zero.

During the year 1896 daily records were kept up to September 26, except from March 1 to April 10. Since September 26 the station has been in charge of Mr. Chas. P. Ross, who reports directly to Washington. The results of his work have not yet been obtained by this office.

#### COLUMBUS STATION ON PLATTE RIVER.

During the summer of 1895 observations of river height were taken by Gottlieb Klaus, at the south end of a bridge which crosses the Platte river on the line of the sixth principal meridian.

In June, 1896, this gauge was moved to the north end of the bridge, and is now located about seventy-five feet above the bridge. The observer is Geo. E. Barnum, a farmer, who lives at a distance of about one-half mile from the gauge. During important periods, the observations are made twice daily. The gauge is of oak, three by six inches, and twelve feet long. The face is inclined thirty degrees to the horizontal, and the foot marks are two feet apart along the rod. The rod is fastened by lag screws secured to cross-ties which are well bedded in the bank, and is also spiked to vertical pieces driven into the bank. The foot of the rod is bedded in the sand of the river bed. This gauge is a portion of the one which was in position on the opposite bank in 1895. The channel at this point is straight above and below. The bed is of loose sand. The main current has been near the north bank ever since the station was first established.

The top of a round stump on the west side of the road and eighty feet north of the north end of the north truss of the bridge is 7.78 feet above zero of the gauge. The top of a square stump, directly opposite on the east side of the road is 7.66 feet above zero of the gauge.

ST. PAUL STATION ON NORTH LOUP RIVER.

This station was established and observations commenced on May 4, 1895. Jas. Stout, Jr., was employed as observer and still remains as such. The gauge consists of a piece of oak two by three inches, sixteen feet long, with face inclined thirty degrees to the horizontal. It rests upon cross-ties which are well bedded and covered. The zero of the rod is 15.01 feet below the top of the lower horizontal projecting part of the foot plate at the north end of the west truss of the north span of the bridge. The channel at the gauge is nearly straight.

A daily record of gauge heights has been obtained for the period from March 29 to November 1 during 1896. Soundings were made by the observer at regular intervals during the season, but have proved to be of little value in making up the record of discharges.

ST. PAUL STATION ON MIDDLE LOUP RIVER.

This station was established and observations commenced on May 5, 1895. The station is located on the right bank of the stream on the lower side of the wagon and railroad bridge, one mile south of St. Paul, Neb. The gauge consists of an oak stick two by three inches, sixteen feet long, inclined at an angle of thirty degrees to the horizon, and securely fastened to cross-ties bedded in the soil. The zero of the rod is 9.62 feet below the bottom of the down stream end of the cap of the first river

bent at the south end of the bridge. The character of the channel is not especially suitable for a gauging station, as cross-currents occur.

The observer at this station is Mr. A. C. Snyder. The same observer was employed in 1895. During 1896 regular observations were taken from March 29 to December 1. Soundings were made by the observer at frequent intervals. It was thought that with the aid of these a satisfactory rating table could be made. In this instance the soundings were of some value for the purpose intended.

#### COLUMBUS STATION ON LOUP RIVER.

This station is located just above the iron bridge of the U. P. Railway. The observer is the bridge watchman, M. Savage, who lives about 500 yards from the bridge. The gauge is a piece of oak three by six inches and twelve feet long. It is fastened by lag screws to a pile which forms a part of the training works above the bridge. The rod is vertical. There is an island in the channel about 1,000 feet above the bridge, also a bend at about the same distance. Training works cause the current to set from shore. In high water the flood passes through the brush and willows on the opposite bank. The twelve foot mark on the rod is seven feet below a point two feet east of third panel point of north truss of east span (counting the end of span as first panel point). All levels are taken from the top of the bottom chord.

Observations were taken twice daily during 1896 until December 1.

#### NORFOLK STATION ON SOUTH FORK ELKHORN RIVER.

The gauge is located on the left bank of the river, near 13th street, extended about two miles from town.

The observer is Burr Taft, a farmer, whose house is about 300 yards from the gauge.

The gage is of oak, two by four inches, twelve feet long. The face is inclined thirty degrees to the horizontal, and the foot marks are two feet apart along the rod. The rod rests on well bedded cross ties, to which it is fastened by lag screws.

The bed of the river consists of sand and mud. There is a curve in the channel about 400 feet above, and an island just below the gage.

The zero of the gage is 8.21 feet below a small spike driven horizontally in a tree near the root, about twenty feet back and down stream from the rod. Also, the zero of the gage is 3.96 feet below the head of a lag screw, which is placed vertically in the horizontal trunk of a large living willow tree which is fifteen feet down stream from the rod.

The station was established on July 16, 1896.

At ordinary stages of the river, the hydrographer wades while gauging. Flood gaugings must be made from the 13th street bridge, which is some distance above the gauge.

## TABLE NO. 1.

FRENCHMAN RIVER AT WAUNETA.

*Daily mean discharge in cubic feet per second.*

1896.

DATE		AUG.	SEPT.
1	.....	.....	86.4
2	.....	.....	86.4
3	.....	.....	84.1
4	.....	.....	84.1
5	.....	.....	84.1
6	.....	.....	86.4
7	.....	.....	86.4
8	.....	.....	84.1
9	.....	.....	86.4
10	.....	.....	88.5
11	.....	.....	88.5
12	.....	.....	68.5
13	.....	.....	70.7
14	.....	.....	70.7
15	.....	.....	73.0
16	.....	68.5	73.0
17	.....	68.5	73.0
18	.....	88.5	70.7
19	.....	73.0	73.0
20	.....	68.5	73.0
21	.....	88.5	70.7
22	.....	88.5	70.7
23	.....	86.5	70.7
24	.....	86.4	70.7
25	.....	88.4	70.7
26	.....	88.5	73.0
27	.....	86.4	.....
28	.....	86.4	.....
29	.....	84.1	.....
30	.....	88.5	.....
31	.....	88.5	.....

TABLE NO 2.

FRENCHMAN RIVER AT PALISADE.

*Daily mean discharge in cubic feet per second.*

1894.				1895.							
DAY	OCT.	NOV.	DEC.	MAR.	APR.	MAY.	J'NE	JULY.	AUG.	SEP.	OCT.
1	.....	113.0	91.3	118.	107.	123.	600.	94.	85.	68.	101.
2	.....	110.5	96.6	112.	115.	144.	215.	94.	95.	68.	.....
3	.....	107.5	102.0	107.	112.	123.	171.	84.	130.	71.	.....
4	.....	110.5	107.5	118.	115.	130.	130.	74.	101.	74.	.....
5	.....	110.5	99.3	118.	118.	130.	138.	69.	85.	77.	104.
6	.....	104.5	96.6	118.	140.	146.	150.	69.	85.	71.	.....
7	.....	102.0	99.3	107.	150.	140.	142.	79.	85.	71.	.....
8	.....	104.5	104.5	100.	150.	134.	122.	142.	79.	71.	107.
9	.....	104.5	104.5	102.	156.	132.	122.	54.	85.	71.	.....
10	.....	99.3	107.5	102.	150.	128.	130.	69.	71.	71.	.....
11	.....	99.3	104.5	107.	147.	128.	229.	94.	74.	74.	.....
12	.....	102.0	107.5	102.	146.	130.	128.	94.	74.	71.	107.
13	.....	96.6	110.5	104.	147.	130.	109.	84.	437.	68.	.....
14	102.0	102.0	110.5	104.	146.	130.	104.	580.	216.	71.	.....
15	104.5	99.3	125.0	104.	144.	125.	104.	239.	85.	71.	107.
16	110.5	110.5	118.5	104.	144.	123.	109.	195.	85.	71.	.....
17	107.5	99.3	96.6	104.	142.	125.	118.	154.	85.	74.	.....
18	110.5	104.5	88.7	104.	144.	125.	109.	135.	82.	79.	.....
19	102.0	110.5	93.8	109.	146.	128.	104.	121.	77.	77.	111.
20	99.3	99.3	75.9	109.	147.	134.	94.	111.	77.	79.	.....
21	96.6	104.5	73.4	107.	150.	130.	109.	113.	64.	85.	.....
22	102.0	104.5	83.5	102.	156.	125.	99.	580.	66.	88.	117.
23	99.3	107.5	78.4	100.	140.	125.	94.	513.	71.	91.	.....
24	107.5	110.5	78.4	100.	134.	125.	84.	203.	71.	95.	.....
25	110.5	99.3	75.9	99.	140.	130.	89.	174.	71.	91.	.....
26	110.5	96.6	.....	98.	134.	118.	69.	143.	74.	91.	128.
27	113.0	99.3	.....	100.	122.	118.	58.	135.	71.	85.	.....
28	125.0	96.6	.....	100.	122.	137.	50.	117.	71.	88.	.....
29	122.0	122.0	.....	102.	118.	111.	65.	104.	68.	95.	121.
30	122.0	110.5	.....	100.	130.	111.	84.	101.	71.	98.	.....
31	118.5	.....	.....	102.	.....	158.	.....	91.	71.	.....	.....
<i>MN</i>	109.0	104.6	97.2	105.3	137.0	129.0	131.	158.3	95.5	78.4	111.4

TABLE NO. 3.

FRENCHMAN RIVER AT PALISADE.

*Daily mean discharge in cubic feet per second.*  
1896.

DAY.	MAY.	JUNE.	JULY.	AUGUST.	SEPT.	OCT.
1	200.0	92.0	110.2	79.5	81.0	81.0
2	140.0	89.2	110.2	76.6	78.0	83.6
3	140.0	89.2	109.8	75.3	78.0	86.5
4	130.0	89.2	112.3	75.3	83.6	89.2
5	140.0	86.5	109.8	74.0	86.6	89.2
6	123.5	85.0	107.0	72.6	81.0	87.8
7	120.5	82.3	103.0	74.0	83.6	83.6
8	116.6	79.5	92.0	71.2	76.6	81.0
9	116.6	79.5	85.0	71.2	76.6	81.0
10	116.6	78.0	83.6	69.7	81.0	76.6
11	118.0	76.6	83.6	66.8	81.0	76.6
12	108.5	74.0	85.0	64.1	76.6	81.0
13	104.3	74.0	87.8	64.1	83.6	81.0
14	104.3	69.7	90.6	62.8	83.6	76.6
15	103.0	65.5	92.7	64.1	83.6	81.0
16	116.5	61.4	145.0	64.1	81.0	83.6
17	112.3	60.0	93.4	83.6	83.6	83.6
18	113.6	50.5	90.6	81.0	83.6	83.6
19	110.0	51.3	89.2	78.0	81.0	87.8
20	107.0	53.0	89.2	81.0	81.0	86.5
21	100.2	71.2	86.5	85.0	81.0	89.5
22	103.0	66.8	85.0	92.0	83.6	83.6
23	105.7	116.5	86.5	83.6	81.0	83.6
24	104.3	93.4	86.5	81.0	83.6	83.6
25	100.2	101.5	86.5	83.6	83.6	81.0
26	100.2	103.0	87.8	83.6	89.2	81.0
27	98.8	93.4	87.8	81.0	83.6	76.6
28	98.7	87.8	86.5	76.6	83.6	76.6
29	97.2	89.2	85.0	72.6	83.6	81.0
30	92.0	800.0	82.3	81.0	81.0	.....
31	105.7	.....	79.5	76.6	.....	.....
Mean.	114.4	103.6	93.8	75.7	81.6	82.5

TABLE No. 4.  
 REPUBLICAN RIVER NORTH FORK AT BENKLEMAN.  
*Daily mean discharge in cubic feet per second.*

DAY	1894.		1895.					
	NOV.	DEC.	MAR.	APR.	MAY.	JUNE.	JULY.	AUG.
1	.....	101.0	.....	53.7	42.0	383.0	656.0	102.5
2	.....	99.0	76.5	53.7	31.6	310.0	249.0	89.0
3	.....	97.0	64.7	52.3	28.8	170.0	102.5	89.0
4	72.3	95.0	28.8	56.8	28.8	142.0	102.5	78.2
5	73.5	83.0	35.2	64.7	28.8	147.0	78.2	72.7
6	76.6	87.3	42.0	82.0	21.6	135.0	78.2	66.0
7	76.3	83.0	53.7	91.0	17.3	100.0	56.0	64.2
8	75.5	86.0	50.7	82.0	17.3	118.0	56.0	57.7
9	72.3	75.0	56.8	82.0	13.3	123.0	61.0	21.4
10	73.5	88.5	56.8	73.2	8.1	135.0	89.0	16.0
11	72.3	.....	56.8	64.7	5.1	830.0	102.5	14.9
12	72.3	.....	49.3	56.8	3.7	550.0	102.5	16.0
13	71.4	.....	49.3	53.7	2.4	374.0	102.5	14.9
14	71.4	.....	110.0	52.3	1.5	122.0	303.0	57.7
15	72.3	.....	130.0	50.7	0.0	103.0	96.5	43.8
16	113.0	.....	152.0	53.7	0.0	103.0	91.0	28.7
17	118.0	.....	162.0	56.8	0.0	94.5	56.0	27.4
18	79.0	.....	152.0	60.0	0.0	122.0	51.4	14.9
19	79.0	.....	152.0	47.6	0.0	86.0	48.3	12.0
20	76.3	.....	110.0	50.7	0.0	54.6	56.0	30.0
21	72.3	.....	91.0	53.7	0.0	54.6	83.5	1.2
22	72.3	.....	73.2	49.3	1.6	54.6	156.0	14.9
23	72.3	.....	71.5	42.0	1.5	38.2	127.0	64.2
24	73.5	.....	75.0	33.9	4.4	38.2	115.0	14.9
25	73.5	.....	73.2	33.9	1.6	39.5	115.0	12.0
26	73.5	.....	73.2	32.6	1.5	38.2	89.0	10.1
27	76.3	.....	71.5	94.6	0.0	34.4	85.5	0.0
28	88.5	.....	64.7	82.0	0.0	34.4	78.2	0.0
29	104.5	.....	61.6	73.2	0.0	38.2	72.7	0.0
30	102.0	.....	56.8	49.3	223.0	38.2	66.0	1.2
31	.....	.....	49.3	.....	281.0	.....	72.7	0.0
Mean	.....	.....	78.3	59.4	24.7	154.7	120.3	34.5

TABLE No. 5.  
 REPUBLICAN RIVER AT SUPERIOR.  
*Daily mean discharge in cubic feet per second.*  
 1896.

DAY.	JUNE.	JULY.	AUGUST	SEPT.	OCT.	NOV.
1	.....	685	928	282	223	333
2	.....	4300	903	261	204	282
3	.....	4850	864	311	223	373
4	.....	.....	467	268	229	342
5	.....	3025	467	216	241	325
6	.....	2147	467	210	229	342
7	.....	1750	1279	204	210	333
8	.....	1940	730	197	191	415
9	.....	1904	1816	204	204	406
10	.....	1525	467	268	191	441
11	.....	1325	415	325	223	398
12	.....	1165	341	304	193	432
13	.....	941	304	289	204	441
14	.....	813	268	423	191	476
15	.....	720	261	289	191	442
16	.....	652	228	289	204	532
17	.....	551	1395	275	204	512
18	.....	570	1466	406	197	476
19	.....	552	1042	296	191	390
20	720	532	611	303	204	325
21	600	580	580	268	223	357
22	513	450	790	296	268	382
23	551	484	695	311	229	415
24	441	450	632	282	217	365
25	450	441	611	223	229	941
26	1052	423	522	.....	217	1137
27	642	382	467	268	229	450
28	673	374	432	254	223	459
29	642	398	365	289	415	.....
30	610	432	333	282	382	493
31	.....	1004	296	.....	365	.....
Mean	.....	1179	660	279	231	449

TABLE No. 6.  
 NORTH PLATTE RIVER AT CAMP CLARKE.  
*Daily mean discharge in cubic feet per second.*  
 1896.

DAY.	JUNE.	JULY.	AUGUST.	SEPT.	OCT.	NOV.
1	.....	2886	1316	854	875	1046
2	.....	2552	1160	1056	932	1137
3	.....	2295	1160	738	875	1186
4	.....	2042	1114	835	875	1212
5	.....	1878	1092	796	932	1238
6	.....	1655	1114	816	914	706
7	.....	1537	1114	835	914	1046
8	.....	1566	1160	895	954	1160
9	.....	1537	1046	1023	1290	.....
10	.....	1508	954	1186	1069	.....
11	.....	1478	854	1046	1023	.....
12	.....	1160	816	932	1046	.....
13	.....	1160	777	1114	1023	.....
14	.....	1137	706	895	1046	.....
15	.....	1137	722	854	1046	.....
16	.....	977	628	816	1046	.....
17	.....	1046	706	796	1023	.....
18	.....	1977	932	1114	1000	.....
19	.....	1685	835	796	1046	.....
20	.....	1137	758	954	1000	.....
21	.....	1186	895	977	1046	.....
22	.....	1160	1069	932	1023	.....
23	.....	1626	.....	1046	954	.....
24	.....	1566	.....	1160	977	.....
25	.....	1368	854	1114	977	.....
26	.....	1342	816	954	954	.....
27	.....	1566	777	1092	1046	.....
28	4100	1114	777	875	1046	.....
29	3324	1394	1000	835	1023	.....
30	3102	.....	835	835	1264	.....
31	.....	1960	796	.....	1023	.....
Mean	.....	1554	924	939	1008	.....

TABLE No. 7.

NORTH PLATTE RIVER AT NORTH PLATTE.

*Daily mean discharge in cubic feet per second.*

1895.

DAY.	MAR.	APR.	MAY.	JUNE.	JULY	AUG.	SEPT	OCT.	NOV.
1	10180	1723	5191	9735	5191	628	323	272	1095
2	8060	2512	5848	8464	4575	537	323	200	963
3	4878	1551	5848	8060	3725	963	323	231	1095
4	4878	1551	8464	12553	4282	730	200	384	1389
5	4878	1905	9735	12553	4575	537	200	384	1551
6	4282	2968	10635	12058	3998	628	200	384	1389
7	3210	3463	10635	16875	3998	842	150	384	1095
8	4575	3210	8878	15732	4575	842	150	537	1095
9	2968	2300	6908	15732	5191	628	175	730	1389
10	1723	1551	7282	15177	5848	628	175	730	963
11	3463	2735	7282	14632	5191	628	175	537	1095
12	2968	2735	6191	12553	4575	628	175	842	1237
13	963	2968	5514	11573	3998	537	200	730	1905
14	537	2512	4878	12553	3998	384	200	842	1551
15	455	1723	5848	11573	3463	455	175	842	1551
16	1389	2512	5848	11573	2968	628	272	1095	1551
17	1723	3210	6908	12553	2098	455	272	1095	1237
18	2300	3725	8060	10635	1551	384	200	1095	1389
19	2512	3463	6544	10635	1551	323	200	963	1237
20	2968	2968	6908	9735	1905	384	150	842	1389
21	2300	4282	6544	8878	1551	272	200	842	963
22	2098	5191	6908	10180	1723	231	231	842	1095
23	2098	5191	6908	8878	2098	272	455	1095	1237
24	2300	4878	7282	8878	2968	231	384	1095	1551
25	2300	4578	6544	8464	2968	272	323	1237	1905
26	3463	4281	6191	7665	2098	200	272	1237	1905
27	2512	5191	6191	7665	1551	175	272	1389	1551
28	2300	5848	5848	7282	1551	537	200	1095	1551
29	2098	6544	5191	6191	1389	455	231	1095	1237
30	1723	6544	7282	5848	1237	384	323	842	1551
31	1389	....	9735	.....	842	323	323	1237	....
Mean	3016	3470	7033	10829	3137	488	238	810	1357

TABLE No. 8.

NORTH PLATTE RIVER AT NORTH PLATTE.  
*Daily mean discharge in cubic feet per second.*  
 1896.

DAY.	APR.	MAY.	JUNE.	JULY.	AUG.	SEPT.
1	.....	3225	3392	2680	1600	550
2	.....	3392	4000	2680	1475	738
3	.....	3048	3392	2335	1730	637
4	.....	3780	2680	2020	1860	637
5	.....	4555	14613	1730	1240	600
6	.....	6777	16300	1600	1475	600
7	.....	5655	14613	1475	1730	550
8	.....	6777	12927	1130	1240	550
9	.....	5111	11241	1130	800	600
10	1860	4000	10117	950	950	675
11	2335	4000	9000	800	675	800
12	3048	3780	9000	600	600	800
13	3560	4555	9000	550	600	950
14	3048	5655	7333	460	550	1130
15	2680	7888	5655	320	520	1130
16	2490	5655	4000	350	460	950
17	2870	5655	3780	280	520	800
18	2870	6222	3780	250	637	875
19	2490	5111	5111	350	800	950
20	2680	5655	4000	405	875	875
21	3225	5655	3780	575	1130	875
22	2680	5111	3560	875	950	950
23	3048	4000	3225	1600	800	800
24	2680	4000	3560	2335	950	875
25	3225	3780	4555	1240	738	950
26	3048	3560	3780	1040	600	1130
27	2680	3225	3560	875	550	.....
28	2680	3225	3560	675	600	.....
29	3048	2680	4000	1350	575	.....
30	3048	2680	2680	1040	550	.....
31	.....	2870	.....	1475	600	.....
Mean	2823	4558	6340	1134	919	807

TABLE No. 9.

PLATTE RIVER AT COLUMBUS (above mouth of Loup river).

*Daily mean discharge in cubic feet per second.*

DAY.	1895.			1896.					
	JUNE.	JULY.	AUG.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.
1	.....	9315	1250	.....	4400	Dry	Dry	188	2250
2	.....	7900	974	.....	4400	620	"	188	2250
3	.....	6600	590	.....	4490	2375	"	305	2250
4	9420	6210	698	4850	4490	1850	"	188	2425
5	8600	5170	782	4320	4280	1250	"	305	2500
6	7100	4165	846	5260	3700	1140	"	425	2500
7	5170	3895	564	5750	3700	725	"	525	2640
8	7500	4345	444	7050	3505	425	"	620	2780
9	11250	3720	312	9715	3190	350	"	725	3535
10	12580	3720	472	14900	3880	188	"	1250	2780
11	27200	3205	336	11975	3570	305	"	1250	1600
12	22400	4435	264	12185	2475	425	"	1030	620
13	22420	4345	96	10925	1975	620	"	1030	620
14	19280	4615	1105	10400	1530	1725	"	620	620
15	17460	4985	910	6100	725	930	"	425	....
16	16150	4165	910	8250	188	188	"	425	....
17	17130	3375	845	10400	Dry	Dry	"	425	....
18	16150	2950	845	8250	"	"	"	188	....
19	16970	3545	910	7950	"	"	"	188	....
20	16150	3205	672	6100	"	"	"	188	....
21	14960	2700	536	5750	"	"	"	188	....
22	14400	2530	878	5510	"	"	"	188	....
23	13470	2135	1250	6380	"	"	"	350	....
24	12580	1980	1340	5750	"	"	"	565	....
25	12800	1980	1070	6380	"	"	"	620	....
26	12250	1745	725	6100	"	"	"	620	....
27	10590	1380	508	6450	"	"	"	725	....
28	11550	1380	416	6380	"	"	"	785	....
29	11750	1525	360	5145	"	"	"	845	....
30	11450	1525	336	4535	"	"	"	2250	....
31	.....	1470	1140	.....	"	"	"	2500	....
Mean	14027	3685	722	7510	1629	423	....	649	....

TABLE No. 10.  
NORTH LOUP RIVER AT ST. PAUL.  
*Daily mean discharge in cubic feet per second.*  
1895.

DAY.	MAY.	JUNE.	JULY.	AUGUST	SEPT.	OCT.	NOV.
1	.....	1453	1017	702	987	1137	987
2	.....	1456	958	842	987	1137	1857
3	.....	3766	1107	900	842	1231	1293
4	.....	1952	958	1293	648	1293	1293
5	1520	1787	900	1047	702	1293	1293
6	1486	1357	842	987	758	1453	1200
7	1421	1453	1047	900	702	1293	1262
8	1293	1453	958	702	987	1262	1200
9	1137	1618	987	1618	702	1231	1137
10	1293	1453	987	1453	900	1293	1047
11	1618	1618	987	900	871	1293	987
12	1421	1618	958	702	702	1293	987
13	1293	1357	1077	1618	702	1293	900
14	1293	1387	1107	1137	648	1325	758
15	1293	1293	1107	987	1077	1293	842
16	1137	1357	987	1077	1351	1351	842
17	1137	1787	900	987	1047	1389	702
18	1168	1618	842	758	1107	1293	758
19	987	987	814	702	929	1293	702
20	1047	1137	842	675	1137	1047	702
21	987	987	702	702	1047	958	566
22	842	987	842	702	3991	987	.....
23	871	1047	842	1787	1787	987	.....
24	842	1077	842	1389	1293	900	.....
25	929	987	702	702	1293	928	.....
26	842	1047	675	648	1262	928	.....
27	871	1230	620	593	1200	842	.....
28	929	1325	437	842	1137	900	.....
29	871	1137	566	702	1017	842	.....
30	1962	1200	566	1453	987	900	.....
31	1618	.....	620	987	.....	842	.....
Mean	1189	1531	864	984	1094	1146	.....

TABLE No. 11.

NORTH LOUP RIVER AT ST. PAUL.

*Daily mean discharge in cubic feet per second.*  
1896.

DAY.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.
1	1078	1521	1698	1138	1072	860	949
2	1139	1455	1455	1110	992	843	965
3	930	1233	1139	1120	957	835	915
4	1078	1263	1139	1080	992	883	932
5	844	1263	1170	1080	974	890	932
6	987	1139	4100	1072	949	908	923
7	1139	1078	2825	1100	915	932	923
8	987	987	1540	1128	932	883	940
9	909	1139	1340	1460	957	851	940
10	844	987	1260	1350	860	883	940
11	844	901	1337	1200	850	860	940
12	2519	958	1290	1128	890	908	965
13	1962	901	1270	1120	900	932	983
14	1455	930	1230	1128	883	1016	949
15	1553	901	1200	1090	900	1000	949
16	1263	1078	1165	1048	867	883	949
17	1455	1203	1155	1032	875	908	923
18	3767	987	1147	1056	900	957	915
19	1962	873	1257	1072	843	1016	965
20	1293	987	1330	1064	835	983	965
21	958	844	1540	1032	867	940	949
22	958	901	1930	1008	890	890	923
23	1048	958	1590	1016	875	867	940
24	958	930	1530	1056	890	932	923
25	901	901	1560	991	867	923	888
26	844	702	1370	1184	867	949	837
27	779	2327	1370	983	867	923	880
28	1139	759	1300	1056	890	923	940
29	1962	570	1212	923	900	890	1220
30	1618	702	1184	1184	883	923	1220
31	.....	873	.....	1155	890	.....	1120
Mean..	1305	1040	1494	1102	904	913	958

TABLE No. 12.

MIDDLE LOUP RIVER AT ST. PAUL.

*Daily mean discharge in cubic feet per second.*  
1895.

DAY.	MAY.	JUNE.	JULY.	AUGUST	SEPT.	OCT.	NOV.
1	.....	1520	1100	803	1134	662	1066
2	.....	2200	1050	787	1018	645	967
3	.....	3965	1000	787	1000	622	933
4	.....	2987	1000	771	933	740	933
5	1380	2300	1066	767	917	803	1000
6	1325	1723	967	787	850	850	933
7	1254	1307	950	803	803	803	....
8	1117	1117	933	835	740	803	....
9	1018	1032	835	614	740	835	....
10	1018	1117	820	630	707	695	....
11	1066	1151	787	820	645	755	....
12	1083	1185	755	787	614	740	....
13	1151	1134	820	1168	662	707	....
14	1168	1117	1018	1117	645	803	....
15	1134	1132	933	1343	630	883	....
16	1100	1166	850	1325	770	883	....
17	1151	1393	771	1117	803	840	....
18	1134	1570	614	950	820	787	....
19	1134	1307	678	933	850	771	....
20	1202	1254	694	950	755	740	....
21	1185	1202	694	787	1134	771	....
22	1185	1066	771	803	1220	820	....
23	1151	917	850	1270	1950	820	....
24	1151	933	933	985	1270	967	....
25	1202	967	900	1000	985	967	....
26	1219	850	885	1168	883	967	....
27	1151	820	850	1151	740	1000	....
28	1050	1050	771	1168	695	1100	....
29	933	1254	835	1134	740	1220	....
30	1343	1151	787	1290	662	900	....
31	1666	.....	771	1117	.....	1100	....
Mean	1173	1396	861	973	877	840	....

TABLE No. 13.

MIDDLE LOUP RIVER AT ST. PAUL.

*Daily mean discharge in cubic feet per second.*

1896.

DAY.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.
1	1490	1440	1720	1315	1685	806	970
2	1360	1300	1550	1240	1550	806	1022
3	1060	1150	1430	1270	1450	854	914
4	1020	1230	1460	1270	1200	914	880
5	1030	1050	1290	1270	1210	818	985
6	900	900	1215	1195	1125	962	1010
7	1020	1015	....	1080	955	782	938
8	1170	870	2250	960	942	794	1000
9	1310	1360	1774	1332	900	806	914
10	1200	1015	1515	1770	955	974	1046
11	1050	890	1400	1420	980	1058	1082
12	1800	1030	1465	1270	942	1010	1010
13	1700	1060	1300	1200	840	1034	974
14	1230	1150	1300	1100	885	1190	1034
15	1310	1080	1560	1040	870	1142	1110
16	1330	1440	1590	1050	890	1070	962
17	1060	1300	1540	1110	810	1058	974
18	2000	1260	1485	1170	890	1000	1000
19	2430	1165	1560	1160	870	1058	1070
20	1730	1210	1470	1170	955	1118	1106
21	1070	1310	1660	1260	984	1130	1010
22	910	1080	1650	1220	1000	1046	1082
23	1170	1170	1580	1210	880	1015	1000
24	1210	1080	1795	1300	840	926	1070
25	1340	1170	1820	1300	880	985	985
26	1000	1210	1645	1440	820	1034	1094
27	1190	1200	1505	1540	760	1034	1070
28	1300	1000	1417	1480	820	1106	1010
29	1860	1215	1315	1320	855	1154	1370
30	1860	1070	1455	1280	746	1094	1478
31	....	1345	....	1670	722	....	1106
Mean.	1364	1154	1542	1271	975	993	1041

TABLE No. 14.

LOUP RIVER AT COLUMBUS.  
*Daily mean discharge in cubic feet per second.*  
 1895.

DAY	MAR.	APR.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.
1	....	3070	2840	4330	2822	1525	3011	2239	2562
2	....	3000	4360	4000	2849	1546	2875	2144	2613
3	....	2670	4420	9080	2613	1546	2410	2004	2664
4	....	2660	3590	7190	2562	4104	2191	1913	2822
5	....	2700	3290	5580	2588	1588	2191	2312	2928
6	....	2520	3180	4775	2562	2264	1957	2288	2822
7	....	2675	2930	3800	2434	1957	1913	2433	2875
8	....	3675	2850	3420	2240	1891	1935	2337	2955
9	....	3450	2750	3010	2288	1846	2027	2288	3011
10	....	3320	2675	2780	2027	2074	1913	2433	3011
11	....	3150	2690	2900	2074	2562	1891	2485	3067
12	....	2950	2800	2835	2051	2408	1758	2434	3122
13	....	2780	2740	3176	1980	1891	1736	2485	3178
14	....	2840	2700	3384	2361	1980	1673	2485	3292
15	....	2625	2600	3205	2562	2743	1736	2562	3378
16	....	2650	2620	2822	3337	2796	1715	2690	3523
17	....	2875	2710	3205	2191	2288	1957	2536	3643
18	....	2890	2770	4264	2074	2288	2074	2460	3378
19	....	2725	2820	4296	2004	2191	2121	2485	3095
20	....	2650	2830	3350	1980	2240	2121	2536	2928
21	....	2303	2730	3039	1824	2191	2322	2485	2822
22	....	2400	2820	2562	1736	2097	3793	2562	2875
23	....	2500	2850	3011	1758	2434	3465	2613	2690
24	....	2520	2800	2850	1846	2743	4264	2639	....
25	....	2450	2880	2337	1957	2902	4995	2690	....
26	....	2440	2740	2361	1935	2664	2849	2690	....
27	....	2440	2750	2337	2004	2264	2536	2613	....
28	....	2490	2750	2588	1588	2536	2337	2511	....
29	2790	2640	2650	2562	1567	2460	2239	2434	....
30	2750	2550	3350	2690	1523	2313	2312	2536	....
31	2790	....	3470	....	1446	2613	....	2613	....
Mean	....	2753	2966	3591	2122	2289	2427	2450	....

TABLE No. 15.

LOUP RIVER AT COLUMBUS.

*Daily mean discharge in cubic feet per second.*

1896.

DAY.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.
1	3205	4807	2694	2817	3100	2063	2402
2	3558	4220	3126	2694	3203	2150	2380
3	3205	4220	3153	2832	3258	2264	2287
4	2945	3897	3205	2792	3258	2455	2287
5	3126	3312	3613	2670	3021	2430	2240
6	3048	3390	....	2597	2868	2287	2287
7	3126	3048	....	2500	3811	2170	2358
8	3205	2768	8000	2572	3338	2063	2477
9	3338	2694	3441	2768	2668	2063	2548
10	3393	2743	3073	2621	2620	2170	2548
11	3365	2867	1991	3670	2620	2287	2694
12	4434	2621	2203	3258	2384	2572	2817
13	6950	2728	2063	3048	2429	2694	2817
14	5797	2892	2086	2892	2482	2867	2768
15	4650	2645	2106	2525	2429	2968	2832
16	3725	3022	2180	2334	2382	2968	2743
17	4160	3022	2106	2334	2288	2832	2645
18	4650	2945	1991	2310	2382	2694	2645
19	7018	2892	1928	2406	2406	2548	2621
20	5938	2892	2406	2406	2454	2597	2597
21	5157	2832	2867	2455	2502	2645	2817
22	4017	2670	3338	2420	2454	2670	2918
23	5032	2621	3725	2482	2596	2728	2945
24	5060	2455	3258	2482	2596	2524	3022
25	3205	2358	4160	2596	2502	2370	2945
26	3126	2310	4494	2727	2358	2334	2968
27	3100	2621	3021	2945	2288	2370	3022
28	5326	2645	2743	2970	2264	2406	2832
29	3613	2867	2670	2970	2264	2310	3022
30	1970	2917	2621	2970	2180	2287	3585
31	....	2621	....	3021	2106	....	3613
Mean	4081	2985	3009				

TABLE No. 16.

ELKHORN RIVER AT NORFOLK.

*Daily mean discharge in cubic feet per second.*

1896.

DAY.	JULY.	AUG.	SEP.	OCT.	NOV.
1	.....	570	158	182	313
2	.....	409	163	182	313
3	.....	294	161	185	298
4	.....	253	163	186	298
5	.....	233	158	188	.....
6	.....	213	158	186	.....
7	.....	206	157	185	.....
8	.....	203	155	213	.....
9	.....	197	158	213	.....
10	.....	191	170	213	.....
11	.....	191	172	213	.....
12	.....	179	167	216	.....
13	.....	180	170	226	.....
14	.....	177	179	216	.....
15	.....	183	176	213	.....
16	191	176	174	213	.....
17	186	183	179	210	.....
18	184	188	182	213	.....
19	185	186	183	220	.....
20	178	185	185	213	.....
21	174	193	185	213	.....
22	172	186	186	210	.....
23	216	186	182	210	.....
24	213	179	179	213	.....
25	206	176	178	210	.....
26	226	170	182	203	.....
27	226	167	180	223	.....
28	213	165	186	203	.....
29	194	163	186	213	.....
30	206	165	182	243	.....
31	321	162	.....	298	.....
Mean	206	210	173	210	.....

TABLE No. 17.  
*Measurements of discharge at gauging stations.*

NAME OF STREAM.	WHERE MEASURED.	DATE.		GAUGE HEIGHT.	RATE OF DIS-	MEAN VE-
					CHARGE. CU. FT PER SEC.	LOCITY. FT. PER SEC.
Loup River .....	Columbus .....	March	29, 1895	4.77	2790	3.51
" " .....	" .....	April	21, 1895	4.65	2303	3.41
" " .....	" .....	June	12, 1895	4.55	2835	3.39
" " .....	" .....	June	29, 1895	4.50	2715	3.27
" " .....	" .....	September	7, 1895	4.17	1896	2.58
" " .....	" .....	March	15, 1896	3.88	1550	3.27
" " .....	" .....	May	3, 1896	5.12	4256	3.56
" " .....	" .....	June	4, 1896	4.76	3222	.....
" " .....	" .....	June	24, 1896	4.10	3206	.....
" " .....	" .....	July	22, 1896	3.91	2420	2.90
" " .....	" .....	August	28, 1896	3.75	2234	3.08
" " .....	" .....	September	25, 1896	4.09	2370	2.97
North Loup River..	St. Paul .....	May	4, 1895	3.27	1520	2.64
" " " ..	" .....	June	28, 1895	3.21	1127	.....
" " " ..	" .....	September	6, 1895	3.04	816	2.34
" " " ..	" .....	May	9, 1896	3.40	1138	2.50
" " " ..	" .....	June	11, 1896	2.30	1337	.....
" " " ..	" .....	J uly	9, 1896	2.10	1120	2.67

TABLE No. 17—Continued.  
 Measurements of discharge at gauging stations.

NAME OF STREAM.	WHERE MEASURED.	DATE.	GAUGE HEIGHT.	RATE OF DISCHARGE. CU. FT. PER. SEC.	MEAN VELOCITY. FT. PER SEC.
North Loup.....	St. Paul.....	August 21, 1896	2.05	880	2.03
“ “ .....	“ “ .....	September 23, 1896	2.15	935	2.06
Middle Loup.....	“ “ .....	June 28, 1895	1.83	1046	.....
“ “ .....	“ “ .....	September 7, 1895	1.62	863	1.81
“ “ .....	“ “ .....	May 8, 1896	1.36	940	2.02
“ “ .....	“ “ .....	June 11, 1896	1.24	1400	2.95
“ “ .....	“ “ .....	July 9, 1896	1.42	1332	2.19
“ “ .....	“ “ .....	August 21, 1896	1.42	984	1.92
“ “ .....	“ “ .....	September 23, 1886	1.53	1015	1.81
N. Fork Republican	Benkleman ...	December 9, 1894	1.74	75.0	2.81
“ “ “ .....	“ “ .....	March 22, 1895	1.89	71.5	2.01
“ “ “ .....	“ “ .....	June 4, 1895	1.68	141.7	2.83
“ “ “ .....	“ “ .....	June 24, 1895	1.06	35.6	1.45
“ “ “ .....	“ “ .....	August 7, 1895	0.96	64.2	2.02
“ “ “ .....	“ “ .....	September 11, 1895	.....	0.0	.....
S. Fork Republican.	“ “ .....	December 9, 1894	.....	0.5	.....
“ “ “ .....	“ “ .....	March 23, 1895	.....	41.0	1.70
“ “ “ .....	“ “ .....	June 4, 1895	.....	348.0	2.90

S. Fork Republican.	Benkelman...	June	24, 1895	.....	75.4	1.79
" " "	" ...	July	3, 1895	.....	278.0	2.48
" " "	" ...	August	7, 1895	.....	22.3	.....
" " "	" ...	September	11, 1895	.....	0.0	.....
Frenchman River..	Palisade .....	December	8, 1894	1.87	116.0	1.41
" " ..	" .....	March	22, 1895	1.52	100.4	1.87
" " ..	" .....	June	5, 1895	1.76	154.3	1.55
" " ..	" .....	July	4, 1895	1.61	74.2	1.58
" " ..	" .....	August	9, 1895	1.50	70.9	1.23
" " ..	" .....	May	15, 1896	1.55	103.1	.....
" " ..	" .....	June	18, 1896	1.35	50.54	1.56
" " ..	" .....	July	15, 1896	1.46	92.72	1.72
" " ..	" .....	August	13, 1896	1.36	64.1	1.39
" " ..	" .....	September	16, 1896	1.51	84.8	1.57
" " ..	" .....	October	17, 1896	1.50	82.47	.....
" " ..	Wauneta.....	August	9, 1895	1.38	61.5	.....
" " ..	" .....	September	10, 1895	0.92	56.4	.....
" " ..	" .....	May	15, 1896	2.20	84.88	.....
" " ..	" .....	June	18, 1896	1.84	47.7	1.52
" " ..	" .....	July	14, 1896	2.15	91.26	3.08
" " ..	" .....	August	12, 1896	1.90	46.2	.....
" " ..	" .....	September	16, 1896	2.07	84.7	2.71
" " ..	" .....	October	17, 1896	2.00	62.46	.....
Platte River.....	Columbus .....	March	29, 1895	0.40	2531.	2.47

TABLE No. 17.—Continued.  
 Measurements of discharge at gauging stations.

NAME OF STREAM.	WHERE MEASURED.	DATE.	GAUGE HEIGHT.	RATE OF DISCHARGE. CU. FT. PER SEC.	MEAN VELOCITY FT. PER SEC.
Platte River	Columbus	May 3, 1895	.....	5550.	2.56
" "	"	May 22, 1895	.....	5896.	.....
" "	"	June 11, 1895	2.28	27214.	4.01
" "	"	June 25, 1895	1.42	12430.	3.20
" "	"	July 15, 1895	0.72	5338.	2.57
" "	"	May 2, 1896	.....	4550.	2.26
" "	"	June 5, 1896	3.19	4320.	2.44
" "	"	June 14, 1896	4.11	10307.	2.88
" "	"	June 30, 1896	3.35	4450.	2.30
" "	"	July 22, 1896	.....	14.4	1.40
" "	"	August 26, 1896	1.06	1.0	.....
" "	"	August 28, 1896	.....	0.0	.....
" "	"	September 6, 1896	.....	0.0	.....
" "	"	September 25, 1896	1.70	188.	1.39
North Platte River.	North Platte.	October 5, 1894	.....	620.	1.58
" " "	" "	November 6, 1894	.....	1227.	1.72
" " "	" "	March 27, 1895	.....	2329.	1.88
" " "	" "	April 29, 1895	.....	5695.	2.16

North Platte River.	North Platte..	May	28, 1895	.....	6320.	2.43	
"	"	June	8, 1895	4.00	16261.	2.85	
"	"	September	14, 1895	1.30	200.	1.64	
"	"	June	13, 1896	3.35	9000.	.....	
"	"	June	29, 1896	2.90	4000.	2.51	
"	"	July	25, 1896	2.05	1260.	.....	
"	"	September	8, 1896	1.50	547.	.....	
"	"	Camp Clarke.	June	27, 1896	3.18	3600.	2.55
"	"	"	August	10, 1896	2.41	812.	1.63
"	"	"	November	21, 1896	2.70	931.	1.36
South Fork Elkhorn.	Norfolk.....	July	16, 1896	0.98	191.	.....	
"	"	August	27, 1896	0.89	175.	1.52	
"	"	September	12, 1896	0.86	176.	1.50	
Republican River..	Superior.....	June	20, 1896	0.92	694.	1.49	
"	"	July	17, 1896	0.78	585.	1.31	
"	"	August	24, 1896	0.89	684.	1.40	
"	"	September	21, 1896	0.42	227.5	0.64	
"	"	October	25, 1896	0.45	72.	.....	

To compare 1895 gauge heights at Wauneta with those of 1896 at same place, add one foot.

To compare 1895 gauge heights on the Platte river at Columbus with those of 1896 at same place, add 2.88 feet.

TABLE No. 18.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CU. FT. PER SEC.	Mean Velocity ft. pr. sec.	REMARKS.
Republican .	Haigler . . . . .	O. V. P. Stout . .	June 17, 1896	8.24	....	Above mouth of Arickaree.
"	" . . . . .	E. T. Youngfelt.	June 16, 1896	6.17	....	Above mouth of Arickaree.
"	" . . . . .	" "	June 17, 1896	14.94	....	Below mouth of Arickaree.
"	" . . . . .	" "	July 16, 1896	9.80	....	Below mouth of Arickaree.
"	" . . . . .	" "	Aug. 25, 1896	10.04	....	Below mouth of Arickaree.
"	" . . . . .	" "	Sept. 18, 1896	24.54	....	Below mouth of Arickaree.
Arickaree . . .	" . . . . .	O. V. P. Stout . .	June 17, 1896	6.14	....	.....
"	" . . . . .	E. T. Youngfelt.	July 16, 1896	3.63	....	.....
Buffalo creek	Near Moore's ranch.	" "	June 17, 1896	7.90	....	.....
Republican . .	2 miles west of Ives.	" "	Aug. 25, 1896	5.00	....	.....
Rock creek . .	B. & M. Ry. crossing	O. V. P. Stout . .	June 16, 1896	12.16	....	.....
"	" "	E. T. Youngfelt.	Aug. 25, 1896	12.20	....	.....
Horse creek .	" "	" "	June 16, 1896	0.22	....	.....
Republican . .	7 mi. w. Benkleman.	O. V. P. Stout . .	June 16, 1896	87.52	....	.....

Dundy Co.	At headgate.....	O. V. P. Stout..	June 16, 1896	6.19	.....	.....
Irr. ditch.	" " .....	" " ..	June 16, 1896	1.12	.....	.....
Neighbor ditch.....						
Republican..	Benkelman .....	" " ..	June 16, 1896	29.30	.....	.....
"	" .....	E. T. Youngfelt.	Aug. 25, 1896	0.00	.....	.....
So. Fork Rep.	" .....	" " ..	June 16, 1896	3.25	.....	.....
"	3000 ft. w. of above.	" " ..	June 16, 1896	1.39	.....	.....
Republican..	Culbertson .....	O. V. P. Stout..	June 19, 1896	6.48	.....	Above mouth of Frenchman.
"	" .....	C. E. Crownover.	May 16, 1896	78.37	.....	Above mouth of Frenchman.
"	" .....	O. V. P. Stout..	Sept. 10, 1896	0.00	.....	Above mouth of Frenchman.
"	" .....	U. S. Geo. Sur..	Nov. 25, 1892	209.00	1.81	Above mouth of Frenchman.
Stinking Water .....	Palisade .....	O. V. P. Stout..	June 19, 1896	12.24	.....	Above mill at Palisade.
"	" .....	E. T. Youngfelt.	Sept. 17, 1896	20.00	.....	Below mill at Palisade.
Frenchman..	Sec. 33 T. 4 R. 32..	O. V. P. Stout..	June 19, 1896	26.30	.....	.....
"	Culbertson .....	E. T. Youngfelt.	June 19, 1896	13.40	.....	.....
"	" .....	U. S. Geol. Sur..	Nov. 25, 1892	177.00	1.68	.....
"	" .....	O. V. P. Stout..	March 22, 1895	120.00	.....	.....
Culbertson canal.	At headgate.....	"	June 19, 1896	60.80	.....	Total discharge of Frenchman river was about 1.25 sec ft. more than this.

TABLE No. 18—Continued.

NAME OF STREAM	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CU. FT. PER SEC.	Mean Velocity ft. per sec.	REMARKS.
Culbt'son cnl	At flume No. 4. ....	E. T. Youngfelt.	June 19, 1896	22.90	.....	.....
"	" No. 1. ....	"	Sept. 17, 1896	62.60	.....	.....
"	At flume "	"	Sept. 17, 1896	17.92	.....	Waste water flow- into stinking water.
Farmers cn'l.	At headgate .....	"	June 19, 1896	2.28	.....	.....
Riverside cnl	"	E. T. Youngfelt.	June 19, 1896	15.92	.....	.....
Republican ..	Oxford .....	O. V. P. Stout...	June 3, 1895	16000.0	7.67	.....
"	" .....	"	Sept. 12, 1895	55.0	1.09	.....
"	" .....	C. E. Crownover	May 17, 1896	254.5	.....	.....
"	" .....	O. V. P. Stout..	June 20, 1896	109.4	.....	.....
North Platte.	Douglas, Wyoming.	State Engr. Wyo.	June 3, 1891	10130.0	.....	.....
"	Fairbanks, Wyoming	"	Oct. 13, 1891	579.	.....	.....
"	Douglas, Wyoming.	"	Nov. 5, 1892	595.	.....	.....
"	Douglas, Wyoming.	"	Dec. 4, 1891	807.	.....	.....
"	North Platte, Neb...	U. S. Geol. Sur.	Sept. 14, 1892	770.	.....	.....
"	" ..	"	Nov. 2, 1892	1070.	.....	.....
"	" ..	"	Nov. 22, 1892	1370.	.....	.....
"	Camp Clarke, Neb..	"	May 29, 1891	8075.	.....	.....

North Platte.	Camp Clarke, Neb..	U. S. Geo. Sur.	Oct. 8, 1892	335.	.....	.....
"	"	O. V. P. Stout..	July 26, 1894	1900.	.....	Approx. measurement by floats.
North Platte.	Gering, Neb.....	O. V. P. Stout..	July 28, 1896	2450.	.....	Very rough measurement by floats.
North Platte.	Gering, Neb.....	O. V. P. Stout..	June 14, 1895	11350.	.....	.....
"	"	"	June 17, 1895	10963.	.....	.....
Pumpkin-seed Creek	Carey's Ranch.....	O. V. P. Stout..	July 26, 1894	17.1	.....	Good measurement by floats.
"	"	"	June 28, 1896	22.2	2.11	.....
Blue Creek.	.....	U. S. Geo. Sur.	.....	105.0	.....	.....
Birdwood Cr.	.....	"	.....	126.0	.....	.....
"	Sutherland.....	O. V. P. Stout..	Sept. 9, 1896	133.0	2.05	Gauged below Bratte's ditch which at the time was carrying 28.2 second feet.
South Platte	Julesburg, Colo....	U. S. Geo. Sur	Oct.	653.	.....	.....
"	North Platte.....	"	Early Nov.	450.	.....	.....
"	"	"	Late Nov.	645.	.....	.....
"	"	O. V. P. Stout..	June 29, 1896	0.0	.....	.....
Platte.....	Columbus.....	"	Sept. 17, 1894	0.0	.....	.....
"	"	"	Oct. 6, 1894	0.0	.....	Water three feet and eight inches below surface of sand of river bed.

TABLE No. 18—Continued.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CU. FT. PER SEC.	Mean Velocity ft. pr. sec.	REMARKS.
Platte.....	Fremont .....	O. V. P. Stout..	Aug. 14, 1894	1420.	.....	Good measurement by meter.
"	" .....	A. Rosewater...	Late Aug, 1894	1209.	.....	.....
North Loup.	Moulton.....	G. H. Lawrence	Nov. 2, 1894	460.0	.....	.....
"	Burwell.....	O. V. P. Stout..	July 9, 1896	625.	2.87	River about three inches higher than on following morning. Said to be about four inches above nor- mal. Rise due to rain on night of July 8.
"	Ord.....	" ..	May 5, 1895	1367.	.....	.....
Calamus....	Burwell .....	" ..	July 10, 1896	368.	2.94	.....
Middle Loup	At forks 8½ miles above Mullen....	" ..	Aug. 20, 1895	41.8	.....	.....
"	Mullen .....	" ..	Aug. 20, 1895	120.0	.....	.....
"	Seneca .....	" ..	Aug. 21, 1895	216.2	.....	.....
"	" .....	" ..	Aug. 30, 1896	212.	2.45	.....
"	Thedford .....	" ..	Aug. 22, 1895	284.3	.....	.....

Middle Loup	Dunning	O. V. P. Stout	Aug. 23, 1895	321.5		
"	"	"	Aug. 30, 1896	323	1.48	
"	Gates, Custer Co.	G. H. Lawrence	Aug. 25, 1894	850		
"	Loup City	O. V. P. Stout	Aug. 29, 1895	878.6		
Dismal	Dunning	O. V. P. Stout	Aug. 23, 1895	294.0		
"	"	G. H. Lawrence	Aug. 22, 1894	435		
South Loup	Callaway	O. V. P. Stout	Aug. 28, 1895	48	1.15	
"	Georgetown	G. H. Lawrence	Sept. 10, 1896	68		
"	Ravenna	O. V. P. Stout	Aug. 31, 1895	296		
"	"	"	Aug. 29, 1896	142	1.45	
Loup	Fullerton	"	Sept. 16, 1894	1704		Fair measurement by meter.
"	"	"	July 11, 1896	2900		Rough gauging.
"	Sec. 13, T. 7 N. R. 2 W	"	Aug. 19, 1894	1335		Computed from notes furnished by L. F. Gottschalk.
"	Columbus	"	June 23, 1891	7065		
"	"	"	July 31, 1894	1475		Approximate gauging by floats.
Cedar	Fullerton	"	Sept. 15, 1894	210.6		
"	"	"	July 11, 1896	338	2.24	Marks of flood at June 5-6, 1896 are approximately seven feet above stage of water at time of gauging.

TABLE No. 18—Continued.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CU. FT. PER SEC.	Mean Velocity ft. per sec.	REMARKS.
Cedar River.	Cedar Rapids . . . . .	O. V. P. Stout . .	July 21, 1896	212.	1.79	.....
"	Ericson . . . . .	W. J. McEathron	March 16, 1895	152.	2.66	.....
"	" . . . . .	"	June 1, 1895	214.	.....	.....
"	" . . . . .	"	Aug. 1895	112.1	.....	.....
Beaver Creek	Genoa . . . . .	O. V. P. Stout	Sept. 17, 1894	71.0	.....	.....
"	" . . . . .	"	July 14, 1896	110.0	1.71	.....
"	" . . . . .	W. J. McEathron	Aug. 14, 1896	112.2	.....	.....
"	Albion . . . . .	O. V. P. Stout	July 21, 1896	47.4	1.13	.....
Shell Creek.	Platte Center . . . . .	"	July 23, 1896	15.3	0.94	.....
"	Schuyler . . . . .	"	July 24, 1896	26.3	1.20	.....
Looking- glass Creek	Near mouth . . . . .	W. J. McEathron	July 1896	15.0	.....	.....
N. Fk. Elkh'n	Norfolk . . . . .	O. V. P. Stout . .	July 16, 1896	70.0	1.39	.....
Elkhorn . . . .	Atkinson . . . . .	Adna Dobson . .	Oct. 2, 1896	11.1	.....	.....
" . . . .	Arlington . . . . .	And. Rosewater .	Late Aug. 1894	214.	.....	.....
" . . . .	Waterloo . . . . .	O. V. P. Stout . .	Aug. 15, 1896	280.	.....	.....
" . . . .	" . . . . .	O. V. P. Stout . .	July 17, 1896	495.	1.64	.....
Union Creek	Madison . . . . .	O. V. P. Stout . .	July 23, 1896	38.3	1.42	.....

Niobrara	Dawes county	Prof. L. E. Hicks	Sept. 4, 1887	98.0		
"	Marsland, Dawes Co.	E. T. Youngfelt	June 23, 1896	4.0		
"	Valentine	Adna Dobson	Oct. 4, 1896	712.		
Minachaduz	Fort Niobrara	"	Oct. 4, 1896	45.2		
Pine	Long Pine	"	Oct. 3, 1896	47.1		
White	Sec. 23 T. 31 N. R.					
	53 W	E. T. Youngfelt	June 24, 1896	23.3		
"	Crawford	"	June 24, 1896	30.7		
"	Whitney	"	June 25, 1896	27.2		
"	Chadron		June 1, 1891	123.		
Soldier Creek	Fort Robinson	E. T. Youngfelt	June 24, 1896	3.23		
Ft. Robinson ditch	Fort Robinson	"	June 24, 1896	0.79		
White Clay Creek	N. line Sec. 1, T. 31, R. 52, W.	"	June 24, 1896	4.0		
Squaw Creek	N. line Sec. 1, T. 31, R. 52, W.	"	June 24, 1896	0.66		
West Ash Creek	N. line Sec. 25, T. 32 R. 51.	"	June 25, 1896	1.73		
East Ash Creek	One-half mile above mouth.	"	June 25, 1896	1.09		

TABLE No. 18—Continued.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CU. FT. PER SEC.	Mean Velocity ft. pr. sec.	REMARKS.
Little Cotton- wood Cr'k.	In Sec. 7, T. 32, N., R. 51, W.....	E. T. Youngfelt.	June 25, 1896	0.1	.....	.....
Big Cotton- wood Cr'k.	Six miles west Whit- ney.....	"	June 25, 1896	0.2	.....	.....
Indian Creek	Near mouth.....	"	June 25, 1896	0.06	.....	.....
Clear Creek.	Sec. 29, T. 16 N., R. R. 41 W.....	Adna Dobson...	Nov. 23, 1896	12.8	.....	.....
Lodge Pole Creek ....	Kimball.....	"	May 26, 1896	4.5	.....	.....
Victoria Cr'k.	Sec. 1, T. 19 N., R. R. 21 W.....	"	July 28, 1896	5.2	.....	.....

## FLOW OF WATER THROUGH VERTICAL OPENINGS AND OVER WEIRS.

The state law on irrigation determines that a cubic foot of water per second of time shall be the legal standard of measurement. But the law also recognizes the miner's inch where water has been appropriated or sold by that standard prior to the act of April 4, 1895, and prescribes how it shall be measured in section 32 of said act.

Section 32. "A cubic foot of water per second of time shall be the legal standard of the measurement of water in this state, both for the purpose of determining the flow of water in the natural streams and for the purpose of distributing therefrom. Provided, however, that water heretofore sold by the miner's inch shall continue to be delivered in that way, and all water sold by the miner's inch by any person, company, or corporation shall be measured as follows, to-wit: Every inch shall be considered to be one inch square orifice under a four inch pressure and a four inch pressure shall be from the top of the orifice in the measuring box to the surface of the water; said measuring box or any slot or aperture through which said water is measured shall in all cases be six inches in perpendicular height inside measurement, except boxes delivering less than twelve inches, which orifice may be square. And all boxes for the purpose of measuring water shall have a descending slope of not less than one-eighth of an inch to the foot, and shall not be less than fourteen feet in length. Fifty miner's inches under a four inch pressure shall be deemed equivalent to a cubic foot per second of time."

By a four inch pressure is meant that the surface of the water on the upper side of the aperture of the measuring

box shall be four inches above the top of the opening. This is generally termed the head of water, pressure referring to the weight of water and is commonly expressed in pounds per square inch of surface. A depth or head of one foot of water produces a pressure of 0.43 pounds per square inch, and a head of 2.31 feet is equivalent to a pressure of one pound per square inch, or 144 pounds per square foot. The law is contradictory in stating that fifty miner's inches shall be deemed equivalent to one cubic foot per second, for under the conditions that the law stipulates with regard to what shall constitute a miner's inch, one cubic foot per second is equal to very nearly forty miner's inches. Table No. 19 has been calculated to show the discharge both in cubic feet per second and in miner's inches through a statutory measuring box for various breadths of the opening, the height of the opening being in all cases six inches, and the head of water remaining constant at four inches.

No device has yet been invented whereby the head of water on a measuring box can be kept constantly at the same height. The nearest approach to this, as far as the writer knows, is A. D. Foote's measuring box, a description of which can be found in P. J. Flynn's treatise on "Irrigation Canals and Other Irrigation Works." The chief merit of this measuring box consists in the fact that it renders it possible to maintain very nearly the statutory head. In order to deliver a constant quantity of water through an opening with varying head, the opening must be so constructed that it can either be bodily raised or lowered, or its dimensions altered as the head of water fluctuates. Table No. 20 has been computed to show the variations of discharge through an opening six inches in height and one foot in width under different heads. By the assistance of this table the correct width of the open-

ing is found for a given discharge and head, by dividing the quantity of water it is desired to deliver by the amount in the table found opposite the given head, and the quotient is width of opening in feet. If the unit of measurement is the cubic foot per second, divide by the amount in the column headed second feet; if the unit is the miner's inch, take the figures in the column headed miner's inches for a divisor. Example: It is desired to deliver 100 miner's inches of water through an opening 6 inches high with a head of  $6\frac{1}{2}$  inches above top of opening; how wide should the opening be made? In the table in the column headed miner's inches and opposite to  $6\frac{1}{2}$  inches we find 83.80, which is the discharge for a width of one foot. Dividing 100 by 83.80 we get 1.193 feet, or 14 5-16 inches, which is the correct width to deliver 100 miner's inches under the above conditions. Example: Required the width of opening to deliver two cubic feet of water per second, the height of the opening being 6 inches and the head above its top being 8 inches. Here we have the quantity to be delivered equal to two second feet to be divided by 2.305 found in the column headed second feet opposite 8 inches in the first column, and the quotient is 0.8676 feet or  $10\frac{3}{8}$  inches (very nearly), which is the required width.

A measuring weir is a structure in the form of notch over which the water flows and affords a very convenient and accurate means for gauging the flow of small streams. The rectangular weir is the one most commonly used, and the remarks that follow apply to this form. Table No. 21 gives the discharge over a weir one foot long for different heads from one inch up to thirty inches. The inch has been taken as the unit of measurement for the head, and the table has been calculated for differences of one-eighth of an inch, this being considered as the most con-

venient form for popular use, since the scales in common use are graduated to inches and fractions of an inch. In order to obtain fairly accurate results the following conditions in regard to the construction of the weir, its position in the channel, and measurement of head of water should be fulfilled as nearly as possible. The channel in which the weir is placed should be straight for some distance above the weir, and of a uniform cross-section, so that the water may arrive with uniform velocity and without eddies and internal agitation. The weir should be placed in the center of the channel perpendicular to the direction of the current with its up-stream side vertical and its crest perfectly horizontal. The crest should have a sharp edge on its up-stream side, and the width or thickness of the crest should not exceed one-eighth part of the depth of water over the crest. If the up-stream edge is rounded the discharge will be increased, and if the width of the crest is such that it will deflect the sheet of falling water the discharge will be diminished. The length of the crest ought not to be less than three times the head in order to reduce the effect of end-contraction where such exists or of friction of the sides of the channel where the weir extends across the entire width of the channel. The depth of the bottom of the channel above the weir below the crest of the weir should be at least twice the head of water over the crest. The area of the cross-section of the channel above the weir should be not less than five times the area of the water flowing over the weir. If the proportion is less than this, and especially if accuracy of measurement is wanted, the velocity of the approaching water has to be taken into account. The head is the depth of water over the crest of the weir measured to the surface of still water above the weir. To measure the head, drive a stake in the channel

of approach exactly level with the crest of the weir, and two to five feet above the weir where the water surface has not begun to slope or curve downward toward the weir. Then a rule held vertically on top of this stake will give the head directly. A thin, sharp-edged scale held with its sharp edge up stream will give a more correct measure than the common carpenter's rule. The correct measurement of the head, although seemingly very simple, is in practice rather difficult to make, owing to the adhesion of water to the scale, ripples on the water surface, and other disturbing influences. An error of one per cent in the measurement of the head will produce an error of one and one-half per cent in the discharge. Where extreme accuracy is desired, an instrument called a hook gauge is used for measuring the head, and with a little care the height of the surface of water above the crest can by this instrument be determined correctly to within one-hundredth part of an inch.

When a weir does not extend across the entire width of the channel the water at the ends of the weir suffers a deflection, so that the sheet of water after passing over the weir has a less width than the length of the weir and a correspondingly diminished discharge. This kind of structure is called a weir with end contractions. Experiments show that the effect of two end contractions on the flow of water over a weir is to diminish the effective length of the weir by about one-fifth of the head.

The formula by which the column headed "discharge in second feet" in table No. 21 has been computed is  $Q=3.33LH^{\frac{3}{2}}$ , or, in ordinary language, the discharge in cubic feet per second is equal to the product of 3.33 multiplied by the length of the weir multiplied by the square root of the head multiplied by the head, the length and head being expressed in feet. If the head is given

in inches the above formula becomes  $Q=0.0801LH^{\frac{3}{2}}$ . For the discharge over a weir with two end contractions the formula is:  $Q=3.33(L-\frac{H}{5})H^{\frac{3}{2}}$ ,  $L$  and  $H$  being in feet. This last formula may be written:  $Q=3.33LH^{\frac{3}{2}}-3.33\frac{H}{5}H^{\frac{3}{2}}$ ; and comparing this with the first formula above we see that the decrease in discharge due to end contraction is independent of the length of the weir and depending on the head only. The column headed end contraction in Table No. 21 has been computed from the formula  $3.33\frac{H}{5}H^{\frac{3}{2}}$ , and gives the amount to be subtracted after the column preceding it has been multiplied by the length of the weir. Of course the caution given above that the length of the weir should not be less than three times the head must be observed. If the length of the weir exceeds ten times the head, no correction need be applied for end contraction.

Example: What is the discharge over a weir  $3\frac{1}{2}$  feet long with two end contractions when the head is 10 inches? Opposite to 10 inches we find 2.533, which is the discharge for a weir one foot long, and multiplying this by  $3\frac{1}{2}$  we get 8.8655. From this subtract 0.422, the amount due to end contraction and found in the second column opposite to 10 inches, and the remainder 8.4435 is the required quantity in cubic feet per second. For intermediate heads not given in the table it will be near enough for all practical purposes to get the corresponding discharge by interpolation. Example: A weir 4 feet 9 inches long has a head of  $12\frac{3}{8}$  inches of water flowing over it; what is the discharge? From the table we find the discharge for  $12\frac{1}{8}$  inches to be 3.382 second feet, and for  $12\frac{1}{4}$  inches 3.434 second feet, an increase of 0.052 second feet for  $\frac{1}{8}$  of an inch, and for  $\frac{1}{8}$  of an inch the

increase is  $\frac{1}{2}$  of 0.052, or 0.026. Adding 0.026 to 3.382 and then multiplying by 4.75 (which is 4 feet and 9 inches expressed in feet), we obtain 16.188 second feet, which is the correct amount. If end contractions exist from 16.188, subtract 0.692, which is the mean between 0.683 and 0.701, corresponding to  $12\frac{1}{8}$  inches and  $12\frac{1}{4}$  inches respectively, and the answer is 15.496 second feet.

TABLE No. 19.

## DISCHARGE THROUGH RECTANGULAR VERTICAL OPENING.

*Height of opening, 6 inches; head above top of opening, 4 inches.*

Width of opening in feet and inches.	Discharge in second feet.	Discharge in statutory inches.	Width of opening in ft. and inches.	Discharge in second feet.	Discharge in statutory inches.	Width of opening in feet and inches.	Discharge in second feet.	Discharge in statutory inches.
0 ft. 2 in..	0.306	12	0 ft. 10 in.	1.533	60	1 ft. 6 in.	2.760	108
0 3 .	0.460	18	0 11	1.686	66	1 8 .	3.066	120
0 4 .	0.613	24	1 0	1.840	72	1 10 .	3.337	132
0 5 .	0.766	30	1 1	1.993	78	2 0 .	3.680	144
0 6 .	0.920	36	1 2	2.146	84	2 6 .	4.600	180
0 7 .	1.073	42	1 3	2.300	90	3 0 .	5.520	216
0 8 .	1.226	48	1 4	2.453	96	3 6 .	6.440	252
0 9 .	1.380	54	1 5	2.606	102	4 0 .	7.360	288

TABLE No. 20.

DISCHARGE THROUGH RECTANGULAR VERTICAL OPENING WITH VARYING HEAD.

*Height of opening, 6 inches; width of opening, 1 foot.*

Head above top of opening.	Discharge in second feet.	Discharge in statutory inches.	Head above top of opening in inches.	Discharge in second feet.	Discharge in statutory inches.	Head above top of opening in inches.	Discharge in second feet.	Discharge in statutory inches.
1 inch..	1.234	48.25	3½ inch.	1.760	68.81	7 inch	2.197	85.96
1¼ ..	1.280	50.05	4 ..	1.840	72.00	7½	2.251	88.07
1 ..	1.343	52.55	4½ ..	1.903	74.46	8	2.305	90.18
1½ ..	1.445	56.54	5 ..	1.966	76.93	9	2.409	94.26
2 ..	1.528	59.78	5½ ..	2.025	79.23	10	2.505	98.00
2½ ..	1.610	63.00	6 ..	2.085	81.58	11	2.601	101.76
3 ..	1.687	66.00	6½ ..	2.142	83.80	12	2.694	105.33

TABLE No. 21.

DISCHARGE OVER WEIR ONE FOOT LONG IN CUBIC FEET PER SECOND.

Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.	Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.	Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.	Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.
1	0.080	0.001	7 1/8	1.564	0.189	12 1/8	3.434	0.701	17 1/8	5.739	1.650
1 1/8	0.147	0.004	7 1/4	1.604	0.197	12 1/4	3.487	0.719	17 1/4	5.802	1.680
2	0.226	0.007	7 1/2	1.645	0.206	12 1/2	3.540	0.738	17 1/2	5.864	1.711
2 1/8	0.270	0.010	7 3/8	1.687	0.214	12 3/8	3.593	0.756	17 3/8	5.927	1.741
2 1/4	0.316	0.013	7 1/2	1.728	0.223	12 1/2	3.647	0.775	17 1/2	5.990	1.772
2 3/8	0.365	0.017	7 5/8	1.770	0.232	12 5/8	3.701	0.794	17 5/8	6.054	1.803
3	0.416	0.020	8	1.813	0.242	13	3.755	0.813	18	6.118	1.835
3 1/8	0.442	0.022	8 1/8	1.855	0.251	13 1/8	3.809	0.833	18 1/8	6.182	1.867
3 1/4	0.469	0.025	8 1/4	1.898	0.260	13 1/4	3.864	0.853	18 1/4	6.246	1.899
3 3/8	0.496	0.028	8 3/8	1.941	0.270	13 3/8	3.918	0.873	18 3/8	6.310	1.932
3 1/2	0.524	0.030	8 1/2	1.985	0.281	13 1/2	3.973	0.894	18 1/2	6.374	1.965
3 3/4	0.553	0.033	8 3/4	2.029	0.291	13 3/4	4.029	0.915	18 3/4	6.439	1.998
3 7/8	0.582	0.036	8 7/8	2.073	0.302	13 7/8	4.085	0.936	18 7/8	6.504	2.032
4	0.611	0.039	9	2.118	0.313	14	4.140	0.957	19	6.569	2.066
4 1/8	0.641	0.043	9 1/8	2.163	0.324	14 1/8	4.196	0.979	19 1/8	6.634	2.101
4 1/4	0.671	0.046	9 1/4	2.208	0.335	14 1/4	4.253	1.001	19 1/4	6.700	2.136

41	0.702	0.049	91	2.254	0.347	141	4.309	1.023	191	6.766	2.171
44	0.733	0.053	99	2.300	0.359	144	4.366	1.046	199	6.832	2.206
44	0.765	0.057	99	2.346	0.371	144	4.423	1.069	199	6.898	2.242
44	0.797	0.061	99	2.392	0.383	144	4.480	1.092	199	6.964	2.278
44	0.830	0.065	99	2.439	0.396	144	4.538	1.115	199	7.031	2.314
44	0.863	0.070	99	2.486	0.409	144	4.596	1.140	199	7.098	2.351
5	0.896	0.075	10	2.533	0.422	15	4.654	1.163	20	7.165	2.388
51	0.929	0.079	101	2.581	0.435	151	4.712	1.187	201	7.232	2.426
51	0.964	0.084	101	2.629	0.449	151	4.771	1.212	201	7.300	2.464
51	0.998	0.089	101	2.677	0.463	151	4.829	1.237	201	7.367	2.502
51	1.033	0.095	101	2.726	0.477	151	4.888	1.263	201	7.435	2.540
51	1.069	0.100	101	2.774	0.491	151	4.948	1.288	201	7.503	2.579
51	1.105	0.105	101	2.823	0.506	151	5.007	1.314	201	7.572	2.618
51	1.141	0.112	101	2.873	0.521	151	5.067	1.340	201	7.640	2.658
6	1.177	0.118	11	2.922	0.536	16	5.127	1.367	21	7.709	2.698
61	1.214	0.124	111	2.972	0.551	161	5.187	1.394	211	7.778	2.738
61	1.252	0.130	111	3.023	0.567	161	5.247	1.421	211	7.847	2.779
61	1.289	0.137	111	3.073	0.583	161	5.308	1.448	211	7.916	2.820
61	1.327	0.144	111	3.124	0.599	161	5.369	1.476	211	7.986	2.862
61	1.366	0.150	111	3.175	0.615	161	5.430	1.504	211	8.056	2.904
61	1.405	0.158	111	3.226	0.632	161	5.491	1.533	211	8.126	2.946
61	1.444	0.165	111	3.278	0.649	161	5.553	1.562	211	8.196	2.988
7	1.484	0.173	12	3.330	0.666	17	5.615	1.591	22	8.266	3.031
71	1.524	0.181	121	3.382	0.683	171	5.677	1.620	221	8.337	3.074

TABLE No. 21—Continued.

DISCHARGE OVER WEIR ONE FOOT LONG IN CUBIC FEET PER SECOND.

Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.	Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.	Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.	Depth over crest of weir in inches.	Discharge in second feet.	Correction to be subtracted for two end contractions.
22 $\frac{1}{2}$	8.408	3.118	23 $\frac{1}{2}$	8.980	3.480	24 $\frac{1}{2}$	9.566	3.866	26	10.620	4.602
22 $\frac{3}{4}$	8.478	3.162	23 $\frac{3}{4}$	9.053	3.527	24 $\frac{3}{4}$	9.640	3.916	26 $\frac{1}{2}$	10.928	4.826
23	8.550	3.206	23 $\frac{1}{2}$	9.126	3.574	24 $\frac{1}{2}$	9.714	3.967	27	11.239	5.057
23 $\frac{1}{4}$	8.621	3.251	23 $\frac{3}{4}$	9.199	3.622	24 $\frac{3}{4}$	9.789	4.018	27 $\frac{1}{2}$	11.552	5.295
23 $\frac{1}{2}$	8.693	3.296	24	9.272	3.670	24 $\frac{1}{2}$	9.864	4.069	28	11.869	5.539
23 $\frac{3}{4}$	8.764	3.341	23 $\frac{1}{2}$	9.345	3.718	24 $\frac{3}{4}$	9.938	4.120	28 $\frac{1}{2}$	12.188	5.789
24	8.836	3.387	24	9.419	3.767	25	10.013	4.172	29	12.510	6.047
23 $\frac{1}{2}$	8.908	3.433	24 $\frac{1}{2}$	9.492	3.816	25 $\frac{1}{2}$	10.315	4.384	30	13.163	6.581

## CHARACTER OF THE PRINCIPAL STREAMS IN NEBRASKA.

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O. V. P. STOUT.

Whether considered in the light of impressiveness on account of size or channel, volume of discharge, or of their availability as sources of water supply for power or irrigation, the two principal rivers of Nebraska are the Platte river, with its north branch, and the Loup river. The importance of these streams to the future development of the state is sufficient to warrant at least a brief special and comparative discussion. The Platte river derives the major portion of its supply from melting snows in the mountains to the west. Hence, it has a regularly recurring season of extensive floods, which is quickly succeeded by a period of greatly diminished flow.

The Loup river furnishes an example of the opposite extreme in this respect. Its main source of supply is the water which falls in the form of rain and snow in the sand hills. A rain, whether it be light or heavy, so long as it is anything short of a waterspout, passes at once into the soil, and is delivered gradually in the form of springs to the river. Great floods in this river are therefore a rarity. Its distinguishing characteristic is a remarkably uniform rate of discharge from one end of the year to the other.

The following comparative statement of mean monthly rates of discharge of the North Platte and of the Loup River at Columbus during the seasons of 1895 and 1896 will illustrate the statement that has just been made.

MEAN MONTHLY RATES OF DISCHARGE—CUBIC FEET  
PER SECOND.

		April.	May.	June.	July.	Aug.	Sept.	Oct.	
N. Platte	}	1895	3470	7033	10829	3137	488	238	810
at N. Platte		1896	2490	4557	6340	1135	914	807	....
Loup at	}	1895	2754	2966	3591	2122	2289	2427	2450
Columbus		1896	4081	2985	3009	2712	2623	2460	2732

The record of the Platte river at Columbus would still better bring out this comparison, provided the record there were as complete as at North Platte. A diagram of daily discharge would answer still better for the purpose of emphasizing the difference in the distribution of the flow of the two streams.

On account of this difference the problem of using and conserving the waters of the two streams assumes different aspects. The later appropriators on the Platte must plan to store the water which is available in season of floods, but which now runs to waste. A supply of water the year round, or throughout the season for either irrigation or power canals is not available from the Platte river, except in the case of the earlier appropriators.

On the Loup river, as the table above will show, the rate of discharge is remarkably uniform. If we exclude from consideration the great flood occurring in June, 1896, we find that the maximum discharge for any recorded month was only forty-six per cent in excess of the mean for all the recorded months. The minimum discharge for any recorded month was only twenty-four per cent less than the mean for all the recorded months.

Storage of the waters of such a stream would be of value only when the demand became so great in the aggregate as to consume the entire annual supply. Then storage of the winter flow would become desirable. In such a case the storage would be made necessary by variations in the demand rather than in the supply.

The North and the Middle branches of the Loup river unite a short distance below St. Paul. The following table shows the proportion of the discharge into the Platte river at Columbus, which comes from these branches.

Percentage of discharge of the Loup river at Columbus which is contributed by the North and Middle Loup rivers at St. Paul.

	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.
1895.....	83.1	81.5	81.3	85.5	81.2	81.1
1896.....	73.4	.....	87.5	69.4	77.5	73.2

The distance from St. Paul to Columbus is about sixty-five miles. The only considerable tributaries which enter the river below the confluence of the two branches are the Cedar river at Fullerton and Cedar creek at Genoa. From the above table it will be seen that these two streams together with underground sources have contributed from 14.5 to 18.9 per cent of the discharge at Columbus during 1895, and from 12.5 to 30.6 per cent in 1896, during the months of which we have a record. That a comparatively small portion of this discharge arises from springs in the sixty-five miles below St. Paul is shown by the gaugings of the Cedar and Beaver creeks and of the Loup at Fullerton, which are recorded in table number eighteen.

In a previous paragraph it was stated in explanation of the uniformity in the rate of discharge on the Loup river,

that the principal supply was from underground sources in the sand hill region. Evidence of this is furnished by the series of measurements tabulated below.

MEASUREMENTS SHOWING INCREASE OF DISCHARGE OF MIDDLE LOUP RIVER FROM UNDER GROUND SOURCES.

DATE.	LOCALITY.	DISTANCE BETWEEN POINTS.	DISCHARGE.	INCREASE IN FLOW.	
				BETWEEN POINTS.	PER MILE.
		<i>Miles.</i>	<i>Second ft.</i>	<i>Second ft</i>	<i>Second ft.</i>
1895.					
Aug. 20	At forks . .	0	42	.....	.....
Aug. 20	Mullen . . .	8	120	78	9.7
Aug. 21	Seneca . . .	11	216	96	8.7
Aug. 22	Theford . .	15	284	68	4.5
Aug. 23	Dunning . .	27	322	38	1.4
Aug. 23	Dunning . .	0	615	.....	.....
Aug. 29	Loup City.	70	879	264	3.8
1896.					
Aug. 30	Seneca . . .	0	230	.....	.....
Aug. 30	Dunning . .	42	323	93	2.2

No surface tributaries except the Dismal river were received in the distance of 131 miles above considered. The measurement at Loup City in 1895, six days after the one at Dunning, is not strictly comparable with those preceding because of the length of time intervening. Two measurements are given for the flow at Dunning; the first, 322 second feet, being the flow of the Middle Loup, and the second, 615 second feet, the combined flow of that stream with the Dismal river which enters at that place. This affords a comparison with the discharge at Loup City, further down the stream.

Referring again to the comparative table of mean monthly discharges of the North Platte river at North Platte, and the Loup river at Columbus, it is seen that in the case of the North Platte, the maximum recorded

discharge for any recorded month was 233 per cent in excess of the mean for all recorded months, while the minimum for any recorded month was 93 per cent less than this mean.

Those who have the knowledge and experience which would enable them to judge in such a matter seem to be unanimously of the opinion that, with the increase of irrigation in this valley, the flow in the latter part of the season will be greatly and materially increased by the seepage or return of waters which have been once applied in irrigation, but have been absorbed by the soil, to drain away again and form springs. That this effect does follow extensive irrigation is proved by numerous observations which have been made. The most notable records and discussions of such observations which have come to the knowledge of the writer are those which are set forth in bulletins No. 33 of the Colorado, and No. 38 of the Utah agricultural experiment stations. It is believed that the great benefit which has been found to accrue to late irrigation from return or seepage waters in Colorado and Utah will be more than equaled under the natural conditions of a porous soil and a pre-existing supply of ground water, which obtain in the valleys of Nebraska rivers. There can be no doubt that the combined results of return or seepage waters, the storage of water in reservoirs and in a properly prepared subsoil, will remove whatever discouragement there may seem to be to extensive irrigation development in the Platte and North Platte valleys on account of the unevenness in the seasonal distribution of its discharge.

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## Report of Under Secretary.

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LINCOLN, NEB., December, 10, 1896.

*Hon. W. R. Akers, State Engineer, Secretary:*

DEAR SIR—I submit herewith a report of the work done by me as Under Secretary since May 18, 1896, the date of my appointment.

The first work undertaken was an examination and survey of Lodge Pole creek from the point where it enters the state from Wyoming on the west to the point where it crosses the south line and flows into Colorado. A similar examination was made of the Frenchman river and its principal tributary, the Stinking Water, during July and August, and measurements were made of all ditches taken from these streams. During August there was a shortage of water in the Republican and Frenchman rivers.

The Republican river was completely dry at Culbertson on July 19, 1895, and remained dry during the remainder of the season.

The Meeker ditch, which heads just below the mouth of the Frenchman river, claims the water of both streams, and there were times, when the water was being used above on the Frenchman river, when this ditch was not able to get the amount of water it was entitled to by reason of its priority. Mr. H. H. Pickens, the Under Assistant for this district, was called out for several days during the irrigating season, but we were able to get through the season without having recourse to the courts. This trouble, however, demonstrates the necessity of the

enforcement for the law relating to the construction of headgates and measuring flumes upon all ditches. Many ditches have no headgates, and others have very crude ones which cannot be set and fastened so as to regulate the flow of the water in the ditch and enable the Under Assistant to perform his duties. As it now is the work of the Under Assistant is rendered very arduous and the results are extremely unsatisfactory. Many ditch owners complain of the expense of the construction of these works, and others question the authority of the Under Secretary to compel their construction. In July a survey was made of the ditches on Victoria Creek, and a map was filed showing the location of ditches, measurement of water flowing in the ditches and stream, the land under ditch, etc.

During the season I have also made gaugings of the Frenchman, Stinking Water, Lodge Pole, Elkhorn, Pine Minnechaduza, and Niobrara rivers, the reports of which are on file.

The amount of water available in many of the streams, such as the Republican and Frenchman rivers, is so limited that the utmost economy in the use of water should be insisted upon. The general practice of the farmers now is to wait until the crops show signs of suffering for want of water, and then every one wishes to use the water at the same time, and the quantity so required is so great that as a natural consequence there is sure to be a shortage and trouble will ensue.

I am satisfied that very much could be accomplished in this territory by use of water upon the land during the season when there is plenty of water for all, and then in a season of drouth so much less water would be needed that all could be supplied with what was really necessary. A great deal could also be accomplished by the storage

of water when it is plentiful, either by means of reservoirs or by deep plowing and thoroughly soaking the subsoil when water is to be had.

There have been instances during the last season where the land was prepared by deep plowing and thoroughly irrigated before the crop was put in and no water put on afterward. The difference in the crop raised on this land and that raised on land not irrigated was enough to convince the most skeptical of the advantage to be gained by irrigation, even on streams which were dry during July and August.

Reference is had to the detailed reports for more complete information in regard to the work done.

All of which is respectfully submitted.

ADNA DOBSON,  
*Under Secretary.*

LODGE POLE CREEK.

OFFICE OF STATE BOARD OF IRRIGATION }  
LINCOLN, August 10, 1895. }

*Hon. W. R. Akers, State Engineer, Secretary:*

DEAR SIR—In accordance with your direction I have made a complete survey and examination of Lodge Pole Creek through this state, and all the irrigation works along said stream, and I submit herewith a detailed report, giving a complete description of all irrigation works with a map of each ditch and the location of the stream through all sections where there are any ditches, the location of headworks and description of the same.

There are a number of peculiar conditions to be found on this stream. It is made up of springs, and where a tight dam is put across the stream and all the water diverted into a ditch, within a distance of less than one mile the stream may be flowing a greater quantity of water

than there was above the dam. Commencing with the point where the stream enters the state on the west, we find that it is flowing about  $3\frac{1}{2}$  cubic feet per second.

The first ditch is the Hoover, covering about fifty acres. Then the ditches of Stillman A. Pierce and L. C. Kinney follow in a distance of five miles. These ditches cover about 575 acres, and about 400 acres of this is well watered. It is mostly native hay, as shown by detailed report. At the east line of section 2, township 14, range 58, immediately below the land covered by L. C. Kinney's ditch, the creek is flowing about 4 cubic feet per second. Below L. C. Kinney's ditch there is no more water taken out for a distance of four miles, and then comes the head of the Young ditch, covering only about thirty acres, but taking all the water in the creek, being 4.3 second feet. This ditch does not get far from the creek, and at the north and south center line of section 34, township 15, range 57, at the terminus of the ditch the creek is again flowing four second feet.

The next ditch is that of Carl Ruttner, five miles lower down, covering about forty acres. Here a ditch is taken out on each side of the creek, taking the whole flow of the creek, 4.9 second feet.

One mile lower down is the head of J. J. Kinney's south ditch, taking all the water in the creek, being 3.6 second feet. This ditch covers about 140 acres. One half mile below this is the head of J. J. Kinney's north ditch, covering 190 acres. At the head of this ditch is a dam across the creek with no opening, the whole flow of the creek being turned into the ditch, which was taking 2.1 second feet. Mr. Kinney says that he usually waters one side of the creek at a time, thereby getting a better volume of water. The volume of water in the creek increases rapidly below the head of Kinney's north ditch,

and at the east line of section 34; about a mile and one-half below the head of this ditch the creek is running about six second feet.

Next is the Hurley, Lilley, and Polley ditch, three miles lower down, covering about 160 acres and taking four and one-half second feet at the time of observation. Two miles below this is the head of the Hurley and Polley ditch. Gate was closed and taking no water. This ditch covers about 125 acres. One-half mile lower down is the head of the Bay State ditch, covering 100 acres and taking two and one-half second feet.

In the next seven miles comes the McIntosh, Circle Arrow, and Brady ditches, none of them getting enough water to do much good, the creek being perfectly dry above Brady's headgate in section 28, township 15, range 54. It is then dry for about twelve miles to a point about on the south line of section 4, township 14, range 52, when the water again appears, and at the head of the Adams' ditches in section 3, township 14, range 52, it is running two and one-fourth second feet, and at dam one-half mile below this it is running four second feet. Adams' ditch covers about 245 acres, mostly native hay.

Next below is Adam Gunderson's ditch, which covers about 100 acres and furnishes power to run grist mill; ditch is taking about five second feet.

Next is Hans Christenson's ditch in section 7, township 14, range 51, covering about seventy acres, and taking about one second foot. One and one-half miles below this is the head of Jas. Mitchell's ditch, covering sixty acres and taking three and one-half second feet, and one-half mile below this is the head of John Anderson's ditch No. 1; this covers 200 acres, taking no water at time of observation. Mr. Anderson says that this ditch is used alternately with the Mitchell ditch above.

Next comes J. S. Shanahan, whose ditch is a very small affair covering only two or three acres.

The next below is M. Urback, whose ditch covers about sixty acres, but whose dam is washed out and taking no water at the present time. N. P. Lingholm's ditch heads in the southeast quarter of section 14, township 14, range 51, and covers about thirty acres. It was taking one and one-half feet at the time of observation. The creek is entirely dry below this dam and continues dry through section 13 and nearly through section 19. Near the east line of section 19 the water rises again, and at the head of Couch ditches on southwest quarter of section 20, township 14, range 50, it is flowing about two second feet. These ditches cover about forty acres, and were using no water at time of examination.

Runge's Ditches Nos. 1 and 2 in sections 28 and 29, township 14, range 50, cover about 105 acres. Iekes' ditch comes next, covering 200 acres, but only one-half of this is ever watered, on account of scarcity of water. About one-half second foot passes this dam and fills a small pond at head of Adams' and Tobin ditch, but water has not raised enough to flow into their ditches, which cover 180 acres, for several years, and the creek is entirely dry for about one mile below the Adams' and Tobin dam and here the springs rise again, and at head of the Trognitz ditch in section 36, township 14, range 50, there is about one-half second foot flowing in the ditch. This ditch covers about thirty-four acres and is the old ditch made by the U. S. government to supply water to Fort Sidney; but since the abandonment of the fort the water has been diverted by Mr. Trognitz and is used to irrigate his land. There is an old dam built by the government near Fort Sidney on the southwest quarter of section 32, township 14, range 49, which forms a pond of two or three acres, but very

little water passes the dam and the creek is practically dry for nearly two miles below this dam when the springs again appear and at head of the Borquist ditch on southwest quarter of section 34, township 14, range 49, there is about three second feet flowing in ditch and creek, and for the next five miles there is a good flow of water, and the Bordwell, Hale, Whitney, and Kruger ditches are taken out covering in all about 1250 acres. Below the Kruger dam near east line of section 29, township 14, range 48, the creek is nearly dry, and at one-half mile farther down it is entirely dry and there is no water to be seen in the creek for about five miles. On section 25, township 14, range 48, is the McLaughlin dam and ditches covering seventy or eighty acres, but creek is perfectly dry for a long distance above and below this dam. At H. Newman's dam near the west line of section 31, township 14, range 47, there is about one second foot flowing, and at Howard dam near east line of section three there is one and one-half second feet.

In the next two miles the Booth, Tobin, and Dickinson ditches are taken out, covering 620 acres, and taking four and one-fourth second feet. The next ditch is that of Mrs. Crist, covering about 100 acres, but with only enough water to irrigate a small portion of it. The ditch was taking about one second foot. Below this dam the creek is dry for about two miles. On section 26, township 14, range 47, is F. Dickinson's dam and ditch, covering about eighty acres, but he has had no water for irrigation since 1894. The next water is being taken out by H. H. Libby on section 36, township 14, range 47, who has ditches covering 200 acres, but only water to irrigate a small percentage of this amount. The next is the Oberfelder ditches, on section 31, township 14, range 46, which take water from both Lodge Pole and Spring

creek. The ditches cover about 350 acres, but there is not enough water for all of it. The creek is running about one second foot through section 32, and the next water taken out is by F. S. Isenburger, who irrigates about ten acres.

A. B. Persinger's ditches, in section 33, township 14, range 46, and section 4, township 13, range 46, cover about 110 acres, about one second foot flowing ditch, and none passing. Next is Ed. Harrington's ditches in sections 2 and 3, which cover about 100 acres, but only have water enough for about ten acres this year. The ditch was taking about one-half second foot, and the creek is dry from below Harrington's dam to a point near the center of section 12, and here there is water standing in a pond above A. Treat's dam, but no water in his ditches. About one mile below this is the head of H. D. Wolf's ditch, covering about 120 acres. The ditch was running two second feet and no water passing dam. This is the last ditch taking water except Albert Bruner's ditch, in section 2, township 12, range 45, west, which irrigates about five acres, and Newman's ditch in southeast quarter, section 36, township 13, range 45, which irrigates about thirty acres. The creek is about dry from below H. D. Wolf's dam for four miles, and then there is water in ponds above the dams of Newman Bros., Albert Bruner, and Ira Brashear, with no water in any of the ditches, except as above noted. Below Ira Brashear's dam in section 12, township 12, range 45, the creek is again dry. There is a total of 7,228 acres under ditches supplied from Lodge Pole creek, of which 4,000 acres has sufficient water to irrigate. This is a remarkably large area when we consider that when the stream enters the state it is only flowing three and one-half cubic feet per second, and is dry for about twenty-five miles of its

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length in Nebraska. It is a question whether the water would flow over these dry stretches or not, even if none were taken out for irrigation. The notes of the government survey, made in July, 1869, show the bed of Lodge Pole creek as being dry in several places in ranges 52 and 53, and this was prior to the use of water for irrigation. The detailed report submitted herewith gives a table showing the amount of land under each ditch and the crops raised for the season of 1896. In the list showing lands irrigated, everything is given upon which water was used at all this season, and much of this had not sufficient water for a satisfactory irrigation, and, as stated above, the amount of land actually well irrigated is about 4,000 acres. Reference is had to detailed report for more complete description of each plant.

All of which is respectfully submitted.

ADNA DOBSON,  
*Under Secretary.*

TABLE SHOWING CROPS UNDER DITCHES ON LODGE POLE  
CREEK FOR THE YEAR 1896.

NAME OF DITCH OR OWNER.	Acres alfalfa.	Native hay.	Corn.	Oats.	Wheat.	Millet.	Rye.	Potatoes.	Garden, trees, etc	Barley.	Under ditch, but not watered.
Hoover .....		27		15	5			3			
S. A. Pierce....	40	120	10	4	5	30		15			
S. A. Kinney....		100									
L. C. Kinney....		170									
W. T. Young....	7	22							1		
Karl Ruttner....		52		4	12	10		2			
J. J. Kinney, S.	50	60		7	6			5	12		
J. J. Kinney, N.	20	154				5		5	6		
Hurley, Lilly and Polly.....	28	123			8				1		
Hurley & Polly.	19	60	30		12			4			
Bay State.....	60	40									
McIntosh.....		180									
Circle Arrow....		260									
J. V. Brady....	3	37									
John Adams....	40	200	4						1		
Johanna Meyer..									1		
A. Gunderson....	20	80							1		
H. Christianson..		60									
Jas. Mitchell....		60									
Jno. Anderson..	7	190		15						5	
M. Urbach.....											60
N. P. Lingholm..			15	4		3		2		5	
A. Couch.....	15	20						2			100
G. Runge.....		80		5	15	2		1	1		
C. S. Ickes....	4	60	16	5					1	10	100
Adams & Tobin..											180
C. E. Trognitz..	4	5	5	7		7	2	3	1		
P. E. Borquist..	14	90		6	5			6	5		

TABLE SHOWING CROPS—Continued.

NAME OF DITCH OR OWNER.	Acres alfalfa.	Native hay.	Corn.	Oats.	Wheat.	Millet.	Rye.	Potatoes.	Garden, trees, etc.	Barley.	Under ditch, but not watered.
Bordwell.....	17	110	...	10	5	..	..	5	..	..	..
Hale.....	30	105	15	10	80	..	..	..	..	..	..
Whitney.....	..	280	20	..	18	..	..	5	..	..	..
F. W. Kruger...	..	400	80	18	20	..	34	..	..	..	..
McLaughlin...	..	..	..	..	..	..	..	..	..	..	70
Alice T. Howard	..	..	..	..	..	..	..	..	..	..	60
Firth Booth....	3	200	26	20	18	..	18	5	..	10	..
M. H. Tobin....	15	120	20	..	..	..	..	5	..	..	..
F. Dickinson...	..	160	..	..	..	..	..	..	..	..	80
Mrs. Crist.....	..	7	..	..	..	..	..	4	..	10	75
H. H. Libby....	..	200	..	..	..	..	..	..	..	..	..
R. S. Oberfelder.	60	190	..	..	..	..	..	..	5	..	80
H. Barrett....	..	..	..	..	..	..	..	..	..	..	40
F. S. Isenburger	..	5	..	5	..	..	..	..	..	..	..
L. H. Barow....	..	..	5	..	..	..	..	..	..	..	..
A. B. Persinger.	30	180	..	..	..	..	..	..	1	..	..
E. Herrington..	..	10	..	..	..	..	..	..	..	..	90
A. Treat.....	..	..	..	..	..	..	..	..	..	..	120
H. D. Wolf.....	..	40	..	..	..	..	..	..	10	..	70
H. G. Weigand.	..	..	..	..	..	..	..	..	..	..	120
F. McAuliff...	..	..	..	..	..	..	..	..	..	..	160
Johnson.....	..	..	..	..	..	..	..	..	..	..	80
Newman Bros..	..	..	..	..	..	..	..	..	..	..	50
Newman Bros..	..	..	..	..	..	..	..	..	..	..	60
A. Bruner.....	..	5	..	..	..	..	..	..	..	..	..
Ira Brashears..	..	..	..	..	..	..	..	..	..	..	25
	486	4262	246	135	209	57	54	72	47	40	1620

## RECAPITULATION.

Total number of acres of Alfalfa .....	486
“ “ “ Native hay .....	4,262
“ “ “ Corn .....	246
“ “ “ Oats .....	135
“ “ “ Wheat .....	209
“ “ “ Millet .....	57
“ “ “ Rye .....	54
“ “ “ Potatoes .....	72
“ “ “ Garden trees, etc .....	47
“ “ “ Barley .....	40
<hr/>	
Total irrigated .....	5,608
Under ditches, but not irrigated, lack of water ....	1,620
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Total under ditch .....	7,228

OFFICE STATE BOARD OF IRRIGATION, }  
LINCOLN, NEB., Nov. 2, 1896. }

*Hon. W. R. Akers, State Engineer and Secretary State  
Board of Irrigation, Lincoln:*

DEAR SIR—I have made a complete examination of the irrigation works on the Frenchman River and its principal tributary, the Stinking Water.

The McCook Irrigation and Water Power Company's canal, known as the "Meeker Ditch," heads on the Republican just below the mouth of the Frenchman River, and it takes all the water in the river at this point in times when the water is low. This ditch was taking forty cubic feet per second at the time of observation. It is provided with a substantial headgate.

The next ditch above this is the "Farmer's Canal," which was taking five second feet and has a capacity of ten or fifteen second feet. This ditch has no headgate or

measuring flume, the flow of water being regulated by a waste gate ten or twelve feet wide near the head of the ditch. Very little water has been used from this ditch during the season of 1896.

Next above this is the "Riverside Canal," which has a capacity of about twenty second feet, and was taking ten second feet at the time of the observation. There is a gate in this ditch about three-fourths of a mile below the head, and a waste gate which regulates the flow of water in the ditch. The next ditch above this is the "Frenchman Valley Canal." At the head of this ditch the water was raised eight or ten feet by a dam across the river, and during the heavy rains early in the season this dam and the headgate of the ditch were washed out, and for this reason no water has been used during the past season. The next ditch is the "Culbertson Canal," which is thirty-five feet wide, and was taking seventy-five second feet on July 19, 1896. This ditch takes nearly the whole flow of the Frenchman River. The water from Stinking Water Creek can also be taken up by this ditch when it is not used by the Palisade Mills, but the water used by the mill is discharged too low to be taken up by the Culbertson ditch, and it flows under flume No. 1 at about four feet below the floor of flume.

The J. W. Hagerman canal is the next above this. At the point of diversion there is a dam four feet high. This dam is badly washed out and ditch is taking no water this season.

Next above is the J. A. Wise canal, at the head of which is a dam of brush and stone ten feet high. The ditch is three feet wide at the headgate. Water has only been used on five or six acres this season. The ditch was taking about one second foot when examined.

Next is the Fuller ditch, with a dam ten feet high of

stone and brush with box 4'x6' through it. The ditch is four feet wide at the head, and was taking 2.9 second feet. This ditch has only watered twenty-five or thirty acres this season.

Dudeck and Summers have a ditch which heads about one mile above the Fuller ditch. The headgate is two and one-half feet wide. No water has been taken by this ditch this season.

The Guernsey ditches next above have not used any water this year, as dams are washed out. Next is the Harlem Canal with dam five or six feet high. Ditch is three feet wide at headgate, and was taking about two second feet.

The Aberdeen Canal comes next; dam is five feet high built of stone; ditch is four feet wide at head, and is running three and one-half second feet.

Next above comes the James ditch, which covers about 250 acres of land. This ditch was built this season and has watered about 100 acres.

Above this is the Champion ditch, covering a large tract of land, but no water has been used this season, as the head of the ditch was badly washed out by the early rains and most of the crops lying under the ditch were ruined by hail so that the ditch was not repaired.

Above this is the Inman ditch and the North and South Maranville ditches; these were not examined, as it was reported that very little water was being used above Champion. On the Stinking Water the Chase County Land and Live Stock Company have five small ditches, each about three feet wide and covering only the low bottom lands on each side of the stream. Nearly all the land covered by these ditches is hay land, and the ditch being located on the low bottom land and only a short distance from the stream, they probably do not lessen

the flow of the stream very materially. The next ditch below these is Frank McLain's. At the head of this ditch there is a dam 120 feet long and five feet high; the ditch is four feet wide, with an opening of three feet at the headgate, and it was taking about one and eight-tenths second feet at the time of the observation. Below this comes the Chase County Land and Live Stock Company's lower ditch, which is five feet wide, and it was taking four second feet at the time of observation. This is a complete list of the ditches taking water from the Frenchman river, and, as will be seen by the detailed report filed herewith, the sum of the filings on this stream is greatly in excess of the average flow of the stream, but by strict economy in the use of the water, and using it as much as possible during the periods when it is plenty, I believe that the supply will be sufficient for all the ditches now constructed.

All of which is respectfully submitted.

ADNA DOBSON,  
*Under Secretary.*

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Abitz Creek, Div. 2 C.					S.	T.	R.	
Fullerton, J. B., Atkinson .....		278	Pending .....	Holt .....	18	30	13	40
Antelope Creek, Div. 2 C.								
Julian, A. R., Chadron .....		119	" .....	Cherry .....	20	32	40	200
Antelope Creek, Div. 2 E.								
Turner, S. A., Harrison .....	137	.....	" .....	Sioux .....				
Antelope Creek (North) Div. 2 E.								
Story, S. R., Story .....		168	" .....	" .....	8	34	56	560
Ash Creek, Div. 2 D.								
Compton, W. L., Whitney ....	40	.....	" .....	Dawes .....				
Ash Creek (West), Div. 2 D.								
Broadhurst, N., <i>et al.</i> , Crawford	9	.....	" .....	" .....				
Broadhurst, N., <i>et al.</i> , Crawford	194	.....	" .....	" .....				
Halbert, W. R., Leroy, N. Y....	49	.....	" .....	" .....				
Ash Creek (East), Div. 2 D.								
Cline, C. A., Whitney .....	128	.....	" .....	" .....				
Tomlin, H. B., Whitney .....	43	.....	" .....	" .....				
Tomlin, H. B., Whitney .....		298	" .....	" .....	30	32	50	160

Ash Creek, Div. 1 A.							
McCormick, C. M., Lewellen .....	159	.....	Deuel .....	16	16	42	140
Ash Creek, Div. 2 C.							
Sprogg, C., Kirkwood .....	233	.....	.....	10	31	17	150
Kirkwood, M. I. & Co., Kirkwood .....	49	.....	.....	.....	.....	.....	.....
Baker Creek, Div. 2 B.							
Fullerton, J. B., Atkinson .....	26	.....	Holt .....	19	30	13	160
Bazille Creek, Div. 2 F.							
Packard, J. S., Creighton .....	178	....	Pending .....	Knox .....	.....	.....	.....
Bear Creek, Div. 2 C.							
Skinner, Thos., Springview .....	143	....	" .....	Keya Paha ..	15	32	21
Skinner, Thos., Springview .....	139	....	" .....	" .....	.....	.....	.....
Cedarburg, Peter, Springview ..	131	....	" .....	" .....	.....	.....	.....
Beaver River, Div. 2 A.							
Babcock, H. E., Ord .....	219	....	" .....	Nance .....	.....	.....	.....
Long, W. M., Genoa .....	277	....	" .....	" .....	14	17	10
Long, C. W., Genoa .....	276	....	" .....	" .....	14	17	4
Quackenbush, J. W., Albion ...	156	....	" .....	Boone .....	.....	.....	.....
Beaver Creek, Div. 2 B.							
Hughes, Fred, Dustin .....	124	....	" .....	Holt .....	18	33	15
Beaver Creek, Div. 2 C.							
Stranger, T., Ainsworth .....	221	....	" .....	Brown .....	16	31	21
Beaver Creek, Div. 2 D.							
Braddock, Adaton .....	127	....	" .....	Sheridan .....	.....	.....	.....

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Beaver Creek, Div. 2 C.					S.	T.	R.	
Hyser, F. B., Adaton .....	116	303	Pending.....	Sheridan .....	20	34	46	23
Stastny, F., Chadron .....	116	.....	" .....	" .....	.....	.....	.....	.....
Beaver Creek, Div. 1 D.								
Wright, G. D., York .....	258	.....	" .....	York .....	.....	.....	.....	.....
Beeman Creek, Div. 2 C.								
Barnard, C. O., Springview .....	11	.....	" .....	Keya Paha ..	.....	.....	.....	.....
Rickman, A. S., Springview .....	173	.....	" .....	" .....	.....	.....	.....	.....
Benner Creek, Div. 2 C.								
Gillespie, B. S., O'Neill .....	.....	213	" .....	Holt .....	31	33	11	305
Birdwood Creek, Div. 1 A.								
Eq. F. & S. I. Co., North Platte .....	.....	204	" .....	Lincoln .....	35	15	33	.....
Eq. F. & S. I. Co., North Platte .....	181	.....	" .....	" .....	.....	.....	.....	.....
Eq. F. & S. I. Co., North Platte .....	166	.....	" .....	" .....	.....	.....	.....	.....
Black Bird Creek, Div. 2 C.								
Mullen, A. F., O'Neill .....	3	.....	Aug. 18, 1894	Holt .....	20	31	11	70
Robertson, J. A., Joy .....	4	.....	Aug. 28, 1894	" .....	32	31	11	14
Blue River (west), Div. 1 D.								
Blue Vale C. Co., Cordova .....	.....	188	Oct. 7, 1895	Seward .....	28	9	3	3000

Blue River (west), Div. 1 D.							
Kersensbrock, John .....	211	Dec. 20, 1895	Seward .....	32	9	3	500
Kersensbrock, John .....	214	Dec. 20, 1895	" .....	32	9	3	Power.
Blue River (Little), Div. 1 C.							
Meyer, E. & S., Oak .....	140	Pending .....	Nuckolls .....				
Nelson, C. W., Hastings .....	129	" .....	Adams .....				
Philleo, E. A., Ayer .....	214	" .....	" .....				
Blue Bird Creek, Div. 2 C.							
Brandt, Ella, O'Neill .....	195	Dec. 14, 1895	Holt .....	26	30	11	320
Murphy, Patrick, O'Neill .....	163	Sept. 7, 1894	" .....	26	30	11	70
Blue Creek, Div. 1 A.							
Bergerson, Nels, <i>et al.</i> , Ramsey	171	Pending .....	Deuel .....				
Eq. F. & S. I. Co., North Platte	174	" .....	" .....				
Graf, Robert, Lewellen .....	191	" .....	" .....				
Hooper, D. C., Ramsey .....	176	" .....	" .....				
Ramsey, A. F., <i>et al.</i> , Lewellen.	193	" .....	" .....				
Union I. & W. P. Co., Ramsey.	184	" .....	" .....				
Winterer, O. H., Lewellen .....	159	" .....	" .....				
Boardman Creek, Div. 2 C.							
Gillespie, B. S., O'Neill .....	146	" .....	Cherry .....	13	30	31	
Lee, J. S., Kennedy .....	275	.....	" .....	6	29	33	480
Boggy Creek, Div. 2 E.							
Smith, J. W., Bodarc .....	187	Pending .....	Sioux .....				

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Boggy Creek (Middle), Div. 2 E.					S.	T.	R.	
Bannon, J. F., Bodarc.....	192		Pending.....	Sioux.....				
Bone Creek, Div. 2 C.								
Ferguson, J. J., Ainsworth....	87		Pending.....	Brown.....				
McAndrew, W. D., Ainsworth....	121		".....	".....	27	30	22	240
Bordeaux Creek, Div. 2 D.								
Adams, S. L., Chadron.....	15		Pending.....	Dawes.....				
Bacon, J. D., Chadron.....	52		".....	".....				
Hall, A. W., Chadron.....	63		".....	".....				
McAvoy, J. H., Chadron.....	61		".....	".....				
Bordeaux (Big) Creek, Div. 2 D.								
Bryant, S. A., Chadron.....	62		Pending.....	Dawes.....				
Locket, T. E., Chadron.....	188		".....	".....				
Morrissey, M., Chadron.....	176		".....	".....				
Richards, H. B. J., Chadron...	71		".....	".....				
Richards, H. B. J., Chadron...	72		".....	".....				
Bordeaux Creek (Little), Div. 2 D.								
Butler, Z. A., Chadron.....	64		Pending.....	Dawes.....				
Hartzell, S. and C., Chadron...	16		".....	".....				

Brush Creek, Div. 2 A.									
Rouche, P. S., Brownlee.....	67	Pending.....	Cherry.....	27	27	29	840		
Brush Creek, Div. 1 B.									
Miller, Jno., Maywood.....	131	Pending.....	Frontier.....	33	8	29	.....		
Brush (West) Creek, Div. 2 C.									
Johnson, J. V., Celia.....	272	".....	Holt.....	26	32	14	50		
McCartney, W. H. & M. H. O'Neill	158	July 1, 1894..	"	26	32	14	35		
Brush Creek (East), Div. 2 C.									
McCartney, W. A. & M. H. O'Neill	157	July 1, 1894..	Holt.....	24	32	14	35		
Buffalo Creek, Div. 1 B.									
Larned, F. G., <i>et al.</i> , Haigler...	32	Oct. 16, 1890.	Dundy.....	18	1	40	420		
Moore, F. B. & E. A., Haigler.	268	Dismissed...	".....	22	2	41	.....		
Porter, J. R. & Sons, Haigler.	260	Nov. 26, 1890.	".....	1	1	41	200		
Moore, Eliza A., Haigler.....	170	Pending.....	".....	26	2	41	.....		
Moore, Eliza A., Haigler.....	171	".....	".....	26	2	41	60		
Buffalo Creek, Div. 2 B.									
Hale, J. F., Battle Creek.....	270	".....	Madison.....	24	24	4	500		
Bull Creek, Div. 2 D.									
Johnson, W. S., Glen.....	44	".....	Sioux.....	.....	.....	.....	.....		
Burton Creek, Div. 2 C.									
Mutz, Otto, Springview.....	136	".....	Keya Paha..	.....	.....	.....	.....		
Wiley, Jas., Lutes.....	239	".....	" ".....	.....	.....	.....	.....		
Mutz, Otto, Springview.....	142	".....	" ".....	8	34	19	160		
Compton, C. T., Lutes.....	150	".....	" ".....	5	34	19	35		

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Calamus River, Div. 2 A.					S.	T.	R.	
Brumback, N. T., Beatrice, Neb	111		Pending	Loup	27	23	18	4000
Hesselgesser, Robt., Prime	202		"	"	16	23	18	
Starke, A. B., Taylor	164		"	"	7	24	19	
Shoemaker, A. E., Burwell	226		"	"	16	23	18	
Willow Springs I. Co., Burwell	228		"	Garfield	31	23	17	
Calf Creek, Div. 2 A.								
Cady, W. E., Compton	286		"		1	25	27	
Camp Creek, Div. 1 A.								
Stillwell, W., Lisco	187		"	Cheyenne				
Canyon Creek, Div. 1 A.								
McCarthy, J. J., Keystone	15		"	Keith				
Cedar River, Div. 2 A.								
Nebraska I. & P. Co., Ord	160		Sept. 14, 1894	Valley	22	21	12	12250
Cedar Creek, Div. 2 E.								
Schilt, Chas. E., Harrison	36		Feb. 21, 1895	Sioux	35	33	56	250
Valdez, M., Harrison	28		Pending	"	3	32	56	
Center Creek, Div. 1 B.								
Bishop & Conkling, Franklin	196		Pending	Franklin				

Center Creek, Div. 1 B.							
Barber, F. W., Franklin.....	285	Pending	Franklin				
Chadron Creek.							
Dorrington, F. M., Alliance.....	75	"	Dawes	36	33	49	
Gallup, W. S., Chadron.....	179	"	"				
Mann, Chas., Chadron.....	299	"	"				
Record, A. A., Chadron.....	45	"	"				
Wilson, H. M., Chadron.....	54	"	"				
Wilson, W. W., Chadron.....	55	"	"				
Cherry Creek, Div. 2 E.							
Ruffing, M., Bodarc.....	66	Pending	Sioux				
Clear Creek, Div. 1 B.							
Green, A. L., Beatrice.....	22	Pending	Chase				
Clear Creek, Div. 1 A.							
Barber and Marsh, Lewellen...	303	Pending	Deuel				
Hooper, D. C., Ramsey.....	164	"	"				
Green, N. A., Lewellen.....	34	"	Keith				
Currum, T. P., Lewellen.....	36	"	"				
Scott and Williams, Lewellen..	39	"	"				
Cold Water Creek, Div. 1 A.							
Brown, H., Oshkosh.....	127	"	Deuel				
Coon Creek, Div. 1 A.							
Winterer, W. H., Keystone.....	69		Keith				

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Cook Creek, Div. 1 B. Sharpnac, W. A., Alma.....		251	Pending.....	Harlan.....				
Cottonwood Creek, Div. 2 C. Morrissy, T., Dunlap.....	13		".....	Dawes.....				
Mirage I. Co., Mirage.....	28		".....	Sheridan.....				
Cottonwood Creek, Div. 2 C. Vifquain, E. T., Marbank.....		293	".....	Keya Paha.....				
Cottonwood (Big) Creek, Div. 1 B. Hansberry, J. T., Bloomington..	280		Dec. 31, 1881.	Franklin....	25	2	16	35
Cottonwood (Little), Div. 2 D. Hall, Leroy, Crawford.....		90	Pending.....	Dawes.....	8	32	51	6000
Little Cot. I. Co., Crawford.....		6	".....	".....				
Penney, B. L., <i>et al.</i> , Alliance..		68	".....	".....	8	32	51	
Stewart, J. T., Crawford.....	39		".....	".....				
Stewart, J. G. & J. T., Crawford..		8	".....	".....	8	32	52	1900
Cottonwood (Little), Div. 2 D. Kusel Ditch Co., Hooper.....		183	".....	Dodge.....	9	32	51	
Cow Creek, Div. 2 A. Calond, F., Brownlee.....		273	".....	Cherry.....	7	26	27	

Cow Creek, Div. 2 A.									
Edgar, H. R., Brownlee.....	154	.....	July 4, 1894	Cherry .....	7	26	27	160	
Earley, J., Brownlee .....	175	.....	Pending.....	" .....	18	26	27	.....	
Walker, M. L., Brownlee .....	98	.....	" .....	" .....	7	26	27	.....	
Crooked Creek, Div. 2 C.									
Mutz, Otto, Div. 2 C.	136	.....	" .....	Keya Paha .....					
Cub Creek, Div. 2 C.									
McCumber, S. S., Meadville....	142	.....	" .....	" .....					
Cypriot Creek, Div. 2 C.									
Cypriot, F. A., Lutes .....	295	.....	Pending.....	Keya Paha .....					
Dead Horse Creek, Div. 2 D.									
Harley, Jas., Chadron .....	8	.....	" .....	Dawes .....					
Goff, L. A., Chadron.....	7	.....	" .....	" .....					
Kemery, Jno., Chadron .....	181	.....	" .....	" .....					
Norton, I. W., Chadron .....	56	.....	" .....	" .....					
Norton, I. W. & O. S., Chadron	57	.....	" .....	" .....					
Slattery, E. M., Chadron.....	32	.....	" .....	" .....	32	33	49	80	
Woodruff, E. T. & F. B., Chadron	5	.....	" .....	" .....					
Woodruff, E. T. & F. B., Chadron	21	.....	" .....	" .....					
Deep Creek, Div. 2 D.									
Green, M. H., Glen.....	203	.....	" .....	Sioux.....	9	30	53	40	
Green, M. H., Glen .....	151	.....	" .....	" .....					
Dismal River, Div. 2 A.									
Stodont, May B., Chicago, Ill..	209	.....	" .....	Blaine .....	3	21	25	.....	

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIOR-ITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Driftwood Creek, Div. 1 B .....					S.	T.	R.	
Walsh, Patrick, McCook.....	11	....	April 20, 1894	Red Willow ..	1	2	30	120
Dry Creek, Div. 2 B.								
Carlton, Thos., O'Neill.....		33	Pending .....	Holt.....	18	28	11	6280
Benedict, E. H., O'Neill .....		225	" .....	" .....	18	28	11	14000
Kinkaid, M. P., O'Neill.....		223	" .....	" .....	8	28	11	160
Dry Creek, Div. 2 D.								
Antrim, Jno., Whitney .....		155	" .....	Dawes .....	1	35	52	50
Dry Creek (East), Div. 2C.								
Burt, A., Springview.....		133	" .....	Keya Paha..				
Eagle Creek, Div. 2 C.								
Alfs, J. D., Roy.....	29	....	Sept. 11, 1894	Holt.....	2	30	13	25
Bokhof, Wm., Atkinson.....	146	....	Sept. 18, 1894	" .....	6	30	13	200
Mann, Jno., O'Neill.....		37	Pending.....	" .....				
Robertson, J. A., Atkinson....	149	....	Mar. 15, 1895	" .....	1	30	14	160
Eagle Creek (branch), Div. 2 C.								
Bruder, J., Atkinson.....		227	Pending.....	" .....				
Eagle Creek (North), Div. 2 C.								
Tisch, Fred, Ray .....		162	" .....	" .....				

Eagle Creek (South).									
Becker, S., Atkinson .....	59	Nov. 30, 1894	Holt.....	8	30	13	80		
Elk Creek, Div. 2 C.									
Johnson, J. T., Bassett .....	92	Pending.....	" .....						
Elkhorn River, Div. 2 B.									
Ashton, W. B., O'Neill.....	6	Feb. 18, 1895	" .....	24	29	13	50		
Carlou, Thos., " .....	161	Pending.....	" .....						
Carlou, Thos., " .....	164	" .....	" .....						
Criss, E. A., " .....	3	" .....	" .....						
Davis, Jos., " .....	113	" .....	" .....						
Elkhorn I. Co., " .....	2	Feb. 3, 1894.	" .....	22	9	15	9200		
Hamilton, C. W., Stuart.....	199	Pending.....	" .....	7	30	13	160		
Lersy, H., Wisner .....	64	" .....	Cumming...	5	23	4E	1780		
Lersy, H., " .....	77	" .....	" .....	5	23	4E	1800		
O'Neill P. & I. Co., Lincoln ..	144	" .....	Holt.....	25	29	12	2000		
Rehberg, F. X. & Co., Atkinson	138	" .....	" .....						
Ryan, Jas., O'Neill .....	101	" .....	" .....	25	29	13	500		
Selah, C., " .....	250	" .....	" .....	32	29	11	5000		
Smith, G. F., Ewing.....	91	" .....	" .....						
Thompson, E. H., <i>et al.</i> , O'Neill	162	Feb. 20, 1895	" .....	32	29	11	350		
Waldreth, C. H., <i>et al.</i> , Atkinson	34	Pending.....	" .....	18	30	15	4000		
Elkhorn River (So. Fork) Div. 2 B.									
Smith, G. F., Ewing.....	222	Pending .....	Holt.....	10	26	9	4650		

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—*Continued.*

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Evergreen Creek, Div. 2 C.					S.	T.	R.	
Hafes, G. & Son, Wood Lake ..	.....	145	" .....	Brown .....	.....	.....	.....	.....
Fairfield Creek, Div. 2 C.								
Kuhre, W. M., Norden .....	153	.....	" .....	Keya Paha ..	.....	.....	.....	.....
Fox Creek, Div. 1 B.								
Phoenix Ins. Co., Hartford, Conn .....	.....	234	" .....	Lincoln .....	.....	.....	.....	.....
Fremont Creek, Div. 1 A.								
Equitable F. & I. Co., No. Platte	109	.....	" .....	" .....	.....	.....	.....	.....
Steenhausen, A., North Platte ..	.....	260	" .....	" .....	.....	.....	.....	.....
Frenchman River, Div. 1 B.								
Carrington, L. J., <i>et al</i> , Culbertson	16	.....	Dismissed ..	Hayes .....	.....	.....	.....	.....
Carrington, L. J., <i>et al</i> , Culbertson	16a	.....	Aug. 23, 1894.	" .....	32	5	53	700
Culberts' n I. & W. P. Co., " ..	136	.....	May 16, 1890	" .....	31	5	33	15120
Cunningham, A., Imperial .....	.....	13	Pending .....	Chase .....	.....	.....	.....	.....
Farmers' M. I. Ass'n., Champion .....	.....	207	" .....	" .....	.....	.....	.....	.....
Farmers' Canal Co., Culbertson ..	24	.....	Dec. 19, 1893	Hitchcock ...	11	3	32	700
Fisher Polly & Co., Wauneta ..	238	.....	July 31, 1896	Chase .....	11	5	36	Power
Fuller, J. C., Imperial .....	2	.....	June 12, 1894	" .....	4	5	36	1750
Grant, J. S., Imperial .....	229	.....	Pending .....	" .....	.....	.....	.....	.....

Frenchman River, Div. 1 B.

Grant, J. S., Imperial .....	154	Pending.....	Chase .....	.....	.....	.....	.....
Grant, A., Imperial .....	10	Oct. 16, 1894	" .....	3	5	38	140
Gould, W. S., Omaha .....	203	Oct. 9, 1894..	" .....	1	5	38	140
Guernsey, D. & Co., Wauneta..	40	Jan. 14, 1895	" .....	10	5	37	1680
Guernsey, D. & Co., Wauneta..	198	Jan. 14, 1894	" .....	3	5	37	350
Hagerman, Hudson .....	84	Aug. 27, 1894	Hayes.....	24	5	35	90
Hayes, Thos., Imperial.....	234	Dismissed ...	.....	31	6	38	.....
Inman, Norton, Champion.....	52	Feb. 28, 1895	Chase.....	17	6	40	105
Inman, Norton, Champion.....	60	.....	" .....	.....	.....	.....	.....
James, R. P., Champion.....	249	Dec. 31, 1887	Chase.....	21	6	39	Power.
Leachy, A. A., Lamar.....	134	Pending.....	" .....	.....	.....	.....	.....
Maranville, Eli, <i>et al.</i> , Lamar .	9	Dec. 8, 1894	" .....	12	6	41	420
McAuliff, John, Imperial.....	59	Pending.....	" .....	.....	.....	.....	.....
McGillen, W. J., " .....	131	" .....	" .....	.....	.....	.....	.....
McGillen, W. J., " .....	3	July 1, 1888	" .....	1	5	38	140
McGillen, W. J., " .....	4	Feb. 2, 1891	" .....	3	5	38	175
North Side Irr. Ditch, Champion .....	246	Pending.....	" .....	.....	.....	.....	.....
Riverside Canal Co., Culbertson	53	July 21, 1894	.....	33	4	32	840
Shahan, J. D., Champion.....	79	Pending.....	Chase.....	.....	.....	.....	.....
Shahan, J. D., " .....	135	" .....	" .....	.....	.....	.....	.....
Sheeks, D. P., Beverly.....	47	" .....	Hitchcock..	.....	.....	.....	.....
Locker, J. H., Hudson .....	98	" .....	Hayes .....	.....	.....	.....	.....
Wersig, O. H., " .....	6	" .....	Chase .....	.....	.....	.....	.....

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Frenchman River, Div. 1 B.					S.	T.	R.	
Wise, J. D., " . . . . .	85	.....	Dec. 28, 1896	Hayes . . . . .	15	5	35	140
Young, Fremont, Lamar . . . . .	334	.....	Dismissed . . . . .	Chase . . . . .	11	6	41	.....
Young, Fremont, " . . . . .	251	.....	.....	" . . . . .	.....	.....	.....	.....
Gracie Creek, Div. 2 A.								
Burns & Dobson, Lincoln . . . . .		66	Pending . . . . .	Loup . . . . .	31	23	17	.....
Willow Springs I. Dis., Burwell . . . . .		228	" . . . . .	" . . . . .	31	23	17	.....
Golden Creek, Div. 1 A.								
Theis, W. J., Ogalalla . . . . .		160	Pending . . . . .	Keith . . . . .	.....	.....	.....	.....
Goose Creek, Div. 2 A.								
Giles G., <i>et al.</i> , Purdum . . . . .	25	.....	Jan. 6, 1895	Cherry . . . . .	2	25	25	700
Crook, Fred " . . . . .	106	.....	Pending . . . . .	Blaine . . . . .	.....	.....	.....	.....
Erickson, P. C. & J. M., Brewster . . . . .	166	.....	" . . . . .	Blaine . . . . .	.....	.....	.....	.....
Gordon Creek, Div. 2 C.								
Gillispie, B. S., O'Neill . . . . .	147	.....	" . . . . .	Cherry . . . . .	.....	.....	.....	.....
Greenwood Creek, Div. 1 A.								
Capron and Lamb, Midway . . . . .	192	.....	Pending . . . . .	Cheyenne . . . . .	.....	.....	.....	.....
Coulter, D. M. & H. M., Redington . . . . .	216	.....	" . . . . .	" . . . . .	.....	.....	.....	.....
Nelson and Trennier, Midway . . . . .	217	.....	" . . . . .	" . . . . .	.....	.....	.....	.....

Greenwood Creek, Div. 1 A.								
Trennier, J. E., Midway.....	218	.....	Pending.....	Cheyenne	.....	.....	.....	.....
Geis, Fred'k, Midway.....	73	.....	"	"	.....	.....	.....	.....
Meglemre, S. A., Lapier.....	294	.....	"	"	.....	.....	.....	.....
Hat Creek, Div. 2 E.								
Antrim, J. F., Bodarc.....	25	.....	"	Sioux	3	32	55	240
Brewster, B. E., Harrison.....	126	.....	"	"	.....	.....	.....	.....
Coffee, C. F., Bodarc.....	33	.....	"	"	.....	.....	.....	.....
Hay Creek, Div. 2 D.								
Batch, T. C., Chadron.....	110	.....	Pending.....	Dawes	11	32	40	80
Holt Creek, Div. 2 C.								
Carnahan & Webster, Enterprise.....	116	.....	"	Keya Paha	.....	.....	.....	.....
Schortzer, F. J., Enterprise....	135	.....	"	"	.....	.....	.....	.....
Holt Creek (East), Div. 2 C.								
Akers, J. W., Springview.....	147	.....	"	"	.....	.....	.....	.....
Mountford, Thos., Springview .	230	.....	"	"	.....	.....	.....	.....
Horse Creek, Div. 1 B.								
Nesbit and Davenport, Ives ...	$\frac{220}{261}$	.....	Aug. 31, 1895	Dundy	23	1	39	130
Horse Head Creek, Div. 2 C.								
Bruce, Andrew, Pembroke.....	149	.....	Pending.....	Keya Paha	.....	.....	.....	.....
Horse Shoe Lake, Div. 2 C.								
Kortz, A., Gordon.....	287	.....	"	Cherry	.....	.....	.....	.....
Indian Creek, Div. 2 D.								
Flood, M. F., Whitney.....	76	.....	"	Dawes	.....	.....	.....	.....

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIOR-ITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Indian Creek, Div. 2 D.					S.	T.	R.	
Seequist, Isaac, Whitney . . . . .	119	...	Pending . . . . .	Dawes . . . . .	...	...	...	...
Indian Creek, Div. 1 B.								
Chamberlain, J. C., Max . . . . .		185	Pending . . . . .	Dundy . . . . .	...	...	...	...
“ “ “ “ . . . . .		240	Pending . . . . .	“ . . . . .	...	...	...	...
“ “ “ “ . . . . .	31	...	Dismissed . . . . .	“ . . . . .	13	2	37	...
“ “ “ “ . . . . .	207	...	Pending . . . . .	“ . . . . .	...	...	...	...
“ “ “ “ . . . . .	263	...	Dismissed . . . . .	“ . . . . .	18	2	36	...
“ “ “ “ . . . . .	265	...	“ . . . . .	“ . . . . .	18	2	36	...
Cannon, H., Max . . . . .	8	...	“ . . . . .	“ . . . . .	18	2	36	...
Kimsey T. C. & J. W., Benkelman	22	...	“ . . . . .	“ . . . . .	10	2	37	...
“ “ “ “ . . . . .		261	Pending . . . . .	“ . . . . .	...	...	...	...
Thompson & Vansickle, “	27	...	Dismissed . . . . .	“ . . . . .	8	2	37	...
“ “ “ “ . . . . .		237	Pending . . . . .	“ . . . . .	...	...	...	...
Wilson, Ed., Stratton . . . . .	43	...	Dismissed . . . . .	“ . . . . .	23	2	36	...
“ “ “ “ . . . . .		268	Pending . . . . .	“ . . . . .	...	...	...	...
Vansickle, A., Benkleman . . . . .	26	...	Dismissed . . . . .	“ . . . . .	5	1	37	...
Jewett Creek, Div. 2 C.								
Jewett, C. P., Meadville . . . . .	144	...	Pending . . . . .	Keya Paha . . . . .	...	...	...	...

Jim Creek, Div. 2 E.								
Anderson, Nels., Harrison.....	31	.....	Pending.....	Sioux.....				
Slattery, Wm., ".....	14	.....	".....	".....	13	33	37	
Woodruff, W. B., ".....	114	.....	".....	".....				
" ".....	115	.....	".....	".....				
Keya Paha River, Div. 2 C.								
Anderson, H. S. & Co., McClain.....	167	.....	".....	Keya Paha.....				
Donason, Jack, Mills.....	166	.....	".....	".....				
Lewis, S. A., Lutes.....	127	.....	".....	".....				
Rhodes, F. J., Springview.....	206	.....	".....	".....				
State Line I. Co., Mills.....	259	.....	".....	".....				
Kiowa Creek, Div. 1 A.								
Currie, E. A., Mitchell.....	215	.....	".....	Scott's Bluff.....				
Kyle Creek, Div. 2 D.								
Colville, D., Glen.....	42	.....	Pending.....	Sioux.....				
Lawrence Fork, Div. 1 A.								
Creigler, E. S., Redington.....	44	.....	".....	Cheyenne.....				
Gilman & Creigler, Redington.....	49	.....	".....	".....				
Harper, J. W., Higgins.....	91	.....	".....	".....				
Redington, H. V., Redington.....	206	.....	".....	".....				
Lincoln Creek, Div. 1 D.								
Smith, Jennie A., York.....	269	.....	".....	York.....	21	12	1	40
Lodge Pole Creek, Div. 1 E.								
Adams, J. M., Potter.....	288	.....	".....	Cheyenne.....				

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Lodge Pole Creek, Div. 1 E.					S.	T.	R.	
Adams, J. M., Potter.....	290	....	Pending.....	Cheyenne .....				
Adams, J. M., Potter.....	291	....	" .....	" .....				
Adams & Tobin, Sidney .....	292	....	" .....	" .....				
Anderson, Jno., Sidney .....	293	....	" .....	" .....				
Anderson, Jno., Sidney .....	296	....	" .....	" .....				
Bay State L. S. Co., Kimball ..	201	....	" .....	Kimball .....				
Borquist, C. E., Sidney .....	287	....	" .....	Cheyenne .....				
Borquist, C. E., Sidney .....	289	....	" .....	" .....				
Brady, J. V., Dix .....	204	....	" .....	Kimball .....				
Booth, Frith, Lodge, Pole .....	102	....	" .....	Cheyenne .....				
Couch, Arabella, Sidney .....		89	" .....	" .....				
Christianson, H. L., Sidney ...	211	....	" .....	" .....				
Christianson, H. L., Sidney ...	212	....	" .....	" .....				
Goss, C. J., Pine Bluffs, Wyo..	159	....	" .....	Kimball .....				
Gunderson, Adam, Potter.....	89	....	" .....	Cheyenne .....				
Hall, Lewis H., Sidney .....	111	....	" .....	" .....				
Hall, Lewis H., Sidney .....	112	....	" .....	" .....				
Hall, Lewis H., Sidney .....	114	....	" .....	" .....				

Lodge Pole Creek, Div. 1 E.

Hall, Lewis H., Sidney	116	Pending	Cheyenne				
Hall, Lewis H., Sidney	208	"	"				
Hurley, J. W., Kimball	224	"	Kimball				
Hurley, J. W., Kimball	225	"	Kimball				
Herrington, Ed., Chappell	113	"	Deuel				
Howard, Alice T., Lodge Pole	156	"	Cheyenne				
Ickes, C. S., Lincoln	147	"	"				
Jones, B. A., Sidney	70	"	"				
Jones, B. A., "	143	"	"				
Jones, B. A., "	144	"	"				
Kinney, J. J., Kimball	157	"	Kimball				
Kinney, J. J., "	282	"	"				
Kinney, L. C., Pine Bluffs, Wyo.	150	"	"				
Kinney, S. A., "	151	"	"				
Kruger, F. W., Sidney	137	"	Cheyenne				
Kruger, F. W., Sidney	138	"	"				
Kruger, F. W., "	139	"	"				
Kruger, Richard, "	295	"	"				
Libby, H. A., Lodge Pole	154	"	"				
Lyngholm, N. P., Sidney	223	"	"				
McIntosh, J. M., Melrose	213	"	Kimball				
McLaughlin, M., Sidney	298	"	Cheyenne				
Mitchell, Jas., "	148	"	"				

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Lodge Pole Creek, Div. 1 E.					S.	T.	R.	
Newman, H., Lodge Pole.....	.....	48	Pending.....	Cheyenne .....				
Oberfelder, R. S., Sidney .....	58.....		“ .....	“ .....				
Oberfelder, R. S., “ .....	59.....		“ .....	“ .....				
Persinger, A. B., Lodge Pole..	146.....		“ .....	“ .....				
Pierce, S. A., Pine Bluffs, Wyo.	152.....		“ .....	Kimball .....				
Ruttner, C., Kimball.....	142.....		“ .....	“ .....				
Runge, G., Sidney.....	247.....		“ .....	Cheyenne .....				
Runge, G., “ .....	248.....		“ .....	“ .....				
Tobin, M. H., Sidney.....	199.....		“ .....	“ .....				
Trognitz, C. E., “ .....	210.....		“ .....	“ .....				
Urback, M., “ .....	149.....		“ .....	“ .....				
Whitney, W. T., “ .....	145.....		“ .....	“ .....				
Whitney, W. T., “ .....	155.....		“ .....	“ .....				
Young, W. T., Kimball.....	141.....		“ .....	Kimball .....				
Lonegan Creek, Div. 1 A.								
Haney, A. C., Ogalalla.....	35.....		Pending.....	Keith .....				
Soehl, Herman, Omaha.....	219.....		“ .....	“ .....				

Lonergan Creek (east), Div. 1 A.								
Jacobs, L., Ogalalla.....	189	....	Pending.....					
Looking Glass Creek, Div. 2 A.								
Babcock, H. E., Ord.....	219	....	".....	Platte.....				
Gerrard, E. A. & F. H., Monroe	22	....	June 12, 1894	".....	1	17	3	200
Gerrard, E. A. & F. H., Monroe	1	....	June 12, 1894	".....				
Loup River, Div. 2 A.								
Babcock, H. E., Ord.....	219	....	Pending.....	".....				
Babcock, H. E., Ord.....	129	....	".....	".....				
Craig, Lynch & Co., Platte Cen..	312	....	".....	Platte.....	13	17	2	
Harvey, Robert, St. Paul.....	35	....	".....	Howard.....	25	13	12	
Murdock, D. <i>et al.</i> , Oconee.....	289	....	".....	Platte.....	27	17	4	
Nelson & Gates, Richland.....	291	....	".....	".....	13	15	8	
Loup (South), Div. 2 A.								
Boblets, E. J., Tuckerville.....	140	....	".....	Custer.....				
Callaway Milling Co., Callaway.	177	....	".....	".....				
Edwards, S., Arnold.....	245	....	".....	".....	21	17	25	
Halladay, C. T., Broken Bow...	62	....	".....	".....	25	17	25	
South Loup I. Co., Callaway...	229	....	".....	".....	6	16	24	
Tillson, W. Z., Sidney.....	78	....	".....	Buffalo.....				
Loup (Middle), Div. 2 A.								
Butcher & Greebe, Gates.....	134	....	Feb. 17, 1895	Custer.....	36	20	21	1280
Grier, Peter, Seneca.....	10	....	Pending.....	Thomas.....				
Grier, Peter, ".....	291	....	".....	".....	21	24	30	

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIOR-ITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Loup (Middle), Div. 2 A.					S.	T.	R.	
Harris, L. H., Dunning.....		263	Pending.....	Blaine.....	3	22	26	.....
Harris, L. H., ".....		248	".....	".....	16	22	25	.....
Jewett, L. H., Broken Bow.....		113	".....	".....	30	22	24	.....
Kenyon, C. T., Boelus.....		200	".....	Howard.....	30	13	12	.....
Lillian Precinct I. Dist., Gates.	118		".....	Custer.....				.....
Mira Valley I. Dist., Ord.....		220	".....	".....	30	13	12	67360
Mathews, G. L., Thedford.....	103		Dismissed...	Thomas.....	7	23	28	.....
Middle Loup I. & C. Co. Sargent	130		June 6, 1894.	Blaine.....	15	21	22	39250
Patton, J. A., Ord.....		262	Pending.....	Valley.....	16	17	16	.....
Posten, D. M., Seneca.....		197	".....	Thomas.....	14	24	31	.....
Purdum, J. W., Thedford.....	102		Sept. 8, 1894.	".....	31	24	29	200
Sherman Co. Irr. Co., Loup City	80		Aug. 13, 1894	Sherman....	30	14	13	17000
Thedford I. & W. P. Co., Thedford	89		Aug. 25, 1894	Thomas.....	4	23	29	3900
Wescott I. & Canal Co., Wescott	166		Aug. 8, 1894.	Custer.....	15	19	18	6200
" " " " ".....		172	Pending.....	".....				.....
Loup (North), Div. 2 A.								
Almeria I. & Canal Co., Almeria.....		117	Pending.....	Loup.....	24	22	20	.....
Body, Wm., Compton.....		169	".....	Cherry.....				.....

Loup (North), Div. 2 A.								
Brewster I. & P. Co., Brewster.	153	Pending	Cherry	27	21	11	7700	
Burwell I. Co., Burwell.	117	Sept. 7, 1894.	Garfield	25	19	14		
Corey, A. L. St. Paul.	165	Pending	Valley					
Compton I. & P. Co., Compton.	190	"	Cherry					
Cox, G. H., Purdum.	108	"	Blaine	8	24	25		
Edgar, H. R., Brownlee.	105	"	Cherry	27	27	28		
Edwards, H. B., Valentine.	104	"	"	27	27	28		
Erickson, P. C., Brewster.	244	"	Blaine	28	24	24		
Farmers I. & M. Co., Brewster.	114	"	"	15	22	23		
Firkins, A. J., Ord.	161	"	Valley	5	20	10		
Forks I. Dist., Burwell.	181	"	Loup	22	21	18		
Gard, D. A., Ord.	14	"	Valley					
Getter, M. E., Ord.	122	"	Loup					
" " " "	99	"	"	30	22	19		
" " " "	279	"	"					
" " " "	201	"	"	35	24	24		
Johnson, M., Elba.	238	"	Howard	1	16	12		
Johns & Wilson, Burwell.	202	"	Garfield	19	21	16		
Keller, G. W. & O. J., Compton	187	"	Cherry	21	26	27		
Keller & Co, Compton	326	"	"	16	26	27	500	
Lee, J. R., Brownlee	26	"	"					
Lee, J. R., Brownlee	170	Aug. 7, 1894.	"	25	27	29	2800	
Lee, J. S., Brownlee	177	Pending	"	26	27	29		

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIOR-ITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Loup (North), Div. 2 A.					S.	T.	R.	
Newton I. Co., Almeria.....	82	....	Pending.....	Loup.....	....	....	....	....
North Loup I. Co., North Loup	23	....	Sept. 30, 1893	Valley.....	27	19	14	10000
Northrup, H. A., Hawley.....	51	....	Pending.....	Blaine.....	29	24	24	6000
Northrup, T. S., <i>et al.</i> , Hawley.	107	....	".....	".....	23	24	25	....
Ord Irr. Dist., Ord.....	136	....	".....	Valley.....	25	21	17	....
Roneche, P. S., Brownlee.....	18	....	".....	Cherry.....	....	....	....	....
Roneche, P. S., <i>et al.</i> , Brownlee	177	....	".....	".....	16	27	29	....
Sanderson, M., <i>et al.</i> , Hawley..	107	....	".....	Blaine.....	23	24	25	....
Smith, E. B., Brewster.....	152	....	".....	".....	27	23	21	....
Stevens, Wm., Taylor.....	143	....	".....	Loup.....	....	....	....	....
Tzschuk Canal Co., Ord.....	301	....	".....	Valley.....	....	....	....	....
Vandergriff, E. R., Brownlee..	16	....	".....	Cherry.....	25	27	28	2000
Vandergriff, E. R., Brownlee..	103	....	".....	".....	33	27	23	....
Walker, M. L., Brownlee.....	96	....	".....	".....	27	27	28	....
Mathew's Creek, Div. 1 A.								
Mathew's, B. G., Keystone....	182	....	".....	Keith.....	....	....	....	....
Medicine Creek, Div. 1 B.								
Phillips, R. A., Lincoln.....	302	....	".....	Frontier.....	....	....	....	....

Medicine Creek, Div. 1 B.							
Rodwell & Brown, Cambridge.	13	.....	Pending.....	Furnas.....	.....	.....	.....
Rodwell & Brown, Cambridge.	56	.....	Dec. 31, 1878	".....	29	4	25 Power.
Sanders, J. L., Stockville.....	130	.....	Feb. 8, 1895	Frontier.....	27	7	27 100
Minnechaduzza Creek, Div. 2 C.							
Bristol, D. S., Valentine.....	87	.....	Pending.....	Cherry.....	.....	.....	.....
Middle Creek, Div. 2 B.							
Abbott, W. N., Lincoln.....	210	.....	".....	Lancaster...	29	10	6e.....
Judge, Peter, Lincoln.....	212	.....	".....	".....	28	10	6 80
Jansen, May, Lincoln.....	215	.....	".....	".....	28	10	6 210
Middle Creek, Div. 2 C.							
Bartling, H., Sidney.....	177	.....	".....	Cheyenne...	.....	.....	.....
Bartling, H., ".....	178	.....	".....	".....	.....	.....	.....
Middle Creek (North), Div. 2 C.							
McGuire, May W., Norden.....	121	.....	".....	Keya Paha...	.....	.....	.....
Middle Creek (East), Div. 2 C.							
Poitevin, Antrim, Norden.....	92	.....	".....	".....	.....	.....	.....
Middle Creek (West), Div. 2 C.							
Allen, M. N., Norden.....	95	.....	".....	".....	.....	.....	.....
Monroe Creek, Div. 2 D.							
Brumbaugh, Sam'l, Harrison..	112	.....	".....	Sioux.....	22	33	56 300
Schilt, Chas., ".....	38	.....	".....	".....	.....	.....	.....
Monroe Creek (Little), Div. 2 C.							
Schilt, Chas., Harrison.....	38	.....	".....	".....	.....	.....	.....

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Monroe Creek (Big), Div. 2 C.					S.	T.	R.	
Wilcox, E. J., Harrison .....	34	....	Pending .....	Sioux .....	....	....	....	....
Muddy Creek, Div. 1 B.								
Phillips, F. C., Max .....	18	....	Dismissed ...	Dundy .....	2	2	36	....
Phillips, F. C., Max .....		....	Pending .....	" .....	....	....	....	....
Muddy Creek, Div. 2 A.								
Conley, J. W., Broken Bow .....		....	....	Custer .....	32	17	20	....
Penn, Chas., " .....	159	....	Aug. 14, 1894	" .....	....	....	....	35
Nemaha River, Div. 1 F.								
Christy, H. R., Palmyra .....		....	Pending .....	Otoe .....	....	....	....	....
Niobrara River, Div. 2 C.								
Allen, M. V. & T., Sargent .....		....	Pending .....	Keya Paha .....	....	....	....	....
Balch, T. C., Chadron .....		....	" .....	Dawes .....	....	....	....	....
Barrett, William, Harrison .....		....	" .....	Sioux .....	....	....	....	....
Barrett, P., " .....		....	" .....	" .....	....	....	....	....
Brown, J. E., Hay Springs .....		....	" .....	Sheridan .....	....	....	....	....
Bruce, Andrew, Pembroke .....	141	....	" .....	Keya Paha .....	....	....	....	....
Cornell, C. H., Valentine .....	100	....	" .....	Cherry .....	....	....	....	....
Earnest, J. W., Harrison .....	19	....	" .....	Sioux .....	....	....	....	....

Niobrara River, Div. 2 C.

Earnest, J. W., "	20	Pending	Sioux
Furman, H. J., Marsland	88	"	Dawes
Gillespie, B. S., O'Neill	74	"	Holt
Golden Irr. District	205	"	"
Grable, C. J., Crawford	102	"	Dawes
Hatch, G. W. <i>et al.</i> , Hemingf'd	124	"	"
Harris, A., Belle	60	"	Sioux
Harris & Neece, Belle	24	"	"
Hughes, John, Marsland	53	"	Box Butte
Irion Bros, "	257	"	Sioux
Johnson, B. F., Harrison	27	"	"
Johnson, B. F., "	199	"	"
Johnson, A., Dunlap	255	"	Dawes
Jackson, M. <i>et al.</i> , Belle	292	"	Sioux
Jackson, W. S., Valentine	191	"	Cherry
Jackson, W. S., "	192	"	"
Lear, C. E., Springview	151	"	Keya Paha
Lichte, H., Dunlap	185	"	Dawes
Mirage Irr. Co., Mirage	28	"	Sheridan
Moore, B. F., Marsland	88	"	Sioux
McMannis, J. F. <i>et al.</i> , Hemingf'd	98	"	Dawes
McGinley & Stover, Rayville	93	"	Sioux
"	94	"	"

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Niobrara River, Div. 2 C.					S.	T.	R.	
McGinley & Stover, Rayville...	95		Pending	Sioux				
McConaugh, A. N., Mirage		128	"	Sheridan				
McConaugh, A. N., "		137	"	"				
McGuire, May W., Norden		138	"	Keya Paha				
McCully, S. J., Carnes	175		"	"				
McLaughlin, A. H., Marsland	105		"	Box Butte				
Nollkamper, Wm., Turner		122	"	Holt				
Palmer, A. J. & Co., Marsland	83		"	Dawes				
Palmer, A. J. & Co., Marsland	90		"	"				
Palmer, A. J. & Co., Marsland	91		"	"				
Peters, H. A., et al., Hay Springs		173	"	Sheridan				
Peters, H. A., et al., Hay Springs		296	"	"				
Richards, B., Chadron	108		"	Dawes				
Richards, B., Chadron	168		"	"				
Snow, L., Marsland	85		"	"				
Seymour & Bigelow	30		"	Sioux				
Usher, H. C., Hay Springs		82	"	Sheridan				
Van Alstyne, J. S., Long Pine		134	"	Brown				

Niobrara River, Div. 2 C.							
Vincent, D. C., Marsland.....	107	.....	Pending.....	Dawes.....			
Warnecke, H., Harrison.....	60	.....	".....	Sioux.....			
Wilson, J. A., Springview.....	129	.....	".....	Keya Paha..			
Wood, J. C., Marsland.....	89	.....	".....	Dawes.....			
Pawnee Creek, Div. 1 A.							
Plummer, W. H., Maxwell....	69	.....	".....	Lincoln.....			
Holcomb, M. N., Brady Island.	100	.....	".....	".....			
Murphy, H. D., Brady Island..	117	.....	".....	".....			
Pine Creek, Div. 2 C.							
Clark, James, Rushville.....	99	.....	".....	Sheridan.....			
Plum Creek, Div. 2 C.							
Plum Creek P. & I. Co., Johnstown	84	.....	".....	Brown.....			
Pole Creek, Div. 2 C.							
Julian, A. R., Chadron.....	120	.....	".....	Dawes.....			
Peppermint Creek, Div. 1 B.							
Betts, N. O., Bloomington....	259	.....	".....	Franklin....	28	2	15
Prairie Dog Creek.							
Schilt, C. E., Harrison.....	37	.....	".....	Sioux.....			
Platte River, Div. 1 A.							
Appleford, H. M., Maxwell....	65	.....	".....	Lincoln.....			
Brooks, H. C., Gothenburg....	125	.....	".....	Dawson.....			
Bernhard, J., Hastings.....	11	.....	".....	Adams.....			
Clark's Island Ditch Co., Gibbon	86	.....	".....	Buffalo.....			

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Platte River, Div. 1 A.					S.	T.	R.	
Cozad Irr. Co., Cozad .....		162	Pending .....	Dawson .....				
Elm Creek Irr. Co., Elm Creek .....	120	....	" .....	Buffalo .....				
Evans, G. J., Hastings .....		20	" .....	Adams .....				
Farmers' Mutual I. Co., Kearney .....	165	....	" .....	Buffalo .....				
Farmers' Mut. I. C. Co., Schuyler .....		247	" .....	Colfax .....				
Farmers' & Merchants' Irr. Co., Lexington .....	183	....	" .....	Dawson .....				
Farmers' Ditch & Canal Co., Brady Island .....	205	....	" .....	Lincoln .....				
Fowler, R. H., Maxwell .....	98	....	" .....	" .....				
Fremont C. & P. Co., Fremont .....		40	" .....	Dodge .....	33	17	4	16960
Gothenburg P. & Irr. Co., Gothenburg .....		217	" .....	Lincoln .....				
Gothenburg P. & Irr. Co., Gothenburg .....	110	....	" .....	" .....				
Gothenburg South Side I. Co., Gothenburg .....	173	....	" .....	" .....				

Platte River, Div. 1 A.							
Lincoln & Dawson Irr. Dist., Gothenburg .....	294	Pending	Lincoln				
Lincoln & Dawson Irr. Dist., Gothenburg .....	80	"	"				
Lowell Farmers' I. Co., Lowell	95	"	Kearney				
Lucas F. & I. Co., Newark	264	"	"				
Newark Ditch Co., "	9	"	"				
Orchard & Alfalfa I. Co., Cozad	305	"	Dawson				
Platte River Irr. Co., Lexington	185	"	"				
South Side Irr. & L. Co., North Platte .....	99	"	Lincoln				
Sides, Leroy, Lowell .....	118	"	Kearney				
Six Mile Ditch Co., Gothenburg	90	Sept. 22, 1894	Lincoln			2800	
Shelton Irr. Co., Shelton .....	21	"	Buffalo				
Williamsburg I. & C. Co., Williamsburg .....	224	"	Phelps				
North Platte River, Div. 1 A.							
Alliance I. C. & W. P. Co., Camp Clarke .....	172	Pending	Cheyenne				
Belmont I. & W. P. Co., Omaha	275	"	Cheyenne				
Brown's Creek I. & C. Co., Camp Clarke .....	47	"	Cheyenne				
Bower, W. F., Oshkosh .....	179	"	Deuel				

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
North Platte River, Div. 1 A.					S.	T.	R.	
Burrett, N., North Platte. . . . .		118	Pending. . . . .	Lincoln. . . . .				
Bushnell, H. J. & E. N., Oshkosh	160	....	" . . . . .	Deuel. . . . .				
Castle Rock, I. C. & P. Co., Wilford	119	....	" . . . . .	Scott's Bluff. . . . .				
Central I. C. & W. P. Co., Gering	246	....	" . . . . .	" " . . . . .				
Chimney Rock I. C. & W. P. Co., Camp Clarke. . . . .	81	....	" . . . . .	Cheyenne. . . . .				
Clarke, H. T., Omaha. . . . .	244	....	" . . . . .	" . . . . .				
Cody & Dillon I. & C. Co. N Platte	169	....	" . . . . .	Lincoln. . . . .				
Dickerman, S. F., North Platte.	194	....	" . . . . .	" . . . . .				
Daugherty, M. A., Ogalalla. . . . .	281	....	" . . . . .	Keith . . . . .				
Enterprise Ditch Co., Gering. . . . .	270	....	" . . . . .	Scott's Bluff. . . . .				
Empire Canal Co., Camp Clarke	54	....	" . . . . .	Cheyenne. . . . .				
Far. & Mer. I. & L. Co., N. Platte	14	....	" . . . . .	Lincoln . . . . .				
Fox, B. M., Oskosh . . . . .	197	....	" . . . . .	Deuel . . . . .				
Gumaer & Robinson, Oskosh. . . . .	168	....	" . . . . .	" . . . . .				
Gyger, J. C., Oskosh. . . . .	121	....	" . . . . .	" . . . . .				
Hale, W. A., Gering. . . . .	200	....	" . . . . .	Scott's Bluff. . . . .				
Hanna Irr. Co., Lisco. . . . .	240	....	" . . . . .	Cheyenne . . . . .				

North Platte River, Div. 1 A.								
Holcomb, G. J., Ogalalla.....		1	Pending	Keith				
Hubartt, E., North Platte.....	15		"	Lincoln				
Jacobs, Lee, Ogallala.....	226		"	Keith				
Johnson, E. A., Brady Island..	106		"	Lincoln				
Lamore, F. E., LePeer.....		279	"	Cheyenne				
Lisco, R., Chappell.....	158		"	Deuel				
Logan, C. S., Camp Clarke....	48		"	Cheyenne				
Logan I. & C. Co., Camp Clarke	50		"	"				
Lyons I. C. & W.P. Co. Oshkosh	188		"	Deuel				
Maycock, J., Collins.....	105		"	Scott's Bluff				
Meyers, T. A. <i>et al.</i> , Ogalalla..	273		"	Keith				
Nichols, Y. and C., Collins....	276		"	Scott's Bluff				
Nine Mile C. & R. Co., Bayard.	221		"	"				
Nissen & Fernstrom, Ogalalla..	227		"	Keith				
No. Riv. I.C.&W.P.Co., Oshkosh		243	"	Deuel				
No. Platte I. & L. Co., No. Platte	101		"	Lincoln				
Orr & Vance, Lewellen.....	78		"	Deuel				
Paxton & Hershey, Omaha....	104		"	Lincoln				
Reimers, H., Paxton.....		258	"	Keith				
Roberts, C. F., Oshkosh.....	232		"	Deuel				
RushCreek I.&C.Co.,LodgePole	122		"	"				
Sheridan, J. W. Ogalalla.....	285		"	Keith				
Short Line I. Co., Bayard.....	96		"	Cheyenne				

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIOR-ITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
North Platte River, Div. 1 A.					S.	T.	R.	
Smith, A., North Platte . . . . .	51	....	Pending . . . . .	Lincoln . . . . .	....	....	....	....
Smith, A. H. <i>et al.</i> , Camp Clarke	55	....	" . . . . .	Cheyenne . . . . .	....	....	....	....
Sutherland & Paxton, Sutherland	271	....	" . . . . .	Lincoln . . . . .	....	....	....	....
Spohn, Wm., Oshkosh . . . . .	180	....	" . . . . .	Deuel . . . . .	....	....	....	....
Steamboat Ditch Co., Gering . . . . .	....	186	" . . . . .	Scott's Bluff . . . . .	....	....	....	....
Stubb Supply Ditch Co., Lewellen . . . . .	....	267	" . . . . .	Deuel . . . . .	....	....	....	....
Stebbins, L., North Platte . . . . .	62	....	" . . . . .	Lincoln . . . . .	....	....	....	....
Wendt, H. H., <i>et al.</i> , Oshkosh . . . . .	243	....	" . . . . .	Deuel . . . . .	....	....	....	....
Wilcox, J. A., Oshkosh . . . . .	126	....	" . . . . .	" . . . . .	....	....	....	....
Winter's Creek I. Co., Gering . . . . .	253	....	" . . . . .	Scott's Bluff . . . . .	....	....	....	....
South Platte River, Div. 1 C.								
Abbott, J. H., <i>et al.</i> , Big Springs	19	....	" . . . . .	Deuel . . . . .	....	....	....	....
Appleford, H. M., North Platte	64	....	" . . . . .	Lincoln . . . . .	....	....	....	....
Armstrong, J. H., Ogalalla . . . . .	233	....	" . . . . .	Keith . . . . .	....	....	....	....
Hollingsworth & Son, Ogalalla . . . . .	299	....	" . . . . .	" . . . . .	....	....	....	....
Hall & Allen, Ogalalla . . . . .	284	....	" . . . . .	" . . . . .	....	....	....	....
Lawler, D. A., <i>et al.</i> , Paxton . . . . .	....	232	" . . . . .	" . . . . .	....	....	....	....
Lute & Sheridan, Ogalalla . . . . .	....	231	" . . . . .	" . . . . .	....	....	....	....

South Platte River Div. 1 C.			
Mason, E. P., Paxton.....	130	Pending.....	Keith.....
Meyer, H., Brule.....	283	".....	".....
Miller, F. S., Big Springs.....	186	".....	Deuel.....
Ogalalla P. & L. Co., Ogalalla..	300	".....	Keith.....
Reed, O., Ogalalla.....	283	".....	".....
J. T. Ryan, Brule.....	269	Pending.....	Keith.....
Searle & Blackburn, Ogalalla..	299	".....	".....
Sherman, W. H., ".....	235	".....	".....
Stafford, D., Paxton.....	184	".....	".....
Stebbins, L., North Platte.....	63	".....	Lincoln.....
Pumpkin Seed Creek, Div. 1 A.			
Brown & Essig, Redington.....	82	".....	Cheyenne.....
Cary, L. B., La Peer.....	123	".....	".....
Campbell, S. D., <i>et al.</i> , Freeport	108	".....	Banner.....
Court House Rock I. Co., Mid- way.....	67	".....	Cheyenne.....
Dunlap, J. P., Dwight.....	175	".....	".....
Finn & Dean, La Peer.....	93	".....	".....
Hampton, R. R. & W. D., Harrisburg.....	236	".....	Banner.....
Heard, H. L., Freeport.....	163	".....	".....
Kelley, W. J., Ashford.....	161	".....	".....
Logan, J. E., Gering.....	304	".....	Scott's Bluff.....

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—*Continued.*

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Pumpkin Seed Creek, Div. 1 A.					S.	T.	R.	
Maxwell, J. J., Redington.....	72	....	" .....	Cheyenne.....	.....	.....	.....	.....
Mutual Ditch Co., Redington..	45	....	" .....	" .....	.....	.....	.....	.....
Nunn, L., " ..	115	....	" .....	" .....	.....	.....	.....	.....
Peters, J. F., Harrisburg.....	170	....	" .....	Banner.....	.....	.....	.....	.....
Smith & Wheeler, Sidney ....	34	....	" .....	Cheyenne.....	.....	.....	.....	.....
Thompson, R. S. <i>et al.</i> , Redington. ....	46	....	" .....	" .....	.....	.....	.....	.....
Waitman, P. P., Redington....	66	....	" .....	" .....	.....	.....	.....	.....
Wilson, T. H., Freeport.....		45	" .....	Banner.....	.....	.....	.....	.....
Wilson, T. H., " .....		46	" .....	" .....	.....	.....	.....	.....
Wisner & Skinner, " .....	190	....	" .....	" .....	.....	.....	.....	.....
Willard, W. M., Midway.....	107	....	" .....	Cheyenne.....	.....	.....	.....	.....
Wright, J. S., Ashford.....	195	....	" .....	Banner.....	.....	.....	.....	.....
Wright, J. S., Ashford.....	196	....	" .....	" .....	.....	.....	.....	.....
Red Bird Creek, Div. 2 C.								
Brennan, J. A., O'Neill.....		284	Pending.....	Holt .....	.....	.....	.....	.....
Red Creek (Little), Div. 2, E.								
Zerbst, R., Harrison .....	68	....	Pending.....	Sioux .....	.....	.....	.....	.....

Red Willow Creek, Div. 1 B.			
Brown, M. L., Osborn.....	132	Pending.....	Frontier..... 35 5 30 .....
Helm, John F., Indianola.....	266	Feb. 18, 1895	Red Willow.. 17 3 28 140
Holland, T. J., Indianola.....	79	Jan. 23, 1891	" " .. 16 3 28 2450
Moore, W. H., Indianola.....	279	Pending.....	" " .. .. .
Osborn, D. M. J., Osborn.....	86	" .....	Frontier..... 34 5 30 .....
Red Willow Lake, Div. 1 B.			
Cooper, Jas., Dickens.....	245	Dismissed....	Lincoln .....
" " " .....	249	Pending.....	" .....
Republican River, Div. 1 B.			
Allen, E. N. & H. P., Arapahoe	88	June 9, 1894.	Furnas..... 2 3 26 980
Anderson, A., Benkleman.....	264	Jan. 26, 1894	Dundy .....
Anderson, A. & C., Benkleman.	193	" .....	" .....
Ballard, H. L., Oxford.....	39	June 6, 1894.	Furnas..... 8 3 21 560
Babcock, H. A., Lincoln.....	176	Pending.....	" .....
Bartley Canal Co., Bartley.....	135	" .....	Red Willow.. .. .
Benedict, I., Culbertson.....	43	" .....	Hitchcock .. .. .
Byfield, Wm., McCook.....	133	June 11, 1894	Red Willow.. 23 3 29 840
Cambridge & Arapahoe I. & C.			
Co., Arapahoe.....	71	Aug. 26, 1891	Furnas..... 28 4 25 11900
Carson, A., McCook.....	254	July 1, 1888.	Red Willow.. 27 3 30 100
Carson, A., McCook.....	255	Pending.....	" " .. .. .
Delaware Hickman Ditch. Co.			
Benkleman .....	21	Jan. 7, 1895.	Dundy..... 17 1 37 1400

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Republican River, Div. 1 B.					S.	T.	R.	
Groesbeck, M., Max . . . . .	17	....	Mar. 27, 1894	Dundy . . . . .	10	1	37	700
Groverts, H. & F., Trenton . . . .	277	....	Jan. 29, 1894	Hitchcock . . . .	2	2	33	70
Larned, W. H., <i>et al.</i> , Haigler . . .	68	....	April 29, 1893	Dundy . . . . .	22	1	40	210
Mann, L., Culbertson . . . . .	25	....	Jan. 22, 1894	Hitchcock . . . .	16	3	31	300
McCook I. & W. P. Co., McCook . . .	1	....	Feb. 1, 1891	" . . . . .	15	3	31	10000
Nelson, A. F., Stratton . . . . .	....	241	Pending . . . . .	" . . . . .	....	....	....	....
Nelson, A. F., " . . . . .	278	....	Dismissed . . . .	" . . . . .	19	2	34	....
Pickering, Jos., Trenton . . . . .	....	266	Pending . . . . .	" . . . . .	....	....	....	....
Republican R. I. Co., Benkleman . . .	7	....	May 2, 1892	Dundy . . . . .	29	1	38	2100
Thomas, A. J., Haigler . . . . .	23	....	June 5, 1894	" . . . . .	24	1	40	140
Trenton Farmers' Irr. Company, Trenton . . . . .	83	....	Dec. 24, 1890	Hitchcock . . . .	10	2	34	2240
Trites & Davenport, Culbertson . . .	12	....	Dec. 18, 1890	" . . . . .	21	3	31	430
Wilcox, F. S., McCook . . . . .	87	....	Oct. 4, 1894	Red Willow . . . .	32	3	29	315
Republican River (N. fork), Div. 1 B.								
Brown, W. A., Haigler . . . . .	41	....	Sept. 25, 1890	Dundy . . . . .	11	1	42	780
Brown, W. A., " . . . . .	42	....	Dismissed . . . .	" . . . . .	11	1	42	....
Dundy Co. Irr. Co., Benkelman . . .	20	....	Nov. 22, 1890	" . . . . .	24	1	39	3150

Republican River (N. fork), Div. 1 B								
Neighbor, E. G., Benkelman...	267	....	Mar. 18, 1891	Dundy .....	24	1	39	200
Republican River (S. fork), Div. 1 B.								
Karr, J. W., Benkelman .....	39	....	July 28, 1894	" .....	20	1	37	140
Riverside Ditch Co., Benkelman	38	....	Aug. 5, 1894	" .....	29	1	37	910
Richard's Branch, Div. 2 D.								
Woodruff, H. S., Adelia .....	52	....	June 25, 1895	Sioux .....	7	33	53	160
Rickman Creek, Div. 2 C.								
Byington, W. W., Springview.	17	....	Pending .....	Keya Paha .....				
Rock Creek, Div. 2 C.								
Springer, J. N., Springview .....	97	....	" .....	Keya Paha .....				
Springer, J. N., Springview .....	112	....	" .....	" .....				
Eastlick, B. J., Carnes .....	183	....	" .....	" .....				
Rock Creek, Div. 2 C.								
Rock Ck. P. & I. Co., Mariaville	96	....	" .....	Rock .....				
Rock Creek (Branch), Div. 2 C.								
Wiles, H., Mariaville .....	86	....	" .....	" .....				
Rock Creek, Div. 2 B.								
Woodward, T. H., Lincoln .....	157	....	" .....	Lancaster .....				
Rock Creek, Div. 1 B.								
Highland, E. F., <i>et al.</i> , Denver, Col	30	....	Dec. 31, 1883	Dundy .....	17	1	39	300
Owens, J. S. and E. E., Ives .....	265	....	Pending .....	" .....				
Owens, E. E., Ives .....	28	....	Dismissed .....	" .....	8	1	39	
Owen, J. S. & Son, Ives .....	29	....	" .....	" .....	31	2	39	

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Rock Springs Creek, Div. 2 C.					S.	T.	R.	
W. S. Moore, Meadville.....	171	.....	Pending .....	Keya Paha..	.....	.....	.....	.....
Sand Creek, Div. 2 D.								
Bendix, Fred, Crawford.....	.....	189	" .....	Dawes .....	35	33	53	200
Sand Creek, Div. 1 A.								
Holcomb, G. J. and F. M. Smith,								
Ogalalla .....	103	.....	" .....	Keith.....	.....	.....	.....	.....
Patrick, H. A., Ogalalla.....	272	.....	" .....	" .....	.....	.....	.....	.....
Sandy Creek (Big).								
Morrow, J. C., Atkinson .....	.....	61	" .....	Holt.....	.....	.....	.....	.....
Sheep Creek, Div. 1 A.								
Sturdivant, Jas., Collins.....	.....	182	Pending.....	Scott's Bluff..	.....	.....	.....	.....
Shell Creek, Div. 2 A.								
Gottberg, M., Columbus.....	.....	2	Pending.....	Platte.....	.....	.....	.....	.....
Hill, J. N., Schuyler.....	.....	156	" .....	Colfax .....	.....	.....	.....	.....
Hill, J. N., Schuyler.....	.....	288	" .....	" .....	.....	.....	.....	.....
Schmidt Peter, Columbus.....	81	.....	.....	.....	.....	.....	.....	.....
" " " .....	77	.....	Dec. 17, 1894	Colfax .....	19	18	1	200



ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Spring Branch, Div. 2 E.					S.	T.	R.	
Garton, O. A., Harrison .....	32	....	Pending .....	Sioux .....	....	....	....	....
Harrison, Robt., " .....	191	....	" .....	" .....	....	....	....	....
Nouish, Wm., " .....		83	" .....	" .....	33	33	56	....
Spring Branch, Div. 2 D.								
Tucker, J. S., Glen .....	186	....	" .....	" .....	....	....	....	....
Spring Branch, Div. 1 A.								
Lang, G. A., Redington .....	80	....	" .....	Cheyenne .....	....	....	....	....
Spring Creek, Div. 1 A.								
Holcomb, G. J., Ogalalla .....	228	....	" .....	Keith .....	....	....	....	....
Halloway, D. P., Keystone .....	237	....	" .....	" .....	....	....	....	....
Spring Creek, Div. 1 B.								
Hatcher, Minnie E., Imperial .....		148	" .....	Chase .....	....	....	....	....
McLean, Frank, " .....	5	....	Sept. 24, 1894	" .....	28	7	37	135
Spring Creek, Div. 1 E.								
Oberfelder, R. S., Sidney .....	57	....	Pending .....	Cheyenne .....	....	....	....	....
Spring Creek, Div. 2 A.								
Donnel & Griffith, Ryno .....		252	" .....	Custer .....	....	....	....	....

Spring Creek, Div. 2 C.								
Townsend, M. M., Springview.....	274	Pending.....	Keya Paha.....					
Spring Creek, Div. 2 D.								
Balzer, H. <i>et al.</i> , Lusk, Wyo....	35	"	Dawes					
Hales, W. S., Crawford.....	71	"	"	25	32	53		
" " ".....	52	"	"					
Penney, B. S., Chadron.....	48	"	"					
Spring Creek, Div. 2 E.								
Hall, W. S. & F. M., Jericho, Mo.	67	"	Sioux					
Schaefer, Peter, Bodarc.....	155	"	"					
Spotted Tail Creek, Div. 2 C.								
Rhodes, J. S., McClean.....	167	"	Keya Paha.....					
Spotted Tail Creek, Div. 1 A.								
Elwood, R. S., Sunflower.....	203	"	Scott's Bluff.....					
Squaw Creek, Div. 2 E.								
Daniels & Stetson, Crawford.....	27	"	Dawes					
Dunn, J. F. & J., Harrison.....	132	"	Sioux	3	32	57		
Dunn, Thos., Harrison.....	100	"	"	10	33	57	170	
" " ".....	120	"	"					
Hamlin & Douglas, Harrison.....	313	"	"	10	33	57		
Hamlin, N. D., Harrison.....	174	"	"					
Shepherd, W. F., Harrison.....	123	"	"	1	33	57		
Stinking Water Creek, Div. 1 B.								
Chase Co. L. & L. S. Co., Beatrice.....	56	"	Chase					

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Stinking Water Creek, Div. 1 B.					S.	T.	R.	
Chase Co. L. & L.S. Co., Beatrice	.....	57	Pending.....	Chase	.....	.....	.....	.....
Chase Co. L. & L.S. Co., Beatrice	76	....	Dec. 21, 1894	"	26	7	37	320
Chase Co. L. & L.S. Co., Beatrice	77	....	Jan. 21, 1895	"	14	7	38	105
Chase Co. L. & L.S. Co., Beatrice	73	....	Jan. 29, 1895	"	14	7	38	130
Chase Co. L. & L.S. Co., Beatrice	74	....	Jan. 28, 1895	"	13	7	38	140
Chase Co. L. & L.S. Co., Beatrice	75	....	Mar. 10, 1894	.....	10	7	38	200
Cummings, W. R., Palisade	250	....	Dismissed....	Hayes	.....	.....	.....	.....
Culbertson I. & W. P. Co., Culb'ts'n	136	....	May 16, 1890	"	31	5	33	.....
Sweeney Canyon, Div. 2 C.								
Hornback, J. N., Sparks	145	....	Pending.....	Cherry	.....	.....	.....	.....
Thompson Creek, Div. 1 B.								
Johnson, Theo., Fairfield	.....	174	"	Webster	.....	.....	.....	.....
Trunk Butte Creek, Div. 2 D.								
Smock, Marcus, Whitney	50	....	"	Dawes	.....	.....	.....	.....
Turkey Creek, Div. 1 D.								
Lane, J. K., Pleasant Hill	239	....	"	Saline	.....	.....	.....	.....
Lane, J. K., Pleasant Hill	.....	81	"	"	4	7	3	.....
Lakin, W. H., Dorchester	.....	218	"	"	34	8	2	.....

Turkey Creek, Div. 1 D.								
Jarvis, Wm., Pleasant Hill.....	271	Pending.....	Saline.....	14	7	3	160	
Roop, Frank, Dorchester.....	208	".....	".....	5	7	3	.....	
Turkey Creek, Div. 1 B.								
Wilt & Polly, Naponee.....	256	Dec. 31, 1891	Franklin.....	4	1	16	Power.	
Verdigris Creek, Div. 2 C.								
Hanson, J. W.....	97	Aug. 11, 1894	Antelope.....	8	28	8	290	
Verdigris Creek (South), Div. 2 C.								
Harvey, Adeline, Orchard.....	106	Pending.....	Antelope.....					
Victoria Creek, Div. 2 A.								
Dailey, Gilligan & Co., Anselmo	123	".....	Custer.....					
Dewey, G. W., Gates.....	125	".....	".....					
Langhran & Bell, New Helena..	150	".....	".....					
McGraw, <i>et al.</i> , Gates.....	44	".....	".....					
War Bonnet Creek, Div. 2 E.								
Brewster, B. E., Harrison.....	58	".....	Sioux.....					
War Bonnet (North), Div. 2 E.								
Kay, John S., Harrison.....	197	".....	Sioux.....					
War Bonnet (Branch), Div. 2 E.								
Nolan, James, Harrison.....	196	".....	Sioux.....					
Nolan, James, Harrison.....	198	".....	".....					
Whistle Creek, Div. 2 E.								
Irion, Edward, Town.....	58	".....	Box Butte.....					
Miller, W. R., Alliance.....	65	".....	".....					

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIOR-ITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
White Tail Creek, Div. 1 A.					S.	T.	R.	
Foster, Frank, Keystone.....	33	....	Pending.....	Keith.....	....	....	....	....
Foster, Frank, ".....	230	....	".....	".....	....	....	....	....
Holloway & Phelps, Ogalalla..	274	....	".....	".....	....	....	....	....
Keystone Irr. Co., ".....		17	".....	".....	....	....	....	....
Reed, Fred, Keystone.....	231	....	".....	".....	....	....	....	....
Leonard Bros., Keystone.....	257	....	".....	".....	....	....	....	....
Ogalalla L. & C. Co., Ogalalla..	252	....	".....	".....	....	....	....	....
McCarthy, J. M., Keystone....	167	....	".....	".....	....	....	....	....
White Clay Creek, Div. 2 D.								
Brockway, D. S., Crawford.....		256	".....	Dawes.....	36	31	22	250
Cooper, Wm., ".....		42	".....	".....	2	31	52	....
Hazelton, W. S., ".....	41	....	".....	".....	....	....	....	....
Hutzell, Levi, Rushville.....		306	".....	".....	14	33	45	160
Thornton & Pomery, Crawford..		30	".....	".....	1	30	52	460
White River Irr. Co., ".....	111	....	".....	".....	....	....	....	....
White Clay Creek, Div. 2 D.								
Ball, R. M., Rushville.....		305	".....	Sheridan.....	23	33	45	160
Brooks, L. A., ".....		198	".....	".....	2	33	45	80

White Clay Creek, Div. 2 D.								
Pine Ridge Agency, Pine Ridge	73	Pending	Sheridan					
White Horse Creek, Div. 1 A.								
Laplugh, I., North Platte	242	"	Lincoln					
White River, Div. 2 D.								
Bartlett, A. M., Chadron	290	Pending	Dawes	4	33	44	140	
Butterworth, J. H., Crawford	172	"	"					
Carpenter, E. J. & Co., Whitney	75	"	"					
Cooper, P. S. <i>et al.</i> , Crawford	76	"	"	26	33	50		
Crawford Co., Crawford	165	"	"					
Diedrichson, Nels., Glen	302	"	"	1	30	54	15	
Dorington, F. M. <i>et al.</i> , Alliance	72	"	"					
Force, F., Harrison	50	"	"	31	31	54	80	
Hall, Leroy, Crawford	70	"	"					
Harrison & Cooper Co., Crawford	46	"	"					
Harris, A. V., Whitney	18	"	"					
Jacobson, M., Glen	193	"	"					
Jensen, J., Lead City, S. D.	199	"	"					
Rasher, Charles, Crawford	110	"	"					
Seeley, Charles, Ravenna	109	"	"					
Welling, N., Crawford	10	"	"					
White River I. Co., Crawford	111	"	"					
Willow Creek, Div. 1 A.								
Stewart & Zink, Stewart	101	Dismissed	Holt	19	31	15		

ALPHABETICAL INDEX OF CLAIMS AND APPLICATIONS BY STREAMS—Continued.

NAME OF CLAIMANT.	CLAIM NO.	APP. NO.	DATE OF PRIORITY.	COUNTY.	LOCATION OF HEADGATE.			ACRES COVERED
					S.	T.	R.	
Winter Creek, Div. 1 A.					S.	T.	R.	
Bouton, C. A., Gering.....	61		Pending.....	Scott's Bluff.....				
Wind Springs, Div. 1 A.								
Maycock, Jno., Gering.....	92		Pending.....	Sioux.....				
Wood River, Div. 1 A.								
Hanky, A. B., Alda.....		12	".....	Holt.....				
Lindlage, H. W., Alda.....		216	".....	".....				
Wood River (North), Div. 1 A.								
Edmiston, J. H., Eddyville.....		178	".....	Dawson.....				
Wood River (Middle), Div. 1 A.								
Edmiston, J. H., Eddyville.....		178	".....	Dawson.....				
" " ".....		180	".....	".....				
Wyman Creek, Div. 2 C.								
Horton, Isaac, Carns.....	148		".....	Keya Paha.....				
McCully, R. A., Carns.....	12		".....	" ".....				
Springs, not named, Div. 2 C.								
Conger, C. K., Norden.....		158	".....	Keya Paha.....				
Grant, C. S., Winfield.....	133		".....	" ".....				
Hutchinson, W. H., Pembroke.....		141	".....	" ".....				

Springs, not named, Div. 2 C.								
Lewis, Ralph, Lutes .....	139	Pending	Keya Paha					
Newman, P., Pembroke .....	163	"	" "					
Opperman, L. B., Springview .....	94	"	" "					
Springs not named. Div. 1 A.								
Cooper, E. A., Camp Clarke ...	262	"	Cheyenne					
Finn Bros., La Peer .....	124	"	"					
Newbury H., North Platte .....	85	"	Lincoln					
Newbury, H., North Platte .....	241	"	Lincoln					
Springs not named. Div. 2 B.								
Newton Land Co., Omaha .....	29	"	Douglas	13	14	14	160	
Springs not named. Div. 1 B.								
Cooper, James, Dickens .....	245	"	Lincoln					
Springs not named. Div. 2 D.								
Goff, T. L., Chadron .....	182	"	Dawes					
Mann, Chas., Chadron .....	299	"	Cheyenne					
Uhlig, Max, Crawford .....	180	"	Dawes					
Springs not named. Div. 1 E.								
Gunder, G. B., Sidney .....	222	"	Cheyenne					

ABSTRACT OF CLAIMS FOR WATER IN THE STATE OF  
BOARD OF  
DIVISION

CLAIMANT.	NAME OF DITCH.	STREAM.	
McCook I. & W. P. Co.	Meeker .....	Republican.	1
Cash D. Fuller.....	Fuller .....	Frenchman.	2
W. J. McGillen.....	Harlam .....	"	3
W. J. McGillen.....	Aberdeen.....	"	4
Frank McLain.....	McLain .....	Spring Ck.	5
O. H. Wissig.....	Champion W. P. & I.	Frenchman.	6
Republican Riv. I. Co.	Republican R. I. Co.	Republican.	7
H. Cannon.....	Cannon .....	Indian Ck.	8
Eli Maranville.....	Maranville.....	Frenchman.	9
Allen Grant.....	Harlam .....	"	10
Patrick Walsh.....	Driftwood.....	Driftwood.	11
W. H. Trites, W. H. Davenport....	Trites & Davenport Canal.....	Republican.	12
E. C. Rodwell, C. M. Brown, Crawford Milling Co.	Mill Power.....	Medicine Ck.	13
F. & M. Irr. Land Co.	F. & M. Canal....	North Platte	14
E. Hubartt.....	Hubartt & Hall Ir. & Land Co.....	"	15
L. J. Carrington.....	Frenchman Val. C.	Frenchman.	16
Groesbeck, M. H., Cannon.....	Groesbeck & Cannon	Republican.	17
F. C. Phillips.....	Phillips.....	Muddy Ck.	18
John H. Abott, Walter Kimball, Gorden E. Thompson.	Big Springs Canal.	South Platte	19
Dundy Co. Irr. Co....	Dundy County....	N. F. Rep.	20
Del. Hickman D. Co.	Del. Hickman D..	Republican.	21
Thomas C. Kimsey, John W. Kimsey....	Kimsey.....	Indian Ck.	22

## NEBRASKA FILED IN THE OFFICE OF THE STATE IRRIGATION.

## NO. I.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	170	Hitchcock .	22.5	3.5	26	.....	\$50000	12000
2	12	Chase . . . . .	6.5	.....	6.5	.....	.....	1960
3	28	" . . . . .	4	.....	4	\$ 4650	4500	560
4	21	" . . . . .	1.1	.....	1.1	3750	.....	250
5	4	" . . . . .	2	1.5	3.5	880	630	300
6	65	" . . . . .	13	.....	13	6500	6000	4540
7	25	Dundy . . . . .	8	.....	8	3000	2500	2380
8	5	" . . . . .	2.2	1.3	3.5	300	300	240
9	16	Chase . . . . .	3	3.2	6.2	2435	2300	460
10	15	" . . . . .	1.7	.....	1.7	535	427	300
11	500	Red Willow	1.5	1.5	3	1050	1050	120
12	14	Hitchcock .	2.1	3.2	5.3	675	.....	1590
13	130	Furnas . . . . .	.....	.....	.....	.....	.....	.....
14	183	Lincoln . . . . .	16.5	3.5	20	9455	5019	14302
15	100	" . . . . .	5.1	.....	5.1	1621	800	4600
16	30	Hayes . . . . .	3.2	2.8	6	2600	1200	1600
17	1382	Dundy . . . . .	6.5	3.5	10	12000	10200	2190
18	2	" . . . . .	1	1	2	175	100	150
19	10	Deuel . . . . .	2	2	4	600	400	625
20	6912	Dundy . . . . .	11	.....	11	8000	.....	4500
21	27	" . . . . .	8	.....	8	2400	2400	1620
22	1	" . . . . .	2	.....	2	326	326	80

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
A. J. Thomas.....	Thomas .....	Republican.	1
Farmers' Canal Co...	Farmers' Canal...	Frenchman.	2
Lounzo Marr.....	Marr.....	Republican.	3
A. Van Sickle.....	Van Sickle.....	Indian Ck.	4
Thompson & VanSickle	Thomson & Van Sickle.....	"	5
E. E. Owens.....	Highland.....	Rock Creek	6
J. S. Owens & Son....	Owens.....	Rock Creek	7
E. F. Highland, A. P. Brown, J. R. Phelan, R. Williams.....	Phelan .....	Rock Creek	8
J. E. Chamberlain....	Chamberlain .....	Indian Ck..	9
N. J. Allen, Sr. N. J. Allen, Jr. J. F. Allen			
Frederick G. Larnerd.	Allen & Larnerd..	Buffalo....	10
Frank Foster.....	Foster Keystone..	White City.	11
Nelson A. Green.....	Green.....	Clear Creek	12
August C. Haney....	Haney .....	Lonergan Creek...	13
Thomas B. Curram... Gary T. Scott, Edwin C. Williams...	Curram .....	Clear Creek	14
Riverside Ditch Co...	Scott & Williams..	Clear Creek	15
John W. Karr.....	Riverside .....	S. Fork Rep.	16
D. Gurnsey & Co....	Karr's .....	S. Fork Rep.	17
William A. Brown...	South Gurnsey....	Frenchman.	18
William A. Brown...	Sand Point D. Co..	N. Fork Rep.	19
Ed. Wilson.....	Brown .....	N. Fork Rep.	20
Edwin S. Crigler....	Wilson .....	Indian Ck..	21
Mutual Ditch Co....	E. S. Crigler....	Lawrence F.	22
	Mutual.....	P. Seed Ck.	23

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles com- pleted.	Miles uncom- pleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered
1	103	Dundy . . . .	1.2	....	1.2	300	300	200
2	200	Hitchcock .	5	....	5	4800	4000	700
3	100	"	1	1	2	1145	695	300
4	2	Dundy . . . .	.7	.3	1	280	270	100
5	1.5	"	.7	....	.7	240	240	80
6	1	Dundy . . . .	.5	.2	.75	150	125	40
7	2	Dundy . . . .	1.8	.2	2	510	450	75
8	50	Dundy . . . .	2	2	4	2000	2000	1280
9	4	Dundy . . . .	.8	.8	1.5	100	.....	80
10	21	Dundy . . . .	2.8	.7	3.5	1364	1254	490
11	80	Keith . . . .	5	....	5	400	250	4240
12	2	Keith . . . .	1.2	....	1.2	148	132	160
13	5	Keith . . . .	1.5	....	1.5	235	200	160
14	1	Keith . . . .	.5	....	.5	81	25	80
15	1	Keith . . . .	1.5	....	1.5	200	180	70
16	30	Dundy . . . .	3	1	4	1610	654	2100
17	7	Dundy . . . .	.7	2	2.7	739	346	1250
18	17	Chase . . . .	3.5	2	5.5	.....	.....	2500
19	11	Dundy . . . .	3.2	....	3.2	225	.....	780
20	12	Dundy . . . .	.1	.2	1.2	75	75	180
21	5	Dundy . . . .	2.2	....	2.2	335	335	350
22	5	Cheyenne . .	1.5	....	1.5	468	25	320
23	12	Cheyenne . .	4	....	4	2140	2140	605

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
R. S. Thompson, A. K. Bliss, John Oliver . . . . .	Birdcage . . . . .	P. Seed Ck.	1
Brown's Ck. I. & C. Co	Brown's Creek Irr.	N. Platte..	2
Chas. E. Logan . . . . . Byron Gilman, E. S. Crigler . . . . .	C. E. Logan Canal.	N. Platte..	3
Logan Irr. Canal Co.	Reddington . . . . .	Lawrence F.	4
	Logan Irr. Canal..	S. Branch N. Platte.	5
Augustus Smith . . . .	Smith Canal . . . .	N. Platte . .	6
Norton Inman . . . . .	Inman . . . . .	Frenchman.	7
Riverside C. & I. Co .	Riverside Canal..	Frenchman.	8
Empire Canal Co. . . .	Empire . . . . .	N. Platte..	9
Alfred H. Smith <i>et al.</i>	Berline . . . . .	N. Platte . .	10
Edwin C. Rodwell, Clinton M. Brown . . .	Flour-mill . . . . .	Medicine Ck	11
Robert S. Oberfelder	Oberfelder No. 1..	Spring Ck .	12
Robert S. Oberfelder	Oberfelder No. 2..	L'ge PoleCk	13
Robert S. Oberfelder	Oberfelder No. 3..	L'ge PoleCk	14
Martin Inman . . . . .	Inman . . . . .	Frenchman.	15
Charles E. Bouton . . .	Bouton . . . . .	Winter's Ck	16
Lucien Stebbins . . . .	Stebbins . . . . .	NorthPlatte	17
Lucien Stebbins . . . .	Stebbins . . . . .	SouthPlatte	18
Henry H. Appleford .	Appleford Canal 1.	S. Ch. Platte	19
Henry M. Appleford .	Appleford Canal 2.	N. Ch. Platte	20
P. P. Waitman . . . . .	Waitman's . . . . .	P. Seed Ck.	21
Court-house R. I. Co .	C. H. Rock I. Canal	P. Seed Ck.	22
George White, William H. Larnerd .	White & Larnerd .	Republican.	23
W. H. Plumer . . . . .	Plumer . . . . .	Pawnee Ck.	24
John McCollough . . .	McCollough . . . .	Platte . . . .	25
Cambridge & Arapa- hoe I. & I. Co . . . . .	Cambridge & Arap- ahoe I. & I. Co.	Republican.	26

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	1	Cheyenne..	1.4	.....	1.4	102	102	160
2	270	Cheyenne..	.....	23	23	34000	13900	13500
3	100	Cheyenne..	1.5	.....	1.5	.....	.....	400
4	8	Cheyenne..	1	.....	1	130	130	80
5	100	Cheyenne..	1.5	.....	1.5	.....	.....	400
6	50	Lincoln ...	2	2	4	1400	1000	3000
7	1	Chase.....	1.5	.....	1.5	589	479	110
8	25	Hitchcock .	5.8	.5	6.3	2743	2443	1700
9	150	Cheyenne..	6	.....	6	.....	.....	2560
10	58	Cheyenne..	4.6	1.4	6	1795	1145	2000
11	....	Furnas ....	.....	.....	.....	20000	20000	.....
12	1	Cheyenne..	1.2	.....	1.2	1500	1500	250
13	5	Cheyenne .	.7	.....	.7	1000	1000	160
14	2	Cheyenne .	.5	.....	.5	1000	1000	220
15	4	Chase.....	1.5	3.1	4.6	1443	479	280
16	6	Scott's Bluff	1.5	.5	2	270	270	50
17	53	Lincoln....	.....	2.5	2.5	1250	50	.....
18	53	Lincoln....	.5	8.2	8.7	2400	335	9060
19	8	Lincoln....	1.3	.....	1.3	2609	2609	2560
20	76	Lincoln....	3	.3	6	2971	1275	3840
21	12	Cheyenne..	4	.5	4.5	950	950	400
22	36	Cheyenne..	5.1	.....	5.1	4050	4050	3840
23	12	Dundy ....	2	1.2	3.2	590	315	350
24	31	Lincoln....	1.1	.....	1.1	115	.....	1600
25	50	Lincoln....	2.5	4	6.5	2250	1250	4000
26	440	Furnas ....	15.8	15	30.8	30000	30000	22000

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Joseph J. Maxwell...	Maxwell.....	P. Seed Ck.	1
S. D. Kilpatrick.....	Chase Co. L. & L. S. Co. No. 3....	S. Water Ck	2
S. D. Kilpatrick.....	Chase Co. L. & L. S. Co. No. 6....	S. Water Ck	3
S. D. Kilpatrick.....	Chase Co. L. & L. S. Co. No. 2....	S. Water Ck	4
Chase Co. L. & L. S. Co.	Chase Co. L. & L. S. Co. No. 7....	S. Water Ck	5
Chase Co. L. & L. S. Co.	Chase Co. L. & L. S. Co. No. 5....	S. Water Ck	6
Roscoe Vance, George B. Orr.....	Orr & Vance.....	NorthPlatte	7
L. J. Holland.....	L. J. Holland I. C.	Red Willow	8
Guy A. Ling.....	Ling.....	SpringBr. of Law. Fk.	9
Chimney Rock I. C. & W. P. Co.....	Chimney Rock Can	NorthPlatte	10
C. H. Essig, D. Brown.....	Brown's.....	P. Seed Ck.	11
Trenton Farmers' Irri- gating Ass'n.....	Trenton Farmers'.	Republican	12
James Hagerman, William Hagerman...	Hagerman's.....	Frenchman	13
John S. Wise.....	Wise.....	Whiteman's Fork, or Frenchman.	14
David J. Osborn, Mary J. Osborn.....	Osborn.....	R. Will'wCk	15
F. S. Wilcox.....	Wilcox.....	Republican	16
Edward N. Allen, Harry P. Allen.....	Allen Irrigation..	Republican	17

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles com- pleted.	Miles uncom- pleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	....	Cheyenne .	2	....	2	425	425	50
2	12	Chase . . . . .	1	....	1	330	330	130
3	24	Chase . . . . .	.9	....	.9	650	650	150
4	12	Chase . . . . .	1.6	....	1.6	527	527	200
5	18	Chase . . . . .	2.4	.8	3.2	1003	1003	320
6	6	Chase . . . . .	1.1	....	1.	220	220	150
7	3	Deuel . . . . .	2.5	....	2.5	356	350	205
8	40	Red Willow	5	....	5	5000	5000	2656
9	120	Cheyenne..	.3	.2	.5	145	80	80
10	840	Cheyenne..	5.8	11	16.8	12587	3000	6770
11	6	Cheyenne..	1.5	1.5	3	300	212	200
12	100	Hitchcock .	7.5	7.5	15	10117	4523	7510
13	5	Hayes . . . .	.2	.8	1	681	140	90
14	2	Hayes . . . .	1.2	....	1.2	390	340	150
15	1	Frontier...	1	1.5	2.5	215	215	150
16	40	Red Willow	1.2	5	6.2	1000	1000	5120
17	100	Furnas . . . .	3	2	5	1500	1204	1200

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Adam Gunderson . . . .	Adam Gunderson. Irr. and Mill . . . .	L'ge Pole Ck	1
Six Mile Ditch Co. . . .	Six Mile Ditch. . . .	Platte . . . .	2
John W. Harper . . . .	Spring Branch . . . .	Lawrence F.	3
John Maycock . . . . .	Wind Spring Canal	Wind Spr. . . .	4
James L. Finn, Henry T. Dean . . . . .	Last Chance . . . . .	P. Seed Ck.	5
Eliza C. Smith, Charles G. Wheeler . .	Smith & Wheeler . .	P. Seed Ck.	6
Lowell Farmers' I. C.	Lowell Irrigation.	S. Ch. Platte	7
Short Line I. & C. Co.	Short Line Irr. C . .	North Platte	8
Oasis Ditch Co. . . . .	Oasis . . . . .	Snake Ck. . . .	9
Russel H. Fowles . . . .	Maxwell Canal . . . .	Platte . . . .	10
South Side I. & L. Co	South Side Irr. . . . .	N. & S. Platte	11
M. N. Holcombe . . . . .	Holcombe . . . . .	Pawnee Ck.	12
N. Platte I. & L. Co. . .	North Platte Canal	North Platte	13
Firth Booth . . . . .	Booth Canal . . . . .	L'ge Pole Ck	14
G. J. Holcomb, F. M. Smith . . . . .	Holcomb & Smith . .	Sand Ck. . . . .	15
Paxton & Herstey Irr. & Land Co . . . . .	Paxton & Hershey Irrigating Canal	North Platte	16
Joseph Maycock . . . . .	Rooster . . . . .	"	17
E. A. Johnson . . . . .	Johnson . . . . .	"	18
William W. Willard . . .	William Willard . . .	P. Seed Ck.	19
Charles O. Endernd, Silas D. Campbell . . . .	Endernd . . . . .	"	20
Equitable F. & S. Im. Co. S. of Neb., Lim	Fremont Creek . . . .	Fremont Ck	21
Gothenburg R. & I. Co	Gothenb'g P. & I. C.	Platte . . . .	22
Lewis H. Hale . . . . .	Hale . . . . .	L'ge Pole Ck	23
Lewis H. Hale . . . . .	Hale No. 2. . . . .	"	24
Ed. Herrington . . . . .	Herrington . . . . .	"	25

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	2	Cheyenne .	.7	....	.7	995	995	160
2	40	Dawson ...	7.5	2	9.5	5000	3600	2800
3	1	Cheyenne .	1	....	1	250	250	1280
4	2	Sioux.....	1.7	.5	2.2	234	219	100
5	160	Cheyenne .	.3	3	3.3	2000	700	1100
6	8	Cheyenne .	1	....	1	275	200	240
7	200	Kearney ..	4.5	2.5	7	6350	4445	9920
8	107	Cheyenne .	1.8	3.1	4.9	2825	1542	4590
9	12	Box Butte.	5	6.5	11.5	7075	4675	3840
10	240	Lincoln ...	3.5	3.7	7.2	7100	2600	14720
11	1000	" ...	28	14	42	74370	36500	8960
12	8	" ...	3.2	....	3.2	2000	2000	960
13	320	" ...	21.5	....	21.5	.....	.....	40000
14	2	Cheyenne .	1.5	....	1.5	997	997	320
15	7	Keith.....	2	....	2	157	157	480
16	160	Lincoln ...	11	6	17	15200	15200	7400
17	50	Scott's Bluff	1	10	11	5130	166	2920
18	1	Lincoln ...	.2	.5	.7	300	225	100
19	6	Cheyenne .	....	1.1	1.1	1435	185	240
20	6	Banner....	1	....	1	120	120	85
21	25	Lincoln ...	3.4	....	3.4	592	592	610
22	2800	" ...	17.5	14	31.5	300000	300000	32000
23	2	Cheyenne .	....	....	....	310	310	50
24	1	"	....	....	....	225	225	80
25	5	Deuel.....	1.5	....	1.5	10	10	640

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Lewis H. Hale.....	Hale No. 3 .....	L'ge PoleCk	1
Lee Munn.....	Round House Rock	P. Seed Ck.	2
Lewis H. Hale.....	Hale No. 4.....	L'ge PoleCk	3
E. D. Murphy.....	Murphy's Canal ..	Pawnee Ck.	4
Leroy Sides .....	Leroy Sides'.....	S. Ch. Platte	5
Castle Rock Irr., C. & Water Power Co...	Castle Rock Irr. C.	North Platte	6
Elm Creek Irr. Co...	Elm Creek Canal .	Platte.....	7
J. C. Gyger .....	Gyger .....	North Platte	8
Rush Creek Irr. C. Co.	Rush Creek Irr. C.	"	9
L. B. Cary .....	Meradith & Ammer.	P. Seed Ck.	10
Finn Bros.....	Finn Bros.....	Spring on se 1/4 28-18-49	11
A. C. Booker .....	Booker Canal ....	N. Ch. Platte	12
John A. Wilcox .....	Wilcox & Brown..	North Platte	13
Harvey Brown .....	Cold Water.....	Cold Water	14
Adam Miller.....	Miller Ditch.....	Skunk Ck .	15
Charles W. Wilson ..	Wilson .....	Little Blue.	16
John S. Saunders....	Saunders I. Plant.	MedicineCk	17
John Miller.....	Brush Creek Res..	Brush Ck..	18
Marcus S. Brown....	M. L. Brown Irr..	R. Will'w Ck	19
William Byfield.....	Byfield Irrigation.	Republican.	20
Fremont Young.....	Young's Private...	Frenchman.	21
Bartley Canal Co. ....	Bartley Canal. ....	Republican.	22
Culbertson I. & W. P. Co	Culbertson I. W. P. Co	Frenchman & S. Water	23
Frederick W. Kreuger	Kreuger's No. 3. .	L'ge PoleCk	24
Frederick W. Kreuger	Kreuger's No. 2. .	"	25
Frederick W. Kreuger	Kreuger.....	"	26
Ernest Meyer.....	Oak Mill Race....	Little Blue.	27
William T. Young....	Young's .....	L'ge PoleCk	28
Carl Ruttner.....	Ruttner .....	"	29
B. A. Jones.....	Bordwell .....	"	30

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered
1	1	Cheyenne ..	.....	.....	.....	\$ 55	\$ 55	40
2	4	" ..	1.3	.7	2	300	225	300
3	5	" ..	.....	.....	.....	85	85	40
4	36	Lincoln ...	1.5	3.5	5	2192	615	1800
5	40	Kearney ...	4.1	.4	4.5	1400	1040	2170
6	594	Scott's Bluff	18.7	.5	19.2	27466	19948	5780
7	300	Buffalo ...	11.2	8.8	20	23100	13816	14000
8	10	Deuel .....	.2	1.3	1.5	323	61	760
9	27	" .....	1.7	2.3	4	1400	383	675
10	30	Cheyenne ..	5	.....	5	2500	.....	1320
11	13 <sup>3</sup> / <sub>4</sub>	" ..	1	.....	1	110	110	160
12	50	Dawson ...	.....	.....	.....	1920	200	3500
13	21	Deuel .....	4	1	5	.....	.....	1040
14	6	" .....	1.5	.....	1.5	445	445	350
15	4	Keith .....	1.3	.....	1.3	261	45	320
16	10	Adams .....	.....	.....	.....	1000	1000	120
17	2	Frontier ...	.5	.....	.5	490	490	100
18	1	Frontier ...	.5	.....	.5	1005	1005	70
19	1	Frontier ...	.1	.1	.2	228	134	15
20	120	Red Willow	2	5	7	6950	1875	2000
21	4	Chase .....	.2	2.2	2.5	46	46	60
22	64	Red Willow	5.5	.....	5.5	10100	10100	3200
23	560	Hitchcock..	35.3	66.2	101 <sup>1</sup> / <sub>2</sub>	204467	146881	39260
24	4	Cheyenne ..	1	.....	1	610	610	160
25	4	Cheyenne ..	1	.....	1	610	610	125
26	7	Cheyenne ..	2	.....	2	715	715	480
27	170	Nuckolls...	1	.....	1	5400	5400	320
28	11	Kimball ...	1.5	.....	1.5	210	47	80
29	4	Kimball ...	1.2	.....	1.2	690	690	320
30	10	Cheyenne ..	1	.5	1.5	600	500	100

## ABSTRACT OF CLAIMS

CLAIMANT.	DITCH.	STREAM.	
B. A. Jones.....	Bordwell No. 2....	L'ge Pole Ck	1
Wm. T. Whitney.....	Whitney .....	"	2
A. B. Persinger.....	Persinger.....	"	3
C. S. Ickes.....	Ickes .....	"	4
James Mitchell.....	Mitchell .....	"	5
Mortz Urback.....	Urback .....	"	6
Lambert C. Kinney...	Premier .....	"	7
Sarah A. Kinney.....	Smeed.....	"	8
Stillman A. Pierce...	Independent .....	"	9
Chas. J. Gross.....	Hoover .....	"	10
Henry H. Libby.....	Libby .....	"	11
Wm. T. Whitney.....	Whitney No. 2....	"	12
Alice T. Howard.....	Howard.....	"	13
James J. Kinney.....	Kinney No. 2....	"	14
Reuben Lisco.....	Lisco.....	North Platte	15
Jacob H. Winterer...	High Line.....	Blue Creek.	16
H. J. Bushnell,			
E. N. Bushnell.....	Bushnell Bros....	North Platte	17
William J. Kelley...	William J. Kelley.	P. Seed Ck..	18
Cozad Irrigation Co..	Cozad Irr. Canal..	Platte.....	19
Henry L. Heard.....	Heard's No. 1 & 2.	P. Seed Ck.	20
David C. Hooper....	Clear Creek.....	Clear Creek	21
Farmers' M. Irr. Co..	Farmers' Canal...	N. Ch. Platte	22
Eq. Farm & I. Co. of Neb., Limited.....	West Side Birdw'd	Birdwo'd Ck	23
John M. McCarthy...	John M. McCarthy	Wh. Tail Ck.	24
John Robinson,			
Henry Gumaer.....	Oshkosh Canal ...	North Platte	25
Cody & Dillon Irr. & Canal Co.....	Cody & Dillon Irr. Canal .....	North Platte	26
John F. Peters.....	Peters .....	P. Seed Ck.	27
Nels Berguson,			
Ira Peasley,			
A. F. Ramsay.....	West Side .....	Blue Creek.	28

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	10	Cheyenne..	1	....	1	\$ 1025	\$ 1025	150
2	6	" ..	....	....	....	600	600	200
3	5	" ..	2.5	....	2.5	35	25	320
4	23	" ..	1.2	.8	2	474	474	400
5	23	" ..	1	....	1	500	500	60
6	5	" ..	.7	.3	1	500	500	100
7	6	Kimball ...	4	....	4	1250	1250	480
8	6	" ..	3	....	3	2050	1300	320
9	10	" ..	2.5	....	2.5	1200	1200	300
10	6	" ..	1.5	....	1.5	300	300	100
11	12	Cheyenne..	3	....	3	.....	.....	640
12	6	Cheyenne..	....	....	....	500	500	150
13	2	Cheyenne..	.5	.5	1	325	325	160
14	4	Kimball ...	2.2	....	2.2	455	445	200
15	50	Deuel .....	6.7	2.5	9.2	2150	1150	5280
16	20	Deuel .....	1.2	5.8	7	2075	850	1400
17	10	Deuel .....	2	....	2	247	230	500
18	2	Banner.....	.3	....	.3	168	168	140
19	1000	Dawson ...	23	16	39	94375	65000	43000
20	21	Banner.....	1.4	....	1.4	149	.....	90
21	2	Deuel .....	2	2	4	35	35	200
22	40	Buffalo.....	2.4	21.7	24.1	12346	2240	12800
23	12	Lincoln ...	2	1	3	1069	682	650
24	5	Keith .....	1.2	....	1.2	275	275	172
25	40	Deuel .....	4.3	....	4.3	1700	17000	3850
26	12000	Lincoln ...	13	3	16	10000	10000	12000
27	5	Banner.....	1	1	2	205	205	200
28	40	Deuel.....	....	6	6	3000	525	.....

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Alliance Irr. Canal & Water Power Co..	Alliance Irr. Canal	NorthPlatte	1
Gothenberg S. Side I. Company.....	Gothenberg S.Side Canal.....	Platte.....	2
Eq. Farm & S. I. Co..	Blue Creek Canal.	Blue Creek.	3
J. P. Dunlap.....	Dunlap.....	P. Seed Ck.	4
David C. Hooper....	Blue Creek.....	Blue Creek.	5
Henry Bartling.....	Bartling.....	Middle Ck.	6
Henry Bartling.....	Bartling No. 2....	Middle Ck.	7
William T. Bower....	Bower.....	NorthPlatte	8
William Spohn.....	Spohn.....	NorthPlatte	9
Eq. Farm & S. I. Co. of Neb., Limited..	Birdwood.....	Birdwo'dCk	10
Benj. G. Mathews....	Mathews.....	Mathews Ck	11
Farmers' & Mer. I. Co.	Farmers' & Mer....	Platte.....	12
Union I. & W. P. Co.	Union I. & W. P..	Blue Creek.	13
Platte River I. Co. of Dawson County ...	Platte R. I. Co.Cnl.	Platte.....	14
F. L. Miller.....	Miller & Warren..	SouthPlatte	15
William Stillwell....	Camp Creek.....	Camp Creek	16
Lyons I. Canal & W. Power Co.....	Lyon Irr. Canal...	NorthPlatte	17
Lee Jacobs.....	East Lonergan ...	E. Lonergan	18
S. R. Wisner, R. Skinner.....	Abbott, Wisner & Skinner.....	P. Seed Ck.	19
Robert E. Graf.....	Graf Canal.....	Blue Ck ...	20
A. M. Capron, J. L. Lamb.....	Capron & Lamb ..	Gre'nw'd Ck	21
A. F. Ramsay, Geo. W. Northrop, W. B. Collier.....	Iowa Irr. & Im. Co.	Blue Ck...	22
Samuel F. Dikeman..	Dikeman Canal...	NorthPlatte	23

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	375	Cheyenne..	9	5.4	14.4	\$18449	\$ 5969	14151
2	....	Lincoln....	....	27.3	27.3	65000	.....	.....
3	300	Deuel. ....	9.2	8.8	18	17748	9160	13206
4	.5	Cheyenne..	....	....	....	60	60	55
5	20	Deuel. ....	2.1	4	6.1	540	300	900
6	2	Cheyenne..	.5	....	.5	200	200	40
7	2	Cheyenne..	.4	....	.4	125	125	20
8	200	Deuel.....	4.5	.5	5	2312	2262	14096
9	40	Deuel.....	.5	2	2.5	1135	500	920
10	100	Lincoln....	20	5	25	20204	17804	14810
11	1	Keith .....	.4	....	.4	84	55	80
12	592	Dawson ...	43.8	18.2	62	106340	84045	83980
13	60	Deuel.....	4	1	5	3050	1676	1794
14	442	Dawson ...	16	....	16	26092	3668	28440
15	53	Deuel.....	....	5.6	5.6	1092	175	3768
16	2	Cheyenne..	1	.5	1.5	315	215	225
17	75	Deuel.....	5	1.7	6.7	2502	2170	2950
18	10	Keith .....	2	....	2	675	675	800
19	14	Banner ....	2.5	....	2.5	265	265	200
20	100	Deuel.....	5	3	8	3905	1743	4340
21	6	Cheyenne .	1.7	....	1.7	550	550	160
22	34	Deuel.....	3.5	....	3.5	1550	1455	1000
23	70	Lincoln ...	1.7	13.2	15	950	950	5600

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
John S. Wright.....	John S. Wright 2.	P. Seed Ck.	1
John S. Wright.....	John S. Wright 2.	P. Seed Ck.	2
B. M. Fox.....	Overland Irr. Co..	NorthPlatte	3
J. Gurnsey & Co....	North Gurnsey...	Frenchman	4
Michael H. Tobin....	Tobin.....	L'gePoleCk	5
Will A. Hale.....	Homestead.....	NorthPlatte	6
Bay State L. S. Co...	Bay State.....	L'gePoleCk	7
Wilson S. Gould.....	Gould or Hamlin.	Frenchman	8
J. V. Brady.....	Brady.....	L'gePoleCk	9
Farmers' D. & C. Co.	Farmers' Canal...	Platte.....	10
Henry V. Redington..	H. V. Redington..	Lawr'nceFk	11
John C. Chamberlain..	Chamberlain....	Indian Ck.	12
Lewis H. Hale.....	Hale.....	L'gePoleCk	13
Robert L. Ellwood...	Spotted Tail....	Spot.TailCk	14
Chas. E. Trognitz...	Trognitz Canal...	L'gePoleCk	15
Hans L. Christenson.	Christenson No. 2.	"	16
Hans L. Christenson.	Christenson No. 1.	"	17
John M. McIntosh...	John McIntosh...	"	18
Edgar A. Philleo....	Philleo's.....	Little Blue.	19
Edwin A. Currie....	Currie.....	Kiowa Ck.	20
David M. Coulter, H. M. Coulter.....	Coulter.....	Greenwood.	21
C. C. Nelson, J. E. Trinnier.....	Nelson Canal.....	"	22
J. E. Trinnier.....	Trinnier Canal...	"	23
Herman Soehl.....	Soehl Canal.....	Lonerganck	24
James Nesbitt, H. W. Davenport....	Horse Creek.....	HorseCreek	25
Nine Mile C. & R. Co.	Nine Mile Canal..	NorthPlatte	26
Geo. B. Gunder.....	Gunder Ditch....	Spring, not named..	27
N. P. Lyngholm.....	Lyngholm.....	L'gePoleCk	28
John W. Hurley....	Polley.....	"	29

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	3	Banner ....	2.5	....	2.5	\$ 321	\$ 321	200
2	2	" ....	2	....	2	205	205	150
3	100	Deuel.....	....	5	5	3625	1565	2000
4	10	Chase.....	3	2	5	.....	.....	1440
5	11	Cheyenne .	1.7	....	1.7	500	500	200
6	25	Scott's Bluff	....	....	....	1485	635	2300
7	7	Kimball... .	1.5	....	1.5	610	610	125
8	2	Chase.....	1.2	....	1.2	690	690	140
9	17	Kimball... .	.7	....	.7	.....	.....	.....
10	800	Lincoln. . .	26	4	30	53000	9127	.....
11	2	Cheyenne .	.1	....	.1	36	36	140
12	71	Dundy.....	.8	1.2	2	285	.....	.....
13	1	Cheyenne .	.2	....	.2	110	110	30
14	6	Scott's Bluff	1.2	....	1.2	390	390	300
15	3	Cheyenne .	1.2	....	1.2	200	200	200
16	3	"	.2	....	.2	40	40	50
17	2	"	.4	....	.4	40	40	30
18	16	Kimball... .	2	....	2	453	453	480
19	10	Adams.....	.5	....	.5	250	250	70
20	11	Scott's Bluff	1	....	1	580	580	640
21	40	Cheyenne .	2	....	2	150	150	800
22	12	"	2.2	....	2.2	1720	1720	720
23	12	"	2.5	....	2.5	1400	1400	600
24	8	Keith.....	2	....	2	300	300	480
25	5	Dundy.....	.7	.8	1.5	380	380	200
26	239	Scott's Bluff	12.7	9.7	22.5	13697	10197	11960
27	.5	Cheyenne..	.2	....	.2	58	58	3
28	.5	"	1	....	1	190	.....	25
29	11	Kimball... .	1.5	....	1.5	405	405	80

## ABSTRACT OF CLAIMS

CLAIMANT.	DITCH.	STREAM.	
John W. Hurley . . . .	Hurl'y, Lily & Polley	L'ge Pole Ck	1
Lee Jacobs . . . . .	Hayland Canal . . .	North Platte	2
Alfred Fernstrom, Peter Nisson . . . . .	Fernstrom & Nisson	"	3
G. J. Holcomb . . . . .	Spring Creek . . . .	Spring Ck.	4
John S. Grant . . . . .	Harlan Cattle Co's.	Frenchman.	5
Frank Foster . . . . .	Foster's Keystone.	W. Tail Ck.	6
Fred Reed . . . . .	Reed . . . . .	"	7
C. F. Roberts . . . . .	Midland . . . . .	North Platte	8
John W. Armstrong, Geo. W. Armstrong . .	Armstrong . . . . .	South Platte	9
Thomas Hayes . . . . .	Thomas Hayes' . . .	Frenchman.	10
W. H. Shireman . . . .	South Side Plano.	South Platte	11
Russell R. Hampton, William D. Hampton . .	Hampton . . . . .	P. Seed Ck.	12
D. P. Holloway . . . . .	Spring Creek . . . . .	Spring Ck.	13
Fisher, Polly & Co. . . .	. . . . .	Frenchman.	14
James K. Lane . . . . .	Roller Mill . . . . .	Turkey Ck.	15
Hannah Irr. Canal Co.	Hannah Irr. Canal	North Platte	16
H. Newberry . . . . .	Newberry . . . . .	Ravine nw cor. sw $\frac{1}{4}$ of s 22-14-32.	17
Isaac Lamplugh . . . . .	Lamplugh . . . . .	W. Horse Ck	18
Geo. M. Simpson, Crook S. Banghart, Hugo H. Wendt . . . . .	Signal Bluff . . . . .	North Platte	19
Henry T. Clark . . . . .	H. T. Clark Canal.	North Platte	20
James Cooper . . . . .	Cooper . . . . .	Red W. Lake	21
Central I. C. & W. P. Co.	Central Irr. Canal.	North Platte	22
Gustave Runge . . . . .	Runge No. 2 . . . . .	L'ge Pole Ck	23
Gustave Runge . . . . .	Runge No. 1 . . . . .	L'ge Pole Ck	24
R. P. James . . . . .	Flour & Grist Mill.	Frenchman.	25
William R. Cummins . .	Cummins . . . . .	Stinking W.	26



## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Fremont Young.....	Young's.....	Frenchman.	1
Ogalalla Land & C. Co.	White Tail.....	W. Tail Ck.	2
Winters Creek Irr. Co.	Winter Ck. Canal..	NorthPlatte	3
Andrew Carson.....	Carson No. 1.....	Republican.	4
Andrew Carson.....	Carson No. 2.....	Republican.	5
Wilt & Polly.....	Wilt & Polly.....	Turkey Ck.	6
Leonard Bros.....	Little Dandy.....	W. Tail Ck.	7
Gene D. Wright.....	Wright Mill.....	Beaver Ck.	8
N. O. Betts.....	Bett's..	Peppermint	9
J. R. Porter & Sons..	J. R. Porter & Sons	Buffalo Ck.	10
James M. Nesbitt, H. W. Davenport....	Horse Creek.....	Horse Ck..	11
Eliza A. Cooper.....	Cooper.....	Sw.L.D.Out	12
John C. Chamberlain.	Chamberlain.....	Indian Ck..	13
Anders Anderson....	Anderson's.....	Republican.	14
John C. Chamberlain.	Chamberlain DNol	Indian Ck..	15
John F. Helm.....	Helm's.....	R. Will'wCk	16
E. G. Neighbor.....	Neighbor.....	N. Fk. Rep.	17
Frances B. Moore, Eliza A. Moore.....	Moore's P.I. & M. P. C	Buffalo Ck.	18
J. T. Ryan.....	Home Irrigation..	SouthPlatte	19
Enterprise Ditch Co..	Enterprise.....	NorthPlatte	20
Sutherland & Paxton L. & Irr. Co.....	Sutherland & Pax- ton L. & I. Co..	NorthPlatte	21
Herman A. Patrick... T. A. Meyers, Al Phelps, F. P. Dickerson.....	Patrick.....	Sand Ck...	22
D. P. Holloway, Al Phelps.....	Meyers & Phelps..	NorthPlatte	23
Belmont I. C. & W. P. Co.	Holloway & Phelps	Wh. Tail Ck	24
	Bel. I. C. & W. P. Co.'s Canal.....	NorthPlatte	25

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	1	Chase . . . . .	.3	.7	1	\$ 835	\$ 121	60
2	50	Keith . . . . .	6.5	6.5	6.5	2400	2400	5700
3	173	Scott's Bluff	12	12	12	12200	12200	8700
4	15	Red Willow	1	1	1	700	700	100
5	3	Red Willow	.5	.5	.5	325	325	275
6	...	Franklin...	...	...	...	20825	...	...
7	140	Keith . . . . .	2.2	2.2	2.2	323	326	240
8	40	York . . . . .	...	...	...	7500	7500	...
9	1	Franklin... .	.5	.5	.5	177	177	35
10	24	Dundy . . . . .	...	...	...	...	...	...
11	5	Dundy . . . . .	.7	.7	.7	280	280	200
12	4	Cheyenne.. .	.5	.2	.7	60	60	60
13	1	Dundy . . . . .	.5	.5	.5	75	75	...
14	3	Dundy . . . . .	.5	.5	.5	45	35	160
15	1	Dundy . . . . .	.5	.5	.5	45	45	4
16	4	Red Willow	.3	.3	.3	1500	1300	...
17	45	Dundy . . . . .	2.5	2.5	2.5	300	300	200
18	7	" . . . . .	3	4	7	900	465	440
19	5000	Keith . . . . .	.2	1.8	3	300	75	300
20	685	Scott's Bluff	23	23	23	31306	31306	12160
21	500	Lincoln . . .	all	...	...	37260	33160	16100
22	4	Keith . . . . .	1.2	.5	1.7	283	208	170
23	20	" . . . . .	3.5	3.5	3.5	1700	1700	780
24	10	" . . . . .	1	1	1	275	275	280
25	4000	Cheyenne . .	42	42	42	94000	...	36815

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Yorick Nichols, Caroll Nicholls.....	Ram's Horn.....	NorthPlatte	1
Henry Grovert, J. W. Frey.....	Grovert & Frey...	Republican	2
Oscar F. Nelson....	Nelson.....	"	3
William H. Moore...	Red Willow Mill..	R. Will'wCk	4
J. T. Hansberry.....	Bloomington MillR	Big C. W. Ck	5
Mathew A. Daugherty	Alfalfa Ir. Dist. Canl	NorthPlatte	6
J. J. Kinney.....	Kinney Ditch, No. 2	L'ge Pole Ck	7
Orin Reed.....	Cereal Irrigation..	SouthPlatte	8
Adam Hull.....	Allen Hull.....	" "	9
J. Wake Sheridan....	Sheridan & Wilson	NorthPlatte	10
Adam Miller.....	Extension of Miller	Skunk Ck..	11
Carl E. Borquist....	Borquist Canal No. 1	L'ge Pole Ck	12
John M. Adams.....	Adams.....	" "	13
Carl E. Borquist....	Borquist Canal No. 2	" "	14
John M. Adams.....	Adams No. 2.....	" "	15
John M. Adams.....	Adams No. 3.....	" "	16
Adams & Tobin.....	Adams & Tobin...	" "	17
John Anderson.....	Anderson No. 2...	L'ge Pole Ck	18
Lincoln & Dawson Co. Irr. District.....	Lin. & Daw. Co. I. Dist. Canal.....	Platte.....	19
Richard Krueger....	Krueger.....	L'ge Pole Ck	20
John Anderson.....	Anderson No. 1...	L'ge Pole Ck	21
E. M. Searle, Thomas Blackburn...	Ogalalla F. & M. C.	SouthPlatte	22
Michael McLaughlin.	McLaughlin I. W.	L'ge Pole Ck	23
Hollingsworth & Son.	Hollingsworth Irr.	SouthPlatte	24
Ogalalla P. & I. Co..	Ogalalla P. & I. Co.	SouthPlatte	25
Henry L. Ballard....	Ballard.....	Republican.	26
R. O. Phillips.....	Curtis Lake.....	Rock S. Ck.	27
F. H. Barber, W. F. Marsh.....	Clear Creek Canal.	Clear Creek	28

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	2640	Scott's Bluff	6.5	....	6.5	\$ 7250	\$ 7250	3200
2	7	Hitchcock .	.5	2	2.5	100	50	500
3	12	"	....	4.5	4.5	480	107	920
4	....	Red Willow	....	....	....	....	....	....
5	5	Franklin . .	....	....	....	....	2500	....
6	800	Keith . . . .	....	16.9	16.9	22000	1000	5600
7	4	Kimball . . .	2.2	....	2.2	455	455	200
8	20	Keith . . . .	.5	5.5	6	2500	420	1400
9	16	" . . . . .	....	4.1	4.1	1723	....	1155
10	15	" . . . . .	3.5	....	3.5	1250	1250	1100
11	2	" . . . . .	.5	.2	.7	60	45	160
12	5	Cheyenne . .	.7	....	.7	600	600	200
13	4	"	1.2	....	1.2	210	210	80
14	5	"	.7	.7	1.5	600	600	200
15	.5	"	.5	....	.5	250	250	120
16	10	"	1.5	....	1.5	450	450	160
17	4	"	.5	....	.5	200	200	....
18	1	Cheyenne . .	.5	....	.5	140	140	50
19	1500	Dawson . . . .	....	62	62	300000	1000	45000
20	3	Cheyenne . .	1.1	....	1.1	300	300	160
21	8	Cheyenne . .	1.5	....	1.5	350	350	200
22	125	Keith . . . .	12	3	15	12500	10050	6000
23	3	Cheyenne . .	.5	....	.5	510	510	160
24	....	Keith . . . .	2.5	3	5.5	2000	....	2297
25	65	Keith . . . .	13	....	13	25000	25000	4500
26	115	Furnas . . . .	2.5	9.5	12	7586	2019	10000
27	2	Keya Paha	1.6	....	1.6	477	477	116
28	20	Deuel . . . .	2	....	2	425	425	1420

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
John E. Logan . . . . .	Logan . . . . .	P. Seed Ck.	1
Orchard & Alfalfa Irr. Co. . . . .	Orchard & Alfalfa.	Platte . . . . .	2
H. D. Wolf . . . . .	Private Ditch of H. D. Wolf . . . . .	L'ge Pole Ck	3
Morrell C. Keith . . . . .	Keith Canal . . . . .	Wh. Horse.	4
Frank McAuliffe . . . . .	McAuliffe Ditch. . . . .	L'ge Pole Ck	5
Friend Dickinson . . . . .	.....	L'ge Pole Ck	6
Friend Dickinson . . . . .	.....	L'ge Pole Ck	7
A. B. Gregory, P. C. Garrett . . . . .	Gregory . . . . .	Center Ck..	8
John J. Eaton . . . . .	Eaton & McCrath.	South Platte	9
Nelson A. Green . . . . .	Clear Creek Ditch.	Clear Creek	10
Walter Beauchamp . . . . .	Beauchamp Canal.	Birdwo'd Ck	11
Lewis Schuetz . . . . .	Schuetz Spring Cnl	Schuetz Sp.	12
George Gillard . . . . .	Gilliard Ditch . . . . .	Ash Creek.	13
Roscoe Vance . . . . .	Vance Ditch . . . . .	Ash Creek.	14
James Cooper . . . . .	R. Willow Lake Cn	R. Willow L	15
E. C. Williams, Harry Robbins . . . . .	Robbins & Williams Canal . . . . .	North Platte	16
The Minitare Mut. Can. & Irr. Co. . . . .	Minitare . . . . .	North Platte	17
Edmund Doran . . . . .	Doran Canal . . . . .	Lawrence F.	18
Farmers Irr. Co. . . . .	Farmers' Irr. . . . .	Platte . . . . .	19
Farmers Canal Co. . . . .	Farmers' Canal . . . . .	North Platte	20
David Kah . . . . .	Kah Ditch . . . . .	North Platte	21
H. M. Finch . . . . .	Finch Ditch . . . . .	Clear Creek	22
Edgar A. Philleo . . . . .	Philleo W. P. & I. Plant . . . . .	Little Blue.	23

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	....	Scott's Bluff	1	.7	1.7	\$ 184	\$ 142	400
2	500	Dawson....	9.7	11	20.7	8000	12800	22710
3	1	Deuel.....	.5	.....	.5	.....	.....	.....
4	....	Lincoln...	9	.....	9	5400	5400	.....
5	4	Deuel.....	1	.....	1	100	120	300
6	....	Cheyenne	1	.....	1	300	300	160
7	5	Cheyenne	1.5	.....	1.5	600	600	320
8	5	Franklin..	.2	.2	.4	300	300	280
9	20	Keith.....	3.8	.....	3.8	1450	1425	1400
10	1	Keith.....	.7	.....	.7	160	160	80
11	18	Lincoln...	2.5	2	4.5	1350	1350	1200
12	.6	Cheyenne	.....	.....	.....	.....	.....	15
13	....	.....	1	.....	1	242	242	100
14	17	Deuel.....	.5	.....	.5	30	30	80
15	2	Lincoln...	1.5	.....	1.5	665	665	150
16	100	Keith.....	6.5	.....	6.5	745	745	.....
17	500	Scott's Bluff	14	10	24	39000	26500	17460
18	4	Cheyenne..	all	.....	.....	375	375	140
19	115	Dawson...	10	.....	10	4500	4500	8000
20	500	Scott's Bluff	19	62	81	350000	98000	70000
21	15	Scott's Bluff	1.5	.....	1.5	500	500	320
22	1	Keith.....	.7	.....	.7	.....	.....	.....
23	36	Adams....	4	.7	4.7	1744	1480	225

ABSTRACT OF CLAIMS FOR WATER IN THE STATE OF  
BOARD OF  
DIVISION

CLAIMANT.	NAME OF DITCH.	STREAM.	
E. A. Gerrard, F. H. Gerrard .....	Monroe .....	Looking- glass Ck.	1
Elkhorn Irrigation Co.	Elkhorn Irr. Canal	Elkhorn...	2
Arthur Mullen.....	Mullen.....	Bl'kbird Ck	3
John Robertson.....	Robertson .....	"	4
E. B. Woodruff, E. F. Woodruff.....	Flag Butte .....	D. Horse Ck	5
William B. Ashton..	Ashton.....	Elkhorn...	6
Samuel L. Goff.....	Goff .....	D. Horse Ck	7
James Harley.....	Harley .....	"	8
Nathan Broadhurst, Robert Holding, S. Woodard, J. J. Harbough .....	W. Ash Creek Irr.	W. Ash Ck.	9
Nicholas Welling.....	Welling.....	White.....	10
Robert A. McCulley .	McCulley.....	Wymaer Ck	11
Tim Morrissey.....	Morrissey .....	Cottonwood	12
D. A. Gard.....	Loup County Canal	North Loup	13
Smith L. Adams ....	Adams .....	Borde'ux Ck	14
Solomon Hartzell, Catherine Hartzell...	Hartzell Canal....	Little Bor- deaux Ck	15
W. W. Byington ....	Byington.....	Richman Ck	16
Estate of A. V. Harris	Harris .....	White.....	17
Joseph W. Earnest ..	Earnest No. 1....	Niobrara ..	18
Joseph W. Earnest...	Earnest No. 2 ....	" ..	19
F. B. Woodruff, E. F. Woodruff .....	Flag Butte.....	D. Horse Ck	20
E. A. Gerrard, F. H. Gerrard .....	Monroe No. 2 ....	Lookingglass	21

## NEBRASKA FILED IN THE OFFICE OF THE STATE IRRIGATION.

## NO. II.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	6	Platte.....	.5	.5	1	\$ 500	\$ 250	200
2	160	Holt.....	12.4	.....	12.4	20000	20000	9200
3	2	".....	1.7	.....	1.7	29	.....	75
4	.5	".....	.5	.....	.5	60	15	15
5	.5	Dawes.....	.2	.....	.2	10	10	2
6	1	Holt.....	.....	.....	.....	165	10	50
7	.3	Dawes.....	.6	.....	.6	131	131	10
8	1	".....	.2	.1	.3	175	85	100
9	7	".....	3.5	.....	3.5	355	355	420
10	20	".....	.5	.5	1	400	400	80
11	4	Keya Paha.....	.....	.....	.....	60	60	80
12	6	Dawes.....	.4	.....	.4	65	65	320
13	300	Valley.....	.....	.....	.....	.....	.....	17000
14	1	Dawes.....	.2	.3	.5	116	65	25
15	2	".....	1	.....	1	220	220	60
16	4	Keya Paha.....	1.2	.....	1.2	85	85	80
17	50	Dawes.....	3.5	.....	3.5	1210	100	480
18	160	Sioux.....	3.2	.....	3.2	1300	1300	200
19	160	".....	3	.....	3	1625	1625	150
20	1	Dawes.....	.2	.....	.2	10	10	25
21	6	Platte.....	.5	.7	1.2	500	250	300

## ABSTRACT OF CLAIMS

CLAIMANT.	DITCH.	STREAM.	
N. Loup Irr. & Im. Co. Octave Harris, Robert Neece..... George Giles, P. R. Giles, Lawrence Giles, Richard Giles..... J. L. Lee..... Benjamin F. Johnson. Mirage Irr. Co.....	North Loup..... Harris & Neece... Giles'..... Lee..... Johnson..... Mirage Canal.....	North Loup Niobrara... Goose Creek North Loup Niobrara .. Niobrara R. & Cotton- wood Ck. Eagle..... Niobrara... Jim Creek... Jim Creek.. Spring Br.. Hat Creek.. B. Monroe. Spring Ck.. Cedar Ck.. Prairie Dog Monroe Ck.. L. Cotton- wood Ck.. Ash Creek.. White Clay. Kyle Creek.. E. Ash Ck.. Bull Creek.. Chadron... White.....	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
John D. Alfs..... William A. Bigelow, William W. Seymour. Nels Anderson..... O. A. Garton..... Chas. F. Coffee..... Eli J. Wilcox..... Orsom J. Demmon, Henry Balzer..... Charles Schilt..... Charles Schilt..... Charles Schilt..... John T. Stuart.....	One Hundred ft.. Bigelow & Seymour Jim Creek..... Garton..... C. F. Coffee..... Big Monroe Ck. D. Spring Creek No. 1 Schilt Cedar Creek Schilt Prairie Dog. Schilt's Monroe... Thomas J. Stuart's		
W. S. Compton..... S. Hazelton..... David Colville..... Harrison B. Tomlin.. Warren S. Johnson.. A. A. Record..... Harris & Cooper.....	Compton..... Hazelton Irrigation Kyle Creek..... Oxyoke..... Johnson No. 1... Half Diamond E.. Harris & Cooper I.		

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles com- pleted.	Miles uncom- pleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	1600	Valley . . . .	13.2	.5	18.2	\$33680	\$26853	10000
2	140	Sioux . . . . .	5.5	2.2	7.7	5527	2527	700
3	7	Blaine . . . .	3.7	....	3.7	575	575	1000
4	....	Cherry . . . .	2	....	2	22000	850	....
5	60	Sioux . . . . .	2	.5	2.5	590	590	200
6	300	Sheridan . . . .	....	32	32	44525	9025	14880
7	4	Holt . . . . .	100.	....	100	110	110	25
8	....	Sioux . . . . .	2.5	.7	3.2	835	835	168
9	1	" . . . . .	.3	....	.3	50	50	50
10	1	" . . . . .	.7	....	.7	235	235	100
11	6	" . . . . .	5	....	5	1322	1322	300
12	1	" . . . . .	2	....	2	815	815	360
13	1	Dawes . . . .	.7	.8	1.5	115	....	140
14	4	Sioux . . . . .	1.5	....	1.5	125	125	250
15	4	" . . . . .	.1	....	.1	45	45	250
16	1.5	Sioux . . . . .	.7	.2	1	205	145	100
17	10	Dawes . . . .	1	....	1	90	....	160
18	1	" . . . . .	....	....	....	....	....	....
19	4	" . . . . .	1	....	1	342	....	160
20	5	Sioux . . . . .	.2	....	.2	45	....	80
21	5	Dawes . . . .	1.5	....	1.5	....	....	680
22	.5	Sioux . . . . .	.3	....	.3	345	345	20
23	10	Dawes . . . .	....	1.2	1.2	712	642	420
24	59	" . . . . .	7	15	22	27000	4800	....

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Bailey G. Pinney....	Spring Creek.....	Spring Ck..	1
William R. Halbert..	Mace.....	W. Ash Ck.	2
Marcus Smock.....	Smock's.....	Trunk Butte Creek ...	3
Elkhorn Irrigation Co	Elkhorn Irrig. Cnl.	Elkhorn...	4
J. D. Bacon.....	Bacon.....	Bord'auxCk	5
William S. Hales...	Spring Creek Irrig	Spring Ck.	6
Henry M. Wilson....	Tug Wilson.....	Chadron Ck	7
Wallace W. Wilson..	Wallace Wilson...	"	8
I. W. Norton.....	Norton.....	D.Horse Ck	9
I. W. Norton, Orlando S. Norton...	Norton No. 2.....	"	10
Benjamin E. Brewster	Warbonnet.....	Warb'n'tCk	11
Samuel Becker.....	Becker.....	S. Br. Eagle	12
Henry Warneke.....	Warnecke's.....	RunningWt	13
John H. McAvoy....	John H. McAvoy.	Bord'auxCk	14
Samuel A. Bryant....	S. A. Bryan't Irri.	Big "	15
Oscar W. Hall.....	Hall's.....	Bord'auxCk	16
John A. Butler.....	Butler.....	Ltl. "	17
Charles Biehle.....	Biehle.....	Spring Br..	18
Michael Ruffing.....	Cherry Creek.....	Cherry Ck.	19
William S. Hall, Francis M. Hall.....	Hall's Spring Ck.	Spring Ck.	20
Richard Zerbst.....	Zerbst's.....	LittleRed..	21
Geo. C. Getchell....	Getchell.....	Sheridan...	22
Leroy Hall.....	Hall's No. 2.....	White.....	23
HarriettBartlett Jarvis Richards.....	Richard's.....	Big Bor- deaux Ck	24
HarriettBartlett Jarvis Richards.....	Richard's No. 2...	"	25
PineRidge IndianAg'y	Pine Ridge Irrig..	WhiteClay.	26
E. J. Carpenter.....	Carpenter Irrig...	White.....	27

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	20	Dawes . . . .	1	15.5	16.5	\$ 4600	\$ 600	.....
2	.7	" . . . .	.7	.....	.7	127	127	40
3	10	" . . . .	.5	.....	.5	155	155	20
4	...	Holt . . . .	...	.....	.....	.....	.....	.....
5	5	Dawes . . . .	.5	.....	.5	200	200	40
6	20	" . . . .	.1	.6	.7	390	92	80
7	2	" . . . .	.7	.....	.7	575	575	160
8	1	" . . . .	.4	.....	.4	300	300	80
9	1	" . . . .	.5	.....	.5	102	102	10
10	1	" . . . .	.5	.....	.5	376	253	30
11	13	Sioux . . . .	.....	.....	.....	.....	.....	600
12	4	Holt . . . .	.5	1	1.5	350	195	80
13	2	Sioux . . . .	2.5	.....	2.5	480	480	1187
14	1	Dawes . . . .	.2	.....	.2	220	220	100
15	2	" . . . .	.8	.....	.8	235	235	20
16	3	" . . . .	.3	.1	.4	100	100	10
17	1	" . . . .	.2	.3	.5	80	35	40
18	1	Sioux . . . .	.5	1.5	2	745	245	80
19	1	" . . . .	.5	.....	.5	115	115	80
20	2	" . . . .	1.2	.8	2	600	200	240
21	1	" . . . .	.3	.....	.3	45	45	10
22	2	Sheridan . .	.5	.5	1	70	20	160
23	100	Dawes . . . .	6.5	4	10.5	10800	4850	6500
24	4	" . . . .	2	.....	2	65	22	15
25	4	" . . . .	.7	.5	1.2	264	264	40
26	4	Sheridan . .	2.6	.....	2.6	4154	4154	500
27	8	Dawes . . . .	2	1.5	3.5	528	528	620

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Millard F. Flood.....	Flood .....	Indian Ck..	1
Peter Schmitt.....	Schmitt's Irrig...	Shell Creek	2
W. Z. Tillson .....	Tillson.....	South Loup	3
Theford I. P. Co. (Lim)	Theford.....	Middle Loup	4
Sherman Co. Ir. W. P. & Im. Co. ....	Sherman Co. Canal	Middle Loup	5
Peter Schmitt.....	Schmitt .....	Shell Ck...	6
Newton I. Co. & W. P.	Newton Irrigation.	North Loup	7
A. J. Palmer & Co...	Pioneer .....	Niobrara...	8
Plum Ck. Canal & I. C.	Johnstown Canal..	Plum Ck...	9
Lorenzo Snow.....	Snow .....	Niobrara...	10
H. Wile .....	Wile's .....	Br. Rock Ck	11
J. G. Ferguson.....	Ferguson .....	Bone Ck...	12
Howard G. Furman..	Furman .....	Niobrara...	13
J. C. Wood, R. B. Pierce, Lena Palmer.....	Enterprise.....	"	14
A. J. Palmer & Co...	North Pioneer....	"	15
A. J. Palmer & Co...	South Pioneer....	"	16
J. T. Johnson .....	Johnson & Miller.	Elk Ck....	17
McGinley & Stover..	McGinley & Stover	Running W	18
McGinley & Stover..	McGinley & Stover's Upper .....	"	19
McGinley & Stover..	McGinley & Stover North Side.....	"	20
Rock Creek I. & P. Co	Copeland .....	Rock Ck...	21
John W. Hanson.....	Drayton Irrigation	V'rdigris Ck	22
Joseph T. McManus, J. F. Neeland.....	McManus & Neeland Irrigation.....	Niobrara...	23
James Clark.....	Pine Ck. R. Mill..	Pine Ck...	24
Charles H. Cornell...	C. H. Cornell....	Niobrara...	25
James E. Stewart, Nathaniel Zink.....	Stewart & Zink...	Willow Ck.	26

## FOR WATER—Continued,

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	.2	Dawes .....	.....	.5	.5	\$ 85	\$ 85	8
2	12	Platte.....	.6	2.2	2.8	776	600	725
3	10	Buffalo.....	3	4.5	7.5	7971	2982	1090
4	30	Thomas....	4.2	34.7	39	11350	2625	3000
5	503	Sherman... ..	15.2	1	26	46000	31000	17590
6	30	Platte.....	.....	.....	.....	.....	.....	.....
7	200	Loup.....	.....	15	15	20684	12384	8062
8	150	Dawes.....	4.5	2.5	7	22585	2123	1030
9	12	Brown .....	.2	10	10.2	2360	390	3580
10	11	Dawes.....	1.1	1	2.1	300	300	400
11	1	Rock .....	1	1.5	2.5	.....	.....	480
12	5	Brown .....	.....	3	3	2000	100	1000
13	10	Dawes.....	.2	1.5	1.7	5402	259	255
14	22	" .....	1	8.5	9.5	1512	565	720
15	22	" .....	4.7	.6	5.3	1033	964	500
16	128	" .....	2.4	2.5	4.9	1552	1294	530
17	....	Rock .....	.....	3.5	3.5	.....	.....	110
18	3	Sioux.....	2	.....	2	575	575	240
19	7	" .....	1.7	1.3	3	560	225	500
20	8	" .....	4	.....	4	1675	1675	560
21	6	Rock .....	.....	5	5	662	662	500
22	5	Antelope... ..	1.7	.4	2.1	1050	750	250
23	10	Dawes.....	1.2	.....	1.2	255	255	89
24	20	Sheridan... ..	.5	.....	.5	600	600	.....
25	1209	Cherry.....	.....	4.9	4.9	67000	362	.....
26	12	Holt.....	2	1	3	2000	1200	240

## ABSTRACT OF CLAIMS

CLAIMANT.	DITCH.	STREAM.	
John W. Purdum . . . .	Norway Irrigation.	Middle Loup	1
G. L. Mathews . . . . .	Homestead . . . . .	"	2
Horatio J. Hendryx . . .	Hendryx . . . . .	Spr. Brook.	3
A. H. McLaughlin . . . .	McLaughlin's . . . .	Niobrara . . .	4
Frederick Crook . . . . .	Crook . . . . .	Goose Ck. . . .	5
David C. Vincent . . . .	Excelsior . . . . .	Niobrara . . .	6
Bartlett Richards . . . .	Richard's . . . . .	"	7
Charles Seeley . . . . .	Seeley Power . . . .	White . . . . .	8
Charles Rasher . . . . .	Rasher . . . . .	White . . . . .	9
White River Irr. Co.	White Riv. Irr. C.	White River	
		W. Clay Ck.	10
Jesse N. Springer . . . .	Springer . . . . .	Rock Creek	11
Joseph Davis . . . . .	Davis . . . . .	Elkhorn . . . .	12
Walter B. Woodruff . . .	Woodruff North . . .	Jim Creek . . .	13
Walter B. Woodruff . . .	Woodruff South . . .	"	14
Frank Stastny . . . . .	Stastny . . . . .	Beaver . . . . .	15
Burwell Irrigation Co.	Burwell Irrigation.	North Loup	16
Lillian Precinct I. D. & Power Co. . . . .	Lillian Pre. I. & P.	Mid'le Loup	17
Isaac Seegrist . . . . .	Seegrist . . . . .	Indian Ck. . . .	18
Thomas Dunn . . . . .	Dunn's . . . . .	Squaw Ck. . . .	19
Mary W. McGuire . . . .	McGuire . . . . .	N. Mid'le Ck . .	20
M. E. Getter . . . . .	Hofatcong . . . . .	North Loup	21
Charles O. Barnard . . .	Barnard . . . . .	Beanon Ck . . .	22
Dailey, Gilligan & Co.	Victoria Irr. Plant.	Victoria Ck. . .	23
G. W. Hatch, William D. Cross . . . . .	Meridian . . . . .	Niobrara . . . .	24
G. W. Dewey . . . . .	Victoria . . . . .	Victoria Ck. . .	25
Benjamin E. Brewster . .	West Hat Creek . . .	W. Hat Ck. . . .	26
Wm. Braddock . . . . .	Braddock's . . . . .	Beaver Ck. . . .	27
Chas. A. Cline . . . . .	East Ash Creek . . .	E. Ash Ck. . . .	28
John A. Wilson . . . . .	Wilson Canal . . . .	Niobrara . . . .	29
Middle Loup Valley Irr. & Canal Co. . . . .	Mid. Loup. Val. I. C.	Mid'le Loup	30

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	10	Thomas ...	.7	1.2	2	\$ 305	\$ 100	200
2	10	" ....	.5	.5	1	250	100	30
3	1	Platte .....	.2	....	.2	5	5	93
4	10	Box Butte.	3.5	....	3.5	680	680	800
5	7	Blaine ....	.9	2.2	3.1	995	325	450
6	8	Dawes.....	1.7	....	1.7	330	330	280
7	40	Sioux.....	4	....	4	.....	.....	.....
8	50	Dawes.....	....	....	....	.....	.....	.....
9	4	Dawes ....	.8	.2	1.0	650	525	160
10	41	" ....	5.3	.5	10.3	5800	3600	.....
11	.5	Keya Paha.	.4	.2	.6	150	125	30
12	3	Holt .....	.2	.2	.5	147	147	120
13	.3	Sioux.....	.4	.2	.6	85	75	23
14	.6	" .....	.5	.5	1	135	95	47
15	2	Sheridan ..	.1	.7	.8	125	.....	80
16	110	Garfield ...	8	1.7	9.7	19000	15653	7700
17	300	Custer.....	18.5	2.9	21.4	28141	15005	.....
18	2	Dawes ....	.7	....	.7	.....	.....	20
19	4	Sioux.....	.2	.3	.5	735	325	120
20	1	Keya Paha.	.5	....	.5	84	84	85
21	200	Valley ....	....	....	....	14000	.....	15000
22	1	Keya Paha.	.5	....	.5	110	110	70
23	11	Custer.....	....	....	....	122	122	430
24	18	Dawes ....	7.3	.2	9.3	567	261	200
25	32	Custer ....	3	....	3	785	785	1365
26	8	Sioux.....	1	....	1	110	110	80
27	1	Sheridan ..	.5	.5	1	90	80	70
28	1	Dawes ....	.2	....	.2	135	.....	.....
29	8	Keya Paha.	10.5	3.5	14	1100	500	585
30	500	Custer ....	12	43	55	95576	41625	47000

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Peter Cedarberg.....	Cedarberg.....	Bear Creek.	1
Wilfred S. Pickler...	Old's.....	Snyder Ck.	2
C. G. Grant.....	Grant.....	Twostreams not named.	3
Abner Butcher, Ben Griebel.....	Butcher & Griebel.	Mid'le Loup	4
F. J. Schoettger.....	Schoettger.....	Holt Creek.	5
Otto Mutz.....	Burton.....	Crooked Ck. & Burton Ck.	6
George H. Turner....	George Turner....	Antelope Ck.	7
F. X. Rehberg.....	Atkinson M.&I.C.	Elkhorn...	8
Thomas Skinner.....	Skinner.....	Bear.....	9
Eugene J. Boblets....	Boblets.....	South Loup	10
Andrew Bruce.....	Bruce's Mill Dam.	Niobrara...	11
S. S. McCumber.....	McCumber.....	Cub Creek.	12
William Stevens....	Loup City I. Canal	North Loup	13
Charles P. Jewett....	Big Little.....	Jewett Ck..	14
Joseph A. Hornbeck..	Canon Canal.....	Sweeney Ck.	15
William Bokhof.....	Bokhof.....	Main Br. of Eagle Ck.	16
Joseph W. Akers....	Akers.....	E. Holt Ck.	17
Isaac Horton.....	Horton.....	Wyman Ck.	18
J. A. Robertson.....	Eagle Valley.....	Eagle Ck..	19
Thomas Laughran, I. P. Bell.....	Laughran & Bell..	Victoria Ck.	20
M. H. Green.....	Deep Creek.....	Deep Creek	21
Peter Schaefer.....	Old Sow Belly....	S. Belly Ck.	22
William M. Kuhre....	Kuhre's Pond....	Fairfield Ck.	23
H. R. Edgar.....	Homestead.....	Cow Creek.	24
Peter Schaefer.....	Spring Creek.....	Spring Ck.	25
J. W. Quackenbush..	Pioneer D. Boone Co	Beaver....	26
M. H. & W. A. McCarthy	McCarthy No. 1..	East Br. of Brush Ck.	27

## FOR WATER—Continued.

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	1	Keya Paha.	.1	.....	.1	\$ 30	\$ 15	3.5
2	3	"	.1	.....	.1	.....	.....	1
3	1	Brown ....	.2	.....	.2	60	30	20
4	40	Custer ....	3.8	3.2	7	2037	1424	1280
5	1	Keya Paha.	.2	.3	.5	46	31	10
6	3	Keya Paha.	2	3	5	1350	900	250
7	20	Sioux .....	.5	.....	.5	270	270	80
8	150	Holt .....	.2	.2	.4	3900	250	2500
9	.2	Keya Paha.	.1	.1	.2	49	24	16
10	302	Custer .....	.2	.....	.2	3000	3000	300
11	200	Keya Paha.	.....	.....	.....	1500	1500	.....
12	1	Keya Paha.	.3	.....	.3	20	20	.....
13	160	Loup .....	.....	30	30	37500	200	11000
14	3	Keya Paha.	.4	1.1	1.5	496	245	100
15	1	Cherry ....	.....	.....	.....	100	65	40
16	2	Holt .....	.....	2.2	2.2	450	.....	200
17	1.5	Keya Paha.	.5	.....	.5	62	62	10
18	.5	Keya Paha.	.2	.....	.2	11	.....	25
19	4	Holt .....	1.2	1	2.2	460	352	160
20	8	Custer ....	2	.....	2	772	772	460
21	60	Sioux .....	.2	.....	.2	50	50	40
22	40	Sioux .....	1.5	.....	1.5	2025	1475	640
23	15	Keya Paha.	.2	.....	.2	200	200	15
24	3	Cherry ....	2	.....	2	285	285	160
25	40	Sioux .....	.5	.....	.5	52	52	50
26	60	Boone .....	.....	.....	.....	.....	1400	.....
27	1	Holt .....	.2	.....	.2	150	150	40

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
M. H. & W. A. McCarthy	McCarthy No. 2...	East Br. of Brush Ck.	1
Charles Penn .....	Penn's Irrigation..	Muddy .....	2
Nebraska I. & P. Co.	Cedar River Canal.	Cedar .....	3
Thomas Carlon .....	Carlon No. 2.....	Elkhorn...	4
N. E. Cain, E. H. Thompson, James P. Gallagher, B. O. Parker, Julia Parker, Eliza McEveny, Bridget Gallagher, Mary Murphy, Francis Cain.....	Farmers .....	Elkhorn ...	5
Patrick Murphy.....	Murphy Irrigation	Blue Bird..	6
Thomas Carlon.....	Carlon No. 1.....	Elkhorn ...	7
Crawford Company of Omaha .....	Crawford Citizens' Canal .....	White.....	8
P. C. Erickson, J. M. Erickson.....	Erickson.....	GooseCreek	9
James G. Rhodes...	Spotted Tail.....	Sp. Tail Ck.	10
Bartlett Richards...	Lakotah .....	Run. Water	11
Westcott I. & Can. Co.	Westcott Irrigation	Mid. Loup.	12
J. R. Lee .. .....	Lee .....	North Loup	13
William S. Moore ...	Moore's Ditch ...	R. Sp'g Ck.	14
J. H. Butterworth...	Butterworth Ditch	White ....	15
A. L. Rickman.....	Beeman & Rickman	J. Beeman C	16
N. D. Hamlin .....	Hamlin .....	Squaw Ck. .	17
S. J. McCulley.....	McCulley.....	Niobrara..	18
Martin Morrissey....	Morrissey Canal ..	B. Bordeaux	19
Callaway Milling & Mfg. Co.....	.....	South Loup	20



## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Judson L. Packard...	Creighton Mill Ra.	Bazile Ck..	1
W. L. Gallup .....	Gallup's Ditch....	Chadron Ck	2
Max Uhlig.....	McManus Ditch...	A spring...	3
John Kemery.....	Kemery Ditch....	D.Horse Ck	4
Theodore L. Goff....	Goff Ditch.....	Five Spr's..	5
Benjamin J. Eastlick.	Necessity Ditch...	Rock Ck...	6
Sarah Jordon.....	Jordon's Ditch....	S. Belly Ck	7
Henry Lichte.....	Lichte Irri. Ditch.	Niobrara...	8
John S. Tucker.....	Tucker's Ditch....	Spring Br.	9
J. W. Smith.....	Smith's Irri. Ditch	Boggy Ck..	10
Thomas E. Locket...	Locket Ditch.....	Big Bor- deaux Ck	11
Julius Jensen.....	Jensen's Mill Race	White.....	12
Sara Montgomery ...	Montgomery Ditch	S. Belly Ck	13
Robert Harrison.....	Harrison's Ditch..	Spr. Br. of Whitehead.	14
James F. Bannon....	Bannon's Ditch...	M. Boggy Ck	15
Martin Jacobsen....	Jacobsen Ditch...	White.....	16
Nathan Broadhurst, R. Holding, Sidney D Woodard, J. J. Harbaugh .....	West Ash Ck I. Co	WestAshCk	17
John J. Rodgers ....	Rodger's Ditch...	Soldier Ck.	18
James Nolan.....	Nolan No. 1.....	Br. of War- bonnet Ck	19
John L. Kay.....	Kay's Ditch.....	N. Br. War- bonnet Ck	20
James Nolan.....	Nolan Ditch No. 2	Br. of War- bonnet Ck	21
Benjamin F. Johnson.	Johnson Ditch ...	Niobrara..	22
William Slattery.....	Slattery Ditch....	Jim Ck...	23
Octave Harris.....	La Belle Ditch...	Rng. Water	24
Yocum, J. C.....	Yocum's Pri. Ir. D	Keya Paha Riv.....	25

## FOR WATER—Continued,

	No. cubic feet.	COUNTY.	Miles com- pleted.	Miles uncom- pleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered.
1	all.	Knox . . . . .				\$ 600	\$ 2800	.....
2	1	Dawes. . . . .	.1	.1	.2	100	100	30
3	1	" . . . . .	1		1	300	300	70
4		" . . . . .					160	2
5	1	" . . . . .	.1		.1	265	265	25
6		Rock . . . . .		.5	.5	514	62	70
7	2	Sioux . . . . .		1	1	342	147	140
8	200	Dawes. . . . .				215	215	100
9	1	Sioux . . . . .	.2	.1	.3	48	24	.....
10	50	" . . . . .					250	.....
11	1	Dawes. . . . .	.2		.2	16	16	5
12	2	Sioux . . . . .	.2		.2	325	325	7
13	1	" . . . . .	1.5		1.5	165	165	75
14	10	" . . . . .	.1	.1	.2	75	5	40
15	.5	" . . . . .	.1	.2	.3	.....	100	.....
16	1	" . . . . .				.....	190	.....
17	10	Dawes. . . . .	3		3	290	290	475
18	10	Sioux . . . . .	.2	.5	.7	150	42	80
19	.5	" . . . . .	.2		.2	.....	5	35
20	.5	" . . . . .	.5	.2	.7	145	53	30
21	1	" . . . . .	.5		.5	30	30	70
22	60	" . . . . .	1.7		1.7	305	305	20
23	500	" . . . . .	.7		.7	145	145	.....
24	70	" . . . . .	1.7	3	4.7	1145	660	480
25	24	Boyd . . . . .	3.5	3.5	7	925	900	100

## ABSTRACT OF CLAIMS

CLAIMANT.	NAME OF DITCH.	STREAM.	
Chas. Fienkin . . . . .	Fienkin Ditch . . . .	Niobrara . . .	1
Clay C. Patterson . . . .	Patterson Ditch . . . .	E. Br. Rock Ck . . . . .	2
William A. Hutchison . . . .	Hutchison Ditch . . . .	Cross Ck . . . .	3
Merritt M. Allen . . . . .	Allen Ditch . . . . .	W. Mid. Ck . . . .	4
Philo Newman . . . . .	Newman Ditch . . . . .	Newman Ck . . . .	5
Tisue & Patterson . . . . .	Tisue & Patterson . . . .	Cub Ck . . . . .	6
John Van Koten . . . . .	Van Koten . . . . .	Rock Ck . . . . .	7
John D. Beeman . . . . .	Beeman . . . . .	Beeman Ck . . . .	8
H. K. Soper . . . . .	Soper . . . . .	Huggins Ck . . . .	9
Frank McFarland . . . . .	Frank McFarland . . . . .	Wh. Clay Ck . . . .	10
Edward Schwartz . . . . .	Hughson's . . . . .	White . . . . .	11
Thomas Holly . . . . .	Holly Ditch . . . . .	Boggy Ck . . . . .	12

FOR WATER—*Concluded.*

	No. cubic feet.	COUNTY.	Miles completed.	Miles uncompleted.	Total miles.	Estimated cost of work.	Cost to date.	No. acres covered
1	6	Holt.....	1.2	.5	1.7	\$ 1025	\$ 675	150
2	.3	Keya Paha.	.5	.....	.5	30	30	10
3	.2	" "	.1	.1	.2	30	18	15
4	1	" "	.5	.2	.7	195	137	70
5	1	" "	.2	.....	.2	200	175	40
6	.2	" "	.2	1.2	1.5	67	15	12
7	.2	" "	.3	.....	.3	.....	.....	15
8	1	" "	.8	.....	.8	250	250	100
9	1	" "	.3	.4	.7	109	80	70
10	1	Dawes.....	1	.....	1	265	265	.....
11	.2	Sioux.....	.2	.....	.2	60	60	5
12	1	Dawes.....	.5	.5	.5	.....	.....	.....

APPLICATIONS FOR WATER OF THE STATE OF  
BOARD OF IRRIGATION, BETWEEN THE DATES

No.	APPLICANT.	NAME OF DITCH.	
1	General J. Holcomb . . . .	Holcomb Irrigation . . . .	1
2	Max Gottberg . . . . .	Gottberg Irrigation Plant	2
3	Eugene H. Cress . . . . .	Gratton Canal . . . . .	3
4	William Bourrett . . . . .	Bourrett . . . . .	4
5	Peter Bourrett . . . . .	Bourrett, Sr . . . . .	5
6	Little Cottonwood I. Co.	Little Cottonwood . . . . .	6
8	James Stewart, John Stewart . . . . .	Stewart Bros . . . . .	7
9	Newark Ditch Co. . . . .	Newark . . . . .	8
10	Peter Grier . . . . .	Grier Irrigation . . . . .	9
11	Jacob Bernhard . . . . .	Bernhard Canal . . . . .	10
12	Arthur B. Hankey . . . . .	Hankey Irrigation Canal	11
13	Alonzo Cunningham . . . .	Gilley . . . . .	12
14	William Slattery . . . . .	Slattery . . . . .	13
15	John J. McCarthy . . . . .	McCarthy . . . . .	14
16	Evans R. Vandergrift . . . .	Delano Irrigation Canal.	15
17	Keystone Irrigation Co.	Keystone Irrigation Co's	16
18	Peter Roneche . . . . .	Minnie Roneche . . . . .	17
20	Griffith J. Evans . . . . .	Adams County Irr. Canal	18
21	Shelton Irrigation Co. . . .	Shelton . . . . .	19
22	A. L. Green . . . . .	S. S. Ditch . . . . .	20
24	Oscar A. Garton . . . . .	Garton . . . . .	21
25	F. Austin . . . . .	Austin . . . . .	22
26	James B. Fullerton . . . . .	James B. Fullerton . . . .	23
27	Daniels & Stetson . . . . .	Daniels & Stetson . . . . .	24
28	Marcus Valdez . . . . .	Marcus Valdez . . . . .	25
29	Newton Land Co (The).	Spring Brook Aqueduct.	26
30	W. A. Thornton, Robert Pomery . . . . .	White Clay . . . . .	27
32	Ernest M. Slattery . . . . .	Slattery . . . . .	28
33	Thomas Carlon . . . . .	Carlon . . . . .	29
34	C. H. Walrath . . . . .	Atkinson . . . . .	30
37	John Mann . . . . .	John Mann . . . . .	31
38	Mats Johnson . . . . .	. . . . .	32

NEBRASKA, FILED IN THE OFFICE OF THE STATE  
OF APRIL 4, 1895, AND NOVEMBER 30, 1896.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	North Platte..	Keith .....	75	\$ .10	\$ 5800	5000
2	Shell Creek...	Platte.....	1	.....	300	80
3	Elkhorn.....	Holt.....	25	4	2320	1750
4	Niobrara.....	Sioux.....	75	1	115	160
5	".....	".....	75	5	125	100
6	Lit. Cottonwood	Dawes ....	20	10	2875	5500
7	".....	".....	10	4	850	1900
8	Platte.....	Kearney ..	268	11	7000	14720
9	Middle Loup..	Thomas ...	5	4	1390	500
10	Platte.....	Adams ....	30	4	2700	2080
11	Wood.....	Hall.....	1	1	317	70
12	Frenchman ...	Chase.....	4	2	725	300
13	Jim.....	Sioux.....	10	1	160	60
14	Canyon.....	Keith.....	.5	.75	25	40
15	North Loup..	Cherry....	30	6	1800	2000
16	White Tail...	Keith.....	55	7	2500	3840
17	North Loup..	Cherry....	15	4	2640	1200
18	Platte.....	Adams ....	644	47	160000	215680
19	".....	Buffalo....	175	17	10000	14040
20	Clear.....	Gage.....	3	1	400	.....
21	Spring.....	Sioux.....	1	.8	140	100
22	Hat.....	".....	4	2	150	240
23	Baker.....	Holt.....	1	1	350	160
24	Squaw.....	Dawes.....	.....	1	100	70
25	Cedar Branch.	Sioux.....	1	.75	147	75
26	Springs.....	Douglas...	10	.5	800	160
27	White Clay...	Dawes ....	2	4	1200	460
28	Dead Horse..	".....	1	2	345	80
29	Dry.....	Holt.....	100	5	310	6280
30	Elkhorn.....	".....	40	10	8000	4000
31	Eagle.....	".....	.75	1	100	60
32	North Loup...	Howard ...	5	3	400	400

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES APRIL

No.	APPLICANT.	NAME OF DITCH.	
39	Henry L. Ballard. . . . .	The H. L. Ballard. . . . .	1
40	Fremont Canal & P. Co.	Fremont Canal. . . . .	2
41	Mike Elmore. . . . .	Elmore Canal. . . . .	3
42	William Cooper. . . . .	Cooper. . . . .	4
43	Isaac Benedict. . . . .	Benedict. . . . .	5
44	James McGrew. . . . .	McGrew & Dailey. . . . .	6
45	Thomas H. Wilson. . . . .	Freeport Canal. . . . .	7
46	Thomas H. Wilson. . . . .	Cowen Canal. . . . .	8
47	D. P. Shicks. . . . .	Gorker. . . . .	9
48	Henry Newman. . . . .	Newman. . . . .	10
49	Kirkwood Mutual I. S. Co.	. . . . .	11
50	Franklin Force. . . . .	Force's. . . . .	12
51	H. A. Northup. . . . .	Northup Canal. . . . .	13
52	H. S. Woodruff. . . . .	Woodruff. . . . .	14
53	John Hughes. . . . .	Hughes. . . . .	15
56	Chase Co. L & L. S. Co.	No. 4. . . . .	16
57	Chase Co. L & L. S. Co.	No. 1. . . . .	17
58	Edward Irion. . . . .	Whistle Creek. . . . .	18
59	John McAuliffe. . . . .	John McAuliffe. . . . .	19
60	Octave Harris. . . . .	LaBelle. . . . .	20
61	John C. Morrow. . . . .	Sand Creek. . . . .	21
62	C. T. Holliday. . . . .	Holliday Canal. . . . .	22
63	J. B. Burke. . . . .	Burke. . . . .	23
64	Henry Leisy. . . . .	Elkhorn Ranch Canal. . . . .	24
65	William K. Miller. . . . .	Home. . . . .	25
	Joseph Burns,		
66	Adna Dobson. . . . .	Gracie Canal. . . . .	26
67	Peter S. Roueche. . . . .	P. S. Roueche. . . . .	27
68	Bailey G. Pinney. . . . .	Cottonwood Canal. . . . .	28
69	William H. Winterer. . . . .	Coon Creek. . . . .	29
70	B. A. Jones. . . . .	Jones Irrigation Plant. . . . .	30
71	William S. Hales. . . . .	Spring Creek Irr. Canal. . . . .	31
72	F. M. Dorrington. . . . .	Dorrington Canal. . . . .	32
73	Frederick Geis. . . . .	Geis Canal. . . . .	33

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Republican ...	Furnas ....	100	12	9000	10000
2	Platte .....	Dodge .....	2500	28	1460000	16960
3	Snake Creek...	Box Butte..	40	3	3000	.....
4	White Clay Ck.	Dawes ....	4	5	1250	.....
5	Republican ...	Hitchcock..	3	2	115	200
6	Victoria Creek.	Custer .....	6	2	.....	.....
7	P. Seed Ck....	Banner ....	2	2	175	160
8	P. Seed Ck....	Banner ....	1	1	80	50
9	Frenchman ...	Hitchcock..	8	3	815	350
10	Lodge Polk Ck.	Cheyenne..	2	.7	350	160
11	Ash Creek ....	Rock .....	7	8	2598	1200
12	White .....	Sioux .....	1	1	125	80
13	North Loup...	Blaine .....	20	4	10350	6000
14	Richards Br...	Sioux .....	5	.3	330	160
15	Niobrara .....	Box Butte..	500	2	1050	640
16	Stinking Water	Chase .....	6	1	502	225
17	Stinking Water	Chase .....	9	.7	233	100
18	Whistle Creek.	Box Butte..	12	1	140	120
19	Frenchman ...	Chase .....	2	1	175	120
20	Niobrara .....	Sioux .....	100	3	689	640
21	Big Sandy Ck.	Holt .....	14	7	8000	5320
22	South Loup...	Custer .....	3	1	600	160
23	Sow Belly Ck.	Sioux .....	40	.5	93	40
24	Elkhorn .....	Cuming ...	25	5	11334	1780
25	Whistle Creek.	Box Butte..	10	2	1000	320
26	Gracie Creek..	Loup .....	50	16	10700	4000
27	Brush Creek...	Cherry .....	...	3	675	840
28	L. Cottonw'd Ck	Dawes ....	40	10	5000	.....
29	Coon Creek...	Keith .....	2	.5	145	160
30	Lodge Pole Ck.	Cheyenne..	2	.5	250	70
31	Spring Creek..	Dawes ....	20	.7	600	80
32	White .....	Dawes ....	15	20	2500	.....
33	Greenwood Ck.	Cheyenne..	2	.5	27	20

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF

No.	APPLICANT.	NAME OF DITCH.	
74	B. S. Gillespie .....	Snake River Irr. Canal.	1
75	F. M. Dorrington.....	Dorrington.....	2
76	Paris G. Cooper .....	Dorrington Canal.....	3
77	Henry Leisy.....	Elkhorn Ranch Canal ..	4
78	F. M. Dorrington.....	Willow Creek .....	5
79	J. D. Shahan .....	.....	6
80	Lincoln & Dawson Co. I. District .....	Lincoln & Dawson Co. Canl.	7
81	James K. Lane.....	Lane's Model Irrigation.	8
82	Henry C. Ussher .....	Ussher Canal .....	9
83	William Noreisch.....	Noreisch.....	10
85	H. Newberry.....	Newberry .....	11
86	C. H. Winchester .....	Clark Island .....	12
87	David Bristol.....	Bristol Canal.....	13
88	Benjamin F. Moore ....	B. F. Moore Irrigation..	14
89	Arabella Couch .....	Couch Canal.....	15
90	Leroy Hall .....	Hall's.....	16
91	G. F. Smith .....	Smith's Clover Dale....	17
92	Antoine Poitevin.....	Middle Creek Canal....	18
93	James H. Locker.....	Locker's Canal .....	19
94	Laura B. Opperman ....	Opperman .....	20
95	M. M. Allen .....	Allen's .....	21
96	M. L. Walker .....	Twin Island.....	22
97	Jesse N. Springer.....	.....	23
98	M. L. Walker.....	Cow Creek.....	24
99	M. E. Getter.....	Pottawattamie.....	25
100	Thomas Dunn.....	Thomas Dunn.....	26
101	James Ryan .....	Ryan Irrigation Canal..	27
102	Charles J. Grable.....	Marsland Canal .....	28
103	Evans R. Vandergrift...	Hackberry Bend.....	29
104	Howard B. Edwards....	North Loup Irr. Canal..	30
105	H. R. Edgar.....	Golden Corn Canal.....	31
106	Adaline Harvey .....	.....	32
107	Mill Sanderson.....	Vineland Canal.....	33

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
APRIL 4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Niobrara .....	Holt .....	800	250	1422300	500000
2	Chadron .....	Dawes .....	10	5	2000	.....
3	White .....	Dawes .....	150	20	24000	.....
4	Elkhorn .....	Cuming .....	50	5	11334	1800
5	Willow .....	Dawes .....	14	4	2000	.....
6	Frenchman .....	Chase .....	2	.....	.....	80
7	Platte .....	Lincoln .....	1500	70	.....	40000
8	Turkey .....	Saline .....	1	1	350	85
9	Niobrara .....	Sheridan .....	10	3	328	130
10	Spring .....	Sioux .....	1	.2	353	4
11	No name .....	Lincoln .....	.6	.75	47	320
12	Platte .....	Buffalo .....	15	4	1000	890
13	Minnechaduzza .....	Cherry .....	1	....	250	70
14	Niobrara .....	Sioux .....	20	3	1000	1120
15	Lodge Pole .....	Cheyenne .....	2	.5	30	80
16	Lit. Cottonw'd .....	Dawes .....	50	4	12950	6000
17	Elkhorn .....	Holt .....	12	2	475	160
18	East Middle .....	Keya Paha .....	all	.5	165	30
19	Frenchman .....	Hayes .....	1	1	1092	160
20	Not named .....	Keya Paha .....	10	.1	25	20
21	West Middle .....	Keya Paha .....	10	1	135	65
22	North Loup .....	Cherry .....	6	7	900	440
23	Rock .....	Keya Paha .....	.5	.5	125	25
24	Cow .....	Cherry .....	all	....	10	.....
25	Loup .....	Valley .....	240	27	21800	26240
26	Squaw .....	Sioux .....	4	2	2425	170
27	Elkhorn .....	Holt .....	6	2	1375	500
28	Niobrara .....	Dawes .....	30	30	22000	6840
29	North Loup .....	Cherry .....	9	6	1125	800
30	North Loup .....	Cherry .....	30	8	2850	2100
31	North Loup .....	Cherry .....	24	9	6050	2990
32	Verdigris .....	Antelope .....	.5	....	100	15
33	North Loup .....	Blaine .....	12	6	4400	2000

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF

No.	APPLICANT.	NAME OF DITCH.	
108	G. H. Cox.....	Velvet Chaff Canal.....	1
109	T. C. Balch.....	Lavacca Irrigation Canal.....	2
110	T. C. Balch.....	Balch Ditch.....	3
111	N. T. Brumback.....	Calamus No. 1.....	4
112	Samuel Brumbaugh.....	Brumbaugh.....	5
113	L. H. Jewett.....	The Jewett.....	6
114	Farmers' I. & Milling Co.	Far. Irr. & Milling Co's.	7
115	H. R. Christy.....	Christy Canal.....	8
116	Carnahan & Webster...	Carnahan & Webster...	9
117	Almeria I. & Canal Co..	Almeria Irrigation Canal	10
118	Newell Burrirt.....	Burrirt & George Canal.	11
119	Allen Julian.....	Antelope.....	12
120	Allen R. Julian.....	Julian.....	13
121	William D. McAndrew..	McAndrew.....	14
122	William Nollkamper...	.....	15
123	Wilbur F. Shepherd...	Shepherd Canal.....	16
124	Fred Aughes.....	Aughes' Canal.....	17
125	J. E. Brown.....	Niobrara & Box Butte..	18
126	M. N. Allen, W.J. Thomas	Glencoe.....	19
127	Stillman O. Lewis.....	KeyaPaha R. W. E. & I. Co.	20
128	A. N. McConaughey....	McConaughey Canal...	21
129	H. E. Babcock.....	Nebraska Central Irr. Co	22
130	Elmer P. Mason.....	Paxton Irrigation.....	23
131	Wm. J. McGillen.....	McGillen.....	24
132	J. F. Dunn, John Dunn.	Joseph & John Dunn's..	25
133	Anderson Burt.....	Burt Anderson.....	26
134	A. A. Leachey.....	Russell's Mill.....	27
135	J. D. Shahan.....	Shahan.....	28
136	Ord Irrigation District..	Ord Irrigation.....	29
137	A. N. McConaughey....	No. 1.....	30
138	Mary W. McGuire.....	McConaughey.....	31
139	Ralph Lewis.....	Lewis.....	32
140	James Wiley.....	Wiley.....	33
141	W. H. Hutchison.....	Hutchison.....	34

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
APRIL 4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	North Loup...	Blaine ....	12	9	\$ 4900	3000
2	Niobrara .....	Dawes ....	50	22	15000	3500
3	Hay .....	" .....	1	1	60	80
4	Calamus .....	Loup .....	60	12	6800	4000
5	Monroe .....	Sioux .....	4	1	350	300
6	Middle Loup..	Custer ....	10	3	1075	300
7	North Loup...	Blaine ....	30	9	3660	2000
8	Nemaha .....	Otoe .....	1	...	222	40
9	Holt .....	Keya Paha.	1	6	385	70
10	North Loup...	Loup .....	30	15	10000	3000
11	North Platte..	Lincoln ...	120	9	1800	3600
12	Antelope .....	Dawes ....	1	3	260	200
13	Pole .....	" .....	1	2	515	150
14	Bone .....	Brown ....	14	1	520	240
15	Niobrara .....	Holt .....	2500	...	6500	.....
16	Squaw .....	Sioux .....	6	2	285	.....
17	Beaver .....	Holt .....	1	2	293	60
18	Niobrara .....	Sheridan ..	3	3	500	240
19	" .....	Keya Paha.	3	1	400	240
20	Keya Paha...	.....	5	3	750	300
21	Niobrara .....	Sheridan ..	2	4	175	100
22	Loup .....	Valley ....	800	35	140000	120000
23	South Platte..	Keith .....	16	8	2014	1140
24	Frenchman ...	Chase .....	28	3	1080	550
25	Squaw .....	Sioux .....	4	2	14250	300
26	East Dry .....	Keya Paha.	1	.5	85	120
27	Frenchman ...	Chase .....	all	...	6000	.....
28	" .....	" .....	3	2	300	160
29	North Loup..	Valley ....	130	25	43500	12400
30	Running Water	Sheridan ..	3	4	165	240
31	Niobrara .....	Keya Paha.	10	3	1000	560
32	Lewis' Spring.	" .....	1	.5	226	100
33	Burton .....	" .....	1	.5	75	160
34	Spring, no name	" .....	.5	.7	40	30

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF

No.	APPLICANT.	NAME OF DITCH.	
142	Otto Mutz . . . . .	Our Trip Irrigation . . . . .	1
143	Thomas Skinner . . . . .	Skinner's . . . . .	2
144	O'Neill Power & Irr. Co.	O'Neill P. & I. Co. Canal	3
145	Gustif Hoefs & Son. . . . .	Hoef's . . . . .	4
146	B. S. Gillespie . . . . .	Snake River Irr. Canal . .	5
147	B. S. Gillespie . . . . .	Snake River Irr. Canal . .	6
148	Minnie E. Hatcher . . . . .	Hatcher . . . . .	7
149	Andrew Bruce . . . . .	Bruce . . . . .	8
150	Chas. T. Crampton . . . . .	Burton Creek Canal . . . .	9
151	Chas. E. Lear . . . . .	Union . . . . .	10
152	E. B. Smith . . . . .	. . . . .	11
153	Brewster I. & W. P. Co.	Brewster Irr. Power . . . .	12
154	John S. Grant . . . . .	John Grant's . . . . .	13
155	John Antram . . . . .	Antram Canal . . . . .	14
156	James N. Hill . . . . .	Colfax Canal . . . . .	15
157	Thaddeus H. Woodward.	Woodward Canal . . . . .	16
158	C. K. Conger . . . . .	Conger Dam . . . . .	17
159	Catherine McCormick . . .	McCormick . . . . .	18
160	Michael J. Thies . . . . .	Thies . . . . .	19
161	A. J. Firkins . . . . .	Spring Dale Canal . . . . .	20
162	Fred Fesch . . . . .	Fesch . . . . .	21
163	Philo Newman . . . . .	Newman Canal . . . . .	22
164	A. B. Stark . . . . .	Jackson . . . . .	23
165	A. L. Corey . . . . .	Scotia I. & W. P. Canal . .	24
166	Jack Donason . . . . .	North Side . . . . .	25
167	H. D. Anderson & Co. . . .	Keya Paha Canal . . . . .	26
168	Solomon R. Story . . . . .	Story's Irrigating . . . . .	27
169	William Body . . . . .	Little Jonnie . . . . .	28
170	Eliza A. Moore . . . . .	Moore No. 1 . . . . .	29
171	Eliza A. Moore . . . . .	Moore No. 2 . . . . .	30
172	Wescott Irr. & Canal Co.	Wescott Irr. & Canal . . . .	31
173	H. A. Peters, C. A. Water- man, J. S. Brown . . . . .	Hay Springs Irr. Canal . .	32
174	Theodore Johnson . . . . .	Springdale Farm . . . . .	33

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
APRIL 4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Burton .....	Keya Paha.	3	8	\$ 1250	2000
2	Bear .....	Keya Paha.	.2	.2	26	10
3	Elkhorn .....	Holt .....	35	5	9500	2000
4	Evergreen ....	Brown. ....	10	....	400	.....
5	Boardman ....	Holt .....	100	250	.....	.....
6	Gorden .....	Holt .....	100	250	.....	.....
7	Spring .....	Chase .....	1	.7	110	80
8	Horse Head...	Keya Paha.	1	1	50	25
9	Burton .....	Keya Paha.	.5	.7	310	35
10	Niobrara .....	Keya Paha.	1500	100	570000	400000
11	North Loup...	Blaine. ....	60	10	5350	4200
12	North Loup...	Blaine. ....	100	17	12500	6000
13	Frenchman ...	Chase .....	1	.5	650	90
14	Dry .....	Dawes ....	50	1	687	50
15	Shell .....	Colfax. ....	20	6	2500	2000
16	Rock .....	Lancaster..	75	.5	.....	2000
17	Not named. ...	Keya Paha.	.5	....	200	10
18	Ash .....	Deuel .....	2	.7	110	140
19	Golden .....	Keith .....	3	.7	150	240
20	North Loup...	Valley ....	194	20	30000	21320
21	N. Br. of Eagle	Holt .....	3	.5	25	5
22	Has no name..	Keya Paha.	1	.2	50	60
23	Calamus .....	Loup .....	120	20	500	12000
24	North Loup...	Howard ...	225	26	59166	16000
25	Keya Paha. ...	Keya Paha.	8	7	5055	500
26	Keya Paha. ...	Keya Paha.	5	4	625	400
27	North Antelope	Sioux .....	8	2	700	560
28	North Loup...	Cherry ....	3	2	725	400
29	Buffalo .....	Dundy ....	2	1	225	140
30	Buffalo .....	Dundy ....	2	1	205	60
31	Middle Loup..	Custer ....	140	13	17800	6000
32	Niobrara .....	Sheridan...	72	11	4635	15700
33	Thompson ....	Webster...	2	.12	75	60

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF APRIL

No.	APPLICANT.	NAME OF DITCH.	
175	Julius Erler.....	Cabbage Head.....	1
176	A. A. Babcock.....	Oxford Canal.....	2
177	P.S. Roueche, Robt. S. Lee	Roueche & Lee.....	3
178	J. H. Edmiston.....	Eddyville.....	4
179	J. H. Edmiston.....	Edmiston Land & Lake.	5
180	J. H. Edmiston.....	Edmiston Land & Lake.	6
181	The Forks Irr. District.	Forks.....	7
182	Joseph Sturdivandt....	Sturdivandt.....	8
183	The Kusel Ditch Co....	Kusel.....	9
184	David Stafford.....	Paxton Southern.....	10
185	John C. Chamberlain...	Last Resort.....	11
186	Steamboat Ditch Co....	Steamboat Ditch.....	12
187	G. W. Keller, O. J. Keller	Keller Canal.....	13
188	Blue Vale Canal Co....	Blue Vale Canal.....	14
189	Fred Bendix.....	Bendix Irrigation.....	15
190	Compton Irr. P. Co. (Lim.)	Compton.....	16
191	W. S. Jackson.....	Jackson.....	17
192	W. S. Jackson.....	Jackson.....	18
193	A. Anderson, C. Anderson	Anderson Bros.....	19
194	J. S. Van Alstyne.....	Riverside Farm Irr. Canal	20
195	Ella Bradt.....	Bradt Irr. Canal.....	21
196	D. L. Bishop, J. Conkling	Center Creek No. 1....	22
197	D. M. Posten.....	Posten.....	23
198	L. A. Brooks.....	L. A. Brooks.....	24
199	C. W. Hamilton.....	The Hamilton.....	25
200	Chas. F. Kenyon.....	Howard City W.P. & Irr. C	26
201	M. E. Getter.....	Hoafatcong Canal.....	27
202	Robert Hessellgesser....	Calamus Valley Irr. Cnl.	28
203	W. H. Green.....	Green.....	29
204	Equitable F. & S. Im. Co	Birdwood Canal.....	30
205	Golden Irr. District....	Golden Irrigation.....	31
206	Frank Rhodes.....	Keya Paha River Canal.	32
207	Farmers' Mutual Irr. Ass'n	Farmers' Mut. Irr.....	33
208	Frank Roop.....	.....	34

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Cow . . . . .	Cherry . . . .	7	.7	70	55
2	Republican . . .	Furnas . . . .	100	15	25250	9800
3	North Loup . . .	Cherry . . . .	15	4	2900	4700
4	North Br. Wood	Dawson . . . .	100	6	9500	3000
5	Mid. Br. Wood.	" . . . . .	50	4	8500	960
6	" . . . . .	" . . . . .	50	20	10000	10000
7	North Loup . . .	Garfield . . .	75	19	10000	5240
8	Sheep . . . . .	Scott's Bluff	60	.2	30	20
9	Lit. Cottonwood	Dodge . . . .	5	2	300	300
10	South Platte . .	Keith . . . .	4	3	2323	300
11	Indian . . . . .	Dundy . . . .	2	2	250	80
12	North Platte . .	Scott's Bluff	35	6	1750	750
13	North Loup . . .	Cherry . . . .	20	8	3250	2000
14	West Blue . . . .	Seward . . . .	350	12	50000	3000
15	Sand . . . . .	Dawes . . . .	20	2	150	200
16	North Loup . . .	Cherry . . . .	35	10	10740	3500
17	Niobrara . . . .	" . . . . .	3	1	400	210
18	" . . . . .	" . . . . .	5	4	820	370
19	Republican . . .	Dundy . . . .	25	5	235	350
20	Niobrara . . . .	Brown . . . .	3	1	.....	200
21	Blue Bird . . . .	Holt . . . . .	15	2	700	320
22	Center . . . . .	Franklin . . .	8	.5	320	240
23	Middle Loup . . .	Thomas . . . .	20	1	550	80
24	White Clay . . .	Sheridan . . .	1	.5	100	80
25	Elkhorn . . . . .	Holt . . . . .	1	2	450	160
26	Middle Loup . . .	Howard . . . .	200	6	6000	800
27	North Loup . . .	Valley . . . .	200	30	15100	15000
28	Calamus . . . . .	Loup . . . . .	70	12	3480	2080
29	Deep . . . . .	Sioux . . . .	60	.5	210	40
30	Birdwood . . . .	Lincoln . . . .	.....	.....	.....	.....
31	Snake . . . . .	Cherry . . . .	800	175	1431000	500000
32	Keya Paha . . . .	Keya Paha . . .	12	9	8786	800
33	Frenchman . . . .	Chase . . . . .	10	4	600	450
34	Turkey . . . . .	Saline . . . .	1	.....	.....	.....

APPLICATIONS FOR WATER OF THE STATE OF NE  
OF IRRIGATION, BETWEEN THE DATES OF APRIL

No.	APPLICANT.	NAME OF DITCH.	
209	Mary B. Stondout.....	Stondout .....	1
210	W. N. Abbott.....	.....	2
211	John Kersenbrock .....	Kersenbrock.....	3
212	Peter Judge.....	.....	4
213	B. S. Gillespie .....	Benner Creek Irrigation.	5
214	John H. Kersenbrock ...	Kersenbrock Power Plant	6
215	Mary Jansen.....	Jansen Canal.....	7
216	Henry W. Lindlage....	Lindlage Res. & Ditch..	8
217	Gothenburg Pow'r & I. Co	Gothenburg Power .....	9
218	W. H. Lakin.....	Lakin .....	10
219	H. E. Babcock .....	Great Eastern Canal....	11
220	Mira Valley Irr. District	Mira Valley I. Dist. Cnl..	12
221	Theodore Strenger.....	Strenger.....	13
222	G. F. Smith.....	Clover Dale.....	14
223	Moses P. Kinkaid .....	Kinkaid .....	15
224	Williamsburg I. Cnl. Co.	Williamsburg Irr. Canal.	16
225	E. H. Benedict.....	Benedict .....	17
226	James J. Collopy.....	Home Supply Canal....	18
227	Joseph Bruder.....	Bruder Canal .....	19
228	Willow Springs Irr. Dist	Willow Springs Irr.....	20
229	South Loup Irr. Co.....	South Loup Canal .....	21
230	Thomas Mountford.....	Mountford.....	22
231	Lute & Sheridan.....	Lute & Sheridan .....	23
232	D. A. Lawlor, Reuben Ellsworth R. Willis...	Lawlor, Ellsw. & Record	24
233	C. Spragg.....	Ash Creek.....	25
234	Phoenix Insurance Co....	.....	26
235	Frank C. Phillips.....	Phillips .....	27
236	John W. Conley.....	J. W. Conley Irr. Plant.	28
237	Thomson & Vansickle...	Thompson & Vansickle .	29
238	This application was filed	to take the place of appli-	30
239	This application was filed	to take the place of Jas.	31
240	John C. Chamberlin....	Chamberlin .....	32
241	Oscar F. Nelson.....	Nelson Irrigation .....	33

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Dismal . . . . .	Blaine . . . . .	48	14	14800	2800
2	Middle . . . . .	Lancaster . . . . .	.....	.....	200	.....
3	W. Fk. Big Blue	Seward . . . . .	6	.....	.....	500
4	Middle . . . . .	Lancaster . . . . .	1	.25	185	80
5	Benner . . . . .	Holt . . . . .	3	2	510	305
6	W. Fk. Big Blue	Seward . . . . .	105	.....	.....	.....
7	Middle . . . . .	Lancaster . . . . .	3	1	700	210
8	Wood . . . . .	Hall . . . . .	1	.5	5000	.....
9	Platte . . . . .	Lincoln . . . . .	.....	.....	.....	.....
10	Turkey . . . . .	Saline . . . . .	2	.....	.....	120
11	Looking Glass	Platte . . . . .	30	36	190000	204800
12	Middle Loup . .	Valley . . . . .	345	79	230000	67360
13	Bone . . . . .	Brown . . . . .	20	3	590	510
14	S. Fk. Elkhorn	Holt . . . . .	12	2	890	640
15	Dry . . . . .	Holt . . . . .	8	3	730	160
16	Platte . . . . .	Phelps . . . . .	286	25	54750	19960
17	Dry . . . . .	Holt . . . . .	300	7	25000	14000
18	Calamus . . . . .	Custer . . . . .	75	21	7502	3500
19	Eagle . . . . .	Holt . . . . .	4	.3	135	160
20	Calamus . . . . .	Garfield . . . . .	130	35	29800	9135
21	South Loup . . .	Custer . . . . .	55	15	19500	5000
22	East Holt . . . .	Keya Paha . . . .	.3	.12	25	23
23	South Platte . .	Keith . . . . .	13	.5	1100	940
24	South Platte . .	Keith . . . . .	100	19	18001	7000
25	Ash . . . . .	Rock . . . . .	1	2	170	150
26	Fox . . . . .	Lincoln . . . . .	2	2	1000	140
27	Muddy . . . . .	Dundy . . . . .	3	2	295	150
28	Muddy . . . . .	Custer . . . . .	.5	.25	1000	35
29	Indian . . . . .	Dundy . . . . .	4	1	517	100
30	ation No. 38,	by M. John son.	.....	.....	.....	.....
31	Wiley's appli-	cation No.	140.	.....	.....	.....
32	Indian . . . . .	Dundy . . . . .	1	.3	65	4
33	Republican . . . .	Hitchcock . . . .	16	4	980	967

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF

No.	APPLICANT.	NAME OF DITCH.	
242	This application was filed	to take the place of appli-	1
243	North River I. C. & W. P. Co	North River I. & W. P. C.	2
244	P. C. Erickson . . . . .	Blaine County Canal. . . .	3
245	Sylvester Edwards. . . . .	Edwards . . . . .	4
246	North Side Irr. Ditch. . .	North Side Irr. Ditch. . .	5
247	Farmers Mutual Irr. Co..	Farmers Mut. Irr. Canal. .	6
248	L. H. Harris. . . . .	Harris Canal. . . . .	7
249	James Cooper. . . . .	Red Willow Lake Canal. .	8
250	Clarence Selah. . . . .	Progress I. Col. Society. .	9
251	W. A. Sharpnac. . . . .	Sharpnac . . . . .	10
252	Griffith, G. A. Donnel, H. G	Griffith & Donnel, I. D. . .	11
253	This application was filed	to take the place of appli-	12
254	This application was filed	to take the place of appli-	13
255	Alfred Johnson. . . . .	Johnson . . . . .	14
256	D. S. Brockway. . . . .	Brockway Irrigation. . . .	15
257	Irion Bros. . . . .	Irion Irrigation . . . . .	16
258	Henry Reimers. . . . .	Reimers Canal. . . . .	17
259	State Line Irr. Co. . . . .	State Line Irr. Canal. . . .	18
260	Albert Steinhausen. . . . .	Steinhausen . . . . .	19
261	Kimsey, J. W. Kimsey, C. C	Kimsey. . . . .	20
262	James A. Patton. . . . .	Arcadia Canal. . . . .	21
263	L. H. Harris. . . . .	Dura Canal. . . . .	22
264	Lucas & Ft. Kearney Irr. Co. . . . .	Lucas & Ft. Kearney. . . .	23
265	Owens, J. S. Owens, E. E	Owens . . . . .	24
266	Joseph Pickering. . . . .	North Side Pioneer I. . . .	25
267	Stubb Supply Ditch Co.	The Stubb Supply. . . . .	26
268	Ed. Wilson. . . . .	Wilson . . . . .	27
269	Jennie A. Smith. . . . .	Private Ditch & D. & Res.	28
270	F. J. Hale. . . . .	Hale Irrigating. . . . .	29
271	William James. . . . .	. . . . .	30
272	J. Victor Johnson. . . . .	Brush. . . . .	31
273	Frank Caloned. . . . .	Big Hill Ditch. . . . .	32
274	M. M. Townsend. . . . .	Townsend . . . . .	33

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
APRIL 4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Canal No. 151.					
2	North Platte...	Deuel.....	200	32	13000	11780
3	North Loup...	Blaine.....	75	13	10000	5000
4	South Loup...	Custer.....	1	.16	150	40
5	Frenchman...	Chase.....	6	1	225	250
6	Platte.....	Colfax.....	69	17	6400	12000
7	Middle Loup..	Blaine.....	21	8	2100	1500
8	Red Willow...	Lincoln...	2.5	1	665	150
9	Elkhorn.....	Holt.....	80	5	10600	5000
10	Cook.....	Harlan.....	1	.5	90	160
11	Spring.....	Custer.....	5	3	1000	600
12	Canal No. 104.					
13	Canal No. 94..					
14	Niobrara.....	Dawes.....	5	2	250	480
15	White Clay...	Dawes.....	10	3	225	250
16	Niobrara.....	Sioux.....	7	2	375	500
17	North Platte..	Keith.....	10	2	1100	400
18	Keya Paha...	Keya Paha..	7	3	1997	500
19	Fremont.....	Lincoln...	9	2	138	640
20	Indian.....	Dundy.....	1	2	425	70
21	Middle Loup..	Valley.....	32	5	1500	2288
22	Middle Loup..	Blaine.....	21	11	3200	2000
23	Platte.....	Kearney...	333	22	22000	14000
24	Rock.....	Dundy.....	2	2	500	90
25	Republican...	Hitchcock..	120	8	...	1800
26	North Platte..	Deuel.....	200	2	5000	7000
27	Indian.....	Dundy.....	5	2	345	330
28	Lincoln.....	York.....	40	.5	1025	40
29	Buffalo.....	Madison...	20	1	530	500
30	Turkey.....	Saline.....	533	...	...	160
31	West Br. Brush	Holt.....	1	.8	70	50
32	Cow.....	Cherry.....	2	.7	670	60
33	Spring.....	Keya Paha..	1.2	1	117	80

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF

No.	APPLICANT.	NAME OF DITCH.	
275	Joseph S. Lee.....	Lee .....	1
276	C. W. Long.....	Wind Mill Irrigation...	2
277	W. M. Long .....	" " .....	3
278	James B. Fullerton ....	Fullerton.....	4
279	This application was filed	amendatory of application	5
280	This application was filed	amendatory of application	6
281	Peter Grier.....	Grier Irr. Canal No. 2..	7
282	H. T. Johns, Jas. Wilson	Rockford Power Canal..	8
283	Henry Meyer .....	Meyer Canal.....	9
284	James A. Brennan .....	Brennan Irrigation .....	10
285	F. W. Barber .....	Barber.....	11
286	Wm. E. Cady .....	Calf Creek.....	12
287	Arthur Kortz .....	Kortz Canal.....	13
288	James N. Hill.....	.....	14
289	Daniel Murdock, <i>et al.</i> ..	Loup Fork Canal.....	15
290	Arthur M. Bartlett.....	Arthur Bartlett .....	16
291	O. Nelson, C. A. Gates .	New York Canal.....	17
292	Jackson Mettlen.....	Mettlen.....	18
293	Elmer F. Vifquain.....	Vifquain .....	19
294	Sarah A. Meglemre ....	Meglemre Canal.....	20
295	Frank A. Cypiot .....	Last Chance .....	21
296	H. A. Peters, J. S. Brown, C. A. Waterman.....	Hay Springs Irr. Canal.	22
297	Fred E. Lamore .....	Lamore Canal.....	23
298	Harrison B. Tomlin....	Ox Yoke No. 3.....	24
299	Charles Mann.....	Mann's .....	25
300	This application was filed	to take the place of ap-	26
301	Tzschuck Canal Co.....	Tzschuck Canal.....	27
302	Nels Diedrichson.....	Diedrichson's .....	28
303	F. B. Hyser .....	Hyser .....	29
304	Henry T. Dean.....	H. T. Dean.....	30
305	R. M. Ball.....	Ball's Irrigation Plant..	31
306	Levi Hutzal.....	Draper.....	32
307	Amedee Tetreault.....	Tetreault Irr. & W. P. Cnl	33

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
APRIL 4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	Bordman .....	Cherry .....	19	4	1245	480
2	Beaver .....	Nance .....	.25	.....	200	15
3	Beaver .....	Nance .....	.25	.....	200	10
4	Abitz .....	Holt .....	1	1	45	40
5	No. 99, Division	No. 2 A .....	.....	.....	.....	.....
6	No. 139, Divi-	sion No. 2 C .....	.....	.....	.....	.....
7	Middle Loup..	Thomas .....	35	12	2675	2600
8	North Loup...	Garfield .....	250	4	10000	.....
9	South Platte..	Keith .....	3	1	312	200
10	Red Bird .....	Holt .....	3	.1	60	160
11	Center .....	Franklin .....	2	1	300	140
12	Calf .....	Cherry .....	2	2	120	140
13	Horse Shoe Lke	Cherry .....	3	3	600	210
14	Shell Creek...	Colfax .....	5	.....	.....	520
15	Loup .....	Platte .....	1417	78	149400	99200
16	White .....	Dawes .....	2	1	220	140
17	Loup .....	Colfax .....	850	65	140000	164800
18	Niobrara .....	Sioux .....	10	3	500	700
19	Cottonwood...	Keya Paha..	1	1	150	100
20	Greenwood...	Cheyenne..	6	1	115	320
21	Cypiot .....	Keya Paha..	.1	.5	154	15
22	Niobrara .....	Sheridan ..	72	3 (suppl.)	.....	.....
23	North Platte..	Cheyenne..	10	2	808	700
24	East Ash .....	Dawes .....	1	.5	150	100
25	Chadron .....	Dawes .....	1	1	500	30
26	plication No.	232 .....	.....	.....	.....	.....
27	North Loup...	Valley .....	300	36	4400	17000
28	White .....	Sioux .....	.25	.....	43	15
29	Beaver .....	Sheridan ..	.....	.....	50	23
30	Greenwood...	Cheyenne..	4	2	500	300
31	White Clay...	Sheridan ..	.5	1	1050	35
32	White Clay...	Sheridan ..	.25	.75	200	16
33	North Platte..	Cheyenne..	2	.....	500	250

APPLICATIONS FOR WATER OF THE STATE OF NE-  
OF IRRIGATION BETWEEN THE DATES OF APRIL

No.	APPLICANT.	NAME OF DITCH.	
308	E. M. Searle . . . . .	River Side Canal . . . . .	1
309	John Van Koten . . . . .	Van Koten . . . . .	2
310	Henry M. Opperman . . . . .	Opperman Ditch No. 2 . . . . .	3
311	Andrew J. Lamb . . . . .	Harvey & Lamb . . . . .	4
312	Carrig Lynch & Co. . . . .	. . . . .	5
313	N. Douglas Hamlin . . . . .	Hamlin's Ditch . . . . .	6
314	G. W. Whitehorse . . . . .	Rochester . . . . .	7
315	Theodore Wheeler . . . . .	Wheeler Ditch No. 3 . . . . .	8
316	Theodore Wheeler . . . . .	Wheeler Ditch No. 1 . . . . .	9
317	Theodore Wheeler . . . . .	Wheeler Ditch No. 2 . . . . .	10
318	E. F. Roberts . . . . .	E. F. Roberts . . . . .	11
319	L. G. Gillespie . . . . .	Chelsea Irr. Canal . . . . .	12
320	Progress Irr. & Col. Soc. . . . .	Progress Irr. & Col. Soc. . . . .	13
321	A. Rickman, A. Wentworth . . . . .	Rickman & Wentworth . . . . .	14
322	Andrew J. Lamb . . . . .	. . . . .	15
323	Bohemian Nurseries . . . . .	Bohemian Nursery Ditch . . . . .	16
324	Bohemian Nurseries . . . . .	Bohemian Nursery Canal . . . . .	17
325	Adam Miller . . . . .	Miller Ditch . . . . .	18
326	Keller & Co. . . . .	Oliver . . . . .	19
327	Fred E. Lamore . . . . .	La More . . . . .	20
328	R. S. McConnell . . . . .	Twist . . . . .	21
329	Robert Wilbert . . . . .	Wilbert . . . . .	22
330	Frank Stastny . . . . .	Stastny . . . . .	23
331	Francis Novak . . . . .	Novak's Canal . . . . .	24
332	Anthony Serbousek . . . . .	Serbousek's Canal . . . . .	25
333	William Cooper . . . . .	Cooper . . . . .	26
334	H. G. Stewart . . . . .	. . . . .	27
335	A. N. McConaughy . . . . .	A. N. McConaughy . . . . .	28
336	B. Frendrick, H. Lichter . . . . .	Frendrick—Lichter . . . . .	29
337	James T. Mason . . . . .	Mason . . . . .	30
338	S. L. Ellis . . . . .	S. L. Ellis . . . . .	31
339	R. T. Ellis . . . . .	R. T. Ellis . . . . .	32
340	L. C. Lewis . . . . .	Lewis . . . . .	33
341	William Miller . . . . .	Miller . . . . .	34

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
4, 1895, AND NOVEMBER 30, 1896—Continued.

	NAME OF STREAM.	COUNTY.	No. of cu. ft.	Total miles.	Estimated cost.	No. acres covered.
1	South Platte..	Keith ....	15	4	\$ 1000	1030
2	Rock. ....	Keya Paha .	.2	5	46	15
3	Spr. (no name)	" .....	.1	.7	300	80
4	Young .....	Holt.....	3	1	200	100
5	Loup .....	Platte.....	....	1	480	273
6	Squaw .....	Sioux ...	2	.7	195	140
7	Niobrara .....	Boyd .....	1000	.7	3500	1500
8	Big Sandy....	Holt.....	3	1	200	80
9	Spring Br....	" .....	.5	1	50	35
10	" .....	" .....	1	1	75	40
11	Blackbird....	" .....	1	.5	100	30
12	Spring .....	" .....	3	2	330	400
13	Benner .....	" .....	6	2	260	100
14	Niobrara .....	Keya Paha .	2	1	75	140
15	Shobe Br....	Holt .....	....	.5	75	140
16	Rose .....	Thayer ...	10	.1	210	16
17	" .....	" .....	1	.1	210	16
18	Skunk .....	Keith ....	4	2	65	320
19	North Loup...	Cherry ....	7	7	1586	500
20	North Platte..	Cheyenne .	20	5	1625	1400
21	Springs .....	" ..	3	.7	270	160
22	Plum .....	Brown.....	1	1	251	230
23	Beaver .....	Dawes.....	2	....	230	25
24	" .....	Sheridan...	1	.5	175	70
25	Branch .....	" ..	.5	.2	150	10
26	Squaw .....	Dawes.....	4	1	300	300
27	Deadman .....	" .....	....	.5	250	80
28	Pepper .....	Sheridan...	5	5	500	600
29	Cottonwood...	Dawes.....	2	1	145	75
30	Seepage .....	Sioux ....	1	.2	280	10
31	Antelope .....	" .....	1	.5	70	70
32	N.Br. Warboret	Sioux ....	.5	.7	90	35
33	White .....	" .....	10	.3	87	15
34	Hat .....	" .....	1	.3	62	.....

APPLICATIONS FOR WATER OF THE STATE OF NE  
OF IRRIGATION, BETWEEN THE DATES OF APRIL

No.	APPLICANT.	NAME OF DITCH.	
342	William Martin . . . . .	Martin . . . . .	1
343	James Cooper . . . . .	Red Willow Lake . . . . .	2
344	David C. Vincent . . . . .	Excelsior . . . . .	3
345	Frederick Crook . . . . .	Crook . . . . .	4
346	Samuel Wicker . . . . .	Wicker . . . . .	5
347	Clay C. Patterson . . . . .	Patterson . . . . .	6
348	Peter Cederburg . . . . .	Cederburg . . . . .	7
349	Thomas P. Stalcup . . . . .	Stalcup . . . . .	8
350	Steambeat Ditch Co. . . . .	Steamboat Ditch Co. . . . .	9
351	Lowell Farmers' Irr. Co.	Lowell Farmers' I. Canal	10
352	William Mace . . . . .		11
353	Amedee Tetreault . . . . .	Tetreault No. 2 . . . . .	12
354	F. L. Miller . . . . .	Miller . . . . .	13
355	Maud Hinman . . . . .	East Birdwood I. Canal .	14
356	E. M. Searle, T. Blackburn	Ogalalla F. & M. Canal .	15
357	O. Reed, H. Carnahan . .	Cereal Irrigation . . . . .	16
358	J. J. Klein . . . . .	White Bridge Park . . . .	17
359	Stephen S. Gilman . . . . .	Gilman . . . . .	18
360	Orchard & Alfalfa I. Co.	Orchard & Alfalfa I. Co.	19
361	Wilber R. Davis . . . . .	Davis . . . . .	20
362	S. E. Solomon . . . . .	Farmers' Canal . . . . .	21

BRASKA, FILED IN THE OFFICE OF THE STATE BOARD  
4, 1895, AND NOVEMBER 30, 1896—*Concluded.*

	NAME OF STREAM.	COUNTY.	No. of cu. ft	Total miles.	Estimated cost.	No. acres covered.
1	East Boggy...	Sioux.....	1	.75	\$ 25	25
2	Red Willow L.	Lincoln...	2	1	485	150
3	Niobrara.....	Dawes....	32	2	110	280
4	Goose.....	Brown....	8	3	995	820
5	Rock.....	Keya Paha..	1	.3	24	5
6	E. Branch Rock	".....	.3	.5	30	10
7	Bear.....	".....	.25	1	133	5
8	Burton.....	".....	1	....	62	40
9	North Platte..	Scott's Bluff	40	....	....	....
10	S. Ch. Platte..	Kearney...	114	7	4769	8000
11	West Ash....	Dawes....	.7	.75	505	700
12	North Platte..	Cheyenne..	5	.5	275	320
13	South Platte..	Deuel.....	16	3	575	1120
14	East Birdwood.	Lincoln...	25	14	9700	2000
15	South Platte..	Keith.....	125	15	12500	6000
16	South Platte..	".....	20	8	4150	2000
17	Wood.....	Buffalo....	....	....	125	4
18	Minnecadusa..	Cherry....	40000	20	....	....
19	Platte.....	Dawson...	500	21	26600	....
20	Larabee.....	Sheridan..	2	.7	60	....
21	Frenchman...	Hitchcock..	100	12	6000	7000

ABSTRACTS OF NOTICES OF CLAIMS  
FILED IN THE OFFICES OF THE VARIOUS COUNTY CLERKS, ALPHABETI-  
CALLY ARRANGED BY COUNTIES.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<b>ADAMS—</b>					
Chas. W. Wilson.....	Little Blue...	4-23-94	18	5	10
E. A. Philleo.....	Little Blue...	6-8-94	4	5	10
E. A. Philleo.....	Little Blue...	9-26-94	4	5	10
<b>ANTELOPE—</b>					
B. C. Buxton.....	Verdigris....	7-13-94	11	28	8
B. C. Buxton.....	Verdigris....	7-13-94	11	28	8
B. C. Buxton.....	Verdigris....	7-13-94	11	28	8
B. C. Buxton.....	Verdigris....	7-13-94	11	28	8
John W. Hanson.....	Verdigris....	8-11-94	8	28	8
William Ferris.....	Elkhorn.....	9-11-94	31	26	7
S. C. Fairchild.....	Elkhorn.....	9-27-94	3	24	6
Neleigh Irr. P. & M. Co.	Elkhorn.....	10-20-94	17	26	8
John Maybury.....	Elkhorn.....	12-19-94	17	26	8
Nelson D. Jackson....	Elkhorn.....	4-6-95	17	26	8
J. E. Buxton.....	Verdigris....	5-29-95	11	28	8
J. E. Buxton.....	Verdigris....	5-29-95	11	28	8
J. E. Buxton.....	Verdigris....	5-29-95	11	28	8
B. C. Buxton.....	Verdigris....	5-29-95	11	28	8
<b>BANNER—</b>					
T. Eggleston, J. Wilcox	Pumpkin Seed	6-19-89	1	19	55
Ban'r Co. Joint Stock Co.	Pumpkin Seed	9-24-89	7	19	55
Ban'r Co. Joint Stock Co.	Pumpkin Seed	9-24-89	5	19	55
T. C. Eggleston.....	Pumpkin Seed	4-7-90	1	19	55
W. S. Langmaid.....	.....	7-11-90	14	18	56
J. C. Walter.....	Pumpkin Seed	7-14-90	4	19	55
John E. Logan.....	Pumpkin Seed	7-18-90	7	19	55
C. Endernd, S. Campbell	Pumpkin Seed	6-4-91	21	19	55
John S. Wright.....	Pumpkin Seed	6-12-91	5	19	54
John S. Wright.....	Pumpkin Seed	6-12-91	5	19	54
R. R. & W. D. Hampton	Pumpkin Seed	5-6-93	23	20	57
G. Lee Shumway.....	Pumpkin Seed	3-12-94	5	19	55
John F. Peters.....	Pumpkin Seed	4-10-94	34	20	56
Lewis Utter.....	Pumpkin Seed	4-24-94	31	20	56
John F. Peters.....	Pumpkin Seed	6-12-96	34	20	56

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
BOONE—					
Quackenbush, Pittinger	Beaver . . . . .	7-25-94	22	20	6
A. Stowell, E. Sargent.	Cedar . . . . .	8-10-94	7	19	8
BROWN—					
R. M. Nesbit, J. Sullivan, P. McAndrew, L. Alder.	Long Pine . . .	8-25-94	17	29	20
J. T. Ferguson. . . . .	Bone . . . . .	10-13-94	4	30	21
W. Coryell, F. Pelster.	Plum . . . . .	10-19-94	27	30	24
Geo. H. Bowering. . . . .	Niobrara. . . . .	11-10-94	7	33	24
Plum Ck. Cnl. & I. Co.	Plum . . . . .	12-26-94	4	29	24
Frederick Crook. . . . .	Goose. . . . .	4-19-95	32	25	24
BUFFALO—					
E. J. Hubbell, E. H. Andrews, J. E. Decker	Platte. . . . .	10-4-94	12	8	16
Farmers Mut. Irr. Co., J. Decker, E. J. Hubbell.	Platte. . . . .	11-23-94	12	8	16
W. J. Tillson. . . . .	South Loup. . .	1-7-95	29	12	15
Box Butte County. . . . .	Niobrara. . . . .	9-13-90	6	28	52
Niobrara I. & Imp. Co.	Niobrara. . . . .	9-25-90	6	28	52
O. H. Phillips. . . . .	Niobrara. . . . .	9-17-90	6	28	52
A. H. McLaughlin. . . . .	Niobrara. . . . .	4-21-91	9	28	52
F. M. Devore. . . . .	Snake. . . . .	6-13-94	1	24	52
David C. Vincent, N. Nebraska W. P. Co.	Niobrara. . . . .	7-10-93	30	33	11
W. D. Forbes. . . . .	Ponca. . . . .	8-11-94	4	34	13
N. O. Neilson. . . . .	Keya Paha. . . .	8-13-94	24	34	15
Nicholas Sieler. . . . .	Ponca. . . . .	8-18-94	6	34	13
J. C. Yocum. . . . .	Keya Paha. . . .	9-11-94	24	34	15
C. E. Yocum. . . . .	“ “ . . . . .	9-11-94	19	34	14
Chas. Fienkin. . . . .	Niobrara . . . . .	10-9-94	7	33	15
J. C. Yocum. . . . .	Keya Paha. . . .	10-27-94	23	34	15
Davis W. Forbes. . . . .	Ponca. . . . .	11-28-94	13	34	13
G. W. Whitehorn. . . . .	Niobrara . . . . .	1-5-95	30	33	11
N. O. Neilson. . . . .	Keya Paha. . . .	1-9-95	24	34	15
L. E. Erickson. . . . .	“ “ . . . . .	2-23-95	21	34	16
John Scheie. . . . .	McGlynn . . . . .	3-25-95	16	34	16
William Kearville. . . . .	Ponca. . . . .	4-18-95	12	34	13

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
BLAINE—					
W. G. Dailey, L. Dailey, J. H. Brooks, T. J. Gil- ligan, A. Dailey.....	Middle Loup.	8-23-94	32	21	21
Custer Co. Pioneer I. O.	“ “	4-9-94	34	21	42
Mid. Loup V. I. & C. Co.	“ “	6-12-94	14	21	22
P. C. Erickson .....	North Loup..	8-10-94	28	24	24
Lillian Pre. I. D. & P. Co	Middle Loup.	9-17-94	30	21	21
Newton Irrigation Co..	North Loup..	2-5-95	35	23	21
T. C. Jackson .....	Goose Creek.	6-5-95	23	24	24
T.S. Northrop, O. M' Cormack	South Loup..	4-9-95	29	24	24
BUTLER—					
Fremont C. & P. Co...	Platte.....	9-7-94	29	17	4e
Fremont C. & P. Co...	“ .....	3-7-95	30	17	4e
Fremont C. & P. Co...	“ .....	5-15-95	30	17	4e
CHERRY COUNTY—					
B. S. Gillespie .....	Snake.....	2-2-94	4	30	33
C. H. Cornell.....	Niobrara .....	2-12-94	8	33	27
B. S. Gillespie.....	Snake.....	2-13-94	35	31	35
G. Giles, P. R. Giles, L. Giles, R. Giles.....	Goose.....	4-13-94	2	25	25
J. R. Lee.....	North Loup..	8-16-94	30	27	28
J. R. Lee.....	“ “ ..	8-16-94	30	27	28
P. Roneche, W. Sanderson.	“ “ ..	8-17-94	23	27	29
Niobrara River Irr. P. C	Niobrara.....	10-3-94	21	34	26
P. D. McAndrew.....	Snake.....	10-10-94	6	30	30
P. D. McAndrew .....	Boardman ..	10-10-94	7	30	30
M. B. Trussell, L. A. Cox	North Loup..	11-19-94	22	26	27
B. S. Gillespie .....	Niobrara .....	1-7-95	21	34	26
B. S. Gillespie .....	Snake.....	1-7-95	4	30	33
P. S. Roneche.....	North Loup..	4-30-95	22	27	29
E. R. Vandergriff.....	“ “ ..	5-14-95	35	27	28
H. R. Edgar .....	Cow .....		7	26	27
Joseph A. Hornback ..	Sweeney Cany		29	34	25
CHASE—					
Henry King, R. Melville	Stinking Wat.	12-17-90	2	7	36
Champion W. P. & I. Co	Frenchman ..	12-26-90	24	6	40

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>CHASE—Continued.</i>					
T. B. Taylor, D. T. Wowns					
M. F. Person, L. Lowman	Frenchman ..	12-31-90	24	6	40
Ough Land & Irr. Co..	" ..	1-2-91	21	6	39
W. J. McGillen .....	" ..	2-3-91	3	5	38
D. Gurnsey, F. Munson,					
Alexander McCarger ..	" ..	2-11-91	3	5	37
Champ. V. W. P. & I. Co.	" ..	2-21-91	20	6	39
George Hocknell .....	S. F. Stink. W.	3-3-91	29	7	37
Bussell & Funk .....	Frenchman ..	3-20-91	18	6	40
Bussell & Funk .....	" ..	3-20-91	18	6	40
William J. McGillen ..	" ..	2-4-94	1	5	38
Chase Co. L. & L. S. Co.	Stinking Wat.	3-12-94	10	7	38
Van L. Wilson .....	Frenchman ..	3-23-94	18	6	40
Van L. Wilson .....	" ..	3-23-94	18	6	40
J. D. Shahan .....	" ..	3-24-94	23	6	39
Van L. Wilson .....	" ..	6-7-94	23	6	39
Cash D. Fuller .....	" ..	6-18-94	4	5	36
O. H. Wirsig, J. Foster,					
M. H. Yaw, B. F. Fuller	" ..	6-28-85	23	6	40
O. H. Wirsig .....	" ..	8-31-94	22	6	40
Frank McLain .....	Stinking Wat.	9-26-94	28	7	37
A. L. Green .....	" ..	9-28-94	19	7	37
Wilson S. Gould .....	Frenchman ..	10-10-94	1	5	38
Allen Grant .....	" ..	10-16-94	3	5	38
Fremont Young .....	" ..	12-4-94	11	6	41
Eli Maranville, Martin					
Overtree, B. Beard ...	" ..	12-15-94	12	6	41
Maranville, Overtree, Beard	" ..	12-15-94	11	6	41
Robert B. Wright ....	Stinking Wat.	12-29-94	25	7	37
Dudeck & Sommers...	Frenchman ..	12-26-94	8	5	36
D. Gurnsey & Co. ....	" ..	1-21-95	3	5	37
D. Gurnsey & Co. ....	" ..	1-21-95	10	5	37
Chase Co. L. & L. S. Co.	Stinking Wat.	2-2-95	13	7	38
Chase Co. L. & L. S. Co.	" ..	2-2-95	14	7	38
Chase Co. L. & L. S. Co.	" ..	2-2-95	14	7	38
Norton Inman .....	Frenchman ..	3-7-95	17	6	40

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
CUSTER—					
Dailey, Gilligan & Co..	Victoria .....	3-19-94	1	19	21
Thomas Laughran.....	" .....	4-5-94	2	19	21
Dailey, Gilligan & Co..	" .....	3-31-94	1	19	21
J.S. McGraw, E. N. Bishop, S. Gates, J. McGraw, G. W. Dewey, J. E. Ash	" .....	7-24-94	1	19	21
Wescott Irr. & Cnl Co.	Middle Loup.	8-8-94	15	19	18
Chas. Penn. ....	Muddy .....	8-24-94	32	17	20
Lillian P'ct. Irr. & P. Co	Middle Loup.	10-19-94	30	21	21
I. P. Bell, T. Langham.	Victoria .....	9-27-94	2	19	21
Abner & Matilda Brown	South Loup..	11-1-94	31	17	24
Eugene Boblits. ....	" ..	1-17-95	10	14	21
B. Greible, A. Butcher..	Middle Loup.	2-19-95	36	20	21
CHEYENNE—					
N. Platte Irr. Cnl. & L. Co	North Platte..	7-29-91	28	14	30
Chas. E. Schilt. ....	Monroe .....	5-31-86	33	33	56
N. G. Fix .....	Pumpkin Seed	10-18-88	33	19	52
Ogalalla&NW Irr. & WP	North Platte..	4-4-89	13	20	52
Carl E. Borgquist. ....	Lodge Pole..	4-15-89	34	14	49
Carl E. Borgquist. ....	" ..	4-15-89	34	14	49
Ch Rock Irr. Cnl & W P Co	North Platte..	4-17-89	6	20	52
L. H. Bordwell. ....	Lodge Pole..	5-7-89	33	14	49
L. H. Bordwell. ....	" ..	5-7-89	35	14	49
Ch Rock Irr. Cnl & W P Co	North Platte..	5-16-89	6	20	52
S. Walsh, Jas. Mitchell.	Lodge Pole..	5-11-89	8	14	51
Adam Gunderson, ....	" ..	5-17-89	1	14	52
Robert S. Oberfelder..	" ..	6-10-89	31	14	46
Robert S. Oberfelder..	Spring .....	6-10-89	31	14	46
Morritz Urbach. ....	Lodge Pole..	6-11-89	11	14	51
Firth Booth .....	" ..	.....	29	14	47
Firth Booth .....	" ..	.....	29	14	47
Ch. Rock Irr. & W. P. Co.	North Platte..	6-17-89	6	20	52
William C. Bullock ....	Spring .....	6-20-89	6	13	46
Henry H. Libby .....	Lodge Pole ..	6-24-89	36	14	47
Henry H. Libby .....	" ..	6-24-89	36	14	47
Henry H. Libby .....	" ..	6-24-89	36	14	47

ABSTRACTS OF NOTICES OF CLAIMS—*Continued.*

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>CHEYENNE—Continued.</i>					
Henry H. Libby . . . . .	Lodge Pole . .	6-24-89	36	14	47
William T. Whitney . . .	Lodge Pole . .	6-19-89	36	14	49
William T. Whitney . . .	Lodge Pole . .	6-19-89	31	14	48
Lewis H. Hale . . . . .	Lodge Pole . .	6-24-89	36	14	49
Lewis H. Hale . . . . .	Lodge Pole . .	6-24-89	36	14	49
Lewis H. Hale . . . . .	Lodge Pole . .	6-24-89	36	14	49
Lewis H. Hale . . . . .	Lodge Pole . .	6-24-89	36	14	49
Lewis H. Hale . . . . .	Lodge Pole . .	6-24-89	36	14	49
Frederick W. Krueger . .	Lodge Pole . .	7-6-89	29	14	48
Frederick W. Krueger . .	Lodge Pole . .	7-6-89	29	14	48
Frederick W. Krueger . .	Lodge Pole . .	7-6-89	29	14	48
Elijah B. Rodgers . . . .	Lodge Pole . .	7-5-89	27	14	48
Elijah B. Rodgers . . . .	Lodge Pole . .	7-6-89	27	14	48
B. Gilman, J. D. Staf- ford, J. J. Maxwell, F. Beasley, C. Lafferty.	Lawrence Fk.	10-17-89	36	19	52
Charles E. Logan . . . .	North Platte.	10-26-89	19	20	50
T. Brown, C. B. Pickerell, G. W. Seward, W. G. Pickerell, E. S. Crigler	Pumpkin Seed	11-4-89	23	19	52
John T. Lafferty . . . . .	Pumpkin Seed	11-1-89	26	19	52
L. P. Hendricks . . . . .	Pumpkin Seed	11-9-89	29	19	51
S P. Laing, G. A. Laing . .	Lawrence Fk.	12-18-89	28	18	52
Charles A. Perkins . . . .	Pumpkin Seed	12-23-89	24	19	52
Leonard Hoppen . . . . .	Pumpkin Seed	12-23-89	24	19	52
Belmont I. C. & W. P. . .	North Platte.	12-27-89	23	20	51
G. Seward, E. S. Crigler, F. D. Hayes, T. Brown, G. Pickerell, S. Gersten	Pumpkin Seed	12-30-89	33	19	52
D. Coulter, H. Coulter. .	Greenwood . .	2-4-90	15	18	50
Levi Miller . . . . .	Cedar . . . . .	2-26-90	27	18	48
J. C. Wolf . . . . .	Lodge Pole . .	3-5-90	32	14	46
Belmont I. C. & W. P. . .	North Platte.	3-10-90	23	20	51
C. Schrader, M. Stewart .	Pumpkin Seed	4-18-90	25	19	51
Mac Radcliff . . . . .	Cedar . . . . .	4-23-90	27	18	48
Oliver Miller . . . . .	Cedar . . . . .	4-28-90	25	18	48

ABSTRACTS OF NOTICES OF CLAIMS—*Continued.*

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>CHEYENNE—Continued.</i>					
Finn Bros. . . . .	Spring . . . . .	6-4-90	28	18	49
William H. Stones. . . . .	North Platte.	8-4-90	18	21	53
P. E. & W. J. VanGorder	" "	8-27-90	3	19	50
John D. Wagoner . . . . .	Pumpkin Seed	9-10-90	24	19	52
J. E. Holloway, A. Neely	" "	10-10-90	30	19	50
W. M. Willard . . . . .	" "	10-10-90	30	19	50
J. E. Holloway, A. Neely,					
W. M. Willard. . . . .	" "	10-14-90	30	19	50
C. F. Schrader, M. Stewart	" "	10-22-90	25	19	51
E. C. Smith C. G. Wheeler	" "	10-25-90	26	19	51
C. B. Pickerill, L. Hop-					
pen, Charles Perkins. . . . .	" "	11-7-90	34	19	52
Charles E. Logan . . . . .	North Platte.	12-11-90	..	20	50
Ch Rock Irr. Cnl. & WPCo	" "	12-10-90	1	20	53
C. C. Nelson, B. F. Mc-					
Kinney, J. E. Trinnier.	Greenwood . . .	1-17-91	33	18	50
W. S. Court, F. Borgas,					
Gerd Henriks . . . . .	Cedar . . . . .	1-23-91	14	18	48
P. P. Waitman . . . . .	Pumpkin Seed	3-17-91	30	19	52
Thomas Brown . . . . .	" "	3-17-91	29	19	52
C. S. Ickes . . . . .	Lodge Pole. . .	3-28-91	34	14	50
J. E. Trinnier . . . . .	Greenwood. . .	4-16-91	22	18	50
Edmund Doran . . . . .	Lawrence Fork	4-24-91	15	18	52
M. H. Tobin . . . . .	Lodge Pole. . .	4-23-91	28	14	47
G. Meridith, J. Ammer.	Pumpkin Seed	5-4-91	13	19	50
S. O. Fowler O. W. Fowler	Lawrence Fork	5-18-91	11	18	52
S. O. Fowler O. W. Fowler	" "	5-18-91	11	18	52
Edwin S. Crigler. . . . .	" "	5-27-91	11	18	52
L. B. Cary . . . . .	Pumpkin Seed	6-17-91	23	19	50
Wm. W. Lisco . . . . .	North Platte.	6-20-91	14	18	47
Brown's Ck. Irr. & Cnl Co	" "	7-6-91	28	20	50
T. W. O. Wolfe, H. F.					
Etches, George Soward.	" "	7-6-91	18	20	51
J. T. Clarkson . . . . .	Lodge Pole. . .	7-21-91	36	14	50
W. D. Watkins, C. Wag-					
ner, W. Stones, T. Wolfe	North Platte.	7-28-91	19	19	48

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>CHEYENNE—Continued.</i>					
E. T. Smith, P. Seaback, W. H. Stone, M. G. Fix, A. Henline, McCracken.	North Platte..	7-31-91	5	20	52
Edwin S. Crigler.....	Lawrence....	9-18-91	1	18	52
George F. Berry.....	" .....	11-2-91	11	18	52
Thos. Brown, C. Essig.	Pumpkin Seed	11-14-91	29	19	52
John Hallway.....	" .....	12-31-91	28	19	50
Brown's Ck. Irr. & Cnl. Co	North Platte..	.....	29	20	50
Asa Remsburg.....	Deep Hole....	.....	3	18	49
William Stillwell.....	Camp.....	3-16-92	13	18	49
Empire Canal Company	North Platte..	5-7-92	18	20	51
C. G. Laing, C. G. Laing	Brown's.....	5-20-92	38	20	49
W. S. Court, J. W. Mc- Mahan, E. A. Yelton..	Cedar.....	6-27-92	14	18	48
B. F. McKinney.....	Greenwood ..	7-28-92	33	18	50
Henry Barthing.....	Middle.....	8-16-92	33	18	51
Calvin P. Rice.....	Spring.....	8-16-92	27	20	48
Eliza A. Cooper.....	Spring Branch	8-23-92	4	19	50
Court House Rock I. Co	Pumpkin Seed	12-15-92	30	19	50
F. Bourner, J. Thalkem.	Greenwood ..	12-27-92	28	18	50
Alliance I. C. & W. P. Co	North Platte..	12-31-92	5	20	52
Henry T. Clark.....	" .....	2-7-93	22	20	51
Logan Irr. Canal Co...	" .....	2-17-93	19	20	50
J. P. Ammer, Geo. R. Meradith.....	Pumpkin Seed	2-28-93	23	19	50
J. Ammer, G. Mradith..	" .....	2-25-93	23	19	50
L. Gerdton, L. Hoppen.	" .....	3-13-93	34	19	52
Wagoner Cnl. & Irr. Co.	North Platte..	3-30-93	14	19	49
George H. Haxby.....	" .....	4-10-93	32	19	48
Short Line Irr. Cnl. Co.	" .....	5-11-93	30	21	52
H. M. Coulter.....	Greenwood ..	6-2-93	10	18	50
D. M. Coulter.....	" .....	6-7-93	15	18	50
Louis Schentz.....	Springs.....	6-14-93	28	18	50
Robert S. Oberfelder..	Lodge Pole...	12-21-93	31	14	46
Harry Barrett.....	" .....	1-15-94	32	14	46
Carl A. Wagoner.....	North Platte..	3-24-94	13	19	49

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>CHEYENNE—Continued.</i>					
J. Finn, H. T. Dean...	Pumpkin Seed	4-21-94	27	19	50
Lee Nunn .....	" "	5-31-94	28	19	51
Joseph J. Maxwell....	" "	7-3-94	24	19	52
Hannah Irr. Canal Co..	North Platte .	9-28-94	24	18	47
A. H. Smith, G. W. Beerline, John Beerline, E. Smith, Morton B. Smith,	" "	10-16-94	24	19	49
George P. Gunder ....	Springs .....	3-23-95	14	13	51
William M. Willard....	Pumpkin Seed	4-4-95	25	19	51
J. P. Dunlap.....	" "	5-14-95	24	19	51
A. M. Capron, J. S. Lamb	Greenwood ..	1-13-92	15	18	50
<i>DAWES—</i>					
J. Hathaway, J. H. Craig					
H. B. Austin, J. P. Arnot, C. C. Hunt....	White .....	9-29-90	25	32	52
J. T. Stewart.....	L. Cottonwood	12-26-90	8	32	52
Wallace S. Gallup.....	Chadron .....	12-26-90	15	33	49
F. B. & E. F. Woodruff.	Dead Horse..	.....	32	32	49
William Mace.....	W. Br. Ash..	12-31-90	2	31	51
J. J. Harbough.....	West Ash....	12-31-90	24	32	51
Harriet B. J. Richards.	Big Bordeaux.	1-7-91	36	33	48
Pres. Wilson.....	White .....	1-23-91	32	33	50
W. M. Gillespie .....	L. Bordeaux .	1-29-91	33	34	48
Alfred Williams .....	Bordeaux ....	2-14-91	33	34	48
S. A. Bryant.....	Big Bordeaux.	2-3-91	14	33	48
Edwin Vasey.....	Second.....	2-3-91	3	32	48
John H. McAvoy .....	Bordeaux ....	3-6-91	28	34	48
Oscar W. Hall.....	" .....	2-28-91	15	33	48
E. Barron .....	East Ash....	3-6-91	32	32	50
I. W. & O. S. Norton..	Dead Horse..	3-3-91	4	31	49
I. W. & O. S. Norton..	" .....	9-4-93	4	31	49
Theodore L. Goff .....	Br. of Butte..	4-11-91	30	32	49
A. J. Palmer & Co .....	Niobrara ....	5-26-91	31	29	50
John A. Butler.....	L. Bordeaux .	6-3-91	33	33	47
Chas J. Grable.....	White .....	6-17-91	23	31	53
J. D. Bacon.....	Bordeaux ....	6-24-91	21	34	48

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
DAWES—Continued.					
Harriet B. J. Richards.	Big Bordeaux	9-9-92	36	33	48
Harrison B. Tomlin...	East Ash....	10-17-92	32	32	50
S. and C. Hartzell....	Lit. Bordeaux	11-8-93	13	33	48
City of Chadron.....	Chadron....	12-26-92	18	32	48
Smith L. Adams.....	Bordeaux...	3-4-93	2	32	48
H. J. Ingersoll, Reuben					
Sewell, W. S. Gallup..	Chadron....	6-3-93	26	33	49
N. Broadhurst.....	West Ash....	7-3-93	36	32	51
Henry M. Wilson.....	Chadron....	7-15-93	12	32	49
Wallace W. Wilson...	".....	7-15-93	12	32	49
William T. Compton..	Ash.....	7-25-93	12	32	51
E. Pearson.....	Dead Horse..	8-19-93	7	32	49
H. A. Goff.....	".....	9-2-93	9	31	49
Geo. Brost.....	Chadron.....	9-9-93	6	31	48
G. W. Hatch, W. D. Cross	Niobrara....	1-25-94	25	29	50
J. C. Wood, R. B. Pierce	".....	2-1-94	28	29	50
Howard G. Furnam...	".....	2-2-94	29	29	50
J. T. McManis, J. Neeland	".....	2-9-94	29	29	49
Harris & Cooper.....	White.....	3-13-94	25	32	52
H. & Cooper I. C., A Harris					
P. Cooper, E. Hutchings,					
B. Pinney, N. Welling, W.					
Peterson, Wm. Smelze.	".....	7-32-94	25	32	52
F. B. and E. F. Woodruff	Dead Horse..	3-20-94	32	32	49
Marcus L. Smock.....	Trunk Butte.	4-19-94	26	33	50
Bailey G. Pinney.....	Spring.....	5-10-94	13	32	52
Charles Rascher.....	White.....	6-20-94	19	32	51
A. A. Record.....	Chadron....	6-26-94	1	32	49
Nicholas Welling.....	White.....	7-21-94	17	32	51
J. Noleman, M. Dorrington	Niobrara....	9-7-94	28	47	47
A. V. Harris.....	White.....	12-11-94	17	32	51
Mary M. Harris.....	Spring.....	12-11-94	8	32	51
O. J. Demmon, Balser.	".....	12-3-94	7	32	51
Mirage Irrigation Co..	Niobrara....	12-7-94	26	29	48
William S. Hazelton..	White Clay..	12-13-94	13	31	52
Herman Kroesing.....	Niobrara....	12-20-94	25	29	48

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>DAWES.—Continued.</i>					
White River Irr. Co. . . . .	White . . . . .	1-9-95	34	32	52
Mirage Irrigation Co. . . . .	Cottonwood . . . . .	1-11-95	22	29	48
Leroy Hall. . . . .	White . . . . .	1-18-95	...	...	...
Leroy Hall. . . . .	" . . . . .	1-19-95	34	32	52
Mirage Irrigation Co. . . . .	Niobrara . . . . .	1-25-95	26	29	48
Henry Lichle. . . . .	" . . . . .	1-28-95	27	29	48
Bernhard Fendrich. . . . .	" . . . . .	2-11-95	26	29	48
Tim Morrissey. . . . .	Cottonwood . . . . .	2-20-95	17	29	48
Big Cottonwood Irr. Co. . . . .	B Cottonwood . . . . .	2-25-95	10	33	52
W. Thomas, W. Phillips . . . . .	White . . . . .	3-8-95	10	32	51
Mary M. Ricker. . . . .	Big Bordeaux . . . . .	3-22-95	27	32	48
L. Snow. . . . .	Niobrara . . . . .	3-28-95	35	29	51
William S. Hales. . . . .	Spring . . . . .	4-2-95	25	32	53
<i>DAWSON—</i>					
Farmers Irrigation Co. . . . .	Platte. . . . .	6-14-94	36	10	23
Anton Able. . . . .	" . . . . .	6-26-94	18	10	23
Elm Creek Irrigating Co. . . . .	" . . . . .	8-17-94	6	8	19
Farmers & Mer. Irr. Co. . . . .	" . . . . .	8-22-94	18	10	23
H. C. Booker. . . . .	" . . . . .	11-10-94	16	11	25
Platte River Irr. Co. . . . .	" . . . . .	9-15-94	13	9	22
Cozad Irrigation Co. . . . .	" . . . . .	12-28-94	15	11	25
Cozad Irrigation Co. . . . .	" . . . . .	1-9-95	15	11	25
Orchard & Alfalfa Irr. Co. . . . .	" . . . . .	1-23-95	...	...	...
<i>DEUEL—</i>					
Ed. Herrington. . . . .	Lodge Pole. . . . .	6-25-89	3	13	46
A. B. Persinger. . . . .	" " . . . . .	6-25-89	33	14	46
N. River Irrigation Co. . . . .	North Platte. . . . .	11-5-89	30	16	42
R. B. Howell. . . . .	Blue. . . . .	2-12-90	6	16	42
Horace R. Jackett. . . . .	North Platte. . . . .	2-13-90	30	16	42
H. R. Jackett. . . . .	" " . . . . .	3-8-90	30	16	42
H. R. Jackett. . . . .	" " . . . . .	5-20-90	10	16	43
A. W. Bond. . . . .	South Platte. . . . .	5-19-90	14	12	43
Union Irrigating Co. . . . .	Blue. . . . .	5-26-90	18	16	42
Blue Ck. Irr. & Im. Co. . . . .	" . . . . .	1-23-90	33	17	42
A. Smith, R. Vance. . . . .	Ash . . . . .	6-23-90	6	17	45
John A. Wilcox. . . . .	North Platte. . . . .	7-28-90	6	17	45

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>DEUEL—Continued.</i>					
North River P. & I. Co.	North Platte.	8-6-90	6	17	45
Union Irrigation Co...	Blue .....	10-8-90	18	16	42
Enterprise Irr. Co. ....	" .....	11-19-90	33	17	42
Blue Creek Cnl. & L. Co.	" .....	11-17-90	8	16	42
Blue Creek Milling Co.	" .....	3-25-91	19	16	42
E. H. Stevens, S. Hinkle	South Platte .	4-13-91	14	12	43
Thomas J. Maguire ....	North Platte .	6-13-91	14	17	45
E. H. Stevens, S. Hinkle.	South Platte .	6-18-91	14	12	43
D. C. Bower .....	North Platte .	7-10-91	9	17	45
F. J. Mason .....	South Platte .	8-14-91	14	12	43
Thomas R. Liddle ....	Lodge Pole..	12-11-91	19	12	44
Henry G. Weigand ....	Lodge Pole..	3-7-92	17	13	45
Union I. & W. P. Co..	Blue .....	5-25-92	7	16	42
Henry R. Fox .....	Lost .....	7-21-92	8	16	43
M. A. Daugherty .....	Blue .....	4-4-93	33	17	42
John A. Wilcox .....	North Platte.	5-1-93	6	17	45
Matt. A. Daugherty ...	Blue .....	6-1-93	32	17	42
David C. Hooper .....	" .....	6-8-93	28	17	42
G. B. Orr & R. Vance .	North Platte.	.....	29	16	42
Walter Kimball .....	.....	.....	.....	.....	.....
G. Thompson, J. Abbott	South Platte..	.....	35	13	42
D. C. Hooper .....	Blue .....	9-16-93	6	16	42
S. P. Delatour .....	Blue .....	9-22-93	24	18	43
Blue Creek I. Co. (Lim.)	Blue .....	9-21-93	33	17	42
Isaac Coe .....	North Platte.	12-23-93	24	17	45
Frank L. Emerson ....	Blue .....	1-4-94	33	17	42
A. F. Ramsey, G. W. Nor-					
throp, W. B. Collier ..	Blue .....	3-7-94	7	16	42
William T. Bower ....	North Platte.	3-27-94	6	17	40
Robert E. Graff .....	Blue .....	4-11-94	19	16	42
C. F. Roberts .....	North Platte.	6-9-94	2	16	44
C. F. Roberts, B. M. Fox,					
H. R. Fox .....	North Platte.	6-22-94	1	16	44
B. M. Fox .....	North Platte.	8-14-94	1	16	44
Fair Play Irrigation Co.	Blue .....	8-27-94	28	17	42
James W. Van Newkirk	North Platte.	9-4-94	6	16	43

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>DEUEL—Continued.</i>					
W. F. Stafford . . . . .	South Platte..	9-7-94	14	12	43
J. H. Winterer . . . . .	Blue . . . . .	9-25-94	28	17	42
W. E. Ledgewood, Har- vey Brown, C. R. Clapp.	Cold Water..	10-4-94	26	18	46
H. G. Gumaer J. Robins'n	North Platte.	10-10-94	33	17	44
Farmers' Ir. D. Co. No. 1	Blue . . . . .	11-21-94	14	19	44
William Spohn . . . . .	North Platte.	11-19-94	13	17	45
Nels Berguson, Ira					
Paisley, A. F. Ramsey.	Blue . . . . .	11-21-94	33	16	42
William Spohn . . . . .	North Platte.	12-8-94	13	17	45
Rush Ck. Irr. Canal Co.	" "	12-18-94	3	17	54
Lyons Irr. Cnl. & W. P. Co.	" "	12-28-94	30	17	44
H. Robbins, E. C. Will'ms	" "	1-6-95	36	16	42
F. S. Miller . . . . .	South Platte.	1-7-95	7	12	42
J. C. Gyger, J. Coffman.	North Platte.	1-7-95	..	16	44
G. M. Simpson C. S. Bang- hardt, Hugo N. Wendt..	" "	1-23-95	16	16	43
Mathew A. Daugherty.	" "	3-29-95	1	15	42
H. J. & E. N. Bushnell	" "	4-2-95	12	16	44
<i>DUNDY—</i>					
Rep. Valley L & I. Co., D.					
Zimmerman, G. D. Pierce					
C. D. Ford, C. C. Goodale.	N. Fork Rep.	11-14-90	27	1	41
J. W. Macrum, W. F. Don- ahue, L. L. West, . . .	Republican . . .	9-27-90	17	1	41
W. A. Brown, J. H. Brown					
J. Drummond, S. Clegg.	N. Fork Rep.	7-7-91	11	1	42
Rep. Valley, L. & I. Co., C.					
D. Ford, G. D. Pierce, C.					
Goodale, D. Zimmerman	Buffalo . . . . .	10-8-90	18	1	40
N. J. Allen Sen., J. Allen,					
N. J. Allen Jr., J. Garetsen	Buffalo . . . . .	10-23-90	18	1	40
Dundy Co. L. & Ir. Co., L.					
Morse, John R. King . .	N. Fork Rep.	11-22-20	24	1	39
D. Hickman, Ditch Co. .	Republican . .	12-6-90	19	1	39
J. C. Chamberlain . . . .	Indian . . . . .	12-22-90	18	2	36

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>DUNDY—Continued.</i>					
H. Cannon . . . . .	Indian . . . . .	12-17-90	13	2	37
Indian Creek Ditch Co.	" . . . . .	12-19-90	9	2	37
" " " "	" . . . . .	12-19-90	10	2	37
" " " "	" . . . . .	12-19-90	12	3	37
John W. Karr . . . . .	Republican . . . . .	1-9-91	17	1	37
John W. Karr . . . . .	S. Fk. Rep . . . . .	1-9-91	32	2	37
C. H. Peck . . . . .	Republican . . . . .	2-28-91	17	1	37
C. Jones, Geo. Young . . . . .	N. Fk. Rep . . . . .	2-23-91	28	1	38
C. Jones, Geo. Young . . . . .	S. Fk. Rep . . . . .	2-23-91	32	1	37
C. Jones, Geo. Young . . . . .	Republican . . . . .	2-25-91	32	1	37
A. J. Thomas . . . . .	N. Fk. Rep . . . . .	3-18-91	24	1	40
E. G. Neighbor . . . . .	" " . . . . .	3-23-91	24	1	39
G. A. Rose, W. R. Bagrer,					
J. James, J. Robidoux,					
J. D. Graves, G. Pierce . . . . .	" " . . . . .	4-7-91	27	1	41
Haigler Land & Cnl. Co.	" " . . . . .	4-20-91	10	1	42
W. Brown, R. Burns . . . . .	" " . . . . .	5-20-91	11	1	42
J. R. Phelan . . . . .	Rock . . . . .	5-23-91	17	1	39
Geo. W. Young . . . . .	N. Fk. Rep . . . . .	6-16-91	28	1	38
John Dunning . . . . .	Spring . . . . .	9-29-91	35	2	38
C. H. Peck . . . . .	S. Fk. Rep . . . . .	11-11-91	29	1	37
C. H. Peck . . . . .	N. Fk. Rep . . . . .	11-11-91	22	1	39
N. Allen, Sr., N. Allen,					
N. Allen, Jr., F. Larned	Buffalo . . . . .	11-17-92	18	1	40
C. H. Peck . . . . .	N. Fk. Rep . . . . .	3-14-92	22	1	39
H. J. Cox . . . . .	" " . . . . .	3-11-92	29	1	38
H. J. Cox . . . . .	" " . . . . .	5-6-92	29	1	38
Paul Benson . . . . .	" " . . . . .	2-23-93	26	1	41
G. White, W. Larned . . . . .	" " . . . . .	5-2-93	22	1	40
Anders Anderson . . . . .	Republican . . . . .	2-3-94	1	1	37
M. H. Groesbeck . . . . .	" . . . . .	2-5-94	1	1	37
M. Groesbeck, H. Cannon	" . . . . .	3-27-94	10	1	37
A. J. Thomas . . . . .	N. Fk. Rep . . . . .	6-9-94	24	1	40
John W. Karr . . . . .	S. Fk. Rep . . . . .	7-28-94	20	1	37
Riverside D. Co. J. Karr,					
S. Forsythe, Geo. King.	S. Fk. Rep . . . . .	8-15-94	29	1	37

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>DUNDY—Continued.</i>					
Del. Hickman D. Co., I.					
J. Childs, pres., J. Karr.	Republican ..	1-12-95	17		137
T., F. B., & E. A. Moore	Buffalo .....	3-28-95	22		241
Ed. Wilson .....	Indian .....	9-30-93	23		236
J. S. Owens & Sons...	Rock .....	4-25-94	31		239
E. E. Owens .....	" .....	5-12-95	8		139
Thompson & Van Sickle	Indian .....	6-1-94	8		237
A. Van Sickle .....	" .....	4-30-94	5		237
T. C. and J. W. Kinsey.	" .....	1-11-94	10		237
F. C. Phillips .....	Muddy .....	1-15-94	2		236
J. C. Chamberlin .....	Indian .....	8-1-95	12		237
James Nesbit .....	Horse .....	8-30-85	23		139
<i>FRONTIER—</i>					
G. W. Warner .....	Brush .....	8-15-94	34		829
John Miller .....	" .....	9-19-94	33		829
James F. Fenton .....	Spring .....	2-8-95	33		727
John L. Sanders .....	Medicine .....	2-8-95	27		727
D. J. & Mary J. Osborn.	Red Willow ..	9-18-89	34		530
Marcus L. Brown .....	" " ..	7-15-94	35		530
<i>FURNAS—</i>					
Cambridge & Arapahoe					
Irr. & Water Power Co.	Republican ..	9-3-91	33		425
C. H. Peck .....	" ..	12-31-91	28		425
Henry L. Ballard .....	" ..	6-11-94	8		321
Cambridge Milling Co.	Medicine .....	12-31-78	29		425
<i>FRANKLIN—</i>					
P. C. Garrett, A. Gregory	Center .....	8-21-94	1		115
Theodore Johnson .....	Thompson ...	5-28-95	4		213
<i>GARFIELD—</i>					
W. Drever, L. E. Fiekens,					
J. Doran, W. D. Lash-					
met, J. H. Harlan ...	North Loup ..	7-21-94	19	21	16
<i>GREELEY—</i>					
North Loup Irrigation &					
Improvement Co. ....	" " ..	8-7-94	27	19	14
Daniel L. Johnson .....	" " ..	12-22-94	30	18	12

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
HAYES—					
W. D. Wildman . . . . .	Frenchman ..	3-19-90	31	5	33
“ . . . . .	Stinking Wat.	3-19-90	31	5	33
“ . . . . .	“ “	3-19-90	31	5	33
“ . . . . .	Frenchman ..	5-23-90	31	5	33
“ . . . . .	Stinking Wat.	5-23-90	31	5	33
G. Hocknell, W. Bullard, S. P. Hart, C. F. Babcock	Frenchman ..	6-23-90	24	5	35
Culbertson C. I. & W. S. Co.	Stinking Wat.	6-18-90	31	5	33
Culbertson I. & W. P. Co., C. J. Jones, E. C. Smith, A. W. Bond . . . . .	Frenchman ..	9-15-90	31	5	33
Culbertson I. & W. P. Co., C. J. Jones, E. C. Smith, A. W. Bond . . . . .	Stinking Wat.	9-15-90	31	5	33
R. S. Perry . . . . .	Frenchman ..	12-29-90	32	5	33
Bush, Hagerman Cnl Co	“ ..	1-2-91	24	5	35
Culbertson I. & W. P. Co	“ ..	1-23-91	31	5	33
A. W. Bond . . . . .	“ ..	2-19-92	32	5	33
A. King, W. Wildman, H. Blum, C. Crews, S. Solo- mon, G. Daniels, C. Arm- strong, A. L. King . . . . .	“ ..	3-21-92	31	5	33
L. C. and Arthur Blount	“ ..	5-29-93	32	5	33
L. Carrington, A. Blount	“ ..	7-25-93	32	5	33
L. Carrington, L. Blount	“ ..	9-1-94	32	5	33
J. and W. Hagerman ..	“ ..	8-27-94	24	5	35
Philip Maloy . . . . .	Red Willow ..	9-22-94	8	8	32
R. C. Walker . . . . .	“ “ ..	10-1-94	9	6	31
John S. Wise . . . . .	Frenchman ..	12-29-94	15	5	35
A. C. Grimm, W. Pollock	“ ..	5-1-95	16	5	35
HITCHCOCK—					
L. Carrington, E. Ellege	“ ..	12-13-90	5	4	33
H. W. Davenport, W. H. Trites, R. H. Stearns	Republican ..	12-20-90	20	3	31
S. W. Sellers, R. S. and L. Hileman, Jno. Whitaker	“ ..	12-24-90	14	3	31

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<b>HITCHCOCK—Continued</b>					
Trenton Farm. Irr. Asso.	Republican ..	12-26-90	10	2	34
I. R. Darnall, O. F. Nelson	“ ..	3-6-91	29	2	35
C. H. Meeker .....	“ ..	4-11-91	15	3	31
C. H. Meeker .....	“ ..	4-11-91	16	3	31
C. H. Meeker .....	“ ..	4-11-91	14	3	31
C. G. Crews, S. E. Solomon	Frenchman ..	5-1-94	22	29	13
Lorenzo Marr .....	Republican ..	7-2-91	24	32	14
Lorenzo Marr .....	Blackwood ..	8-11-94	3	31	12
Henry Grovert .....	Republican ..	8-15-94	26	32	14
Oscar F. Nelson .....	“ ..	8-16-94	20	31	11
Conrad Wacker .....	Frenchman ..	8-20-94	9	31	11
Daniel H. Swayze .....	Muddy .....	8-30-94	4	28	11
Oscar F. Nelson .....	Republican ..	8-28-94	32	31	11
Henry Wacker .....	Frenchman ..	8-29-94	30	30	14
Oscar F. Nelson .....	Republican ..	9-5-94	26	30	11
E. B. Ellege .....	Frenchman ..	9-7-94	26	30	11
A. W. Suiter, J. C. Thompson, A. A. McCoy ..	Republican ..	12-26-90	10	2	34
J. W. Frey .....	“ ..	3-6-91	29	2	35
<b>HOLT—</b>					
D. L. Darr .....	Elkhorn .....	4-11-91	15	3	31
T. V. Golden .....	“ .....	4-11-91	16	3	31
Joseph Davis .....	“ .....	4-11-91	14	3	31
Thomas Carlon .....	“ .....	12-27-93	11	3	32
Thomas Carlon .....	“ .....	1-23-94	16	3	31
Elkhorn Irrigation Co.	“ .....	1-23-94	14	3	31
W. A. & M. H. McCarthy	E. Br Brush Ck	2-7-94	3	2	33
James Greig .....	Honey .....	5-23-94	19	2	34
W. A. & M. H. McCarthy	W Br Brush Ck	6-7-94	34	4	32
Arthur F. Mullen .....	Blackbird ..	6-18-94	5	2	35
L. Flannigan .....	“ .....	6-29-94	19	2	34
William Ferris .....	Elkhorn .....	7-28-94	33	4	32
John A. Robertson .....	Blackbird ..	8-25-94	19	2	34
F. X. Rehberg .....	Elkhorn .....	12-29-94	23	4	33
James Brennan .....	Red Bird .....	5-4-95	1	2	33
Patrick Murphy .....	Blue Bird .....	5-7-95	2	2	33

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>HOLT—Continued.</i>					
Samuel Becker.....	S. Br. Eagle Ck	9-17-94	8	30	13
William Bokhoff.....	Eagle.....	9-17-94	6	30	13
John D. Alfs.....	".....	9-11-94	2	30	13
D. J. Cronin.....	Blackbird ...	9-18-94	18	30	11
William Ferris.....	S. Fk. Elkhorn	10-25-94	7	26	9
John D. Alfs.....	Eagle.....	11-26-94	2	30	13
D. McLachlan, W. Bok- hof, J. A. Robertson.	".....	12-18-94	1	30	14
J. P. Gallagher, N. E. Cain	Elkhorn.....	1-15-95	30	29	11
W. B. Ashton.....	".....	2-25-95	24	29	13
M. X. Gallagher, M. A. Murphy, B. Gallagher, J. E. & B. O. Parker, N. E. Cain, J. P. Gallagher, F. R. Cain, E. McEvony..	".....	2-20-95	32	29	11
Byron O. Parker.....	".....	2-21-95	4	28	11
Lewis Steabner.....	Eagle.....	3-30-95	5	31	12
<i>HOWARD—</i>					
P. P. Parker.....	North Loup..	8-10-94	3	15	11
Robert Harvey.....	Middle Loup.	9-21-94	30	13	11
Robert Harvey.....	" "	9-21-94	25	13	12
Edwin S. Lewis.....	Munson.....	9-26-94	5	15	11
C. Ender, H. Keating..	".....	10-5-94	5	15	11
Clayton A. Gates.....	Loup.....	1-5-95	15	15	9
Robert Harvey.....	Middle Loup.	2-2-95	25	13	12
<i>KEITH—</i>					
N. Platte Irr. & Land Co.	North Platte.	7-30-91	13	14	34
Fred Wolf.....	Lonergan....	5-20-89	18	15	39
G. Holcomb, F. M. Smith	Sand.....	5-20-89	10	15	40
Lee Jacobs.....	Lonergan....	5-28-89	17	15	39
Hollingsworth M Cormic	South Platte .	4-3-90	33	13	31
Samuel M. Carson.....	.....	4-17-90	34	15	37
Hollingsworth M Cormic	South Platte .	5-8-90	29	13	41
T. J. Winter.....	.....	6-17-90	35	15	37
D. P. Holloway.....	Spring.....	6-21-90	19	15	37
M. A. Daugherty.....	North Platte .	6-25-90	9	15	41

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<b>KEITH—Continued.</b>					
F. Q. Feltz . . . . .	North Platte.	8-4-90	6	14	37
R. D. Harris . . . . .	“ “	8-20-90	18	14	36
L. F. Waugh . . . . .	White Tail . . .	8-26-90	26	15	38
Al Phelps, T. A. Mey- ers, F. P. Dickerson.	North Platte.	9-12-90	34	15	39
G. F. Copper, J. Sheridan	“ “	10-9-90	20	14	35
R. D. Harris . . . . .	“ “	11-1-90	18	14	36
Lee Jacobs . . . . .	“ “	12-27-90	9	14	37
M. A. Daugherty . . . . .	“ “	3-6-90			
Aleck Harris, R. Major, T. J. Miller, L. F. Waugh, A. W. Arnett, J. C. Culver, C. Fenwick . .	White Tail . . .	3-13-91	26	15	38
James Ware . . . . .	North Platte.	5-19-91	26	15	38
The Ogalalla L. & C. Co.	White Tail . . .	7-18-91	26	15	38
D. P. Holloway, A. Phelps	“ “ . . .	3-27-93	36	15	38
Herman H. Soehl . . . . .	Lonegan . . . . .				
Nelson A. Green . . . . .	Clear . . . . .				
Gary T. Scott . . . . .	“ . . . . .				
Thomas P. Curram . . . . .	“ . . . . .				
John M. McCarthy . . . . .	White Tail . . .				
Benjamin G. Matthews.	Matthews . . . . .				
M. A. Daugherty . . . . .	Blue . . . . .	4-14-93	33	17	43
Fred Wolf . . . . .	Lonegan . . . . .	5-2-93	17	15	39
John Bratt . . . . .	North Platte.	12-11-93	9	15	40
A. Neilson, D. Hunter, John H. Conway . . . .	“ “	12-30-93	23	14	36
A. Neilson, D. Hunter, John H. Conway . . . .	“ “	2-3-94	18	14	36
Hollingsworth & Son..	South Platte.	6-5-94	16	13	39
G. J. Holcomb . . . . .	Spring . . . . .	6-19-94	12	15	40
H. A. Patrick . . . . .	Sand . . . . .	7-14-94	3	15	40
G. W. & J. W. Armstrong.	South Platte.	9-4-94	5	13	37
Leonard Bros. . . . .	White Tail . . .	10-11-94	22	15	38
M. S. Collins . . . . .	North Platte.	9-15-94	9	15	41
J. C. Palmer . . . . .	“ “	10-25-94	22	14	36

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>KEITH—Continued.</i>					
Frank Foster . . . . .	White Tail . . .	10-29-94	36	15	38
Hollingsworth & Son..	South Platte . .	1-4-95	7	13	39
W. T. Vail . . . . .	" " . . . . .	1-10-95	26	13	41
Lee Jacobs . . . . .	North Platte . .	1-28-95	29	15	39
W. A. Sherman . . . . .	South Platte . .	1-21-95	17	13	39
Louis Aufdengarten . .	North Platte . .	2-23-95	13	14	37
G. J. Holcomb, R. Lewis	" " . . . . .	3-7-95	16	15	40
James T. Ryan . . . . .	South Platte . .	3-11-95	30	13	40
A. Fernstrom, P. Nissen.	North Platte . .	3-23-95	26	15	39
M. A. Daugherty . . . . .	" " . . . . .	3-27-95	1	15	42
A. W. Arnett . . . . .	Spring . . . . .	4-16-95	19	15	37
Adam Miller . . . . .	" . . . . .	4-22-95	1	14	37
O. Reed, R. H. Austin.	South Platte . .	4-22-95	16	13	39
W. H. Winterer . . . . .	Coon . . . . .	4-23-95	34	15	37
W. Winterer, J. Sillasen.					
A. Arnett, C. Fenwick..	White Tail . .	5-4-95	36	15	38
<i>KIMBALL—</i>					
Lambert C. Kinney . . .	Lodge Pole . . .	4-20-89	3	14	58
Sarah A. Kinney . . . . .	" " . . . . .	4-20-89	8	14	58
E. B. Polley . . . . .	" " . . . . .	5-10-89	30	15	55
Stillman A. Pierce . . . .	" " . . . . .	5-15-89	7	14	58
James H. Gridley . . . . .	" " . . . . .	5-13-89	30	15	55
James J. Kinney . . . . .	" " . . . . .	5-16-89	32	15	56
BayState Live Stock Co.	" " . . . . .	5-29-89	30	15	54
BayState Live Stock Co.	" " . . . . .	5-29-89	29	15	55
James J. Kinney . . . . .	" " . . . . .	5-25-89	33	15	56
William T. Young . . . . .	" " . . . . .	6-12-89	33	15	57
Carl Ruttner . . . . .	" " . . . . .	6-8-89	31	15	56
John McIntosh . . . . .	" " . . . . .	6-17-89	23	15	55
J. B. Brady . . . . .	" " . . . . .	8-19-89	28	15	54
John W. Hoover . . . . .	" " . . . . .	9-13-89	12	14	59
John W. Hurley,					
L. H. Lilley,					
Edward B. Polley . . . . .	Lodge Pole . . .	10-12-91	26	15	56
<i>KEYA PAHA—</i>					
W. W. Byington . . . . .	Rickman . . . . .	2-13-94	4	32	20

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>KEYA PAHA—Continued</i>					
S. McCulley, C. McCulley R. McCulley, A. Kro- nig, C. Honnen . . . . .	Niobrara . . . . .	8-7-94	24	32	20
Boyd Co. I. P. & Im. C.	Keya Paha . . . . .	8-8-94	10	34	17
H. Millay, Otto Mutz . . .	Burton . . . . .	8-18-94	17	34	19
William S. Justice . . . . .	Keya Paha . . . . .	9-1-94	35	35	19
Isaac Horton . . . . .	Wyman . . . . .	9-10-94	17	32	19
Boyd Co., Irr. Company	Keya Paha . . . . .	9-12-94	28	35	19
Solomon S. McCumber . . .	Cub . . . . .	9-26-94	28	33	32
Charles P. Jewett . . . . .	Jewett . . . . .	10-26-94	5	32	21
J. A. Wilson . . . . .	Niobrara . . . . .	10-27-94	18	32	21
H. K. Soper . . . . .	Huggins . . . . .	11-6-94	21	35	20
William S. Moore . . . . .	Rock . . . . .	11-6-94	12	32	22
J. H. Irwin, Ed. Monroe . . .	Niobrara . . . . .	1-11-95	16	32	21
F. J. Schoettger . . . . .	Holt . . . . .	2-27-95	32	35	20
H. D. Anderson . . . . .	Keya Paha . . . . .	3-5-95	3	34	18
Thos. G. Wilson, P. L. Hemmons, W. Farmer	“ “ . . . . .	3-8-95	24	34	17
Peter M. Peterson . . . . .	Alkali . . . . .	3-12-95	13	34	17
F. McConaha, W. Kuhre . . . .	Niobrara . . . . .	4-25-95	26	33	24
Peter Cederburg . . . . .	Dry . . . . .	5-30-95	3	32	21
J. L. Rhodes . . . . .	Spotted Tail . . . . .	6-14-95	4	34	17
Anderson Burt . . . . .	Creek . . . . .	7-13-95	13	32	21
<i>KEARNEY—</i>					
Leroy Sides . . . . .	Platte . . . . .	7-25-94	13	8	14
Lowell Farmers Irr. Co.	“ . . . . .	9-24-94	15	8	14
G. H. Pratt . . . . .	“ . . . . .	12-26-94	21	8	15
William R. Burton . . . . .	“ . . . . .	2-19-95	21	8	15
John E. Decker . . . . .	N. Ch. Platte . . . . .	5-30-95	20	8	16
<i>LOUP—</i>					
Burwell Irrigation Co. . . . .	North Loup . . . . .	8-13-94	26	21	18
F. Mallory, Jas. Wilson, E. P. Clements . . . . .	North Loup . . . . .	8-15-94	25	21	17
Burwell Irrigation Co. . . . .	“ “ . . . . .	9-15-94	27	21	17
Hiram A. Akins, A. B. Starke, Morgan Crane	Calamus . . . . .	1-22-95	1	24	20

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
LINCOLN—					
N. Platte Irr. & L Co., I.					
Dillon Pre. F. Foley Sec.	North Platte.	7-28-91	13	14	34
M. N. Holcomb . . . . .	Pawnee . . . . .	10-27-90	13	13	28
Eq. F. & S. Imp. Co. Lim.	Birdwood . . . . .	3-5-91	15	16	33
Eq. F. & S. Imp. Co. Lim.	Fremont Sl. . . . .	3-6-91	15	13	30
S. L. Wiley . . . . .	Birdwood . . . . .	3-27-91	27	15	13
Walter Wiley . . . . .	" . . . . .	3-27-91	27	15	33
S. T. Wiley . . . . .	" . . . . .	5-8-91	34	15	33
L. R. Britton . . . . .	Platte . . . . .	5-21-91	13	12	28
L. R. Britton . . . . .	" . . . . .	5-21-91	26	12	27
J. H. McColl . . . . .	" . . . . .	7-31-91	26	12	27
Gothenburg Canal Co.,					
A. H. Hadford, Pres. . . . .	Platte . . . . .	9-18-91	29	12	26
William Roberts . . . . .	Birdwood . . . . .	10-31-93	35	14	33
James Cooper . . . . .	Braugh Lake . . . . .	12-20-93	36	9	33
A. L. McNeel . . . . .	Birdwood . . . . .	1-2-94	10	16	33
C & D Irr. Canal Co., W.					
F. Cody, Isaac Dillion . . . . .	North Platte . . . . .	12-30-93	9	14	31
Birdwood Irr. Co., P.O.					
Buchanan, E. Speiling . . . . .	E. Birdwood . . . . .	1-3-94	10	16	33
A. L. McNeel . . . . .	Birdwood . . . . .	1-22-94	3	16	33
William Roberts . . . . .	" . . . . .	1-16-94	22	15	33
J. A. Hershey, W. Paxton . . . . .	North Platte . . . . .	2-20-94	18	14	33
E. A. Johnson . . . . .	" " . . . . .	2-24-94	10	12	27
D. B. McNeal . . . . .	" " . . . . .	2-24-94	11	14	32
Isaac Coe . . . . .	W. Birdwood . . . . .	3-19-94	10	16	34
M. C. Keith . . . . .	White Horse . . . . .	4-7-94	36	14	30
Isaac Lamplugh . . . . .	" " . . . . .	4-9-94	5	14	30
James B McKee . . . . .		4-23-94	22	14	32
James B. McKee . . . . .		4-23-94	21	14	32
E. Hubart . . . . .	Slough . . . . .	4-24-94	16	14	30
W. L. Park . . . . .	North Platte . . . . .	5-29-94	12	14	33
I. A. Young . . . . .	Platte . . . . .	5-31-94	4	11	26
E. Hubart . . . . .	" . . . . .	5-24-94	17	14	30
M. C. Keith . . . . .	North Platte . . . . .	6-5-94	35	14	13
D. A. Baker . . . . .	Slough . . . . .	6-12-94	23	14	31

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>LINCOLN—Continued.</i>					
S. W. Clark, Fred Peckham, J. J. O'Rourke, P. B. Bloom, Geo. Swift, S. L. Clapp, L. D. Rich	Platte.....	6-5-94	17	13	29
I. A. Fort .....	South Platte..	6-12-94	34	14	33
I. A. Fort .....	North Platte..	6-12-94	14	14	34
W. Findley, W. E. Young, E. Moore, L. Homer, E. M. Young.....	Platte.....	6-15-94	30	12	26
E. D. Murphy.....	Pawnee .....	6-9-94	29	13	27
I. A. Young .....	Platte.....	6-14-94	4	11	99
W. K. Beauchamp....	Birdwood....	6-12-94	15	15	33
W. H. Plumer.....	Pawnee .....	6-16-94	19	13	27
R. H. Fowles, T. Roberts	Platte.....	7-11-94	29	13	28
S. W. Clark, Fred Peckham, J. J. O'Rourke, P. B. Bloom, Geo. Swift, S. L. Clapp, L. D. Rich	" .....	7-7-94	16	13	29
Henry M. Appleford..	" .....	7-7-94	15	13	29
M. C. Keith.....	North Platte..	7-17-94	25	14	30
David A. Baker .....	Slough.....	7-25-94	23	13	31
A. Smith, J. H. Moran.	North Platte..	8-13-94	36	14	30
W. K. Beauchamp....	Birdwood....	9-22-94	15	15	33
William C. Ritnor ...	Platte.....	9-20-94	1	14	33
Henry Herman.....	" .....	9-22-94	29	12	26
John McCullough.....	" .....	10-23-94	36	13	28
Fred Hecox.....	" .....	10-29-94	11	11	26
Edwin Moore .....	" .....	11-3-94	30	12	26
Benjamin A. Layton...	" .....	11-5-94	30	12	26
J. W. Hiles.....	" .....	12-19-94	27	12	27
Lucien Stebbins.....	South Platte..	12-17-94	34	14	32
S. F. Dickman.....	North Platte..	1-24-95	9	14	32
J. W. Hiles.....	Platte.....	1-29-95	29	12	26
Equitable Farm & Stock and Improvement Co., (Lim.), John Bratt. Sec.	Fremont ....	1-7-95	15	13	36

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<b>LINCOLN—Continued.</b>					
Lincoln & Dawson Co. I. Co., J. T. Karr, C. Morrell	Platte . . . . .	3-1-95	9	13	29
Heber Newberry . . . . .	From a ravine	2-25-95	21	14	32
Heber Newberry . . . . .	“ “	2-25-95	22	14	32
J. D. Kelliher, P. F. Dolan					
G. W. Snyder, W. Plumer	North Platte.	2-27-95	24	13	29
Henry Appleford . . . . .	Platte . . . . .	3-1-95	15	13	29
Emanuel Hubartt . . . . .	North Platte.	3-2-95	20	14	30
W. K. Beauchamp . . . . .	Birdwood . . . . .	3-26-95	22	15	33
Lucien Stebbins . . . . .	South Platte.	3-21-95	32	14	32
H. M. Knoll . . . . .	Platte . . . . .	4-5-95	30	12	26
D. G. Potter . . . . .	East Birdwood	4-4-95	10	16	33
H. M. Appleford . . . . .	Platte . . . . .	4-17-95	15	13	29
Gothenburg S. S. I. Co.	North Platte. . . . .				
<b>PHELPS—</b>					
Manlius Lucus . . . . .	Platte . . . . .	12-22-94	13	8	18
<b>PLATTE—</b>					
E. A. & F. H. Gerrard.	Looking-glass	6-12-94	1	17	3
H. J. Hendryx . . . . .		6-26-94	2	17	3
Orlando Nelson . . . . .	Loup . . . . .	10-24-94	17	17	3
Peter Schmitt . . . . .	Shell . . . . .	12-17-94	19	18	1
Fannie Rice . . . . .	“ . . . . .	3-23-95	22	18	1
Max Gottberg . . . . .	“ . . . . .	3-23-95	24	18	1
Daniel Murdock . . . . .	Loup . . . . .	4-3-95	6	17	3
<b>ROCK—</b>					
Ed. L. Peters . . . . .	Sand . . . . .	10-5-94	26	32	18
Geo. H. Bowering . . . . .	Niobrara . . . . .	10-24-94	29	32	19
J. T. Johnson . . . . .	Elk . . . . .	10-1-94	8	31	19
H. Wile . . . . .	Rock . . . . .	10-27-94	4	31	18
Joseph Copeland . . . . .	“ . . . . .	12-1-94	28	32	18
J. & J. H. Copeland, H. C. Hall . . . . .	“ . . . . .	1-8-95	32	32	18
B. J. Eastlick . . . . .	“ . . . . .	1-17-95	28	32	18
H. Wile . . . . .	“ . . . . .	1-18-95	4	31	18
H. Wile, Jas. Cooper..	“ . . . . .	4-3-95	9	31	18
C. G. Grant . . . . .	Two streams. . . . .		4	31	20

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>Rock—Continued.</i>					
J. M. Gordon . . . . .	Oak . . . . .	4-13-95	31	32	17
Jacob Martin . . . . .	" . . . . .	5-24-95	13	32	18
<i>RED WILLOW—</i>					
J. Whittaker, S. W. Sellers, R. J. & R. S. Hileman	Republican . .	12-30-90	14	3	31
L. J. Holland . . . . .	Red Willow . .	1-30-91	16	3	28
C. J. Jones . . . . .	" " . .	2-16-91	16	3	28
C. J. Jones . . . . .	Republican . .	2-16-91	19	3	28
C. J. Jones . . . . .	Red Willow . .	2-16-91	7	3	28
C. J. Jones . . . . .	" " . .	4-15-91	16	3	28
C. J. Jones . . . . .	Republican . .	4-15-91	26	3	29
Andrew Carson . . . . .	" . .	5-7-91	27	3	30
L. J. Holland . . . . .	" . .	6-20-91	17	3	28
W. P. Grimes, W. S. Fitch.	Driftwood . .	11-10-93	12	2	30
Patrick Walsh . . . . .	" . .	4-24-94	4	20	94
William Byfield . . . . .	Republican . .	6-21-94	23	3	29
F. S. Wilcox . . . . .	" . .	10-5-94	32	3	29
E. N. Allen, H. P. Allen	" . .	2-1-95	2	3	26
J. F. Helm . . . . .	Red Willow . .	2-19-95	17	3	28
F. S. Wilcox . . . . .	Republican . .	5-2-95	32	3	29
Bartley Canal Co. . . . .	" . .	11-30-88	9	3	27
<i>Sioux—</i>					
J. W. Long, Geo. Todd, R. T. Walker, W. T. Long, R. A. Walker.	Sheep . . . . .	6-3-89	27	25	58
O. H. Phillips . . . . .	Niobrara . . .	9-17-90	12	28	54
O. H. Phillips . . . . .	" . . . . .	9-17-90	7	28	54
Marsland Irr. & Imp. Co.	" . . . . .	4-14-91	10	28	53
Chas. J. Grable . . . . .	White . . . . .	6-17-91	23	31	53
John Maycock . . . . .	Wind Springs	2-20-92	12	24	54
Nels Anderson . . . . .	Jim . . . . .	7-28-92	8	33	56
O. A. Garton . . . . .	Spring Branch	10-16-93	31	33	56
G. W. Nation . . . . .	Springs . . . .	9-24-94	31	24	53
L. W. Parrott . . . . .	Niobrara . . .	2-12-95	7	28	53
James Felch . . . . .	White . . . . .	2-14-95	23	31	53
Henry Warneche . . . . .	Running Wat.	2-23-95	27	31	57

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
SIOUX—Continued.					
Eli J. Wilcox.....	Big Monroe..	2-20-95	33	33	56
Chas. E. Schilt.....	Cedar.....	2-23-95	35	33	56
“ “.....	Prairie Dog..	2-23-95	35	33	56
“ “.....	Little Monroe.	2-23-95	27	33	56
John E. Eberspecher..	East Hat....	4-22-95	15	32	55
Walter B. Woodruff....	Jim.....	4-22-95	14	33	57
George Turner.....	Antelope....	4-16-95	26	34	57
Charles Biehle.....	Spring Branch	4-22-95	32	33	56
Leonard Dant.....	N. Warbonnet	4-18-95	30	33	56
Leonard Dant.....	“ “	4-18-95	30	33	56
B. F. Moore.....	Niobrara.....	4-18-95	9	28	58
W. R. Dove, E. C. McDowell, G. Brown, D. A. Publon, C. Grove, S. W. Carey, J. W. Grove, A. C. Dove....	Cottonwood..	4-22-95	6	32	53
Cornelius Jordon.....	Monroe.....	4-27-95	14	33	56
William Slattery.....	Jim.....	4-23-95	13	33	57
William Bourrett.....	Running Wat.	4-24-95	33	30	56
Wilhelm Noreisch.....	Warbonnet..	4-27-95	5	32	56
John J. Rodgers.....	Soldier.....	4-22-95	5	31	53
Robert Harrison.....	White Head..	4-16-95	13	33	54
Benjamin E. Brewster..	Warbonnet...	6-1-79	21	33	56
Michael Ruffing.....	Cherry.....	5-31-93	39	33	54
William S. Hall.....	Spring.....	1-1-89	25	32	55
Richard Zerst.....	Little Red...	3-13-93	6	33	56
William A. Bigelow....	Niobrara.....	3-2-95	19	31	57
B. F. Johnson.....	“.....	3-2-95	36	31	57
Chas. F. Coffee.....	Hat.....	3-5-95	26	33	55
Andrew McKinley, W. C. Stover.....	Niobrara.....	3-6-95	23	29	59
J. W. Earnest.....	“.....	3-2-95	29	29	56
S. L. Ellis.....	Antelope....	4-27-95	25	33	57
R. T. Ellis.....	Warbonnet...	4-27-95	33	33	57
O. Harris, R. Neece...	Niobrara.....	3-18-95	3	28	55
Octave Harris.....	“.....	3-18-95	32	29	54

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>SIoux—Continued.</i>					
Warren S. Johnson . . .	Bull . . . . .	3-23-95	7	30	53
A. T. Hughson . . . . .	White . . . . .	3-25-95	26	41	55
W. Stover, A. McKinley	Niobrara . . . .	4-2-95	25	29	96
David Colville . . . . .	Kyle . . . . .	3-30-95	3	30	54
Wm. S. Hales . . . . .	Spring . . . . .	4-2-95	25	32	53
S. Jordon, S. Montgom'ry	Sow Belly . . . .	4-5-95	21	33	55
M. H. Green . . . . .	Deep . . . . .	4-13-95	9	30	53
J. W. Smith . . . . .	Boggy . . . . .	4-9-95	31	33	54
W. T. Forbes . . . . .	White . . . . .	4-9-95	23	31	53
Julius B. Burke . . . . .	Sow Belly . . . .	4-11-95	5	32	55
James McCann . . . . .	Warbonnet . . . .	4-13-95	12	33	56
O. A. Garton . . . . .	Spring Branch	4-15-95	31	33	56
Peter Bourrett . . . . .	Running Wat.	4-15-95	29	30	56
H. F. Zerbe . . . . .	Hat . . . . .	4-13-95	35	33	55
William Miller . . . . .	" . . . . .	4-13-95	23	33	55
Peter Schaefer . . . . .	Spring . . . . .	4-13-95	7	32	55
Peter Schaefer . . . . .	Sow Belly . . . .	4-13-95	7	32	55
William Martin . . . . .	East Boggy . . . .	4-20-95	7	32	54
<i>SCOTT'S BLUFF—</i>					
Farmers' Canal Co. . . . .	North Platte.	9-19-87	10	23	58
Minitare Cnl & Irr. Co.	" "	1-14-88	32	22	54
" " "	" "	1-14-88	32	22	54
Enterprise Ditch Co. . . .	" "	3-30-89	27	23	57
Castle R'ck I. C. & W. P. Co	" "	4-25-89	4	21	54
" " "	" "	5-14-89	4	21	54
Bayard Irr. D. & W. P. Co	" "	8-14-90	25	21	53
Charles A. Bouton . . . .	Winter's Sprs	8-21-89	3	2	54
Samuel & Eytchison . . . .	Horse . . . . .	6-11-90	34	23	58
Mutual Irr. & Water Co	North Platte.	6-23-90	27	22	55
William H. Stone . . . . .	" "	8-2-90	18	21	53
Bayard Irr. C. & W. P. Co	" "	11-30-90	...	...	...
C. W. Ford . . . . .	" "	11-18-90	10	23	58
Farmers' Canal Co. . . . .	" "	.....	10	23	58
Bayard Irr. C. & W. P. Co	" "	11-30-90	18	21	53
Chimney R'ck I. & W. P. Co	" "	12-10-90	1	20	53
Herman Mott . . . . .	Pole Canyon.	12-19-90	4	20	55

## ABSTRACTS OF NOTICES OF CLAIMS—Continued.

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
SCOTT'S BLUFF—Con.					
R. L. Elwood.....	Spotted Tail..	1-17-91	10	23	56
Belmont & Froid Canal & Reservoir Co.....	North Platte.	7-7-91	..	23	58
Samuel D. Daniels....	Horse Creek.	7-16-91	23	23	58
Alfred Eytchison.....	" "	9-5-91	34	23	58
John Emery .....	North Platte.	12-31-91	21	22	55
Theodore G. Conkling.	Spring .....	1-15-92	6	22	55
Theodore G. Conkling.	" .....	3-17-92	36	23	56
James E. Beach.....	Kiowa .....	3-14-92	24	21	57
Edwin A. Currie.....	" .....	3-25-92	13	21	57
William E. Bullock...	Owl .....	4-16-92	21	22	57
Robert M. DeLaMatter, Allen Lowry .....	Kiowa .....	5-17-92	21	22	57
William A. Hale.....	North Platte.	6-25-92	31	22	57
W. H. Walker.....	" "	9-22-92	21	22	55
Central Irr. Canal Co..	" "	2-9-93	27	22	55
Mid Way Ditch Co....	" "	3-22-93	21	21	53
David Kale.....	" "	3-20-93	12	21	54
Yorick & Carroll Nichols	" "	3-24-93	18	23	57
Short Line Irr. Cnl Co.	" "	5-9-93	30	21	52
Enterprise Ditch Co...	" "	8-18-93	27	23	57
John H. Kellums.....	Kiowa .....	12-11-93	11	22	58
John H. Kellums.....	Owl .....	12-11-93	12	22	58
Nine Mile Cnl. & R. Co	North Platte.	12-9-93	18	21	53
Right Hand Irr. Co...	" "	4-5-94	21	21	53
Joseph Maycock.....	" "	8-8-94	13	23	58
W. H. Walker.....	" "	11-30-94	21	22	55
Farmers Canal Co.....	" "	3-14-95	10	23	58
Short Line Irr. Cnl. Co	" "	3-19-95	12	21	53
Robert J. Harshman...	" "	.....	17	22	55
SHERIDAN—					
James Clark.....	Pine .....	6-12-93	33	30	44
B. S. Gillespie.....	Niobrara ....	2-2-94	19	30	43
B. S. Gillespie.....	" .....	2-13-94	19	30	43
Geo. C. Getchell.....	.....	4-11-94	27	34	45
U. S. of America.....	White Clay...	8-7-94	Res.		

ABSTRACTS OF NOTICES OF CLAIMS—*Concluded.*

CLAIMANT.	STREAM.	FILED.	S.	T.	R.
<i>SHERIDAN—Continued.</i>					
B. S. Gillespie .....	Niobrara .....	1-7-95	19	30	43
U. S. of America .....	White Clay ..	5-4-95	Res.		
Henry C. Ussher .....	Niobrara .....	5-23-95	19	29	46
Frank Stastny .....	Beaver .....	4-5-95	4	33	46
William Braddock .....	" .....	10-1-94	18	34	46
Sanderson & Sanderson.	Middle Loup.	6-18-94	9	23	28
G. L. Mathews .....	" "	6-15-94	7	23	28
John Spurgin .....	" "	8-8-94	10	23	28
Theford Irr. & P. Co.	" "	9-1-94	4	23	29
J. W. Purdum .....	" "	9-8-94	6	23	29
<i>VALLEY—</i>					
North Loup Irrigation & Improvement Co. ....	North Loup ..	9-30-93	26	19	14
North Loup Irrigation & Improvement Co. ....	" " ..	8-6-94	27	19	14
Sherman Co. L. P. & L. Co. A. Cully, J. Jorger, A. Wall, R. J. Nightin- gale, Carsten Truelson	Middle Loup.	8-20-94	26	17	16
<i>WHEELER—</i>					
A. S. Rowan .....	Cedar .....	9-22-94	22	21	12

## State Irrigation Association.

In the fall of 1894, the organization known as the "State Irrigation Association" was formed in the city of North Platte. Hon. I. A. Forte was elected president at its first meeting. A committee on irrigation legislation was appointed, consisting of Hon. J. S. Hoagland, of North Platte; Hon. R. B. Howell, of Omaha; and W. R. Akers, of Gering, Neb. This committee, in the fall of 1895, drafted the present irrigation law, both the district law and the law creating the State Board of Irrigation, and had the same presented to the legislature, which in due time became the law of our state.

This association has held four regular meetings. The first being held at North Platte; second, at Kearney; third, at Sidney; and fourth, at Lexington. It has grown to be a wonderful power in the state. The meetings have been very interesting and highly profitable, among which are notably the one at Sidney and the one at Lexington. The meeting at Sidney was held in 1895, at which Mr. A. G. Wolfenbarger, of Lincoln, was elected president, after having served one year as secretary. James McIntosh was elected secretary. There were very many valuable discussions held at this meeting, and immediately after its adjournment, Mr. Wolfenbarger, the new president, published the "Irrigation Annual," the first work of the kind published in the United States. This publication proved to be of very great interest and was very much thought of, by not only the people in the state, but by the people in all parts of the country, and the first edition was exhausted long before the demand was sup-

plied. Mr. Wolfenbarger so thoroughly demonstrated, not only his ability, but his enthusiasm in the cause of irrigation, that at the meeting in Lexington in 1896 he was unanimously chosen president for the second term, and is now engaged in preparing the "Irrigation Annual" for 1897, which is expected to contain a great amount of very valuable information, and its publication is looked forward to with great interest. The meeting at Lexington in 1896 was a great success, and at its close the association was regularly incorporated under the laws of the state of Nebraska, and will hereafter be known as the "Nebraska Irrigation Association," and it is confidently believed that in the very near future this association will become a great power in educating the people along the lines of irrigation. It is confidently expected and earnestly hoped that all who are interested in irrigation will come to the support of this new organization and assist in making it what it should be, an important factor in the spreading of the gospel of irrigation in our young state.

One of the things most needed in the publication of this annual, and in making this association a great success in the future, is liberal financial support of the people of the state. Let every Nebraskan who desires to see his state stand in the very front rank of irrigation states come to its assistance and contribute, not only his time, his energy, and his brain, but also his means. It is believed that the right men are at the head of the association, and their sympathies are enlisted in the cause, and if they only have the proper support of the people, that great good will be done in the state of Nebraska by and through its influence.

I cannot think of closing this report without making favorable mention of the people who have been so closely

connected with me in this office during the time of my incumbency.

At the time Mr. Howell resigned, and I was advanced to the position of secretary, Mr. E. T. Youngfelt was appointed assistant secretary, and he has proven himself a valuable acquisition to the office. He was first assigned the task of making large maps of the different water-sheds of the state, which he accomplished in a very credible manner, some of them being very large. Blue prints of these maps may be seen on the walls of the office. He was then in connection with Prof. O. V. P. Stout, of the State University of Nebraska; assigned the measurement of the different streams of the state, and between these two able engineers a large amount of work along that line, for the amount of time and means they have had at their command, has been accomplished.

Owing to the limited appropriation for extra help in the office, under secretary, Frank Bacon, was retained in the office by Mr. Howell during his incumbency, and I have done the same. Much important work has been assigned him, and his efficiency has been demonstrated by the excellence and volume of work performed. He is conscientious, pains-taking, and industrious.

Adna Dobson, of Lincoln, was appointed under secretary for Division No. 2 shortly after I advanced to my present position, and has proven a very valuable man to the office. Besides being a competent engineer, he is an honest and industrious worker, having the interest of the state always at heart. Besides the routine business of the office, of which he has done much, he has been entrusted with some very important investigations, which he has faithfully performed, as will be seen by reference to his reports to me.

I have retained the same clerk and reporter employed

by Mr. Howell. Harry A. Scott has acted as clerk and reporter in all the hearings, and has traveled with me in almost every part of the state, and has been employed constantly while in the office as clerk and reporter. I have always found him industrious, quick, and accurate, and possessing the very best qualifications for his business.

Miss Fannie Steinmetz has acted in the capacity of stenographer and typewriter in the office, and has accomplished a great deal of work. She has always been faithful, honest and pains-taking and rarely makes a mistake.

Both these stenographers have worked for less money than is paid for like work in other offices in the building, for the simple reason that there was no money to pay them except as collected from the people for whom the work was done.

And last, but not least, I desire to mention the Board, Governor S. A. Holcomb, H. C. Russell, Commissioner of Public Lands and Buildings, and A. S. Churchill, Attorney General. Our relations have been most pleasant and agreeable. We have had many important cases to settle, and some very vexatious contests and knotty legal questions to wrestle with, and in every case have the Board affirmed my findings, and in every case has the affirmation been unanimous, save one, in which one member of the Board dissented, and I have, and do now believe, that a better acquaintance with the testimony and circumstances in that case would have made that unanimous likewise.

The people wherever we have gone in our official work have treated us with great respect. On the whole, our connection with the State Board of Irrigation has been very pleasant, and I sincerely hope it has not been without profit to the people who are interested in irrigation

and to the state in general; and I also hope that the people and the legislature will continue to extend their best wishes and assistance to the Board and its secretaries and officers in the future, and that time may prove that the establishing of this Board was a move in the right direction and a great step in advance in irrigation matters, and that the most sanguine hope of the supporters of this law may be fully realized, and Nebraska take first rank among the irrigating states of the country.

W. R. AKERS,  
*Secretary.*

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