

REPORT
OF
STATE BOARD OF IRRIGATION
OF
NEBRASKA
1897-98

WILSON

SECOND BIENNIAL REPORT

OF THE

State Engineer, Secretary

OF THE

STATE BOARD OF IRRIGATION

TO THE

GOVERNOR OF NEBRASKA.

1897 AND 1898.

LINCOLN, NEB.
JACOB NORTH & CO., PRINTERS
1899

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 " " " and tributaries in Deuel county.
 " " " and tributaries in Keith county.
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 North Platte, South Platte, and Platte rivers and trib-
 utaries in McPherson and Lincoln counties.
 Platte river in Dawson county.
 Platte river in Buffalo, Phelps, and Kearney counties.

LINCOLN, NEB., November 30, 1898.

To The Honorable Silas A. Holcomb, Governor:

SIR—In accordance with the provisions of section 10, article 1, of the irrigation law of the state of Nebraska, I have the honor to submit the following report of the work of this office during the past two years.

Yours very respectfully,

J. M. WILSON,
State Engineer, Secretary.

LIST OF OFFICERS IN CHARGE OF PUBLIC
WATERS IN NEBRASKA.

STATE BOARD OF IRRIGATION.

Silas A. Holcomb, Governor.

C. J. Smyth, Attorney General.

J. V. Wolfe, Commissioner of Public Lands and
Buildings.

ADMINISTRATIVE OFFICERS.

Silas A. Holcomb, President.

J. M. Wilson, State Engineer, Secretary.

A. B. McCoskey, Assistant Secretary.

H. H. Pickens, Under Secretary for Division 1.

J. J. Adams, Under Secretary for Division 2.

Fannie Steinmetz, Stenographer.

C. B. Channel, Assistant Engineer on field work.

R. P. Scott, Assistant Engineer on field work.

Glen E. Smith, Assistant Engineer on gaugings.

UNDER ASSISTANTS.

James Dayley, Water District No. 1, Water Division
No. 1-A.

R. H. Willis, Water District No. 2, Water Division
No. 1-A.

I. A. Young, Water District No. 3, Water Division
No. 1-A.

C. J. Osborn, Water District No. 1, Water Division
No. 1-E.

Robert Busch, Water District No. 1, Water Division
No. 1-B.

REPORT.

REVIEW OF WORK.

STATE BOARD OF IRRIGATION FOR 1897 AND 1898.

In the report of the secretary of the board, dated November 30, 1896, it is stated that the total number of claims under the old law and cases growing out of these claims, entered on the records of the board for adjudication at that date, was 940, of which 340 had been disposed of. Since the date referred to in his report November 30, 1896, twenty-one additional cases have been filed, making a total of 995 cases of this kind on the records of the board since its organization. Of these 947 cases have been passed upon by the secretaries, leaving on November 30, 1898, forty-eight cases on which no action has been taken. Of these forty-two are claims and six are contests. In addition to the above, there are twelve cases for rehearing before the secretary and one appeal to the board from the decision of the secretary.

There were on file, November 30, 1898, 361 applications for appropriations of water under the present law, of which nine had been acted upon at that date by the secretary. Since November 30, 1896, 125 new applications have been filed, making a total of 486 applications under the present law, up to November 30, 1898. Of these 103 have been allowed and twenty-four have been dismissed or abandoned, leaving 359 applications yet to be examined and disposed of.

Since the last report, 13 cases have come before the

board on appeal, all of which have been passed upon, except one which was received after the last meeting.

The appropriations made by the last legislature for the ensuing biennium, beginning April 1, 1897, and ending April 1, 1899, are as follows:

Salary of secretary, \$2,500.

Salary of assistant secretary, \$2,000.

Salary of two under secretaries, \$3,200.

Salary of stenographer, \$1,600.

Field help, \$1,000.

Postage, \$300.

Instruments, draughtman's tools and stationery, \$500.

Expenses of engineers and assistants, \$500.

The expenditures up to date have been as follows:

Salary of secretary, \$1,875.

Salary of assistant secretary, \$1,666.64.

Salary of under secretaries, \$2,519.80.

Salary of stenographer, \$1,333.28.

Field help, \$982.73.

Postage, \$135.53.

Instruments, draughtman's tools, stationery, \$533.90.

Expenses of engineers and assistants, \$500.

This leaves balances, November 30, 1898, as follows:

For salary of secretary of board \$625.

For salary of assistant secretary, \$333.36.

For under secretaries, \$680.20.

For stenographer, \$266.72.

For field help, \$17.27.

For postage, \$164.47.

Expenses of engineers and assistants, all expended.

Instruments, draughtman's tools and stationery, a deficiency of \$33.90.

Under the rule of the board fixing a stenographer's fees for taking and transcribing oral testimony offered at hearings, there was collected by stenographers fees as follows:

Geo. Corcoran for taking and transcribing 3,128 folios, \$618.50.

John G. Maher for taking and transcribing 603 folios, \$109.65.

The fees collected by Mr. Corcoran were retained by him. Those collected by Mr. Maher were turned over to the secretary. Out of this fund there has been paid to John G. Maher for stenographer's work and transcripts \$75.37, to Bessie E. Gilmore for making extra copies of parts of these transcripts \$3.20, leaving from this source a balance unexpended of \$31.08.

There has been collected, for preparing copies of records for the use of the claimants and attorneys, fees to the amount of \$16.85, of which there has been expended in procuring outside assistance for making these copies \$11.85, leaving a balance of \$5 in this fund not expended.

The amount of work required for the proper adjudication of the claims before the board has been greatly in excess of the force and means provided, and the secretary finds himself much crippled for lack of means to carry forward the investigations of the claims and appropriations still pending before the board. It is due to the board and the appropriators that the work of adjudication of these claims should be finished at as early a date as practicable, and that the board should be permitted to enter fully on the second and more important part of its the administration and distribution of the waters of the state to the claimants.

The law as a whole is working as satisfactorily as could be expected, when we consider the confusion which existed when the board was organized and the complicated nature of the problem with which the board is called to deal. The conditions with which the settler who would win a home in the arid and semi-arid regions of the West is confronted are all new and strange. The climatic conditions demand new uses for the waters of the streams. The principles of the common law, which were admirably fitted to the uses of water in the humid climate where they originated, are totally inadequate and inapplicable to the new conditions. That there is confusion is not strange. The work of the board is to evolve out of this confusion a peaceable and orderly solution of the complicated problem.

NEEDED AMENDMENTS.

Attention is called to some minor changes which it is believed should be made.

TIME DISTRIBUTION OF WATER.

Provision is needed for a time distribution of water to claimants having small appropriations. Under the law, the maximum allotment of water for irrigation is 1-70 of a cubic foot per second for each acre reclaimed. On many of the small streams the areas susceptible of irrigation are limited to a few acres, often only a garden. There may be water enough in the stream at the maximum allowance for all the appropriators, but if each claim is restricted at all times to this allowance, the volume allowed to each is so small that it is impossible to distribute the water to the crops. If the full flow of the stream or so much of it as the appropriator is able to use without waste could be allowed to each for a limited

time, the crop could often be irrigated in a few hours without waste of water and with a great saving of time in the distribution. The time allotment should be proportioned to the area to be irrigated, due regard being had to the rights of prior appropriators.

REPORTS.

There should be provision for a report from each claimant as to the amount and kind of crops to be irrigated.

In times of scarcity of water each claimant is restricted to the volume actually needed by the crop to be irrigated at that time. When an under assistant is called to supervise the distribution of water, he needs to know the area under crop at that time needing irrigation. If he must determine this after he is called to distribute the water, valuable time will be wasted and crops may be ruined before he can secure the necessary information. If, at the beginning of each irrigating season, a report were required from each water user as to the amount and kind of crops to be irrigated during that season, the problem of distribution would be much simplified to the under assistant and the service correspondingly improved.

EXAMINATION OF PLANS AND ESTIMATES FOR IRRIGATION DISTRICTS.

Propositions for bonding irrigation districts should not be submitted to vote until the plans and estimates have been examined and approved by an officer of the board. The law as it stands is open to grave abuse. Lands that are in nowise benefited are often included in districts and taxed for the construction and maintenance of ditches. After the bonds are issued, these lands are part of the security for the payment of the bonds, and

there is no way of securing a release of lands not benefited except through the consent of the bondholder and a majority vote of the electors of the district. To secure the release of such lands when there are outstanding bonds is practically an impossibility. The cost of construction and maintenance is not always proportioned to the value of the lands reclaimed nor to the market value of the crops which can be produced. The estimates as to cost are in some cases inadequate and misleading. The amount of unappropriated water is not always carefully estimated. If serious mistakes are made in the estimates on any of these last three items, the result is disastrous alike to the owner of the land and to the purchaser of the bonds. It is believed that some safeguard should be provided against these errors.

REGISTRATION OF BONDS.

When the district law was passed, the necessity for registration of the bonds seems to have been overlooked. This should be remedied by an amendment providing for the registering of these bonds with the auditor of state, as in the case of other bonds.

ADJUDICATION OF CLAIMS FOR POWER.

5. Some further provision should be made for securing the adjudication of claims for power purposes on streams in middle and eastern Nebraska, where irrigation is as yet but little practiced, but where there is a growing demand for the use of water. On the streams of eastern Nebraska, there are many valuable mill claims, established before there was any special legislation as to the use of water. Of many of these claims we have no record. The appropriations for irrigation from these streams are as yet few in number and small, but, with increasing

knowledge of the possibilities for and the benefits to be derived from irrigation, the demand is growing. Ultimately all the unappropriated water will be made use of.

Inquiries concerning the appropriations from these streams are often addressed to this office by parties who desire to use the water. With an incomplete record, the answers can not be satisfactory. When an application is filed on such a stream, no action can be taken without a special investigation to determine what uses have already been made of the water. An amendment which would compel registration of these claims would save the mill owners from much future trouble and anxiety, would facilitate the appropriation and use of the surplus water, and would greatly expedite the work of this office.

PRIOR RIGHT TO WATERS OF SPRING.

The clause of section 44, article 2, giving right to the owner of land on which a spring rises to the use of water as against all prior appropriators, should be repealed. The fundamental principle of our irrigation law is that the priority of an appropriation for a reasonable beneficial use shall be protected. The water of a stream at its normal flow is the aggregate of the waters of the springs which flow into it. Each of these springs has its rise on somebody's land. What special sacredness should attach to a stream flowing in an underground channel at the point where it reaches the surface as against the same stream flowing in a channel on the surface is not apparent.

That the owner of the land on which the stream rises should be protected in all beneficial uses that he has made of the water, and especially in its use for domestic purposes, is admitted, but that he should be allowed at any time and without warning to appropriate and use these waters to the detriment of those who have con-

structed works for their use and made valuable improvements based on such use is not reasonable. Grave difficulties have already arisen because of this provision, and more are likely to follow unless it is promptly repealed.

POWER TO ADMINISTER OATH, ETC.

Some inconvenience has been felt at times because the powers of the officers of the board when conducting hearings were not well defined. This should be remedied by an amendment giving the secretary and under secretaries, when conducting hearings, power to administer oaths, to issue subpoenas, to compel attendance of witnesses, and to enforce proper order and decorum in proceedings at such hearings.

OFFICIAL SEAL.

The secretary should also be authorized to provide the office with an official seal, and all papers of official nature should be marked with this seal.

PROTECTION OF RECORDS.

The records of the office consisting of certified copies of the original filings made with the county clerks, and the evidence, oral and documentary, furnished by the appropriators in support of their claims, has been brought together with more or less cost to the claimants and with great expense to the state. Much of this material could not possibly be reproduced if lost. The rights of these claimants to the use of water based on this evidence are far more valuable in many cases than the deeds to the lands reclaimed. At present all these records, which must be referred to daily, are kept in the office in the third story of the capitol. In case of fire, these documents would likely be destroyed. Some steps should be taken to provide the necessary vaults for the protection of these records.

ADJUDICATION ON HAT CREEK AND ITS TRIBUTARIES.

The first work to which your secretary addressed himself on taking charge of the office was the adjudication of the pending claims on Hat Creek and its tributaries.

The lands in this region are rugged and, for the most part, suitable only for grazing. A small area fit for cultivation in the valley of one of the many small streams which intersect this country, with water assured for its irrigation, provides the conditions for the establishment of a home. The rough lands furnish abundant pasturage for stock. The irrigated lands provide the comforts of a home for the settler's family, and winter feed for his stock when the range will not support them. With these conditions assured, the settler can establish himself here with a fair prospect of success. Without such a location, there is no place for him. He must move on. These streams are all small, the claimants many, and the aggregate amount of water claimed far in excess of the total flow of the streams. It soon became evident that no intelligent progress was to be made toward a proper solution of the difficulties, except through a personal inspection of the works constructed and a survey of the lands irrigated.

The location of the streams and ditches and the lands to be irrigated, as given in the plats filed by the claimants, is very inaccurate. The most serious difficulty is found in determining the area irrigated. A very common error is to claim water for a whole quarter section where perhaps only a few acres can be watered. Justice to those making later appropriations makes it necessary to correct these errors by a more or less accurate survey. Where the country is rough and the land lines not well defined, this involves much laborious travel and difficult work.

Much of the time of the assistant secretary and the assistants, who could be employed with the small appropriation for field help, has been given to the surveying and mapping of these claims. The method pursued in this work is first to make a tracing of the government plat of each township in which a ditch is located. From this a blue print is made for use in the field. While the location of the streams within the sections is not always correctly shown by these plats, the intersections of the streams with the section lines are generally reliable, and the blue print thus prepared furnishes a good basis for the survey of the claim. Before leaving the office the canal as it appeared on the plat furnished by the claimant was sketched in on the blue print. From the survey made on the ground the prints were corrected and the results transferred to the tracing in the office. So far as possible this method has been adhered to in all the field work.

A tracing of the government plat for each of the townships in the state in which irrigation is practiced has been prepared. On these the ditches as surveyed are platted. The plats are made on the scale of two inches to the mile and will, when this work is finished, make a complete graphic record of the progress of irrigation in the state, a record which is indispensable for the work of the office and which will be of great value to all who need information concerning the land reclaimed.

These surveys, with the evidence in the office concerning these claims, were made the basis of the adjudication with results generally satisfactory to the claimants.

CONDITIONS AS TO APPROPRIATION OF WATER.

Though under this examination the acreage for which water is claimed is perceptibly reduced, it is still found

that the ordinary flow of water in the streams of this region is very closely appropriated. But as the areas irrigated are generally small and close to the streams, much of the water diverted reappears below as seepage and can be used again on other lands. More lands are irrigated than would appear at all possible from the measurement of a stream at any one point.

APPROPRIATION OF STORM WATER.

Further development is possible from the storage of storm water. At present most of this is lost. On account of the rugged nature of the country and the rapid fall of the streams, storm waters are quickly discharged, and even after a heavy rain the effect appears in the streams for only a few hours. There are many excellent reservoir sites that could be utilized for the storage of these waters with but little expense. Some work is in progress along this line, and much more is possible.

DAMS.

Some controversy has arisen concerning dams and obstructions in the streams of this region. The rapid fall of the streams does not permit the storing of a large volume at any one point. The area submerged being small the loss from evaporation is not great and the leakage which is always considerable from these imperfect and temporary structures helps to equalize the flow. It is believed that these dams should be protected and that, with proper restrictions, the construction of others should be encouraged.

The following table shows briefly the findings of the secretary in the adjudication of claims on Hat Creek and its tributaries:

CLAIMS ADJUDICATED IN DIVISION 2-E.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED	LOCATION OF HEADGATE.			DATE OF PRIORITY.			DOCKET NO.
				S.	T.	R.	M.	D.	Y.	
Antelope creek.....	Turner, George..	Irrigation.	6-7	26	34	57	Oct.	31	94	537
Boggy creek	Holly, Thomas...	"	4-35	30	33	55	Dec.	31	88	956
"	Smith, J. W.....	"	2-7	31	33	54	May	1	92	526
Boggy cr. Middle br.	Bannon, James F.	"	2-35	7	32	54	July	1	86	560
Cedar creek.....	Schilt, Chas. E..	"	4-7	35	33	56	May	15	85	507
Cherry creek.....	Ruffing, Michael	"	1-35	29	33	54	May	1	93	549
Hat creek.....	Brewster, Benj. E	"	13-14	16	32	55	June	1	80	†553
"	Coffee, Chas. F...	"	2 5-14	26	33	55	Sept.	1	81	*512
Jim creek.....	Nolan, James....	"	5-14	14	33	57	May	1	90	536
"	Anderson, Nels...	"	3-7	8	33	56	Dec.	15	90	502
"	Slattery, Wm....	"	2-7	13	33	57	May	31	91	543
Little Red creek....	Zerbst, Richard..	"	1-7	25	33	56	May	1	93	551
Monroe creek.....	Wilcox, Eli J....	"	1 3-7	33	33	56	May	1	88	506
"	Schilt, Chas. E...	"	1-2	27	33	56	July	2	88	509
Prairie Dog creek..	Schilt, Chas. E..	"	1 1-7	35	33	56	May	31	86	508
Sow Belly creek....	Schaefer, Peter..	"	3	7	32	55	June	1	87	533
" "	Montgom'y, Sarah	"	1	21	33	55	Dec.	1	90	559

† Contested. * Rehearing pending.

Sow Belly creek...	Jordan, Sarah...	Irrigation	2-7	21	33	55	June	195	556
Spring crk. (Trib. to Sow Belly creek)	W. S. & F. M. Hall	"	4-7	6	32	55	Mar.	2689	550
Spring Branch.....	Schafer, Peter...	"	2-7	7	32	55	Jan.	193	532
Spring Br. (Trib. to So. Warbonnet)..	Garton, O. A....	"	1 3-7	31	33	56	Apr.	191	538
Spring Br. (Trib. to Warbonnet).....	Kay, John L....	"	1-7	26	33	57	May	187	958
Spring Br. (Trib. to S. Warbonnet)...	Biehle, Charles..	"	8-35	32	33	56	Apr.	191	538
Spring Br. (Trib. to N. Warbonnet)..	Nolan, James....	"	1-70	23	33	57	Mar.	1587	957
"	Nolan, James....	"	2-7	23	33	57	May	188	959
Squaw creek.....	Dunn, Thomas...	"	5-14	15	33	57	June	190	552
"	Hamlin, Doug. N.	"	1-70	10	33	57	April	191	555
Warbonnet creek...	Brewster, Benj. E.	"	2 6-7	21	33	56	July	3180	548
Warbonnet cr (N Br. of S Br).....	Anderson, John..	"	5-7	30	33	56	May	3189	539a
"	Anderson, John..	"	2-7	30	33	56	Dec.	3191	539b
Whitehead creek...	Harrison, Robt...	"	2-35	13	33	54	May	3088	547

WHITE RIVER AND ITS TRIBUTARIES.

On the conclusion of the surveys on Hat creek, the work was transferred to White river and its tributaries. The conditions prevailing on the upper part of White river and on the tributaries are practically the same as in the Hat creek country, and the statements made in that connection apply here. Below Ft. Robinson the valley widens, and in the vicinity of Crawford and Whitney there are considerable areas of smooth, fertile land suitable for irrigation. Expensive works have been constructed by several different parties, each of whom claims the right to use most of the water of White river. The measurements of this stream taken under the direction of the Board range from eighteen to thirty-one cubic feet per second. The total volume which it is proposed to divert under four appropriations is 324 second feet. The areas actually susceptible of irrigation and covered by these four ditches already constructed, and all claiming water from White river, aggregate 10,714 acres. At the legal allowance of one cubic foot per second to seventy acres, this would require a volume of 153 cubic feet per second.

The matter is further complicated by mill claims whose presence here has apparently been ignored by parties constructing the irrigation works. All these claims were inaugurated under the law in force prior to April 4, 1895, when the present law was enacted. A better illustration of the evils of a lack of supervision in water appropriations than is furnished in this valley would be difficult to find.

The difficulties growing out of these complications have resulted in much controversy. The taking of the testimony in the contests growing out of these claims has con-

sumed some fifteen days of the time of the Secretary and of an expert stenographer. The testimony when transcribed covers more than 1,200 pages of typewritten matter. The briefs aggregate some 350 pages more. The Secretary hopes to have all these contested cases disposed of before the end of the year. All the other claims in this division have been passed on except one or two belated cases which came in after the surveys were completed.

The following table gives the findings of the Secretary in the adjudication of claims on White river and its tributaries so far as completed.

CLAIMS ADJUDICATED IN DIV. 2-D.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Ash creek	Compton, W. L. . .	Irrigation.	1-35	12	32	51	July	15 93*	455
Ash creek (East Br.) . . .	Tomlin, Harrison B	"	2 6-7	31	32	50	May	31 80	447
"	Aird, Ida L.	"	1 1-7	32	32	50	July	1 88	438
Ash creek (West Br.) . . .	Vetter, Andrew . . .	"	1	2	31	51	July	31 84	428
"	Broadhurst, N. et al	"	1 31-50	36	32	51	July	4 93	452
Beaver creek	Braddock, Wm. . . .	"	5-14	18	34	46	April	15 95	423
"	Braddock, James F	"	3-70	1	34	47	April	15 95	974
Bull creek	Johnson, Warren S.	"	2-7	7	30	53	Mch.	13 95	519
Bordeaux creek	Locket, Thos. E. . .	"	1-14	11	32	48	June	30 86	494
"	Richards, H. B. J.	"	1-7	36	33	48	Sept.	10 90	430
"	Bryant, Samuel A.	"	2-7	14	33	48	Feb.	4 91	434
"	Hall, Oscar W. . . .	"	1-14	15	33	48	Mch.	1 91	437
"	Richards, H. B. J.	"	5-14	36	33	48	Sept.	7 92	446
"	Adams, Smith L. . .	"	1-7	2	32	48	Mch.	5 93	450
"	Bacon, J. D.	"	3-14	21	34	48	July	1 94	445
"	Morrissey, Martin.	"	3-35	15	33	48	Aug.	25 94	491
"	McAvoy, John H.	"	.....	28	34	48	dismi ss ed		436
Bordeaux Little	S. & C. Hartzell. . .	"	4-7	13	33	48	June	1 93	448
"	Butler, John A. . . .	"	4-35	33	33	47	June	1 94	443

* Rehearing pending.

Chadron creek	Gallup, W. S.	Irrigation.	3-35	15	33	49	Dec.	20	90	426
"	Wilson, Henry M.	"	1-5	12	32	49	July	13	93	453
"	Wilson, Wallace W.	"	1-14	12	32	49	July	14	93	454
"	Record, A. A.	"	4-7	1	32	49	June	17	94*	468
Cottonwood, Little	Stuart, John	"	5-14	8	32	52	Dec.	21	90	425
Dead Horse creek	Kemery, John	"	1-70	32	32	49	Sept.	1	90	493
"	Woodruff, F.B.&E.	"	1-35	32	32	49	April	10	91	427
"	Goff, Lowell L.	"	6-35	9	31	49	Aug.	27	93	457
"	Harley, James	"	1-70	32	32	49	Aug.	1	94	488
"	Norton, I. W. & O.S.	"	.....	4	31	49	Dismiss			440
"	Norton, I. W.	"	.....	4	31	49	Dismiss			439
Deep creek	Green, M. H.	"	2-35	9	30	53	May	1	87	525
Hooker creek	Uhlig, Max	"	1	7	31	51	Dec.	31	89	492
Indian creek	Seegrist, Isaac	"	1-35	3	31	50	Nov.	1	93	489
"	Flood, Millard F.	"	1-14	33	32	50	Feb.	13	94	460
Kyle creek	Collville, David	"	4-7	3	30	54	June	30	82	552
Sheridan creek	Getchell, Geo. C.	"	1-14	27	34	45	Aug.	1	94	418
Soldier creek	Rodgers, John J.	"	1-7	5	31	52	April	30	83	546
Spring Branch (Tributary to White R.)	Tucker, Jonathan S.	"	6-35	34	31	54	June	1	83	557
Spring creek (Trib. to Little Cottonwood.)	Pinney, B. G.	"	6-7	13	32	52	May	10	94	466
" (Trib. to Little Cottonwood.)	Demmon, Orson J.	"	2	7	32	51	Dec.	1	94	473
" (Trib. to Little Cottonwood.)	Balzer, Henry	"	.....	8	32	51	Dismiss			472
" (Trib. to Little Cottonwood.)	Harris, A. V.	"	.....	8	32	51	Dismiss			472
Springs (Trib. to Dead Horse creek.)	Goff, Theodore L.	"	1-7	30	32	49	April	2	91	441
Spring creek (Trib. to White river.)	Hales, Wm. S.	"	.....	25	32	53	Dismiss			523

* Rehearing pending.

CLAIMS ADJUDICATED IN DIV. 2-D.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.	
				S.	T.	R.	M.	D.		Y.
Trunk Butte creek	Smock, Marcus . . .	Irrigation	1-14	26	32	50	June	28	95	465
White River	Jacobsen, Martin . .	"	1-7	32	31	53	Oct.	1	82	561
"	Dietrichson, Nels .	"	3-14	1	30	54	Sept.	1	90	562
"	Rasher, Charles . . .	"	1 1-7	19	32	51	June	20	94	467
"	Welling, Nicholas . .	"	4-7	17	32	51	July	13	94	469
"	Swartz, Edward . . .	"	1-14	26	31	55	Mch.	15	95	520
"	Butterworth, J. H.	"	1-14	3	31	52	May	7	95	490

THE NIOBRARA.

The work on the Niobrara was not reached until late in the fall of 1897. Most of the claims on this river in Sioux and Dawes counties were examined during the fall and winter. On account of the inclemency of the weather, the work was discontinued in November. In the early summer of 1898, the remaining field work on the Niobrara river and its tributaries was taken up and completed. The Niobrara, where it crosses the state line from Wyoming, is a small stream gaging four or five second feet. From tributary streams and springs, it is gradually increased as it flows eastward, until, at Ft. Niobrara near Valentine, it is a river carrying at ordinary stages from 700 to 800 feet per second.

The valley of the upper Niobrara is wide with large tracts of fertile lands suitable for irrigation. The supply of water, however, is inadequate and the efforts at irrigation are confined for the most part to the low lands immediately adjacent to the stream. Much of this low land has been reclaimed and is used for the production of wild hay. The proximity of the open range on the uplands to the north and south of the Niobrara gives special value to this product and insures a good market for all that can be produced. The season for applying water to these hay lands coincides with the season of maximum flow in the stream, and as the lands are close to the river, much of the water applied returns to increase the flow in the later summer. At Marsland and a short distance below are mill claims older than most of the irrigating ditches. These interfere seriously with the use of water for irrigation on the stream above. The appropriations, however, on the stream below absorb all of the water passing the mills so that none is wasted.

In the eastern part of Sheridan county the valley nar-

rows and, through the remaining part of its course eastward, it flows through deep gorges and in narrow valleys between high hills, where there are few opportunities for diverting the water except at great expense. The valleys of the tributaries in the eastern Niobrara region are also narrow and the areas that can be irrigated are consequently small.

The accompanying table shows the claims from the Niobrara and its tributaries which have been passed on by your Secretary with results as indicated:

CLAIMS ADJUDICATED IN DIVISION 2-C.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Bear creek	Skinner, Thomas .	Irrigation .	8-35	15	32	21	June	20 88	609
Beeman creek	Barnard, Chas. O. .	"	3-7	21	32	20	June	1 92	603
"	Beeman, John D. .	"	1 2-7	23	32	20	May	20 92	620
"	Rickman, A. L. . . .	"	2-7	23	32	20	July	25 95	613
Bone creek	Ferguson, J. Y. . . .	"	.....	4	30	21	Dismiss ed		402
Crooked creek	Mutz, Otto	Irr. & power	^{1 for Irr.} _{3 for power.}	19	34	19	Dec.	31 89	608 (a)
Burton creek	Mutz, Otto	Irrigation .	4-7	19	34	19	June	30 95	608 (b)
Cottonwood creek	Morrissey, Tim	"	5-7	17	29	48	Feb.	16 95	481
Cross creek	Hutchison, Wm. H. .	"	3-14	8	33	24	Sept.	1 88	615
Cub creek	Tissue & Patterson	"	1-35	16	33	22	June	30 94	618
"	McCumber, S. S. . . .	"	1-10	28	33	22	Aug.	15 94	589
Elk creek	Johnson, J. T. . . . .	"	.....	8	31	19	Dismiss ed		391
Holt creek	Schoettger, F. J. . . .	"	1-7	32	35	20	Feb.	23 95	595
" east branch	Akers, Joseph W. . . .	"	1-7	1	34	21	Aug.	1 94	611
Huggins creek	Soper, H. K.	"	1-7	21	35	20	Nov.	6 94	592
Jewett creek	Jewett, Chas. P. . . .	"	5-7	5	32	21	Oct.	23 94	590
Keya Paha river	Yocum, J. C.	"	1 1-7	23	34	15	Sept.	7 94	573
Middle creek, east branch	McGuire, Mary W. . . .	"	5-7	32	33	23	June	1 84	606
" west "	Allen, Merritt M. . . .	"	1-2	29	33	23	June	1 91	616

STATE BOARD OF IRRIGATION. 27

CLAIMS ADJUDICATED IN DIVISION 2-C.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE.			DATE OF PRIORITY.			DOCKET NO.
				S.	T.	R.	M.	D.	Y.	
Newman creek	Newman, Philo...	Irrigation.	3-14	17	33	24	July.	188	617	
Niobrara river	Richards, Bartlett	"	7 1-7	130	57	Aug.	183	554		
"	Bruce, Andrew...	Power ...	60	16	33	24	April	186	610	
"	McGinley, Andrew									
"	Stover, W. C...	Irrigation.	4 4-7	25	29	56	May.	187	513(a)	
"	Palmer & Co., A. J.	"	7 ¹ / ₂ For Irr.	31	29	50	Aug.	187	442	
"	McGinley, Andrew									
"	Stover, W. C...	"	3 3-7	25	29	56	May.	190	513(b)	
"	Bigelow, Wm. A.,									
"	Seymour, Wm. W.	"	2 2-5	19	31	57	June.	891	510	
"	Harris, Octave,									
"	Neece, Robert..	"	5	3	28	55	July.	192	517	
"	Palmer & Co., A. J.	Power ...	10	31	29	50	Aug.	193	442	
"	Roll Milling Co...	"	35	5	28	51	Sept.	1093	970	
"	Hatch, G. W.,									
"	Cross, Wm. D...	Irrigation.	4-7	25	29	50	Jan..	1094	459	
"	Palmer, Lena....	"	5 5-7	28	29	50	Jan..	2794	461	
"	Noleman, Julia,									
"	Dorrington, M. C	"	.....	28	29	47	Dismissed		470

Niobrara river.....	Johnson, Ben. F..	Irrigation.	2 6-7	36	31	57	May	1 94	511
"	McLaughlin, A. H.	"	7 1-7	9	28	52	June	1 94	566
"	McMannis, Joseph Neeland, J. F.	"	6-7	29	29	49	June	15 94	463
"	Fienkin, Charles..	"	1	12	33	16	Oct.	1 94	575
"	McCulley, S. J...	"	8 4-7	25	32	20	Oct.	7 94	583
"	Wilson, John A...	"	5 5-7	18	32	21	Oct.	18 94	591
"	Mirage Irr. Co....	"	150	26	29	48	Nov.	28 94	474
"	Lichty, Henry....	"	1 3-7	27	29	48	Jan.	24 95	479
"	Warneke, Henry..	"	1 4-7	37	31	57	Feb.	13 95	505
"	McGinley & Stover	"	2 6-7	23	29	56	Feb.	25 95	521
"	Snow, Lorenzo ...	"	2 6-7	35	29	51	Mch.	26 95	485
"	Earnest, Joseph W.	"	2 6-7	9	29	56	May	1 95	514
"	Vincent, David C..	"	2 6-7	10	28	52	May	15 95	568
Pine creek.....	Clark, James.....	Power ...	32	33	30	44	June	5 93	415
Plum creek	Plum Ck. C. & I. Co.	Irrigation.	26	4	29	24	Dec.	18 94	405
Rickman creek	Byington, W. W..	"	1	22	32	20	May	19 91	582
Rock creek.....	Rock Ck. I. & P. Co.	"	6 3-7	33	32	18	Jan.	8 95	394
"	Eastlick, Benj. J..	"	5-14	29	32	18	Jan.	17 95	395
"	Wile, H.	"	6-7	9	31	18	April	3 95	397
Rock Springs creek.....	Van Koten, John..	"	1-14	25	33	22	Jan.	1 95	619
"	Moore, Wm. S....	"	1 3-7	12	32	22	June	30 97	593
"	Springer, Jesse N.	"	.....	1	32	22	Dismi	ss ed	605
Stream not named.....	Grant, C. G.....	"	1-7	4	31	20	Jan.	1 95	400

CLAIMS ADJUDICATED IN DIV. 2-C—Continued.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Snider creek.....	Pickler, W. S.....	Irrigation.	1-70	31	33	19	May	194	607
Spotted Tail creek.....	Rhodes, James G.	"	1-14	4	34	17	May	1795	601
Sweeney Canyon.....	Hornback, Joseph.	"	3-4	29	34	25	Aug.	1093	414
Wyman creek.....	McCulley, Robt. A.	"	4-5	19	32	19	June	1091	604
"	Horton, Isaac	"	1-7	7	32	19	June	594	587

THE PLATTE RIVERS.

In the spring of 1898, the work was begun on the unadjudicated claims on the Platte and its tributaries. These claims were scattered on both sides of the Platte river and its north and south branches from the east line of Kearney county westward to the Colorado line on the South Platte and to the east line of Scott's Bluff county on the North Platte. The surveys were completed early in July. With the exception of three cases in which there has been some delay in securing the necessary evidence, these claims have all been adjudicated.

The wide and fertile valley through which this stream flows offers an inviting field for the canal builder and the irrigator. The river after it enters the state has a regular fall of from six to nine feet to the mile, and the valley drops at about the same rate. The broad smooth slopes present few obstacles to construction and maintenance. The cost of preparing the surface for the easy distribution of the water is here at a minimum. The ditch builder has been prompt to realize his opportunities, and from the west line of Hall and Adams counties to the state line the valley is everywhere intersected with ditches. The accompanying maps give some idea of the extent to which these developments have been carried.

In the amount of water discharged, the extent of the works constructed, and the acreage under irrigation, the North Platte and Platte rank first in importance among the rivers of the state. The maximum discharge, as will be seen by reference to the gaging tables, occurs in May and June and the first half of July. In the later summer, the volume is considerably reduced by the many ditches taking water, as well as by the diminished flow from the mountains. The river bed is wide and sandy.

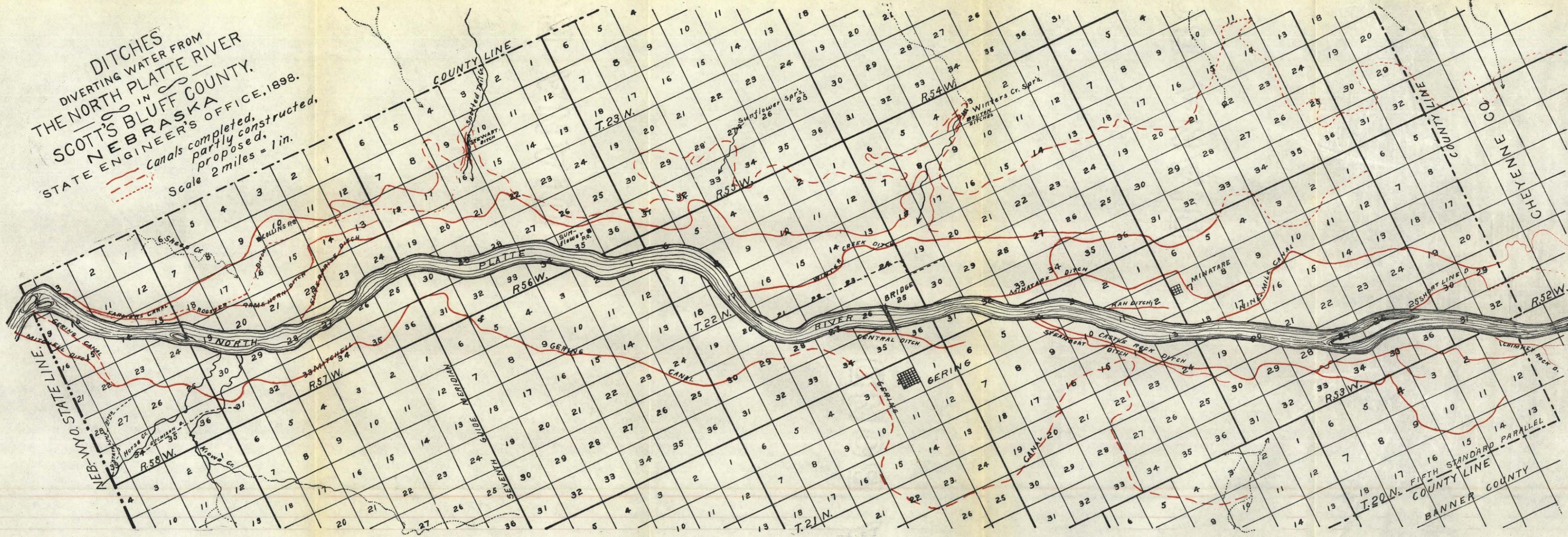
At low stages, when the water is confined to narrow channels, much of this sandy surface is exposed to air and sun and the evaporation and loss from sinking in the sand is enormous. One or two hundred feet will at such times often disappear within a few miles. At what point the loss becomes so great that the attempt to get water to the claimants on the lower part of the stream should be abandoned is a problem involving serious consequences to the appropriators.

The necessity of using all reasonable means to protect the prior appropriator is keenly felt, while the demand that the water shall not be wasted is equally imperative. It is believed that a system of bulletins giving reports of the condition of the stream at points above, from day to day, when the volume is failing, would save much water which now goes to waste. The busy farmer, with a crop not yet suffering, seeing plenty in the stream, expects to find it equally abundant a few days later when he will be ready to irrigate. If warned that a scarcity was imminent, he would lose no time in applying the water, which he now allows to waste. An arrangement of crops that would make use of the water earlier in the season, while it is abundant, would do much to relieve the difficulty.

The following table shows briefly the results of our adjudications on this stream.

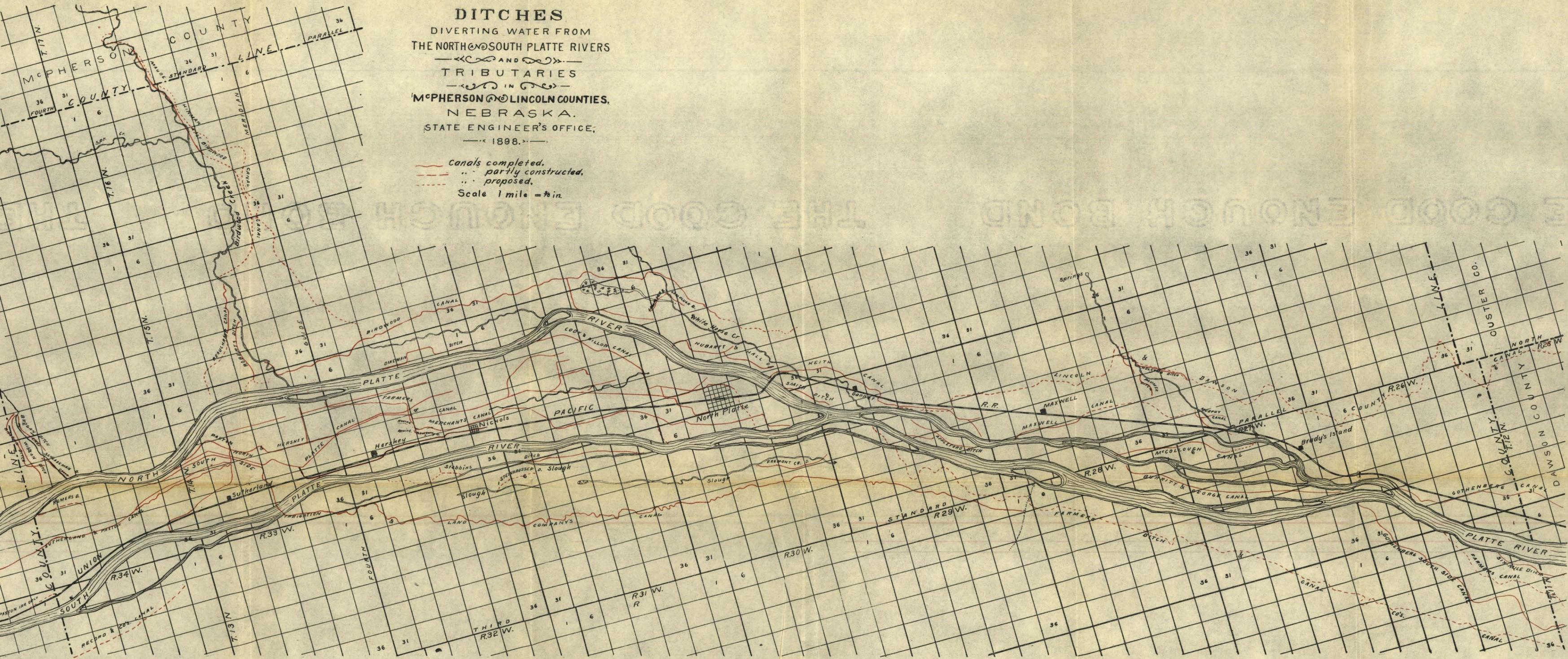
DITCHES
DIVERTING WATER FROM
THE NORTH PLATTE RIVER
IN
SCOTT'S BLUFF COUNTY,
NEBRASKA
STATE ENGINEER'S OFFICE, 1898.

Canals completed,
partly constructed,
proposed.
Scale 2 miles = 1 in.



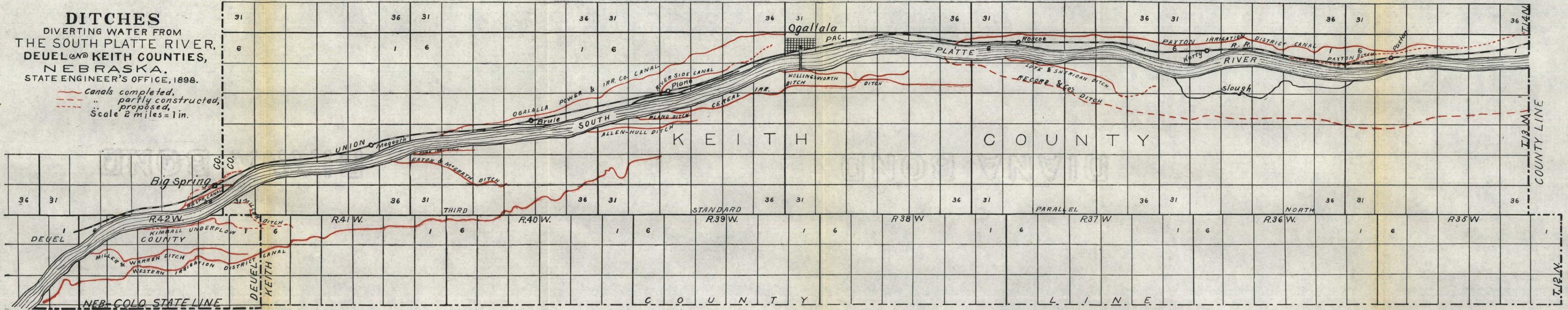
DITCHES
 DIVERTING WATER FROM
 THE NORTH & SOUTH PLATTE RIVERS
 AND
 TRIBUTARIES
 IN
 McPHERSON & LINCOLN COUNTIES,
 NEBRASKA.
 STATE ENGINEER'S OFFICE,
 1898.

— Canals completed.
 - - - partly constructed.
 . . . proposed.
 Scale 1 mile = 2/3 in.



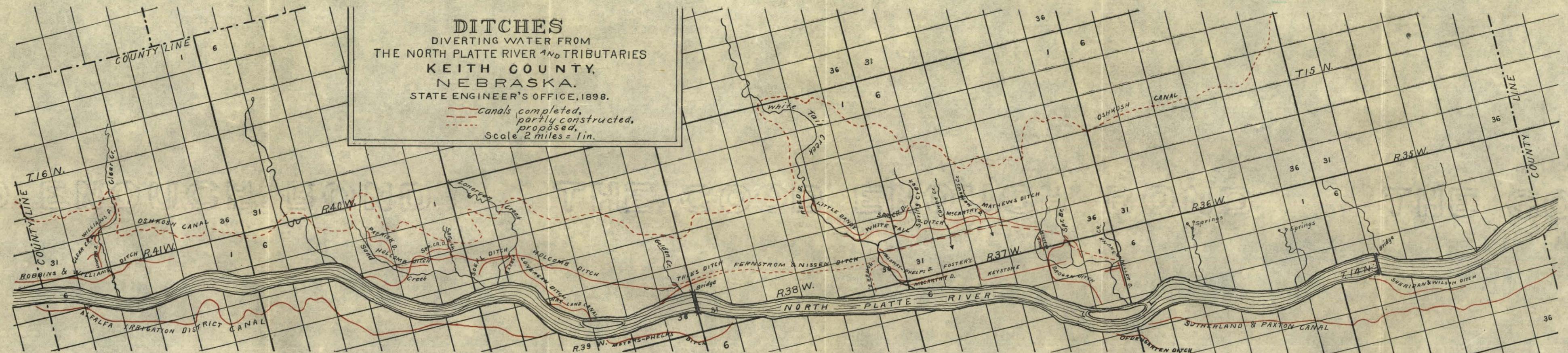
DITCHES
 DIVERTING WATER FROM
 THE SOUTH PLATTE RIVER,
 DEUEL AND KEITH COUNTIES,
 NEBRASKA.
 STATE ENGINEER'S OFFICE, 1898.

— Canals completed,
 - - - partly constructed,
 . . . proposed,
 Scale 2 miles = 1 in.



DITCHES
 DIVERTING WATER FROM
 THE NORTH PLATTE RIVER AND TRIBUTARIES
KEITH COUNTY,
NEBRASKA.
 STATE ENGINEER'S OFFICE, 1898.

— canals completed,
- - - partly constructed,
- - - - - proposed.
 Scale 2 miles = 1 in.



DITCHES

DIVERTING WATER FROM
THE NORTH PLATTE RIVER AND TRIBUTARIES

DEUEL COUNTY,
NEBRASKA;

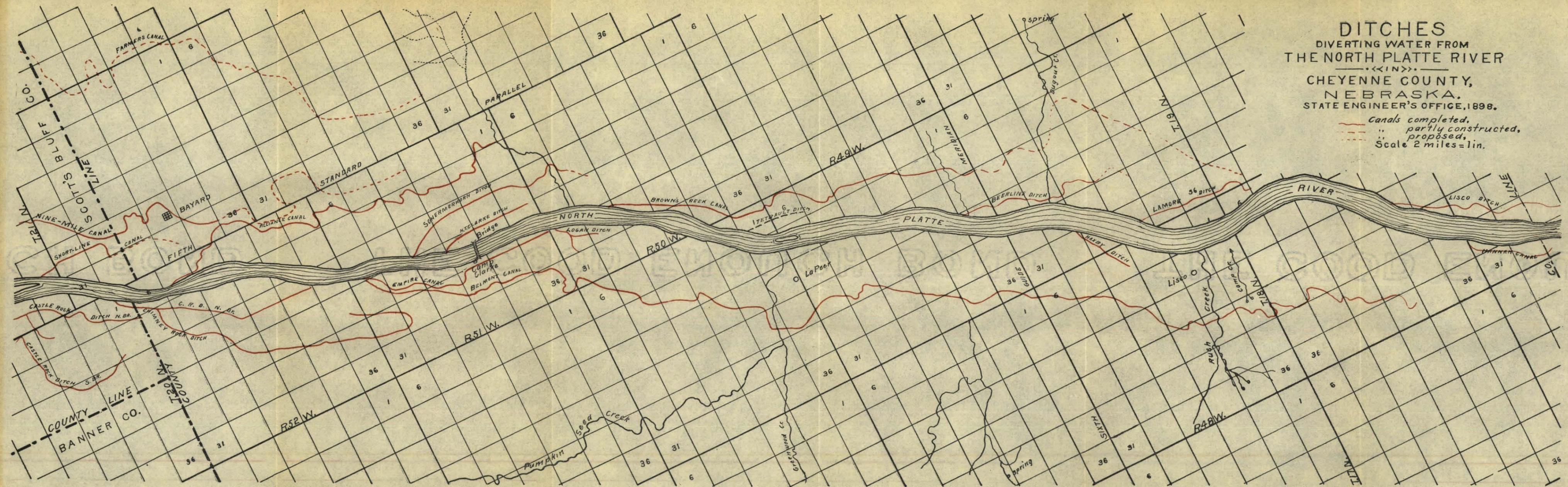
STATE ENGINEER'S OFFICE, 1898.

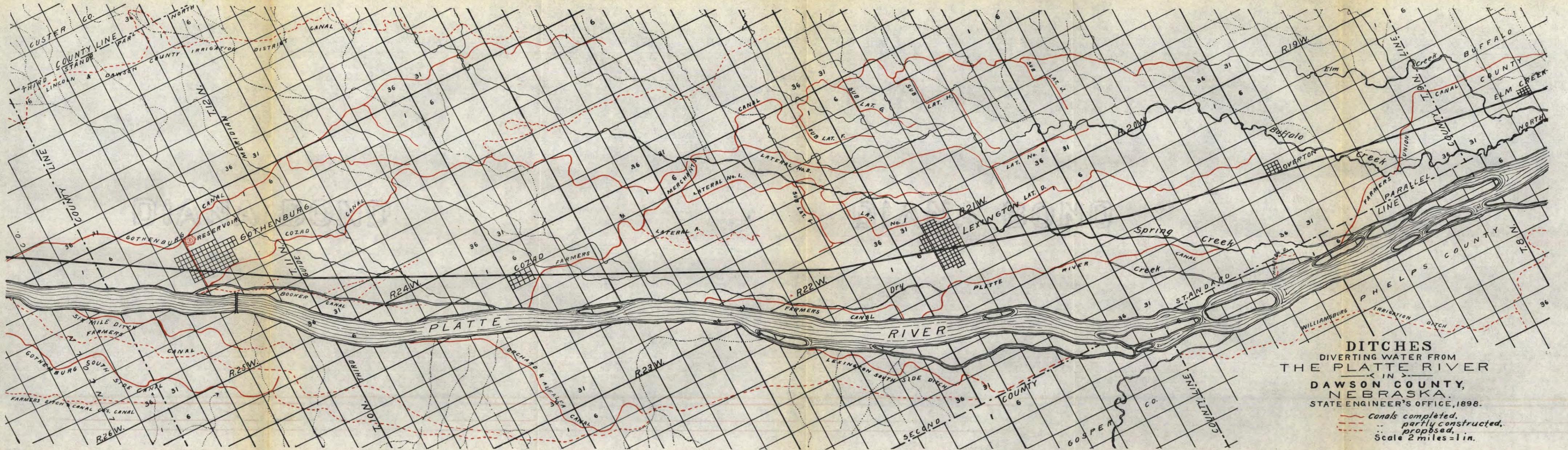
- Canals completed,
 - - - partly constructed,
 - · · proposed,
- Scale 2 miles = 1 in.



DITCHES
 DIVERTING WATER FROM
 THE NORTH PLATTE RIVER
 CHEYENNE COUNTY,
 NEBRASKA.
 STATE ENGINEER'S OFFICE, 1898.

— Canals completed,
 - - - partly constructed,
 . . . proposed,
 Scale 2 miles = 1 in.





DITCHES
 DIVERTING WATER FROM
 THE PLATTE RIVER
 < IN >
 DAWSON COUNTY,
 NEBRASKA.
 STATE ENGINEER'S OFFICE, 1898.

— Canals completed.
 - - - partly constructed.
 ... proposed.
 Scale 2 miles = 1 in.

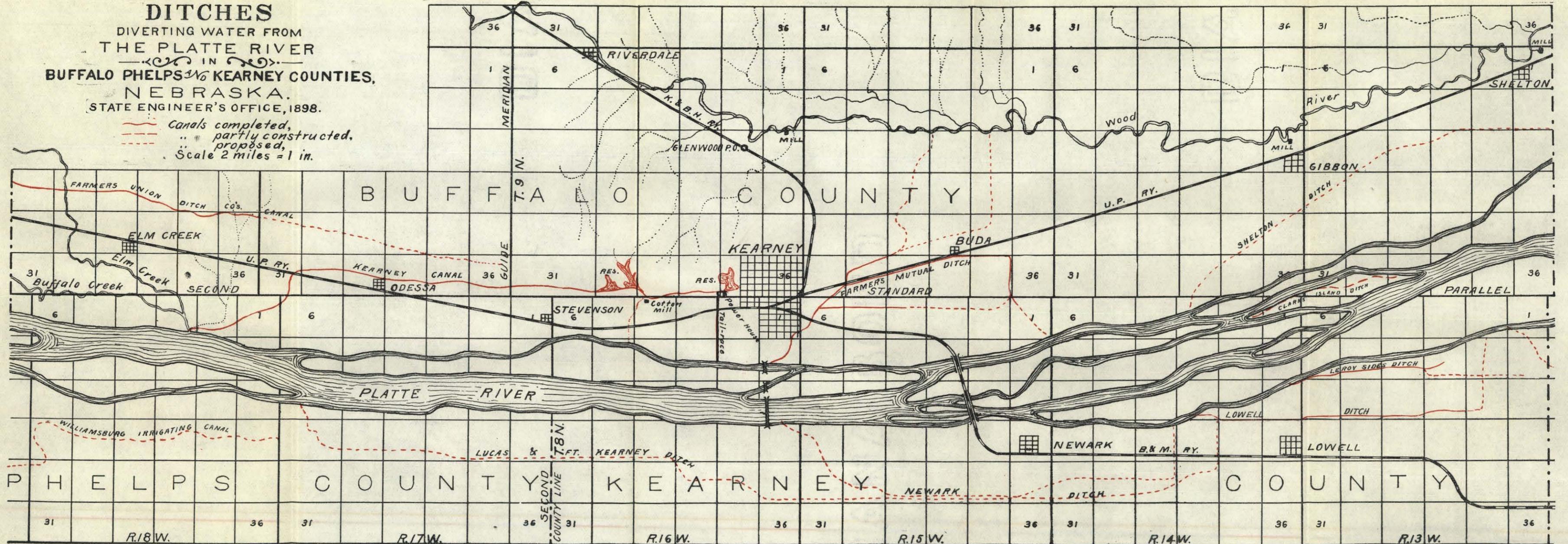
DITCHES

DIVERTING WATER FROM
THE PLATTE RIVER

IN
BUFFALO PHELPS & KEARNEY COUNTIES,
NEBRASKA.

STATE ENGINEER'S OFFICE, 1898.

Canals completed,
partly constructed,
proposed,
Scale 2 miles = 1 in.



CLAIMS ADJUDICATED IN DIV. 1-A.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Ash creek	Vance, Roscoe....	Irrigation.	1 1-7	27	16	42	June	14 90	765
Birdwood creek	Equitable Farm & Stock Imp. Co..	"	100	35	15	33	Oct..	21 93	646
"	Roberts, Wm.....	"	8 4-7	22	15	33	Jan..	16 94	652
"	Beauchamp, W. K.	"	3	15	15	33	Sept.	19 94	677
Blue creek	Iowa Irr. & Imp. Co	"	12	12	16	42	Feb.	14 94	786
"	Graf, Robt. E....	"	61 3-7	19	16	42	April	2 94	788
Camp creek	Stilwill, Wm.....	"	1 3-7	13	18	49	Mar..	16 92	866
Clear creek	Scott, Gary T.	"	1	28	16	41	May.	18 94	747
Cold Water creek	Williams, Edwin C	"	1	28	16	41	May.	18 94	747
	Ledgerwood, W. E.,	"	4 2-7	26	18	46	Sept.	92 94	796
	Brown, Harvey,	"	4 2-7	26	18	46	Sept.	92 94	796
Fremont creek	Clapp, Cyrus R...	"	4 2-7	26	18	46	Sept.	92 94	796
	Equitable Farm & Stock Imp. Co..	"	9 2-7	15	13	30	Jan..	31 94	686
Lonergan creek	Soehl, Herman A..	"	2	17	15	39	May.	10 89	697(a)
"	"	"	6-7	17	15	39	April	27 93	697(b)
"	Haney, August C.	"	1 1-7	17	15	39	July.	1 93	719
"	Jacobs, Lee.....	"	9 1-7	17	15	39	May	25 89	699
Matthews creek	Matthews, Benj. G	"	1 1-7	28	15	37	April	1 95	750

STATE BOARD OF IRRIGATION.

CLAIMS ADJUDICATED IN DIV. 1-A.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.	
				S.	T.	R.	M.	D.		Y.
Pawnee creek	Holcombe, M. N. .	Irrigation.	8	13	13	28	Oct.	18	90	636
“	Murphy, E. G. . . .	“	8 4-7	29	13	27	June	9	94	669
“	Plumer, Wm. H. . .	“	10	19	13	27	June	15	94	672
Platte river	Frmrs D. & C. Co.	“	280	17	13	29	June	2	94	666
“	Fowles, Russel H. .	“	22 1-7	29	13	28	July	5	94	673
“	Appleford, Henry .	“	10	15	13	29	July	7	94	674
“	Sides, Leroy	“	20	13	8	14	July	23	94	629
“	Frm. Union D. Co.	“	128 4-7	6	8	19	Aug.	10	94	623
“	Frm. Mut. Ir. Co. .	“	180	12	8	16	Sept.	24	94	628
“	McCulley, John . .	“	30	35	13	28	Oct.	20	94	679
“	Cozad Irr. Co. . . .	“	614 2-7	15	11	25	Dec.	28	94	626
“	Appleford, Henry .	“	2 6-7	15	13	29	Mar.	28	95	690
North Platte river	North Platte Ir. & Land Co	“	300	13	19	34	May	31	84	635
“	Logan, Chas. E. . .	“	5 5-7	19	20	50	Oct.	17	89	821
“	Belmont Irr. Canal & Wat'r Powr. Co.	“	270	18	20	51	Dec.	19	89	828
“	T. Meyers, A. Phelps	“	7 1-7	34	15	39	Sept.	11	90	709
“	T. P. Dickerson. . .	“								

North Platte river.....	Sheridan, J. Wake	Irrigation	10	20	14	35	Oct.	9	90	710	
" "	Chimney Rock Irr.	"	60	1	20	53	Dec.	3	90	844	
" "	Can. & W. P. Co.	"	28	4-7	18	20	51	June	25	91	858
" "	Empire Canal Co.	"	100		5	20	52	Dec.	26	92	874
" "	Alliance Irr. Canal & Water Pwr. Co	"	9	3-7	22	20	51	Feb.	2	93	875
" "	Clarke, Henry T. .	"	32	6-7	14	18	47	July	1	93	856
" "	Lisco Reuben.....	"	127		9	14	31	Dec.	29	93	649
" "	Cody & Dillon Irr. Canal Co.....	"	186		18	14	36	Feb.	2	94	722
" "	Sutherland & Pax- ton L. & Irr. Co.	"	130		18	14	33	Feb.	12	94	653
" "	Paxton & Hershey Ir. C. & L. Co. .	"	183		12	14	33	May	22	94	662
" "	Far. & M. I. & L. Co	"	270		14	14	34	June	6	94	667
" "	S. Side I. & L. Co.	"	12		2	16	44	June	9	94	789
" "	Roberts, C. F. . . .	"	71		36	14	30	July	7	94	657
" "	Keith, Morrell C. .	"	20		36	14	13	Aug.	9	94	676
" "	Smith, Augustus. .	"	20		1	16	44	Aug.	14	94	791
" "	Fox, B. M.	"	5	5-7	24	18	47	Sept.	24	94	886
" "	Hannah Irr. C. Co.	"	40		33	17	44	Oct.	5	94	797
" "	Gumaer, H. G., Robinson, John . .	"	30		24	19	49	Oct.	13	94	887
" "	Smith, A. H. et al.	"									

CLAIMS ADJUDICATED IN DIVISION 1-A.—Continued.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE.		DATE OF PRIORITY.		DOCKET NO.
				S. | T. | R.	M. | D. | Y.			
North Platte river.....	Dikeman, S. F....	Irrigation.	30	9	14	32	Jan. 14 95	684
“ “	Jacobs, Lee.....	“	5 5-7	29	15	39	Jan. 19 95	732
“ “	Fernstrom, Alfred,	“						
	Nissen, Peter.....	“	4	25	15	39	Mar. 23 95	737
South Platte river.....	Eaton, John J....	“	20	25	13	41	April 3 94	755
“ “	Hollingsworth*Son	“	30	12	13	39	June 5 94	723
“ “	Stebbins, Lucien..	Irr. & powr	30	34	14	32	Dec. 17 94	683
“ “	“	“		32	14	32	Dismiss ed	*692
“ “	Searle, E. M.....	Irrigation.	2 6-7	17	13	39	Dec. 22 94	744
“ “	Ryan, J. T.....	“	3 1-7	30	13	40	Mar. 2 95	736
“ “	Shereman, W. H..	“	1 3-7	17	13	39	April 22 95	733
Schentz spring.....	Schentz, Lewis...	“	3-14	28	18	50	May 10 92	881
Skunk creek	Miller, Adam.....	“	2 2-7	1	14	37	April 1 95	740
Spring creek.....	Holcombe, G. J...	“	4-7	12	15	40	June 18 94	724
Spring ck, (trib. Wh. Clay	Holloway, D. P...	“	1 4-7	19	15	37	June 21 90	704
Stream not named.....	Newberry, H.....	“	1 1-7	22	14	32	Feb. 25 95	688
White Horse creek.....	Lamplugh, Isaac..	“	2 6-7	8	14	30	Dec. 31 83	658
White Tail creek	McCarthy, John M.	“	1	36	15	38	July 15 90	749
“	Ogalalla L. & C.Co.	“	21	21	26	15	July 18 91	716

White Tail creek	Holloway, D. P.,	Irrigation	4	36	15	38	June	15	93	717									
	Phelps, Al.....																		
"	Leonard Bros....										"	2	22	15	38	Oct.	12	94	727
"	Foster, Frank....										"	20	36	15	38	Oct.	30	94	730
"	Reed, Fred.....	"	4-7	15	15	37	May	15	95	751									

*Rehearing Pending.

THE LOUPS.

Much of the work on the claims from the Loup and their tributaries had been disposed of by my predecessor, but there were still a few claims in this region that had not been adjudicated. These were examined and disposed of.

The value of the Loups for irrigation is not fully appreciated. Rising as it does within our own state, there are here no interstate complications. Its sources are in a region of sand hills. The precipitation of the winter and spring, held back in the sands, is discharged gradually throughout the season. This insures a permanence of flow that gives it a peculiar value for irrigation purposes. Along the lower Loups, there are fine bodies of agricultural lands which may be readily brought under irrigation. Though this portion of Nebraska is not in the arid or even the semi-arid region, the growth of the irrigation interest in this locality has been steady and healthy. Many valuable ditches diverting water from these streams have been built and others are now in process of construction.

The following claims were adjudicated in this division by your present secretary:

CLAIMS ADJUDICATED IN DIVISION 2-A.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HEADGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Beaver river	Quackenbush, J. W.	Irrigation	3 4-7	22	20	6	Dec.	8 94	287
South Loup river.....	Boblitz, Eugene J.	"	1-2	10	14	21	Jan.	17 95	219
"	"	Power ...	20	10	14	21	Jan.	17 95	219

THE ELKHORN.

The claims on the Elkhorn were next taken up. The following list covers all cases passed upon by your secretary in this division:

CLAIMS ADJUDICATED IN DIVISION 2-B.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Elkhorn River.....	Rehberg, F. X....	Power...	38 1-2	30	30	14	Nov..	1883	271
"	Davis, Joseph....	Irrigation	1 3-7	31	29	11	Feb..	8 94	260
"	Carlton, Thomas..	"	1	32	29	11	Feb..	8 94	261
"	"	"	5	30	29	11	Feb..	8 94	262

This closes the report on the adjudication of claims arising under the laws in force prior to the enactment of the law of 1895.

There are still a few belated cases in all these divisions which did not get before the board until after the hearings and the surveys and examinations were completed. These should be taken up in connection with the work on the applications under the present law. They can be disposed of in this way without great expense.

APPLICATIONS TO APPROPRIATE WATER UNDER THE
PRESENT LAW.

When the adjudication of claims on the Republican and its tributaries was completed by my predecessor, it appeared very doubtful whether further appropriations could safely be granted. Those making application under the present law could not, at that time, be encouraged to go forward with their enterprises without danger of disappointment. During the year 1898, a careful examination was made of each valid claim and application on these streams, to determine just what had been accomplished. In this work, we have been ably assisted by Under Secretary H. H. Pickens, who made a personal examination and report on each case. As a result of these investigations, the secretary was able to grant, in modified form and with proper limitations, many of these applications. There are others still pending on which like action will be taken as soon as errors in the description of lands and in the plats filed can be corrected.

The carelessness with which many of the applications have been prepared causes a great deal of delay and demands much correspondence. The extravagance of the claims both as to the amount of water in the streams and as to the acreage that can be irrigated, makes an exami-

nation of the works almost imperative. There are many streams in the state carrying only a few cubic feet per second, which now have applications pending against them asking for hundreds of second feet.

To get at the real facts and to secure even approximate justice in the distribution of these appropriations, requires much time and care. It has not been possible to do systematic work on the applications in the other divisions, but in connection with the work on the claims considerable progress has been made in these investigations along the Platte, the Loup, the Elkhorn, and the lower Niobrara.

The applications named in the following list have been allowed by your secretary:

APPLICATIONS ALLOWED IN DIVISION 1-A.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.			DOCKET NO.
				S.	T.	R.	M.	D.	Y.	
Cannon creek	McCarthy, John J.	Irrigation	1-2	29	15	37	June	12	95	15
Deep Hole creek, N. br..	McConnel, R. S. . .	"	1 3-7	10	18	49	July.	18	96	328
Dugout creek	Rice, C. P.	"	1	4	19	48	Aug.	15	98	462
Horse creek	Roberts, Samuel S.	"	10	33	23	58	Sept.	10	97	407
Platte river	Heffner, O. O.	"	12 4-7	8	9	22	Oct..	14	97	416
North Platte	Schermerhorn, A. D.	"	30	16	20	51	Oct..	25	97	418
Ravine	Newberry, H.	"	2	22	14	32	July.	19	95	85
South Platte	Stafford, David. . .	"	4	2	13	36	Oct..	17	95	184
"	Lute & Sheridan. . .	"	13 3-7	5	13	37	Feb.	17	96	231
Spotted Tail creek.	Stewart, H. G.	"	1	10	23	56	May	2	98	449

APPLICATIONS ALLOWED IN DIVISION 1-B.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE		DATE OF PRIORITY.		DOCKET NO.
				S.	T. | R.	M.	D. | Y.	
Big Cottonwood	Zulauf, Chas. E. . . .	Power. . . .	6	25	216	Nov.	23 98	483
"	"	Irrigation. 1 3/4		25	216	Nov.	23 98	483
Center creek	Bishop, D. L.,	"	2	22	215	Dec.	12 95	196
"	Conkling, James, Jr	"	2	1	115	April	3 96	285
"	Barber, F. W.	"	2	1	115	April	3 96	285
Driftwood creek	Stock, F. A.	"	1 1-7	33	231	Mch.	26 97	388
"	Wasson, Chas. A. . . .	"	6-7	12	230	Jan.	14 98	431
Fox creek	Phoenix Ins. Co. . . .	"	1	29	928	Feb.	14 96	234
Frenchman river	Cunningham, A. . . .	"	2	31	638	June	11 95	13
"	McAuliffe, John. . . .	"	2	4	537	July	3 95	59
"	Locker, James H. . . .	"	1	24	535	Aug.	1 95	93
"	McGillin, Wm. J. . . .	"	2 2-7	6	537	Aug.	26 95	131
"	Grant, John S.	"	1	1	538	Sept.	10 95	154
"	North Side I. D. Co.	"	2 6-7	21	639	Feb.	25 96	246
"	Shallenberger, P.H	"	3	25	639	Dec.	21 97	423
"	Inman D. & I. Co. . . .	"	10	17	640	Feb.	10 98	436
Peppermint creek	Betts, N. O.	Irr. and fish	1-2	28	215	Jan.	13 98	430
Republican river	Benedict, Isaac. . . .	Irrigation. 2 6-7		19	331	June	24 95	43
"	Nelson, Oscar F. . . .	"	10	19	234	Feb.	17 96	241

STATE BOARD OF IRRIGATION.

APPLICATIONS ALLOWED IN DIVISION 1-B.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.			DOCKET NO.
				S.	T.	R.	M.	D.	Y.	
Republican river.....	Pickering, Joseph.	Irrigation.	10	9	23	44	Mar.	14	96	266
“	Spooner, J. A.	“	1	25	1	40	Oct.	7	97	413
Sappa creek.....	Wheeler, Matilda E	“	3-7	13	1	22	July	26	97	399
Spring creek.....	Callihan, Oscar...	“	1 1-2	19	1	37	Dec.	31	96	373
“	Hatcher, Minnie E.	“	1	3	6	36	Sept.	5	95	148
Stinking Water creek...	Chase Co. Land &	“	1 5-7	14	7	38	June	27	95	56
“	Live Stock Co...	“	1 3-7	4	7	38	June	27	95	57

APPLICATIONS ALLOWED IN DIVISION 1-D.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.	
				S.	T.	R.	M.	D.		Y.
Bear creek.....	Wolfe, J. V.....	Dom. use.	1	36	4	6E	May	20	98	455
Blue river, west fork....	Kersenbrock, J. R.	Irrigation.	7 1-7	32	9	3E	Dec.	20	95	211
" "	"	Power....	105	32	9	3	Dec.	20	95	214

APPLICATIONS ALLOWED IN DIVISION 1-F.

Nemaha river, middle br	Christy, H. R....	Irrigation	1	4	8	9E	Aug.	13	95	115
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APPLICATIONS ALLOWED IN DIVISION 2-A.

Beaver river.....	Long, C. W.....	Irrigation	1-4	14	17	4	Mar.	31	96	276
"	"	"	1-4	14	17	4	Mar.	31	96	277
Loup river.....	Harvey, Robert..	"	250	25	13	12	June	19	95	35
"	Nelson, Orlando, Gates, Clayton A.	"	300	13	15	8	April	28	96	291
Loup river, south branch	Hartzell, B. F....	"	13-35	27	18	26	May	18	97	390

APPLICATIONS ALLOWED IN DIVISION 2-B.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HEADGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Cache creek.....	Trommershauser, John A.....	Ir. & powr.	5 5-7	30	26	9	Apr.	20 98	450
Dry creek	Carlson, Thomas ..	Irrigation.	2 2-7	18	28	11	Jan.	5 95	33
"	Benedict, E. H....	"	2 2-7	18	28	11	Jan.	31 96	225
Elkhorn river.....	Leisy, Henry	"	25	5	23	4E	July	15 95	77
"	"	Power ...	25	5	23	4E	July	15 95	77
"	Murphy, J. G., Rehberg, F. X ..	Irrigation.	2 2-7	30	30	14	Feb.	14 98	443
Elkhorn river, S. branch	Smith, G. F.....	"	9	10	26	9	Feb.	7 96	222
"	Sanders, M. F.....	Power....	33	3	26	9	Aug.	21 98	464
Springs.....	Newton Land Co..	Irrigation.	1	13	14	14E	June	18 95	29
Silver creek.....	Armour & Co	Icemaking	10	7	13	9E	Oct.	18 97	415
Wahoo creek.....	Swift & Co.....	"	10	34	13	9E	Sept.	22 98	473

APPLICATIONS ALLOWED IN DIVISION 2-C.

STREAM.	NAME OF CLAIMANT.	USE TO WHICH APPLIED.	SECOND FEET GRANTED.	LOCATION OF HE'DGATE			DATE OF PRIORITY.		DOCKET NO.
				S.	T.	R.	M.	D.		Y.
Ash creek	Spragg, C.	Irrigation.	2 1-7	10	31	17	Feb.	10 96	233
Bear creek	Cedarburg, Peter .	"	1-14	3	32	21	Oct.	3 98	479
Bone creek	McAndrew, W. D..	"	2 4-7	27	30	22	Aug.	21 95	121
Burton creek	Crampton, Chas. T.	"	1-7	5	34	19	Sept.	9 95	150
"	Wiley, James.	"	6-35	8	34	19	Feb.	3 96	239
Cypiot creek	Cypiot, Frank A. .	"	1-10	3	34	19	May	7 96	295
Horse Head creek	Bruce, Andrew. . .	"	5-14	16	33	24	Sept.	7 95	149
Keya Paha river	Lewis, Stillman O.	"	4 2-7	19	35	19	Aug.	23 95	127
"	Donason, Jack . . .	"	7	35	35	19	Oct.	26 95	166
"	Anders'n, H. D. & Co	"	5	3	34	18	Oct.	26 95	167
Lewis' spring	Lewis, Ralph.	"	1-7	29	35	19	Aug.	30 95	139
Minnechaduza creek . . .	Bristol, David S. . .	"	1	35	34	28	July	22 95	87
Niobrara river	McGuire, Mary. . .	"	8	26	33	24	Aug.	30 95	138
" "	Rickman, A. L.	"							
" "	Wentworth, A. A. .	"	2	22	32	20	June	29 96	321
Rock Springs creek	Wicker, Samuel. . .	"	1-14	24	33	22	June	12 96	346
" " "	Patterson, Clay C. .	"	1-7	31	33	21	June	12 96	347
Spring Branch	Wheeler, Theodore	"	1-2	4	31	15	June	24 96	316
"	"	"	1	34	32	15	June	24 96	317
Stream not named	Conger, C. K.	"	1-7	5	33	24	Sept.	16 95	158

STATE BOARD OF IRRIGATION.

The applications named in the following lists have been dismissed:
APPLICATIONS DISMISSED.

DIVISION 1-A.

STREAM.	NAME OF APPLICANT.	LOCATION OF HEAD-GATE.			APP. NO.
		S	T	R	
Platte river.....	Evans, Griffith, J.....	21	8	15	20
“	Orchard and Alfalfa				
	Irrigation Co	9	10	24	360

DIVISION 1-B.

Clear Creek and Springs.....	Green, A. L.....	30	7	37	22
Republican river.....	Ballard, Henry L.....	8	3	21	39
“	Babcock, H. A.....	8	3	21	176
Frenchman river.....	Shahan, J. D.....	22	6	39	79
“	Shahan, J. D.....	24	6	40	135

DIVISION 2-A.

Loup river.....	Murdock, Dan'l, et al.....	27	17	4	289
“ “ South Fork.....	Edwards, Sylvester.....	21	17	25	245
“ “ “ “	Harvey, Robert.....	25	13	12	428
Spring creek.....	Griffith, G. A.....	13	15	22	252
	Donnel, H. G.....				

DIVISION 2-B.

Buffalo creek	Hale, F. J.	24	24	4	270
Dry Creek	Kinkaid, Moses P.	8	28	11	223
Elkhorn river	Cross, Eugene H.	28	29	12	3
“ “	Ryan, James.	25	29	13	101
“ “	Hamilton, C. W.	7	30	15	199

DIVISION 2-C.

Bear creek	Skinner, Thomas	15	32	21	143
“ “	Cedarberg, Peter	3	32	21	348
Lewis Spring	Lewis, Ralph	29	35	19	280
Niobrara river	VanAlstine, J. S.	2	32	22	194
Rock creek	Van Koten, John	25	33	22	309
“ “	Springer, Jesse N.	1	32	22	97

The granting of further appropriations on the upper Niobrara and in the White River and Hat Creek region should not be done carelessly. There are many of these applications which should be granted, but each needs special attention, lest the new appropriations interfere with claims already established, on which much labor has been expended. These applications should receive immediate attention. Little can be done, however, toward this important work until necessary traveling expenses of the engineers making the investigations are provided for.

The following summary of the ditches examined, platted, and reported on, in connection with the adjudications and the granting of applications, will give some idea of the extent of this work and its distribution.

NUMBER OF CLAIMS AND APPLICATIONS EXAMINED AND REPORTED DURING THE YEARS 1897 AND 1898.

Platte river and tributaries, Div. 1-A.....	103
Republican river and tributaries, Div. 1-B.....	103
Loup river and tributaries, Div. 2-A.....	9
Elkhorn river and tributaries, Div. 2-B.....	20
Niobrara river and tributaries, Div. 2-C.....	77
White river and tributaries, Div. 2-D.....	92
Hat creek and tributaries, Div. 2-E.....	51
Total.....	455

The following table shows the appropriations from the streams in the various divisions of the state which have been allowed by the board since its organization in 1895, with the date of priority and amount granted to each. It also shows the claims and applications still pending. Those marked with the docket number are claims under the

old law. Those marked with the application number are appropriations under the law now in force. Each grant is conditioned on its beneficial use on or before some date fixed by the secretary.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Ash creek...	Vance, Roscoe....	Lewellen....	Vance ditch.....	1
"	Gilliard, George..	"	Gilliard ditch.....	2
"	McCormick, C....	"	McCormick ditch..	3
"	Parker, Utra M....	"	Wisconsin ditch....	4
Birdwood ck..	Equit.Farm&Stock Imp. Co.....	North Platte.	Birdwood canal....	5
" ..	Roberts, William..	Birdwood....	W.Side Birdw'dCan.	6
" ..	Beauchamp, W. K.	Sutherland ..	Beauchamp canal... 7	
" ..	Equit.Farm&Stock Imp. Co.....	North Platte.	Birdwood canal....	8
" ..	Suburban Irr. Dist.	" ..	Suburban Dist.canal	9
Birdwood,Ebr	Hinman, Maude...	" ..	E. Birdwood Ir. can.	10
" ..	" ..	" ..	M.HinmanIr.&P.can	11
Blue creek...	Union Irr.&W.P.Co	Ramsay.....	UnionIrr.& W.P.can	12
"	Iowa Irr.& Imp.Co.	"	Blue creek ditch... 13	
"	Equit.Farm &Stock Imp. Co.....	North Platte.	Blue creek canal... 14	
"	Iowa Irr.& Imp. Co	Lewellen,....	Iowa Ir.& I. Co. dch	15
"	Graf, Robt. E....	"	Graf canal.....	16
"	Winterer, Jacob H.	"	High Line ditch... 17	
"	Ramsay, A. F....	Ramsay.....	West Side ditch... 18	
"	Hooper, James & David.....	"	Blue creek ditch... 19	
"	Iowa Irr. & Imp. Co	Lewellen....	Hooper ditch.....	20
"	Ramsay, A. F., Paisley, Ira.....	Ramsay.....	Paisley, Berguson, Ramsay ditch... 21	
Box Elder ck.	Reasor, Paul J ...	Freeport	Reasor ditch.....	22
Camp creek..	Stillwill, Wm	Liscoe	Camp creek ditch..	23
Cannon creek.	McCarthy, John J.	Keystone....	McCarthy ditch ...	24
Cedar creek..	Reasor, Paul J....	Freeport	Cedar ditch.....	25
Clear creek ..	Hooper, David C..	Ramsay	Clear creek ditch... 26	
" ..	Barber,F., Marsh W	Lewellen....	Clear creek canal... 27	
" ..	Green, Nelson A..	"	Clear creek ditch... 28	

BY STREAMS IN DIVISION 1-A.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig..		1.14	27	16	42	Deuel	June	14	90	765	....
2	"		1.43	3	16	42	"	Dec.	31	90	812	....
3	"	2	.....	16	16	42	"	Sept	17	95	....	*159
4	"	2	.....	10	16	42	"	Sept	1	98	....	*470
5	"		100	35	15	33	Lincoln ...	Oct.	21	93	646	....
6	"		8.57	22	15	33	"	Jan.	16	94	652	....
7	"		3	15	15	33	"	Sept	19	94	677	....
8	"		.....	35	15	33	"	Jan.	11	95	....	*204
9	"	126	.....	2	14	33	"	Sept	19	98	....	*472
10	"	25	.....	27	17	33	McPherson.	July	8	96	....	*355
11	"	100	.....	21	17	33	"	Aug.	20	98	....	*468
12	"		24.64	18	16	42	Deuel	May	16	90	763	....
13	"		12.86	6	16	42	"	Sept	7	93	781	....
14	"		185.71	33	17	42	"	Dec.	27	93	785	....
15	"		12	12	16	42	"	Feb.	24	94	786	....
16	"		61.43	19	16	42	"	Apr.	2	94	788	....
17	"		20	21	17	42	"	Sept	27	94	795	....
18	"		21	28	17	42	"	Nov.	20	94	800	....
19	"	14	.....	6	16	42	"	Sept	6	98	....	*466
20	"	20	.....	6	16	42	Deuel	Sept	6	98	....	*467
21	"	20	.....	33	17	42	"	Sept	14	98	....	*471
22	"	1	.....	16	18	53	Banner....	Oct.	9	97	....	*414
23	"		1.43	13	18	49	Cheyenne..	Mar.	16	92	866	....
24	"		.50	29	15	37	Keith	June	12	95	....	15
25	"	1	.....	17	18	53	Banner....	Oct.	27	97	....	*419
26	"		2.86	32	16	41	Keith	July	1	98	748	....
27	"		14.57	29	16	41	"	May	30	93	754	....
28	"		1.25	32	16	41	"	May	30	93	756	....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Clear creek ..	Green, Nelson A. . .	Lewellen.	Green ditch.	1
" . . .	Scott, Gary T., Williams, E. C. . . .	"	Scott & Williams D.	2
" . . .	Wilson, Alexander.	Paxton	Wilson Irr. canal	3
" . . .	Brogan, Hughey. . .	"	Brogan ditch.	4
" . . .	Schlademan, Louis	"	Schlademan Ir. canal	5
Cold Water ck	Ledgewood, W. E., Brown, H., Clapp, C.	Oshkosh.	Cold Water ditch	6
Coon creek . .	Winterer, Wm. H. . .	Keystone	Coon creek ditch	7
Deep Hole crk	McConnell, R. S. . .	La Peer.	Twist ditch.	8
Dugout creek	Cooper, Eliza A. . .	Camp Clarke.	Cooper ditch.	9
Dugout creek.	Rice, C. P.	Lisco.	Rice canal.	10
Fox creek . . .	Ramsay, A., Fox, B.	Ramsay.	Fox & Ramsay ditch	11
Fremont creek	Equitable Farm & Stock Imp. Co. . . .	North Platte.	Fremont crk. ditch	12
" slough	Steinhausen, A. . . .	North Platte.	Steinhausen ditch	13
Golden creek.	Thies, Michael J. . .	Ogalalla	Thies ditch	14
Greenwood cr.	Coulter, D. & H. M.	Loveland, Col.	Coulter Ditch	15
"	Trinnier, J. E.	Midway	Trinnier canal.	16
"	Nelson & Trinnier.	"	Nelson canal.	17
"	Capron, A., Lamb, J.	"	Capron & Lamb D.	18
"	Geis, Frederick . . .	Davison	Geis canal.	19
"	Meglemre, Sarah A.	La Peer	Meglemre ditch.	20
"	Dean, Henry T. . . .	"	H. T. Dean ditch.	21
Horse creek . .	Roberts, Samuel S.	Collins	State line ditch.	22
"	Roberts, S. S., Etchison, A.	Caldwell.	Etchison & Roberts D	23
Kiowa creek . .	Currie, Edwin A. . .	Mitchell	Currie ditch	24
Lawrence fork	Laing, Guy A.	North Platte. . . . .	.....	25
"	Gilman, Byron, Crigler, E. S.	Redington	Redington ditch.	26
"	Crigler, E. S.	"	E. S. Crigler ditch	27
"	Harper, John W. . . .	Higgins	Spring branch D.	28
Lawrence fork	Redington, H. V. . . .	Redington	H. V. Redington D.	29

BY STREAMS IN DIVISION 1-A—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.		1.14	29	16	41	Keith.	June	1	93	745	....
2	"		1	28	16	41	"	May	18	94	747	....
3	"	10		31	15	34	Lincoln . . .	Apr.	30	97	....	*384
4	"	6		30	15	34	"	Oct.	18	97	....	*417
5	"	4.50		5	14	34	"	Mar.	29	98	....	*446
6	"		4.29	26	18	46	Deuel	Sept	29	94	796	....
7	"	2.20		34	15	37	Keith	July	3	95	....	*69
8	"		1.43	10	18	49	Cheyenne . .	July	18	96	....	328
9	" . . . . .		.86	4	19	48	"	Aug.	15	92	872	....
10	"		1	4	19	48	"	Aug	15	98	....	462
11	"	20		9	16	43	Deuel	June	6	98	....	*458
12	"		9.29	15	13	30	Lincoln. . . .	Jan.	31	94	686	....
13	"	9		1	13	32	Lincoln. . . .	Mar.	19	96	....	*260
14	"	3		25	15	39	Keith	Sept	17	95	....	*160
15	"		4	15	18	50	Cheyenne . . .	Feb.	3	90	830	....
16	"		6.29	28	18	50	"	Apr.	1	91	849	....
17	"		3	33	18	50	"	Apr.	1	92	845	....
18	"		2	15	18	50	"	Jan.	1	93	890	....
19	"	100		4	17	50	"	July	10	95	....	* 73
20	"	6		10	18	50	"	May	6	96	....	*294
21	"	4		10	18	50	"	May	15	96	....	*304
22	"		10	33	23	58	Scott's Bluff	Sept	10	97	....	407
23	"	17		34	23	58	"	Sept	11	97	....	*408
24	"		9.14	13	21	57	"	Mar.	23	92	938	....
25	" . . . . .		.50	28	18	52	Cheyenne . . .	Dec.	31	86	825	....
26	" . . . . .		.57	36	19	52	"	Oct.	9	89	820	....
27	" . . . . .		.57	1	18	52	"	Sept	11	91	861	....
28	"		1	11	18	52	"	Oct.	23	91	862	....
29	" . . . . .		.50	11	18	52	Cheyenne . . .	May	1	93	893	....

*Pend ng.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Lawrence fork	Doran, Edmond...	Sidney	Doran Canal.....	1
"	Harper, John W..	Higgins	Spring branch exten	2
"	Crigler, E. S.....	Redington ...	Crigler's extension.	3
Lonergan cr..	Soehl, Herman A.	Ogalalla	Soehl canal.....	4
" ..	Soehl, Herman A.	Ogalalla	"	5
" ..	Haney, August C.	Lonergan....	Haney ditch.....	6
" E. br	Jacobs, Lee	Ogalalla	East Lonergan ditch	7
Mathews cr..	Mathews, Benj. G.	Keystone	Mathews' canal.	8
Owl creek...	Kellums, John H.	Caldwell.....	Sunflower ditch....	9
Pawnee creek.	Holcombe, M. N..	Brady Island.	Holcomb's ditch...	10
"	Murphy, E. D....	"	Murphy's canal....	11
"	Plumer, Wm. H..	Maxwell.....	Plumer ditch.....	12
Platte river..	Farmers' D. & C. Co.	"	Farm. D. & C. Co. D.	13
"	Farmers' Irr. Co.	Lexington ...	Farmers Irr. Co.'s D.	14
"	Farm. & Mer. Irr. Co	"	Farm. & Mer. canal.	15
"	Fowles, Russell H.	Maxwell.....	Maxwell canal.....	16
"	Appleford, Henry.	"	Appleford canal...	17
"	Sides, Leroy.....	Lowell	Leroy Sides' ditch.	18
"	Frms'. Un. D. Co.	Kearney.....	Elm Creek Canal ..	19
"	Platte R. Irr. Co..	Lexington ...	Platte R. Irr. Co. Can	20
"	Frms. Mut. Irr. Co.	Kearney.....	Farmers Canal.....	21
"	McCulley, John...	Maxwell .....	.....	22
"	Six Mile Ditch Co.	Gothenburg..	Six Mile D. Co. Can.	23
"	Gothenburg South Side Irr. Co.....	"	Gothenburg So. Side Irr. Co. Canal...	24
"	Booker, H. C.....	"	Booker Canal	25
"	Cozad Irr. Co	Cozad.....	Cozad Irr. Canal...	26
"	Orchard & Alfalfa Irrigation Co...	"	Orchard & Alfalfa Irr. Co. Ditch....	27
"	Linc'n & Dawson County Irr. Dist.	Gothenburg..	Lin. & Dawson Co. Irr. Dist. Canal..	28
"	Appleford Henry..	Maxwell	Appleford Canal...	29

BY STREAMS IN DIVISION 1-A—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig.		1.14	15	18	52	Cheyenne .	June	1	94	850	....
2 "	1	.....	1	18	52	"	Oct.	13	98	....	*476
3 "	2	.....	1	18	52	"	Nov.	25	98	....	*486
4 "		2	17	15	39	Keith	May	10	89	697a	....
5 " . . . . .		.86	17	15	39	"	Apr.	27	93	697b	....
6 "		1.14	17	15	39	"	July	1	93	719	....
7 "		9.14	17	15	39	"	May	25	89	699	....
8 "		1.14	28	15	37	"	Apr.	1	95	750	....
9 "	8	.....	12	22	58	Scott's Blfs.	Sept	17	97	....	*411
10 "		8	13	13	28	Lincoln.	Oct.	18	90	636	....
11 "		8.57	29	13	27	"	June	9	94	669	....
12 "		10	19	13	27	"	June	15	94	672	....
13 "		280	17	13	29	"	June	2	94	666	....
14 "		114	25	10	23	Dawson	June	14	94	621	....
15 "		1142.86	18	10	23	"	June	26	94	622	....
16 "		27.14	29	13	28	Lincoln.	July	5	94	673	....
17 "		10	15	13	29	"	July	7	94	674	....
18 "		20	13	8	14	Kearney.	July	23	94	629	....
19 "		128.57	6	8	19	Dawson	Aug.	10	94	623	....
20 "		400	13	9	22	"	Sept	15	94	624	....
21 "		180	12	8	16	Buffalo.	Sept	24	94	628	....
22 "		30	35	13	28	Lincoln	Oct.	20	94	679	....
23 "		40	11	11	26	"	Oct.	22	94	680	....
24 "		357.14	30	12	26	"	Oct.	26	94	681	....
25 "		100	16	11	25	Dawson	Nov	9	94	625	....
26 "		614.29	15	11	25	"	Dec.	28	94	626	....
27 "		300	9	10	24	"	Jan.	23	95	627	....
28 "		642.86	9	13	29	Lincoln	Feb.	22	95	687	....
29 "		2.86	15	13	29	"	Mar.	28	95	690	....

*Pending

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Platte river..	Gothenburg Power & Irr. Co.....	Gothenburg..	Gothenburg Power & Irrigation canal	1
"	Bernhard, Jacob..	Hastings	J. Bernhard canal..	2
"	Newark Ditch Co..	Newark	Newark ditch	3
"	Shelton Irr. Co....	Shelton	Shelton ditch	4
"	Clark Island Ditch	Gibbon	Clark Island Irr. D.	5
"	Low'l Frms.Irr.Co	Lowell	Lowell Frms Irr. C	6
"	Williamsburg Irr. Canal Co.....	Williamsburg	Williamsburg canal	7
"	Lucas & Ft. Kearney Irr. Co.....	Newark	Lucas & Ft Kearney Ditch	8
"	Orchard & Alfalfa Irrigation Co..	Cozad	Orchard & Alfalfa I. C. ditch.....	9
"	Milbourn ditch...	Overton	Milbourn ditch....	10
"	Young, Fred.....	Gothenburg..	Farmers canal.....	11
"	Hefner, O. O.....	Lexington ...	Lexington So. Side Irr. ditch.....	12
North Platte..	North Platte Irr. and Land Co...	North Platte.	North Platte canal.	13
"	Farmers Canal Co.	Omaha	Farmers canal.....	14
"	Minitare Mut. C. and Irr. Co.	Minitare.....	Minitare ditch	15
"	Winters Ck Irr. Co.	Gering	Winter creek canal.	16
"	Enterprise D Co..	Sunflower. ...	Enterprise ditch...	17
"	Castle Rock Irr., C & Water Pwr Co	Wilford	Castle Rock Irr. C..	18
"	Logan, Chas. E...	Camp Clarke.	.....	19
"	Belmont Irr. C. & W. P. Co.....	Omaha	Belmont I C. & W. P. Co. canal.....	20
"	Central Irr. C. & W. P. Co.....	Gering.....	Central I. C. & W. P. Co. canal....	21

BY STREAMS IN DIVISION 1-A—Continued:

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	I. & P.	.....	.....	29	12	26	Lincoln ...	.....	.....	.....	*645	.....
2	Irrig.	30	.....	1	8	13	Kearney ...	June	11	95	.....	* 11
3	"	268.75	.....	24	8	16	" ...	June	10	95	.....	* 9
4	"	175	.....	4	8	14	Buffalo ...	June	14	95	.....	* 21
5	"	15	.....	1	8	14	" ...	July	19	95	.....	* 86
6	I. & P.	114	.....	15	8	14	Kearney ...	July	27	96	.....	*351
7	Irrig.	286	.....	7	8	20	Phelps ...	Feb.	6	96	.....	*224
8	"	333.30	.....	13	8	18	" ...	Mar.	4	96	.....	*264
9	"	500	.....	9	10	24	Dawson ...	Sept	21	96	.....	*360
10	"	.....	.....	2	8	20	Phelps ...	Jan.	7	97	.....	*375
11	"	400	.....	4	11	26	Dawson ...	July	31	97	.....	*400
12	"	.....	12.57	8	9	22	" ...	Oct.	14	97	.....	416
13	"	.....	300	13	14	34	Lincoln ...	May	31	84	635	.....
14	"	.....	1142.86	3	23	58	Scott's Bluff	Sept	16	87	918	.....
15	"	.....	249.43	32	22	54	"	Jan.	14	88	919	.....
16	"	.....	124.29	17	22	55	"	Oct.	18	88	952	.....
17	"	.....	173.71	27	23	57	"	Mar.	28	89	920	.....
18	"	.....	82.57	4	21	54	"	Apr.	18	89	921	.....
19	"	.....	5.71	19	20	50	Cheyenne ..	Oct.	17	89	821	.....
20	"	.....	270	18	20	51	"	Dec.	19	89	828	.....
21	"	.....	36	27	22	55	Scott's Bluff	June	23	90	926	.....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
North Platte.	Meyers, F. A., Phelps, A., and Dickerson, F. P....	Ogalalla.....	Meyers & Phelps C.	1
"	Sheridan, J. Wake	"	Sheridan & Wilson D	2
"	Chimney Rk I. C. & W. P. Co.....	Camp Clarke.	Chimney Rock canal	3
"	Empire Canal Co.	"	Empire canal.....	4
"	Kah David.....	Minitare	Kah Ditch	5
"	Brown's Ck. I. C. Co	Camp Clarke.	Brown's Ck. Irr. Can.	6
"	Hale, Will A.....	Gering	Homestead ditch ..	7
"	Alliance Irr. Can. & W. P. Co.....	Camp Clarke.	Alliance Irr. canal .	8
"	Clarke, Henry T..	"	H. T. Clarke canal .	9
"	Nichols, Yorick, Nichols, Carroll ..	Collins	Ramshorn ditch. ...	10
"	Short Line Irr. C. Co	Bayard	Short Line Irr. Can.	11
"	Lisco, Reuben....	Chappell	Lisco Ditch.....	12
"	Nine Mile Canal & Res. Co.....	Bayard	Nine Mile canal....	13
"	Cody & Dillon Irr. Canal Co.....	North Platte.	Cody & Dillon Irr. C	14
"	Sutherland & Pax- ton L. & Irr. Co.	Sutherland ..	Sutherland & Paxton L & Irr. Co. canal	15
"	Paxton & Hershey Irr., C & Land Co	Hershey.....	Paxton & Hershey C	16
"	Bower, Wm. T....	Oshkosh	Bower Ditch.....	17
"	Frmrs & Merchants Irr. & Land Co.	North Platte.	Frmrs. & Merchants Canal	18
"	South Side Irr. & Land Co.....	"	So. Side Irr. & Land Co. Canal.....	19
"	Roberts, C. F.....	Oshkosh	Midland ditch	20
"	Keith, Morrell C..	North Platte.	Keith canal.....	21
"	Maycock, Joseph .	Collins.....	Rooster ditch.....	22

BY STREAMS IN DIVISION 1-A—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig.		7.14	34	15	39	Keith	Sept	11	90	709	....
2 "		10	20	14	35	"	Oct.	9	90	710	....
3 "		60		1	20	53 Cheyenne..	Dec.	3	90	844	....
4 "		28.57	18	20	51	"	June	25	91	858	....
5 "		4.57	11	21	54	Scott's Bluff	Nov.	1	91	944	....
6 "		188.71	29	20	50	Cheyenne .	Jan.	20	92	857	....
7 "		11.43	21	22	55	Scott's Bluff	June	29	92	941	....
8 "		100		5	20	52 Cheyenne .	Dec.	26	92	874	....
9 "		9.43	22	20	51	"	Feb.	2	93	875	....
10 "		45.71	18	23	57	Scott's Bluff	Mar.	20	93	945	....
11 "		65.57	25	21	53	"	May	1	93	946	....
12 "		32.86	14	18	47	Cheyenne .	July	1	93	856	....
13 "		200		18	21	53 Scott's Bluff	Dec.	6	93	925	....
14 "		127		9	14	31 Lincoln ...	Dec.	29	93	649	....
15 "		186		18	14	36 Keith	Feb.	2	94	722	....
16 "		130		18	14	33 Lincoln ...	Feb.	12	94	653	....
17 "		21.37	6	17	45	Deuel.....	Mar.	27	94	787	....
18 "		183		12	14	33 Lincoln ...	May	22	94	662	....
19 "		270		14	14	34 "	June	6	94	667	....
20 "		12		2	16	44 Deuel.....	June	9	94	789	....
21 "		71		36	14	30 Lincoln ...	July	7	94	657	....
22 "		5.71	13	23	58	Scott's Bluff	July	29	94	950	....

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
North Platte.	Smith, Augustus .	North Platte.	Smith canal	1
"	.. Fox, B. M.	Oshkosh	Overland Irr. Co. can.	2
"	.. Hannah Ir. Can. Co.	Lisco . . . . .	.....	3
"	.. Gumaer, H. G.			
"	.. Robinson, John . .	Oshkosh	Oshkosh canal	4
"	.. Smith, A. H., et al	Camp Clarke.	Beerline ditch	5
"	.. Spohn, Wm.	Oshkosh	Spohn ditch	6
"	.. Rush Creek Irriga- tion Canal Co . .	Lodge Pole . .	Rush Creek Irr. can.	7
"	.. Lyons Irr. Canal & Water Power Co.	Oshkosh	Lyons Irr. canal . . .	8
"	.. Orr, Geo. B.,			
"	.. Vance, Roscoe	Lewellen	Orr & Vance canal .	9
"	.. Williams, E. C.			
"	.. Robbins, Harry . .	"	Robbins & Williams canal	10
"	.. Gyger, J. C.	Oshkosh	Gyger ditch	11
"	.. Dikeman, S. F. . . .	North Platte.	Dikeman canal	12
"	.. Simpson, Geo. M., Banghardt, C. S., Wendt, Hugo H. . .			
"	.. Jacobs, Lee	Oshkosh	Signal Bluff ditch . .	13
"	.. Hubartt, E.	Ogalalla	Hay Land canal . . .	14
"	.. Fernstrom, Alfred,	North Platte.	Hubartt & Hall ditch	15
"	.. Nissen, Peter.	Ogalalla	Fernstrom & Nissen ditch	16
"	.. Alfalfa Irr. district	"	Alfalfa Dist. canal . .	17
"	.. Bushnell, H. J.,			
"	.. Bushnell, E. N.	Oshkosh	Bushnell Bros. ditch	18
"	.. Aufdengarten, L.	Ogalalla . . . . .	.....	19
"	.. Holcomb, Gen. J.	"	Holcomb Irr. ditch .	20
"	.. Burritt, Newell . . .	North Platte.	Burritt & George can.	21
"	.. Steamboat D. Co. . .	Gering	Steamboat ditch	2

BY STREAMS IN DIVISION 1-A *Continued.*

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.		20	36	14	13	Lincoln ...	Aug.	9	94	676	....
2	"		20	1	16	44	Deuel	Aug.	14	94	791	....
3	"		5.71	24	18	47	Cheyenne .	Sept	24	94	886	....
4	"		40	33	17	44	Deuel	Oct.	5	94	797	....
5	"		30	24	19	49	"	Oct.	13	94	887	....
6	"		13.14	13	17	45	"	Dec.	6	94	801	....
7	"		9.64	2	17	46	"	Dec.	11	94	802	....
8	"		42.14	30	17	44	"	Dec.	22	94	803	....
9	"		2.93	29	16	42	"	Dec.	24	94	811	....
10	"		26.57	35	16	42	"	Jan.	4	95	804	....
11	"		10.86	10	16	44	"	Jan.	5	95	806	....
12	"		30	9	14	32	Lincoln ...	Jan.	14	95	684	....
13	"		30.13	16	16	43	Deuel	Jan.	16	95	807	....
14	"		5.71	29	15	39	Keith	Jan.	19	95	732	....
15	"		65.71	20	14	30	Lincoln ...	Mar.	3	95	691	....
16	"		4	25	15	39	Keith	Mar.	23	95	737	....
17	"		100	1	15	42	"	Mar.	25	95	738	....
18	"		7.14	12	16	44	Deuel	Mar.	27	95	809	....
19	" 10			13	14	37	Keith.				*734	....
20	"		63	16	15	40	"	June	4	95	....	1
21	" 120			2	12	28	Lincoln ...	Aug.	15	95	....	*118
22	"		15	4	21	54	Scott's Bluff	Oct.	22	95	....	186

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
North Platte.	North river I, C. W. & P. Co. . . .	Oshkosh	North river Irr. can.	1
"	Stub Supply D. Co.	Lewellen.	Stub supply ditch . .	2
"	Reimers, Henry . .	Paxton	Reimers canal.	3
"	La More, Fred E. .	La Peer.	La More canal.	4
"	La More, Fred E. .	La Peer.	La More ditch.	5
"	Steamboat Ditch Co	Gering.	Steamboat ditch . . .	6
"	Tetreault Amedee	La Peer	Tetreault ditch No. 2	7
"	The Gering Ir. dist.	Gering	Gering canal	8
"	Schermerhorn, A.	Omaha	Schermerhorn Irr can	9
South Platte.	Eaton, John J. . . .	Brule	Eaton & McGrath D.	10
"	Hollingsworth & S'n	Ogalalla	Hollingsworth ditch	11
"	Stebbins, Lucien . .	North Platte . .	Stebbins canal.	12
"	Searle, E. M.	Ogalalla . . . . .	.....	13
"	Miller, F. L.	Big Springs. . . .	Miller & Warren D.	14
"	Ryan, J. T.	Brule	Home Irr. ditch. . . .	15
"	Shireman, W. H. . .	Ogalalla	South Side Plano D.	16
"	Kimball, Walter, Thompson, G. E., Abbott, John H. . .	Big Springs. . . .	Big Springs canal . .	17
"	Ogalalla P. & Irr. Co	Ogalalla	Ogalalla P. & I. Co D.	18
"	Stebbins, Lucien . .	North Platte . .	Stebbins canal.	19
"	Mason, Elmer P. . .	Paxton	Paxton Irr. ditch . . .	20
"	Stafford, David . . .	"	Paxton Southern D.	21
"	Lawler, D. A., Ellsworth, Reuben, Record, Willis. . . .	Paxton	Lawler, Ellsworth, Record ditch.	22
"	Lute & Sheridan . .	Ogalalla	Lute & Sheridan D.	23
"	Meyer, Henry	Brule	Meyer canal.	24
"	Lawler, D. A., Ellsworth, Reuben, Record, Willis. . . .	Paxton	Record & Co.'s ditch	25
"	Searle, E. M.	Ogalalla	Riverside canal. . . .	26

BY STREAMS IN DIVISION 1-A—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.		168.29	14	18	47	Cheyenne..	Feb.	24	96	....	243
2	"	200	.....	24	16	43	Deuel.....	Mar.	14	96	....	*267
3	"	10	.....	18	14	34	Lincoln....	Mar.	23	96	....	*258
4	"	10	.....	34	19	48	Cheyenne..	May	9	96	....	*297
5	"	20	.....	34	19	48	"	July	18	96	....	*327
6	"		40	4	21	54	Scott's Bluff	July	22	96	....	350
7	"		12	1	19	50	Cheyenne..	Aug.	15	96	....	353
8	"		500	4	23	58	Scott's Bluff	Mar.	15	97	....	365
9	"		30	16	20	51	Cheyenne..	Oct.	25	97	....	418
10	"		20	25	13	41	Keith.....	Apr.	3	94	755	....
11	"		30	12	13	39	"	June	5	94	723	....
12	Irr.&p.		30	34	14	32	Lincoln...	Dec.	17	94	683	....
13	Irrig.		2.86	17	13	39	Keith.....	Dec.	22	94	744	....
14	"		53.86	7	12	42	Deuel.....	Jan.	5	95	805	....
15	"		3.14	30	13	40	Keith.....	Mar.	2	95	736	....
16	"		1.43	17	13	39	"	Apr.	22	95	733	....
17	"		8.93	35	13	42	Deuel.....	Apr.	27	95	810	....
18	"	65	.....	20	13	40	Keith.....	....	....	....	*753	....
19	Irr.&p.			32	14	32	Lincoln...	Disms	sed	....	†692	....
20	Irrig.	16	.....	2	12	36	Keith.....	Aug.	24	95	....	*130
21	"		4	2	13	36	"	Oct.	17	95	....	184
22	"	100	.....	9	13	37	Keith.....	Feb.	6	96	....	*232
23	"		13.43	5	13	37	"	Feb.	17	96	....	231
24	"	3	.....	22	13	40	"	Apr.	14	96	....	*283
25	"	328	.....	1	13	38	"	May	12	96	....	*300
26	"	15	.....	17	13	39	"	May	28	96	....	*308

*Pending. †Rehearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
South Platte.	Searle, E. M.,			
	Blackburn, Thos..	Ogalalla	Ogalalla Farmers & Mer. canal	1
"	Reed, Orin,	"	Cereal Irrigation D.	2
	Carnahan, H.	"	Miller ditch	3
"	Miller, F. L.	Big Springs..	Allen ditch.	4
"	Allen, Wm. F.	Omaha	Paxton I. Dist. canal	5
"	Paxton Irrig. Dist.	Paxton	Paxton South Side D	6
"	Stafford, David	Paxton	Kimball's Underflow ditch	7
"	Leech, E. E.	Big Springs..	Plum Creek canal..	8
Plum creek	Meeker, Amos	Lewellen	Barrett ditch	9
"	Barrett, Helena E.	Ogalalla	J. S. Wright D. No. 1	10
Pumpkin Seed	Wright, John S.	Ashford	Wm. J. Kelly ditch.	11
"	Kelly, Wm. J.	"	Heard's ditches Nos. 1 and 2	12
"	Heard, Henry L.	Freeport	J. S. Wright D. No. 2	13
"	Wright, John S.	Ashford	Logan ditch	14
"	Logan, John E.	Gering	Court House Rock Irr. Co.	15
"	Court House Rock Irr. Co.	Midway	Court House Irr. C.	16
"	Smith, Eliza C.,		Smith & Wheeler D.	17
"	Wheeler, Chas. G.	Sidney	Mutual ditch	18
"	Mutual Ditch Co.	Redington	Waitman's ditch	19
"	Waitman, P. P.	"	Enderund ditch	20
"	Enderund, Chas. O.,	Freeport	Meredith & Ammer ditch	21
"	Campbell, S. D.	Freeport	Hampton ditch	22
"	Cary, L. B.	La Peer	Last Chance.	23
"	Hampton, R. R.,		Round House Rock D	24
"	Hampton, Wm. D.	Harrisburg..	J. J. Maxwell Irr. D.	25
"	Finn, James L.,		Dunlap ditch	
"	Dean, Henry T.	La Peer		
"	Munn, Lee.	Redington		
"	Maxwell, Joseph J	Redington		
"	Dunlap, J. P.	Dwight		

BY STREAMS IN DIVISION 1-A—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.		125	20	13	40	Keith.	July	10	96	....	356
2	"	70	.....	16	13	39	"	July	10	96	....	*357
3	"	16	.....	31	13	41	"	Aug.	15	96	....	*354
4	"	10	.....	24	13	40	"	Dec.	15	96	....	*370
5	"	100	.....	1	13	38	"	Mar.	22	97	....	*387
6	"	4	.....	9	13	36	"	Dec.	30	97	....	*425
7	I. & P.	15	.....	4	12	42	"	Nov.	8	98	....	*482
8	Irrig.	2	.....	14	16	42	Deuel.	Feb.	20	97	....	*378
9	"	1	.....	23	16	42	Deuel.	Dec.	10	97	....	*422
10	"		2	5	19	54	Banner.	Dec.	31	82	904	....
11	"		1.43	5	19	54	"	May	10	86	915	....
12	"		1.29	14	19	54	"	June	1	87	916	....
13	"		2.86	5	19	54	"	Dec.	31	87	905	....
14	"		4	7	19	55	"	July	16	90	902	....
15	"		30.50	30	19	50	Cheyenne..	Oct.	6	90	840	....
16	" . . . . .		.71	26	19	51	"	Oct.	16	90	842	....
17	"		8.57	33	19	52	"	Nov.	1	90	843	....
18	"		2.86	25	19	53	Banner.	Mar.	12	91	847	....
19	"		1	21	19	53	"	May	27	91	903	....
20	"		18.86	23	19	50	Cheyenne..	Feb.	20	93	876	....
21	"		1.29	25	20	57	Banner.	Apr.	5	93	906	....
22	"		8	27	19	50	Cheyenne..	Apr.	12	94	883	....
23	"		3	28	19	51	"	May	29	94	884	....
24	" . . . . .		.50	23	19	52	"	June	30	94	885	....
25	" . . . . .		.36	24	19	51	"	Mar.	1	95	889	....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Pumpkin Seed	Willard, Wm. M. . .	Midway	Wm. M. Willard D. . .	1
"	Thompson, R. S., Bliss, A. K., Oliver, John	Redington . . .	Bird Cage ditch . . .	2
"	Smith, Eliza C., Wheeler, Chas. G. .	Sidney	Smith & Wheeler D. .	3
"	Wisner, S. R., Skinner, R.	Freeport	Abbot & Wisner D. . .	4
"	Peters, John F. . . .	Harrisburg . . .	Peters ditch	5
"	Wilson, Thos. H. . . .	Freeport	Freeport canal	6
"	"	"	Cowen canal	7
Ravine	Newberry, H.	North Platte . . .	Newberry ditch	8
Sand creek	Holcomb, G. J., Smith, F. M.	Ogalalla	Holcomb & Smith . . .	9
"	Patrick, Herman A. .	"	Patrick ditch	10
Schentzsprung	Schentz, Lewis	La Peer	Schentz Spring C. . . .	11
Sheep creek	Sturdivant, Joseph . .	Collins	Sturdivant ditch	12
Skunk creek	Miller, Adam	Keystone	Miller ditch	13
"	"	"	"	14
Snake creek	Oasis Ditch Co.	Alliance	Oasis ditch	15
"	Elmore, Mike	"	Elmore canal	16
Spotted Tail ck	Stewart, Herman G. . .	Crawford . . . . .	. . . . .	17
Spring Branch	Brogan Bros.	Paxton	Brogan Bros. ditch . . .	18
Spring creek	Holcomb, G. J.	Ogalalla	Spring creek ditch . . .	19
"	Saunders, L. F.	Gering	Saunders ditch	20
Spring ck (trib to White Clay)	Holloway, D. P.	Keystone	Spring creek ditch . . .	21
Springs (trib. to Middle ck).	Bartling, Henry	Sidney	Bartling ditch	22
"	"	"	Bartling ditch No. 2 . .	23
Springs on sec 1 of 28-18-49	Finn Bros.	La Peer	Finn Bros. ditch	24
Str'm no name	Newberry, H.	North Platte . . .	Newberry ditch	25
White Hrse ck	Lamplugh, Isaac	"	Lamplugh's lakes	26

BY STREAMS IN DIVISION 1-A—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE			DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.	
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.			Y.
1	Irrig.		1.43	25	19	51	Cheyenne .	Mar.	27	95	888	....
2	"		1	19	19	51	"	June	1	95	892	....
3	"		1.57	26	19	51	"	June	1	96	842	....
4	"	14.40		23	19	53	Banner				*917	....
5	" . . . . .	.10		34	20	56	"				*913	....
6	"	2		18	19	53	"	June	24	95		*45
7	"	1		17	19	53	"	June	24	95		*46
8	"		2	22	14	32	Lincoln . . .	July	19	95		*85
9	"		7	10	15	40	Keith	May	20	89	698	....
10	"		2.43	3	15	40	"	May	31	91	725	....
11	" . . . . .		.21	28	18	50	Cheyenne . .	May	10	92	881	....
12	"	60		12	25	58	Sioux	Oct.	10	95		*182
13	"		2.29	1	14	37	Keith	Apr.	1	95	740	....
14	"	4		1	14	37	"	July	13	96		*325
15	"		54.86	6	24	51	Box Butte . .	June	6	94	567	....
16	"	40		30	25	51	"	June	22	95		* 41
17	"		1	10	23	56	Scott's Bluff	May	2	98		449
18	"	6		35	15	37	Keith	Sept	24	97		*410
19	" . . . . .		.57	12	15	40	"	June	18	94	724	....
20	"		9.14	36	23	56	Scott's Bluff	Apr.	20	97		368
21	"		1.57	19	15	37	Keith	June	21	90	704	....
22	" . . . . .		.29	28	18	51	Cheyenne . .	July	31	91	870	....
23	" . . . . .		.29	28	18	51	"	Jan.	1	94	891	....
24	" . . . . .		.50	28	18	49	"	July	1	90	836	....
25	"		1.14	22	14	32	Lincoln . . .	Feb.	25	95	688	....
26	"		2.86	8	14	30	"	Dec.	31	83	658	....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
White Tail ck.	McCarthy, John M.	Keystone	J.M. McCarthy ditch	1
"	Ogalalla Land and Cattle Co.	Chicago, Ill.		2
"	Holloway, D. P.			
"	Phelps, Al.	Ogalalla.	Holloway & Phelps.	3
"	Leonard Bros.	Keystone	Little Dandy.	4
"	Foster, Frank.	"	Foster Keystone C..	5
"	Reed, Fred.	"	Reed ditch.	6
"	Keystone Irri. Co.	Ogalalla.	Keystone I. Co. ditch	7
"	Bower, Jno. H.	"		8
Wind Springs.	Maycock, John.	Gering	Wind Springs canal	9
Winters' Ck. . .	Bouten, Chas. A.	"	Bouten's ditch.	10
Wood river. . .	Davis, J. H. & Son	Gibbon		11
"	Shelton Milling & Grain Co.	Shelton		12
"	Bearrs, S.	Kearney		13
"	Hankey, Arthur B.	Alda.	Hankey Irri. canal. .	14
"	Edmisten, J. H.	Eddyville.	Eddyville ditch. . . .	15
"	"	"	Edmisten Land & Lake ditch.	16
"	"	"	"	17
"	Babcock, H. E.	Ord.	Little Gem.	18

BY STREAMS IN DIVISION 1-A—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.	.....	1	36	15	38	Keith	July	15	90	749	....
2	"	.....	21	21	26	15	"	July	18	91	716	....
3	"	.....	4	36	15	38	Keith	June	15	93	717	....
4	"	.....	2	22	15	38	"	Oct.	12	94	727	....
5	"	.....	20	36	15	38	"	Oct.	30	94	730	....
6	"	.....	.57	15	15	37	"	May	15	95	751	....
7	"	55	.....	25	15	38	"	June	12	95	....	* 17
8	I. & P.	9	.....	36	15	38	"	Oct.	29	97	....	*420
9	Irrig.	.....	1.43	12	24	55	Sioux	Mar.	1	92	954	....
10	"	.....	1	3	22	54	Scott's Bl'f.	Aug.	17	89	923	....
11	Mill...	40	.....	13	9	14	Buffalo	.....	.....	.....	993	*...
12	" ..	40	.....	1	9	13	"	.....	.....	.....	994	*...
13	" ..	25.40	.....	13	9	16	"	.....	.....	.....	995	*...
14	Irrig.	1	.....	8	10	10	Hall	June	11	95	....	* 12
15	"	100	.....	8	12	20	Dawson	Oct.	6	95	....	*178
16	"	50	.....	29	12	20	"	Oct.	7	95	....	*179
17	"	50	.....	29	12	20	"	Oct.	7	95	....	*180
18	"	.....	180	9	10	10	Hall	Apr.	10	97	....	366

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Big Cottonw'd	Hansberry, John T.	Bloomington	Bloomington Mill Race.....	1
"	Zulanf, Chas. E...	Ravenna	" "	2
"	"	"	" "	3
Buffalo Creek	Larnerd, Frederick	Haigler	Allen & Larnerd Ditch	4
"	Porter, J. R. & Sons	"	Porter & Sons Ditch	5
"	Moore, Eliza A...	"	Moore Ditch	6
"	"	"	"	7
Center Creek.	Gregory, A. B.,			
"	Garrett, P. C....	Franklin	Gregory Ditch	8
"	Bishop, D. L.,			
"	Conkling, Jas., Jr.	Franklin	Center creek D.No.1	9
"	Barber, F. W....	"	Barber Ditch	10
Cook Creek..	Sharpnac, W. A...	Alma	Sharpnac Ditch	11
Driftwood Crk	Walsh, Patrick...	McCook	Driftwood Ditch...	12
"	Stock, F. A.	Falls City ...	Stock's Ditch	13
"	Wasson, Chas. A..	McCook	Wasson Pumping Plant.....	14
Fox Creek...	Phoenix Ins. Co...	Hartford, Con.		15
Frenchman R.	Fisher, Polly & Co	Wauneta	Wauneta Mills....	16
" ..	James, R. P.....	Champion ...	Champion Mills....	17
" ..	McGillin, W. J...	Imperial	Aberdeen ditch....	18
" ..	"	"	Harlem ditch.....	19
Frenchman R. and Stinking Water creek..	Culbertson Irr. & W. P. Co.....	Culbertson ...	Culbertson Irriga- tion & W. P. canal	20
Frenchman R.	Wirsig, O. H....	Champion....	Champion Water P. & Irrigation ditch	21
"	McGillin, W. J...	Imperial	Aberdeen ditch....	22
"	Farmers Canal Co.	Culbertson ...	Farmers canal....	23
"	Fuller, C. D.....	Imperial	Fuller ditch	24

BY STREAMS IN DIVISION 1-B.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE			DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.	
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.			Y.
1	Irrig.	.....	.50	25	2	16	Franklin ..	Dec.	31	81	185	....
2	Power	.....	6	25	2	16	Buffalo....	Nov.	23	98	....	483
3	Irrig.	.....	1.43	25	2	16	"	Nov.	23	98	....	483
4	"	.....	6	18	1	40	Dundy ...	Oct.	16	90	117	....
5	"	.....	2.86	1	1	41	" ...	Nov.	26	90	171	....
6	"	.....	3.43	26	2	41	" ...	Oct.	4	95	....	170
7	"	.....	2	26	2	41	" ...	Oct.	4	95	....	171
8	"	.....	4	1	1	15	Franklin ..	Aug.	11	94	182	....
9	"	.....	2	22	2	15	" ..	Dec.	12	95	....	196
10	"	.....	2	1	1	15	" ..	Apr.	3	96	....	285
11	"	1	.....	4	1	18	Harlan ...	Feb.	21	96	....	*251
12	"	.....	1.71	1	2	30	Red Willow	Apr.	20	94	107	....
13	"	.....	1.14	33	2	31	Hitchcock .	Mar.	26	97	....	388
14	"	.....	.86	12	2	30	Red Willow	Jan.	14	98	....	431
15	"	.....	1	29	9	28	Lincoln ...	Feb.	14	96	....	234
16	Mill...	.....	.....	11	5	36	Chase.....	July	31	86	178	....
17	"	.....	.....	21	6	39	"	Dec.	31	87	179	....
18	Irrig.	.....	2	3	5	38	Chase.....	July	1	88	50	....
19	"	.....	2	1	5	38	"	July	1	88	56	....
20	"	.....	215	31	5	33	Hayes	May	16	90	24 25 29 30	....
21	"	.....	64.86	24	6	40	Chase.....	Dec.	23	90	47	....
22	"	.....	50	3	5	38	"	Feb.	2	91	50	....
23	"	.....	10	11	3	32	Hitchcock..	Dec.	19	93	10	....
24	"	.....	25	4	5	36	Chase.....	June	12	94	62	....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Frenchman R.	Riverside Canal & Irrigation Co..	Culbertson...	Riverside canal....	1
"	Carrington, L. J., Blount, L. C.....	"	Frenchman Valley C	2
"	Hagerman, J., Hagerman, Wm..	Hudson.....	Hagerman ditch...	3
"	Gould, Wilson S..	Omaha.....	Gould or Harlam D.	4
"	Grant, Allen.....	Imperial	Grant or Harlam D.	5
"	Maranville, E., Overtree, M., Beard, B.....	Lamar	Maranville ditch...	6
"	Wise, J. S.....	Hudson	Wise ditch	7
"	Gurnsey, D. & Co.	Waneta	No. Side Gurnsey D.	8
"	"	"	South Gurnsey ditch	9
"	Inman, N.....	Champion....	Inman ditch	10
"	Cunningham, A..	Imperial.....	Gilley ditch	11
"	Sheeks, D. P.....	Beverly	Goker ditch	12
"	McAuliffe, J.....	Imperial.....	John McAuliffe D..	13
"	Locker, J. H.....	Hudson	Locker's ditch	14
"	McGillin, W. J..	Imperial.....	McGillin ditch	15
"	Leachey, A. A....	Lamar	Russell's mill.....	16
"	Grant, J. S.....	Imperial.....	John Grant's ditch.	17
"	North Side I. D. Co.	"	North Side Irr. ditch	18
"	Farmers Canal Co.	Culbertson...	Farmers canal.....	19
"	Shallenberger, P. H.	Imperial.....	Shallenberger canal.	20
"	Inman D. & Irr. Co.	"	Inman ditch	21
Horse creek..	Davenport, H. W., Nesbit, J. M.....	Ives	Horse creek ditch..	22
" ..	Pringle, Esther L.	"	Pringle ditch.....	23
Indian creek..	Thompson & Van Sickle.....	Benkelman ..	Thompson & Van Sickle.....	24
" ..	Kimsey, J. W., Kimsey, C. C.....	"	Kimsey ditch	25
" ..	Wilson, Ed.....	Stratton	Wilson ditch.....	26

BY STREAMS IN DIVISION 1-B—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE			DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.	
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.			Y.
1	Irrig.		12	33	4	32	Hitchcock.	July	28	94	18	....
2	"		10	32	5	33	Hayes	Aug.	23	94	38	....
3	"		1.29	24	5	35	"	Aug.	27	94	39	....
4	"		2	1	5	38	Chase	Oct.	9	94	67	....
5	"		2	3	5	38	"	Oct.	16	94	68	....
6	"		6	12	6	41	"	Dec.	8	94	⁷⁰ ₇₁	....
7	"		2	15	5	35	"	Dec.	28	94	42	....
8	"		5	3	5	37	"	Jan.	14	95	74	....
9	"		24	10	5	37	"	Jan.	14	95	75	....
10	"		1.50	17	6	40	"	Feb.	28	95	79	....
11	"		2	31	6	38	"	June	11	95	....	13
12	"	8	.....	8	4	33	Hitchcock .	June	24	95	....	*47
13	"		2	4	5	37	Chase	July	3	95	....	59
14	"		1	24	5	35	Hayes	Aug.	1	95	....	93
15	"		2.29	6	5	37	Chase	Aug.	26	95	....	131
16	Milli'g		.....	18	6	40	"	Aug.	30	95	....	134
17	Irrig.		1	1	5	38	"	Sept	10	95	....	154
18	"		2.86	21	6	39	"	Feb.	25	96	....	246
19	"		100	11	3	32	Hitchcock .	Dec.	9	96	....	362
20	"		3	25	6	39	Chase	Dec.	21	97	....	423
21	"		10	17	6	40	"	Feb.	10	98	....	436
22	"		1.86	23	1	39	Dundy	Aug.	31	85	¹⁵⁹ ₁₇₃	....
23	"		2.14	11	1	39	"	Jan.	12	97	364	....
24	"		1.43	8	2	37	"	June	20	95	....	237
25	"		1	10	2	37	"	June	20	95	....	261
26	"		4.71	23	2	36	"	June	22	95	....	268

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Indian creek .	Chamberlain, J. C.	Max	Chamberlain ditch .	1
"	"	"	Last Resort	2
Medicine ck .	Rodwell, E. C.,			
	Brown, C. M.	Cambridge		3
"	Sanders, John L. .	Stockville	Sanders Irr. Plant. .	4
"	Phillips, R. O . . .	Lincoln	Curtis lake	5
Muddy creek .	Phillips, F. C . . .	Max	Phillips ditch	6
Peppermint ck	Betts, N. O	Bloomington . . .	Betts ditch	7
Red Willow ck	Holland, L. J. . . .	Indianola	L. J. Holland ditch. .	8
"	Helm, John F	Red Willow		9
"	Moore, Wm. H . . .	Indianola		10
R. Willow lake	Cooper, James . . .	Wallace		11
"	"	Dickens	Red Willow lake C. .	12
Republican . .	Carson, Andrew . .	McCook	Carson ditch No. 1. .	13
"	Trites, W. H.,			
	Davenport, H. W. .	Culbertson	Trites & Davenports canal	14
"	McCook Irr. & W.			
	Power Co.	McCook	C. H. Meeker Irr. & W. P. Canal	15
"	Trenton Farmers			
	Irr. Association. .	Trenton	Trenton Frmr Irri.D .	16
"	Carson, Andrew . .	McCook	Carson Ditch No. 2. .	17
"	Cambridge & Arap-			
	ahoe I. & Imp. Co	Crete	Cambr'ge & Arap. Irr. & I. Co. d. . . .	18
"	Republic Riv. I.C	Benkleman	Republican R. Irri. Co. Ditch	19
"	White, Geo., Larn-			
	erd, Wm. H.	Haigler	White & Larnerd D. .	20
"	Marr, Lorenzo . . .	Culbertson	Marr ditch	21
"	Anderson, Anders .	Benkleman	Anders Anderson D .	22
"	Frey, J. W.	Trenton	Grovert & Frey D. .	23
"	Groesbeck & Cannon	Max	Groesbeck & Cannon ditch	24

BY STREAMS IN DIVISION 1-B—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	I & fish		.06	18	2	36	Dundy	Oct.	4	95	....	240
2	Irrig.		1.14	12	2	37	"	Oct.	19	95	....	185
3	Mill.		68	29	4	25	Furnas	Dec.	31	78	{ 92	....
4	Irrig.		1.43	27	7	27	Frontier	Feb.	8	95	83	....
5	W.sup. & pow'r			32	8	28	"	....	....	....	*364	....
6	Irrig.		2.14	2	2	36	Dundy	Jan.	19	95	235	....
7	I & fish		50	28	2	15	Franklin	Jan.	13	98	....	430
8	Irrig.		35	16	3	28	Red Willow	Jan.	23	91	95	....
9	"		2	17	3	28	"	Feb.	18	95	111	....
10	Mill.			16	3	28	"	....	....	....	*181	....
11	Irrig.		2	36	9	33	Lincoln	Dec.	20	93	647	....
12	"		2.14	36	9	33	"	Aug.	30	95	....	249
13	"		1.43	27	3	30	Red Willow	July	1	88	103	....
14	"		7	20	3	31	Hitchcock	Dec.	18	90	3	....
15	Irrig.		143	15	3	31	Hitchcock	Dec.	22	90	{ 4, 7, 8, 9	....
16	"		32	10	2	34	"	Dec.	24	90	5	....
17	I. & pr		18	27	3	30	Red Willow	May	5	91	102	....
18	Irrig.		170	28	4	25	Furnas	Aug.	26	91	89	....
19	"		30	29	1	38	Dundy	May	2	92	{ 147, 148	....
20	"		3	22	1	40	"	Apr.	29	93	150	....
21	"		4.29	16	3	31	Hitchcock	Jan.	22	94	11	....
22	"		2	1	1	37	Dundy	Jan.	26	94	151	....
23	"		1	4	2	33	Hitchcock	Jan.	29	94	13	....
24	"		10	10	1	37	Dundy	Mar.	27	94	153	....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Republican ..	Thomas, A. J.	Haigler	Thomas ditch	1
" ..	Ballard, Henry L.	Oxford	Ballard ditch	2
" ..	Byfield, William ..	McCook	Byfield ditch	3
" ..	Wilcox, F. S.	"	Wilcox	4
" ..	Delaware-Hickman Ditch Co.	Benkleman ..		5
" ..	Allen, E. N.,			
" ..	Allen, H. P.	Arapahoe	Allen Irr. ditch	6
" ..	Benedict, I.	Culbertson ..	Benedict ditch	7
" ..	Anderson, C.,			
" ..	Anderson, A.	Benkelman ..	Anderson Bros. ditch	8
" ..	Nelson, O. F.	Stratton	Nelson Irr. ditch ..	9
" ..	Pickering, J.	Trenton	North Side Pioneer Irrigation ditch ..	10
" ..	Spooner, J. A.	Ives.	Private ditch	11
" N.Fk.	Brown, W. A.	Haigler	Sand Point Ditch Co	12
" ..	Dundy County Irr. Co.	Benkelman ..	Dundy Co. Irr. ditch	13
" ..	Neighbor, E. G. ...	"	Neighbor ditch	14
" S.Fk.	Karr, J. W.	"	Karr's ditch	15
" ..	Riverside Ditch Co	"	Riverside ditch	16
Rock creek ..	Highland, E. F., Bonnot, A. B., Phelan, J. R., Williams, R.	Denver, Col.	Phelan ditch	17
" ..	Owens, J. S., Owens, E. E.	Ives.	Owen's ditch	18
Sappa creek ..	Wheeler, Matilda E	Precept.		19
Spring creek .	Callihan, Oscar ..	Benkelman ..	Benkelman ditch ..	20
" ..	Hatcher, Minnie E	Imperial	Hatcher ditch	21
Stinki'g w't cr	Chase County Land & Live Stock Co	Beatrice.	Chase Co. L. & L. S. Co., ditch 2.	22
" ..	McLain, Frank ...	Imperial	McLain's ditch	23

BY STREAMS IN DIVISION 1-B—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig.		2	24	140		"	June	5	94	154	....
2 "		8	8	321		Furnas	June	9	94	91	....
3 "		12	23	329		Red Willow	June	11	94	108	....
4 "		4.50	32	329		"	Oct.	1	94	109	....
5 "		20	17	137		Dundy	Jan.	7	95	157	....
6 "		14	2	326		Red Willow	Jan.	26	95	110	....
7 "		2.86	19	331		Hitchcock	June	24	95	....	43
8 "		7	2	137		Dundy	Nov.	13	95	....	193
9 "		10	19	234		Hitchcock	Feb.	17	96	....	241
10 "		10	9	234		"	Mar.	14	96	....	266
11 "		1	25	140		Dundy	Oct.	7	97	....	413
12 "		11	11	142		"	Sept	25	90	115	....
13 "		45	24	139		"	Nov.	22	90	118	....
14 "		2.86	24	139		"	Mar.	18	91	133	....
15 "		2	20	137		"	July	28	94	155	....
16 "		13	29	137		"	Aug.	5	94	156	....
17 "		4.29	17	139		"	Dec.	31	83	138	....
18 "		1.29	31	239		"	Jan.	20	95	....	265
19 " . . . . .		.43	13	122		Furnas	July	26	97	....	399
20 "		1.50	19	137		Dundy	Dec.	31	96	....	373
21 "		1	3	636		Chase	Sept	5	95	....	148
22 "		2.86	10	738		"	Mar.	10	94	57	....
23 "		2.50	28	737		"	Sept	24	94	65	....

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Stink'g Wtr. ck	Chase County Land & Live Stock Co	Beatrice.....	Chase Co. L. & L. S.	
"	Chase County Land & Live Stock Co	" ...	Co., ditch 7.....	1
"	Chase County Land & Live Stock Co	" ...	Co., ditch 6.....	2
"	Chase County Land & Live Stock Co	" ...	Chase Co. L. & L. S.	
"	Chase County Land & Live Stock Co	" ...	Co., ditch 5.....	3
"	Cummins, W. R..	Palisade.....	Co., ditch 3.....	4
"	Chase County Land & Live Stock Co	Palisade.....	.....	5
"	Chase County Land & Live Stock Co	Beatrice.....	Chase Co. L. & L. S.	
"	Chase County Land & Live Stock Co.	" ...	Co., ditch 4.....	6
Thompson ck.	Johnson, T.....	Fairfield.....	Chase Co. L. & L. S.	
Turkey creek.	Wilt and Polly ...	Naponee.....	Co., ditch 1.....	7
Turkey creek.	Waters, E. H	McCook.....	Spring Dale Farm d.	8
			.....	9
			Edison ditch.....	10

BY STREAMS IN DIVISION 1-B—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig..	4.57	36		7	37 Chase.....	Dec.	21	94	72 175	....
2 “	2	13		7	37 “	Jan.	28	95	76	....
3 “	1.50	14		7	38 “	Jan.	29	95	77	....
4 “	1.71	14		7	38 “	Jan.	29	95	78	....
5 Power	30		5	33 Hayes.....	.....	.....	.....	* 44	....
6 Irrig..	1.71	14		7	38 Chase.....	June	27	95	....	56
7 “	1.43	4		7	38 “	June	27	95	....	57
8 Irrig..	2	.....	4		2	13 Franklin ..	Sept	30	95	....	*174
9 Power	4		1	16 Franklin ..	Dec.	31	74	*183	....
10 Irrig..	15	.....	30		4	21 Furnas	Oct.	28	98	....	*481

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Little Blue ..	Wilson, Chas. W..	Hastings.....	.....	1
" ..	Philleo, E. A.	Ayr .....	.....	2
" ..	Meyer & Siedenburg	Oak.....	Oak mill race	3
Rose creek... ..	Komrs, H. F.	Reynolds ...	Bohemian Nursery d	4

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Bear creek... ..	Wolfe, J. V.	Lincoln	Wat. Wks. Institute Feeble Minded ..	1
Beaver creek.	Wright, G. D.	York.....	.....	2
Blue riv., W. bk	Blue Vale C. Co... ..	Cordova	Blue Vale canal ...	3
" ..	Kersenbrock, J. H.	Columbus ...	J. Kersenbrocks' ir pl	4
" ..	" ..	" ..	J. H. Kersenbrocks' power plant.....	5
Lincoln creek.	Smith, Jennie A..	York	Private ditch.....	6
Turkey creek.	Lane, J. K.	Pleasant Hill.	.....	7
" ..	" ..	" ..	Lanes' Model irr. d.	8
" ..	Roop, F.	Dorchester ..	.....	9
" ..	Lakin, W. H. ....	" ..	.....	10
" ..	William, J.	Pleasant.....	.....	11

BY STREAMS IN DIVISION 1-C.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig..	10	.....	18	5	10	Adams .....	.....	.....	.....	*989	.....
2 " "	10	.....	9	5	10	" .....	.....	.....	.....	*992	.....
3 Millng.....	.....	.....	16	3	5	Nuckolls ..	.....	.....	.....	*991	.....
4 Irrig..	1.36	.....	12	1	1	Thayer.....	.....	.....	.....	*323	.....

* Pending.

BY STREAMS IN DIVISION 1-D.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Dom. use & ir .....	.....	1	36	4	6-E	Gage	May	20	98	.....	455
2 Mill.....	.....	40	7	10	2-W	.....	Nov.	1	78	963	.....
3 Irrig.	350	.....	25	9	3-W	York	Oct.	7	95	.....	*188
4 " "	.....	7.14	32	9	3-E	Seward....	Dec.	20	95	.....	211
5 Pr .....	.....	105	32	9	3-E	"	Dec.	20	95	.....	214
6 Irrig. ....	.....	1	21	12	1-W	York	Mar.	2	96	.....	269
7 Mill.....	.....	.....	18	7	3-E	Saline .....	.....	.....	.....	*990	.....
8 Irrig.	1.25	.....	4	7	3-E	"	July	16	95	.....	* 81
9 " ..	1	.....	5	7	3-E	"	Jan.	10	96	.....	*208
10 " ..	2	.....	34	8	2-E	"	Jan.	27	96	.....	*218
11 " ..	8.9	.....	14	7	3-E	,,	Mar.	25	96	.....	*271

* Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Lodge Pole ck	Bay State L. S. Co	Kimball	Bay State Ditch. . .	1
"	Adams & Tobin. . .	Sidney	Adams & Tobin ditch	2
"	Gunderson, A.	Potter	Adam, Gunderson. .	
			Irr. & Mill ditch. . .	3
"	Runge, G.	Sidney	Runge Ditch No. 1.	4
"	"	"	Runge Ditch No. 2.	5
"	Anderson, J.	"	And. Ditch No. 1. .	6
"	Bay State L. S. Co	Kimball	Circle Arrow ditch .	7
"	Urbach, M.	Sidney	Urbach ditch.	8
"	Hale, L. H. . . . .	" . . . . .	.....	9
"	" . . . . .	" . . . . .	.....	10
"	" . . . . .	" . . . . .	.....	11
"	Whitney, W. T. . . .	Seattle, Wash.	Whitney ditch. . . .	12
"	McAuliffe, F.	Chappell. . . . .	.....	13
"	Kinney, J. J.	Kimball	Kinney Ditch No. 2.	14
"	Libby, H. H.	Lodge Pole. . . .	Libby ditch.	15
"	Dickinson, F. . . . .	" . . . . .	.....	16
"	Howard, A. T.	"	Howard ditch.	17
"	Krueger, F. W. . . .	Sidney	Krueger Ditch No. 3	18
"	Wolfe, H. D.	Chappell . . . . .	.....	16
"	Krueger, F. W. . . .	Sidney	Krueger Ditch No. 2	20
"	Borgquist, C. R. . .	"	Borgquist canal. . .	21
"	"	"	"	22
"	Whitney, W. T. . . .	Seattle, Wash.	Up. Whitney ditch .	23
"	McLaughlin, M. . . .	Sidney	McLaughlin ditch . .	24
"	Hale, L. H. . . . .	" . . . . .	.....	25
"	Mitchell, J. . . . .	" . . . . .	.....	26
"	Tobin, M. H.	"	Tobin ditch.	27
"	Jones, B. A.	"	Bordwell ditch. . . .	28
"	Kinney, S. C.	P. Bluffs, Wyo	Premier ditch.	29
"	Kinney, S. A.	"	Smeed ditch.	30
"	Jones, B. A.	Sidney	Bordwell ditch. . . .	31
"	Hurley, J. W.	Kimball	Polly ditch.	32
"	Pierce, S. A.	P. Bluffs, Wyo	Independent ditch. .	33

BY STREAMS IN DIVISION 1-E.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE			DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.	
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.			Y.
1	Irrig		1.50	29	15	35	Kimball . . .	Dec .	31	76	347	....
2	"		1.14	35	14	52	Cheyenne . .	Oct .	1	78	368	....
3	"		1.43	1	14	52	"	June.	1	79	305	....
4	"		1.71	20	14	50	"	April	15	80	339	....
5	" . . . . .		.50	20	14	50	"	April	15	82	338	....
6	"		2.50	8	14	51	"	June.	30	82	373	....
7	"		3.71	30	15	54	Kimball . . .	July .	1	82	346	....
8	" . . . . .		.83	14	14	51	Cheyenne . .	Sept. .	1	82	308	....
9	" . . . . .		.53	36	14	49	"	April	30	83	320	....
10	" . . . . .		.71	36	14	49	"	April	30	83	321	....
11	" . . . . .		.57	36	14	49	"	April	30	83	322	....
11	"		2.29	31	14	48	"	May .	1	83	317	....
13	"		2.29	21	13	45	Deuel	Dec .	31	84	814	....
14	"		2.71	33	15	56	Kimball . . .	Dec .	31	84	348	....
15	"		2	36	14	47	Cheyenne . .	Dec .	31	84	312	....
16	"		1.14	26	14	47	"	Jan .	1	85	969	....
17	" . . . . .		.86	31	14	47	"	April	10	85	336	....
18	"		1.14	32	14	48	"	May .	1	85	323	....
19	"		1	18	13	45	Deuel	Dec .	31	85	813	....
20	"		2.29	32	14	48	Cheyenne . .	Oct .	10	86	324	....
21	"		1.29	34	14	49	"	April	30	87	301	....
22	" . . . . .		.71	34	14	49	"	April	30	87	300	....
23	"		2.29	36	14	49	"	May .	1	87	316	....
24	"		1	25	14	48	"	May .	1	87	966	....
25	"		1.14	36	14	49	"	July .	1	87	318	....
26	" . . . . .		.86	8	14	51	"	Sept. .	1	87	304	....
27	"		2.86	28	14	47	"	July .	31	88	330	....
28	"		1.43	35	14	49	"	Aug .	1	88	303	....
29	"		2.43	3	14	58	Kimball . . .	April	11	89	340	....
30	"		1.43	8	14	58	"	April	12	89	341	....
31	" . . . . .		.86	35	14	49	Cheyenne . .	April	27	89	302	....
32	" . . . . .		.79	30	15	55	Kimball . . .	May .	6	89	342	....
33	"		3.14	7	14	58	"	May .	6	89	343	....

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Lodge Pole	Kinney, J. J	Kimball	Kinney ditch	1
"	Young, W. T	"	Young ditch	2
"	Ruttner, C	"	Ruttner ditch	3
"	Hale, L. H	Sidney . . . .	.....	4
"	Harrington E. . . .	Chappell . . . .	.....	5
"	Persinger, A. B	Lodge Pole . . . .	.....	6
"	Krueger, F. W	Sidney	Krueger ditch	7
"	Brady, J. V.	Dix	Brady ditch	8
"	Gross, C. J.	Pine Bluffs, Wo.	Hoover ditch	9
"	Ickes, C. S.	Denver, Col.	Ickes ditch	10
"	Adams, J. M.	Potter	Adam's ditch	11
"	Hurley, J. W	Kimball	Hurley, Lilly, and Polly ditch	12
"	Christenson, H. L.	Sidney	Christenson ditch	13
"	"	"	Christenson D. No. 1	14
"	Trognitz, C	"	Trognitz canal	15
"	Oberfelder, R. S.	"	Oberfelder ditch	16
"	Krueger, R.	"	Richard Krueger D	17
"	Anderson, J	"	Anderson D. No. 2	18
"	Adams, J. M.	Potter	Adam's ditch	19
"	Lyngholm, N. P	Brownson	Lyngholm ditch	20
"	Adams, J. M.	Potter	Adam's ditch	21
"	Dickinson, F	Lodge Pole . . . .	.....	22
"	Booth, F	"	Booth's canal	23
"	Oberfelder, R. S.	Sidney	Oberfelder ditch	24
"	Newman, H.	Lodge Pole	Newman ditch	25
"	Jones, B. A.	Sidney	Jones' Irr. plant. . . .	26
"	Couch, A.	"	Couch canal	27
"	Burg, C. C	Dix . . . .	.....	28
"	Bullock, W. C	Lodge Pole	Bullock canal	29
"	Forsling, A.	Kimball	Maltese ditch	30
"	McIntosh, J	"	McIntosh ditch	31
Spring creek.	Oberfelder, R. S.	Sidney	Oberfelder ditch	32
Spring	Gunder, G. B	"	Private ditch	33

BY STREAMS IN DIVISION 1-E.—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig		2	33	15	56	Kimball ...	May	14	89	345	....
2	"		.50	33	15	57	" ...	May	28	89	349	....
3	"		1.14	31	15	56	" ...	June	4	89	350	....
4	"		.43	36	14	49	Cheyenne	June	20	89	319	....
5	"		9.14	3	13	46	Deuel	June	25	89	296	....
6	"		4.57	33	14	46	"	June	25	89	297	....
7	"		3	29	14	48	Cheyenne	June	26	89	325	....
8	"		.71	28	15	54	Kimball ...	Aug.	16	89	352	....
9	"		1.43	12	14	59	" ...	Sept.	4	89	353	....
10	"		2.50	33	14	50	Cheyenne	Mar.	25	91	329	....
11	"		1.43	3	14	52	"	July	1	91	371	....
12	"		2.57	26	15	56	Kimball ...	Oct.	1	91	354	....
13	"		.57	7	14	51	Cheyenne	April	15	93	366	....
14	"		.43	7	14	51	"	April	15	93	367	....
15	"		1	36	14	50	"	June	1	93	365	....
16	"		2	31	14	46	"	Dec.	30	93	306	....
17	"		1	29	14	48	"	May	1	94	968	....
18	"		.57	10	14	51	"	June	1	94	372	....
19	"		1.43	10	14	52	"	Sept.	1	94	370	....
20	"		.36	14	14	51	"	Nov.	1	94	337	....
21	"		.50	10	14	52	"	Aug.	1	95	369	....
22	"		2.29	33	14	47	"	May	10	96	967	....
23	"		4.29	29	14	47	"	....	....	....	*309	...
24	"		1	31	14	46	"	....	....	....	*333	...
25	"	2	.....	31	14	47	"	June	24	95	....	*48
26	"	2	.....	33	14	49	"	July	5	95	....	*70
27	"	2	.....	20	14	50	"	July	24	95	....	*89
28	"	2	.....	30	15	53	Kimball ...	Mar.	3	97	....	*381
29	"	1	.....	4	13	46	Cheyenne	Feb.	2	98	....	*437
30	"	1	.....	36	15	57	Kimball ...	May	16	98	....	*454
31	"	16	.....	23	15	55	"	....	....	....	*351	....
32	"		2.29	31	14	46	Cheyenne	May	29	89	307	....
33	"		.04	14	13	51	"	....	19	95	335	....

*Rehearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Nemaha river, md br.	Christy, H. R.	Palmyra	Christy ditch.....	1

BY STREAMS IN DIVISION 1-F

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig		1	4	8	9-E	Otoe.....	Aug.	13	95	....	115

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Beaver river..	Quackenbush, J. W.	Albion	Pioneer ditch.....	1
"	Babcock, H. E.	Ord	Great Eastern canal	2
"	Long, C. W.	Genoa	Wind Mill Irrig...	3
"	"	"	"	4
Brush creek..	Roneche, P. S.	Brownlee....	P. S. Roneche ditch.	5
Calamus river	Brumback, N. T. ..	Beatrice	Calamus No. 1.....	6
"	Hesselgesser, R. ..	Prime	Calamus Val. Irr. C.	7
"	Shoemaker, A. E. .	Burwell....	Home Supply canal.	8
"	Willow Spr. Irr. dis	"	Willow Spr. Irr. ditch	9
"	Stark, A. B.	Taylor.....	Jackson irrig. canal.	10
Calf creek ..	Cady, W. E.	Compton	Calf Creek ditch...	11
Cedar river ..	Neb. Irr. & Pr. Co.	Ord	Cedar River canal .	12
Clear creek ..	Pibel, E.	Pibel	Clear Creek ditch..	13
Cow creek ...	Edgar, H. R.	Brownlee	Homestead ditch...	14
" ..	Walker, M. L.	"	Cow Creek ditch...	15
" ..	Erler, J.	"	Cabbage Head ditch	16
" ..	Caloned, F.	"	Big Hill ditch	17
Dismal river .	Stodard, M. B.	Chicago, Ill. .	Stodard ditch	18
Goose creek..	Erickson, P. C. & J. H.	Brewster....	Ericksons ditch...	19
" ..	Giles, R. P., et al.	Purdum	Giles ditch	20
" ..	Crook, F.	Giles	Crook ditch	21
Gracie creek .	Burns, J.,			
"	Dobson, A.	Lincoln	Gracie canal	22
"	Krueger, G.	Prime.....	Gracie High Line..	23
Look'g Glass C	Gerrard, E. H. & F.	Monroe	Monroe Irr. ditch..	24
" ..	Babcock, H. E.	Ord	Great Eastern canal	25
Loup river ...	Harvey, R.	St. Paul	South Loup canal..	26
"	Babcock, H. E.	Ord	Neb. Cen. Irr. Co. C.	27
" ..	Nelson, O.			
"	Gates, C. A.	Richland....	New York canal ...	28
" ..	Carrig, Lynch & Co	Platte Center.		29
" ..	McEathron, W. J.	Omaha	Platte County canal	30

STATE BOARD OF IRRIGATION.

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BY STREAMS IN DIVISION 2-A.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig		3.57	22	20	6	Boone	Dec.	8	94	287	....
2	I. & P.		100	24	17	4	Nance	Jan.	22	96	....	219
3	Irrig . . . . .		.25	14	17	4	"	Mch.	31	96	....	276
4	" . . . . .		.25	14	17	4	"	Mch.	31	96	....	277
5	"			27	27	29	Cherry	Jan.	30	95	....	* 67
6	"	60		27	23	18	Loup	Aug.	10	95	....	*111
7	"	70		16	23	18	"	Nov.	20	95	....	*202
8	"	75		16	23	18	"	Feb.	6	96	....	*226
9	"	130		31	23	17	Garfield . . .	Feb.	8	96	....	*228
10	"	128		5	24	20	Loup	Mch.	7	96	....	*164
11	"	2		1	25	27	Cherry	April	10	96	....	*286
12	"		175	22	21	12	Wheeler	Sept.	14	94	221	....
13	"	3		13	21	11	Wheeler	May	14	98	....	*453
14	"		2.29	7	23	27	Cherry	July	14	94	194	....
15	"			7	26	27	"	Aug.	3	95	....	* 98
16	"	7		18	26	27	"	Sept.	30	95	....	*175
17	"	2		7	26	27	"	Mch.	27	96	....	*273
18	"	48		3	21	25	Blaine	Jan.	8	96	....	*209
19	"		8	18	25	24	Brown	April	3	95	209	....
20	"		10	2	25	25	Cherry	June	1	95	187	....
21	"	8		33	25	24	"	June	2	96	....	*345
22	"	50		31	23	17	Loup	July	11	95	....	* 66
23	"	6		29	23	17	"	July	9	97	....	*397
24	"		2.86	1	17	3	Platte	June	12	94	289	....
25	I. & P.		30				"	Jan.	22	96	....	219a
26	Irrig		250	25	13	12	Howard	June	19	95	....	35
27	I. & P.		1200	17	17	3	Nance	Aug.	24	95	....	129
28	Irrig		300	13	15	8	"	April	28	96	....	291
29	"			13	17	2	Platte	June	15	96	....	*312
30	I. & P.	250		35	17	4	Nance	Jan.	12	98	....	*429

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Loup river n.b	North Loup Ir. &			
"	Improvement Co.	North Loup..	North Loup ditch..	1
"	Lee, J. R.....	Brownlee	Lee ditch.	2
"	Burwell Irr. Co...	Burwell	Burwell Ir. ditch ..	3
"	Newton Irr. Co...	Almeria .....	.....	4
"	Vandergrift, E. R.	Brownlee	Delano Irr. canal ..	5
"	Roneche, P. S....	"	Minnie Roneche D ..	6
"	Northup, H. A....	Hawley	Northup Canal	7
"	Walker, M. L....	Brownlee	Twin Islands ditch.	8
"	Getter, M. E.....	Ord	Pottawattamie canal	9
"	Sanderson, Mill,			
"	Northup, T. S....	Hawley	Vineland canal	10
"	Vandergrift, E. R.	Brownlee	Hackberry Bend C.	11
"	Edwards, H. B...	Valentine....	North Loup Ir. canal	12
"	Edgar, H. R.....	Brownlee	Golden Corn canal .	13
"	Cox, G. H.....	Purdum	Velvet Chaff canal .	14
"	Dailey, S. A	Brewster.....	Farmers Ir. & M. Co	15
"	Almeria Ir. Canal Co	Almeria	Almeria Ir. canal ..	16
"	Ord Ir. Dist.....	Ord	Ord Irr. ditch.....	17
"	Smith, E. B.....	Brewster.....	State Central canal.	18
"	Brewster I. & P.Co.	"	Brewster Ir.&P.Co.c	19
"	Firkins, A. J....	Ord	Springdale Ir. canal	20
"	Roneche, Peter S.,			
"	Lee, Robt. S	Brownlee	Roneche-Lee ditch..	21
"	Getter, M. E	Ord	Hopatcong canal...	22
"	Forks Irr. District.	Burwell	Forks Irr. ditch ...	23
"	Covey, A. L.....	St. Paul.....	Scotia Ir.&W. P. C.	24
"	Body, Wm.....	Compton ...	Little Jonnie ditch.	25
"	Keller, G.W.&O.J.	"	Keller canal.....	26
"	Compton I. & P. Co	"	Compton ditch.....	27
"	Edwards, H. B....	Valentine....	North Loup Ir. canal	28
"	Getter, M. E.	Ord	Pottawattamie canal	29
"	Johnson, M.	Elba	Cotesfield ditch....	30
"	Erickson, P. C ...	Brewster.....	Blaine Co. canal....	31

BY STREAMS IN DIVISION 2-A.—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irr.	.....	143	27	19	4	Valley	Sept.	30	93	} 227 228 232 188 189	....
2	"	.....	40	25	27	29	Cherry	Aug.	7	94		....
3	"	110	27	21	17	Loup	Sept.	7	94		224
4	"	.....	115.14	35	23	21	Blaine	Feb.	5	95	†205	....
5	"	30	.....	25	27	28	Cherry	June	12	95	....	*16
6	"	15	.....	15	27	29	"	June	12	95	....	*18
7	"	20	.....	29	24	24	Blaine	June	25	95	....	*51
8	"	6.50	.....	27	27	28	Cherry	Aug.	3	95	....	*95
9	"	240	.....	..	22	19	Loup	Aug.	5	95	....	*99
10	"	12	.....	23	24	25	Blaine	Aug.	9	95	....	*107
11	"	9	.....	33	27	28	Cherry	Aug.	7	95	....	*103
12	"	30	.....	27	27	28	"	Aug.	7	95	....	*104
13	"	24	.....	27	27	28	"	Aug.	9	95	....	*105
14	"	12	.....	8	24	25	Blaine	Aug.	9	95	....	*108
15	"	30	.....	15	23	23	"	Aug.	13	95	....	*114
16	"	30	.....	24	22	20	Loup.....	Aug.	15	95	....	*117
17	"	130	.....	25	21	17	"	Aug.	30	95	....	*136
18	L & P.	.....	51.43	27	23	22	Blaine	Sept.	10	95	....	152
19	Irr.	100	.....	15	23	23	"	Sept.	10	95	....	*153
20	"	194	.....	5	20	15	Valley	Sept.	17	95	....	*161
21	"	15	.....	16	27	29	Cherry	Sept.	23	95	....	*177
22	"	200	.....	35	24	24	Blaine	Oct.	5	95	....	*201
23	"	75	.....	22	21	18	Loup	Oct.	10	95	....	*181
24	"	225	.....	25	19	14	Valley	Oct.	25	95	....	*165
25	"	3	.....	5	25	26	Cherry	Nov.	13	95	....	*169
26	"	20	.....	21	26	27	"	Nov.	14	95	....	*187
27	"	35	.....	4	25	26	"	Nov.	19	95	....	*190
28	"	30	.....	27	27	28	"	Feb.	10	96	....	*253
29	"	150	.....	33	22	19	Loup	Feb.	11	96	....	†279
30	"	5	.....	1	16	12	Howard ...	Feb.	19	96	....	*238
31	"	75	.....	28	24	24	Blaine	Feb.	24	96	....	*244

* Pending. †Rehearing pending. ‡Amendatory to App. No. 99.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Loup Riv N. br	Johns, H. F.,			
	Wilson, J	Burwell	Rockford Power C.	1
"	Tzschuck Canal Co	Taylor.	Tzschuck canal.	2
"	Keller & Co.	Compton	Oliver ditch.	3
"	Davenport, M. D.	Omaha	Loup Triangle canal	4
"	Dowell, T. E.	Pullman.	Top ditch.	5
"	Smith, W.	Burwell	High Divide ditch.	6
Loup R. M. br	Sherman Co. Irr.			
	W't'r Pow. & Im. Co	Loup City	Sherman Co. canal.	7
"	Middle Loup Valley			
	Irr. Canal Co.	Sargent.	Middle Loup V. I. C.	8
"	Wescott Irr. Canal Co	Wescott	Wescott Irr. ditch.	9
"	Sherman Co. Irr.			
	W't'r Pow. & Im. Co	Loup City	Sherman Co. canal.	10
"	Thedford Ir. & P'r Co	Thedford	Thedford's ditch.	11
"	Purdum, J. W.	"	Norway Irr. ditch.	12
"	Lillian Precin't Irr.			
	Ditch & Power Co.	Gates	Lillian Prec. Irr. ditch	13
"	Butcher, A.,			
	Greibel, B.	"	Butcher & Greible D.	14
"	Grier, P.	Seneca	Grier Irr. ditch.	15
"	Jewett, L. A.	Broken Bow.	Jewett's ditch.	16
"	Canyon, C. T.	Boelus.	Howard City Water Power and Irrigation canal.	17
"	Poston, D. M.	Seneca	Poston ditch.	18
"	Mira Val. Irr. Dist.	Ord.	Mira Valley canal.	19
"	Harris, L. H.	Dunning	Harris canal.	10
"	"	"	Dura canal.	21
"	Patton, J. A.	Ord.	Arcadia canal.	22
"	Grier, P.	Seneca	Grier Irr. C. No. 2.	23
"	Sargent Canal Co.	Sargent.	Sargent canal.	24
"	Webster, L.	Wescott	Webster canal.	25
Loup Riv. S. br	Tillson, W. Z.	Pools' Siding.	Tillson ditch.	26
"	Boblitz, E. J.	Tuckerville	Boblitz ditch.	27
"	"	"	"	28

BY STREAMS IN DIVISION 2-A--Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Power.	250	.....	19	21	16	Garfield ...	April	8	96	.....	*282
2 Irrig .	.....	242.86	30	22	19	Loup	June	5	96	.....	301
3 " .	7	.....	16	26	27	Cherry	July	13	96	.....	*326
4 " .	.....	242.86	35	17	12	Greeley ...	Jan.	13	97	.....	367
5 " .	2	.....	15	28	35	Cherry	April	15	97	.....	*386
6 " .	28	.....	24	21	27	Loup	Aug.	27	97	.....	*403
7 Power.	.....	125	26	17	16	Valley	Nov.	30	88	229	.....
8 Irrig .	.....	560.29	15	21	22	Blaine	June	6	94	202	.....
9 " .	.....	84.57	15	19	18	Custer	Aug.	8	94	214	.....
10 " .	.....	244	26	17	16	Valley.....	Aug.	13	94	229	.....
11 " .	.....	43	4	23	29	Thomas ...	Aug.	25	94	198	.....
12 " .	.....	2.86	31	24	29	"	Sept.	8	94	199	.....
13 " .	.....	140	30	21	21	Blaine	Oct.	19	94	²⁰⁴ 216	.....
14 " .	.....	18.29	36	20	21	Custer	Feb.	17	95	220	.....
15 " .	5	.....	20	24	30	Thomas ...	June	10	95	.....	*10
16 " .	10	.....	30	22	24	Blaine	Aug.	12	95	.....	*113
17 " .	200	.....	30	13	12	Howard ...	Dec.	5	95	.....	*200
18 " .	20	.....	14	24	31	Hooker	Dec.	12	95	.....	*197
19 " .	345	.....	36	20	21	Custer	Jan.	21	96	.....	*220
10 " .	21.42	.....	16	22	25	Blaine	Feb.	21	96	.....	*248
21 " .	21.42	.....	3	22	26	Thomas ...	Mar.	3	96	.....	*263
22 " .	32	.....	16	17	16	Valley	Mar.	6	96	.....	*262
23 " .	35.8	.....	21	24	30	Thomas ...	Mar.	29	96	.....	*281
24 " .	29.50	.....	12	19	19	Custer	Sept.	28	97	.....	*412
25 " .	16	.....	20	19	17	"	Mar.	5	98	.....	*442
26 " .	.....	15.57	29	12	15	Buffalo....	Dec.	28	94	236	.....
27 " .	.....	.50	10	14	21	Custer	Jan.	17	95	219	.....
28 Power.	.....	20	10	14	21	"	Jan.	17	95	219	.....

*P ending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Loup Riv. S br	Callaway Mill. Co.	Callaway . . . .	.....	1
"	Holliday, C T . . .	Broken Bow..	Holliday canal	2
"	South Loup Irr. Co.	Callaway	South Loup canal..	3
"	Brown, A. D.	Milldale	A. D. Brown canal .	4
"	"	"	"	5
"	Hartzell, B. F. . . .	Logan	Hartzell's ditch . . .	6
Muddy creek	Penn, C.	Broken Bow..	Penn's Irr. ditch . . .	7
" . . .	Conley, J. W.	"	J. W. Conley Ir. plnt	8
Platte river . .	Farmers' Mut. Irr.			9
	can. of Colfax Co.	Schuyler	Farmer's Mut. Ir. C.	10
Platte & Elk-	Seymour Park Can.			
horn river . .	& Power Co.	Omaha	Seymour Park canal	11
Shell creek . .	Schmitt, P.	Columbus	Schmitt's Irr. canal	12
" . . .	"	"	"	13
" . . .	Gottberg, M.	"	Gottberg Irr. plant	14
" . . .	Hill, J. N.	Schuyler	Colfax canal.	15
" . . .	"	"	"	16
Spring creek.	Hendryx, H.	Monroe	Hendryx ditch	17
Victoria creek	Daily, Gilligan & Co	Anselmo	Victoria Irr. Plant	18
" . . .	Victoria Ditch Ass.	Gates	Victoria ditch	19
" . . .	Laughran, T.			
	Bell, I. P.	New Helena .	Laughran & Bell d.	20

STATE BOARD OF IRRIGATION.

BY STREAMS IN DIVISION 2-A-Continued

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Mill ..	83	.....	.....	.....	.....	.....	.....	.....	.....	*988	...
2 Irrig	2.29	25	17	25	Custer	July	5	95	.....	62
3 "	71.43	6	16	24	"	Feb.	6	96	.....	229
4 "	4.57	31	17	24	"	Feb.	23	97	.....	363
5 Pr	60	31	17	24	"	Feb.	23	97	.....	363
6 Irrig37	27	18	26	Logan	May	18	97	.....	390
7 "50	33	17	20	Custer	Aug.	14	94	215	.....
8 " ..	.50	.....	32	17	20	"	Feb.	17	96	.....	*236
9 "
10 " ..	69	.....	6	16	2-E	Colfax	Feb.	24	96	.....	*247
11 I. & P.	1800	.....	1	16	3-E	Dodge	Oct.	25	98	.....	*480
12 Irrig	3	19	18	1	Platte	Dec.	17	94	292	.....
13 Pr	30.50	19	18	1	"	Dec.	17	94	292	.....
14 Irrig	1	24	18	1	"	June	6	95	.....	2
15 "	28.57	35	18	3-E	Colfax	Sept.	11	95	.....	156
16 "	7.43	35	18	3-E	"	Mar.	20	96	.....	288
17 "	1.33	2	17	3	Platte	June	25	94	290	.....
18 "	2.29	1	19	21	Custer	Mar.	17	94	210 212	.....
19 "	4.29	1	19	21	"	July	17	94	213	.....
20 "	4	3	19	21	"	Sept.	22	94	217	.....

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE:	NAME OF DITCH.	
Battle creek .	Herbison, H.	Madison	Battle C'k rol mills .	1
Cache creek .	Trommershauser, J. A	Ewing		2
Dry creek . . .	Carlou, T.	O'Neill	Carlou ditch	3
" . . .	Benedict, E. H.	"	Benedict's ditch	4
Elkhorn river.	Rehberg, F. X. & Co.	Atkinson	Atkinson mill	5
"	Elkhorn Irr. Co.	O'Neill		6
"	Davis, J.	"		7
"	Carlou, T.	"		8
"	"	"		9
"	Ashton, W. B.	"		10
"	Cain, N. E., et al .	"		11
"	Cress, E. H.	"	Grattan canal	12
"	Sherwood, B. D., Morrow, J. C., Walrath, C. H.	Atkinson	Atkinson ditch	13
"	Leisy, H.	Wisner	Elkhorn ranch canal	14
"	"	"	"	15
"	Ryan, J.	O'Neill	Ryan's Irr. canal . . .	16
"	Hamilton, C. W . .	Stuart	Hamilton right D . .	17
"	Selah, C.	O'Neill	Progress Irr. & Col- onizat'n Soc. D . .	18
"	Murphy, J. G., Rehberg, F. X.	Atkinson	Atkinson Milling & Irr. Co. ditch	19
Elkhorn S. br	Smith, G. F.	Ewing	Clover Dale ditch . .	20
"	Sanders, M. F	"		21
Middle creek .	Abbott, W. N	Lincoln		22
"	Jansen, M	"		23
"	Judge, P	"		24
Springs	Newton Land Co. . . .	Omaha	Spring br'k Acq'd't	25
Silver creek . .	Armour & Co	South Omaha.	Armour & Co. res'v'r	26
Wahoo creek .	Swift & Co	Omaha	Swift & Co. reservoir	27

BY STREAMS IN DIVISION 2-B—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE			DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.	
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.			Y.
1	Mill...	10.66	.....	36	24	3	Madison...	Nov.	12	98	....	*484
2	I. & P.		5.71	30	26	9	Holt.....	April	20	98	....	450
3	Irrig..		2.29	18	28	11	"	Jan.	5	95	....	33
4	"		2.29	18	28	11	"	Jan.	31	96	....	225
5	Mill... ..		38.50	30	30	14	"	Nov.	1	83	271	....
6	Irrig..		131.43	32	29	13	"	Feb.	3	94	¹²⁵⁹ ₇₂₆₃	....
7	"		1.43	31	29	11	"	Feb.	8	94	260	....
8	"		1	32	29	11	"	Feb.	8	94	261	....
9	"		5	30	29	11	"	Feb.	8	94	262	....
10	" .. ....		.71	24	29	13	"	Feb.	18	95	282	....
11	"		5	32	29	11	"	Feb.	20	95	283	....
12	"	25	.....	28	29	12	"	June	8	95	....	*3
13	"	40	.....	18	30	15	"	June	19	95	....	* 34
14	"		25	5	23	4e	Cuming ...	July	15	95	....	77
15	Pwr... ..		25	5	23	4e	"	July	15	95	....	77
16	Irrig..	6	.....	25	29	13	Holt.....	Aug.	5	95	....	*101
17	"	1	.....	7	30	15	"	Dec.	14	95	....	*199
18	"	80	.....	32	29	11	"	Feb.	24	96	....	*250
19	"		2.29	30	30	14	"	Feb.	14	98	....	443
20	"		9	10	26	9	"	Feb.	7	96	....	222
21	Power.		33	3	26	9	"	Aug.	21	98	....	464
22	Irrig.. ....		.....	29	10	6E	Lancaster..	Dec.	26	95	....	*210
23	"	3	.....	28	10	14E	"	Jan.	6	96	....	*215
24	"	1.14	.....	28	10	6E	"	Jan.	9	96	....	*212
25	"		1	13	14	6E	Sarpy.....	June	18	95	....	29
26	Ice		10	7	13	9E	Saunders ..	Oct.	18	97	....	415
27	Ice		10	34	13	9E	Howard ...	Sept.	22	98	....	473

* Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Abitz creek..	Fullerton, J. B. . . .	Atkinson	Fullerton ditch	1
Antelope ck..	Julian, A. R.	Chadron	Antelope ditch	2
Ash creek . . .	Spragg, C.	Kirkwood	Ash Creek ditch	3
Baker creek..	Fullerton, J. B. . . .	Atkinson	J. B. Fullerton ditch	4
Bear creek..	Skinner, T.	Springview . . .	Skinner ditch.	5
" . . .	Cedarburg, P.	"	Cedarburg ditches Nos. 1 and 2	6
Beaver creek.	Hughes, F.	Dustin	Hughes' ditch	7
Beeman creek	Barnard, C. O.	Springview. . . .	Barnard ditch	8
"	Beeman, J. D.	"	Beeman ditch.	9
"	Rickman, A. L.	"	Beeman & Rickman.	10
Benner creek.	Gillespie, B. S.	O'Neill	Benner Creek ditch.	11
"	Progress Irr. and Colonization soc. . .	"	Prog. I. & Col. S. D	12
Bone creek . . .	McAndrew, W. D. . .	Ainsworth	McAndrew ditch	13
" . . .	Strenger, T.	"	Strenger ditch.	14
Blackbird ck.	Mullen, A.	O'Neill	Mullen ditch	15
"	Robertson, J. A. . . .	Joy	Robertsons ditch. . . .	16
"	Roberts, E. F.	"	Roberts ditch	17
Bluebird ck.	Murphy, P.	O'Neill	Murphys Irr. ditch. . . .	18
"	Bradt, Ella	"	Bradt Irr. canal.	19
Boardman ck.	Lee, Joseph S.	Chesterfield . . .	Lee Irrigation ditch	20
"	Gillespie, B. S.	O'Neill	Snake River Irr. C.	21
"	Lee, Joseph S.	Kennedy	Lee ditch	22
"	Beekley, Samuel S. . .	"	Beekley Irr. ditch. . . .	23
Brush creek..	Sample, Samuel C. . .	Butte	Brush Crk Pow. Co.	24
" E. br	McCarthy, M. H., McCarthy, W. A. . . .	O'Neill . . . . .	.....	25
" W. br	McCarthy, M. H., McCarthy W. A. . . .	" . . . . .	.....	26
"	Johnson, J. V.	Celia	Brush ditch	27
Burton creek.	Mutz, Otto	Springview	Burton Creek ditch. . . .	28
"	"	"	One Trip Irr. ditch. . . .	29

STATE BOARD OF IRRIGATION.

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BY STREAMS IN DIVISION 2-C.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig	1	.....	18	30	13	Holt	Mar.	23	96	....	*278
2	"	1.50	.....	20	32	40	Cherry	Aug.	19	95	....	*119
3	"	.....	2.14	10	31	17	Rock	Feb.	10	96	....	233
4	"	1.50	.....	19	30	13	Holt	June	17	95	....	*26
5	"	.....	.22	15	32	21	Keya Paha.	June	20	88	609	....
6	"	.....	.07	3	32	21	"	Oct.	3	98	....	479
7	"	1	.....	18	33	15	Holt	Aug.	22	95	....	*124
8	"	.....	.43	21	32	20	Keya Paha.	June	1	92	603	....
9	"	.....	1	23	32	20	"	May	20	92	620	....
10	"	.....	.29	23	32	20	"	July	25	95	613	....
11	"	3	.....	31	33	11	Holt	Jan.	6	96	....	*213
12	"	6	.....	32	33	11	"	June	29	96	....	*320
13	"	.....	2.57	27	30	22	Brown	Aug.	21	95	....	121
14	"	20	.....	16	31	21	"	Feb.	7	96	....	*221
15	"	.....	1	20	31	11	Holt	Aug.	18	94	267	....
16	"	.....	.20	32	31	11	"	Aug.	28	94	270	....
17	"	1	.....	29	31	11	"	June	25	96	....	*318
18	"	.....	1	26	30	11	"	Sept.	7	94	273	....
19	"	15	.....	26	30	11	"	Dec.	14	95	....	*195
20	"	19	.....	6	29	33	Cherry	....	....	....	973	*....
21	"	100	.....	13	30	31	"	Sept.	6	95	....	*146
22	"	19	.....	6	29	33	"	Mar.	28	96	....	*275
23	"	3	.....	13	30	31	"	July	14	97	....	*398
24	Mill	8	.....	23	33	15	Boyd	Sept.	28	98	....	*474
25	Irrig	.....	.50	24	32	14	Holt	July	1	94	264	....
26	"	.....	.63	26	32	14	"	Aug.	15	95	266	....
27	"	1	.....	26	32	14	"	Mar.	26	96	....	*272
28	Irrig	.....	.57	19	34	19	Keya Paha.	June	30	95	608b	....
29	"	3	.....	2	33	20	"	Sept.	2	95	....	*142

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Burton creek.	Crampton, C. T. . . .	Lutes	Burton Creek canal.	1
"	Wiley, Jas	"	Wiley ditch	2
"	Stalcup, T. P.	Springview . .	Stalcup ditch	3
Cedar creek . .	Bruce, A	Penbrook	Bruce ditch	4
Cedar gulch . .	Taft, R. L.	Brodie	Cedar ditch	5
Cottonwood Cr	Morrissey, T.	Dunlap	Morrisseys ditch . . .	6
"	Vifquain, E. T. . . .	Marbank	Vifquain ditch	7
"	Fendrich, B.,			
"	Lichter, H.	Dunlap	Fendrich-Lichter D.	8
Creek	Opperman, L. B. . . .	Springview . .	Opperman ditch . . .	9
"	"	"	Opperman ditch 3. .	10
Crooked creek	Mutz, Otto	"		11
"	"	"	Crooked Creek ditch	12
Cross creek . .	Hutchison, W. H. . . .	Penbrook	Hutchison ditch . . .	13
Cub creek . . .	Tissue & Patterson	Springview . .	Tissue & Patters'n d	14
"	McCumber, S. S. . . .	Meadville	McCumber ditch . . .	15
Cypriot creek .	Cypriot, F. A.	Lutes	Last Chance	16
Deer creek . . .	Randall & Dailey . . .	Rushville	Deer Creek ditch . .	17
Dry Ck., E. br	Burt, A	Springview . . .	A. Burt ditch	18
Eagle creek . .	Alfs, J. D	Ray		19
"	"	"		20
"	Bokhof, W	Atkinson	Bokhof ditch	21
"	Becker, S.	"	Samuel Becker ditch	22
"	Robertson, J. A	"	Eagle Valley ditch .	23
"	Mann, J	O'Neill	John Mann's ditch . .	24
"	Bruder, J.	Atkinson	Bruder canal	25
Evergreen Ck	Hoefs & Son	Wood Lake		26
Gordon creek .	Gillespie, B. S.	O'Neill	Snake River Irr. C. .	27
Hay creek . . .	Schalch, F. C.	Chadron	Balch ditch	28
Holt creek . . .	Schoettger, F. J. . . .	Enterprise	Schoettger ditch . . .	29
"	Carnah'n & Webst'r	"	Carnah'n & Webster c	30
"	Mountford, Thos. . . .	Springview	Mountford ditch . . .	31
Holt Ck. E. br	Akers, J. W	"	Akers ditch	32
Holt creek . . .	Tesch, F	Ray	Tesch ditch	33

BY STREAMS IN DIVISION 2-C—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig .	.....	.14	5	34	19	Keya Paha.	Sept.	9	95	....	150
2	" .	.....	.17	8	34	19	"	Feb.	13	96	....	239
3	" .	1	.....	19	34	19	"	June	12	96	....	*349
4	Mill...	8	.....	33	34	25	Cherry ...	Feb.	22	97	....	*379
5	Irrig .	2	.....	14	32	16	Holt	Dec.	29	96	....	*372
6	" .	.....	.71	17	29	48	Dawes	Feb.	16	95	481	....
7	" .	1.50	.....	21	35	22	Keya Paha.	April	23	96	....	*293
8	" .	1.50	.....	22	29	48	Dawes	May	9	96	....	*336
9	" .	10	.....	19	32	20	Rock	Aug.	1	95	....	* 94
10	" .	.50	.....	19	32	20	"	Dec.	12	96	....	*369
11	Power	.....	3	19	34	19	Keya Paha.	Dec.	31	89	608a	....
12	Irrig .	.....	1	19	34	19	"	June	30	95	608a	....
13	" .	.....	.21	8	33	24	"	Sept.	1	88	615	....
14	" .	.....	.03	16	33	22	"	June	30	94	618	....
15	" .	.....	.1	28	33	22	"	Aug.	15	94	589	....
16	" .	.....	.1	3	34	19	"	May	7	96	....	295
17	" .	8	.....	30	30	42	Sheridan ..	Aug.	11	97	....	*401
18	" .	1	.....	13	32	21	Keya Paha.	Aug.	30	95	....	*133
19	" .	.....	.43	2	30	13	Holt	Sept.	11	94	276	....
20	Power	.....	1	2	30	13	"	Sept.	11	94	276	....
21	Irrig .	.....	2.86	6	30	13	"	Sept.	18	94	275	....
22	" .	.....	1.14	8	30	13	"	Nov.	30	94	274	....
23	" .	.....	2.29	1	30	14	"	Mch.	15	95	280	....
24	" .	.75	.....	17	30	13	"	June	19	95	....	* 37
25	" .	4	.....	19	30	13	"	Feb.	6	95	....	*227
26	Mill ..	10	.....	27	31	24	Brown	Sept.	7	95	....	*145
27	Irrig .	100	.....	7	30	29	Cherry ...	Sept.	6	95	....	*147
28	" .	1	.....	11	32	40	"	Aug.	10	95	....	*110
29	" .	.....	.14	32	35	20	Keya Paha.	Feb.	23	95	595	....
30	" .	1	.....	19	35	20	"	Aug.	15	95	....	*116
31	" .	.3	.....	6	34	20	"	Feb.	10	96	....	*230
32	" .	.....	.14	1	34	21	"	Aug.	1	94	611	....
33	" .	3	.....	27	31	13	Holt	Sept.	18	95	....	*162

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Horse Head ck	Bruce, A.	Penbrook	Bruce ditch	1
Horse Shoe lk.	Hortz, A.	Gordon	Hortz canal	2
Huggins Ck..	Soper, H. K.	Enterprise	Soper ditch	3
Jewett Ck ...	Jewett, C. P.	Meadville	B. L. ditch.	4
Jordan creek.	Thiede, F. L.	Enterprise	Thiede ditch.	5
Keya Paha riv	Yocum, J. C.	Butte	Yocum's ditch.	6
"	Lewis, S. O.	Lutes	Keya Paha river Water Elevator.	7
"	Donason, J.	Mills	North Side ditch ..	8
"	Anderson, H. D. & Co	McClellan	Keya Paha canal ..	9
"	Rhodes, F. J.	Springview.	Keya Paha river C.	10
"	State Line Irr. Co.	Mills	State Line Irr. canal	11
Lewis' Spring	Lewis, R.	Lutes	Lewis ditch	12
Long Pine cr.	Golden Irr. Dist. .	O'Neill.	Golden Irr. ditch ..	13
Middle ck. e br	McGuire, M. W. .	Norden	McGuire ditch	14
Middle ck. w br	Allen, M. M.	"	Allen ditch.	15
"	"	"	"	16
Minnachaduza river.	Bristol, D. S.	Valentine	Bristol Irr. ditch ..	17
"	Gilman, S. S.	Davenport .....	.....	18
Newman ck .	Newman, Philo. .	Norden	Newman ditch.	19
Niobrara river	Richards, B.	Chadron.	Lakotah ditch	20
"	Bruce, A.	Penbrook	Bruce's Mill	21
"	McGinley, A. ....	.....	.....	.....
"	Stover, W. C.	Royville.	McG. & S. Low. N.D.	22
"	Palmer & Co.	Marsland	Pioneer ditches.	23
"	McGinley, A.,	.....	.....	.....
"	Stover, W. C.	Royville.	McG. & S. Low. So. D.	24
"	Bigelow, W. A.,	.....	.....	.....
"	Seymour, W. W. .	Harrison.	Bigelow & Seymore d	25
"	Harris, O.,	.....	.....	.....
"	Neece, R.	Bell	Harris & Neece D. .	26
"	Palmer & Co.	Marsland	Pioneer ditches.	27
"	Roll Mill Co.	Marsland	Roll Mill.	28

BY STREAMS IN DIVISION 2-C—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.	.....	.04	16	33	24	Keya Paha.	Sept.	7	95	.....	149
2	"	3	.....	11	34	40	Cherry	Apr.	13	96	.....	*287
3	"	.....	.14	21	35	20	Keya Paha.	Nov.	6	94	592	.....
4	"	.....	.71	5	32	21	"	Oct.	23	94	590	.....
5	"	.25	.....	34	35	20	"	June	25	97	.....	*395
6	"	.....	1.14	23	34	15	Boyd	Sept.	7	94	573	.....
7	"	.....	4.29	19	35	19	Keya Paha.	Aug.	23	95	.....	127
8	"	.....	7	35	35	19	"	Oct.	26	95	.....	166
9	"	.....	5	3	34	18	"	Oct.	26	95	.....	167
10	"	12	.....	24	35	20	"	Jan.	16	96	.....	*206
11	"	7	.....	35	35	19	"	Mch.	23	96	.....	259
12	"	.....	.14	29	35	19	"	Aug.	30	95	.....	139
13	"	400	.....	17	30	20	Rock	Dec.	19	96	.....	*371
14	"	.....	.71	32	33	23	Keya Paha.	June	1	84	606	.....
15	"	.....	.50	29	33	23	"	June	1	91	616	.....
16	"	10	.....	29	33	23	"	Aug.	2	95	.....	*95
17	"	.....	1	35	34	28	Cherry	July	22	95	.....	87
18	"	40000	.....	30	34	27	"	Sept.	12	96	.....	*359
19	"	.....	.21	17	33	24	Keya Paha.	July	1	88	617	.....
20	"	.....	7.14	1	30	57	Sioux	Aug.	1	83	554	.....
21	Mill...	.....	60	16	33	24	Keya Paha.	April	1	86	610	.....
22	Irrig.	.....	4.57	25	29	56	"	May	1	87	513 a	.....
23	"	.....	7.14	31	29	50	Dawes	Aug.	1	87	442	.....
24	"	.....	3.43	25	29	56	Keya Paha.	May	1	90	513 b	.....
25	"	.....	2.4	19	31	57	"	June	8	91	510	.....
26	"	.....	5	3	28	55	Sioux	July	1	92	517	.....
27	Power	.....	10	31	29	50	Dawes	Aug.	1	93	442	.....
28	Mill...	.....	35	5	28	51	Dawes	Sept.	10	93	970	.....

*Pending. †Rebearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Niobrara river	Hatch, G. W.,			
	Cross, Wm. D. . . .	Hemingford .	Meridian ditch	1
"	Palmer, L	Marsland	Enterprise	2
"	Furman, H. G.	"	Furman ditch	3
"	Johnson, B. F.	Harrison.	Johnson ditch	4
"	McLaughlin, A. H.	Marsland	McLaughlin ditch .	5
"	McMannis, J.,			
	Neeland, J. F.	Hemingford .	McMannis & Neeland ditch	6
"	Fienkin, C.	Grand Rapids		7
"	McCulley, S. J.	Carns	McCulley ditch.	8
"	Wilson, J. A.	Springview.	Wilson canal.	9
"	Mirage Irr. Co.	Grayson	Mirage canal.	10
"	Lichte, H.	Dunlap	Lichte Irr. ditch.	11
"	Warneke, H.	Harrison	Warneke's ditch	12
"	McGinley & Stover	Royville	M'Gi. & St. upper d.	13
"	Snow, L.	Marsland	Snows ditch.	14
"	Earnest, J. W.	Harrison	Earnest ditch, No. 1	15
"	Vincent, D. C.	Marsland	Excelsior ditch.	16
"	Vincent, D. C.	"	La Belle ditch.	17
"	Cook, J. H.	Royville		18
"	Hughes, J.	"	Hughes ditch	19
"	Cornell, C. H.	Valentine	Chas. H. Cornell C.	20
"	Bourrett, W.	Harrison	Bourrett ditch.	21
"	Bourrett, P.	"	Bourrett ditch, Sr.	22
"	Hughes, J.	Marsland	Hughes ditch.	23
"	Harris, O.	Belle	La Belle ditch.	24
"	Gillespie, B. S.	O'Neill	Snake River Irr C.	25
"	Ussher, H. C.	Hay Springs	Ussher canal.	26
"	Moore, B. F.	Marsland	Moore Irr. ditch.	27
"	Grable, C. J.	Crawford	Marsland canal.	28
"	Nollkamper, W.	Turner		29
"	Brown, J. E.	Hay Springs.	Niobrara & Box	
			Butte canal	30

STATE BOARD OF IRRIGATION.

BY STREAMS IN DIVISION 2-C—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig . . . . .		.57	25	29	50	Dawes	Jan.	10	94	459	....
2 "		5.71	28	29	50	"	Jan.	27	94	461	....
3 "		3.64	29	29	50	"	Feb.	2	94	462	....
4 "		2.86	36	31	57	Sioux	May	1	94	511	....
5 "		7.14	9	28	52	Box Butte	June	1	94	566	....
6 " . . . . .		.86	29	29	49	Dawes	June	15	94	463	....
7 "		1	12	33	16	Boyd	Oct.	1	94	575	....
8 "		8.57	25	32	20	Keya Paha	Oct.	7	94	583	....
9 "		5.71	18	32	21	"	Oct.	18	94	591	....
10 "		150	26	29	48	Dawes	Nov.	28	94	474	....
11 "		1.43	27	29	48	"	Jan.	24	95	479	....
12 "		1.57	37	31	57	Sioux	Feb.	13	95	505	....
13 "		2.86	23	29	56	"	Feb.	25	95	521	....
14 "		2.86	35	29	51	Dawes	Mar.	26	95	485	....
15 "		2.86	9	29	56	Sioux	May	1	95	514	....
16 "		2.86	10	28	52	Box Butte	May	15	95	568	....
17 "	70			6	28	54	"			+518	....
18 "	8			1	28	56	Sioux			*980	....
19 " . . . . .	.29			1	28	52	Dawes			*987	....
20 "	1209			8	33	27	Cherry			*407	....
21 "	75			33	30	56	Sioux	June	8	95	....
22 "	75			29	30	56	"	June	10	95	....
23 " . . . . .	.28			1	28	52	Box Butte	June	26	95	....
24 "	100			6	28	54	Sioux	July	3	95	....
25 "	700			19	30	43	Sheridan	July	13	95	....
26 "	10			19	29	46	"	July	17	95	....
27 "	20			9	20	53	Sioux	July	22	95	....
28 "	30			6	28	53	"	Aug.	6	95	....
29 Power	2.50			30	33	11	Holt	Aug.	21	95	....
30 Irrig	3			28	29	47	Dawes	Aug.	22	95	....

*Pending. †Rehearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Niobrara river	Allen, M. M.,			
	Thomas, W. G.	Springview. . .	Glencoe ditch.	1
"	McConaughey, A. N.	Mirage.	McConaughey canal	2
"	"	"	McCon. ditch No. 10	3
"	McGuire, M.	Norden.	McConaughey ditch	4
"	Lear, Chas. E.	Springview. . .	Union canal.	5
"	Peters, H. A., Waterman, C. A.,			
	Brown, J. S.	Hay Springs.	Hay Springs Irr. C.	6
"	Van Alstyne, J. S.	Long Pine. . .	Riverside Farm Irr. canal	7
"	Highland Irr. Dist.	Springview. . .	Highland Ir. Dist. D.	8
"	Johnson, A.	Dunlap.	Johnson ditch	9
"	Irion Bros.	Marsland	Irion Irr. ditch	10
"	Mettlen, J., Moore, J.,			
	Irion, E.	Bell	Mettlen ditch.	11
"	Peters, H. A.			
	Brown, J. S.	Hay Springs.	Hay Sps. Irr. canal.	12
"	Vincent, D. C.	Marsland	Excelsior ditch.	13
"	Whitehorn, G. W.	Rochester, . . .	Rochester ditch	14
"	Rickman, A. L., Wentworth, A. A.	Springview. . .	Rick. & Went. ditch	15
"	Vojtech, C.	Dunlap.	Chladek's ditch	16
"	Hatch, G. W., Cross, W.	Hemingford..	Hatch & Cross D. . .	17
"	McMannis & Neeland	"	McMannisNeeland D	18
"	Armstrong, T. S. . .	Butte	Armstrong canal. . . .	19
"	Cornell, C. H.	Valentine. . . . .	. . . . .	20
"	Hatch & Cross. . . .	Hemingford..	Meridian ditch.	21
"	Brown, J. S., Peters, H. A., Waterman, C. A. . .	Hay Springs.	Hay Sps. Ir. canal. . .	22

STATE BOARD OF IRRIGATION.

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BY STREAMS IN DIVISION 2-C--Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig .	3	.....	36	33	24	Brown	Aug.	22	95	.....	*126
2	" .	2	.....	26	29	47	Dawes	Aug.	24	95	.....	*128
3	" .	3	.....	26	29	47	Dawes	Aug.	30	95	.....	*137
4	" .	.....	8	26	33	24	Keya Paha . .	Aug.	30	95	.....	138
5	" .	1500	.....	2	32	30	Cherry	Sept.	9	95	.....	*151
6	" .	72	.....	29	29	47	Dawes	Sept.	27	95	.....	*173
7	" .	3	.....	2	32	22	Keya Paha . .	Nov.	17	95	.....	*194
8	" .	1500	.....	1	32	30	Cherry	Feb.	14	96	.....	*242
9	" .	5	.....	30	29	47	Dawes	Feb.	27	96	.....	*255
10	" .	7	.....	1	28	54	Sioux	Mar.	29	96	.....	*257
11	" .	10	.....	4	28	54	"	April	27	96	.....	*292
12	" .	72	.....	29	29	47	Dawes	May	11	96	.....	*296
13	" .	32	.....	10	23	52	Box Butte . .	May	29	96	.....	*344
14	" .	1000	.....	30	33	11	Boyd	June	18	96	.....	*314
15	" .	.....	2	22	32	20	Keya Paha . .	June	29	96	.....	321
16	" .	1000	.....	27	29	48	Dawes	April	12	97	.....	*385
17	" .	18	.....	25	29	50	"	Feb.	28	98	.....	*441
18	" .	3	.....	29	29	49	Dawes	April	9	98	.....	*448
19	Power .	150	.....	9	33	13	Boyd	May	14	98	.....	*452
20	Irrig .	.....	.....	22	34	27	Cherry	July	14	98	.....	*460
21	" .	5.71	.....	25	29	50	Dawes	Aug.	29	98	.....	*469
22	" .	72	.....	29	29	47	Sheridan . . .	Nov.	14	98	.....	*485

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Pepper creek.	McConaughey, A.	Mirage	A. McConaughey D.	1
Pine creek . . .	Clark, J.	Rushville	Pine Ck. roller mills	2
Plum Creek . . .	Plum Creek Can. & Irrigation Co.	Johnstown		3
" . . .	Wilbert, R.	Ainsworth	Wilbert ditch	4
Pole creek . . .	Julian, A. R.	Chadron	Julian ditch	5
Rickman ck. . .	Byington, W. W.	Springview	Byington ditch	6
Red Bird ck. . .	Brennan, J. A.	O'Neill	Brennan Irr. ditch . . .	7
Rock creek . . .	Rock Cr. Ir. & Pr. Co.	Mariaville	Copeland ditch	8
" . . .	Eastlick, B. J.	Carns	Necessity ditch	9
" . . .	Wile, H.	Mariaville	Wile's ditch	10
Rock Sprin's c	Van Koten, J.	Springview	Van Koten ditch	11
" . . .	Moore, W. S.	Meadville	Moore's ditch	12
" . . .	Wicker, S.	Springview	Wicker ditch	13
" . . .	Patterson, C. C.	"	Patterson ditch	14
Sandy creek . . .	Morrow, J. C.	Atkinson	Sand Creek ditch	15
" . . .	Wheeler, T.	"	Wheeler ditch No. 3	16
Shobe branch.	Lamb, A. J.	Rochester		17
Spring creek . .	Townsend, M. M.	Springview	Townsend ditch	18
" . . .	Hutchison, W. H.	Penbrook	Hutchison ditch	19
" . . .	Gillespie, L. G.	O'Neill	Chelsa Irr. canal	20
" . . .	Opperman, H. M.	Springview	Opperman ditch, 2	21
Spring	Burt, A.	Cuba	Burts ditch	22
Spring branch	Wheeler, T.	Atkinson	Wheeler ditch No. 1	23
" . . .	"	"	Wheeler ditch No. 2	24
Stream	Grant, C. G.	Winfield	Grant ditch	25
" . . .	Opperman, L. B.	Springview	Opperman ditch	26
" . . .	Conger, C. K.	Norden	Conger ditch	27
" . . .	Newman, P.	Penbrook	Newman canal	28
Snake river . .	Golden Irr. Dist.	O'Neill	Golden Irr. ditch	29
Snider creek . .	Pickler, W. S.	Springview	Olds ditch	30
Spotted Tail c	Rhodes, J. G.	McClellan	Spotted Tail ditch . . .	31
Sweeney cany'	Hornback, J.	Sparks	Canyon canal	32
Verdigris ck. .	Hanson, J. W.	Orchard	Drayton Irr. ditch . . .	33

BY STREAMS IN DIVISION 2-C—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig .	5	.....	26	29	47	Dawes	May	8	96	.....	*335
2	Mill...	.....	32	33	30	44	Sheridan...	June	5	93	415	.....
3	Irrig .	.....	26	4	29	24	Brown.....	Dec.	18	94	405	.....
4	" .	1	.....	35	32	23	"	May	5	96	.....	*329
5	" .	1.50	.....	28	32	40	Cherry....	Aug.	19	95	.....	*120
6	" .	.....	1	22	32	20	Keya Paha.	May	19	91	582	.....
7	" .	3	.....	26	30	11	Holt	April	8	96	.....	*284
8	" .	.....	6.43	33	32	18	Rock	Jan.	8	95	394	.....
9	" .	.....	.35	29	32	18	"	Jan.	17	95	395	.....
10	" .	.....	.86	9	31	18	"	April	3	95	397	.....
11	" .	.....	.07	25	33	22	Keya Paha.	Jan.	1	95	619	.....
12	" .	.....	1.43	12	32	22	"	June	30	97	593	.....
13	" .	.....	.07	24	33	22	"	June	12	96	.....	346
14	" .	.....	.14	31	33	21	"	June	12	96	.....	347
15	" .	14	.....	10	31	15	Holt	July	5	95	.....	*61
16	" .	3	.....	3	31	15	"	June	24	96	.....	*315
17	" .	3	.....	30	33	11	Boyd	July	6	96	.....	*322
18	" .	1.25	.....	35	34	19	Keya Paha.	Mar.	28	96	.....	*274
19	" .	.15	.....	8	33	24	"	Sept.	2	95	.....	*141
20	" .	3	.....	2	32	13	Holt	June	26	96	.....	*319
21	" .	1	.....	29	32	20	Brown	June	10	96	.....	*310
22	" .	.....	.....	4	31	20	Rock	June	5	97	.....	*392
23	" .	.....	.50	4	31	15	Holt	June	24	96	.....	316
24	" .	.....	1	34	32	15	"	June	24	96	.....	317
25	" .	.....	.14	4	31	20	Rock	Jan.	1	95	400	.....
26	" .	1	.....	19	32	20	Keya Paha.	Feb.	10	96	.....	*254
27	" .	.....	.14	5	33	24	"	Sept.	16	95	.....	158
28	" .	1	.....	17	33	24	"	Sept.	20	95	.....	*163
29	" .	800	.....	4	30	32	Cherry	Dec.	23	95	.....	*205
30	" .	.....	.01	31	33	19	Keya Paha.	May	1	94	607	.....
31	" .	.....	.14	4	34	17	"	May	17	95	601	.....
32	" .	.....	.21	29	34	25	Cherry	Aug.	10	93	414	.....
33	" .	.....	2.86	8	28	8	Antelope...	Aug.	11	94	248	.....

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Verdigris C.s.f	Harvey, A.	Sherman . . . . .	.....	1
Whistle creek	Miller, W. K.	Alliance	Home ditch	2
"	Irion, E.	Lawn	Whistle Creek ditch	3
Wyman creek	McCulley, R. A.	Carns	McCulley ditch	4
"	Horton, I.	"	Horton ditch	5
Young creek .	Lamb, A. J.	Rochester	Harvey & Lamb D.	6

BY STREAMS IN DIVISION 2-C—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig .	.50	.....	22	28	8	Antelope ..	Aug.	9	95	.....	*106
2 " .	10	.....	13	28	54	Sioux	June	8	95	.....	*65
3 " .	12	.....	12	28	54	"	June	28	95	.....	*58
4 " .	.....	.8	19	32	19	Keya Paha.	June	10	91	604	.....
5 " .	.....	.14	7	32	19	"	June	5	94	587	.....
6 " .	3	.....	32	33	11	Boyd	June	13	96	.....	*311

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Ash creek ...	Compton, W. L. ...	Whitney ...	.....	1
" ...	Connell, J.	" ...	Connell ditch.....	2
Ash Ck., E. Br.	Tomlin, H. B.	" ...	Ox Yoke ditch.....	3
"	Aird, Ida L.	Crawford ...	Barron ditch.....	4
"	Tomlin, H. B.	Whitney ...	Ox Yoke ditch No. 3	5
Ash C., W. Br.	Vetter, A.	Crawford ...	Mace ditch.....	6
"	Broadhurst, N., et al	Whitney ...	West Ash Creek Irr. Co. ditch.....	7
"	Woodard, S. D.	" ...	Woodard ditch....	8
Beaver creek.	Braddock, Wm ...	Adaton.....	Braddock ditch....	9
"	Braddock, J. F.	Chadron.....	.....	10
"	Stastny, F.	" ...	Stastny ditch.....	11
"	Novak, F.	Hay Springs.	Novaks canal.....	12
"	Serbousek, A.	"	Serbousek canal....	13
"	Hyser, F. B.	Adaton.....	Hyser ditch.....	14
"	Dictel, J. M.	" ...	Dictel canal.....	15
Bull creek...	Johnson, W. S. ...	Glen.....	Johnson Ditch No. 1	16
Bordeaux ck	Locket, T. E.	Chadron.....	Locket ditch.....	17
"	Richards, H. B. J.	" ...	Richards ditch....	18
"	Bryant, S. A.	" ...	Bryants Irr. ditch..	19
"	Hall, O. W.	" ...	Halls ditch.....	20
"	Richards, H. B. J	" ...	Richards ditch....	21
"	Adams, S. L.	" ...	Adams ditch.....	22
"	Bacon, J. D.	" ...	Bacon ditch.....	23
"	Morrissey, M.	" ...	Morrissey canal....	24
"	Mann, Wm ...	" ...	Mann's ditch.....	25
"	O'Donnel, J.	" ...	O'Donnells ditch ..	26
"	Nelson, P. B.	" ...	Nelsons ditch.....	27
Bordeaux Lit.	Hartzell, S.,			
	Hartzell, C.	" ...	Hartzell canal.....	28
"	Butler, J. A.	" ...	John A. Butler ditch	29
"	Hartzell, S.	" ...	Hartzell ditch.....	30
Cedar Canyon	Golden, T. F.	Adelia ...	Cedar Canyon ditch	31
Chadron ck .	Gallup, W. S.	Chadron.....	Gallup's ditch.....	32

STATE BOARD OF IRRIGATION.

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BY STREAMS IN DIVISION 2-D—Continued.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig. . . . .		.03	12	32	51	Dawes	July	15	93	455	....
2 "	2		6	32	50	"	June	17	98	....	*459
3 "		2.86	31	32	50	"	May	31	80	447	....
4 "		1.14	32	32	50	"	July	1	88	438	....
5 "	1		30	32	50	"	May	11	96	....	*298
6 "		1	2	31	51	"	July	31	84	428	....
7 "		1.62	36	32	51	"	July	4	93	452	....
8 "	2		25	32	51	"	Feb.	3	98	....	*434
9 " . . . . .		.36	18	34	46	Sheridan... April	15	95	423	....
10 " . . . . .		.04	1	34	47	Dawes	April	15	95	974	....
11 "	2.50		4	33	46	Sheridan... July	30	95	....	*330	
12 "	1		9	33	46	"	May	7	96	....	*331
13 " . . . . .	.50		28	33	46	"	May	7	96	....	*332
14 " . . . . .	.30		20	34	46	"	May	14	96	....	*303
15 "			32	34	46	"	April	11	98	....	*447
16 " . . . . .		.29	7	30	53	Sioux	Mar.	13	95	519	....
17 " . . . . .		.07	11	32	48	Dawes	June	30	86	494	....
18 " . . . . .		.14	36	33	48	"	Sept.	10	90	430	....
19 " . . . . .		.29	14	33	48	"	Feb.	4	91	434	....
20 " . . . . .		.07	15	33	48	"	Mar.	1	91	437	....
21 " . . . . .		.36	36	33	48	"	Sept.	7	92	446	....
22 " . . . . .		.14	2	32	48	"	Mar.	5	93	450	....
23 " . . . . .		.21	21	34	48	"	July	1	94	445	....
24 " . . . . .		.08	15	33	48	"	Aug.	25	94	491	....
25 "	2		25	33	48	" . . . .	....	....	....	*975	....
26 "	2		9	34	48	"	Jan.	17	98	....	*132
27 " . . . . .	.20		14	33	48	"	Oct.	19	98	....	*478
28 " . . . . .		.57	13	33	48	"	June	1	93	448	....
29 " . . . . .		.11	33	33	47	"	June	1	94	413	....
30 "			19	33	47	"	Mar.	16	98	....	*445
31 "	10		16	33	53	Sioux	Mar.	1	97	....	*380
32 " . . . . .		.08	15	33	49	Dawes	Dec.	20	90	426	....

*Pending.

†Rehearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Chadron creek	Wilson, H. M.	Chadron	Tug Wilson ditch . .	1
"	Wilson, W. W.	"	Wallace Wilson D. .	2
"	Record, A. A.	Hyannis	Half Diamond E. D	3
"	Dorrington, F. M.	Alliance	Dorrington ditch . .	4
"	Mann, Chas	Chadron	Mann's ditch	5
"	Frick, L . . . . .	" . . . . .	.....	6
Charcoal creek	Weber, M. J	Glen	Klein ditch	7
Cottonwood ck	Rasmussen, N.	Whitney	Rasmussen ditch . . .	8
Cotton'd Little	Stuart, Jno	Crawford	Thomas Stuart ditch	9
"	Stuart, Jas. G., Stuart, Jno. T.	"	Stuart Bros. ditch .	10
"	Lit. Cott'd Irr. Co. Pinney, B. G., Cooper, P. G., Dorrington, F. M.	"	Lit. Cott'd Irr. Co. D	11
"	Hall, Leroy	"	Cottonwood canal . .	12
"	Hall, Leroy	"	Hall ditch No. 2 . . .	13
"	Kusel, Wm. T.	Hooper	Kusel ditch	14
"	"	"	"	15
Dead Horse ck	Kemery, J	Chadron . . . . .	.....	16
"	Woodruff, F. B., Woodruff, E. F.	"	Flag Butte ditch . . .	17
"	Goff, L. L	"	Goff ditch	18
"	Harley, J . . . . .	" . . . . .	.....	19
"	Slattery, E. M	"	Slattery ditch	20
Deadman ck	Stewart, H. G.	Crawford . . . . .	.....	21
Deep creek . .	Green, H. M.	Glen	Deep Creek ditch . .	22
"	"	"	Green ditch	23
Dirty creek . .	Wisdom, A. O.	Crawford	Wisdom ditch	24
Dry Canyon .	Braddock, J. F.	Chadron	Braddock ditch	25
Dry creek . . .	Antram, J	Whitney	Antram canal	26
Hooker creek .	Uhlig, Max	Crawford	McMannis ditch	27
Indian creek .	Seegrist, I	Whitney . . . . .	.....	28
"	Flood, M. F	"	Flood ditch	29
Kyle creek . . .	Colville, D.	Glen	Kyle Creek ditch . . .	30

BY STREAMS IN DIVISION 2-D—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.	.....	.20	12	32	49	Dawes	July	13	93	453	....
2	"	.....	.07	12	32	49	"	July	14	93	454	....
3	"	.....	.57	1	32	49	"	June	17	94	468	....
4	"	10	.....	36	33	49	"	July	13	95	.....	*75
5	"	1	.....	24	32	49	"	May	11	96	.....	*299
6	"	1	.....	31	32	48	"	July	1	97	.....	*396
7	"	2	.....	33	31	53	Sioux	.....	.....	.....	*982	....
8	"	1000	.....	10	33	52	Dawes	Mar.	8	98	.....	*444
9	"	.....	.36	8	32	52	"	Dec.	21	90	425	....
10	"	10	.....	8	32	52	"	June	10	95	.....	*8
11	"	20	.....	6	32	53	Sioux	June	10	95	.....	*6
12	"	40	.....	8	32	51	Dawes	July	1	95	.....	*68
13	"	50	.....	8	32	51	"	July	26	95	.....	*90
14	"	5	.....	9	32	51	"	Oct.	15	95	.....	*183
15	"	4	.....	9	32	51	"	Feb.	24	98	.....	*439
16	"	.....	.01	32	32	49	"	Sept.	1	90	493	....
17	"	.....	.03	32	32	49	"	April	10	91	427	....
18	"	.....	.17	9	31	49	"	Aug.	27	93	457	....
19	"	.....	.01	32	32	49	"	Aug.	1	94	488	....
20	"	1	.....	32	33	49	"	June	18	95	.....	*32
21	"	10	.....	19	30	52	"	May	8	96	.....	*334
22	"	.....	.06	9	30	53	Sioux	May	1	87	525	....
23	"	60	.....	9	30	53	"	Oct.	5	95	.....	*203
24	"	10	.....	7	33	52	Dawes	Feb.	3	98	.....	*435
25	"	.....	.....	12	34	47	"	Aug.	15	98	.....	*463
26	"	50	.....	1	33	52	"	Sept.	11	95	.....	*155
27	"	.....	1	7	31	51	"	Dec.	31	89	492	....
28	"	.....	.03	3	31	50	"	Nov.	1	93	489	....
29	"	.....	.07	33	32	50	"	Feb.	13	94	460	....
30	"	.....	.57	3	30	54	Sioux	June	30	82	552	....

*Rehearing pending. *Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Larabee ck ..	Davis, W. R.	Rushville	Davis ditch	1
Sand ck	Bendix, F.	Crawford	Bendix Irr. ditch...	2
"	Carlson, A. A.	"	Carlson ditch	3
Sheridan ck..	Getchell, G. C. ...	Pine Ridge...	Getchell ditch	4
Soldier ck ...	Rodgers, J. J.	Crawford	Rodgers ditch	5
Spring Br. trib to White R.	Tucker, J. S.	Glen	Tuckers ditch	6
Spring C. tr. to Little Cotw'd	Pinney, B. G.	Crawford	Spring creek ditch.	7
"	Demmon, O. J.,	"	Spring ck D. No. 1.	8
"	Balzer, H.	"	Spring ck. Irr. ditch	9
"	Hales, Wm. S.	"	Simons ditch	10
"	Simons, R.	Whitney		
Springs tr. to Dead Horse C.	Goff, T. L.	Chadron		11
Squaw ck	Daniels & Stetson.	Crawford	Daniels & Stetson D	12
"	Cooper, Wm.	"	Cooper ditch	13
"	Duncan, G. W.	"	Duncan Irr ditch ..	14
Squaw c. w. br	Detrick, J. L.	"	Detricks ditch	15
Trunk Butte C	Smock, M.	Whitney	Smocks ditch	16
White Clay C.	McFarland, F.	Crawford	Frank McFarland D	17
"	Hazelton, Wm. S.	"	Hazelton Irr. ditch.	18
"	Cooper, Wm.	"	Cooper ditch	19
"	Brockway, D. L. ...	"	Brockway Irr. ditch.	20
White Clay C.	Pine Ridge Ind. Ag	Pine Ridge In. Agency, S.D.	Pine Ridge Irr. D.	21
"	Brooks, L. A.	Rushville	L. A. Brooks ditch.	22
"	Ball, R. M.	"	Balls Irr. plant	23
"	Hutzel, Levi.	"	Draper ditch	24
"	"	"	Leach ditch	25
"	"	"	Hammond ditch ...	26
"	"	"	Talbot ditch	27
White river..	Jacobson, M.	Glen	Jacobson ditch	28
White river..	Diedrichson, N. ...	Glen	Diedrichson ditch..	29

BY STREAMS IN DIVISION 2-D.—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig.	2	.....	16	34	44	Sheridan ..	Sept.	29	96	....	*361
2	"	20	.....	35	33	53	Sioux	Nov.	19	95	....	*189
3	"	20	.....	32	33	52	Dawes	Feb.	28	98	....	*440
4	"	.....	.07	27	34	45	Sheridan ..	Aug.	1	94	418	....
5	"	.....	.14	5	31	52	Sioux	April	30	83	546	....
6	"	.....	.17	34	31	54	"	June	1	83	557	....
7	"	.....	.86	13	32	52	Dawes	May	10	94	466	....
8	"	.....	2	7	32	51	"	Dec.	1	94	473	....
9	"	20	.....	25	32	52	Sioux	July	7	95	....	*71
10	"	.11	.....	8	32	51	"	Jan.	3	98	....	*426
11	"	.....	.14	30	32	49	Dawes	April	2	91	441	....
12	"	.....	.....	19	31	51	"	June	17	95	....	*27
13	"	4	.....	36	32	52	"	May	8	96	....	*333
14	"	1	.....	28	31	51	"	Sept.	6	98	....	*465
15	"	2	.....	32	31	51	"	April	8	97	....	*382
16	"	.....	.07	26	32	50	"	June	28	95	465	....
17	"	.....	1.64	35	32	52	"	May	18	91	960	....
18	"	.....	.57	13	31	52	"	Dec.	8	94	475	....
19	"	4	.....	2	31	52	"	June	22	95	....	*42
20	"	1	.....	36	31	52	"	Feb.	27	96	....	*256
21	"	4.78	.....	.....	.....	.....	Indian Res.	.....	.....	.....	.....	*419
22	"	1	.....	2	33	45	Sheridan..	Dec.	2	95	....	*198
23	"	.50	.....	23	33	45	"	May	29	96	....	*305
24	"	.25	.....	13	33	45	"	May	29	96	....	*306a
25	"	1	.....	12	33	45	"	May	29	96	....	*306b
26	"	.25	.....	14	33	45	"	May	29	96	....	*306c
27	"	2	.....	14	33	45	"	May	29	96	....	*306d
28	"	.....	.14	32	31	53	Sioux	Oct.	1	82	561	....
29	"	.....	.21	1	30	54	Sioux	Sept.	1	90	562	....

* Pending. † Rehearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
White River..	Rasher, C.	Crawford	Rasher ditch	1
" ..	Welling, N.	"	Welling ditch	2
" ..	Swartz E.	Harrison.	Hughson ditch	3
" ..	Butterworth, J. H.	Crawford	Butterworth ditch..	4
" ..	Harris & Cooper..	"	Harris & Cooper D.	5
" ..	Crawford Co.	"	Crawford Citizen's C	6
" ..	White Riv. Irr. Co.	"	White R. Irr. Co. D	7
" ..	Est. of A. V. Harris	Whitney. ....	.....	8
" ..	Hall, L.	Crawford	Hall's mill	9
" ..	"	"	Hall's Ditch No. 1 .	10
" ..	"	"	Halls Ditch No. 2..	11
" ..	Seeley, C.	Ravenna.	Seeley's Mill	12
" ..	Carpenter, E. J. & Co	Whitney	Carpenter Irr. ditch	13
" ..	Force, F.	Harrison	Forces ditch.....	14
" ..	Cooper, P. G., Pinney, B. G., Dorrington.	Crawford	Dorrington canal..	15
" ..	"	"	"	16
" ..	Bartlett, A. M.	Chadron	Arthur Bartlett D..	17
" ..	Mason, J.	Glen	Mason ditch	18
" ..	Lewis, L. C.	Harrison	Lewis ditch	19
" ..	Cook, J. P.	Chadron .....	.....	20
" ..	Jones, E. B.	"	Edgar B. Jones D..	21
" ..	Schwabe, L.	"	Schwabe ditch	22
" ..	Wilkinson, T.	Crawford	Wilkinson ditch...	23
" ..	Stewart, A.	Whitney.	Sandy Stewart ditch	24
" ..	Thompson, H.	Crawford	Rasher ditch	25
" ..	Schmelzle, W.	"	Zuen & Schmelzle D	26

STATE BOARD OF IRRIGATION.

BY STREAMS IN DIVISION 2-D—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1	Irrig		1.14	19	32	51	Dawes	June	20	94	467	....
2	I. & fish . . . . .		.57	17	32	51	"	July	13	94	469	....
3	Irrig . . . . .		.07	26	31	55	Sioux	Mar.	15	95	520	....
4	" . . . . .		.07	3	31	52	Dawes	May		7 95	490	....
5	"	57.4		25	32	52	"				464	*
6	"	200		23	31	53	Sioux				501 444	*
7	Ir. & P	41		35	32	52	Dawes				477	*
8	Irrig	50		17	32	51	"				471	*
9	Power	40		34	32	52	"				478a	....
10	Ir. & P	26.04					"				478b	....
11	Irrig	26		34	32	52	"				478	*
12	Mill	50		1	32	51	"				486	*
13	Irrig	8		1	32	51	"				487	*
14	"	1		31	31	54	Sioux	June	25	95	....	*50
15	"	150		26	33	50	Dawes	July	15	95	....	*72
16	"	150		26	33	50	"	July	15	95	....	*76
17	"	2		4	33	49	"	May		2 96	....	*290
18	"	1		32	31	53	Sioux	May		12 96	....	*337
19	"	10		27	31	55	"	May		19 96	....	*340
20	"	2		34	34	49	Dawes	Feb.		1 97	....	*377
21	"	90		18	34	48	"	May		21 97	....	*391
22	"	100		25	34	49	"	June		24 97	....	*394
23	"	5		24	32	52	"	Nov.		18 97	....	*421
24	"	4		10	32	51	"	Jan.		8 98	....	*427
25	" . . . . .	.50		19	32	51	"	May		23 98	....	*456
26	"	128		19	32	51	"	Oct.		13 98	....	*475

*Pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Antelope ck..	Turner, Geo	Harrison	Turner ditch	1
"	Story, S. R.	Story	Story's Irr. ditch ..	2
"	Ellis, S. L.	Harrison	S. L. Ellis ditch...	3
Boggy creek ..	Holly, Thos.	Crawford .....	.....	4
"	Smith, J. W.	Bodarc	Smiths Irr. ditch...	5
Boggy, E. br.	Martin, Wm.	"	Martin ditch	6
Boggy, M. br.	Bannon, J. F.	"	Bannon's ditch.....	7
Cedar creek ..	Schilt, C. E.	Harrison	Schilt Cedar Cr. D.	8
"	Valdez, M.	"	Valdez ditc h.....	9
"	"	"	Valdez ditch	10
Cherry creek.	Ruffing, M.	Bodarc	Cherry Creek ditch.	11
Hat creek	Brewster, B. E. ..	Harrison .....	.....	12
"	Coffee, C. F.	Bodarc	D. F. Coffee ditch..	13
"	Antrim, Z. F.	"	Antrim ditch	14
"	Miller, Wm.	"	Miller ditch	15
Jim creek	Nolan, Jas.	Harrison	Woodruff's South D	16
"	Anderson, Nels. ..	"	Jim Creek ditch...	17
"	Slattery, Wm.	"	Slattery ditch	18
"	Daut, L.	"	Daut Bros. ditch...	19
"	Slattery, Wm.	"	Slattery's ditch....	20
Jim creek	Hunter, H. C.	Adelia	Hunter ditch	21
Jim creek, E br	Meyers, J. F.	Montrose	Meyer's ditch	22
Little Red ck.	Zerbat, R.	Harrison	Zerbat ditch	23
Monroe creek.	Wilcox, E. J.	"	Big Monroe Creek d	24
"	Schilt, C. E.	"	Schilt's Monroe Ck. ditch	25
"	Noreisch, Wm.	"	Noreischs ditch.....	26
"	Brumbaugh, S.	"	Brumbaugh's ditch..	27
Prairie Dog c.	Schilt, C. E.	"	Schilt's Prairie Dog ditch	28
Richards Br ..	Woodruff, H. S. ...	Adelia	Woodruff ditch....	29
Sow Belly ck.	Schaefer, P.	Bodarc	Old Sow Belly ditch	30
"	Montgomery, S. ...	"	Montgomery ditch..	31
"	Jordan, S.	Gilchrist.	"	32

BY STREAMS IN DIVISION 2-E.

USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE				DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.
	Applied for.	Granted.	S.	T.	R.	County.	M.	D.	Y.		
1 Irrig .	.....	.86	26	34	57	Sioux	Oct.	31	94	537	.....
2 " "	8	.....	8	34	56	"	Nov.	11	95	.....	*168
3 " "	1	.....	9	33	57	"	May	17	96	.....	*338
4 " "	.....	.11	30	33	55	"	Dec.	31	88	956	.....
5 " "	.....	.29	31	33	54	"	May	1	92	526	.....
6 " "	.....	.....	18	32	54	"	May	19	96	.....	*342
7 " "	.....	.06	7	32	54	"	July	1	86	560	.....
8 " "	.....	.57	35	33	56	"	May	15	85	507	.....
9 " "	.50	.....	10	32	56	" . . . .	.....	.....	.....	*976	.....
10 " "	1	.....	3	32	56	"	June	17	95	.....	*28
11 " "	.....	.03	29	33	54	"	May	1	93	549	.....
12 " "	.....	.93	16	32	55	"	June	1	80	553	.....
13 " "	.....	2.36	26	33	55	"	Sept.	1	81	512	.....
14 " "	4	.....	3	32	55	"	June	17	95	.....	*25
15 " "	1	.....	23	33	55	"	May	19	96	.....	*341
16 " "	.....	.36	14	33	57	"	May	1	90	536	.....
17 " "	.....	.43	8	33	56	"	Dec.	15	90	502	.....
18 " "	.....	.29	13	33	57	"	May	31	91	543	.....
19 " "	1	.....	7	33	56	" . . . .	.....	.....	.....	*981	.....
20 " "	10	.....	13	33	57	"	June	12	95	.....	*14
21 " "	.....	.....	26	33	54	"	May	12	98	.....	*451
22 " "	1	.....	23	33	54	"	June	3	98	.....	*457
23 " "	.....	.14	25	33	56	"	May	1	93	551	.....
24 " "	.....	1.43	33	33	56	"	May	1	88	506	.....
25 " "	.....	.50	27	33	56	"	July	2	88	509	.....
26 " "	.96	.....	33	33	56	"	July	19	95	.....	*83
27 " "	4	.....	22	33	56	"	Aug.	12	95	.....	*112
28 " "	.....	1.14	35	33	56	"	May	31	86	508	.....
29 " "	.50	.....	7	33	53	"	June	26	95	.....	*52
30 " "	.....	3	7	32	55	"	June	1	87	533	.....
31 " "	.....	1	21	33	55	"	Dec.	1	90	559	.....
32 " "	.....	.29	21	33	55	"	June	1	95	556	.....

*Pending. †Contested. ‡Rehearing pending.

CLAIMS AND APPLICATIONS

STREAM.	NAME OF CLAIMANT.	POST-OFFICE.	NAME OF DITCH.	
Sow Belly ck.	Burke, J. B.	Bodarc.	Burke ditch.	1
"	Jordan, S.	Gilchrist.	Jordan's ditch.	2
"	Smith, D. C.	Bodarc.	Smith's Flood ditch	3
"	Nutto, F.	Harrison.	Nutto's ditch.	4
Sp. C., t. S. B'y	Hall, Wm. S., Hall, F. M.	Bodarc.	Halls Sp. Ck. ditch.	5
"	Schaefer, P.	"	Spring Creek ditch.	6
Sp. br., trib.				
S. Warb't..	Garton, O. A.	Harrison.	Garton ditch.	7
"	"	"	"	8
Sp. br., trib.				
to Warb't..	Kay, J. L.	"	Kay's ditch.	9
Sp. br., trib.				
to S. Warb't	Biehle, C.	"	Biehle ditch.	10
Sp. br., trib.				
to N. Warb't	Nolan, Jas.	"	Nolan Ditch No. 1.	11
"	"	"	Nolan Ditch No. 2.	12
Squaw creek.	Dunn, Tho.	"	Dunn's ditch.	13
"	Hamlin, D. N.	"	Hamlin ditch.	14
"	Dunn, Tho.	"	Thomas Dunn's D.	15
"	Shepherd, W. F..	"	Shepherd ditch.	16
"	Dunn, J. F., Dunn, Jno.	"	Joseph & John ditch	17
"	Hamlin, D. N.	"	Hamlin ditch.	18
"	Dunn, P. D.	"	Philip Dunn's ditch.	19
Stream.	Coffee, S. B.	Bodarc.	Homestead ditch. ...	20
Warbonnet C.	Brewster, B. E. ...	Harrison.	Warbonnet ditch. ...	21
Warb. C., n. br.	Ellis, S. L.	"	R. T. Ellis ditch. ...	22
Warb. C., n. br.				
of South Br	Anderson, J. ....	" .....	.....	23
"	" .....	" .....	.....	24
Whitehead Ck	Harrison, R.	Adelia.	Harrison's ditch. ...	25

STATE BOARD OF IRRIGATION.

BY STREAMS IN DIVISION 2-E—Continued.

	USE TO WHICH APPLIED.	SECOND FEET.		LOCATION OF HEADGATE			DATE OF PRIORITY.			DOCKET NUMBER.	APP. NO.	
		Applied for.	Granted.	S.	T.	R.	County.	M.	D.			Y.
1	Irrig.	40	.....	5	32	55	Sioux	July	5	95	.....	*63
2	"	1.57	.....	21	33	55	"	May	11	96	.....	*424
3	"	.....	.....	5	32	55	"	April	22	97	.....	*383
4	"	1	.....	24	32	56	"	Sept.	4	97	.....	*404
5	"	.....	.57	6	32	55	"	Mar.	26	89	550	.....
6	"	.....	.29	7	32	55	"	June	1	93	532	.....
7	"	.....	1.43	31	33	56	"	Oct.	16	93	503	.....
8	"	1	.....	31	33	56	"	June	17	95	.....	*24
9	"	.....	.14	26	33	57	"	May	1	87	958	.....
10	"	.....	.23	32	33	56	"	April	1	91	538	.....
11	"	.....	.01	23	33	57	"	Mar.	15	87	957	.....
12	"	.....	.29	23	33	57	"	May	1	88	959	.....
13	"	.....	.36	15	33	57	"	June	1	90	552	.....
14	"	.....	.01	10	33	57	"	April	1	91	555	.....
15	"	4	.....	10	33	57	"	Aug.	5	95	.....	*100
16	"	6	.....	1	33	57	"	Aug.	21	95	.....	*123
17	"	4	.....	3	33	57	"	Aug.	25	95	.....	*132
18	"	2	.....	10	33	57	"	June	12	96	.....	*313
19	"	1	.....	3	33	57	"	Jan.	22	97	.....	*376
20	"	1	.....	27	33	54	"	.....	.....	.....	.....	*984
21	"	.....	2.86	21	33	56	"	July	31	80	+548	.....
22	"	.50	.....	25	33	57	"	May	17	96	.....	*339
23	"	.....	.71	30	33	56	"	May	31	89	539a	.....
24	"	.....	.29	30	33	56	"	Dec.	31	91	539b	.....
25	"	.....	.06	13	33	54	"	May	30	88	547	.....

*Pending. †Rehearing pending.

STREAM MEASUREMENTS.

Section 17, Article 2, reads as follows: "It shall be the duty of the Secretary of the State Board of Irrigation, as soon as practicable after the passage of this act, to measure, or cause to be measured, the quantity of water flowing in the several streams of the state and to make a record thereof in the office of said board, and he shall from time to time make such additional measurements as may be necessary, or cause the same to be made, for the information of such board in considering applications for water appropriations and such controversies as may arise regarding the distribution of water."

A single measurement on a stream has some value, but in order that any adequate notion may be formed of the volume that the stream can be expected to furnish, the observations must be repeated at intervals throughout the season. The observations of a single season conducted in this way have great value, but as the waters are used for irrigation on the lands adjacent to a stream, the effects of seepage appear modifying the flow. In order that anything certain may be known as to the real capacity of a stream for irrigation, the observations must be continued from year to year. When we consider the number of streams from which water is claimed, it will be seen that a task of no mean proportions is laid out for the secretary and his assistants.

The United States Geological Survey have for the past four years been conducting a series of daily observations on the larger streams of the state under the direction of Prof. O. V. P. Stout, of the State University. To avoid duplication of work, it was agreed that Professor Stout should take full charge and direction of the measurements on these larger streams. The expense of this part

of the work has been borne, for the most part, by the United States Geological Survey. When their appropriation was exhausted, the amount necessary to keep the work going was contributed from our fund for field work; \$137.50 was used in paying the wages of the engineers making these observations.

The results of the measurements taken by Professor Stout and his assistants are found in the following report and table:

The table of North Platte measurements at North Platte is from observations made by Chas. P. Ross, C. E., for the United States Geological Survey.

REPORT OF PROF. O. V. P. STOUT.

The following tables of the rates of discharge of some of the principal streams of Nebraska are the result of work which was undertaken in the state in 1894 by the hydrographic division of the United States Geological Survey, under Mr. F. H. Newell as chief of division, and which has been continued, on a constantly increasing scale, throughout the open season of each year since that time. The scope and value of the results have been increased materially through the substantial co-operation of the various public and private agencies within the state, to whose interest it is that the results should be as complete and as reliable as possible.

When the site for a gaging station at which to obtain a record of the daily rate of discharge of a stream has been selected a gage rod is placed on the bank of the river or on some part of a bridge which spans the stream, and an observer is employed to read once or twice each day upon the rod the height of the water surface in the river. A trained hydrographer makes frequent visits to the station, and by means of approved forms of current meters, measurements are made of the number of cubic feet of water per second passing the station.

The success of this method of operating a gaging station depends upon how nearly the height of the surface of water in the river constitutes a reliable indication of the volume of water which passes the station in a given time. Unfortunately for this purpose, the streams which are located in the portions of Nebraska where irrigation is a question of immediate moment flow over beds of shifting sand, and instances are rare of permanence in the relation of height of water surface and rate of discharge. This fact has made it necessary to modify, some-

what, the standard methods of procedure, and in working up the records of a season on such streams it is necessary to take account not only of variation in the height of the water surface, but also of changes in the form, size, and position of the channel through which the water flows. This has been done by direct measurements of the cross-sections of the streams at intervals between the visits of the hydrographer, and also by an indirect method which we shall not take the space here to describe, but which seems to produce results of a more satisfactory nature than those arrived at by the employment of any other expedient which has been tried.

In passing upon the value of this work to the state, it is well to note that it is probably true that no other state, at a correspondingly early period of its development in irrigation, has had a more complete knowledge of its water resources and of the normal flow of its streams, dating from the time when they were practically unaffected by the appropriations for irrigation or other purposes, than that which is now possessed by Nebraska. If we may judge from the experience of other states, older than our own in the practice of irrigation, this fact will prove a most fortunate circumstance for us, in that many of the problems of irrigation legislation and administration, which in these other states have assumed most perplexing aspects, will be encountered in this state in comparatively simple forms.

O. V. P. STOUT.

Lincoln, Neb., Dec. 22, 1898.

PLATTE RIVER AT COLUMBUS (above mouth of Loup).

Daily mean discharge in cubic feet per second.

DAY.	MAY.				JUNE.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	1500	.....	.....	21600	7800
2	4550	.....	2400	.....	.....	21600	24600
3	5550	.....	.....	4000	.....	.....	21400	13900
4	6700	4800	9420	4850	27400	22200
5	7000	6400	8600	4320	22600	20200
6	7350	6600	7100	5260	19700	17100
7	8200	6800	5170	5750	19700	19000
8	10300	6000	7500	7050	20600	15800
9	12250	5100	11250	9715	21600	13100
10	11250	4950	12580	14900	22600	14100
11	10800	3900	27200	11975	23750	13900
12	11250	4400	22400	12185	31100	12400
13	11250	3800	22420	10925	28575	11900
14	11250	3500	19280	10400	20300	11400
15	12700	3300	17400	6100	17750	10900
16	12250	3175	16150	8250	16000	13200
17	12250	3650	17130	10400	13900	11700
18	13400	4500	16150	8250	9800	10300
19	13400	3500	16970	7950	8200	9300
20	12100	6850	16150	6100	5500	7600
21	11250	10700	14960	5750	11250	6200
22	5896	.....	11250	8900	14440	5510	12500	6350
23	10300	7950	13470	6380	11500	5750
24	9250	9600	12580	5750	11100	6400
25	10800	8300	12800	6380	11750	6350
26	12250	6600	12250	6100	12200	5700
27	12100	9100	10590	6450	12250	5100
28	14675	8100	11550	6380	11750	5200
29	15250	6700	11750	5145	10750	5300
30	18000	7350	11450	4535	8700	5600
31	21600	9000	.....	.....	.....	.....
Mean	11801	5885	14027	7510	16914	11278

PLATTE RIVER AT COLUMBUS (above mouth of Loup).
Daily mean discharge in cubic feet per second.

DAY.	JULY.				AUGUST.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	9315	4400	8200	6100	1250	Dry.	†	†
2	7900	4400	8200	5000	970	620	†	†
3	6600	4490	7600	5050	590	2375	†	†
4	6210	4490	6400	5200	698	1850	†	†
5	5170	4280	4700	4900	782	1250	†	†
6	4165	3700	3900	4800	846	1140	†	†
7	3895	3700	3500	3900	564	725	†	†
8	4345	3505	3500	3650	444	425	†	†
9	3720	3190	3500	3800	312	350	†	†
10	3720	3880	3100	3000	472	188	†	†
11	3205	3570	2550	2700	336	305	†	†
12	4435	2475	2000	2350	264	420	†	†
13	4345	1975	2000	1700	96	620	†	†
14	4615	1530	2000	1550	1105	1725	†	†
15	4985	725	2000	1400	910	930	†	†
16	4165	188	2000	1550	910	188	†	†
17	3375	Dry.	2000	1400	845	Dry.	3300	†
18	2950	"	†	1300	845	"	4400	†
19	3545	"	†	750	910	"	4400	†
20	3205	"	†	500	672	"	4900	†
21	2700	"	†	†	536	"	4900	†
22	2530	"	†	†	878	"	4900	†
23	2135	"	†	†	1250	"	4400	†
24	1980	"	†	†	1340	"	3800	†
25	1980	"	†	†	1070	"	3400	†
26	1745	"	†	†	725	"	3400	†
27	1380	"	†	†	508	"	3400	†
28	1380	"	*994	†	416	"	3400	†
29	1525	"	†	*285	360	"	1400	†
30	1525	"	†	†	336	"	1400	†
31	1470	"	†	†	1140	"	1400	†
Mean	3685	3156	3786	2899	722	423	3520	.....

*Measurement.

†No water at gage.

PLATTE RIVER AT COLUMBUS (above mouth of Loup).
Daily mean discharge in cubic feet per second.

DAY.	SEPTEMBER.			OCTOBER.			NOVEMBER.	
	1896.	1897.	1898.	1896.	1897.	1898.	1896.	1898.
1	Dry.	†	†	188	†	†	2250	†
2	"	†	†	188	†	†	2250	†
3	"	†	†	305	†	†	2250	†
4	"	†	*2	188	†	†	2425	†
5	"	†	.....	305	†	†	2500	†
6	"	†	.....	425	†	†	2500	.....
7	"	†	.....	525	†	†	2640	.....
8	"	†	.....	620	†	†	2780	.....
9	"	†	.....	725	†	†	2535	.....
10	"	†	.....	1250	†	†	2780	.....
11	"	†	.....	1250	†	†	1600	*16
12	"	†	.....	1030	†	†	620	.....
13	"	†	.....	1030	†	†	620	.....
14	"	†	.....	620	†	†	620	.....
15	"	†	.....	425	†	†	.....	.....
16	"	†	.....	425	†	*14	.....	.....
17	"	†	.....	425	†	†	.....	.....
18	"	†	*10	188	†	†	.....	.....
19	"	†	.....	188	†	†	.....	.....
20	"	†	.....	188	†	†	.....	.....
21	"	†	.....	188	†	†	.....	.....
22	"	†	.....	188	†	†	.....	.....
23	"	†	.....	350	†	†	.....	.....
24	"	†	.....	565	†	†	.....	.....
25	"	†	.....	620	†	†	.....	.....
26	"	†	†	620	†	†	.....	.....
27	"	†	†	725	1400	†	.....	.....
28	"	†	†	785	1400	†	.....	.....
29	"	†	†	845	1600	†	.....	.....
30	"	†	†	2250	1600	*13	.....	.....
31	.....	†	.....	2500	.....	†	.....	.....
Mean	.....	.....	.....	649	.....	.....	.....	.....

*Measurement.

†No water at gage.

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

DAY.	JANUARY.		FEBRUARY.		MARCH.		
	1897.	1898.	1897.	1898.	1895.	1897.	1898.
1	5715	4864	4876	5296	10180	2341	3138
2	5296	5296	4876	5296	8060	3689	2707
3	6554	5296	4876	4864	4878	4457	2064
4	6134	4864	5715	5296	4878	5296	2064
5	6554	5296	5296	5296	4878	5712	1844
6	6973	5296	5296	5296	4282	6554	1700
7	7392	5296	5296	5296	3210	6973	1700
8	7812	5848	5296	5848	4575	7392	2064
9	8231	5848	6134	6333	2968	7812	2491
10	7812	5296	6973	5848	1723	8650	2491
11	7812	5296	7812	6333	3463	9489	2491
12	7812	4864	7812	7786	2968	3167	2491
13	8650	5080	8231	7786	963	3341	2275
14	8650	5296	8650	8270	587	2993	2064
15	7812	4864	8650	7786	455	2645	2491
16	8231	5080	9489	6333	1389	2471	2064
17	8231	4864	9489	5296	1723	2993	2275
18	8231	5296	9489	5080	2300	3515	1844
19	8231	5080	9489	4864	2512	2471	2491
20	8231	4864	9489	4864	2968	2296	2491
21	7812	4864	9489	4864	2300	3167	2707
22	6973	4864	8650	4433	2098	3167	2064
23	5715	5080	7812	4217	2098	2993	1557
24	4876	5296	6974	3785	2300	2645	1557
25	4876	4864	2471	3570	2300	2122	1413
26	5715	5296	2645	3354	3463	1774	1270
27	5715	5296	2645	3354	2512	2296	1700
28	5715	5296	2645	2922	2300	1948	2491
29	5715	5296	.....	.....	2098	1774	3354
30	5715	5296	.....	.....	1723	2122	2922
31	5715	5296	.....	.....	1389	2296	2707
Mean	6932	5178	6663	5342	3016	3921	2252

Gagings at North Platte for the years 1897 and 1898 furnished by Chas. P. Ross, C.E., of North Platte.

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

DAY.	APRIL.				MAY.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	1723	.....	2645	3138	5191	3225	8231	3785
2	2512	.....	3515	2707	5848	3392	7812	4001
3	1551	.....	4457	2491	5848	3048	8650	4433
4	1551	.....	4457	2064	8464	3780	11854	4433
5	1905	.....	5296	2707	9735	4555	11854	4433
6	2968	.....	4038	3138	10635	6777	10328	4433
7	3463	.....	4457	2707	10635	5655	11854	4648
8	3210	.....	5296	2922	8878	6777	11854	4433
9	2300	.....	4457	2491	6908	5111	14948	4433
10	1551	1860	3863	1700	7282	4000	14217	4433
11	2735	2335	3863	2064	7282	4000	14217	4001
12	2735	3048	4896	2491	6191	3780	14948	4001
13	2968	3560	3863	2707	5514	4555	14948	3785
14	2512	3048	3515	2275	4878	5655	14217	3570
15	1723	2680	3167	1844	5848	7888	14948	3785
16	2512	2490	2471	2275	5848	5655	10328	4217
17	3210	2870	2471	1557	6908	5655	13486	6817
18	3725	2870	2645	1700	8060	6222	10328	5296
19	3463	2490	2645	1700	6544	5111	10328	4864
20	2968	2680	2819	2064	6908	5655	13486	4864
21	4282	3225	3515	2064	6544	5655	11854	5296
22	5191	2680	3863	2064	6908	5111	13486	5080
23	5191	3048	5296	2491	6908	4000	13486	5296
24	4878	2680	6973	2275	7282	4000	14217	4864
25	4878	3225	8650	2491	6544	3780	15679	4864
26	4281	3048	10328	2922	6191	3560	17872	5296
27	5191	2680	13486	3785	6191	3225	20063	6817
28	5848	2680	9489	3785	5848	3225	20796	6817
29	6544	3048	8650	3785	5191	2680	20796	5848
30	6544	3048	8231	3785	7282	2680	21527	14646
31	.....	.....	.....	.....	9735	2870	20796	10074
Mean	3470	2823	5110	2540	7033	4558	13981	5276

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

DAY.	JUNE.				JULY.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	9735	3392	21527	12034	5191	2680	6197	4217
2	8464	4000	20296	9559	4575	2680	5716	4001
3	8060	3392	20796	8785	3725	2335	5556	4001
4	12553	2680	18603	8528	4282	2020	5235	4433
5	12553	14613	18603	8270	4575	1730	4914	3785
6	12058	16300	18603	7786	3998	1600	4754	3570
7	16875	14613	21527	7786	3998	1475	4432	3354
8	15732	12927	23720	6817	4575	1130	4272	2491
9	15732	11241	21849	6817	5191	1130	4593	2275
10	15177	10117	17172	6817	5848	950	4112	3570
11	14632	9000	16637	6817	5191	800	3174	2707
12	12553	9000	16637	6817	4575	600	3409	3138
13	11573	9000	13490	6333	3998	550	4272	1844
14	12553	7333	11916	8270	3998	460	3174	1557
15	11573	5655	9768	7302	3463	320	2940	1270
16	11573	4000	11393	6333	2968	350	3409	984
17	12553	3780	11393	5848	2098	280	3409	1127
18	10635	3780	12442	6333	1551	250	3643	984
19	10635	5111	11393	6817	1551	350	3409	984
20	9735	4000	11393	7302	1905	405	4272	697
21	8878	3780	11393	6817	1551	575	3409	697
22	10180	3560	11393	5848	1723	875	3878	697
23	8878	3225	11393	5842	2098	1600	4432	715
24	8878	3560	9768	5848	2968	2335	2940	622
25	8464	4555	9768	5848	2968	1240	2940	660
26	7665	3780	7331	5296	2098	1040	2306	622
27	7665	3560	6518	5296	1551	875	2306	622
28	7282	3560	7331	5080	1551	675	2306	510
29	6191	4000	6518	4433	1389	1350	2306	399
30	5848	2680	6518	4648	1237	1040	1510	324
31	.....	.....	.....	.....	842	1475	1090	473
Mean	10829	6340	13920	6878	3137	1134	3688	1846

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

DAY.	AUGUST.				SEPTEMBER.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	628	1600	1090	548	323	550	850	150
2	537	1475	1090	1270	323	738	850	70
3	963	1730	1090	1413	323	637	743	90
4	730	1860	1510	840	200	637	679	90
5	537	1240	2306	510	200	600	615	120
6	628	1475	4593	473	200	600	679	80
7	842	1730	4432	548	150	550	550	100
8	842	1240	4754	473	150	550	422	160
9	628	800	4432	399	175	600	422	219
10	628	950	4593	324	175	675	486	324
11	628	675	4754	306	175	800	679	436
12	628	600	4272	289	175	800	743	660
13	537	600	3643	254	200	950	615	548
14	384	550	4112	219	200	1130	679	697
15	455	520	4593	179	175	1130	615	984
16	628	460	4272	179	272	950	679	697
17	455	520	4272	179	272	800	679	660
18	384	637	4272	179	200	875	743	548
19	323	800	4112	160	200	950	615	473
20	384	875	3643	100	150	875	615	399
21	272	1130	3643	100	200	875	615	362
22	231	950	4309	100	231	950	615	324
23	272	800	2306	254	455	800	550	324
24	231	950	1510	271	384	875	486	324
25	272	738	1090	199	323	950	550	324
26	200	600	1090	160	272	1130	550	324
27	175	550	963	140	272	.....	486	324
28	537	600	963	90	200	.....	486	289
29	455	575	850	120	231	.....	486	289
30	384	550	743	90	323	.....	486	306
31	323	600	743	80	323	.....	.....	.....
Mean	488	919	2876	353	238	807	609	352

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

DAY.	OCTOBER				NOVEMBER.			DECEMBER.	
	1895	1896	1897	1898	1895	1897	1898	1897	1898
1	272	....	615	324	1095	2624	697	4112	2275
2	200	....	486	289	963	1510	697	3174	2275
3	231	....	486	254	1095	963	697	4112	2275
4	384	....	486	289	1389	743	697	4112	2707
5	384	....	486	289	1551	743	984	4112	2707
6	384	....	486	324	1389	963	984	4112	2707
7	384	....	486	324	1095	1510	984	4112	2707
8	537	....	486	324	1095	1510	697	4112	2707
9	730	....	486	436	1389	2624	984	4432	2707
10	730	....	679	399	963	2624	660	4593	2707
11	537	....	550	399	1095	1510	697	4754	3570
12	842	....	679	436	1237	1510	984	4914	3570
13	730	....	743	399	1905	1510	984	5395	3570
14	842	....	679	399	1551	1510	984	5395	3570
15	842	....	473	399	1551	1510	697	5716	3570
16	1095	....	963	399	1551	1510	1127	5716	3570
17	1095	....	1090	399	1237	2624	984	6037	3570
18	1095	....	1343	399	1389	2624	1270	6037	....
19	963	....	1510	473	1237	2624	1844	6037	....
20	842	....	963	548	1389	2624	1557	6037	....
21	842	....	963	548	963	2624	1127	6037	....
22	842	....	743	548	1095	2306	984	6037	....
23	1095	....	743	622	1237	2624	984	5716	....
24	1095	....	743	622	1551	2624	984	5716	....
25	1237	....	743	622	1905	963	984	5395	....
26	1237	....	1090	660	1905	2306	984	5395	....
27	1389	....	1510	697	1551	3409	984	5395	....
28	1095	....	3643	697	1551	4112	1844	5074	....
29	1095	....	3878	697	1237	4112	1557	5395	....
30	842	....	3643	697	1551	4112	1557	5716	....
31	1237	....	2940	697	.....	.....	.....	5716	....
Mean	810	....	1132	476	1357	2152	1040	5116	...

REPORT OF SECRETARY

NORTH PLATTE RIVER AT CAMP CLARKE.
Daily mean discharge in cubic feet per second.

DAY.	APRIL.		MAY.	JUNE.		JULY.		
	1897.	1898.	1898.	1896.	1898.	1896.	1897.	1898.
1	2200	675	2600	.....	10600	2886	.....	4200
2	2100	675	2350	.....	10300	2552	4195	3350
3	2050	900	2600	.....	8500	2295	.....	2960
4	1950	1050	2400	.....	7600	2042	3250	2800
5	1850	1050	3700	.....	7550	1878	2950	2800
6	1650	830	4000	.....	6700	1655	2760	2400
7	1850	900	4000	.....	6500	1537	2440	2050
8	2150	830	3350	.....	5900	1566	2440	1900
9	2050	925	3150	.....	5300	1537	3000	1760
10	1550	950	3050	.....	6900	1508	3000	1650
11	1850	1000	3150	.....	6700	1478	2700	1550
12	2050	1175	2700	.....	6300	1160	2400	1800
13	1420	900	3150	.....	6300	1160	2400	1350
14	1850	950	3300	.....	6200	1137	2040	1200
15	1850	1000	2500	.....	7200	1137	1850	1200
16	1900	1200	2600	.....	7400	977	1560	1200
17	1850	1250	2650	.....	7600	1046	1350	1200
18	2000	1350	2650	.....	8100	1977	1710	1200
19	2400	1650	2800	.....	7300	1685	2600	1350
20	4195	1900	4000	.....	7400	1137	1650	1350
21	.....	2400	5300	.....	7550	1186	1420	1200
22	.....	2450	5700	.....	7400	1160	1480	1150
23	.....	3050	6300	.....	7900	1226	1420	1260
24	.....	3400	6100	.....	7550	1566	1560	1100
25	.....	2900	5900	.....	7300	1368	1360	1075
26	.....	2900	6200	.....	6500	1342	1210	1050
27	.....	2900	13300	3600	5900	1566	1350	850
28	.....	2450	.....	4100	5300	1114	1210	800
29	.....	2700	.....	3324	4800	1394	1310	800
30	.....	2800	13400	3102	4550	.....	1440	850
31	.....	.....	11300	.....	.....	1960	930	780
Mean	2038	1637	4628	3531	7030	1554	2034	1619

NORTH PLATTE RIVER AT CAMP CLARKE.
Daily mean discharge in cubic ft. per sec.

DAY.	AUGUST.			SEPTEMBER.		
	1896.	1897.	1898.	1896.	1897.	1898.
1	1316	740	800	854	580	80
2	1160	835	780	1056	565	80
3	1160	1160	725	738	565	60
4	1114	1210	600	835	580	60
5	1092	1040	300	796	550	65
6	1114	1160	725	816	500	65
7	1114	1260	750	835	490	80
8	1160	.....	230	895	475	80
9	1046	1400	275	1023	475	80
10	954	2000	230	1186	450	200
11	854	2000	200	1046	450	160
12	816	1560	160	932	450	150
13	777	1650	150	1114	490	150
14	706	1620	130	895	475	160
15	722	1420	125	854	515	150
16	628	1270	190	816	515	150
17	706	1160	150	796	530	150
18	932	1135	200	1114	500	150
19	835	1000	190	796	540	125
20	758	835	150	954	515	90
21	895	720	125	977	490	105
22	1069	.....	130	932	450	105
23	.....	740	130	1046	440	95
24	.....	645	125	1160	450	80
25	854	660	125	1114	440	110
26	816	610	110	954	450	115
27	777	580	60	1092	465	115
28	777	610	95	875	450	140
29	1000	610	95	835	465	80
30	835	550	95	835	410	80
31	796	580	90	.....	.....	.....
Mean	924	1061	266	939	491	110

REPORT OF SECRETARY

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

DAY.	OCTOBER.			NOV.
	1896.	1897.	1898.	1896.
1	875	380	110	1046
2	932	370	150	1137
3	875	400	150	1186
4	875	400	160	1212
5	932	400	150	1238
6	914	410	150	706
7	914	410	160	1046
8	954	430	160	1160
9	1290	430	190	.....
10	1069	410	200	.....
11	1023	475	220	.....
12	1046	.....	220	.....
13	1023	465	200	.....
14	1046	450	200	.....
15	1046	450	190	.....
16	1046	465	165	.....
17	1023	465	150	.....
18	1000	475	150	.....
19	1046	465	130	.....
20	1000	515	125	.....
21	1046	580	365	931
22	1023	600	365	.....
23	954	565	375	.....
24	977	555	350	.....
25	977	565	365	.....
26	954	600	390	.....
27	1046	610	425	.....
28	1046	580	420	.....
29	1023	600	410	.....
30	1264	600	390	.....
31	1023	600	425	.....
Mean	1008	491	245	1074

NORTH PLATTE RIVER AT GERING.

Daily mean discharge in cubic feet per second.

DAY.	APR.		MAY.		JUNE.		JULY.		AUGUST.	
	1898	1897.	1898.	1897.	1898.	1897	1898	1897	1898	
1	1000	.....	4900	18700	12150	4269	5750	1084	350
2	1000	.....	4200	18700	11150	4269	4900	815	350
3	1000	.....	4900	20400	11150	4269	4200	815	350
4	1000	.....	5750	24000	10100	3552	3400	1084	200
5	1000	.....	6500	25900	10100	3552	3000	815	200
6	1450	.....	5750	.....	9200	2909	3400	815	200
7	1450	.....	4900	.....	9200	2340	2700	815	350
8	1450	.....	4900	.....	9200	2340	2000	1428	200
9	1450	.....	4900	.....	9200	2909	2000	1428	200
10	1450	.....	4900	.....	8250	3557	2000	2340	200
11	1450	.....	4200	.....	8250	2340	2000	1428	200
12	1450	.....	4200	.....	8250	1847	2000	1428	100
13	2000	.....	3400	.....	7400	1847	2000	1428	100
14	2000	.....	3400	.....	8250	1428	2700	1847	100
15	2000	.....	3400	.....	8250	1428	2000	1847	100
16	2000	.....	4200	.....	10600	1428	2000	1847	100
17	2700	.....	4900	.....	11150	1428	2000	1847	200
18	2700	.....	5750	.....	11150	1847	2000	1428	200
19	2700	.....	6500	.....	10100	2340	2000	1428	200
20	3400	.....	6500	.....	10100	1428	2000	1428	100
21	4900	.....	7400	.....	9200	1428	1650	815	200
22	5750	.....	7400	.....	8250	1428	1000	815	200
23	5750	.....	8250	.....	8250	1428	1000	620	200
24	5750	.....	8250	.....	8250	1428	1000	620	200
25	5750	.....	7400	.....	8250	1428	1000	620	100
26	5750	.....	6500	.....	7400	1428	1000	500	100
27	5750	.....	18500	.....	7400	1428	650	500	100
28	6500	.....	17100	.....	7400	1428	650	500	100
29	6500	23360	18500	.....	6500	1428	650	500	100
30	6500	27900	15700	.....	5750	1084	650	500	100
31	....	24000	14600	.....	.....	1084	....	500	100
Mean	3165	.....	7345	.....	9028	2140	2110	1093	177

REPORT OF SECRETARY

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

DAY	SEPTEMBER.		OCTOBER.	
	1897.	1898.	1897.	1898.
1	815	100	455	100
2	815	100	455	100
3	815	100	455	100
4	620	100	455	100
5	620	50	455	100
6	620	50	455	150
7	620	100	455	150
8	500	100	455	150
9	500	200	455	150
10	500	100	468	150
11	500	100	468	200
12	500	100	468	200
13	500	100	500	200
14	500	100	500	200
15	500	100	500	200
16	500	100	500	200
17	500	100	550	350
18	500	100	550	350
19	500	100	550	350
20	500	100	550	350
21	500	100	550	350
22	468	100	550	350
23	468	100	550	350
24	468	100	620	.....
25	468	100	620	.....
26	468	100	620	.....
27	468	100	550	.....
28	468	100	550	.....
29	455	100	550	.....
30	455	100	550	.....
31	.....	.....	.....	.....
Mean	537	100	514	213

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY.	JAN.		FEB.		MAR.		APRIL		MAY.	
	1897.	1897.	1897.	1897.	1897.	1898.	1897.	1898.	1897.	1898.
1	.....	900	.....	.....	.....	.....	.....	.....	665	500
2	555	.....	636	820	.....	.....	.....	.....	575	1310
3	.....	.....	.....	.....	.....	.....	.....	.....	500	700
4	.....	.....	.....	880	.....	.....	.....	.....	480	710
5	.....	.....	.....	.....	.....	.....	.....	.....	457	765
6	600	900	506	.....	.....	.....	.....	.....	475	930
7	.....	.....	506	990	.....	.....	.....	.....	445	995
8	.....	.....	.....	1388	.....	.....	.....	.....	420	1100
9	.....	.....	.....	1190	.....	.....	.....	.....	575	960
10	.....	.....	457	1074	.....	.....	.....	.....	600	1210
11	.....	900	.....	1095	.....	.....	.....	.....	470	980
12	.....	.....	.....	1190	.....	.....	.....	.....	440	910
13	600	.....	.....	1252	.....	.....	.....	.....	420	1170
14	.....	.....	.....	1050	.....	.....	.....	.....	370	1310
15	.....	900	516	1095	.....	.....	.....	.....	360	740
16	.....	.....	.....	.....	.....	.....	.....	.....	341	910
17	.....	.....	385	.....	.....	.....	.....	.....	330	870
18	.....	.....	.....	1252	.....	.....	.....	.....	305	890
19	.....	880	.....	1074	.....	.....	.....	.....	280	845
20	700	.....	425	990	590	.....	.....	.....	255	1000
21	.....	.....	.....	945	580	.....	.....	.....	230	1465
22	.....	.....	650	920	940	.....	.....	.....	250	1445
23	900	.....	465	740	.....	.....	.....	.....	1130	1350
24	900	880	.....	880	885	.....	.....	.....	445	930
25	900	.....	.....	840	430	.....	.....	.....	425	890
26	900	.....	.....	675	580	.....	.....	.....	395	1050
27	900	.....	457	620	560	.....	.....	.....	445	910
28	900	.....	.....	.....	560	.....	.....	.....	280	1015
29	900	.....	.....	.....	490	.....	.....	.....	270	.....
30	900	.....	.....	800	520	.....	.....	.....	220	1630
31	.....	.....	610	.....	.....	.....	.....	.....	180	1170
Mean	805	893	511	946	613	.....	.....	.....	418	1022

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY.	JUNE.			JULY.		
	1896.	1897.	1898.	1896.	1897.	1898.
1	.....	190	1295	685	555	511
2	.....	180	1030	4300	.....	540
3	.....	220	1000	4850	.....	495
4	.....	220	960	.....	.....	345
5	.....	180	1000	3025	.....	430
6	.....	241	1240	2147	.....	430
7	.....	370	980	1750	.....	420
8	.....	270	1720	1940	.....	420
9	.....	230	1380	1904	.....	530
10	.....	212	1325	1525	1010	1345
11	.....	750	.....	1325	770	1000
12	.....	550	1625	1165	506	530
13	.....	.....	1530	941	350	560
14	.....	.....	1610	813	265	910
15	.....	.....	1565	720	230	725
16	.....	.....	1575	652	190	560
17	.....	.....	1600	551	190	540
18	.....	.....	1380	570	220	480
19	.....	.....	.....	552	170	430
20	720	490	1430	532	230	380
21	600	405	1275	580	206	345
22	530	320	1040	450	160	420
23	551	290	1240	484	140	340
24	441	330	1045	450	165	340
25	450	226	910	441	120	270
26	1052	.....	710	423	165	295
27	642	.....	750	382	160	280
28	673	.....	685	374	640	270
29	642	.....	630	398	206	270
30	610	.....	560	432	131	220
31	.....	.....	.....	1004	119	230
Mean	628	315	1182	1179	294	279

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY.	AUGUST.			SEPTEMBER.		
	1896.	1897.	1898.	1896.	1897.	1898.
1	928	94	210	282	110	.....
2	903	110	230	261	85	.....
3	864	94	215	311	64	.....
4	467	90	210	268	.....	.....
5	467	110	210	216	75	.....
6	467	330	210	210	74	410
7	1279	1460	185	204	64	360
8	730	395	185	197	.....	305
9	1816	390	195	204	.....	360
10	467	310	185	268	.....	345
11	415	305	165	325	.....	350
12	341	390	150	304	70	410
13	304	375	155	289	85	285
14	268	380	230	423	60	240
15	261	101	100	289	64	230
16	228	119	165	289	241	185
17	1395	119	165	275	180	190
18	1466	140	150	406	180	240
19	1042	155	160	296	125	210
20	611	212	.....	303	1330	210
21	580	171	145	268	82	470
22	790	206	.....	296	75	410
23	695	190	.....	311	.....	380
24	632	395	380	282	64	270
25	611	341	270	223	70	275
26	522	265	215	.....	.....	240
27	467	212	205	268	.....	220
28	432	180	180	254	.....	220
29	365	165	200	289	.....	215
30	333	119	.....	282	82	205
31	296	105	.....	.....	.....	.....
Mean	660	258	195	279	149	289

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY.	OCTOBER.			NOVEMBER.	
	1896.	1897.	1898.	1896.	1898.
1	223	.....	200	333	320
2	204	.....	230	282	330
3	223	60	165	373	340
4	229	.....	165	342	370
5	241	.....	170	325	340
6	229	.....	165	342	340
7	210	.....	185	333	360
8	191	.....	200	415	350
9	204	.....	145	406	360
10	191	.....	195	441	345
11	223	.....	270	398	350
12	193	.....	300	432	410
13	204	.....	290	441	415
14	191	.....	280	476	410
15	191	.....	270	442	420
16	204	75	330	532	420
17	204	.....	.....	512	470
18	197	.....	.....	476	450
19	191	.....	.....	390	450
20	204	1142	.....	325	.....
21	223	1160	.....	357	.....
22	268	1130	.....	382	.....
23	229	1160	325	415	.....
24	217	.....	295	365	.....
25	229	1010	290	941	.....
26	217	1070	295	1137	.....
27	229	.....	265	450	.....
28	223	.....	330	459	.....
29	415	.....	320	.....	.....
30	382	.....	365	493	.....
31	365	.....	330	.....	.....
Mean	231	886	255	449	381

FRENCHMAN RIVER AT PALISADE.

Daily mean discharge in cubic feet per second.

DAY.	MAR.	APRIL	MAY.		JUNE.		JULY.	
	1895.	1895.	1895.	1896.	1895.	1896.	1895.	1896.
1	118	107	123	200	600	92	94	110.2
2	112	105	144	140	215	89.2	94	110.2
3	107	112	123	140	171	89.2	84	109.8
4	118	115	130	130	130	89.2	74	112.3
5	118	118	130	140	138	86.5	69	109.8
6	118	140	146	123.5	150	85	69	107
7	107	150	140	120.5	142	82.3	79	103
8	100	150	134	116.6	122	79.5	142	92
9	102	156	132	116.6	122	79.5	54	85
10	102	150	128	116.6	130	78	69	83.6
11	107	147	128	118	229	76.6	94	83.6
12	102	146	130	108.5	128	74	94	85
13	104	147	130	104.3	109	74	84	87.8
14	104	146	130	104.3	104	69.7	580	90.6
15	104	144	125	103	104	65.5	239	92.7
16	104	144	123	116.5	109	61.4	195	105
17	104	142	125	112.3	118	60	154	93.4
18	104	144	125	113.6	109	50.5	135	90.6
19	109	146	128	110	104	51.3	121	89.2
20	109	147	134	107	94	53	111	89.2
21	107	150	130	100.2	109	71.2	113	86.5
22	102	156	125	103	99	66.8	580	85
23	100	140	125	105.7	94	116.5	513	86.5
24	100	134	125	104.3	84	93.4	203	86.5
25	99	140	130	100.2	89	101.5	174	86.5
26	98	134	118	100.2	69	103	143	87.8
27	100	122	118	98.8	58	93.4	135	87.8
28	100	122	137	98.7	50	87	117	86.5
29	102	118	111	97.2	65	89.2	104	85
30	100	130	111	92	84	800	101	82.3
31	102	.....	158	105.7	.....	.....	91	79.5
Mean.	105.3	137	129	114.4	131	103.6	158.3	93.8

FRENCHMAN RIVER AT PALISADE.

Daily mean discharge in cubic feet per second.

Day.	AUGUST.		SEPT.		OCTOBER.			NOV.	DEC.
	1895.	1896.	1895	1896	1894.	1895.	1896.	1894.	1894.
1	85	79.5	68	81	.....	101	81	113	91.3
2	95	76.6	68	78	.....	.....	83.6	110.5	96.6
3	130	75.3	71	78	.....	.....	86.5	107.5	102
4	101	75.3	74	83.6	.....	.....	89.2	110.5	107.5
5	85	74	77	86.6	.....	104	89.2	110.5	99.3
6	85	72.6	71	81	.....	.....	87.8	104.5	96.6
7	85	74	71	83.6	.....	.....	83.6	102	99.3
8	79	71.2	71	76.6	.....	107	81	104.5	104.5
9	85	71.2	71	76.6	.....	.....	81	104.5	104.5
10	71	69.7	71	81	.....	.....	76.6	99.3	107.5
11	74	66.8	74	81	.....	.....	76.6	99.3	104.5
12	74	64.1	71	76.6	.....	107	81	102	107.5
13	437	64.1	68	83.6	.....	.....	81	96.6	110.5
14	216	62.8	71	83.6	102	.....	76.6	102	110.5
15	85	64.1	71	83.6	104.5	107	81	99.3	125
16	85	64.1	71	81	110.5	.....	83.6	110.5	118.5
17	85	83.6	74	83.6	107.5	.....	83.6	99.3	96.6
18	82	81	79	83.6	110.5	.....	83.6	104.5	88.7
19	77	78	77	81	102.5	111	87.8	110.5	93.8
20	77	81	79	81	99.3	.....	86.5	99.3	75.9
21	64	85	85	81	96.6	.....	89.5	104.5	73.4
22	66	92	88	83.6	102	117	83.6	104.5	83.5
23	71	83.6	91	81	99.3	.....	83.6	107.5	78.4
24	71	81	95	83.6	107.5	.....	83.6	110.5	78.4
25	71	83.6	91	83.6	110.5	.....	81	99.3	75.9
26	74	83.6	91	89.2	110.5	128	81	96.6	.....
27	71	81	85	83.6	113	.....	76.6	99.3	.....
28	71	76.6	88	83.6	125	.....	76.6	96.6	.....
29	68	72.6	95	83.6	122	121	81	122	.....
30	71	81	98	81	122	.....	.....	110.5	.....
31	71	76.6	.....	.....	118.5	.....	.....	.....	.....
M	95.5	75.7	78.4	81.6	109.	111.4	82.5	104.6	97.2

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY.	APRIL.				MAY.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	3070	3205	.....	2130	2840	4807	2750	2425
2	3000	3558	.....	2730	4360	4220	2675	2425
3	2670	3205	7125	2700	4420	4220	2850	2550
4	2660	2945	.....	2730	3590	3897	2850	3075
5	2700	3126	.....	2800	3290	3312	2850	3775
6	2520	3048	.....	2850	3180	3390	2800	3625
7	2675	3126	.....	2960	2930	3048	2750	3530
8	3675	3205	3950	2850	2850	2768	2775	3400
9	3450	3338	3650	2700	2750	2694	2775	3300
10	3320	3393	3450	2820	2675	2743	2875	3175
11	3150	3365	3075	2800	2690	2867	2675	3350
12	2950	4434	2775	2960	2800	2621	2675	3425
13	2780	6950	3825	2860	2740	2728	2575	3280
14	2840	5797	4100	3520	2700	2892	2525	3050
15	2625	4650	3625	3375	2600	2645	2525	2700
16	2650	3725	3500	3125	2620	3022	2500	2800
17	2875	4160	3675	2820	2710	3022	2425	2850
18	2890	4650	4075	2675	2770	2945	2375	3375
19	2725	7018	3250	3150	2820	2892	2350	3175
20	2650	5938	3225	3050	2830	2892	2225	3500
21	2303	5157	3275	3150	2730	2832	2250	4150
22	2400	4017	3950	2550	2820	2670	2300	4250
23	2500	5032	3800	2425	2850	2621	2500	4400
24	2520	5060	3575	2400	2800	2455	2575	5100
25	2450	3205	3550	2520	2880	2358	2500	4200
26	2440	3126	3375	2775	2740	2310	2225	4975
27	2440	3100	3050	2630	2750	2621	2100	4450
28	2490	5326	2725	2600	2750	2645	2300	4150
29	2640	3613	2675	2650	2650	2867	2175	3525
30	2550	1970	3040	2500	3350	2917	2025	3550
31	.....	.....	.....	.....	3470	2621	1850	3250
Mean	2753	4081	3443	2793	2966	2985	2503	3509

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY.	JUNE.				JULY.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	4330	2694	1975	3375	2822	2817	11825	2025
2	4000	3126	1800	3300	2849	2694	5350	2025
3	9080	3153	1800	3525	2613	2832	3525	1925
4	7190	3205	2675	3900	2562	2792	3300	1975
5	5580	3613	2350	5600	2588	2670	3050	2425
6	4775	.....	2675	6675	2562	2597	2975	2530
7	3800	.....	2500	5750	2434	2500	2025	2400
8	3420	8000	2500	5600	2240	2572	1750	2400
9	3010	3441	2500	5375	2288	2768	1650	2200
10	2780	3073	2425	5000	2027	2621	1850	2025
11	2900	1991	2425	4600	2074	3670	2075	2075
12	2835	2203	2600	4325	2051	3258	2375	2050
13	3176	2063	2800	4450	1980	3048	2300	2000
14	3384	2086	2775	4550	2361	2892	2225	2100
15	3205	2106	2850	4600	2562	2525	2975	2100
16	2822	2180	2850	4450	2337	2334	2650	2050
17	3205	2106	2850	4400	2191	2334	2050	2025
18	4264	1991	2775	4050	2074	2310	2050	1865
19	4296	1928	3150	4050	2004	2406	1850	1780
20	3350	2406	3000	4100	1980	2406	2250	1700
21	3039	2867	2575	4325	1824	2455	2325	1725
22	2562	3338	2350	4550	1736	2420	2150	1700
23	3011	3725	2200	4100	1758	2482	2075	1825
24	2850	3258	2175	3025	1846	2482	2050	1650
25	2337	4160	2275	2425	1957	2596	1975	1620
26	2361	4494	2525	2275	1935	2727	1975	1630
27	2337	3021	9550	2175	2004	2945	1850	1680
28	2588	2743	4000	2120	1588	2970	1650	1680
29	2562	2670	3600	2000	1567	2970	1625	1700
30	2690	2621	4250	2100	1523	2970	1600	1750
31	.....	.....	.....	.....	1446	3021	1725	1680
Mean	3591	3009	2891	4026	2122	2712	2616	1946

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY.	AUGUST.				SEPTEMBER.			
	1895.	1896.	1897.	1898.	1895.	1896.	1897.	1898.
1	1525	3100	1600	1650	3011	2063	1350	1800
2	1546	3203	1450	1725	2875	2150	1275	1715
3	1546	3258	1350	1820	2410	2264	1175	1620
4	4104	3258	1275	2600	2191	2455	1175	1600
5	1588	3021	1675	3450	2191	2430	1050	1575
6	2264	2868	2500	1725	1957	2287	1075	1520
7	1957	3811	2225	4325	1913	2170	1150	1500
8	1891	3338	2400	3500	1935	2063	1000	1500
9	1846	2668	3025	3175	2027	2063	1075	1460
10	2074	2620	3050	2900	1913	2170	1350	1600
11	2562	2620	3275	2725	1891	2287	1525	1620
12	2408	2384	2725	2625	1758	2572	1625	1700
13	1891	2429	2500	2550	1736	2694	1650	2470
14	1980	2482	2375	2460	1673	2867	1625	2950
15	2743	2429	2125	2440	1736	2968	1625	2730
16	2796	2382	1950	2475	1715	2968	1550	2650
17	2288	2288	1800	2675	1957	2832	1700	2700
18	2288	2382	1600	3050	2074	2694	1550	2490
19	2191	2406	1500	2950	2121	2548	1475	2490
20	2240	2454	1450	2675	2121	2597	1450	2350
21	2191	2502	1425	2550	2822	2645	1425	2200
22	2097	2454	1375	2600	3793	2670	1450	1870
23	2434	2596	1325	2530	3465	2728	1475	1700
24	2743	2596	1300	2500	4264	2524	1550	1925
25	2902	2502	1275	2490	4995	2370	1600	2080
26	2664	2358	1325	2490	2849	2334	1625	2080
27	2264	2288	1200	2490	2536	2370	1600	2080
28	2536	2264	1100	2300	2337	2406	1550	2075
29	2460	2264	1275	2050	2239	2310	1550	2025
30	2313	2180	1300	1950	2312	2287	1550	2025
31	2613	2106	1425	1850	.....	.....	.....	.....
Mean	2289	2629	1812	2558	2427	2460	1427	2003

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY.	OCTOBER.				NOVEMBER.	
	1895.	1896.	1897.	1898.	1895.	1898.
1	2239	2402	1600	2025	2562	2800
2	2144	2380	1650	2075	2613	2675
3	2004	2287	1675	2080	2634	2550
4	1913	2287	1675	2225	2822	2450
5	2312	2240	1750	2175	2928	2450
6	2288	2287	1800	2200	2822	2550
7	2433	2358	1900	2225	2875	2550
8	2337	2477	1925	2200	2955	2675
9	2288	2548	1975	2325	3011	2800
10	2433	2548	2075	2375	3011	2800
11	2488	2694	2350	2600	3067	2900
12	2434	2817	2725	2900	3122	2825
13	2485	2817	2825	2725	3178	.....
14	2485	2768	2850	2500	3292	.....
15	2562	2832	2950	2425	3378	.....
16	2690	2743	3125	2400	3523	.....
17	2536	2645	3375	2425	3643	.....
18	2460	2645	4700	2450	3378	.....
19	2485	2621	4800	2650	3095	.....
20	2536	2597	4375	2800	2928	.....
21	2485	2817	4325	2650	2822	.....
22	2562	2918	4250	2550	2875	.....
23	2113	2945	4200	2525	2690	.....
24	2639	3022	4500	2425	.....	.....
25	2690	2945	4250	2775	.....	.....
26	2690	2968	4200	2525	.....	.....
27	2613	3022	4800	2725	.....	.....
28	2511	2832	10400	2725	.....	.....
29	2434	3022	4875	2650	.....	.....
30	2536	3535	4750	2550	.....	.....
31	2613	3613	.....	2900	.....	.....
Mean	2450	2732	3422	2477	3011	2669

NORTH LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY.	APRIL.		MAY.			JUNE.		
	1896.	1897.	1895.	1896.	1897.	1895.	1896.	1897.
1	1076	.....	.....	1521	1250	1453	1698	880
2	1139	.....	.....	1455	1220	1456	1455	905
3	930	.....	.....	1233	1180	3766	1139	940
4	1078	.....	.....	1263	1210	1952	1139	990
5	844	.....	1520	1263	1180	1787	1170	960
6	987	.....	1486	1139	1180	1357	4100	930
7	1139	.....	1421	1078	1190	1453	2825	900
8	987	.....	1293	987	1140	1453	1540	920
9	909	.....	1137	1139	1160	1618	1340	890
10	844	.....	1293	987	1100	1453	1260	860
11	844	.....	1618	901	1100	1618	1337	850
12	2519	.....	1421	958	1080	1618	1290	840
13	1962	.....	1293	901	1060	1357	1270	840
14	1455	.....	1293	930	1110	1387	1230	930
15	1553	.....	1293	901	1080	1293	1200	970
16	1263	.....	1137	1078	1080	1357	1165	960
17	1455	.....	1137	1203	1050	1787	1155	905
18	3767	.....	1168	987	1030	1618	1147	990
19	1962	.....	987	873	1020	987	1257	930
20	1293	1280	1047	987	1030	1137	1330	900
21	958	1320	987	844	1020	987	1540	740
22	958	1360	842	901	1020	987	1930	1430
23	1048	1400	871	958	1030	1047	1590	1230
24	958	1230	842	930	1030	1077	1530	1050
25	901	1210	929	901	1030	987	1560	940
26	844	1130	842	702	1040	1047	1370	720
27	779	1140	871	2327	1040	1230	1370	.....
28	1139	1170	929	759	1010	1325	1300	1770
29	1962	1210	871	570	970	1137	1212	1200
30	1618	1210	1962	702	940	1200	1184	2550
31	.....	.....	1618	873	915	.....	.....	.....
Mean	1305	1242	1189	1040	1080	1531	1494	1032

NORTH LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY.	JULY.			AUGUST.			SEPTEMBER.		
	1895	1896	1897	1895	1896	1897	1895	1896	1897
1	1017	1138	1680	702	1072	640	987	860	610
2	958	1110	1360	842	992	620	987	843	610
3	1107	1120	1890	900	957	620	842	835	690
4	958	1080	1030	1293	992	620	648	883	650
5	900	1080	1030	1047	974	670	702	890	650
6	842	1072	890	987	949	630	758	908	680
7	1047	1100	860	900	915	900	702	932	690
8	958	1128	800	702	932	790	987	883	690
9	987	1460	690	1618	957	770	702	851	600
10	987	1350	740	1453	860	780	900	883	1100
11	987	1200	750	900	850	740	871	860	800
12	958	1128	740	702	890	690	702	908	780
13	1077	1120	780	1618	900	670	702	932	770
14	1107	1128	740	1137	883	690	648	1016	740
15	1107	1090	690	987	900	670	1077	1000	720
16	987	1048	620	1077	867	670	1351	883	720
17	900	1032	720	987	875	720	1047	908	690
18	842	1056	680	758	900	730	1107	957	690
19	814	1072	780	702	843	690	929	1016	690
20	842	1064	700	675	835	670	1137	983	700
21	702	1032	680	702	867	670	1047	940	700
22	842	1008	650	702	890	650	3991	890	680
23	842	1016	670	1787	875	690	1787	867	690
24	842	1056	680	1389	890	640	1293	932	690
25	702	991	690	702	867	630	1293	923	690
26	675	1184	670	648	867	610	1262	949	710
27	620	983	770	593	867	590	1200	923	670
28	437	1056	670	842	890	610	1137	923	680
29	566	923	650	702	900	650	1017	890	670
30	566	1184	610	1453	883	630	987	923	700
31	620	1155	620	987	890	590	....	...	....
Mean	864	1102	824	984	904	675	1094	913	705

NORTH LOUP RIVER AT ST. PAUL.
*Daily mean discharge in cubic feet
per second.*

DAY.	OCTOBER.			NOV.
	1895.	1896.	1897.	1895.
1	1137	949	740	987
2	1137	965	740	1857
3	1231	915	760	1293
4	1293	932	720	1293
5	1293	932	720	1293
6	1453	923	750	1200
7	1293	923	770	1262
8	1262	940	770	1200
9	1231	940	800	1137
10	1293	940	820	1047
11	1293	940	820	987
12	1293	965	820	987
13	1293	983	860	900
14	1325	949	900	758
15	1293	949	920	842
16	1351	949	1000	842
17	1389	923	1260	702
18	1293	915	1210	758
19	1293	965	1020	702
20	1040	965	1130	702
21	958	949	1080	566
22	987	923	1080	.....
23	987	940	1100	.....
24	900	923	1100	.....
25	928	888	1200	.....
26	928	837	1210	.....
27	842	880	1230	.....
28	900	940	1230	.....
29	842	1220	1290	.....
30	900	1220	1320	.....
31	842	1120	.....	.....
Mean	1146	958	979	1015

MIDDLE LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY.	APRIL.		MAY.			JUNE.		
	1896.	1897.	1895.	1896.	1897.	1895.	1896.	1897.
1	1490	.....	.....	1440	1210	1520	1720	1030
2	1360	.....	.....	1300	1270	2200	1550	1040
3	1060	.....	.....	1150	1290	3965	1430	1240
4	1020	.....	.....	1230	1350	2987	1460	1140
5	1030	.....	1380	1050	1380	2300	1290	1130
6	900	.....	1325	900	1410	1723	1215	960
7	1020	.....	1254	1015	1360	1307	.....	1015
8	1170	.....	1117	870	1410	1117	2250	1000
9	1310	.....	1018	1360	1490	1032	1775	990
10	1200	.....	1018	1015	1440	1117	1515	1005
11	1050	.....	1066	890	1440	1151	1400	1080
12	1800	.....	1083	1030	1360	1185	1465	1020
13	1700	.....	1151	1060	1410	1134	1300	960
14	1230	.....	1168	1150	1360	1117	1300	960
15	1310	.....	1134	1080	1200	1132	1560	1000
16	1330	.....	1100	1440	1200	1166	1590	970
17	1060	.....	1151	1300	1200	1393	1540	990
18	2000	.....	1134	1260	1300	1570	1485	970
19	2430	.....	1134	1165	1240	1307	1560	945
20	1730	.....	1202	1210	1180	1254	1470	860
21	1070	1780	1185	1310	1350	1202	1660	870
22	910	1720	1185	1080	1150	1066	1650	895
23	1170	1540	1151	1170	1260	917	1580	905
24	1210	1760	1151	1080	1180	933	1795	860
25	1340	1880	1202	1170	1210	967	1820	870
26	1000	1720	1219	1210	1160	850	1645	970
27	1190	1730	1151	1200	1250	820	1505	1005
28	1300	1620	1050	1000	1190	1050	1417	920
29	1860	1800	933	1215	1140	1254	1315	905
30	1860	1420	1343	1070	1060	1151	1455	2600
31	.....	.....	1666	1345	1055	.....	.....	.....
Mean	1364	1697	1173	1154	1274	1396	1542	1037

MIDDLE LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY.	JULY.			AUGUST.			SEPTEMBER.		
	1895	1896	1897	1895	1896	1897	1895	1896	1897
1	1100	1315	1800	803	1685	605	1134	806	670
2	1050	1240	1740	787	1550	625	1018	806	650
3	1000	1270	1220	787	1450	625	1000	854	603
4	1000	1270	955	771	1200	620	933	914	615
5	1066	1270	895	767	1210	685	917	818	620
6	967	1195	860	787	1125	700	850	962	655
7	950	1080	845	803	955	685	803	782	600
8	933	960	815	835	942	755	740	794	585
9	835	1332	800	614	900	745	740	806	600
10	820	1770	865	630	955	885	707	974	690
11	787	1420	870	820	980	705	645	1058	685
12	755	1270	915	787	942	720	614	1010	700
13	820	1200	880	1168	840	700	662	1034	705
14	1018	1100	800	1117	885	690	645	1190	695
15	933	1040	780	1343	870	685	630	1142	705
16	850	1050	815	1325	890	670	770	1070	700
17	771	1110	780	1117	810	655	803	1058	680
18	614	1170	790	950	890	645	820	1000	675
19	678	1160	780	933	870	660	850	1058	690
20	694	1170	805	950	955	650	755	1118	685
21	694	1260	770	787	984	660	1134	1130	695
22	771	1220	745	803	1000	655	1220	1046	705
23	850	1210	755	1270	880	670	1950	1015	710
24	933	1300	735	985	840	660	1270	926	705
25	900	1300	720	1000	880	620	985	985	700
26	885	1440	715	1168	820	610	833	1034	720
27	850	1540	670	1151	760	615	740	1034	705
28	771	1480	660	1168	820	605	695	1106	720
29	835	1320	690	1134	855	660	740	1154	670
30	787	1280	685	1290	746	685	662	1094	695
31	771	1670	660	1117	720	690
Mean	861	1271	865	973	975	672	877	993	674

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MIDDLE LOUP RIVER AT ST. PAUL.
*Daily mean discharge in cubic
 feet per second.*

DAY	OCTOBER.			NOV.
	1895.	1896.	1897.	1895.
1	662	970	710	1066
2	645	1022	705	967
3	622	914	735	933
4	740	880	765	933
5	803	985	785	1000
6	850	1010	770	933
7	803	930	770	.....
8	803	1000	790	.....
9	835	914	795	.....
10	695	1046	870	.....
11	755	1082	900	.....
12	740	1010	900	.....
13	707	974	870	.....
14	803	1034	960	.....
15	883	1110	965	.....
16	883	962	1040	.....
17	840	974	1140	.....
18	787	1000	1170	.....
19	771	1070	1170	.....
20	740	1106	1150	.....
21	771	1010	1140	.....
22	820	1082	1200	.....
23	820	1000	1290	.....
24	967	1070	1340	.....
25	967	985	1370	.....
26	967	1094	2130	.....
27	1000	1070	2800	.....
28	1100	1010	1960	.....
29	1220	1370	1760	.....
30	900	1478	1440	.....
31	1100	1106	1840	.....
Mean	840	1041	1169	.....

SOUTH FORK ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY.	APRIL	MAY.		JUNE.		JULY.		
	1898.	1897.	1898.	1897.	1898.	1896.	1897.	1898.
1	500	940	410	330	860	.....	320	435
2	495	840	405	370	800	.....	325	430
3	495	780	460	370	730	.....	290	350
4	490	740	460	355	1060	....	285	400
5	490	680	490	340	.....	.....	260	405
6	490	660	515	340	.....	.....	240	405
7	465	620	565	340	.....	.....	240	410
8	470	620	550	320	.....	.....	220	430
9	460	720	565	310	.....	.....	220	420
10	455	630	565	310	.....	.....	325	405
11	455	590	530	305	.....	.....	380	400
12	473	560	490	290	.....	.....	290	380
13	480	560	480	290	.....	.....	260	370
14	480	540	490	290	1380	.....	255	350
15	480	530	560	290	1140	.....	240	340
16	480	500	455	285	1000	191	230	350
17	473	500	455	310	930	186	220	285
18	480	500	530	305	870	184	210	280
19	485	460	525	310	805	185	200	280
20	490	440	840	275	810	178	260	255
21	480	430	830	265	780	174	260	235
22	460	420	790	265	690	175	230	210
23	455	420	730	270	640	216	230	235
24	450	390	760	265	585	213	225	240
25	440	385	1470	255	585	206	210	245
26	425	370	1320	260	580	226	210	215
27	415	370	1300	255	550	226	200	210
28	405	350	1170	280	520	213	195	210
29	399	340	1160	280	500	194	180	200
30	410	320	1045	320	475	206	180	215
31	330	895	321	180	230
Mean	462	533	730	302	776	206	244	317

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SOUTH FORK ELKHORN RIVER AT NORFOLK.
Daily mean discharge in cubic feet per second.

DAY.	AUGUST.			SEPTEMBER.		
	1896.	1897.	1898.	1896.	1897.	1898.
1	570	165	215	158	150	195
2	409	180	215	163	160	75
3	294	195	210	161	150	70
4	253	215	210	163	160	70
5	233	215	210	158	145	65
6	213	255	210	158	135	65
7	206	230	215	157	130	60
8	203	275	310	155	130	65
9	197	275	320	158	115	75
10	191	265	390	170	155	85
11	191	245	400	172	155	75
12	179	240	440	167	150	210
13	180	225	385	170	150	220
14	177	240	380	178	150	210
15	186	240	360	176	150	215
16	176	225	340	174	175	210
17	183	195	330	179	190	215
18	188	210	310	182	190	220
19	186	210	320	183	185	235
20	185	195	325	185	170	175
21	193	180	305	185	185	195
22	186	180	250	186	170	175
23	186	180	220	182	170	245
24	179	180	260	179	180	200
25	176	180	265	178	170	210
26	170	170	250	182	165	220
27	167	170	250	180	160	240
28	165	170	250	186	150	195
29	163	160	245	186	155	195
30	165	170	220	182	145	195
31	162	150	220	.....	.....	.....
Mean	210	206	285	173	158	163

SOUTH FORK ELKHORN RIVER AT
NORFOLK.*Daily mean discharge in cubic
feet per second.*

DAY.	OCTOBER.			NOV.
	1896.	1897.	1898.	1896.
1	182	145	185	313
2	182	145	200	313
3	185	140	185	298
4	186	140	210	298
5	188	140	210	.....
6	186	140	210	.....
7	185	150	200	.....
8	213	170	195	.....
9	213	160	200	.....
10	213	170	200	.....
11	213	170	235	.....
12	216	170	245	.....
13	226	210	240	.....
14	216	210	235	.....
15	213	185	235	.....
16	213	205	210	.....
17	210	235	240	.....
18	213	245	.....	.....
19	220	260	.....	.....
20	213	255	260	.....
21	213	250	250	.....
22	210	240	250	.....
23	210	235	255	.....
24	213	230	270	.....
25	210	235	265	.....
26	203	240	265	.....
27	223	250	280	.....
28	203	275	275	.....
29	213	280	275	.....
30	243	285	.....	.....
31	298	295	.....	.....
Mean	210	209	233	.....

MEASUREMENTS ON THE SMALLER STREAMS.

The measurement of the smaller streams has been pushed steadily whenever opportunity offered. This work is scattered over a wide area, the streams often remote and inaccessible, and the means at the disposal of your secretary so scant, that comparatively few observations have been possible on any one stream.

During the past two years 186 gagings have been made on these smaller streams. The results of these measurements are given in the following tables:

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations, made in 1897.

NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
Blue creek.....	N. E. $\frac{1}{4}$ 30-16-42.....	115	March 28	Adna Dobson.
Blue river.....	Beatrice.....	203	Aug. 21	O. V. P. Stout.
Boardman creek....	Two miles above mouth.....	Est. 1	July 24	"
Boggy creek.....	Between Secs. 17 and 18-32-54..	.15	" 8	A. B. McCoskey.
" "	Sec. 31-33-54.....	.35	" 8	"
Chadron creek.....	Above Chadron water works.....	1.59	Sept. 14	"
" "	Below Chadron water works.....	.96	" 14	"
Elkhorn river.....	O'Neill	20.63	June 23	O. V. P. Stout.
" "	Ewing	9.77	Sept. 3	"
Elkhorn river, N.fork	Norfolk.....	166	May 6	Adna Dobson.
" " "	"	77	" 24	"
" " "	"	69.8	July 30	O. V. P. Stout.
" " "	"	701	March 24	Adna Dobson.
" " S fork	Ewing.....	18.17	Sept. 3	O. V. P. Stout.
Frenchman river....	Wauneta.....	127.93	April 14	Adna Dobson.
" "	Palisade.....	63.23	July 2	O. V. P. Stout.
" "	"	73.3	" 19	"
Gordon creek.....	Sec. 15-32-29.....	3.53	" 23	"
Horse creek.....	At state line above Gering.....	10.5	Oct. 15	A. B. McCoskey.

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.
From streams of Nebraska at points other than regular gaging stations, made in 1897.

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NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
Hat creek, east Br..	N. W. $\frac{1}{4}$ 23-32-55. ....	.3	July 10	A. B. McCoskey.
"	Above mouth, 14-33-55.	1.05	July 10	"
"	Below confluence, 14-33-55.	1.6	July 10	"
" west Br..	Above mouth, 14-33-55. ....	.53	July 10	"
Jim creek	Woodruff's dam, s.e. $\frac{1}{4}$ 14-33-57..	.22	July 22	"
Loup, Middle.....	Boelus	837.	May 28	Adna Dobson.
" South.....	St. Michaels	220.	May 28	"
" North.....	Below mouth of Wauneduza creek.	129.8	July 24	O. V. P. Stout.
Minnechaduza.....	Valentine.....	21.2	June 24	"
Monroe creek	At hd of Schiltz's d., s.w. $\frac{1}{4}$ 27-33-56.	.22	July 20	A. B. McCoskey.
"	At hd Wilcox D., N. E. $\frac{1}{4}$ 33-33-56	1.02	July 21	"
Niobrara river.....	At state line	3.56	Oct. 20	"
"	Above Warneke's dam, 27-30-57.	5.12	Oct. 20	"
"	Above Wm. Burrett's dm, 33-30-56	6.36	Oct. 21	"
"	Above Earnest's dam, 9-29-56..	7.36	Oct. 21	"
"	Above Joe Earnest's hse., 23-29-56	16.34	Oct. 21	"
"	At McGinley's ranch, 31-29-55..	9.27	Oct. 22	"
"	Octave Harris' house, T. 28, R. 54.	13.44	Oct. 23	"
"	N. W. $\frac{1}{4}$ 8-28-53, near Bell P. O.	11.92	Oct. 23	"

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Niobrara river	At B. F. Moore's ranch, 11-28-53	17.10	Oct.	25	A. B. McCoskey.
"	McLaughlin's ranch, ne $\frac{1}{4}$ 10-28-52	16.79	"	25	"
"	$1\frac{1}{2}$ miles below head of proposed Golden canal	195	April	27	Eng. in employ
"	Head proposed Gold. C, 13-31-41	190	"	26	Golden Irr. Dis.
"	Niobrara City	759	June	22	O. P. V. Stout.
"	Lavaca post-office	105	"	25	"
Platte river	Grand Island	Dry	Sept.	7	"
"	"	12	"	15	"
Republican	McCook	745	April	13	Adna Dobson.
"	"	Dry	July	19	O. V. P. Stout.
Snake river	Sec. 2-30-31	250	March	22	Engineers in
"	"	225	April	13	employ of Gold-
"	4 miles east of 2-30-31	222	March	16	en Irrig. Dist.
"	"	240	April	13	"
"	At mouth	280	July	23	O. V. P. Stout.
"	Above mouth of Bordman creek	215	"	24	"
Sow Belly creek	At bridge south of Gilchrist P. O.	.08	"	24	A. B. McCoskey.
"	Above hd Shaefer D, n e. $\frac{1}{4}$ 7-32-55	1.45	"	16	"
"	Bodarc post-office	1.54	"	14	"
Soldier creek	Sec. 5-31-53, near Crawford	2.28	Aug.	14	O. V. P. Stout.
Squaw creek	At Patrick Daun's	.13	July	22	A. B. McCoskey.
White river	Below Crawford	7.53	Sept.	20	"

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations, made in 1897.

NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
White River.....	At Elkhorn bridge below Crawford	6.96	Sept. 9	A. B. McCoskey
" "	At R. R. bridge above Glen	5.70	Aug. 13	"
" "	One mile below mouth of Kyle Cr.	6.60	Aug. 11	"
" "	Below Crawford	10.13	Oct. 18	"
" "	" "	10.58	Nov. 5	"
" "	" "	8.00	Aug. 14	O. V. P. Stout and A. B. McCoskey.
Warbonnet Spr. br..	At hd. of Biehle D. sw $\frac{1}{4}$ 32-33-56	.27	July 21	A. B. McCoskey
" Mid. br..	At hd. of Garton's D. 31-33-56 .	.26	July 21	"
" Creek ...	At Brewster's ranch, 21-33-56 ..	.51	July 23	"
West Ash Creek...	At head of Mace ditch 2-31-51 ..	.96	Aug. 18	"

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations, made in 1898.

NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
Antelope creek	Sec. 21-32-40	3.1	June 2	A. B. McCoskey.
Ash creek	Ab. Spragg's dam, Sec. 10-31-17	2.19	" 20	C. B. Channel.
Ash creek	Sec. 12-32-51	Est. .5	Sept. 21	"
Beaver creek	Albion	88.6	April 23	Glen E. Smith.
" "	Genoa	149.7	June 21	O. V. P. Stout.
Birdwood creek	Above Beauchamp's D. 15-15-33.	123.32	May 7	C. B. Channel.
Bone creek	At Ainsworth	3.92	June 12	"
" "	Long Pine	13.8	Sept. 8	Glen E. Smith.
Burton creek	At mouth, T. 35 R. 19	5.57	" 17	C. B. Channel.
Boardman creek	Sec. 6-29-33	Es. 40	May 20	A. B. McCoskey.
Buck creek	Sec. 14-31-41	Est. 4	June 1	"
Blue river	Seward	42.7	July 1	O. V. P. Stout.
" "	Milford	53.4	" 1	"
" "	Crete	126.6	" 2	"
" "	De Witt	202	" 2	"
" "	Beatrice	285	" 4	"
Blue creek	Sec. 33-17-42	80.6	Aug. 31	A. B. McCoskey.
Bordeaux creek	Sec. 25-33-48	1.9	Sept. 22	"
Cedar creek	Fullerton	277	June 21	O. V. P. Stout.
Coon creek	Winterer's D., Sec. 34-15-37 . . . . .	.78	May 19	C. B. Channel.

STATE BOARD OF IRRIGATION.

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.
From streams of Nebraska at points other than regular gaging stations, made in 1898.

NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
Coldwater creek.	Sec. 26-18-46.	2.93	May 25	C. B. Channel.
Crooked creek.	At head Mutz D., sw $\frac{1}{4}$ sec. 20-34-19	.76	June 18	"
Chadron creek.	Sec. 36-33-49.	Est. 1.3	Sept. 23	A. B. McCoskey.
Deer creek.	" 22-30-43.	Est. 12.	June 1	"
Dead Horse creek.	" 31-33-50.	Est. .3	Sept. 21	"
" " "	" 7-32-49.	Est. .6	" 23	"
Dismal river.	Dunning.	368.7	Apr. 28	Glen E. Smith
" "	"	351	Nov. 1	"
Elkhorn river.	O'Neill.	31.30	Aug. 17	C. B. Channel.
" "	"	288	June 10	Glen E. Smith.
" "	Arlington.	1808	May 26	"
" "	"	422	Dec. 15	"
" " N. Fk.	Norfolk.	162	June 20	O. V. P. Stout.
Elkhorn river.	At Ewing.	53.52	Aug. 18	C. B. Channel.
" "	Sec. 30-30-14.	110.05	May 24	A. B. McCoskey.
Harney creek.	" 31-33-23.	23.49	June 11	C. B. Channel.
Hat creek.	" 23-33-55.	1.41	Sept. 30	A. B. McCoskey.
Keya Paha river.	Above mouth Burton C, T. 35, R. 19	62.02	June 17	C. B. Channel.
Lonegan creek.	Sec. 17-15-39.	6.10	May 22	"

Long Pine creek....	At Long Pine.....	50.41	June	20	C. B. Channel.
"	"	44.3	Aug.	21	Glen E. Smith.
Loup River, So.....	At Callaway.....	82.91	Aug.	3	C. B. Channel.
"	At Arnold.....	31.48	Aug.	4	"
Loup River, Mid....	Dunning.....	410	April	28	Glen E. Smith.
"	"	433	Nov.	1	"
"	Seneca.....	221.6	April	28	"
"	"	198	Nov.	1	"
Mathews creek.....	Above Mathew's D., Sec. 28-15-37	1.71	May	19	C. B. Channel.
Minnechaduza river.	Valentine.....	23.2	May	13	Glen E. Smith.
"	"	105.8	May	18	A. B. McCoskey.
"	"	89.46	May	24	Glen E. Smith.
"	At Bristol's dam, S. W. $\frac{1}{4}$ 35-34-28	33.90	June	6	C. B. Channel.
"	Valentine.....	52.5	June	12	Glen E. Smith.
"	"	15.3	July	27	"
"	"	18.2	Aug.	21	"
"	"	18.8	Sept.	7	"
"	"	22.1	Sept.	27	"
"	"	22.5	Oct.	15	"
"	"	27	Oct.	29	"
Monroe creek.....	S. W. $\frac{1}{4}$ 14-33-56.....	Est. .3	Sept.	30	A. B. McCoskey.
Niobrara river.....	Dunlap.....	75.4	May	30	"
"	Sec. 22-29-48.....	55.5	May	31	"
"	Lavaca bridge.....	209.9	April	26	Glen E. Smith.

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations, made in 1898.

NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
Niobrara river	Lavaca bridge	152.1	June 2	A. B. McCoskey.
“	“	203.4	Oct. 30	Glen E. Smith.
“	Sec. 12-32-22	958.6	June 13	C. B. Channel..
“	Marsland	23.24	Oct. 31	Glen E. Smith
“	At Fort Niobrara	987	April 24	“
“	“	1588	May 31	“
“	“	1156	May 24	“
“	“	876	June 12	“
“	“	690	July 27	“
“	“	748	Sept. 7	“
“	“	840	Sept. 26	“
“	“	867	Oct. 16	“
“	“	960	Oct. 29	“
“	“	960	Nov. 17	“
Pawnee creek	Above Plummer D., sec. 19-13-27	4.94	April 25	C. B. Channel..
“	Above Holcomb's ditch	4.73	April 25	“ ..
Plum creek	At mouth, Sec. 13-22-32.	101.13	June 13	“ ..
Pine “	Sec. 33-30-44	24.5	June 1	A. B. McCoskey
Pole “	Sec. 28-32-40	Est. 2	June 2	“

Platte river, No.	At Lewellen bridge.	Est. 5.	Sept.	1	A. B. McCoskey.
"	At R. R. bridge, N. Platte	Es. 12.	Sept.	2	"
"	At Gering bridge.	593.42	Nov.	7	"
Republican river.	Oxford.	385	June	24	O. V. P. Stout.
"	Culbertson.	91.3	June	25	"
Rock creek	Above Moore's ditch, sec.12-32-22	2.37	June	14	C. B. Channel.
"	Sec. 4-31-18.	2.08	June	20	"
Soldier creek.	Ft. Robinson.	3.67	April	27	Glen E. Smith.
Stinking Water.	Palisade	23.6	July	7	"
"	Sec. 28-32-18.	4.39	June	20	C. B. Channel.
Skunk creek.	Above Miller's ditch, sec.12-14-37	2.02	May	18	"
Spring creek.	Above Holloway's D. sec.29-15-37.	1.11	May	19	"
Spring creek.	Above William's D., sec. 28-16-41.	4.59	May	23	"
Spring creek.	Above Barber D., sec. 29-16-41 ..	6.73	May	23	"
Spring creek.	At mill, Mill's P. O., T. 34, R. 18.	7.3	June	16	"
Sowbelly creek.	Sec. 19-33-55.	Est. 1.	Sept.	30	A. B. McCoskey.
White Horse creek ..	Above Lamplugh's L. sec. 5-14-30	2.33	May	3	C. B. Channel.
White Tail creek. ...	Above White Tail C. sec. 22-15-38	24.67	May	20	"
"	Above Reed's ditch, sec.15-15-38.	24.62	May	20	"
"	Above Holloway-Phelps canal, sec. 36-15-38	26.06	May	20	"
West Middle creek. ..	Above Allen's ditch, sec.29-33-23	1.84	June	11	"
"	N. E. $\frac{1}{4}$ of N. W. $\frac{1}{4}$ 29-33-23. ....	.87	June	11	"
Wood river.	At Glenwood.	5.82	Aug.	8	"
White river.	Head of Grable ditch.	18.3	April	27	Glen E. Smith.

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations, made in 1898.

NAME OF STREAM.	WHERE MEASURED.	DISCHARGE CUBIC FEET PER SECOND	DATE.	HYDROGRAPHER.
White river	Below Crawford	11.1	April 27	Glen E. Smith.
"	"	7.7	Sept. 20	A. B. McCoskey.
"	Whitney	Est. 8	" 21	"
"	At head of Grable ditch	13.65	" 24	"
White Clay Cr.	Sec. 2-31-52	Est. .8	" 21	"
Warbonnet Cr.	" 21-33-56	1.23	" 29	"

On account of the lack of means, the work done on these smaller streams is far short of what is needed. It is impossible, with the other duties of the secretary and the meager allowance for help, to keep pace with this work. The need for such measurements is every year more pressing. The information is needed now, and it is hoped that the next legislature will see the way to provide more liberally for this work.

For the purpose of bringing together all that has been accomplished in the measurement of the smaller streams and on the larger streams at points other than the regular gaging stations, the following table has been prepared. This, with the table of regular gagings, furnishes a complete record of the work accomplished to date.

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gauging stations for the years 1894 to 1898 inclusive.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Arickaree fk Rep	Haigler	O. V. P. Stout..	June 17, '96	6.14	.....
"	"	E. T. Youngfelt	July 16, '96	3.63	.....
Ash creek, east.	$\frac{1}{2}$ mile above mouth..	"	June 25, '96	1.09	Trib. White R.
" west	N. line Sec. 25-32-51	"	June 25, '96	1.73	"
" west	Head of Mace ditch ..	A. B. McCoskey	Aug. 18, '97	.96	"
Ash creek	Sec. 12-32-51	"	Sept. 21, '98	Est. .5	Trib. White R.
"	Above Spragg's dam, Sec. 10-31-17	C. B. Channel..	June 20, '98	2.19	Trib. Niobrara
Antelope creek .	Sec. 21-32-40	A. B. McCoskey	June 2, '98	3.1	"
Buffalo creek...	Near Moore's ranch ..	E. T. Youngfelt	June 17, '96	7.9	.....
Blue creek .....	.....	U. S. Geol. Sur.	.....	105	.....
"	N.E. $\frac{1}{4}$ of Sec. 30-16-42	Adna Dobson ..	Mar. 28, '97	115	.....
"	Sec. 33-17-42	A. B. McCoskey	Aug. 31, '98	80.6	.....
Birdwood creek.	.....	U. S. Geo. Sur.	.....	126	.....
"	Southerland	O. V. P. Stout..	Sept. 9, '96	133	.....
"	Above Beauchamp's D. 15-15-33	C. B. Channel..	May 7, '98	123.32	.....
Beaver creek...	Genoa	O. V. P. Stout..	Sept. 7, '94	71	.....
"	"	"	July 14, '96	110	.....
"	"	W. J. McEathron	Aug. 14, '96	112.2	.....
"	"	O. V. P. Stout..	June 21, '98	149.7	.....

Beaver creek...	Albion	O. V. P. Stout..	July 21, '96	47.4	.....
" "	"	Glen E. Smith..	April 23, '98	88.6	.....
Blue river	Beatrice	O. V. P. Stout..	Aug. 21, '97	203	.....
" "	"	"	July 4, '98	285	.....
" "	Seward	"	July 1, '98	42.7	Below dam. Mill not running.
" "	Milford	"	July 1, '98	53.4	Below mill.
" "	Crete	"	July 2, '98	126.6	Below mill.
" "	De Witt	"	July 2, '98	202.	1000 feet below mill.
Boardman creek.	Two miles above m'th.	"	July 24, '97	Est. 1	.....
" "	Sec. 6-29-33	A. B. McCoskey.	May 20, '98	Est. 40	.....
Boggy creek...	Bet. Secs. 17&18-32-54	"	May 8, '97	.15	.....
" "	31-33-54	"	May 8, '97	.35	.....
Bone creek	At Ainsworth	C. B. Channel..	June 12, '98	3.92	.....
" "	At Long Pine	Glen E. Smith..	Sept. 8, '98	138	.....
Burton creek...	At mouth T. 35, R. 19	C. B. Channel..	Sept. 17, '98	5.57	.....
Buck creek	Sec. 14-31-41	A. B. McCoskey.	Sept. 1, '98	Est. 4	.....
Bordeaux, C., Big	Sec. 25-33-48	"	Sept. 22, '98	1.9	.....
Calamus river...	Burwell	O. V. P. Stout..	July 10, '96	368	.....
Cedar river.....	Fullerton	"	Sept. 15, '94	210.6	.....
" "	"	"	July 11, '96	338	.....
" "	"	"	June 21, '98	277	.....
" "	Cedar Rapids	"	July 21, '96	212	.....
" "	Ericson	W. J. McEathron	Mar. 16, '95	152	.....
" "	"	"	June 1, '95	214	.....

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations for the years 1894 to 1898 inclusive.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Cedar River ...	Ericson	W. J. McEathron	Aug. '95	112.1	.....
O'tnw'd Ck., Lit.	Sec. 7-32-51	E. T. Youngfelt	June 25, '96	.10	Trib. White R.
" Big	6 miles west Whitney	"	June 25, '96	.20	"
Clear creek	Sec. 29-16-41.....	Adna Dobson ..	Nov. 23, '96	12.8	.....
Coon creek	Above Winterer's ditch, 34-15-37	C. B. Channel..	May 19, '98	.78	.....
Coldwater creek	Sec. 26-18-46.....	"	May 25, '98	2.93	.....
Crooked creek..	At head of Mutz ditch, sw ¼ sec. 20-34-19.	"	June 18, '98	.76	.....
Chadron creek..	Ab. Chadron wat. wks.	A. B. McCoskey	Sept. 14, '97	1.59	.....
"	Below "	"	Sept. 14, '97	.96	.....
"	Sec. 36-33-19.....	"	Sept. 23, '98	Est. 1.3	.....
Dismal river ...	Dunning	O. V. P. Stout..	Aug. 23, '95	29.4	.....
"	"	G. H. Lawrence	Aug. 22, '94	435	.....
"	"	Glen E. Smith..	Apr. 28, '98	368.7	.....
"	"	"	Nov. 1, '98	351	.....
Deer creek.....	Sec. 22-30-43	A. B. McCoskey	June 1, '98	Est 12	.....
Dead Horse Ck.	Sec. 31-33-50.....	"	Sept. 21, '98	Est. .3	.....
"	Sec. 7-32-49.....	"	Sept. 23, '98	Est. .6	.....
Elkhorn river ..	Atkinson	Adna Dobson ..	Oct. 2, '96	11.1	.....
"	"	A. B. McCoskey	May 24, '98	110.5	.....

Elkhorn river..	Arlington.....	A. Rosewater...	late Aug. '94	214	.....
"	"	Glen E. Smith..	May 26, '98	1808	.....
"	"	"	Dec. 15, '98	422	.....
"	Waterloo.....	O. V. P. Stout..	Aug. 15, '96	280	.....
"	"	"	July 17, '96	495	.....
"	O'Neill.....	"	June 23, '97	20.63	.....
"	"	Glen E. Smith..	June 10, '98	288	.....
"	"	C. B. Channel..	Aug. 17, '98	31.3	.....
"	Ewing.....	O. V. P. Stout..	Sept. 3, '97	9.77	.....
"	"	C. B. Channel..	Aug. 18, '98	53.52	.....
" N. fork	Norfolk.....	O. V. P. Stout..	July 16, '96	70	.....
"	"	Adna Dobson...	Mar. 24, '97	701	.....
"	"	"	May 6, '97	166	.....
"	"	"	May 24, '97	77	.....
"	"	O. V. P. Stout..	July 30, '97	69.8	.....
"	"	"	June 20, '98	162	.....
" S. fork	Ewing.....	"	Sept. 3, '97	18.17	.....
Frenchman river	Sec. 33-4-32.....	"	June 19, '96	26.3	.....
"	Culbertson.....	E. T. Youngfelt.	June 19, '96	13.4	.....
"	"	U. S. Geo. Sur..	Nov. 25, '92	177	.....
"	"	O. V. P. Stout..	Mar. 22, '95	120	.....
"	Wauneta.....	Adna Dobson...	Apr. 14, '97	127.93	.....
"	Palisade.....	O. V. P. Stout..	July 2, '97	63.23	.....

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations for the years 1894 to 1898 inclusive.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Frenchman river	Palisade	O. V. P. Stout..	July 19, '97	73.3	.....
"	"	Glen E. Smith..	July 7, '98	92	Above head of Culbertson Ditch
Gordon creek..	Sec. 15-32-29.....	O. V. P. Stout..	July 23, '97	3.53	.....
Horse creek....	B. & M. Ry. crossing.	E. T. Youngfelt	June 16, '96	.22	.....
Horse creek....	At state line ab. Gering	A. B. McCoskey	Oct. 15, '97	10.5	.....
Hat creek, east.	N. W. $\frac{1}{4}$ 23-32-55....	"	July 10, '97	.30	.....
"	" Above mouth 14-33-55	"	July 10, '97	1.05	.....
"	" " 14-33-55	"	July 10, '97	.53	.....
"	" Just below confluence. 14-33-55.	"	July 10, '97	1.6	.....
"	" Head of Brewster or Steele ditch, 16-32-55	"	July 16, '97	.69	.....
"	" Sec. 23-33-55.....	"	Sept. 30, '98	1.41	.....
Harney creek..	Sec. 31-33-23.....	C. B. Channel..	June 11, '98	23.49	.....
Indian creek ...	Near mouth.....	E. T. Youngfelt	June 25, '96	.06	.....
Jim creek	Above Woodruff's dam, S.E. $\frac{1}{4}$ 14-33-57.	A. B. McCoskey	July 22, '97	.22	.....
Keya Paha river	Above mouth of Burton Ck T. 35. R. 19.	C. B. Channel..	June 17, '98	62.02	.....
Loup river.....	Fullerton	O. V. P. Stout..	Sept. 16, '94	1704	.....
"	"	"	July 11, '96	2900	.....
"	" Sec. 13-7-2.....	"	Aug. 19, '94	1335	Computed fr'm notes of L. F. Gottschalk
"	" north Moulton.....	G. H. Lawrence.	Nov. 2, '94	460	.....

Loup river, north	Burwell	O. V. P. Stout..	July 9, '96	625	River 4 inches above normal.
"	"	"	July 24, '97	129.8	.....
"	middle	Below mouth Wanaduza C	"	Aug. 20, '95	41.8
"	"	Forks 8½ miles ab. Mullen	"	Aug. 20, '95	120
"	"	Mullen	"	Aug. 21, '95	216.2
"	"	Seneca	"	Aug. 30, '96	212.3
"	"	"	Glen E. Smith..	Apr. 28, '98	221.6
"	"	"	"	Apr. 28, '98	198
"	"	Thedford	O. V. P. Stout..	Apr. 22, '95	284.3
"	"	Dunning	"	Apr. 23, '95	321.5
"	"	"	Glen E. Smith..	Apr. 28, '98	410
"	"	"	"	Nov. 1, '98	433
"	"	"	O. V. P. Stout..	Aug. 30, '96	323
"	"	Gates, Custer county	G. H. Lawrence.	Aug. 25, '94	850
"	"	Loup City	O. V. P. Stout..	Aug. 29, '95	878.6
"	"	Boelus	Adna Dobson ..	May 28, '97	837
"	south	Callaway	O. V. P. Stout..	Aug. 28, '95	48
"	"	"	C. B. Channel..	Aug. 3, '98	82.91
"	"	Arnold	"	Aug. 4, '98	31.48
"	"	Georgetown	G. H. Lawrence.	Sept. 10, '96	68
"	"	Ravenna	O. V. P. Stout..	Aug. 31, '95	296
"	"	"	"	Aug. 29, '96	142
"	"	St. Michaels	Adna Dobson ..	May 28, '98	220
Looking Glass ck	Near mouth	W. J. McEathron.	July, '96	15	.....

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at points other than regular gaging stations for the years 1894 to 1898 inclusive.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Lodge Pole ck..	Kimball	Adna Dobson...	May 26, '96	4.5	.....
Lonergan creek.	Sec. 17-15-39.....	C. B. Channel..	May 22, '98	6.1	.....
Long Pine creek	Long Pine.....	" ..	June 20, '98	50.41	.....
"	"	Glen E. Smith..	Aug. 21, '98	44.3	.....
Minnachaduza..	Fort Niobrara.....	Adna Dobson..	Oct. 4, '96	45.2	.....
"	Valentine.....	O. V. P. Stout..	June 24, '97	21.2	.....
"	"	Glen E. Smith..	May 14, '98	23.2	.....
"	"	A. B. McCoskey	May 18, '98	105.8	.....
"	"	Glen E. Smith..	May 24, '98	89.5	.....
"	"	C. B. Channel..	June 6, '98	33.9	.....
"	"	Glen E. Smith..	June 12, '98	52.5	.....
"	"	" ..	July 27, '98	15.3	.....
"	"	" ..	Aug. 21, '98	18.2	.....
"	"	" ..	Sept. 7, '98	18.8	.....
"	"	" ..	Sept. 27, '98	22.1	.....
"	"	" ..	Oct. 15, '98	22.5	.....
"	"	" ..	Oct. 29, '98	27	.....
Monroe creek...	At head of Schilt ditch. S.W. 33-56. 27	A. B. McCoskey	July 20, '97	.22	.....
"	At head of Wilcox ditch. N.E. 33-33-56.	"	July 21, '97	1.02	.....

Monroe creek ..	Sec. 14-33-56.....	A. B. McCoskey	Sept. 30, '98	Est. .3	.....
Mathews creek..	Sec. 28-15-37.....	C. B. Channel..	May 19, '98	1.71	.....
Niobrara river .	Dawes county	Prof. L. E. Hicks	May 4, '87	98	.....
"	Marsland, Dawes Co..	E. T. Youngfelt	June 23, '96	4	.....
"	"	Glen E. Smith..	Oct. 31, '98	23.24	.....
"	Valentine	Adna Dobson ..	Oct. 4, '96	712	.....
"	Niobrara City.....	O. V. P. Stout..	June 22, '97	759	.....
"	Lavaca P. O.....	"	June 25, '97	105	.....
"	"	Glen E. Smith..	Apr. 26, '98	209.9	.....
"	Lavaca bridge.....	A. B. McCoskey	June 2, '98	152.1	.....
"	"	Glen E. Smith..	Oct. 30, '98	203.4	.....
"	At state line	A. B. McCoskey	Oct. 20, '97	3.56	.....
"	Above Warneke's dam, 27-30-57.	"	Oct. 20, '97	5.12	.....
"	Above Wm. Bonnett's dam, 33-30-56.	"	Oct. 21, '97	6.36	.....
"	Above Earnest's dam, 9-29-56.	"	Oct. 21, '97	7.36	.....
"	At Earnest's house, 23-29-56.	"	Oct. 21, '97	16.34	.....
"	At McGinley's ranch, 31-29-56.	"	Oct. 22, '97	9.27	.....
"	At Octave Harris' house, T. 28 R. 54	"	Oct. 23, '97	13.44	.....
"	Near Bell P. O. 8-28-53	"	Oct. 23, '97	11.92	.....
"	At B. F. Moore's ranch, 11-28-53.	"	Oct. 25, '97	17.1	.....
"	At McLaughlin's ranch, 10-28-52.	"	Oct. 25, '97	16.79	.....
"	Head of proposed Golden ditch, 13-31-41.	} Engineers in employ of Golden Irrigation district.	Apr. 26, '97	190	.....
"	1½ miles below head of proposed Golden canal.		Apr. 27, '97	195	.....

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.
*From streams of Nebraska at other than regular gaging stations for the years 1894 to
 1898 inclusive.*

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NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Niobrara river..	Dunlap.....	A. B. McCoskey	May 30, '98	75.4	.....
" "	Sec. 22-29-48.....	"	May 31, '98	55.5	.....
" "	Bridge N. of Ainsworth	C. B. Channel..	June 13, '98	958.6	.....
" "	Ft. Niobrara.....	Glen E. Smith.	Apr. 24, '98	987	.....
" "	"	"	May 13, '98	1588	.....
" "	"	"	May 24, '98	1156	.....
" "	"	"	June 12, '98	876	.....
" "	"	"	July 27, '98	690	.....
" "	"	"	Sept. 7, '98	748	.....
" "	"	"	Sept. 26, '98	840	.....
" "	"	"	Oct. 16, '98	867	.....
" "	"	"	Oct. 29, '98	960	.....
" "	"	"	Nov. 17, '98	960	.....
Platte river, N.	Douglas, Wyoming ..	State Engr. Wyo.	June 3, '91	10130	.....
" "	Fairbanks, " ..	"	Oct. 13, '91	579	.....
" "	Douglas, " ..	"	Dec. 4, '91	807
" "	" " ..	"	Nov. 5, '92	595
" "	North Platte, Neb... U. S. Geol. Sur.		Sept. 14, '92	770
" "	" " "	"	Nov. 2, '92	1070

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Platte river, N.	North Platte, Neb.	U. S. Geol. Sur.	Nov. 22, '92	1370
"	Camp Clarke, Neb. ...	"	May 29, '91	8075
"	"	"	Oct. 8, '92	335	.....
"	"	O. V. P. Stout..	July 26, '94	1900	Approx. measurement by floats.
"	Lewellen bridge.	A. B. McCoskey.	Sept. 1, '98	Est. 5	.....
"	R. R. bridge, N. Platte	"	Sept. 2, '98	Est. 12	.....
"	Gering bridge.	"	Nov. 7, '98	593.42	.....
Platte river.	Columbus.	O. V. P. Stout..	Sept. 17, '94	Dry	} Water 3-8 ft. below surface of sand of river bed. Good measurement by meter.
"	"	"	Oct. 6, '94	Dry	
"	Fremont.	"	Aug. 14, '94	1420	.....
"	"	A. Rosewater ...	L'te Aug. '94	1209	.....
"	Grand Island.	O. V. P. Stout..	Sept. 7, '98	Dry	.....
"	"	"	Sept. 15, '98	12	.....
Platte River, S.	Julesburg, Col.	U. S. Geol. Sur.	October ...	653	.....
"	North Platte	"	Early Nov.	450	.....
"	"	"	Late Nov.	645	.....
"	"	O. V. P. Stout..	June 29, '96	0.0	.....
Pawnee creek ..	Above Plummer ditch, Sec. 19-13-27.	C. B. Channel..	Apr. 25, '98	4.94	.....
"	Above Holcomb's D. .	"	Apr. 25, '98	4.73	.....
Plum creek.	At mouth, Sec. 13-22-32	"	June 13, '98	101.13	.....
Pine creek.	Long Pine.	Adna Dobson ..	Oct. 3, '96	47.1	.....
"	Long Pine, 33-30-44.	A. B. McCoskey.	Oct. 1, '98	24.5	.....
Pole creek.	Long Pine, 28-32-40.	"	Oct. 2, '98	Est. 2	.....
Republican river	Haigler.	O. V. P. Stout .	Oct. 17, '96	8.24	Above mouth of Arickaree.

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at other than regular gaging stations for the years 1894 to 1898 inclusive.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Republican river	Haigler	E. T. Youngfelt.	Oct. 16, '96	6.17	Above mouth of Arickaree.
"	"	"	Oct. 17, '96	14.94	Below mouth of Arickaree.
"	"	"	July 16, '96	9.8	"
"	"	"	Aug. 25, '96	10.04	"
"	"	"	Sept. 18, '96	24.54	"
"	McCook	Adna Dobson ..	Apr. 13, '97	745	.....
"	"	O. V. P. Stout..	July 19, '97	0.0	.....
"	2 miles west of Ives..	E. T. Youngfelt.	Aug. 25, '96	5	.....
"	7 miles W. Benkleman	O. V. P. Stout..	June 16, '96	87.52	.....
"	Benkleman.....	" ..	June 16, '96	29.3	.....
"	"	E. T. Youngfelt.	Aug. 25, '96	5	.....
"	Culbertson	C E. Crownover.	May 16, '96	78.37	Above mouth of Frenchman.
"	"	O. V. P. Stout..	June 19, '96	6.48	"
"	"	" ..	Sept. 10, '96	0.0	"
"	"	U. S. Geol. Sur.	Nov. 25, '92	209	"
"	"	O. V. P. Stout..	June 25, '98	91.3	"
"	Oxford	" ..	June 3, '95	16000	.....
"	"	" ..	Sept. 12, '95	55	.....
"	"	C. E. Crownover	May 17, '96	254.5	.....

Republican.....	Oxford.....	O. V. P. Stout..	June 16, '96	109.4	.....
"	"	" ..	June 24, '98	385	.....
Rock creek	B. & M. Ry. crossing.	" ..	June 16, '96	12.16	.....
"	"	E. T. Youngfelt.	Aug. 25, '96	12.20	.....
"	Above Moore ditch. Sec. 12-32- 22.	C. B. Channel..	June 14, '98	2.37	Normal.....
"	Sec. 4-31-18.....	" ..	June 20, '98	2.08	"
"	Sec. 28-32-18.....	" ..	June 20, '98	4.39	"
Stinking Water C	Palisade.....	O. V. P. Stout..	June 19, '96	12.24	Above mill at Palisade.
"	"	E. T. Youngfelt.	Sept. 17, '96	20	Below mill at Palisade.
"	"	Glen E. Smith..	July 7, '98	23.6	.....
Shell creek.....	Platte Center.....	O. V. P. Stout..	July 21, '96	47.4	.....
"	Schuyler	" ..	July 24, '96	26.3	.....
Soldier creek...	Fort Robinson.....	E. T. Youngfelt.	June 24, '96	3.23	.....
"	5 miles above Fort Robinson. 5- 31-53.	O. V. P. Stout..	Aug. 14, '97	2.28	.....
"	Fort Robinson.....	Glen E. Smith..	Apr. 27, '98	3.67	.....
Squaw creek....	Sec. 1-31-52.....	E. T. Youngfelt.	June 24, '96	.66	.....
"	At Patrick Dunns....	A. B. McCoskey.	July 22, '97	.13	.....
Snake river....	4 mi. e. of sec. 2-30-31	Eng. Golden i. d.	Mar. 16, '97	222	.....
"	Sec. 2-30-31.....	" ..	Mar. 22, '97	250	.....
"	"	" ..	Apr. 13, '97	225	.....
"	4 mi. e. of sec. 2-30-31	" ..	Apr. 13, '97	240	.....
"	At mouth.....	O. V. P. Stout..	July 23, '97	280	.....
"	At mouth of Boardman Creek... Above head of Shaefer ditch. N. E. 7-32-55.	" ..	July 24, '97	215	.....
Sow Belly creek		A. B. McCoskey	July 16, '97	1.45	.....

SUMMARY OF ALL MEASUREMENTS OF DISCHARGE.

From streams of Nebraska at other than regular gaging stations for the years 1894 to 1898 inclusive.

NAME OF STREAM.	WHERE MEASURED.	BY WHOM.	DATE.	DISCHARGE CUBIC FEET PER SECOND	REMARKS.
Sow Belly creek.	Bodarc P. O	A. B. McCoskey.	July 14, '97	1.54	.....
"	Bridge S. of Gilchrist.	"	July 24, '97	.08	.....
"	Sec. 19-33-55.	"	Sept. 30, '98	Est. 1	.....
Skunk creek	Ab. Miller's D. 12-14-37	C. B. Channel..	May 18, '98	2.02	.....
Spring creek . . .	Above Holloway's ditch, Sec. 29-15-37.	" ..	May 19, '98	1.11	.....
" ..	Above William's ditch, Sec. 28-16-41.	" ..	May 23, '98	4.59	.....
" ..	Above Barber ditch, Sec. 29-16-41.	" ..	May 23, '98	6.73	.....
" ..	At Mill, Mills' P. O., T. 34, R. 18.	" ..	June 16, '98	7.30	.....
Union creek	Madison	O. V. P. Stout..	July 23, '96	38.3	.....
Victoria creek . .	Sec. 1-19-21.	Adna Dobson ..	July 28, '96	5.2	.....
White Clay Ck . .	Sec. 1-31-52.	E. T. Youngfelt.	June 24, '96	4	.....
"	Sec. 2-31-52.	A. B. McCoskey.	Sept. 21, '98	Est. .8	.....
Warbonnet Sp. b.	At head of Biehle ditch, S. W. $\frac{1}{4}$, 32-33-56.	"	July 21, '98	.27	.....
" Mid. Br.	At head of Garton's ditch, S. W. $\frac{1}{4}$, 31-33-56.	"	July 21, '98	.26	.....
" creek	Brewster's, 21-33-56.	"	July 23, '97	.51	.....
" "	Sec. 21-33-56.	"	Sept. 29, '98	1.23	.....
White Horse Ck.	Above Lamplugh's lakes, Sec. 5-14-30.	C. B. Channel..	May 3, '98	2.33	.....
White Tail Ck . .	Above White Tail canal, Sec. 22-15-38.	" ..	May 20, '98	24.67	.....
"	Above Reed ditch, Sec. 15-15-38...	" ..	May 20, '98	24.62	.....

White Tail ck. . .	Above Holloway—Phelps canal, Sec. 36-15-33.	C. B. Channel. . .	May 20, '98	26.06	*When these measurements were taken the water was all diverted into the Crawford ditch. The gaugings at the bridge below Crawford show only the water accumulated between the two points, from Soldier creek, seepage, springs, etc. The actual discharge of the stream at Crawford with the Crawford ditch closed would be a little less than the sum of the discharges at the two points.
West Middle ck.	Above Allen's ditch, Sec. 29-33-23.	" "	June 11, '98	1.84	
" " "	N. E $\frac{1}{4}$ of N. W. $\frac{1}{4}$ 29-33-23	" "	June 11, '98	.87	
Wood river.	Glenwood	" "	Aug. 8, '98	5.82	
White river.	Sec. 23-31-53	E. T. Youngfelt.	June 24, '96	23.3	
" "	Crawford	" "	Sept. 24, '96	30.7	
" "	Whitney	" "	Sept. 25, '96	27.2	
" "	"	A. B. McCoskey	Sept. 21, '98	Est. 8	
" "	1 mi. bel. m'th Kyle C	" "	Aug. 11, '97	6.6	
" "	R. R. bridge above Glen	" "	Aug. 13, '97	5.7	
" "	Head of Crawford D. .	O. V. P. Stout and A. B. McCoskey.	Aug. 14, '97	11.9	
" "	Bridge below Crawford	A. B. McCoskey	Aug. 14, '97	8	
" "	" " "	" "	Sept. 9, '97	6.96	
" "	Head of Crawford D. .	" "	Sept. 20, '97	10.44	
" "	Bridge below Crawford	" "	Sept. 20, '97	17.97*	
" "	Head of Crawford D. .	" "	Oct. 18, '97	7.55	
" "	Bridge below Crawford	" "	Oct. 18, '97	15.25	
" "	Head of Crawford D. .	" "	Nov. 5, '97	10.13	
" "	Bridge below Crawford	" "	Nov. 5, '97	25.38*	
" "	Head of Crawford D. .	" "	Nov. 5, '97	15.87	
" "	Bridge below Crawford	" "	Nov. 5, '97	10.56	
" "	Head of Crawford D. .	Glen E. Smith.	Apr. 27, '98	18.3	
" "	Bridge below Crawford	" "	Apr. 27, '98	11.1	
" "	" " "	A. B. McCoskey	Sept. 20, '98	7.7	
" "	Head of Crawford D. .	" "	Sept. 24, '98	18.65	

UNAPPROPRIATED WATER.

In section 28, article 2, of Nebraska Irrigation Law, describing the steps necessary to secure the right to the use of water, the following statement occurs:

“If there is unappropriated water in the source of supply named in the application, and if such appropriation is not otherwise detrimental to the public welfare, the state board through its secretary shall approve the same by endorsement thereon, etc.”

Whether there is or is not unappropriated water in a stream is often a complicated and difficult question. The flow of the stream varies much with the climatic conditions and the changing seasons. Each crop has its time when its need for water is most imperative. The demand for water for any particular crop may last only a few weeks. Another crop needs the water at another season, and this need can often be met as well as the first. Just when the process of appropriation should stop is a difficult and delicate question. Too great restriction results in the waste of much valuable water, while too great laxity results in the expenditure of labor and capital in the development of appropriations having little value.

A knowledge of existing conditions as to the flow of water in the stream and as to the extent and kind of use for which it is already appropriated is an essential condition for any proper treatment of this most difficult situation. It has not always been possible to reach such knowledge with the means at our disposal, but your secretary and assistants have realized the importance of the problem and the difficulties involved in its solution.

CERTIFICATE OF APPROPRIATION.

Section 21, article 2, reads as follows:

“Within thirty days after the determination of the

priorities of appropriation to the use of water of any stream, it shall be the duty of the state board, through its secretary, to issue to each person, association, or corporation, a certificate to be signed by the president of the state board and attested by the secretary of said board, setting forth the name and post-office address of the appropriator, the priority number of each appropriation, the amount of water appropriated, and the amount of prior appropriation, and, if such appropriation be for irrigation, a description of the land to which the water is to be applied and the amount thereof. Said certificate shall be transmitted by the said state board of irrigation through its secretary, by registered mail, to the county clerk of the county in which said appropriation shall have been made, and it shall be the duty of said county clerk within ten days after the receipt of said certificate, to record the same in a book especially prepared and kept for that purpose, and to notify the party or parties in whose favor the said certificate is issued of such record, and transmit said certificate to said party or parties, on payment of the fees for recording, which fee shall not exceed seventy-five cents for each certificate so recorded."

When the work of adjudication was begun, it was very soon apparent that it was impossible to comply at once with all of the provisions of this section. During the years immediately preceding the passage of this law, there had been great activity in the construction of ditches. Very little use had as yet been made of the water, and many of the ditches were not yet completed. How much water these ditches would use beneficially could not as yet be determined. It was held by the board that justice to the parties making these improvements required that time be allowed for the completion of the work and the beneficial use of the water on the

land. In each opinion rendered by the secretary in the claims passed on, a date was therefore fixed for the completion of the appropriation of the water to the beneficial use for which the appropriation was made. In making this time allowance, regard was had to the magnitude of the work and the difficulties to be overcome in construction and in securing the cooperation of the land owners. The amount of the appropriation was made contingent on the acreage actually reclaimed prior to the date fixed by the secretary. With many of the smaller and earlier appropriations, this date has been passed. Others will reach the limit fixed within the coming year. On account of the pressure of other duties, the secretary has not been able to take up this work, and it has not been possible to issue the certificates. It is due to these appropriators and to those making later filings, that this matter be taken up at an early date and the certificates issued for the completed appropriations.

RELATION OF THE FREE RANGE PROBLEM TO IRRIGATION.

The most profitable market for the products of the irrigated lands is found in connection with stock raising. There is practically in many places no other available market. The best results are obtained when each irrigator finds in his own herd the market for his own agricultural products. In the western part of the state and adjacent to the irrigated lands, there are yet some 10,000,000 acres of unoccupied government land. The theory of the present range system is that all have equal rights to the use of these lands for grazing purposes, and that the small stock owner and the farmer on the irrigated lands with his few head of cattle and sheep has the same rights as the owner who numbers his herd by the thousands. But the practice reduces to this: each gets

and holds what he can, and the small owner has no rights that one stronger than himself is under any obligation to respect. Under the present law, or rather lack of law, there is no remedy for this. The results are contention and bitterness, destruction of property, and bloodshed. The state is taxed to maintain law and order, while the national government offers the use of these lands as a rich prize to the lawless and arrogant.

The settlers on these semi-arid lands have a right to some consideration at the hands of the national government. The lands of this region in their natural condition offer little inducement to the settler seeking a home. They were offered by the government on the same conditions as the lands of the humid country to the east, under the assumption that they were valuable agricultural lands. The attempt to reclaim these lands without irrigation has resulted in much misapplied effort and has been attended with much distress and loss. Discouraged by repeated failures in dry farming, they have sought relief in irrigation, and, with much labor and expense, have reclaimed these lands and established homes. Many of these lands are remote from market and can not profitably be cultivated except in connection with stock raising. With access to the range, the future of these farmers is assured. Without this his work must be unremunerative. Instead of marketing his crops in concentrated form, as beef, pork, mutton and wool, butter and cheese, his bulky products must now be transported to the nearest railroad station or be marketed at what they will bring at the railroad point, less the cost of transportation from the farm to the market.

For the privilege of peaceable control, the settler would gladly pay a reasonable rental. With proper provision

for leasing, this land would be fenced, wind mills erected, reservoirs constructed, and many small herds would take the place of the few large ones. A new and orderly development fitted to existing conditions would take the place of the old condition of disorder and turbulence, and this unoccupied and unproductive territory would become a source of wealth and prosperity to the state.

The existing practice as to the use of the range should cease, and some provision should be made for the protection of the stock of the homesteader and the settler on the irrigated lands. The unoccupied government lands should either be turned over to the state to be held in trust and to be leased in limited areas to actual settlers on terms prescribed by the state, or a national system of leasing should be devised which would meet the needs of the small ranchers and the settlers on the irrigated lands.

PROTECTION OF FOREST AT THE SOURCES OF RIVERS.

A matter having an important bearing on the practice of irrigation in Nebraska is the protection of the forests on the mountain slopes to the west. The timber value of these forest areas is great, but their chief utility is in the holding back of the moisture from the rains and snows. On these timbered slopes, the snows protected from the sun discharge their waters gradually into the streams, thus maintaining the flow into the later summer. The forest is nature's reservoir. When the forests have been removed, especially when they have been destroyed by fire, the snows are soon melted and are discharged at once into the streams. The result is we have floods in May and June with dry channels in the later summer when water is needed. The usefulness of the streams heading in these mountain regions for irri-

gation purposes has already been greatly impaired, and unless effective protection is provided against the ravages of ax and fire, this deterioration will go on. Nebraska's interest in this matter is a vital one and the need of action urgent.

INTERSTATE RIVERS.

Another matter which should claim the immediate attention of the national legislature, is the distribution of the waters of the interstate rivers. A reference to the accompanying maps showing the ditches diverting water from the North Platte, South Platte, and Platte rivers in Scott's Bluff, Cheyenne, Keith, Deuel, Lincoln, Dawson, Buffalo, Phelps, and Kearney counties in this state, will show that the state of Nebraska has a very large interest in the waters of these rivers. Millions of dollars have been expended on these ditches, increasing the value of the lands covered many millions more. Much of this land has been purchased at advanced prices by settlers. Money has been spent and obligations incurred to secure water rights for the reclamation of these lands, and much labor and capital has been expended in bringing these lands under cultivation and in buildings and improvements necessary for the establishment of homes. It is due to the settlers who are making these sacrifices and developing this rich country that their interests should not be imperiled through indifference or neglect. Federal legislation is absolutely necessary, that these people may be fully assured of protection in the rights which they have acquired. Whatever is done should be done at once, before complications arise. All difficulties between this state and neighboring states as to water appropriations could probably be settled now without serious difficulty, but if neglected serious complications will arise.

STORAGE OF WATER.

The conservation of the waters of our western rivers should also receive attention. A study of the flow of water in our important streams, as shown in the tables of gaugings accompanying this report, reveals the fact that the bulk of water discharged by our western rivers is wasted. Water enough was discharged from the Platte river at Columbus above the mouth of the Loup, from May 1, 1898, to July 15, a period of 75 days, to cover 1,141,900 acres to a depth of one foot. Most of this water came from the North Platte River. Within thirty days after the last mentioned date, the river was dry for 200 miles above Columbus and crops were suffering for want of this wasted water. This is the loss from one river. The other streams of the state discharge as much more. A like waste goes on in the other states west of the Missouri.

When we consider the wonderful possibilities in store for Nebraska and her sister states, when these waters shall be conserved and distributed to the lands as needed, it seems impossible that this waste should go on, and that this broad empire of valuable lands in the heart of the continent should remain unpeopled and undeveloped.

The rental of the public lands of the arid and semi-arid regions would, if wisely expended in irrigation investigations and the construction of needed irrigation works for the storage and distribution of these waters, do much to stop this waste. The wasted resources of these lands would, without the expenditure of one dollar in appropriation from the national treasury, redeem millions of acres to profitable agricultural use, and furnish homes and independent employment to thousands who are now homeless and dependent.

With proper legislation as to interstate rivers, with a

rational land system adapted to the needs of the arid and semi-arid West, with wise forest laws protecting the sources of our rivers, with reasonable appropriations for storing and distributing the waste waters of our streams, the state of Nebraska with the other states west of the Missouri would enter on a new era of development and progress which would fill this plains country with prosperous communities.

USE OF WATER.

Very few of our irrigators have had much experience or opportunity for observing the best practice. The common error is the use of too much water. This wasteful and damaging use of water is most noticeable in the irrigation of meadow lands. On these lands the water is often discharged for weeks, and sometimes throughout the whole season, without care as to the proper distribution. As a result, the low places are filled up and become standing pools, while the high places receive no benefit. This wasteful process increases the product for a time, but if persisted in, the quality soon deteriorates, and ultimately the productive capacity of the soil is permanently impaired. With cultivated crops the bad effects are earlier apparent, and the wasteful practice is sooner corrected. In the majority of cases the use of water is excessive. Experience will in time correct this abuse. Much of it could be prevented by a closer administration than has yet been possible.

DUTY OF WATER.

The maximum allowance which the secretary can grant under the law is one cubic foot to seventy acres, but when experience indicates that that amount is not needed for the protection of the crops, this allowance may be reduced.

Except in extreme cases, this maximum grant is more than sufficient for the proper irrigation of the lands. By irrigating in the fall or early spring, many crops can be matured without further watering. This is especially true of winter wheat, early potatoes, and all crops that ripen early. Observant farmers are finding that by deep plowing, with fall and winter irrigation, a supply of water can be stored, and with improved methods of surface cultivation, this moisture can be retained in the soil until needed by the growing plants. Careful experiments made along this line show that, with the normal rainfall of Nebraska and proper culture, we may expect to see the duty of water increased much beyond the statutory allowance of seventy acres per second foot.

INTEREST IN IRRIGATION.

Notwithstanding that the past two years have been unprecedented in the history of Nebraska in the seasonable distribution of water for the crops, irrigation interests are steadily gaining ground. Even in these years of bountiful harvests a careful comparison of the crops in the same district and under the same cultivation shows a difference of from 30 to 50 per cent in favor of the irrigated fields. New converts are being made every day, as the increasing number of filings in the office of the State Board of Irrigation shows. This increased interest is not confined to the western part of the state. One of the most promising and successful irrigation plants in the state is located in the heart of one of the finest farming districts of central Nebraska, where a total failure of crops has never been known. The success of this enterprise is attracting the attention of good farmers and is slowly breaking down the opposition growing out of lack of information as to the benefits to be derived from, and

the cost and trouble of, irrigation. Farmers are finding that the price of irrigation is a cheap insurance against the effect of prolonged drought. One who has seen his crop or his neighbor's saved from destruction, or the yield doubled by timely irrigation, needs no further argument to convince him of its value.

CORRESPONDENCE.

The correspondence of the office has necessarily taken much of the time of the secretary. Many questions as to the amount and character of the appropriations on the various streams are addressed to this office by those contemplating appropriations. Parties seeking locations desire information as to lands under ditches and as to the probable water supply. Advice is often desired as to proposed constructions.

The operation of our irrigation law, fostering a new set of rights and establishing, as it does, new relations in the midst of an old and established order, raises many questions as to the extent and scope of the rights established and as to the proper mode of procedure in order to secure them. The answers to these questions often involve much research. It is believed that the giving of this information is an important part of the secretary's work and as such has received his careful attention.

SALARIES OF SECRETARY AND ASSISTANT SECRETARY.

The law creating the office of secretary fixes the salary at \$2,000 per annum. No legislation has been had or attempted changing this, nor was any recommendation made by the committees on salaries during the last legislature. But through a mistake of the committee appointed to adjust differences as to appropriation between

the House and Senate of the last legislature, only \$2,500 was appropriated for this office, leaving a deficiency in the salary of the secretary for the present biennium of \$1,500.

The responsible character of the duties of the secretary, the professional skill required, and the importance of the interests involved are such that the compensation fixed by law is only moderate. For the same work, the salary of the state engineer of Colorado is \$3,000. The state of Wyoming pays her state engineer an annual salary of \$2,500, and in addition to this the responsibilities of the office are shared by the board of control, consisting of the state engineer and four division superintendents, who are each paid \$10 per day and actual expenses. Other illustrations might be given, but it is believed that the attention of the legislature only needs to be called to the error to secure its correction.

The position of assistant secretary is an important one, and the maximum salary provided by law, \$1,200 per annum, is not too great for the skill required and for the grave responsibilities attaching to the duties of this office. The appropriation for the two years just past was only \$2,000.

The present incumbent, A. B. McCoskey, brought to this work a large experience in the construction of ditches and in the distribution and use of water. The state has had in him a most conscientious and efficient officer, at a cost much below the real value of his service.

Our indebtedness is here acknowledged to the United States Geological survey for kindly co-operation and assistance in the gaging work, and especially do we acknowledge obligations to F. H. Newell, hydrographer of this department, to Prof. O. V. P. Stout, engineer in

charge of hydrographical work in Nebraska, to Adna Dobson, engineer in charge of stream gagings for 1897, to Glen E. Smith, engineer in charge of stream gagings for 1898, to C. R. Ross, engineer in charge of gagings at North Platte, and to R. H. Willis, engineer in charge of gagings at Camp Clarke and at Gering, all of whom have rendered valuable assistance.

I desire to express my appreciation of the faithful work of my assistants in the office and field. They have zealously co-operated in all measures to increase the efficiency of the department, and from each the state has had most efficient and faithful service. To division secretary H. H. Pickens, and his assistants, much credit is due for faithful work, often done under trying circumstances. The distribution of the waters of the streams to the various claimants is a work that calls for good judgment and rare discretion. Your secretary believes that these rare qualities have been manifest in much of the work of these officers.

I wish also to express my obligations to the railroads for transportation furnished to myself and my assistants while engaged in the work of the office. This has materially reduced the expense of the field work, and has made it possible to secure many valuable and much needed stream measurements, and to extend the surveys and investigation much beyond what would have otherwise been possible.

In closing, I wish to express my feeling of indebtedness to the members of the board for much valuable assistance. Although burdened with many other grave duties, they have always been accessible and always ready to assist the secretary to the best solution of the problem confronting him. For their hearty co-operation and wise

counsel, I wish to return my sincere thanks. My associates in field and office work join with me in this expression of our appreciation of the kindly and helpful spirit which has been manifested at all times toward us by the officers of the board.

Respectfully submitted,

J. M. WILSON,

State Engineer Secretary.

REPORT OF H. H. PICKENS UNDER SECRETARY, DIV. 1-A.

J. M. Wilson, State Engineer Secretary:

DEAR SIR—I herewith submit to you my report of the work done by me since my appointment to the office of under secretary of Water Division No. 1.

The work done by my predecessor, Adna Dobson, on Lodge Pole Creek and the Frenchman River furnished much valuable information. But new questions concerning the distribution of water among the many claimants has made it necessary for me to go over the same ground again. I have under your instructions investigated and reported to you upon all claims and applications in this first water division, except a small number in Lincoln and Keith counties. A number of irrigation enterprises appear only on the records of your office and have been so reported. In other instances, surveys have been made and canals wholly or partly constructed, which appear afterwards to have been abandoned, as no attempt has been made to use them for two or more years. The best interest of the people in the irrigated country would seem to demand that such

claims, after full examination, should be declared abandoned.

Of a large per cent of the claims passed upon by Secretary Akers, the time allowance in which to complete the canal and apply water to the beneficial use has expired, and other parties are claiming the right to appropriate that part of the water not already used in irrigation. The settlement of this question at as early a date as possible will, I think, be for the best interest of all parties concerned. There have been some differences to adjust between water users on the smaller streams, especially on the Lodge Pole and Pumpkin Seed creeks. These are small streams in which the normal flow of water does not exceed twelve second feet at any given point. On the Pumpkin Seed claims have been passed upon and allowed for more than eighty second feet. The stream is fed by springs, most of which come out in the bed of the creek. In some places if all the water is diverted, a measurement taken a short distance below the point of diversion will show but little if any shrinkage in the amount. At other points the stream will remain dry for miles below the point of diversion. This peculiarity of the stream will require further investigation before we can be sure that all water that might be made available has been taken from the stream.

I have been ably assisted in my work on this creek by Under Assistant Robert H. Willis, and all differences have been adjusted in a manner that has been satisfactory to all parties.

On Lodge Pole creek the conditions are very similar to those described above.

Under your orders, I made an examination of complaint

of McLaughlin against Kreuger, and found that Kreuger had built a dam known as Kreuger's lower dam, and from that point to McLaughlin's dam, a distance more than eleven miles by the creek, there was little or no water in the channel. At a term of the district court held by Judge Norris at Sidney suit had been brought by McLaughlin against Kreuger for interfering with the flow of water in the stream, whereby the plaintiff was wrongfully deprived of the water for irrigation purposes. An order had been issued by the court that the dam be taken out and the water allowed to flow in the creek. This had been done. On June 24, 1897, I measured the water in the stream at the above mentioned dam and found four and one-fourth second feet; amount at point above back water at McLaughlin's dam, eleven miles below, one and one-fourth second feet; height of McLaughlin's dam, eight feet; depth of water in dam, four feet. On the 25th of June I closed all canals on stream below Sidney after measuring amount of water in each. I found the amount taken by all these canals to be eighteen and three-fifths second feet. June 28, there was ten second feet of water at Kreuger's dam; at point above back water at McLaughlin's dam seven second feet. Total rise of water in dam in eighty hours, twenty-four inches. In last twenty-four hours rise less than one inch, or a loss in last day of 98 per cent of water. The water in the dam was still twelve inches below the bottom of the McLaughlin canal. Believing a further test of this matter would be useless, I so informed complainant McLaughlin, and at the time informed the water users on stream above that point that they could go on and make use of all the water in the stream. One peculiarity particularly brought out was that when at Kreuger's dam there were flowing

six second feet, and in canals above that point twelve and three-fifths second feet, when all the water was turned into the creek the flow at Kreuger's dam was only ten second feet. Other complaints on the stream have been examined and reported to your office for settlement.

During the summer of 1897, there was no serious shortage of water on the North Platte river. On July 31, 1898, a complaint was filed by the Lexington people against the Cozad Irrigation Company, alleging that the Cozad Irrigation Company was diverting all the water in the river into their canal. Upon an investigation, I found that the only water in the Platte river came from Birdwood creek, and that with 104 second feet at North Platte, the loss from seepage and evaporation between that point and the head of the Gothenburg canal amounted to from 60 to 90 per cent, the loss becoming greater after entering the Platte river. August 13 I found about 60 second feet going by headgate of Lexington canal. This entire volume of water disappeared in the sand in less than twelve miles. On further investigation I found the North Platte river practically dry to east line of Cheyenne county, something rarely, if ever, known before. This unexpected failure of the water supply resulted in serious losses to the farmers. A very large acreage of corn got no water this year, making a difference in amount of crops raised of not less than 50 per cent. Much if not all this loss could have been avoided by an earlier irrigation of the crops. This is the solution of the problem on the Platte river. "Use the water while there is plenty of it." Something may be done by the State Board of Irrigation, but their work to be effective must be done before the scarcity of water is noticed by canal owners. This may be done by securing some

reliable reports of the condition of the river at some point in Wyoming.

Fires have burned over large areas of country on mountains near headwaters of the North Platte river, and without the protection afforded by forests the snow soon melts, and we expect an earlier rise in the river as well as an earlier stage of low water. The farmers of Colorado and Wyoming are using a large portion of the water in the Laramie river, which use will probably be increased from year to year. These are some of the reasons why, with an abundant supply of water in early part of irrigation season, the distribution of the water of the North Platte will be found one of the difficult problems to be solved. To aid in this work, measurements of the stream at some point as near the state line as possible should be made during the irrigating season. All canals taking water from the Platte River should be rated, and a record of water taken out should be kept by the several superintendents. Measurements of rivers at other points should be provided for whenever possible. This work well carried out will furnish much information. Especially will it determine to some extent the loss of water by seepage between points where measurements are taken. Without these facts an equitable division of the water can not be made. If the state engineer could secure daily record of stage of water at the mouth of the Laramie river, this information would be very useful to irrigators on lower Platte river by warning them in advance when a serious fall in the river might be expected. Much risk and loss could be avoided by planting largely crops that do not take all the season to mature. The acreage of wheat, also barley and alfalfa, could be increased many times over with an assurance of plenty of water every year.

Work on the Republican river and its tributaries has been largely the investigating of the many applications and claims in this part of Division No. 1. Some differences have been adjusted in a manner satisfactory to all parties. This stream like the North Platte carries a large amount of water during the fall, winter, and early spring, much of which might be used. A large amount of alfalfa is grown on irrigated land in this valley, and this acreage is being increased each year.

I have found a general disposition among the people to accept the ruling of the board in all disputed points without further appeal to the law. This gives promise of peaceable settlement of most or all points of dispute that may arise.

Respectfully submitted,

H. H. PICKENS,

Under Secretary.

REPORT OF R. H. WILLIS, UNDER ASSISTANT,
WATER DISTRICT NO. 2, WATER DIVISION,
NO. 1-A.

*To H. H. Pickens, Under Secretary of State Board of
Irrigation, Division No 1:*

SIR—In compliance with your request I will attempt to state in brief my experience in the performance of duties as under assistant secretary on Pumpkin Seed creek.

Early in the spring of 1898 in accordance with instructions I notified those appropriators, who were likely in my judgment to get water, to build rating flumes as per plans and specifications furnished by the state engineer.

The discharge of Pumpkin Seed creek during irrigation season is approximately as follows:—

Three miles from the mouth	20cu. ft.	per second.
Four	“ “ “ “	15 “ “ “
Eight	“ “ “ “	11 “ “ “
Twelve	“ “ “ “	6 “ “ “
Eighteen	“ “ “ “	2.5 “ “ “
Twenty-two	“ “ “ “	0.7 “ “ “
Twenty-five	“ “ “ “	1.1 “ “ “
Thirty-five	“ “ “ “	2.0 “ “ “
Forty	“ “ “ “	0.3 “ “ “

As will be seen by the above discharge figures, the water sinks in several places along the creek.

The first important complaint from the appropriators of Pumpkin Seed water was from the Court House rock canal, June 25, 1893. This canal takes water from Pumpkin Seed at a point about eight miles from the mouth. I at once ascertained a safe approximation of the amount of land needing water under this canal. Allowing one cubic foot per second for each seventy acres, they should have ten cubic feet. Measuring the water then flowing through this rating flume, I found four and seventy-two hundredths cubic feet, a shortage of five and twenty-eight hundredths cubic feet per second. It was then necessary to proceed up the creek and shut down the headgates of the canals having the later rights until ten cubic feet passed through the rating flume. Five days later, July 5, I measured the water passing through the Court House canal rating flume, which I found to be thirteen and sixty-eight hundredths cubic feet per second. This rating was not satisfactory, as the creek was carrying flood water from a freshet of the night before near Ashford. July 11, I

found fourteen and eighty-nine hundredths cubic feet of water passing through, nearly the capacity of the flume. This rating was also unsatisfactory as the stream was carrying flood water from a storm of July 10th near Redington. This storm broke the dam on the 12th at the head of Court House canal. During these freshets the flood waters were used by many of the smaller canals that could not otherwise get water. July 16, thirteen and forty-three hundredths cubic feet was passing through the Court House rating flume. July 20, nine and sixty-nine hundredths cubic feet was passing through. After this date crops seemed to be doing well with what water they could get from the stream along with frequent showers. The results of irrigation were very satisfactory under this canal.

The Mutual canal was shut down from June 30 to July 12, but after July 12 the Mutual took all the water out of the creek at its point of diversion. The crops under this ditch did not suffer from want of water. Several nice groves under this canal are growing fast, alfalfa stacks are quite numerous, some small grain harvested and some corn gathered. The small grain and corn was damaged by the hail storm of July 11. Five canals were trying to get water between the Court House and Mutual canals, and by taking turns they managed to raise very fair crops. No serious trouble experienced above Mutual canal, excepting occasional complaints from stock owners between Freeport and Ashford, that the irrigators were taking water from the creek to the detriment of stock. Above Freeport the canals are small and irrigate gardens, more or less hay land, and fruit and shade trees. Mr. John S. Wright is the owner of two of these small canals between Freeport and Ashford,

one of which is the oldest canal on the creek. It is now eighteen years since he irrigated his first trees, a grove of several acres. Most of these trees are now forty feet or more in height. He also has an orchard started and a large acreage of alfalfa as well as irrigated wild land.

The Last Chance canal had plenty of water during the irrigation season, and the results are very apparent in the fields of corn, small grain, and alfalfa, and in the beautiful trees that were irrigated with a wind mill or with pails before this ditch brought water to them.

The Round House canal is another successful canal, using about two cubic feet per second this season. This water has kept green during this season acres of alfalfa, wild hay, and corn besides fruit and shade trees and flowers.

The heavy freshet of July 18, 1897, destroyed the headgates of the Meradith and Amner ditch. The owner was unable to complete the new dam and headgate in time for this season's work. However, the crops were kept growing by the use of water from the Belmont canal taken from the North Platte river.

Pumpkin Seed creek was entirely dry at one time at Freeport, showing that there are no springs in the creek at that point. Of the twenty-three appropriations on the creek, only sixteen used water during this season.

There are two important tributaries to Pumpkin Seed creek, Lawrence Fork and Greenwood creeks. The former carries from one cubic foot near the head to five or six cubic feet near the point where the water sinks. The results on this creek show that the water has been used to great advantage.

Under the Nehuse canal on this creek, fine large apples were gathered in the fall from trees ten and twelve feet

in height. There were only a few minor complaints on this stream, which were adjusted satisfactorily. Four canals used water this season from Lawrence Fork.

Greenwood Creek water is used most for alfalfa, the Nelson and Trinnier canal raising the greater portion.

Capron canal was used for small farming, including a little alfalfa.

The Meglemre canal uses all the water that comes down to its headgate. This canal did very well considering that the canal was built only last spring.

The construction of the Dean ditch was never begun.

Respectfully submitted,

ROBT. H. WILLIS,

Under Assistant, Dist. No. 2.

RIGHTS TO WATER IN NEBRASKA:

The following statement of the history and present status of "Water Rights in Nebraska" was prepared by your secretary at the request of Elwood Mead, special agent in charge of the irrigation work of the United States Department of Agriculture, and has been published in bulletin form in connection with sketches of the irrigation work in other states. It is believed that this statement summarizes briefly the progress of irrigation work in Nebraska, and as such it is here reproduced.

Water rights in Nebraska may be briefly divided into the following general classes:

1. Rights acquired by actual use prior to the passage of the first general irrigation law, March 4, 1889.
2. Rights acquired by compliance with the law in force from March 4, 1889, to April 4, 1895.

3. Rights acquired under the law in force from April 4, 1895, up to the present time.

4. Rights acquired since the enactment of the irrigation law in 1889 by those who, without complying with all of the provisions of the law, actually constructed works and made beneficial use of the water.

To the first class belong many valuable mill claims and several of the earlier irrigation rights. Of many of these claims there was, up to 1889, no public recognition. Only those who had been so unfortunate as to get into court could boast of a record. The settler driven by his repeated failures in dry farming to seek relief in irrigation had no means of determining what rights were established or what amount of water was unappropriated. If a right was disputed, it could only be maintained by force or by a tedious suit at law. This unsatisfactory state of affairs continued until 1889, when the first irrigation law was enacted. The method of establishing a claim for water under this law was as follows:

1. A notice stating the amount appropriated and the purpose of the appropriation was posted by the claimant at the point of diversion.

2. A copy of the notice was filed with the county clerk in the county in which the appropriation was made, within ten days after posting.

3. The work of construction was begun within sixty days after posting, and prosecuted with diligence to completion. By compliance with these rules the right dated back to the time of posting notice. To prevent speculative filings, the law prescribed that a failure to observe these rules forfeited all rights as against a subsequent appropriator who made full compliance with the law; that is, the right of the claimant who failed to take the steps

required by the law did not date back to the date of posting, but was determined by the date when water was first applied to a beneficial use.

No provision was made limiting the amount appropriated by the respective claimants, neither was there any provision for the distribution of the water, nor for the protection of the appropriators. Under this law, the records of the county clerks soon showed the waters in most of the streams in the state appropriated many times over. Many of the streams of the state cross several counties. The record in each county only showed the filings made in that county, and there was no means of determining the total appropriation from such a stream except by an investigation of the records of every county through which the stream flowed. The filings in a single county would often show more water appropriated than could be found in the stream, even in time of flood. The would-be appropriator could only disprove this record by a careful examination of all the territory susceptible of irrigation from the stream. This was a tedious, expensive process, impracticable for the small appropriator. The result was a condition of hopeless confusion and discouragement for the real appropriator. With slight modifications in 1891, this law remained in force until 1895, when the present law was enacted.

The statute of 1895 reaffirmed the validity of prior rights through use, and made a formal statement of the doctrine of state ownership of water.

WATER DIVISIONS.

The state was divided into two water divisions.

Water Division No. 1 includes the watershed of the Platte and its tributaries west of the mouth of the Loup

river and all lands south of the Platte drained by streams not tributaries of the Platte.

Water Division No. 2 includes the watersheds of the Loup, White, Niobrara, and Elkhorn rivers and their tributaries, and all other lands not included in Division 1.

STATE BOARD OF IRRIGATION.

By this law a Board of Irrigation, consisting of the governor, attorney general and commissioner of public lands and buildings, was created. The governor is ex-officio president of the board. The law provides for a secretary and an assistant secretary of the board, an under secretary for each of the two divisions, and such under assistants as shall be found necessary for the proper distribution of the water. The term of office in each case is two years. The secretary or state engineer is the executive officer, his acts subject to review by the board. It is made the duty of the board through its secretary: first, to pass upon and fix the priority and amount of all claims which had been initiated prior to April 4, 1895; second, to pass upon all applications for permits to make appropriations of water under existing laws; third, through the under secretary and his assistants to distribute the waters in accordance with the priorities and amounts determined by the secretary and approved by the board.

The law made it the duty of the county clerks to forward copies of all filings made for water prior to April 4, 1895, on record in their respective offices. These, with the claims filed with the State Board of Irrigation by parties who had neglected to post notices and file with the county clerks, but who had appropriated and used the water, made up the claims to be adjudicated before

there could be an intelligent disposition of the new appropriations or any equitable distribution of the water.

Since its organization in April, 1895, 994 claims and contests under the old law have been placed on record with the board.

The steps in the process of an adjudication are:

1. Copies of the county records of claims are obtained from the county clerks.

2. Each claimant was required to file a claim affidavit setting forth all important facts in the history of the appropriation, with a plat showing the location of the stream and ditch and the territory irrigated. To secure uniformity and definiteness, blanks were furnished by the board. (See blank "Claim for Waters of the State of Nebraska.")

3. Hearings were appointed at points convenient to the claimants for the taking of oral testimony in support of these claims. This oral testimony was transcribed and made part of the record. A copy of the original filing (if there is one), the claim affidavit, and the transcript of the oral testimony, with other affidavits and documents furnished by the claimant, with the report of a responsible engineering assistant after a personal inspection of the works, constitute the record in each case, and on this the decisions of the secretary are based. In determining the rights of these claimants, the board is guided by the following principles: where a notice has been posted at the point of diversion, a copy filed with the county clerk, and the law complied with as to diligence in construction, the priority is fixed by the date of posting notice at the point of diversion. When there is an evident lack of diligence, the priority dates from the time when beneficial use began. When there is no filing, the

priority likewise dates from the time when use began. The maximum allowance is one cubic foot per second for each seventy acres of land brought under irrigation. The amount is limited by the capacity of the ditch. When the capacity of the canal is in excess of the acreage covered, the area determines the allowance. At the time of the passage of this law, many of the younger claims, begun under the old law, were in an unfinished condition, and in passing upon these, it has been necessary to fix a time for the completion of the appropriation. The opinion issued in such a case determines the priority, but conditions the amount of the grant on the capacity of the ditch and the area actually irrigated at the expiration of the time fixed by the secretary. The time allowed for completion varies with the character and extent of the work. The determining of the rights under these claims has presented many perplexing problems and has claimed much of the time and attention of the secretary and his assistants; but this part of the work is now rapidly approaching completion except in contested and belated cases, and in the future the work of the secretary and his assistants can be given more largely to the new appropriations and to the economical and equitable distribution of the water.

APPEALS.

Claimants dissatisfied with the decision of the secretary may appeal to the board, and a further appeal may be taken from the finding of the board to the district court of the county in which the point of diversion is located.

APPROPRIATION UNDER EXISTING LAWS.

All unappropriated waters of any natural stream in the state are subject to appropriation. Priority in appropri-

ation gives the better right as between those using water for the same purpose, but appropriations for domestic use take precedence over appropriations for power purposes.

HOW APPROPRIATIONS ARE SECURED.

The steps in the process of securing a right to use water are as follows: the person desiring to acquire the right to the use of water files with the state board an application for permit to make the appropriation. This application is made on a blank form furnished by the board (See blank "Application for a permit to appropriate the Waters of the State of Nebraska"), and sets forth in the form of an affidavit the important facts concerning the desired appropriation. If on examination the application is found to be properly prepared, the filing is put on record. If not, it is returned for correction, and the applicant acquires no right till the filing is made in proper form. If there is unappropriated water in the stream, and the appropriation is a proper one, the board through its secretary approves the permit, authorizing the applicant to take such steps as may be necessary to perfect the appropriation. If the secretary deems the amount applied for excessive, he may limit the appropriation to a less quantity. If there is no unappropriated water in the sources applied for, or an appropriation has been perfected to water the same land, it is the duty of the secretary to refuse the permit. In these matters, as in the case of claims, the acts of the secretary are subject to the revision of the board, and an appeal may be taken from the decision of the board to the district court. Within six months after the approval of the appropriation, a plat must be filed on

a scale of not less than two inches to the mile, showing the location of the stream, the location of the canal, and the legal subdivisions of land to be watered. The work of excavation and construction must be begun within six months after approval of the application, and carried forward diligently to completion. When the appropriation has been perfected in accordance with the law, a certificate is issued, signed by the president of the board and the secretary, setting forth the priority and amount and the lands for which the appropriation is perfected. This certificate is forwarded to the county clerk of the county in which the appropriation is made, is recorded by him, and transmitted to the applicant. The priority of the appropriation dates from the filing of the application with the state board.

NATURE AND LIMITATIONS OF APPROPRIATIONS.

The importance of this topic has not as yet been fully realized, but it is one that is making itself felt more and more as the value of rights to the use of water increases with the increased use and the consequent diminished supply. The act of 1889 prescribed that all appropriations must be for beneficial use, and that the purposes and places of use should be described in the notices posted at the point of diversion. The notices were, however, in most cases very vague and imperfect in their description of place and use. The act further prescribed that when the use ceased, the right should cease. The law of 1895 went still further, and required that a description of the land to be irrigated should be given, with a plat showing its location.

The law of 1889 limits the appropriation in all cases to the amount required by good husbandry for the cultivation of the crops. The law of 1895 makes the same

limitation and fixes the maximum limit of one cubic foot for each seventy acres irrigated. There is much difference of opinion and some difficulty in determining the proper amount. The climatic conditions vary from the humid in the east to the arid in the extreme west, and the soil conditions vary as widely as the climatic, so that much must be left to the judgment of the person who distributes the water.

Since April 4, 1895, there have been filed with the state board 460 applications for water, covering some 3,000,000 acres. It was evident, at the beginning of the work under the new law, that the claims under the old law would demand the attention of the board for some time, and that it would be impossible to determine, until these claims were adjudicated, what water was appropriated or what land was covered by canals already built or in process of construction. Not desiring to stand in the way of construction where appropriation could properly be made, a circular letter was issued by the board and mailed to each new applicant when he made his filing, setting forth the facts as to the work before the board and as to the time that might be required before his application could be reached. He was informed of the uncertainty as to there being water for his appropriation, and was notified that he would not be held responsible for beginning his work until after his appropriation had been approved, but he was further notified that if he felt sure that there was unappropriated water in the source of supply, that the board would not seek to prevent his proceeding with the construction, and that such construction should not in any way prejudice his appropriation. In many cases the canals have been built; others await the action of the board.

As fast as the claims under the old law can be gotten out of the way, the applications under the new law are taken up and passed upon. It has been found necessary in most cases to make a personal inspection of the proposed location and the lands to be irrigated. When the supply is sufficient and the plan appears reasonable and feasible, the grant is made. If otherwise, the application is either rejected or modified to fit the conditions.

Sections 1, 2, and 3 of Article 2 of Nebraska Irrigation Law reads as follows:

“SEC. 1. The state of Nebraska is hereby divided into two water divisions, denominated Water Division No. 1 and Water Division No. 2 respectively.

“SEC. 2. Water Division No. 1 shall consist of all the irrigable lands of the state drained by the Platte rivers and their tributaries lying west of the mouth of Loup river, and also all other lands lying south of the Platte and South Platte rivers that may be watered from other superficial or subterranean streams not tributary to said Platte river.

“SEC. 3. Water Division No. 2 shall consist of all irrigable lands that may be watered from the Loup, White, Niobrara, and Elkhorn rivers and their tributaries, and all other irrigable lands of the state not included in any other water division.

WATER DIVISIONS AND WATER DISTRICTS.

The two divisions into which the state is divided are subdivided by watersheds as follows:

Division No. 1-A—The Platte and its tributaries west of the Loup.

Division No. 1-B—The Republican and its tributaries.

Division No. 1-C—The Little Blue and its tributaries.

Division No. 1-D—The Big Blue and its tributaries.

Division No. 1-E—The Lodge Pole.

Division No. 1-F—The Great and Little Nemaha and their tributaries and the tributaries of the Missouri south of the Platte.

Division No. 2-A—The Loups and their tributaries.

Division No. 2-B—The Platte and its tributaries from the mouth of the Loup eastward. The most important of these tributaries are the Elkhorn river and Salt Creek.

Division No. 2-C—The Niobrara and its tributaries.

Division No. 2-D—The White River and its tributaries.

Division No. 2-E—Hat Creek and its tributaries.

Division No. 2-F—All tributaries of the Missouri north of the Platte except the Niobrara.

For boundaries and locations of these divisions see accompanying maps.

WATER DISTRICTS.

For convenience in the distribution of water, water districts are created. These districts, when the territory covered is not too great, are made up of a single watershed or division. When a division covers more territory than can be properly administered by one assistant, the territory is subdivided into districts of convenient size for the distribution of water. For each district so created, an under assistant is appointed. He receives his appointment from the board, works under the direction of the under secretary for his division, and is paid by the county in which the service is rendered. Five such districts have thus far been created and assistants appointed. These districts are:

Water District No. 1 in Water Division No. 1-A, including the waters of the North Platte river and its tributaries, in Keith and Deuel counties.

Water District No. 2 in Water Division No. 1-A, including the waters of the North Platte and tributaries in Cheyenne and Banner counties

Water District No. 1 in Water Division No. 1-B, including the waters of the Republican river and its tributaries in Red Willow, Hitchcock, Hayes, Chase, and Dundy counties.

Water District No. 1 in Water Division No. 1-E, including the waters of Lodge Pole creek and its tributaries in Deuel, Cheyenne, and Kimball counties.

Water District No. 3 in Water Division No. 1-A, including the waters of the Platte river and the North Platte and South Platte rivers and their tributaries in Buffalo, Kearney, Phelps, Gosper, and Lincoln counties.

ENLARGEMENT AND EXTENSION OF DITCHES.

When it is desired to enlarge or extend old ditches so that a larger appropriation is needed, an application is required as for a new appropriation. When changes in the location of headgate become necessary, a petition is filed for permit to make such change. (See blank petition for change in point of diversion.)

STORAGE OF WATER.

Water not needed for immediate use for irrigation or for domestic use may be stored in reservoirs. For this purpose and application is made out as for other appropriations.

DAMS.

For dams less than ten feet high, no special permit is required. For a dam over ten feet in height, plans must be submitted to the secretary for examination and approval.

FEES.

No fees are required for any work done by the state board, except for a stenographer when the secretary is conducting a hearing in the adjudication of claims. The stenographer's fee is twenty cents per folio, to be paid by the party in whose interest testimony is given.

FORMS USED BY CLAIMANTS AND APPLI-
CANTS FOR WATERS OF THE
STATE OF NEBRASKA.

CLAIM FOR THE WATERS OF THE STATE OF NEBRASKA.

I,.....of the..... county of....., state of
....., being duly sworn, upon my oath say:

1. That the name of the claimant is..... Post office
.....address No..... street..... county.....

2. That the water is claimed for the purpose of.....

3. That the name adopted for the ditch or canal is
the.....

4. That the source of the appropriation claimed is....

5. That the amount of the appropriation claimed is
..... cubic feet per second of time.

6. That the headgate is located on the.....bank
of the stream, in.... of section....., township....
range..... of the..... principal meridian.

7. That the said ditch or canal,..... miles in length,
passes through the following sections of land, as shown
on the accompanying township plats, viz:.....

(a) That the portion of said ditch or canal,.....
miles in length, indicated on said plats by a black line, is
completed. (b) That the portion of said ditch or canal
..... miles in length, indicated on said plats by a
red line is not completed.

8. That the dimensions of said ditch or canal are (and
will be for the uncompleted portions) as follows: head-
gate—width in clear.....feet; depth of water on floor
at low water.....feet.

Below headgate: depth ft.; width on bottom
 ft.; width on top ft.; grade per mile
 ft.

At mile: depth ft.; width on bottom
 ft.; width on top ft.; grade per mile
 ft.

9. That the total excavation amounts to cubic yards of material, consisting of and that the total length of fluming required is feet.

(a) That the material thus far removed amounts to cubic yards. (b) That the fluming completed amounts to feet.

10. That the estimated cost of said ditch or canal is as follows: earthwork, \$ fluming, \$ headgate, \$ other expenses, \$ total, \$

(a) That the expenditures thus far incurred are as follows: earthwork, \$ fluming, \$ headgate, \$ other expenses, \$ total, \$

11. That it is the intention that the said ditch or canal shall supply water to irrigate the following sections or quarter sections of land, viz., amounting in all to acres.

12. That the actual work of excavation and construction was begun on the day of 18 and the works (were, or will be) completed, and the appropriation perfected on or before the day of 1

(a) That this claim is made under and by virtue of rights deemed to have been acquired by

(b) That water was turned into said ditch or canal on or before the day of 18

13. That the time estimated as necessary to provide for the application of the amount of water herein claimed

to the beneficial use above stated isyears from April 4, 1895.

(c) That there wereacres of crops actually irrigated from said ditch or canal during (d) That it is estimated that there will be acres of crops irrigated from said ditch or canal during

14. That the relation which the subscriber to this affidavit bears to said ditch or canal, or other work, is that of..... (state whether owner, manager, superintendent, etc.) and that he is authorized to make this affidavit in behalf of the interests affected.

.....
(Signature.)

State of..... }
County of..... } ss.

I hereby certify that the foregoing claim was signed in my presence and sworn to before me by..... this..... day of..... 189....

.....
[SEAL] Notary Public.

NOTICE--The above claim affidavit must be signed and sworn to by some person closely related in interest (or having authority, delegated or otherwise, to make affidavit) to the ditch, canal, or other work in question; preferably by the owner or president, secretary, or manager of the company controlling same.

Too much care cannot be exercised in the preparation of this affidavit, as it is the foundation for all additional testimony that will be taken (upon the ground) by under secretaries, to complete the record from which the board will determine the rights and priority of the claimant. Therefore, generalities must be avoided, and all facts required carefully determined and accurately stated.

This affidavit must be filed at the office of the State Board of Irrigation within....days from.....189..... Delay and neglect will jeopardize the rights of claimants.

Proposed extensions and enlargement of canals, ditches, or other works, not protected by new filings made previously to April the

4, 1895, must not be included in the above claim. Individuals or corporations, desiring to make such extensions or enlargements, must make applications for a permit from the state board, as provided by the statute now in force.

STATE BOARD OF IRRIGATION,
State Engineer, Secretary.

**SUPPLEMENTAL FORM USED IN CONNECTION WITH REGULAR
CLAIM AFFIDAVIT BY PARTIES CLAIMING WATER FOR
POWER.**

In the matter of Docket No. County;
Claim Affidavit No., Water Division No.
The claimant, deposes and says:

1. That the water power is used for operating mill.
2. That the power is obtained from wheel, manufactured by, catalogue No., diameter of wheel inches. (If the wheel is not a turbine, give dimensions and kind of wheel.)
3. That the capacity of the mill is
4. That the net power required from the shaft of the wheel to operate the mill when in good repair and proper running order is horse power.
5. That the maximum head or fall that it is practical to maintain at average low water stage of stream is feet. (This should give the difference in height between the level of the water in forebay and in the tail race.)
6. That the amount of water necessary in operate said mill is . . . cubic feet per second.
7. That the stream furnishes (a) at low water stage, cu. ft. per second.
 - (b) At medium stage, cu. ft. per second.
 - (c) At high water stage, cu. ft. per second.
8. That the work of construction for the mill began on or before the day of

9. That the mill was completed on or before the day of

10. That the mill was first put in operation on or before the day of

11. That the mill has been operated

.

(Signature.)

State of Nebraska, }
County of } ss.

I hereby certify that the foregoing affidavit was signed in my presence and sworn to before me by this day of

.

Notary Public.

APPLICATION FOR A PERMIT TO APPROPRIATE THE WATERS OF THE STATE OF NEBRASKA.

I, of the county of state of being duly sworn, upon my oath say:

1. That the name of the applicant herefor is post office address, No street, county

2. That it is proposed to use the water applied for herein, for

3. That the name adopted for the proposed ditch or canal is the

4. That the source of the proposed appropriation is

5. That the amount of the appropriation desired is cubic feet per second of time.

6. That it is proposed to locate the headgate on the bank of the stream, in of section township range of the principal meridian

7. That the said ditch or canal will be.....miles in length, and pass through the following sections of land, as shown on the accompanying township plats, viz:.....

8. That the dimensions of the proposed ditch or canal will be as follows: headgate—width in clear.....feet; depth of water on floor at low water....feet.

Below headgate: depth.....ft.; width on bottomft; width on top....ft.; grade per mile....ft.

At.....mile: depth.....ft.; width on bottomft.; width on top.....ft.; grade per mileft.

9. That the material to be removed amounts to..... cubic yards, consisting of..... and that the total length of fluming required is.....feet.

10. That the estimated cost of the proposed construction is as follows: earthwork, \$....., fluming, \$....., headgate, \$....., other expenses, \$....., total, \$.....

11. That the proposed ditch or canal is to be built with the intention of supplying water to irrigate the following sections or quarter-sections of land, viz:..... amounting in all to.....acres.

12. That construction is to be begun within..... of the date hereof, and the proposed works are to be completed, and the appropriation perfected on or before.....

13. That the time estimated as necessary to provide for the application of the amount of water herein applied for to the beneficial use above stated, is.....years from.....189..

.....

(Signature.)

State of..... }
 County of..... } I hereby certify that the
 foregoing application was signed in my presence and
 sworn to before me by.....this.....day of.....
 189....

[SEAL]
 Notary Public

State of Nebraska, }
 Office State Board of Irrigation. } ss. This is to cer-
 tify that the foregoing application has been examined...
 STATE BOARD OF IRRIGATION,

 State Engineer, Secretary.

This is to certify that the foregoing application has been examined and is hereby granted subject to the following limitations and conditions:

1. The work of excavation or construction shall begin on or before.....189..
2. The time for completing the work, or perfecting the appropriation, shall extend to.....1..
3. The time for completing the application of water to the beneficial use indicated shall extend to.....1..
4. The water appropriated shall be used for the purpose of irrigation.
5. The prior right of the owners of land bordering on this stream, or through which this stream flows, to so much of the natural flow of the stream as is necessary for domestic uses, including stock water, must be respected.
6. The prior rights of all persons who, by compliance with the laws of the state of Nebraska, have acquired a right to the use of the waters of this stream, must not be interfered with by this appropriation.

7. The amount of the appropriation shall not exceedcubic feet per second of time; neither shall it exceed the capacity of said ditch or canal, nor the least amount of water that experience may hereafter indicate as necessary for the production of crops in the exercise of good husbandry; and, further, said appropriation under any circumstances, shall be limited to one-seventieth (1-70) of a cubic foot per second of time, for each acre of land to which water is actually and usefully applied, on or before.....

STATE BOARD OF IRRIGATION.

.....
State Engineer, Secretary.

SUPPLEMENTAL FORM USED IN CONNECTION WITH REGULAR APPLICATION BLANK BY PARTIES MAKING APPLICATION TO APPROPRIATE WATER FOR POWER.

In the matter of Application No.....,County.
Water division No.....

The applicant,....., deposes and says:

1. That the water power is to be used for operating...
2. That the power is obtained from.....wheel, manufactured by....., catalogue No....., diameter of wheel.....inches. (If the wheel is not a turbine, give dimensions and kind of wheel.)
3. That the capacity of the plant is.....
4. That the net power required from the shaft of the wheel to operate the plant when in good repair and proper running order will be.....horse power.
5. That the maximum head or fall that it is practical to maintain at average low water stage of stream is.....
6. That the amount of water necessary to operate said plant is.....cubic feet per second.

7. That the stream furnishes:

(a) At low water stage.....cubic feet per second.

(b) At medium water stage.....cubic feet per second.

(c) At high water stage.....cubic feet per second.

8. That the estimated cost of the proposed construction is as follows: Dam, \$....., headgate, \$....., race, \$....., buildings, \$....., machinery,\$ total, \$.....

State of Nebraska, }
County of } ss.

Signed in my presence
and sworn to before me by.....this....day of.....

Notary Public.

PETITION FOR A PERMIT TO RELOCATE IRRIGATION WORK.

I,.....of the.....county of....., state of.....being duly sworn, upon my oath say:

1. That the name of the petitioner herefor is..... post office address.....,.....county,.....

2. That this is a petition for a permit to relocate.....

3. That the name of the ditch, canal, or other works referred to in this petition is the.....

4. That the source of the water supply thereof is.....

5. That the appropriation therefor is claimed by virtue of rights acquired by..... (State whether appropriation is deemed to have been acquired by application of water to a beneficial use previous to 1889, or by posting a notice in compliance with the irrigation law of 1889, or by filing an application with the State Board of Irrigation.)

6. (a) That the present location of the headgate is on the.....bank of the stream, in.....of section.....,

township.....range.....of the.....principal
meridian.

(b) That the proposed location of the headgate is on
the.....bank of the stream, in.....of section.....
township.....range.....of the.....principal
meridian.

7. That the said ditch or canal.....miles in length
passes through the following quarter sections of land, as
shown on the accompanying township plats, viz.:.....

(a) That the portion of said ditch or canal.....
miles in length indicated on said plats by a continuous
black line, is completed.

(b) That the portions of said ditch or canal.....
miles in length, indicated on said plats by a dotted black
line, is not completed.

8. That the said ditch or canal, when relocated, will be
.....miles in length and pass through the following
quarter sections of land, as shown on the accompanying
township plats, viz.:.....

(a) That the portions of said ditch or canal.....
miles in length, indicated on said plats by continuous and
dotted black lines, show course thereof as originally
located.

(b) That the portions of said ditch or canal.....
miles in length, indicated on said plats by red lines, show
course thereof as relocated.

9. That the estimated cost of proposed relocation is as
follows: earthwork, \$....., fluming, \$....., head-
gate, \$....., other expenses, \$....., total, \$.....

10. That the work of relocation is to be begun within
.....of the date hereof, and the same will be com-
pleted on or before.....

.....
(Signature.)

State of..... }
 County of..... } ss. I hereby certify that the
 foregoing petition was signed in my presence and sworn
 to before me by.....this.....day of.....
189.....

[SEAL]

Notary Public.

State of Nebraska, }
 Office State Board of Irrigation. } This is to cer-
 tify that the foregoing petition has been examined.....
 STATE BOARD OF IRRIGATION,

 State Engineer, Secretary.

APPLICATION FOR PERMIT TO CONSTRUCT DAM AND RE-
 SERVOIR TO STORE STORM WATER.

I,.....of the.....county of.....state of
 Nebraska being duly sworn, upon my oath say:

1. That the name of the applicant herefor is.....
 post office address, No.....street.....,.....county.
2. That it is proposed to use the water herein appro-
 priated for.....
3. That the name adopted for the proposed work is
 the.....
4. That the source of the appropriation is.....
5. That the reservoir is located in the.....of
 section....., township....., range.....
 principal meridian.
6. That the area of the reservoir is.....acres.
7. That the greatest depth of water in the reservoir
 will be.....feet.
8. That the average depth will be.....feet.
9. That the total length of the dam will be.....ft.

- 10. That the dam at the deepest point will be feet high.
- 11. That the base of the dam will be feet wide.
- 12. That the top of the dam will be feet wide.
- 13. That a spillway feet in width will be provided.
- 14. That the bottom of the spillway will be feet below the crest of the dam at the lowest point.
- 15. That this spillway will be so arranged that the escaping water shall not come in contact with the dam.
- 16. That the material of which the dam is constructed amounts to cu. yds. and consists of
- 17. That the cost of the proposed structure is as follows: earthwork, \$, fluming, \$, head-gate, \$, other expenses, total, \$
- 18. That the water stored is to be used for
- 19. That the water stored will be discharged through a box fitted with a gate for controlling the discharge.
- 20. That construction is to be begun within of the date hereof, and the proposed works are to be completed and the appropriation perfected on or before
- 21. That the water will be conducted in the canal and thence to the

.....

Signature.

State of Nebraska, }
 County of } ss.

I hereby certify that the foregoing application was signed in my presence and sworn to before me by this day of 189..

.....

Notary Public.