FOURTH BIENNIAL REPORT

OF THE

State Engineer, Secretary

OF THE

STATE BOARD OF IRRIGATION

TO THE

GOVERNOR OF NEBRASKA

1901–1902

LINCOLN, NEBRASKA
JACOB NORTH & COMPANY
1902

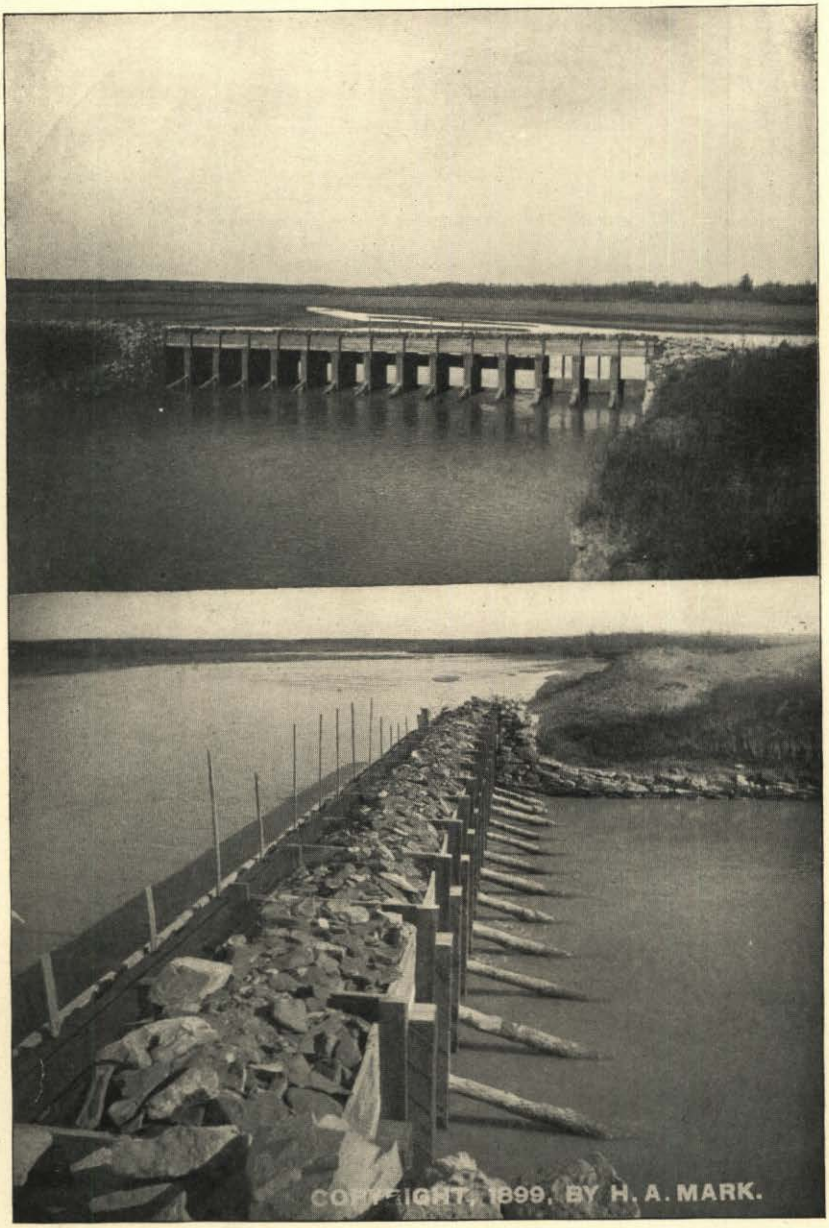

Photo by H. A. Mark, Alliance

HEADGATE MITCHELL CANAL

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LINCOLN, NEB., November 30, 1902.

To His Excellency, Ezra P. Savage, Governor of Nebraska:

SIR—In compliance with the provisions of law, I have the honor to transmit herewith the fourth biennial report of the transactions of the State Board of Irrigation, being for the years 1901 and 1902.

Yours very respectfully,

ADNA DOBSON,

State Engineer, Secretary.

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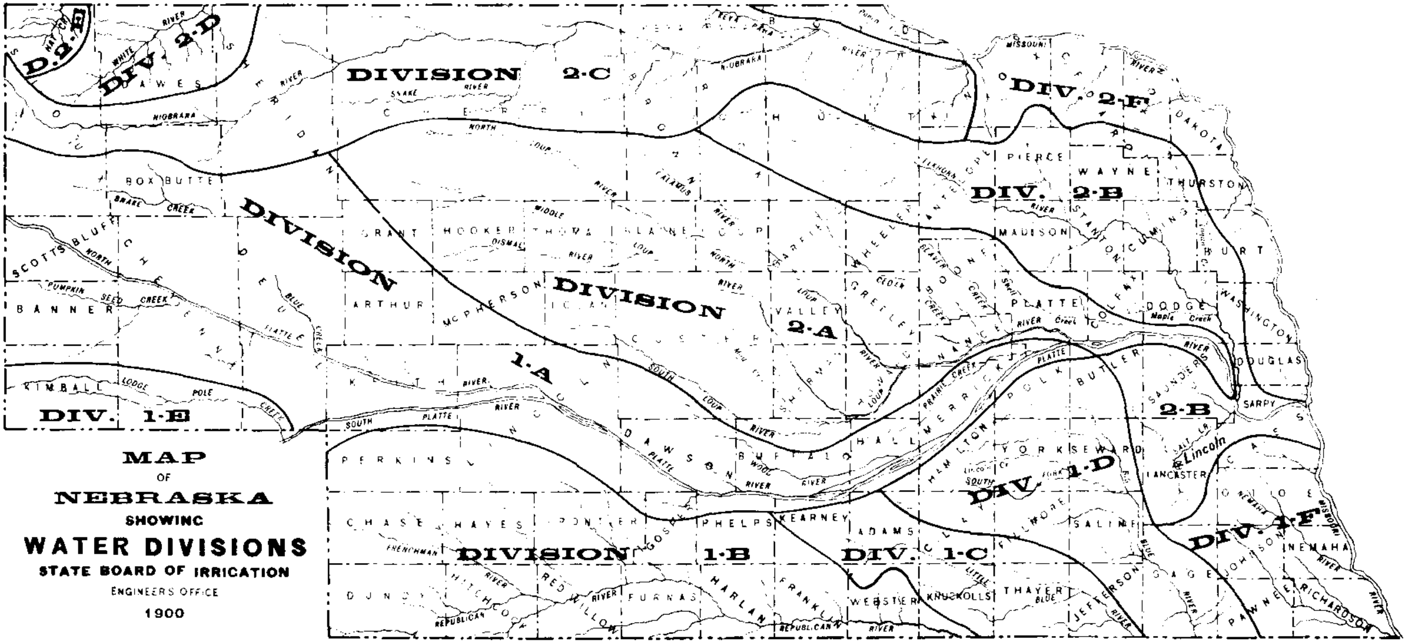
F. N. PROUT, Attorney General.
G. D. FOLLMER, Commissioner of Public Lands and Buildings.

ADMINISTRATIVE OFFICERS.

EZRA P. SAVAGE, Governor.
ADNA DOBSON, State Engineer, Secretary.
J. C. STEVENS, Assistant Secretary.
H. O. SMITH, Under Secretary for Division 1.
PAGE T. FRANCIS, Under Secretary for Division 2.
FANNIE STEINMETZ, Clerk and Stenographer.

UNDER ASSISTANTS.

G. DURAND, Water District No. 1, Water Division No. 1-A.
ROBT. H. WILLIS, Water District No. 2, Water Division No. 1-A.
I. A. YOUNG, Water District No. 3, Water Division No. 1-A.
H. H. PROUTY, Water District No. 1, Water Division No. 1-E.
ROBERT BUSCH, Water District No. 1, Water Division No. 1-B.



MAP
OF
NEBRASKA
SHOWING
WATER DIVISIONS
STATE BOARD OF IRRIGATION
ENGINEERS OFFICE
1900

WATER DIVISIONS AND WATER DISTRICTS.

Secs. 1 and 2, art. 2, of the Nebraska Irrigation Law, divides the state into two water divisions, denominated Water Division No. 1 and Water Division No. 2 respectively.

Water Division No. 1 includes "all the irrigable lands of the state drained by the Platte rivers and their tributaries lying west of the mouth of the 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 rivers."

Water Division No. 2 includes "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."

For convenience in the adjudication of claims and in the distribution of water these divisions have been subdivided into twelve water divisions denominated 1-A, 1-B, 1-C, 1-D, 1-E, 1-F, 2-A, 2-B, 2-C, 2-D, 2-E, and 2-F, as shown on the accompanying map.

Under the provisions of sec. 33, art. 2, Nebraska Irrigation Law, water districts have been created as follows:

Water District No. 1, Water Division No. 1-A, includes the watersheds of Blue creek, Clear creek, and that part of the North Platte river lying in the counties of Keith and Deuel.

Water District No. 2, Water Division No. 1-A, includes the watersheds of the Pumpkin Seed, Lawrence Fork, and Greenwood creeks, and all that part of the North Platte river lying within Cheyenne and Scotts Bluff counties.

Water District No. 3, Water Division No. 1-A, includes that part of the watershed of the Platte river and its tribu-

taries lying in Lincoln, Dawson, Gosper, Phelps, and Buffalo counties.

Water District No. 1, Water Division No. 1-B, includes the counties of Chase, Dundy, Hitchcock, and Red Willow.

Water District No. 1, Water Division No. 1-E, includes the watersheds of the South Platte river and Lodge Pole creek in Nebraska.

REPORT.

REVIEW OF WORK OF STATE BOARD OF IRRIGATION.

The third biennial report of the Secretary shows that on November 30, 1900, there were on file, awaiting the action of the Board, 26 claims for water, 34 applications for a permit to appropriate water, including 2 which were canceled.

Since November 30, 1900, there have been filed 1 claim, 2 contests, 2 motions for rehearing, 2 appeals to the Board, 108 applications, and 8 permissions for a permit to change location of headgate.

Disposition has been made of 7 claims, 2 contests, 2 motions for rehearing, and 2 appeals. The Secretary has allowed 74 applications for a permit to appropriate water and dismissed 17. He has allowed 5 petitions to change location of headgate and has dismissed 1, thus leaving 20 claims, 49 applications, and 2 petitions for permit to change location of headgate now pending.

Hearings were held as follows:

June 4, 1901, at North Platte, Neb.

October 17, 1901, at Lincoln, Neb.

March 3, 1902, at Lexington, Neb.

September 29, 1902, at Lincoln, Neb.

October 28, 1902, at Lincoln, Neb.

The tables show a list of the claims and applications acted upon from November 30, 1900, to November 30, 1902, and also a complete list of claims and applications granted and pending in each water division, arranged alphabetically and in order of priority on each stream.

Stream measurements have been made on all the principal

streams of the state as shown by table of gagings. By cooperation with the United States Geological Survey, we have been able to get the reports of the daily discharge of many of the larger streams of the state.

Where necessary, applications are examined in the field and a report is had from the under secretary or field assistant, showing the conditions in each case before action is taken. Maps have been prepared covering a large part of the state, showing the location of canals, lands covered, the amount of canal actually constructed, and the location of all proposed canals. These records are of great value, showing as they do all the data required by parties who propose to construct any works for irrigation or for the development of power.

Several hundred maps on file in the office have been classified and indexed and a general index of all records of the office has been made, which shows at a glance every action taken in each of the cases which have come before the Board since its organization.

Some measurements have been made to determine the amount of loss due to seepage and evaporation in the canals of the state, and it is hoped that much more can be done in this direction during the ensuing year.

The question of whether the amount of water an appropriator is entitled to under sec. 20, art. 2, of the Irrigation Law, viz., "one cubic foot per second for each seventy acres of land for which said appropriation shall be made" shall be measured at the head of the canal or at the point of use, has been raised; and one of the most extreme cases where the loss due to seepage was very great was submitted to the Attorney General, and his opinion will be found elsewhere in this report.

Some very interesting and valuable investigations have been made by the United States Department of Agriculture to ascertain the duty of water in Nebraska, or, in other words, the amount of water required to irrigate an acre of

land. This investigation involves a study of the losses due to seepage and evaporation, the requirements of different crops, the return received from the use of an acre foot of water, and many other problems which confront the irrigator or the person who is considering the construction of irrigation works. A very complete report of this work prepared by O. V. P. Stout, Special Agent of the Department of Agriculture, will be found elsewhere in this report.

The unexpected balances in the various funds for the maintenance of this department on November 30, 1900, the amount drawn on each fund from November 30, 1900, to April, 1901, the amount appropriated for the biennium beginning the first Wednesday in April, 1901, the amounts drawn against these funds to November 30, 1902, and the balance remaining in each fund, are shown by the following tables:

	Balance Nov. 30, 1900	Drawn Nov. 30, 1900, to April 3, 1901	Balance unused	Appropriation 1901	Expended April 3, 1901, to Nov. 30, 1902	Balance Nov. 30, 1902
Secretary.....	$ 900 00	$ 900 00	.....	$3600 00	$2700 00	$ 900 00
Assist. Secretary..	416 67	416 67	.....	2000 00	1666 65	333 35
Under Secretaries.	1168 39	1159 99	$ 8 40	3200 00	2874 35	325 65
Stenographer.....	333 34	333 34	.....	1680 00	1400 00	280 00
Office expenses...	63 50	60 45	3 05	600 00	523 90	76 10
Field Help.....	479 18	479 18	.....	1000 00	292 62	707 38
Instruments.....	132 10	131 92	18	200 00	169 18	30 82
Office furniture...	20	.....	20	200 00	136 85	63 15
Traveling expenses	44 81	10 19	34 62	600 00	396 44	203 56
Maps	90 00	.....	90 00	500 00	7 60	492 40
	$3628 19	$3491 74	$ 136 45	$13580 00	$10167 59	$3412 41

APPLICATIONS APPROVED

November 30, 1900, to November 30, 1902

Div. No.	STREAM	APPLICANT	USE	Second feet granted	LOCATION OF HEAD GATE			DATE OF PRIORITY			Application No.
					S.	T.	R.	M.	D.	Y.	
2-C.	Ashburn creek	McFarland, G. W.	Irrigation.	.57	27	34	26	June	17	1902	676
2-D.	Beaver creek	Riekman, E. W.	"	1	9	23	46	July	2	1902	681
2-C.	Big Sandy creek	Pickler, W. S.	Power	35	12	33	14	Aug.	28	1902	685
2-C.	" " "	Pickler, W. S.	Irr. & P.	1.14	12	33	14	May	16	1902	667
2-D.	Beaver creek	Braddock, J. F.	Irrigation.	.64	1	34	47	Nov.	24	1897	463
2-A.	Beaver river	Rice, H.	Power	80	22	20	6	Oct.	14	1901	640
2-A.	" "	Rice, H.	"	100	26	20	6	Oct.	3	1901	639
1-A.	Buffalo creek	Farmers' Union Ditch Co.	Irrigation.	*128	34	9	19	Aug.	13	1901	632
1-A.	" " W. Br.	Henry, A.	"	5	23	11	23	July	2	1900	570
2-D.	Bordeaux creek	Burns, T. C.	"	4.29	36	33	48	Nov.	5	1900	584
1-A.	Birdwood, east fork	McCabe, N.	"	13	3	16	33	Mar.	1	1901	602
2-D.	Bordeaux creek	Martens, Wm.	"	.71	28	34	48	Sept.	22	1902	690
1-B.	Center creek	Bishop, D. L.	Irr. and P.	1.43	15	2	15	Dec.	10	1900	590
2-D.	Clay creek	Rincker, H. C.	Irrigation.	1.43	11	31	52	June	8	1901	618
2-A.	Cedar creek	Gates, C. A. et al.	Power	250	10	16	6	July	6	1901	625
2-A.	Cedar river	Bennett, T. T.	"	200	12	16	6	Sept.	9	1901	636
1-B.	Center creek	Rose, C. H.	Irrigation.	.29	36	2	15	Jan.	10	1902	648
1-B.	Crooked creek	Kaley, C. H.	Fish Pond.	1	1	1	11	May	7	1902	665
2-D.	Dead Man creek	Lindeman, Con.	Irrigation.	1.14	7	30	52	Dec.	15	1900	592
2-D.	Dead Horse creek	Geiser, B. A.	"	2.29	7	32	49	Mar.	18	1902	658
2-B.	Elkhorn river	Atkinson M., G. & Stock Co.	Power	40	4	30	14	Dec.	22	1900	593
2-B.	" "	Stanton W. P. Co.	"	242	29	23	2 E	Mar.	26	1901	608
1-B.	Frenchman river	Hoke, J. A.	"	34.40	21	6	39	Dec.	12	1900	591
2-E.	Hat creek	Antrim, Z. F.	Irrigation.	.71	3	32	55	Dec.	24	1900	594
2-E.	Jim creek	Wasserberger, J.	"	2.29	29	34	54	Oct.	13	1900	581
1-A.	Kiowa creek	Kellums, J. H.	"	2.43	11	22	58	Oct.	18	1901	641

* This amount granted also includes the amount granted in Docket 623.

APPLICATIONS APPROVED—*Continued*

November 30, 1900, to November 30, 1902

Div. No.	STREAM	APPLICANT	USE	Second feet granted	LOCATION OF HEAD GATE			DATE OF PRIORITY			Application No.
					S.	T.	R.	M.	D.	Y.	
1-E.	Lodge Pole creek....	Wertz Bros.....	Irrigation.	2.86	12	13	46	Feb.	14	1901	600
1-E.	" " "	Newman, G. R.....	" .	1.29	26	13	45	April	17	1901	611
1-E.	" " "	Johnson, J. C.....	" .	1.14	23	13	45	April	17	1901	612
1-E.	" " "	Nasland, J. A.....	" .	1.43	1	12	45	April	16	1901	661
1-E.	" " "	Bennett Live Stock Co.....	" .	*	21	15	55	Mar.	13	1902	657
2-A.	Loup river.....	New York Imp. Co.....	Power	1000	13	15	8	May	6	1901	614
2-A.	" "	Sunderland, W. C.....	"	1000	8	15	8	Aug.	2	1901	629
2-A.	" "	Neb. Cen. Irr. Co.....	"	1200	27	17	4	Feb.	1	1902	653
2-A.	" " North	Bennett, T. T.....	"	250	9	19	14	Sept.	27	1901	637
1-B.	Lost creek.....	Pickard, J.....	Irrigation.	.36	10	1	15	Jan.	2	1902	646
2-E.	Long Branch	Ebert, L. J.....	" .	.14	19	35	53	Aug.	22	1901	635
2-D.	Little Cottonwood...	Spearman, C. K.....	" .	1.43	12	32	52	Jan.	9	1902	647
2-D.	" " ...	Dunn, J. G.....	" .	1.43	9	32	52	Jan.	14	1902	649
2-D.	" " ...	Stewart, G. W. et al.....	" .	.86	3	32	52	Mar.	10	1902	656
1-A.	Little Spring creek..	Ware Costin Cattle Co.....	" .	.57	29	15	37	April	1	1902	659
2-C.	Long Pine creek.....	F., E. & M. V. R. R.....	Power	35	6	29	20	June	30	1902	678
1-B.	Methodist creek.....	Deans, B. A.....	Irrigation.	2	2	1	18	Feb.	14	1901	601
2-C.	Niobrara river.....	Brown, J. S. et al.....	" .	15	29	29	47	Jan.	7	1901	595
2-C.	" "	Dierix, C.....	" .	2	19	30	43	Feb.	1	1901	598
2-C.	" "	Fendrick, B.....	" .	.57	26	29	48	Mar.	18	1901	607
2-C.	" "	Niobrara Irr. & W. P. Co..	Power	700	34	32	7	April	13	1901	609
2-C.	" "	Niobrara Irr. & W. P. Co..	P. and Irr.	21.43	34	32	7	April	13	1901	610
2-C.	" "	Fendrick, G. A.....	Irrigation.	.29	32	29	48	June	1	1901	616
2-C.	" "	Fendrick, G. A.....	" .	.29	32	29	48	June	1	1901	617
2-C.	" "	Himes, J. E.....	Power	1000	34	33	11	July	27	1901	628
2-C.	" "	Cornell, C. H.....	"	1600	27	34	27	Jan.	29	1902	652

*700 acre feet.

APPLICATIONS APPROVED—*Concluded*
November 30, 1900, to November 30, 1902

Div. No.	STREAM	APPLICANT	USE	Second feet granted	LOCATION OF HEADGATE			DATE OF PRIORITY			Application No.
					S.	T.	R.	M.	D.	Y.	
1-A.	Otter creek	Howell, R. B	Irrigation.	15	5	15	40	July	24	1902	682
1-A.	Platte river	Young, Fred	"	229	4	11	26	July	31	1897	400
2-B.	Platte and Elkhorn	Rosewater, A	Power	5000	15	13	10 E	July	9	1901	626
2-B.	" " "	Riley, J. E	"	1250	29	13	10 E	Oct.	31	1901	643
2-B.	Platte, Elk. & Buffalo	Riley, J. E	"	1000	29	13	10 E	Sept.	12	1902	687
2-B.	Platte and Elkhorn	Rosewater, A	"	3000	9	15	10 E	Sept.	15	1902	689
2-A.	Prairie creek	Stires, J. D	Irr. and P.	8	27	16	5	May	6	1901	613
1-B.	Republican, S. fork	McDonald, J. A	Irrigation.	1.71	36	1	38	Nov.	13	1901	644
2-E.	Sow Belly creek	Jordan, S	"	1.43	21	33	55	May	26	1902	668
2-D.	Springs	Forbes, J. D	"	1.14	20	32	52	Feb.	11	1901	599
1-E.	Spring Branch	Libby, H. H	"	1.43	33	14	47	July	1	1901	623
2-C.	Turkey creek	La Rue, Chas	"	.57	35	33	23	June	17	1901	622
2-D.	White river	Roley, I. M	"	.33	3	31	52	Oct.	3	1900	579
2-D.	" "	Carlson, John	"	1.14	6	32	50	Nov.	26	1900	588
1-A.	Wood river	Sibbernsen, I	Irr. and P.	37	9	10	10	Nov.	6	1900	589
1-A.	White Tail creek	Leonard, M. J	Irrigation.	1	28	16	38	Mar.	6	1901	603
1-A.	" " "	Leonard, M. J	"	.57	34	16	38	Mar.	6	1901	604
1-A.	" " "	Ware Costen Cattle Co	"	54	26	15	38	April	26	1902	662*b*
2-D.	White Clay & Squaw	White River Irr. Co	"	8	36	32	52	Mar.	3	1902	655
1-A.	Willow creek	Everett, R. L	"	1.14	16	19	56	Jan.	21	1902	650
1-A.	" "	Everett, R. L	"	.86	16	19	56	Jan.	21	1902	651
2-E.	White Head (trib.)	Raben, Peter	"	.57	19	34	53	Mar.	21	1901	615*b*

APPLICATIONS DISMISSED

November 30, 1900, to November 30, 1902

DIV. NO.	STREAM	NAME OF APPLICANT	LOCATION OF HEADGATE			APPLICATION NO.
			S.	T.	R.	
1–A	Clear creek	Bain, John A	32	16	41	605
2–C	Deer creek	Rush Stock Co	32	30	42	519
2–B	Elkhorn	Selah, C	32	29	11	250
1–B	Frenchman	Leachy, A. A	18	6	40	134
1–B	Flag creek	Richards, S	21	2	19	630
2–A	Loup, North	Laverty, J. D	27	19	14	631
2–A	Myra creek	Block, E. W	26	18	13	654
1–B	Methodist creek	Deans, B. A	2	1	18	638
2–C	Niobrara	Cornell, C. H	27	34	27	460
2–C	Niobrara	Cornell, C. H	22	34	27	548
2–A	Platte	Rosewater, A	21	17	4 E	620
2–B	Platte and Elkhorn	Rosewater, A	15	14	10 E	621
2–B	Platte, Elkhorn, and Buffalo	Riley, J. E	4	13	10 E	688
2–E	Squaw creek	Shepherd, W. F	1	33	57	123
2–E	Squaw creek, W	Dunn, F. D	10	33	57	597
2–E	Springs	Raben, P	22	34	54	615*a*
1–A	White Tail creek	Ware Costin Cattle Co	26	15	38	633

Photo by H. A. Mark, Alliance

BRIDGE ACROSS NORTH PLATTE BETWEEN GERING AND SCOTTS BLUFF

CLAIMS AND APPLICATIONS GRANTED AND PENDING.

The following tables give a complete list of the claims and applications which have been granted since the organization of the State Board of Irrigation.

In these tables the appropriations have been arranged in each water division by streams in alphabetical order, and the appropriations on each stream are arranged in the order of their priority. Range numbers refer to ranges west of 6th P. M. unless otherwise indicated.

Those having docket numbers are claims made under the law prior to April 4, 1895, and those having application numbers are applications made under the law of 1895.

These tables will be found valuable in ascertaining the relative rights of different appropriators upon any stream.

CLAIMS AND APPLICATIONS

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Ash creek	McCormick	Lewellen	McCormick	1
"	Vance, Roscoe	"	Vance Ditch	2
"	Gilliard, George	"	Gilliard Ditch	3
Birdwood creek	Eq. Farm & S. Imp. Co.	North Platte	Birdwood Canal	4
"	Eq. Farm & S. Imp. Co.	Birdwood	W. Side Birdwood Can.	5
"	Beauchamp, W. K.	Su herland.	Beauchamp Canal	6
Birdw'd ck. E. B	McCabe, N.	North Platte	McCabe Ditch	7
Blue creek	Union Irr. & W. P. Co.	Ramsay	Union Irr. & W.P.Can.	8
"	Ia. Irr. & Imp. Co.	"	Blue Creek Ditch	9
"	Eq Farm & S. Imp. Co.	North Platte	Blue Creek Canal	10
"	Ia. Irr. & Imp. Co.	Lewellen	Ia. Irr. & Imp. Co. D.	11
"	Graf, Robert E.	"	Graf Canal	12
"	Winterer, Jacob H.	"	High Line Ditch	13
"	Bergenson, Nels.	Ramsay	West Side Ditch	14
"	Ia. Irr. & Imp. Co.	Lewe'len	Hooper Ditch	15
"	Paisley, Ira	Ramsay	P. Berg. & R. Ditch.	16
"	Delatour, S. P.	Lewellen	Delatour Ditch.	17
"	Ramsey & Paisley.	"		18
Buffalo creek	Farmers' Un. Ditch Co.	Kearney	Farmers' Union Ditch	19
Buffalo Ck. W.	Henry, Absalom.	Cozad	Henry Canal	20
Camp creek	Stillwell, Wm.	Lisco.	Camp Creek Ditch	21
Canyon creek	McCarthy, Jno. J.	Keystone	McCarthy Ditch	22
Cedar creek	Reasor, Paul J.	Freeport	Cedar Ditch	23
"	Wade, Peter C.	Liscoe	Cedar Creek Ditch	24
"	Miller, Oliver.	S. Pasadena, Cal.,	Miller's W. Side D.	25
Clear creek	Hooper, D. C.	Ramsay	Clear Creek Ditch	26
"	Barber, F., Marsh, W.	Lewellen	Clear Creek Canal	27
"	Green, Nelson A.	"	Clear Creek Ditch	28
"	Green, Nelson A.	"	Green Ditch	29
"	Scott, G. T., Williams, E. C.	"	Scott & Williams' D.	30
"	Finch, H. M.	Chicago	Finch Ditch	31
"	Wilson, Alexander.	Paxton.	Wilson Irr. Canal	32
"	Brogan, Hughey.	"	Brogan Ditch	33
"	Schlademan, Louis	"	Schlademan Irr. Can.	34
Cold Water Ck.	Ledgewood, W. E., Brown, H., Clapp, C.	Oshkosh	Cold Water Ditch	35
Coon creek	Winter, Wm	Keystone	Coon Creek Ditch	36
Deep Hole Ck.	McConnell, R. S	LaPeer	Twist Ditch.	37
Dugout creek	Cooper, Eliza A	Camp Clark.	Cooper Ditch	38
Spring Ck. trib. to Dugout creek	Rice, C. P.	Lisco.	Rice Canal	39
Dugout creek	Dolph, Chas. E.	Irving	Dolph Canal	40
Fremont creek.	Eq. Farm & S. Imp. Co.	North Platte	Fremont Creek Ditch.	41
Fremont slough	Steinhausen, A. P.	"	Steinhausen Ditch	42
Golden creek	Thies, Michael J.	Ogalalla	Theis Ditch	43
Greenwood Ck.	Coulter, D. & H. M.	Lovel'd Col.	Coulter Ditch	44
"	Trinnier, J. E	Midway	Trinnier Canal	45
"	Nelson & Trinnier.	"	Nelson Canal	46

BY STREAMS IN DIVISION 1-A.

	USE TO WHICH APP.	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S	T	R	COUNTY	Month	D	Yr.		
1	Irrig.	2.	.....	16	16	42	Deuel	.....	..	....	*1010	....
2	"	.....	1.14	27	16	42	"	June	14	1890	765	....
3	"	.....	1.43	3	16	42	"	Dec.	31	1890	812	....
4	"	.....	100	35	15	33	Lincoln	Oct.	21	1893	646	....
5	"	.....	8.57	22	15	33	"	Jan.	16	1894	652	....
6	"	.....	3	15	15	33	"	Sept.	19	1894	677	....
7	"	.....	13	3	16	33	"	Mar.	1	1901	.....	602
8	"	.....	24.64	18	16	42	Deuel	May.	16	1890	763	....
9	"	.....	12.86	6	6	42	"	Sept.	7	1893	781	....
10	"	.....	107.29	33	17	42	"	Dec.	27	1893	785	....
11	"	.....	12	7	16	42	"	Feb.	24	1894	786	....
12	"	.....	61.43	19	16	42	"	April	2	1894	788	....
13	"	.....	20	21	17	42	"	Sept.	27	1894	795	....
14	"	.....	21	28	17	42	"	Nov.	20	1894	800	....
15	"	20.	.....	6	16	42	"	Sept.	6	1898	.....	*467
16	"	.....	20	33	17	42	"	Sept.	14	1898	.....	471
17	"	.....	10	14	18	43	"	Feb.	20	1899	.....	495
18	"	.....	4	33	17	42	"	July	14	1899	.....	515
19	"	128	.....	34	9	19	Dawson	Aug.	13	1901	.....	*632
20	"	.....	5	23	11	23	"	July	2	1900	.....	570
21	"	.....	1.43	13	18	49	Cheyenne...	Mar.	16	1892	866	....
22	"	.....	0.57	29	15	37	Keith	June	12	1895	.....	15
23	"	.....	1	17	18	53	Banner	Oct.	27	1897	.....	419
24	"	12.	.....	23	18	48	Cheyenne...	April	18	1899	.....	*506
25	"	1.71	.....	23	18	48	" ...	Sept.	26	1900	.....	*574
26	"	.....	2.86	32	16	41	Keith	July	1	1888	748	....
27	"	.....	14.57	29	16	41	"	May	30	1893	754	....
28	"	.....	1.14	32	16	41	"	May	30	1893	756	....
29	"	.....	1.14	29	16	41	"	June	1	1893	745	....
30	"	.....	1	28	16	41	"	May	18	1894	747	....
31	"	.....	1.43	4	15	41	"	June	30	1895	964	....
32	"	.....	4	31	15	34	Lincoln	April	30	1897	.....	384
33	"	.....	.86	30	15	34	"	Oct.	18	1897	.....	417
34	"	.....	.29	5	14	34	"	Mar.	29	1898	.....	446
35	"	.....	4.29	26	18	46	Deuel	Sept.	29	1894	796	....
36	"	.....	.71	34	15	37	Keith	July	3	1895	.....	69
37	"	.....	1.43	10	18	49	Cheyenne...	July	18	1896	.....	328
38	"	.....	.86	4	19	48	" ...	Aug.	15	1892	872	....
39	"	.....	1	4	19	48	" ...	Aug.	15	1898	.....	462
40	"	.....	.04	4	19	48	" ...	Oct.	30	1899	.....	522
41	"	.....	9.29	15	13	30	Lincoln.....	Jan.	31	1894	683	....
42	"	.....	9	1	13	32	"	Mar.	19	1896	.....	260
43	"	.....	3.43	25	15	39	Keith	Sept.	17	1895	.....	160
44	"	.....	4	15	18	50	Cheyenne...	Feb.	3	1890	830	....
45	"	.....	6.29	28	18	50	" ...	April.	6	1891	849	....
46	"	.....	3	33	18	50	" ...	April.	1	1892	845	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Greenwood Ck.	Capron, A., Lamb, J...	Midway	Capron & Lamb D...	1
"	Meglemre, Sarah A....	La Peer.....	Meglemre Ditch	2
Horse creek....	Roberts, Saml. S.....	Collins	State Line Ditch.....	3
"	Roberts, Samuel S., Etchison, A.....	Caldwell....	Etchison & Roberts D	4
Kiowa creek...	Currie, Edwin A.....	Mitchel.....	Currie Ditch.....	5
"	Kellums, J. H.....	Caldwell....	Kellums Ditch.....	6
Lake creek	Lute, H. D.....	Paxton	Lake Creek Ditch....	7
Lawrence fork.	Laing, Guy A.....	North Platte	.....	8
"	Gilman, Byron, Crigler, E. S	Redington..	Redington Ditch.....	9
"	Crigler, E. S	" ..	E. S. Crigler Ditch...	10
"	Harper, John W.....	Higgins	Spring Branch Ditch.	11
"	Redington, H. V	Redington..	H. V. Redington D...	12
"	Neihus, Henry.....	" ..	Neihus Ditch	13
"	Doran, Edmond	Sidney	Doran Canal.....	14
"	Harper, John W.....	Higgins	Spring Branch Ext'n.	15
"	Crigler, E. S.....	Redington..	Crigler Extension....	16
"	Neihus, Henry.....	" ..	Neihus Ditch.....	17
"	Bicket, Thos. M.....	" ..	Fowler Ditch	18
"	Harper, J. W.....	Sidney	Harper Ditch.....	19
"	" "	"	Bicket Ditch.....	20
Lonergan Ck ..	Soehl, Herman A.....	Ogalalla	Soehl Canal.....	21
" ..	" "	"	"	22
" ..	Haney, August C.....	Lonergan...	Haney Ditch.....	23
Lonergan Ck., E. branch ...	Jacobs, Lee.....	Ogalalla	E. Lonergan Ditch...	24
Mathews creek.	Mathews, Benj. G	Keystone ...	Mathews Canal	25
Otter creek....	Howell, R. B.....	Omaha	Cascade Ditch... ...	26
Owl creek	Kellums, John H.....	Caldwell....	Sunflower Ditch	27
Pawnee creek..	Holcombe, M. N	Brady Isl...	Holcombe's D tch....	28
" ..	Murphy, E. D.....	Brady Isl...	Murphy's Ditch.....	29
" ..	Plumer, Wm. H.....	Maxwell....	Plumer Ditch.....	30
Platte river....	Farmers' D. & C. Co...	"	Farm. D. & C. Co. D..	31
"	Farmers' Irr. Co.....	Lexington ..	Farmers Irr. Co.'s D.	32
"	Farm. & Mer. Irr. Co..	" ..	Farm. & Mer. Canal.	33
"	Fowles, Russell H.....	Maxwell....	Maxwell Canal.....	34
"	Appleford, Henry.....	"	Appleford Canal.....	35
"	Sides, Leroy.....	Lowell.....	Leroy Sides' Ditch...	36
"	Farmers' Union D. Co..	Kearney....	Farmers' Union Canal	37
"	Platte R. Irr. Co.....	Lexington ..	Platte R. Irr. Co. Can.	38
"	Farmers' Mut. Irr. Co .	Kearney....	Farmers' Canal	39
"	McCullough, John.....	Maxwell....	McCullough D.....	40
"	Six Mile Ditch Co.....	Gothenburg.	Six Mile Ditch.....	41
"	Gothenburg South Side Irr. Co.....	Gothenburg.	Gothenburg S.S. Irr. C	42
"	Booker, H. C.....	"	Booker Canal.....	43
"	Cozad Irr. Co.....	Cozad	Cozad Irr. Canal	44

STREAMS IN DIVISION 1-A—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	.....	2	15	18	50	Cheyenne ..	Jan.	1	1893	890	....
2	"	.....	.57	10	18	50	Cheyenne ..	May	6	1896	.....	294
3	"	.....	10	33	23	58	Scotts Bluff.	Sept.	10	1897	.....	407
4	"	.....	9	34	23	58	" " .	Sept.	11	1897	.....	408
5	"	.....	9.14	13	21	57	" " .	Mar.	23	1892	938	....
6	"	.....	2.43	11	22	58	" " .	Oct.	18	1901	.....	641
7	"	.10	.....	14	14	36	Keith.....	Sept.	3	1902	.....	*686
8	"	.....	.50	28	18	52	Cheyenne ..	Dec.	31	1886	825	....
9	"	.....	.57	36	19	52	" ..	Oct.	9	1889	820	....
10	"	.....	.57	1	18	52	" ..	Sept.	11	1891	861	....
11	"	.....	1	11	18	52	" ..	Oct.	23	1891	862	....
12	"	.....	.50	11	18	52	" ..	May	1	1893	893	....
13	"	1	.....	11	18	52	" ..	.....	..	....	*1010	....
14	"	.....	1.14	15	18	52	" ..	June	1	1894	850	....
15	"	.....	.57	1	18	52	" ..	Oct.	13	1898	.....	476
16	"	.....	1.43	1	18	52	" ..	Nov.	25	1898	.....	486
17	"	1	.....	11	18	52	" ..	Mar.	23	1900	.....	*550
18	"	1	.....	11	18	52	" ..	April	5	1900	.....	*553
19	"	1.43	.....	11	18	52	" ..	May	27	1902	.....	*669
20	"	.57	.....	11	18	52	" ..	May	27	1902	.....	*670
21	"	.....	2	17	15	39	Keith	May	10	1889	697*a*	....
22	"	.....	.86	17	15	39	"	April	27	1893	697*b*	....
23	"	.....	1.14	17	15	39	"	July	1	1893	719	....
24	"	.....	9.14	17	15	39	"	May	25	1889	699	....
25	"	.....	1.14	28	15	37	"	April	1	1895	750	....
26	"	.....	15	5	15	40	"	July	24	1902	.....	682
27	"	.....	1.14	12	22	58	Scotts Bluff.	Sept.	17	1897	.....	411
28	"	.....	8	13	13	28	Lincoln	Oct.	18	1890	636	....
29	"	.....	8.57	29	13	27	"	June	9	1894	669	....
30	"	.....	10	19	13	27	"	June	15	1894	672	....
31	"	.....	280	17	13	29	"	June	2	1894	666	....
32	"	.....	114	25	10	23	Dawson	June	14	1894	621	....
33	"	.....	1142.86	18	10	23	"	June	26	1894	622	....
34	"	.....	27.14	29	13	28	Lincoln	July	5	1894	673	....
35	"	.....	10	15	13	29	"	July	7	1894	674	....
36	"	.....	20	13	8	14	Kearney....	July	23	1894	629	....
37	"	.....	128.57	6	8	19	Dawson	August	10	1894	623	....
38	"	.....	400	13	9	22	"	Sept.	15	1894	624	....
39	"	.....	180	12	8	16	Buffalo	Sept.	24	1894	628	....
40	"	.....	30	35	13	28	Lincoln.....	Oct.	20	1894	679	....
41	"	.....	40	11	11	26	"	Oct.	22	1894	680	....
42	"	.....	357.14	30	12	26	"	Oct.	26	1894	681	....
43	"	.....	100	16	11	25	Dawson.....	Nov.	9	1894	625	....
44	"	.....	614.29	15	11	25	"	Dec.	28	1894	626	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Platte river....	Orchard & Alfalfa Irr. Co.....	Cozad	Orchard & Al. Irr. D.	1
"	Lincoln & Dawson County Irr. Dist. 1...	Gothenburg	Lincoln & Dawson Co. Irr. Dist. Canal	2
"	Appleford, Henry.....	Maxwell....	Appleford Canal	3
"	Gothenburg P. & I. Co.	Gothenburg.	Gothenburg P. & I. C.	4
"	Gothenburg P. & I. Co.	Gothenburg.	Gothenburg P. & I. C.	5
"	Lucas & Ft. Kearney Irrigation Co.....	Newark	Lucas & Ft. Kearney D.	6
"	Lowell Farm. Irr. Co..	Lowell	Lowell Farm. I. Canal	7
"	Milbourn, L.....	Overton	Milbourn Ditch.....	8
"	Young, Fred.....	Gothenburg.	Farmers' Canal	9
"	Hefner, O. O.....	Lexington..	Lex. So. Side I. Ditch	10
"	Lucas, John R.....	Elm Creek .	.....	11
"	Lex. So. Side Irr. Co...	Lexington..	Lex. So. Side Ditch..	12
"	Midway Mutual Irr. Co.	Cozad	Midway Irr. Canal...	13
"	Rosewater, A.....	Omaha.....	Fremont Power Plant.	14
North Platte R.	N. Platte Irr. & L. Co.	North Platte	North Platte Canal...	15
"	Farmers Canal Co.....	Omaha.....	Farmers' Canal	16
"	Minatare Mut. C. & I. Co.	Minatare ...	Minatare Ditch	17
"	Winters' Creek Irr. Co.	Gering	Winter Creek Canal..	18
"	Enterprise Ditch Co...	Sunflower ..	Enterprise Ditch.....	19
"	Castle Rock Irr., Canal & Water Power Co...	Wilford	Castle Rock Irr. Canal	20
"	Logan, Chas. E.....	Camp Clark.	.....	21
"	Belmont I. C. & W. P. Co.	Omaha	Belmont I. C. & W. P. Co. s Canal.....	22
"	Central I. C. & W. P. Co.	Gering	Central I. C. & W. P. Co. Canal	23
"	Myers, T. A., and Phelps, A, and Dickerson, F. P.	Ogalalla	Myers & Phelps Canal	24
"	Sheridan, J. Wake.....	"	Sheridan & Wilson D.	25
"	Chimney Rock Irr. Can. & Water Power Co..	Camp Clark.	Chimney Rock Canal.	26
"	Empire Canal Co.....	" " .	Empire Canal.....	27
"	Kah, David	Minatare ...	Kah Ditch.....	28
"	Brown's Cr. I. C. Co...	Camp Clark.	Brown's Ck. Irr. Canal	29
"	Hale, Will A.....	Gering	Homestead Ditch	30
"	Alliance I. C. & W. P. Co.	Camp Clark.	Alliance Irr. Canal...	31
"	Clarke, Henry T.....	" " .	H. T. Clarke Canal...	32
"	Nichols, Yorrick, and Nichols, Carroll	Collins	Ramshorn Ditch.....	33
"	Short Line Irr. C. Co..	Bayard	Short Line Irr. Canal.	34
"	Lisco, Reuben.....	Chappell ...	Lisco Ditch.....	35
"	Nine Mile C. & Res. Co.	Bayard	Nine Mile Canal	36
"	Cody & Dillon I. C. Co.	North Platte	Cody & Dillon I. C. Co.	37
"	Sutherland & Paxton Land & Irr. Co.....	Sutherland .	S. & P. L. & I. C	38

STREAMS IN DIVISION 1-A—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	.....	300	9	10	24	Dawson	Jan.	23	1895	627	....
2	"	.....	642.86	9	13	29	Lincoln	Feb.	22	1895	687	....
3	"	.....	2.86	15	13	29	"	Mar.	28	1895	690	....
4	I. & P.	.....	100	29	12	26	"	July	5	1890	645*a*	....
5	"	.....	240	29	12	26	"	Sept.	22	1894	645*b*	....
6	Irrig.	.....	100	13	8	18	Phelps	March	4	1896	.....	264
7	"	.....	114	15	8	14	Kearney....	July	27	1896	.....	351
8	"	.....	.57	2	8	20	Dawson	Jan.	7	1897	.....	375
9	"	.....	229	4	11	26	Lincoln	July	31	1897	.....	400
10	"	.....	12.57	8	9	22	Dawson	Oct.	14	1897	.....	416
11	"	.....	2.64	15	8	18	Phelps	June	18	1900	.....	566
12	"	.....	58	8	9	22	Dawson	Sept.	28	1900	.....	576
13	"	.....	229	3	11	26	Lincoln	Nov.	3	1900	.....	586
14	Power	3000	.....	29	17	4E	Butler.....	July	6	1901	.....	*624
15	Irrig..	.....	300	13	14	34	Lincoln	May	31	1884	635	....
16	"	.....	1142.86	3	23	58	Scotts Bluff.	Sept.	16	1887	918	....
17	"	.....	249.43	32	22	54	" .	Jan.	14	1888	919	....
18	"	.....	124.29	17	22	55	" .	Oct.	18	1888	952	....
19	"	.....	173.71	27	23	57	" .	March	28	1889	920	....
20	"	.....	82.57	4	21	54	" .	April	18	1889	921	....
21	"	.....	5.71	19	24	50	Cheyenne...	Oct.	17	1889	821	....
22	"	.....	270	18	20	51	" ...	Dec.	19	1889	828	....
23	"	.....	36	27	22	55	Scotts Bluff.	June	23	1890	926	....
24	"	.....	7.14	34	15	39	Keith	Sept.	11	1890	709	....
25	"	.....	10	20	14	35	"	Oct.	9	1890	710	....
26	"	.....	60	1	20	53	Cheyenne...	Dec.	3	1890	844	....
27	"	.....	28.57	18	20	51	" ..	June	25	1891	858	....
28	"	.....	4.57	11	21	54	Scotts Bluff.	Nov.	1	1891	944	....
29	"	.....	188.71	29	20	50	Cheyenne ..	Jan.	20	1892	857	....
30	"	.....	11.43	21	22	55	Scotts Bluff.	June	29	1892	941	....
31	"	.....	100	5	20	52	Cheyenne ..	Dec.	26	1892	874	....
32	"	.....	9.43	22	20	51	" ..	Feb.	2	1893	875	....
33	"	.....	45.71	13	23	58	Scotts Bluff.	March	20	1893	945	....
34	"	.....	65.57	25	21	53	"	May	1	1893	946	....
35	"	.....	32.86	14	18	47	Cheyenne ..	July	1	1893	856	....
36	"	.....	200	18	21	53	Scotts Bluff.	Dec.	6	1893	925	....
37	"	.....	127	9	14	31	Lincoln	Dec.	29	1893	649	....
38	"	.....	186	18	14	36	Keith	Feb.	2	1894	722	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
North Platte R.	Paxton & Hershey Irr. Canal & Land Co....	Hershey....	Paxton & Hershey C.	1
"	Bower, Wm. T.....	Oshkosh ...	Bower Ditch.....	2
"	Farmers' & Merchants' Irr. & Land Co.....	North Platte	Farm. & Merchants C.	3
"	South Side I. & L. Co..	"	So. Side I. & L. Co. C.	4
"	Roberts, C. F.....	Oshkosh ...	Midland Ditch.....	5
"	Keith, Morrell C.....	North Platte	Keith Canal	6
"	Maycock, Joseph	Collins	Rooster Ditch	7
"	Smith, Augustus.....	North Platte	Smith Canal.....	8
"	Fox, B. M.....	Oshkosh ...	Overland I. Co. Canal	9
"	Hannah Irr. Can. Co...	Lisco.....	Hannah I. Canal.....	10
"	Gumaer, H. G., Robinson, John	Oshkosh ...	Oshkosh Canal.....	11
"	Smith, A. H., et al.....	Camp Clark.	Beerline Ditch.....	12
"	Spohn, Wm.....	Oshkosh ...	Spohn Ditch.....	13
"	Rush Creek Irr. Can. Co	Lodge Pole.	Rush Creek Irr. Canal	14
"	Lyons I. C. & W. P. Co.	Oshkosh ...	Lyons Irr. Canal.....	15
"	Orr, Geo. B., and Vance, Roscoe.....	Lewellen ...	Orr & Vance Canal...	16
"	Williams, E. C., & Robbins, Harry	" ...	Robbins & Williams C	17
"	Gyger, J. C.....	Oshkosh ...	Gyger Ditch.....	18
"	Dikeman, S. F.....	North Platte	Dikeman Canal	19
"	Simpson, Geo. M., Banghardt, C. S., Wendt, Hugo H.....	Oshkosh ...	Signal Bluff Ditch....	20
"	Jacobs, Lee	Ogalalla....	Hay Land Canal.....	21
"	Hubartt, E.....	North Platte	Hubartt & Hall Ditch	22
"	Fernstrom, Alfred, Nisson, Peter.....	Ogalalla	Fernstrom & Nissen..	23
"	Alfalfa Irr. District....	"	Alfalfa District Canal.	24
"	Bushnell, H. J. and Bushnell, E. N.....	Oshkosh ...	Bushnell Bros. Ditch.	25
"	Holcomb, Gen. J.....	Ogalalla....	Holcomb Irr. Ditch..	26
"	Burritt, Newell.....	North Platte	Burritt & George Can.	27
"	Steamboat Ditch Co...	Gering	Steamboat Ditch.....	28
"	North River Irr. C. & Water Power Co.....	Oshkosh ...	North River Irr. Co..	29
"	Stub Supply D. Co.....	Lewellen ...	Stub Supply Ditch...	30
"	LaMore, Fred E.....	LaPeer.....	LaMore Ditch	31
"	Steamboat Ditch Co...	Gering	Steamboat Ditch.....	32
"	Tetreault, Amedee.....	LaPeer.....	Tetreault Ditch No. 2.	33
"	The Gering Irr. District	Gering	Gering Canal	34
"	Schermerhorn, A.....	Omaha	Schermerhorn Irr. Can	35
"	Eq. F'm & Stock Im. C	"	Oskosh Canal.....	36
"	Stewart, H. G.....	Mitchell....	Spotted Tail Ext'n...	37
"	Frank, Wm.....	Grand Isl'nd	Columbia Canal.....	38

STREAMS IN DIVISION 1-A—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Irrig.	.....	130	18	14	33	Lincoln	Feb.	12	1894	653	....
2	"	.....	21.37	6	17	45	Deuel	March	27	1894	787	....
3	"	.....	183	12	14	33	Lincoln	May	22	1894	662	....
4	"	.....	270	14	14	34	Lincoln	June	6	1894	667	....
5	"	.....	12	2	16	44	Deuel	June	9	1894	789	....
6	"	.....	71	36	14	30	Lincoln	July	7	1894	657	....
7	"	.....	5.71	10	23	58	Scotts Bluff.	July	29	1894	950	....
8	"	.....	20	36	14	30	Lincoln	Aug.	9	1894	676	....
9	"	.....	20	1	16	44	Deuel	Aug.	14	1894	791	....
10	"	.....	5.71	24	18	47	Cheyenne...	Sept.	24	1894	886	....
11	"	.....	40	33	17	44	Deuel	Oct.	5	1894	797	....
12	"	.....	30	24	19	49	Cheyenne ..	Oct.	13	1894	887	....
13	"	.....	13.14	13	17	45	Deuel	Dec.	6	1894	801	....
14	"	.....	9.64	2	17	46	"	Dec.	11	1894	802	....
15	"	.....	42.14	30	17	44	"	Dec.	2.	1894	803	....
16	"	.....	2.93	29	16	42	"	Dec.	24	1894	811	....
17	"	.....	26.57	35	16	42	"	Jan.	4	1895	804	....
18	"	.....	10.86	10	16	44	"	Jan.	5	1895	806	....
19	"	.....	30	9	14	32	Lincoln	Jan.	14	1895	684	....
20	"	.....	30.13	16	16	43	Deuel	Jan.	16	1895	807	....
21	"	.....	5.71	29	15	39	Keith	Jan.	19	1895	732	....
22	"	.....	65.71	20	14	30	Lincoln	March	3	1895	691	....
23	"	.....	4	25	15	39	Keith	March	23	1895	737	....
24	"	.....	100	1	15	42	"	March	25	1895	738	....
25	"	.....	7.14	12	16	44	Deuel	March	27	18 5	809	....
26	"	.....	63	16	15	40	Keith	June	4	1895	.....	1
27	"	.....	30	2	12	28	Lincoln	Aug.	15	1895	.....	118
28	"	.....	15	4	21	54	Scotts Bluff.	Oct.	22	1895	.....	186
29	"	.....	168.29	14	18	47	Cheyenne ..	Feb.	24	1896	.....	243
30	"	200	.....	24	16	43	Deuel	March	14	1896	.....	*267
31	"	.....	20	34	19	48	Cheyenne ..	July	18	1896	.....	327
32	"	40	.....	4	21	54	Scotts Bluff.	July	22	1896	.....	*350
33	"	.....	12	1	19	50	Cheyenne ..	Aug.	15	1896	.....	353
34	"	.....	500	4	23	58	Scotts Bluff.	March	15	1897	.....	365
35	"	.....	30	16	20	51	Cheyenne ..	Oct.	25	1897	418	....
36	"	.....	400	24	17	45	Deuel	July	19	1899	.....	517
37	"	30	.....	3	23	58	Scotts Bluff.	Jan.	21	1901	.....	*596
38	"	2200	.....	3	23	58	Scotts Bluff.	April	14	1902	.....	*660

* Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
North Platte R.	Farmers Irrig. Dist...	Minatare ...	Farmers Ir. Dist. Can	1
South Platte R.	Eaton, John J.....	Brule	Eaton & McGrath D.	2
"	Hollingsworth & Sons.	Ogalalla ...	Hollingsworth Ditch.	3
"	Stebbins, Lucien	North Platte	Stebbins Canal	4
"	Searle, E. M	Ogalalla ...	Riverside	5
"	Miller F. L	Big Springs.	Miller & Warren.....	6
"	Ryan, J. T	Brule	Home Irr. Ditch.....	7
"	Sherman, W. H	Ogalalla ...	So. Side Plano Ditch.	8
"	Kimball, W., Thompson, G. E., Abbott, J. H	Big Springs.	Big Springs Canal....	9
"	Mason, Elmer P.....	Paxton	Paxton Irr. Ditch....	10
"	Stafford, David.....	"	Paxton Southern D ..	11
"	Lute & Sheridan	Ogalalla ...	Lute & Sheridan D ..	12
"	Meyer, Henry.....	Brule	Meyer Canal	13
"	Searle, E. M., Blackburn, T., Reed, O ...	Ogalalla ...	Ogalalla F. & M. Can.	14
"	Carnahan, H.....	" ...	Cereal Irr. Ditch.....	15
"	Allen, Wm. F.....	Omaha	Allen Ditch.....	16
"	Paxton Irrig. Dist.....	Paxton	Paxton Irr. Ditch....	17
"	Leech, E. E.....	Big Springs.	Kimball's Underflow.	18
"	Western Irr. Dis	"	Western Irr.....	19
Plum creek....	Barrett, Helena E	Ogalalla ...	Barrett Ditch	20
Pumpkin Seed.	Wright, John S.....	Ashford	J. S. Wright D. No. 1.	21
"	Kelly, Wm. J	"	Wm. J. Kelly Ditch..	22
"	Heard, Henry L.....	Freeport ...	Heard's D's Nos. 1 & 2	23
"	Wright, John S.....	Ashford	J. S. Wright D. No. 2.	24
"	Logan, John E	Gering	Logan Ditch.....	25
"	Court House Rock I. Co	Midway	Court House Irr. Can.	26
"	Smith, Eliza C., Wheeler, Chas. G.....	Sidney	Smith & Wheeler So D	27
"	Mutual Ditch Co	Redington..	Mutual Ditch.....	28
"	Waitman, P. P.....	" ..	Waitman's Ditch.....	29
"	Enderud, Charles O., Campbell, S. D.....	Freeport ...	Enderud Ditch.....	30
"	Cary, L. B	La Peer	Meredith & Amner D.	31
"	Hampton, R. R., Hampton, Wm. D...	Harrisburg .	Hampton Ditch.....	32
"	Finn, J. L., Dean, H. T.	La Peer	Last Chance	33
"	Munn, Lee.....	Redington..	Round H'se Rock D..	34
"	Maxwell, Jos. J.....	" ..	J. J. Maxwell Irr. D..	35
"	Dunlap, J. P	Dwight	Dunlap Ditch.....	36
"	Willard, Wm. M	Midway	Wm. M. Willard D ..	37
"	Thompson, R. S., Bliss, A. K., Oliver, John..	Redington..	Birdcage Ditch.....	38
"	Smith, Eliza, Wheeler, Chas. G.....	Sidney	Smith & Wheeler North Ditch.....	39
"	Wisner, S. R., Skinner, R.....	Freeport....	Abbott & Wisner D..	40

STREAMS IN DIVISION 1-A—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	.....	.....	3	23	58	Scotts Bluff.	June	16	1902	*675	....
2	"	.....	20	25	13	41	Keith	April	3	1894	755	....
3	I. & P.	.....	30	12	13	39	"	June	5	1894	723	....
4	Irrig.	.....	30	34	14	32	Lincoln	Dec.	17	1894	683	....
5	"	.....	2.86	17	13	39	Keith	Dec.	22	1894	744	....
6	"	.....	53.86	7	12	42	Deuel	Jan.	5	1895	805	....
7	"	.....	3.14	30	13	40	Keith	Mar.	2	1895	736	....
8	"	.....	1.43	17	13	39	"	April	27	1895	733	....
9	"	.....	8.93	35	13	42	Deuel	April	27	1895	810	....
10	"	.....	16	2	13	35	Keith	Aug.	24	1895	.....	130
11	"	.....	4	2	13	36	"	Oct.	17	1895	.....	184
12	"	.....	13.43	5	13	37	"	Feb.	17	1896	.....	231
13	"	.....	2.86	22	13	40	"	April	14	1896	.....	283
14	"	.....	125	20	13	40	"	July	10	1896	.....	356
15	"	.....	20	16	13	39	"	July	10	1896	.....	357
16	"	.....	9	24	13	40	"	Dec.	15	1896	.....	370
17	"	.....	42	1	13	38	"	Mar.	22	1897	.....	387
18	"	.....	180	14	12	43	Deuel	June	14	1897	.....	393
19	"	.....	6.29	4	12	42	"	Nov	8	1898	.....	482
20	"	.....	.50	23	16	42	"	Dec	10	1897	.....	422
21	"	.....	2	5	19	54	Banner	Dec.	31	1882	904	....
22	"	.....	1.43	5	19	54	"	May	10	1886	915	....
23	"	.....	1.29	14	19	54	"	June	1	1887	916	....
24	"	.....	2.86	5	19	54	"	Dec.	31	1887	905	....
25	"	.....	4	7	19	55	"	July	16	1890	902	....
26	"	.....	30.50	30	19	50	Cheyenne ..	Oct.	6	1890	840	....
27	"	.....	1.57	26	19	51	" ..	Oct.	16	1890	842	....
28	"	.....	8.57	33	19	52	" ..	Nov.	1	1890	843	....
29	"	.....	2.86	25	19	53	Banner	Mar.	12	1891	847	....
30	"	.....	1	21	19	53	"	May	27	1891	903	....
31	"	.....	18.86	23	19	50	Cheyenne ..	Feb.	20	1893	876	....
32	"	.....	1.29	25	20	57	Banner	April	5	1893	906	....
33	"	.....	8	27	19	50	Cheyenne ..	April	12	1894	883	....
34	"	.....	3	28	19	51	" ..	May	29	1894	884	....
35	"	.....	.50	23	19	52	" ..	June	30	1894	885	....
36	"	.....	.36	24	19	51	" ..	Mar.	1	1895	889	....
37	"	.....	1.43	25	19	51	" ..	Mar.	27	1895	888	....
38	"	.....	1	19	19	51	Cheyenne ..	June	1	1895	892	....
39	"	.....	.71	26	19	51	" ..	June	1	1896	842	
40	"	14.40	.....	23	19	53	Banner.....	.....	..	....	*917	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Pumpkin Seed.	Peters, John T.....	Harrisburg .	Peters Ditch.....	1
"	Wilson, Thomas H.....	Freeport ...	Cowan Canal	2
"	Holloway, J. P.....	Camp Clark.	Holloway Irr. Plant..	3
Ravine	Newberry, H.....	North Platte	Newberry Ditch.....	4
Sand creek	Holcomb, G. J., Smith, F. M.....	Ogalalla....	Holcomb & Smith ...	5
"	Patrick, Herman A....	"	Patrick Ditch.....	6
"	Nissen, P.....	"	Nissen Ditch.....	7
Scheutz Spring.	Scheutz, Lewis	LaPeer.....	Scheutz Spring Canal.	8
Sheep creek ...	Sturdivant, Jos.....	Collins	Sturdivant Ditch.....	9
Skunk creek...	Miller, Adam.....	Keystone...	Miller Ditch.....	10
Snake creek ...	Oasis Ditch Co.....	Alliance	Oasis Ditch.....	11
"	Elmore, Mike.....	"	Elmore Canal.....	12
Spotted Tail Ck	Stewart, H. G.....	Crawford...	.....	13
Spring Branch.	Brogan Bros.....	Paxton	Brogan Bros. Ditch...	14
Spring Br., trib. to Lawrence Fk.....	Harper, J. W.....	Sidney	Harper Ditch No. 2...	15
Spring creek...	Holcomb, G. J.....	Ogalalla....	Spring Creek Ditch ..	16
"	Saunders, L. F.....	Gering	Saunders' Ditch.....	17
"	"	Gering	Saunders' Ditch No. 2	18
"	Armbruster, C. F.....	Lexington ..	Armbruster Ditch....	19
Spring Ck., trib. to White Tail	Holloway, D. P.....	Keystone...	Spring Creek Ditch ..	20
Spring Ck. Lit.	Ware Costin Cattle Co.	Omaha	Little Spring Ditch...	21
Spring Ck., trib. to Middle Ck.	Bartling, Henry	Sidney	Bartling Ditch.....	22
Spring Ck., trib. to Middle Ck.	Bartling, Henry	"	Bartling Ditch No. 2.	23
Sprs. on Sec. 4 of 28-18-49...	Finn Brothers.....	LaPeer.....	Finn Bros.' Ditch....	24
Strm. (no name)	Newberry, H...	North Platte	Newberry Ditch	25
Willow creek ..	Everett, R. L.....	Harrisburg .	Willow Springs D. 1 .	26
"	Everett, R. L.....	" .	Willow Springs D. 2 .	27
White Horse Ck	Lamplugh, Isaac.....	North Platte	Lamplugh's Lakes...	28
White Tail Ck.	McCarthy, John M....	Keystone...	J. M. McCarthy.....	29
"	Holloway, D.P., Phelps, Al.....	Ogalalla....	Halloway & Phelps D..	30
"	Leonard Brothers.....	Keystone...	Little Dandy	31
"	Foster, Frank.....	" ...	Foster Keystone Can.	32
"	Reed, Fred.....	" ...	Reed Ditch.....	33
"	Bower, John H.....	Ogalalla....	.....	34
"	Leonard, Mark J.....	"	Leonard Ditch.....	35
"	Leonard, M. J.....	Keystone...	Branch Ditch.....	36
"	Ware Costin Cattle Co.	" ...	Keystone Canal.....	37
White Tail Ck., west fork....	Leonard, M. J.....	" ...	Leonard Ditch.....	38
Wind Springs..	Maycock, John.....	Gering	Wind Springs Canal..	39

STREAMS IN DIVISION 1-A—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	4.80	.....	34	20	56	Banner.....	.....	..	....	*913	....
2	"	.....	.71	17	19	53	"	June	24	1895	.....	46
3	"	.....	2	28	19	50	Cheyenne...	Jan.	14	1899	.....	492
4	"	.....	2	22	14	32	Lincoln	July	19	1895	.....	85
5	"	.....	7	10	15	40	Keith	May	20	1889	698	....
6	"	.....	2.43	3	15	40	"	May	31	1891	725	....
7	"	20	.....	10	15	40	"	March	18	1901	.....	*606
8	"	.....	.21	28	18	50	Cheyenne...	May	10	1892	881	....
9	"	.....	.29	12	25	58	Sioux	Oct.	10	1895	.....	182
10	"	.....	2.29	1	14	37	Keith	April	1	1895	740	....
11	"	.....	54.86	6	24	51	Box Butte ..	June	6	1894	567	....
12	"	.....	6	30	25	51	" ..	June	22	1895	.....	41
13	"	.....	1	10	23	56	Scotts Bluff.	May	2	1898	.....	449
14	"	.....	.57	30	15	37	Keith	Sept.	24	1897	.....	410
15	"	2	.....	1	18	52	Cheyenne ..	June	16	1902	.....	*674
16	"	.....	.57	12	15	40	Keith	June	18	1894	724	....
17	"	.....	9.14	36	23	56	Scotts Bluff.	April	20	1897	.....	368
18	"	4	.....	36	23	56	" .	Oct.	12	1900	.....	*580
19	"	5	.....	10	10	22	Dawson	Aug.	22	1901	.....	*634
20	"	.....	1.57	19	15	37	Keith	June	21	1890	704	....
21	"	.....	.57	29	15	37	"	April	1	1902	.....	659
22	"	.....	.29	28	18	51	Cheyenne ..	July	31	1891	870	....
23	"	.....	.29	28	18	51	" ..	June	1	1894	891	....
24	"	.....	.50	28	18	49	" ..	July	1	1890	836	....
25	"	.....	1.14	22	14	32	Lincoln	Feb.	25	1895	688	....
26	"	.....	1.14	16	19	56	Banner.....	Jan.	21	1902	.....	650
27	"	.....	.86	16	19	56	"	Jan.	21	1902	.....	651
28	"	.....	2.86	8	14	30	Lincoln	Dec.	31	1883	658	....
29	"	.....	1	36	15	38	Keith.....	July	15	1890	749	....
30	"	.....	4	36	15	38	"	June	1	1893	717	....
31	"	.....	2	22	15	38	"	Oct.	12	1894	727	....
32	"	.....	20	36	15	38	"	Oct.	30	1894	730	....
33	"	.....	.57	15	15	38	"	May	15	1895	751	....
34	"	.....	2.86	36	15	38	"	Oct.	29	1897	.....	420
35	"	.....	1.43	28	16	38	"	May	4	1899	.....	507
36	"	.....	.57	34	16	38	"	March	6	1901	.....	604
37	"	.....	54	26	15	38	"	April	26	1902	.....	662½
38	"	.....	1	28	16	38	"	March	6	1901	.....	603
39	"	.....	1.43	12	24	55	Sioux	March	1	1892	954	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Winters creek..	Bouton, Chas. A.....	Gering	Bouton's Ditch.....	1
Wood river....	Davis, J. H., & Sons...	Gibbon.....	.....	2
"	Shelton Mill. & G. Co..	Shelton	.....	3
"	Bears, S.....	Kearney....	.....	4
"	Babcock, H. E.....	Ord	Little Gem	5
"	Klein, J. J.....	Kearney....	White Bridge Park...	6
"	Klein, J. J.....	"	" ...	7
"	Sibbernsen, I.....	Columbus...	Grand Island Canal..	8

STREAMS IN DIVISION 1-A—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Irrig..	.....	1	3	22	54	Scotts Bluff.	Aug.	17	1889	923	....
2	Power	.....	40	13	9	14	Buffalo	Nov.	1	1873	993	....
3	"	.....	40	1	9	13	"	Oct.	16	1873	994	....
4	"	.....	25.40	13	9	16	"	May	1	1881	995	....
5	Irrig..	.....	180	9	10	10	Hall	April	10	1897	.....	366
6	"	.....	.06	8	9	15	Buffalo	Mar.	14	1900	.....	545*a*
7	Power	.....	10	8	9	15	"	Mar.	14	1900	.....	545*b*
8	Irrig.	.....	37	9	10	10	Hall	Nov.	26	1900	.....	589

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Beaver river....	Quackenbush, J. W....	Albion	Pioneer Ditch.....	1
"	Babcock, H. E.....	Columbus ..	Great Eastern Canal..	2
"	Long, C. W.....	Genoa.....	Windmill Irr.....	3
"	Long, Wm.....	"	"	4
"	Rice, H.....	Albion	Albion Elec. L.&P. P.	5
"	Rice, H.....	"	"	6
Brush creek....	Roneche, P. S.....	Brownlee...	P. S. Roneche Ditch..	7
Calamus river..	Hesselgesser, R.....	Prime	Cal. Val. Irr. Canal ..	8
"	Shoemaker, A. E.....	Burwell	Home Supply Canal..	9
"	Dahlman, J. C.....	Omaha	Calamus River Canal.	10
Calf creek.....	Cady, W. E.....	Compton ...	Calf Creek Ditch.....	11
Cedar river.....	Neb. Irr. & Power Co..	Ord.....	Cedar River Canal ...	12
"	Gates, C. A., et al.	Omaha	Fullerton Power P ...	13
"	Bennett, I. I.....	Fullerton...	Fullerton Elec. L. &P.	14
Cow creek	Edgar, H. R.....	Brownlee ...	Homestead Ditch	15
"	Erler, J.....	"	Cabbage Head Ditch..	16
Goose creek....	Erickson, P. C. & J. H.	Brewster ...	Erickson's Ditch.....	17
"	Giles, R. P. et al.....	Purdum.....	Giles Ditch.....	18
"	Crook, F.....	Giles	Crook Ditch.....	19
Gracie creek...	Krueger, G.....	Prime.....	Gracie High Line.....	20
Looking Glass c	Gerrard, E. H. & F....	Monroe.....	Monroe Irr. Ditch....	21
"	Babcock, H. E.....	Columbus ..	Great Eastern Canal .	22
Loup river.....	Harvey, Robt.....	St. Paul....	South Loup Canal ...	23
"	Babcock, H. E.....	Columbus ..	Neb. Cen. Irr. Co. Can.	24
"	Nelson, O., Gates, C. A.	Richland ...	New York Canal.....	25
"	McEathron, W. J.....	Omaha.....	Platte County Canal .	26
"	Neb. Central Irr. Co...	Columbus ..	Great Eastern Canal .	27
"	N. Y. Imp. Co.....	"	Loup Valley Canal...	28
"	Sunderland, W. C.....	Omaha	Sunderland Power P.	29
"	Neb. Central Irr. Co...	Columbus ..	Columbus Power P...	30
Loup river N Br	Nor. Loup Ir. & Imp. Co.	North Loup.	North Loup Ditch....	31
"	Lee, J. R.....	Brownlee...	Lee Ditch	32
"	Burwell Irr. Co.....	Burwell.....	Burwell Irr. Ditch....	33
"	Newton Irr. Co.....	Almeria	Newton Irr. Canal....	34
"	Roneche, P. S.....	Brownlee...	Minnie Roneche Dit..	35
"	Northup, H. A.....	Hawley.....	Northup Canal.....	36
"	Vandegrift, E. R.....	Brownlee...	Hackberry Bend Can.	37
"	Edgar, H. R.....	"	Golden Corn Canal...	38
"	Smith, E. B.....	Brewster....	State Central Canal ..	39
"	Covey, A. L.....	St. Paul....	Scotia Ir. & Wat. Pr.C.	40
"	Body, Wm.....	Compton....	Little Jonnie Ditch...	41
"	Keller, G.W. &. O. J...	"	Keller Canal.....	42
"	Compton Irr. & Pr. Co.	"	Compton Ditch.....	43
"	Edwards, H. B.....	Valentine...	North Loup Irr. Canal	44
"	Johns, H. F., Wilson, J.	Burwell.....	Rockford Pr. Canal ..	45

STREAMS IN DIVISION 2-A.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Irrig	.....	3.57	22	20	6	Boone	Dec.	8	1894	287	....
2	"	.....	100	24	17	4	Nance.....	Jan.	22	1896	.....	219
3	"	.....	.25	14	17	4	"	Mar.	31	1896	.....	276
4	"	.....	.14	14	17	4	"	Mar.	31	1896	.....	277
5	Power	.....	100	26	20	6	Boone	Oct.	3	1901	.....	639
6	"	.....	80	22	20	6	"	Oct.	14	1901	.....	640
7	Irrig..	.....	2.29	27	27	29	Cherry	June	30	1895	.....	67
8	"	.....	.29	16	23	18	Loup.....	Nov.	20	1895	.....	202
9	"	.....	35	16	23	18	"	Feb.	6	1896	.....	226
10	"	70	.....	16	23	18	"	Oct.	4	1902	.....	*694
11	"	.....	2	1	25	27	Cherry	April	10	1896	.....	286
12	"	.....	175	22	21	12	Wheeler....	Sep.	14	1894	221	....
13	Power	.....	250	10	16	6	Nance.....	July	6	1901	.....	625
14	"	.....	200	12	16	6	"	Sep.	9	1901	.....	636
15	Irrig..	.....	2.29	7	26	27	Cherry	July	14	1894	194	....
16	"	.....	.71	18	26	27	"	Sep.	30	1895	.....	175
17	"	.....	8	18	25	24	Brown.....	April	3	1895	209	....
18	"	.....	10	2	25	25	Cherry	June	1	1895	187	....
19	"	.....	8	33	25	24	Brown.....	June	2	1896	.....	345
20	"	.....	.29	29	23	17	Loup.....	July	9	1897	.....	397
21	"	.....	2.86	1	17	3	Platte	June	12	1894	289	....
22	"	.....	30	5	17	3	"	Jan.	22	1896	.....	219*a*
23	"	.....	250	25	13	12	Howard	June	19	1895	.....	35
24	"	.....	1200	17	17	3	Nance.....	Aug.	24	1895	.....	129
25	"	.....	300	13	15	8	"	April	28	1896	.....	291
26	Ir & P	250	.....	35	17	4	"	Jan.	12	1898	.....	*429
27	"	.....	1000	27	17	4	"	Dec.	26	1899	.....	527
28	Power	.....	1000	13	15	8	"	May	6	1901	.....	614
29	"	.....	1000	8	15	8	"	Aug.	2	1901	.....	629
30	"	.....	1200	27	17	4	"	Feb.	1	1902	.....	653
31	Irrig..	.....	143	27	19	14	Valley	Sep.	30	1893	227 228 232	....
32	"	.....	40	25	27	29	Cherry	Aug.	7	1894	188 189	....
33	"	.....	110	27	21	17	Loup.....	Sep.	7	1894	224	....
34	"	.....	115.14	35	23	21	Blaine.....	Feb.	5	1895	205	....
35	"	.....	15	15	27	29	Cherry	June	12	1895	.....	18
36	"	.....	20	29	24	24	Blaine.....	June	25	1895	.....	51
37	"	.....	8.57	33	27	28	Cherry	Aug.	7	1895	.....	103
38	"	.....	10	27	27	28	"	Aug.	9	1895	.....	105
39	"	.....	51.43	27	23	22	Blaine.....	Sep.	10	1895	.....	152
40	"	.....	100	25	19	14	Valley.....	Oct.	25	1895	.....	165
41	"	.....	5.71	5	25	26	Cherry	Nov.	13	1895	.....	169
42	"	.....	20	21	26	27	"	Nov.	14	1895	.....	187
43	"	.....	35	4	25	26	"	Nov.	19	1895	.....	190
44	"	.....	20	27	27	28	"	Feb.	10	1896	.....	253
45	Power	.....	250	19	21	16	Garfield	April	8	1896	.....	282

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Loup river N.Br	Tzschuck Canal Co....	Taylor.....	Tzschuck Canal.....	1
"	Keller & Co.....	Compton ...	Oliver Ditch.....	2
"	Davenport, M. D	Omaha	Loup Triangle Canal.	3
"	Dowell, T. E..	Pullman....	Top Ditch.....	4
"	Smith, W.....	Burwell.....	High Divide Ditch...	5
"	Bennett, I. I.....	Hastings....	Ord Elec. L. & P. P...	6
Loup riv. Mid Br	Sherman Co. Ir. Water, Pr. & Imp. Co.....	Loup City..	Sherman County Can.	7
"	Middle Loup Valley Irr. Canal Co.....	Sargent.....	Mid. Loup Val. Irr. C.	8
"	Douglas Grove Irr. Dist	Wescott	Wescott Irr. Ditch ...	9
"	Sherman Co. Irr. W. Pr. & Imp. Co.....	Loup City ..	Sherman Co. Canal...	10
"	Thedford Irr. & Pr. Co.	Thedford ...	Thedford Ditch.....	11
"	Purdum, J. W.....	" ...	Norway Irr. Ditch....	12
"	Lillian Precinct Irr. D. & Power Co.....	Gates.....	Lillian Prec. Irr. D...	13
"	Butcher, A., Greible, B	"	Butcher & Greible D.	14
"	Grier, P.....	Seneca	Grier Irr. D.....	15
"	Jewett, L. A.....	Broken Bow	Jewett's Ditch.....	16
"	Kenyon, C. T., Harris, L. H.....	Boelus	Howard C.W. P. & I. C	17
"	Harris, L. H	Dunning ...	Harris Canal.....	18
"	Patton, J. A.....	Ord	Arcadia Canal.....	19
"	Grier, Peter.....	Seneca	Mid. Loup River D...	20
"	Sargent Canal Co.....	Sargent.....	Sargent Canal.....	21
"	Webster, L.....	Wescott	Webster Canal	22
"	Webster, L.....	"	Webster Canal Ext'n.	23
"	Sargent, R. H.....	Walworth ..	The Walworth Mills..	24
"	Tillson, W. Z.....	Pool s Sid'g	Tillison Ditch.....	25
"	McMillan, J. M.....	Thedford....	L. C. Ditch.....	26
Loup R., S. Br	Boblitz, E. J.....	Tuckerville.	Boblitz Ditch	27
"	Boblitz, E. J.....	"	Boblitz Ditch	28
"	Callaway Mill Co.....	Callaway ...	.....	29
"	Holliday, C. T	Broken Bow	Holliday Canal.....	30
"	South Loup Irr. Co....	Callaway ...	South Loup Canal....	31
"	Brown, A. D	Milldale....	A. D. Brown Canal...	32
"	Brown, A. D	"	A. D. Brown Canal...	33
"	Hartzell, B. F.....	Logan.....	Hartzell's Ditch.....	34
Muddy creek ..	Penn, C.....	Broken Bow	Penn's Irr. Ditch.....	35
" ..	Conley, J. W	"	J. W. Conley Irr. Pl't.	36
" ..	Benson, Wm. C.....	Litchfield...	Litchfield Mills.....	37
Platte river	Fremont C. & P. Co...	Fremont....	Fremont Canal.....	38
"	Keene, Lewis M.....	" ...	Fremont Pr. Canal...	39
Platte and Elkh	Seymour Park Can. & Water Power Co.....	Omaha	Seymour Park Canal .	40

STREAMS IN DIVISION 2-A—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	242.86	30	22	19	Loup.....	June	5	1896	.....	301
2	"	.....	7	16	26	27	Cherry	July	13	1896	.....	326
3	"	.....	242.86	35	17	12	Greeley.....	Jan.	13	1897	.....	367
4	"	.....	1.71	15	28	35	Cherry.....	April	15	1897	.....	386
5	"	.....	20	24	21	17	Loup.....	Aug.	27	1897	.....	403
6	Power	.....	250	9	19	14	Valley	Sep.	27	1901	.....	637
7	"	.....	125	26	17	16	"	Fall of	..	1888	229	....
8	Irrig..	.....	560.29	15	21	22	Blaine.....	June	6	1894	202	....
9	"	.....	83.57	15	19	18	Custer.....	Aug.	8	1894	214	....
10	"	.....	244	26	17	16	Valley.....	Aug.	13	1894	229	....
11	"	.....	43	4	23	29	Thomas	Aug.	25	1894	198	....
12	"	.....	2.86	31	24	29	"	Sept.	8	1894	199	....
13	"	.....	140	30	21	21	Blaine.....	Oct.	19	1894	204 216	....
14	"	.....	18.29	36	20	21	Custer.....	Feb.	17	1895	220	....
15	"	.....	5	20	24	30	Thomas	June	10	1895	.....	10
16	"	.....	4.29	30	22	24	Blaine.....	Aug.	12	1895	.....	113
17	"	.....	65	30	13	12	Howard	Dec.	5	1895	.....	200
18	"	.....	21.42	16	22	25	Blaine.....	Feb.	21	1896	.....	248
19	"	.....	20	16	17	16	Valley.....	Mar.	6	1896	.....	262
20	"	.....	25	21	24	30	Thomas	Mar.	29	1896	.....	281
21	"	.....	29	12	19	19	Custer.....	Sept.	28	1897	.....	412
22	"	.....	1.71	20	19	17	"	Mar.	5	1898	.....	442
23	"	.....	8.57	20	19	17	"	May	3	1899	.....	505
24	Power	.....	27	35	20	20	"	Aug.	16	1900	.....	573
25	Irrig..	.....	15.57	29	12	15	Buffalo	Dec.	28	1894	236	....
26	"	14	.....	12	23	28	Thomas	June	12	1901	.....	*619
27	"	.....	.50	10	14	21	Custer.....	Jan.	17	1895	219	....
28	Power	.....	20	10	14	21	"	Jan.	17	1895	219	....
29	"	83	.....	2	15	23	"	.....	..	....	*988	....
30	Irrig..	.....	2.29	25	17	25	"	July	5	1895	.....	62
31	"	.....	71.43	6	16	24	"	Feb.	6	1896	.....	229
32	"	.....	4.57	31	17	24	"	Feb.	23	1897	.....	363
33	Power	.....	60	31	17	24	"	Feb.	23	1897	.....	363
34	Irrig..	.....	.37	27	18	26	Logan.....	May	18	1897	.....	390
35	"	.....	.50	33	17	20	Custer.....	Aug.	14	1894	215	....
36	"	.....	.50	32	17	20	"	Feb.	17	1896	.....	236
37	Power	54	.....	33	14	16	Sherman ...	.....	..	....	*999	....
38	P. & I.	.....	2500	30	17	4E	Butler.....	June	21	1895	.....	40
39	"	2500	.....	30	17	4E	"	Jan.	2	1900	.....	*530
40	I. & P.	.....	180 I 1500P	1	16	8E	Dodge.....	Oct.	25	1898	.....	480

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Platte river	Baum, J. E.....	Omaha	Omaha Pr. Canal.....	1
Prairie creek...	Stires, J. D.....	Columbus...	Prairie Creek Ditch ..	2
Shell creek	Schmitt, P.....	" ..	Schmitt's Irr. Canal..	3
"	Schmitt. P.....	" ..	Schmitt's Irr. Canal..	4
"	Gottberg, M.....	" ..	Gottberg Irr. Pl.....	5
"	Hill, J. N.....	Schuyler ...	Colfax Canal.....	6
"	Hill, J. N.....	" ...	Colfax Canal Ext'n ..	7
Spring creek...	Hendryx, H.....	Monroe.....	Hendryx Ditch	8
Victoria creek..	Daily, Gilligan & Co...	Anselmo....	Victoria Irr. Plant....	9
" ..	Victoria Ditch Ass'n...	Gates.....	Victoria Ditch.....	10
" ..	Laughran, T., Bell, I. P	New Helena	Laughran & Bell D...	11

STREAMS IN DIVISION 2-A—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	I. & P.	2000	.....	1	16	8	Dodge.....	Aug.	16	1900	.....	*572
2	Irrig..	.....	8	27	16	5	Nance.....	May	6	1901	.....	613
3	"	.....	3	19	18	1	Platte	Dec.	17	1894	292	....
4	Power	.....	30.50	19	18	1	"	Dec.	17	1894	292	....
5	Irrig..	.....	1	24	18	1	"	June	6	1895	.....	2
6	"	.....	28.57	35	18	3E	Colfax.....	Sept.	11	1895	.....	156
7	"	.....	7.43	36	18	3E	"	Mar.	20	1896	.....	288
8	"	.....	1.33	2	17	3	Platte	June	25	1894	290	....
9	"	.....	2.29	1	19	21	Custer.....	Mar.	17	1894	210 212	....
10	"	.....	4.29	1	19	21	"	July	17	1894	213	....
11	"	.....	4	3	19	21	"	Sept.	22	1894	217	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Big Cottonwood	Hansberry, Jon. T.....	Bloomingt'n	Bloomington Mill R..	1
"	Zulauf, Chas. E.....	Ravenna....	" ..	2
"	Zulauf, Chas. E.....	"	" ..	3
Buffalo creek..	Allen, N. J.....	Haigler.....	Allen & Larned Ditch	4
"	Porter, J. R. & Sons...	"	Porter & Sons' Ditch.	5
"	Moore, Eliza	"	Moore Ditch.....	6
"	Moore, Eliza	"	"	7
Center creek...	Gregory, A. B., Garrett, P. C.....	Franklin ...	Gregory Ditch.....	8
"	Bishop, D. L., Conkling, Jas. Jr.....	"	Center Creek D. No. 1	9
"	Barber, F. W.....	"	Barber Ditch.....	10
"	Bishop, D. L.....	McCook	Bishop's Ditch.....	11
"	Rose, C. H.....	Franklin ...	Rose Ditch	12
Coates creek....	Burton, R. D.....	"	.....	13
Cook creek	Sharpnac, W. A.	Alma.....	Sharpnac Ditch.....	14
Crooked creek.	Kaley, C. H.....	Red Cloud..	Fish Pond.....	15
Driftwood creek	Walsh, Patrick.....	McCook	Driftwood	16
"	Stock, F. A.....	Falls City...	Stock's Ditch	17
"	Wasson, Chas. A.....	McCook	Wasson Pump Plant..	18
Fox creek	Phoenix Ins. Co.....	Htf'd, Conn.	.....	19
Frenchman R..	Fisher, Polly & Co.....	Wauneta ...	Wauneta Mills	20
"	James, R. P.	Champion...	Champion Mills.....	21
"	McGillen, W. J.....	Imperial....	Aberdeen Ditch	22
"	McGillen, W. J.....	"	Harlem Ditch.....	23
Frenchman Riv and Stinking Water creek..	Culbertson Irr. & Water Pr. Co.....	Culbertson..	Culbertson Irrig. and Water Pr. Canal....	24
Frenchman R..	Chase Co. Land & L. S. Co.....	Champion...	Champion Water Pr. and Irr. Ditch.....	25
"	McGillen, W. J.....	Imperial....	Aberdeen Ditch	26
"	Farmers Canal Co.....	Culbertson..	Farmers' Canal	27
"	Fuller, C. D.....	Imperial....	Fuller Ditch	28
"	River Side Canal & Irrigation Co.....	Culbertson..	Riverside Canal.....	29
"	Carrington, L. J., L. C. Blount.....	" ..	Frenchman Val. Can.	30
"	Hagerman, J., Hagerman, Wm.....	Hudson	Hagerman Ditch.....	31
"	Gould, Wilson S.....	Omaha.....	Gould or Harlem D ..	32
"	Grant, Allen	Imperial....	Grant or Harlem D...	33
"	Maranville, E., Overtree, M., Beard, B. ..	Lamar.....	Maranville Ditch.....	34
"	Wise, J. S.....	Hudson.....	Wise Ditch	35

STREAMS IN DIVISION 1-B.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Power	.....	.50	25	2	16	Franklin ...	Dec.	31	1881	185	....
2	"	.....	6	25	2	16	" ...	Nov.	23	1898	.....	483
3	Irrig..	.....	1.43	25	2	16	" ...	Nov.	23	1898	.....	483
4	"	.....	6	18	1	40	Dundy	Oct.	16	1890	117	....
5	"	.....	2.86	1	1	41	"	Nov.	26	1890	171	....
6	"	.....	3.43	26	2	41	"	Oct.	4	1895	.....	170
7	"	.....	2	...	2	41	"	Oct.	4	1895	.....	171
8	"	.....	4	1	1	15	Franklin ...	Aug.	11	1894	182	....
9	"	.....	2	22	2	15	" ...	Dec.	12	1895	.....	196
10	"	.....	2	1	1	15	" ...	April	3	1896	.....	285
11	"	.....	1.43	15	2	15	" ...	Dec.	10	1900	.....	590
12	"	.....	.29	36	2	15	" ...	Jan.	10	1902	.....	648
13	"	.....	.71	33	2	14	" ...	March	6	1899	.....	501
14	"	.....	1	4	1	18	Harlan.....	Feb.	21	1896	.....	251
15	F sh..	.....	1	1	1	11	Webster	May	7	1902	.....	605
16	Irrig..	.....	1.71	1	2	30	Red Willow.	April	20	1894	107	....
17	"	.....	1.14	33	2	31	Hitchcock ..	March	26	1897	.....	388
18	"	.....	.86	12	2	30	Red Willow.	Jan.	14	1898	.....	431
19	"	.....	1	29	9	28	Lincoln.....	Feb.	14	1896	.....	234
20	Power	37.45	.....	11	5	36	Chase	July	31	1886	*178	....
21	"	.....	.....	21	6	39	"	Dec.	31	1887	*179	....
22	Irrig..	.....	2	3	5	38	"	July	1	1888	50	....
23	"	.....	2	1	5	38	"	July	1	1888	56	....
24	"	.....	215	31	5	33	Hayes.....	May	16	1890	24 25 29 30	....
25	"	.....	64.86	23	6	40	Chase	Dec.	23	1890	47	....
26	"	.....	.50	3	5	38	"	Feb.	2	1891	50	....
27	"	.....	10	11	3	32	Hitchcock ..	Dec.	19	1893	10	....
28	"	.....	25	4	5	36	Chase	June	12	1894	62	....
29	"	.....	12	33	4	32	Hitchcock ..	July	28	1894	18	....
30	"	.....	10	32	5	33	Hayes.....	Aug.	23	1894	38	....
31	"	.....	1.29	24	5	35	"	Aug.	27	1894	39	....
32	"	.....	2	1	5	38	Chase	Oct.	9	1894	67	....
33	"	.....	2	3	5	38	"	Oct.	16	1894	68	....
34	"	.....	6	12	6	41	"	Dec.	8	1894	70 71	....
35	"	.....	2	15	5	35	Hayes.....	Dec.	28	1894	42	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Frenchman R..	Gurnsey, D. & Co.....	Wauneta....	N. Side Gurnsey D...	1
"	Gurnsey, D. & Co.....	"	S. Side Gurnsey D...	2
"	Inman, N.....	Champion ..	Inman Ditch.....	3
"	Daschosfsky, G.....	Lamar.....	Lamar Rolling Mill ..	4
"	Cunningham, A.....	Imperial....	Gilly Ditch.....	5
"	Sheeks, D. P.....	Beverly	Goker Ditch.....	6
"	McAuliffe, J.....	Imperial....	John McAuliffe Ditch.	7
"	Locker, J. H.....	Hudson	Locker Ditch.....	8
"	McGillen, W. J.....	Imperial ...	McGillen Ditch	9
"	Leachey, A. A.....	Lamar	Bussell's Mill.....	10
"	Grant, J. S.....	Imperial ...	John Grant Ditch....	11
"	North Side Irr. D. Co..	" ...	North Side Irr. Ditch.	12
"	Farmers Canal Co.....	Culbertson .	Farmers Canal.....	13
"	Shallenberger, P. H...	Imperial ...	Shallenberger Canal .	14
"	Inman Ditch & Irr. Co.	" ...	Inman Ditch.....	15
"	Hoke, J. A.....	Champion ..	Creamery.....	16
Horse creek ...	Davenport, H. W., and Nesbit, J. M.....	Ives.....	Horse Creek Ditch...	17
"	Pringle, Esther L.....	"	Pringle Ditch.....	18
Indian creek...	Thompson & VanSickle	Benkleman .	Thompson&VanS ckle	19
"	Kimsey, J. W., Kimsey, C. C.....	"	Kimsey Ditch.....	20
"	Wilson, Ed	Stratton	Wilson Ditch.....	21
"	Chamberlain, J. C.....	Max	Chamberlain Ditch...	22
"	Chamberlain, J. C.....	Max	Last Resort.....	23
Lost creek.....	Pickard, J.....	Bloomington	Catfish Ditch.....	24
"	Pickard, J.....	"	Pickard Ditch	25
Medicine creek	Rodwell, E. C., and Cambridge Mill'g Co.	Cambridge .	.....	26
"	Sanders, John L.....	Stockville ..	Sanders Irr. Plant....	27
"	Phillips, R. O.....	Lincoln.....	Curtis Lake.....	28
Methodist creek	Deans, B. A.....	Alma.....	.....	29
Muddy creek ..	Phillips, F. C.....	Max	Phillips Ditch	30
Peppermint Ck.	Betts, N. O.....	Bloomington	Betts Ditch.....	31
Red Willow Ck.	Holland, L. J.....	Indianola ..	L. J. Holland Ditch..	32
"	Helm, John F.....	Red Willow.	.....	33
"	Moore, Wm. H.....	Indianola...	.....	34
Red Willow Lk.	Cooper, James.....	Wallace	.....	35
"	Cooper, James.....	Dickens	Red Willow Lake C..	36
Republican R..	Carson, Andrew.....	McCook	Carson Ditch No. 1...	37
"	Trites, W. H. Davenport, H. W.....	Culbertson .	Trites-Davenport C...	38
"	McCook I. & W. P. Co.	McCook	C. H. Meeker Irr. & Water Power Canal.	39
"	Trenton Farmers Irrigation Association	Trenton	Trenton Farmers I. D.	40

STREAMS IN DIVISION 1-B—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	5	3	5	37	Chase	Jan.	14	1895	74	....
2	"	.....	24	10	5	37	"	Jan.	14	1895	75	....
3	"	.....	1.50	17	6	40	"	Feb.	28	1895	79	....
4	Power	all.	.....	18	6	40	"	.....	..	....	*1013	....
5	Irrig..	.....	2	31	6	38	"	June	11	1895	.....	13
6	"	.....	2.86	8	4	33	Hitchcock..	June	24	1895	.....	47
7	"	.....	1.57	4	5	37	Chase	July	3	1895	.....	59
8	"	.....	1	24	5	35	Hayes	Aug.	1	1895	.....	93
9	"	.....	2.86	6	5	37	Chase	Aug.	26	1895	.....	131
10	Power	all	.....	18	6	40	"	Aug.	30	1895	.....	*134
11	Irrig.	.....	1	1	5	38	"	Sept.	10	1895	.....	154
12	"	.....	2.86	21	6	39	"	Feb.	25	1896	.....	246
13	"	.....	100	11	3	32	Hitchcock..	Dec.	9	1896	.....	362
14	"	.....	3	25	6	39	Chase	Dec.	21	1897	.....	423
15	"	.....	10	17	6	40	"	Feb.	10	1898	.....	436
16	Power	.....	34.4	21	6	39	"	Dec.	12	1900	.....	591
17	Irrig..	.....	1.86	23	1	39	Dundy	Aug.	31	1885	159 173	....
18	"	.....	2.14	11	1	39	"	Jan.	12	1897	....	364
19	"	.....	1.43	8	2	37	"	June	20	1895	....	237
20	"	.....	1	10	2	37	"	June	20	1895	.....	261
21	"	.....	4.71	23	2	36	"	June	22	1895	.....	268
22	I & fish	.....	.06	18	2	36	"	Oct.	4	1895	.....	240
23	"	.....	1.14	12	2	37	"	Oct.	19	1895	.....	185
24	Irrig..	.....	.36	10	1	15	Franklin ...	Jan.	2	1902	.....	646
25	"	.65	.....	10	1	15	" ...	June	12	1902	.....	*673
26	Power	.....	68	29	4	25	Furnas	Dec.	31	1878	92 93	....
27	Irrig..	.....	1.43	27	7	27	Frontier	Feb.	8	1895	83	....
28	W. S. & P.	.....	.....	32	8	28	"	.....	..	....	*364	....
29	Irrig..	.....	2	2	1	18	Harlan	Feb.	14	1901	.....	601
30	"	.....	2.14	2	2	36	Dundy	June	19	1895	.....	235
31	"	.....	.43	28	2	15	Franklin ...	Jan.	13	1898	.....	430
32	"	.....	35	16	3	28	Red Willow.	Jan.	23	1891	95	....
33	"	.....	2	17	3	28	"	Feb.	18	1895	111	....
34	Power	.....	.....	16	3	28	"	Jan.	1	1886	181	....
35	Irrig..	.....	2	36	9	33	Lincoln	Dec.	20	1893	647	....
36	"	.....	2.14	36	9	33	"	August	30	1895	.....	249
37	"	.....	1.43	27	3	30	Red Willow.	July	1	1888	103	....
38	"	.....	7	20	3	31	Hitchcock..	Dec.	18	1890	3	....
39	"	.....	143	15	3	31	" ..	Dec.	22	1890	4, 9 8, 7	....
40	"	.....	32	10	2	34	" ..	Dec.	24	1890	5	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Republican R..	Carson, Andrew.....	McCook....	Carson Ditch No. 2...	1
"	Cambridge & Arapahoe Irr. & Imp. Co.....	Crete.....	C. & A. I. & I. Co. D.	2
"	Republican River I. Co.	Benkelman .	Republican R. I. Co. D.	3
"	White, G., Larned, W. H.	Haigler	White & Larned D...	4
"	Marr, Lorenzo.....	Culbertson..	Marr Ditch	5
"	Anderson, Anders	Benkelman .	Anders Anderson D ..	6
"	Frey, J. W.....	Trenton	Grovert & Frey Ditch	7
"	Groesbeck & Cannon ..	Max.....	Groesbeck & Cannon Ditch.....	8
"	Thomas, A. J.....	Haigler.....	Thomas Ditch.....	9
"	Ballard, Henry L.....	Oxford.....	Ballard Ditch	10
"	Byfield, William.....	McCook....	Byfield Ditch	11
"	Wilcox, F. S.....	"	Wilcox Ditch	12
"	Delaware-Hickman D. Co.....	Benkelman .	Delaware-Hickman D.	13
"	Allen, E. M., Allen, H. P.....	Arapahoe...	Allen Irr. Ditch.....	14
"	Benedict, I.....	Culbertson..	Benedict Ditch.....	15
"	Anderson, C., Anderson, A	Benkelman .	Anderson Bros.' Ditch	16
"	Nelson, O. F.....	Stratton	Nelson Irr. Ditch	17
"	Pickering, J.....	Trenton	North Side Pioneer Ir. Ditch.....	18
"	Spooner, J. A.....	Ives.....	Private Ditch	19
"	Harmon, W. H.....	McCook....	Harmon Ice Pond D..	20
"	Walsh, Patrick.....	"	P. Walsh Canal.....	21
"	Dundy Co. Irr. Co.....	Benkelman .	Dundy Co. Irr. Ditch.	22
"	Neighbor, E. C.....	" .	Neighbor Ditch.....	23
"	Rep. River Irr. Co.....	" .	Rep. River Irr. Canal	24
"	Riverside Ditch Co	" .	Riverside Ditch.....	25
"	McDonald, J. A.....	" .	McDonald Ditch.....	26
Rep. R. N. Fk.	Karr, J. W.....	" .	Karr's Ditch.....	27
Rep. R. S. Fk .	Brown, W. A.....	Haigler.....	Sand Point Ditch Co .	28
Rock creek	Highland, E. F., Bonno, A. B., Phelan, J. R., Williams, R.....	Denver, Col.	Phelan Ditch	29
"	Owens, J. S., Owens, E. E.....	Ives.....	Owens' Ditch.....	30
"	Rock Creek Ditch Co..	"	Rock Creek Ditch Co.	31
Sappa creek....	Wheeler, Matilda E ...	Precept.....	.....	32
"	Zulauf, Geo. W.....	Stamford ...	Stamford Mills.....	33
Spring Creek ..	Callihan, Oscar.....	Benkelman .	Benkelman Ditch	34
" ...	Hatcher, Minnie E	Imperial....	Hatcher Ditch	35
Stinking Wat. C	Chase Co Land & Live Stock Co.....	Beatrice	Chase Co. Land & L. Stock Co. Ditch 2..	36

STREAMS IN DIVISION 1-B—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Irrig..	.....	18	27	3	30	Red Willow.	May	5	1891	102	....
2	"	.....	170	28	4	25	Furnas.....	Aug.	26	1891	89	....
3	"	.....	30	29	1	38	Dundy	May	2	1892	147 148	....
4	"	.....	3	22	1	40	"	April	29	1893	150	....
5	"	.....	4.29	16	3	31	Hitchcock..	Jan.	22	1894	11	....
6	"	.....	2	1	1	37	Dundy.....	Jan.	26	1894	151	....
7	"	.....	1	4	2	33	Hitchcock..	Jan.	29	1894	13	....
8	"	.....	10	10	1	37	Dundy.....	Mar.	27	1894	153	....
9	"	.....	2	24	1	40	"	June	5	1894	154	....
10	"	.....	8	8	3	21	Furnas.....	June	9	1894	91	....
11	"	.....	12	23	3	29	Red Willow.	June	11	1894	108	....
12	"	.....	4.50	32	3	29	" .	Oct.	4	1894	.....	109
13	"	.....	20	17	1	37	Dundy,.....	Jan.	7	1895	157	....
14	"	.....	14	2	3	26	Red Willow.	Jan.	26	1895	110	....
15	"	.....	2.86	19	3	31	Hitchcock..	June	24	1895	.....	43
16	"	.....	7	2	1	37	Dundy.....	Nov.	13	1895	.....	193
17	"	.....	10	19	2	34	Hitchcock..	Feb.	17	1896	.....	241
18	"	.....	10	9	2	34	" .	Mar.	14	1896	.....	266
19	"	.....	1	25	1	40	Dundy.....	Oct.	7	1897	.....	413
20	Ice...	.....	10	32	3	29	Red Willow.	Jan.	22	1900	.....	535
21	Irrig..	.....	11	35	3	30	" .	Jan.	31	1900	.....	537
22	"	.....	45	24	1	39	Dundy.....	Nov.	22	1890	118	....
23	"	.....	2.86	24	1	39	"	Mar.	18	1891	133	....
24	"	50	.....	29	1	38	"	Aug.	22	1900	.....	*577
25	"	.....	13	29	1	37	"	Aug.	5	1894	156	....
26	"	.....	1.71	36	1	38	"	Nov.	13	1901	.....	644
27	"	.....	2	20	1	37	"	July	28	1894	155	....
28	"	.....	11	11	1	42	"	Sept.	25	1890	115	....
29	"	.....	4.29	17	1	39	"	Dec.	31	1883	138	....
30	"	.....	1.29	31	2	39	"	June	20	1895	.....	265
31	"	.....	1	13	2	40	"	Dec.	18	1899	.....	526
32	"	.....	.43	13	1	22	Furnas.....	July	26	1897	.....	399
33	Power	41	.....	21	2	20	Harlan.....	.....	..	....	*997	....
34	Irrig..	.....	1.50	19	1	37	Dundy.....	Dec.	31	1896	.....	373
35	"	.....	1	3	6	36	Chase	Sept.	5	1895	.....	148
36	"	.....	2.86	10	7	38	"	Mar.	10	1894	57	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Stinking Wat Cr	McLain, Frank.....	Imperial....	McLain's Ditch	1
"	Chase Co. Land & Live Stock Co.....	Beatrice	Chase Co. Land & L. Stock Co. Ditch 7..	2
"	Chase Co. Land & Live Stock Co.....	Beatrice	Chase Co. Land & L. Stock Co. Ditch 6..	3
"	Chase Co. Land and Live Stock Company	Beatrice	Chase Co. Land and L. Stock Co. Ditch 5..	4
"	"	Beatrice	Chase Co. Land and L. Stock Co. Ditch 3..	5
"	Cummings, W. R.....	Palisade	.....	6
"	Chase Co. Land and Live Stock Company	Beatrice	Chase Co. Land and L. Stock Co. Ditch 4..	7
"	"	Beatrice	Chase Co. Land and L. Stock Co. Ditch 1..	8
Thompson Cr..	Johnson, T.....	Fairfield ...	Springdale Farm D...	9
Turkey Creek..	Wilt & Polly.....	Naponee ...	.....	10
"	Waters, E. H.....	McCook	Edison Ditch.....	11

STREAMS IN DIVISION 1-B—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	2.50	28	7	37	Chase	Sept.	24	1894	65	....
2	"	.....	4.57	36	7	37	"	Dec.	21	1894	72 175	....
3	"	.....	2	13	7	38	"	Jan.	28	1895	76	....
4	"	.....	1.50	14	7	38	"	Jan.	29	1895	77	....
5	"	.....	1.71	14	7	38	"	Jan.	29	1895	78	....
6	Power	all	.....	30	5	33	Hayes.....	.....	..	....	*44	....
7	Irrig..	.....	1.71	14	7	38	Chase	June	27	1895	.....	56
8	.....	.....	1.43	4	7	38	"	June	27	1895	.....	57
9	.....	.....	1	4	2	13	Franklin ...	Sept.	30	1895	.....	174
10	Power	.....	.....	4	1	16	"	Dec.	31	1874	*183	....
11	Irrig..	.....	5	31	4	21	Furnas	Aug.	4	1900	.....	571

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Battle Creek..	Herbison, H.....	Madison ...	Battle Ck Roll Mills	1
Cache Creek..	Tromershauser, J. A.	Ewing	.....	2
Dry Creek....	Carlon, T.....	O'Neill	Carlon D.....	3
"	Benedict, E. H.....	"	Benedict D.....	4
Elkhorn River	Rehberg, F. X. & Co..	Atkinson ..	Atkinson Mill	5
"	Elkhorn Irri. Co.....	O'Neill	Elkhorn Irr. Can...	6
"	Davis, J.....	"	Davis Ditch	7
"	Carlon, T.....	"	Carlon Ditch No 1..	8
"	Carlon, T.....	"	Carlon Ditch No 2..	9
"	Ashton, W. B.....	"	.....	10
"	Cain, N. E. et al.....	"	.....	11
"	Leisy, H.....	Wisner ...	Elkhorn Ranch Can	12
"	Leisy, H.....	"	"	13
"	Murphy, J. G., Rehberg, F. X.....	Atkinson ..	Atkinson Milling & Irr. Co. Ditch....	14
"	Atkinson Mill, Grain & St. Co.....	Atkinson ..	.....	15
"	Stanton Water Power Co.	Stanton ...	.....	16
Elkhorn, N fk.	Sugar Cy. Cereal....	Norfolk ...	Sugar Cy. Cereal....	17
Elkhorn, S br.	Smith, G. F.....	Ewing	Clover Dale Ditch..	18
"	Sanders, M. F.....	"	Flouring Mill	19
Oak Creek ...	Eiche, Herman.....	Lincoln ...	Eiche Irrig. Plant..	20
Platte & Elk..	Rosewater, A.....	Omaha	Omaha Power Plant	21
"	Riley, J. E.....	"	Plattsmouth P. Plant	22
Springs	Newton Land Co....	"	Spring Brook Aqueduct	23
Silver Creek..	Armour & Co.....	So. Omaha.	Armour & Co. Res'rv	24
"	Swift & Co.....	Chicago ...	Swift & Co. Res'rv..	25
Union & Taylor Creeks..	Bley, Louis G.....	Madison ...	Union Val. R. Mills.	26
Wahoo Creek.	Swift & Co.....	Omaha	Swift & Co. Res'rv..	27

STREAMS IN DIVISION 2-B.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Power	.....	10.67	36	24	3	Madison....	Nov.	12	1898	.....	484
2	Irrig..	.....	5.71	30	26	9	Holt	April	20	1898	.....	450
3	"	.....	2.29	18	28	11	Holt	June.	5	1895	.....	33
4	"	.....	2.29	18	28	11	Holt	Jan.	31	1896	.....	225
5	Power	.....	38.50	30	30	14	Holt	Nov.	1	1883	271	....
6	Irrig..	.....	131.43	22	29	13	Holt	Feb.	3	1894	259 263	....
7	"	.....	1.43	31	29	11	Holt	Feb.	8	1894	260	....
8	"	.....	1	32	29	11	Holt	Feb.	8	1894	261	....
9	"	.....	5	30	29	11	Holt	Feb.	8	1894	262	....
10	"	.....	.71	24	29	13	Holt	Feb.	18	1895	282	....
11	"	.....	5	32	29	11	Holt	Feb.	20	1895	283	....
12	"	.....	25	5	23	4 E	Cuming	July	15	1895	.....	77
13	Power	.....	25	5	23	4 E	Cuming	July	15	1895	.....	77
14	Irrig..	.....	2.29	30	30	14	Holt	Feb.	14	1898	.....	443
15	Power	.....	40	4	30	14	Holt	Dec.	22	1900	.....	593
16	"	.....	242	29	23	2 E	Stanton	Mar.	26	1901	.....	608
17	"	.....	100	23	24	1	Madison.	Mar.	1	1870	996	....
18	Irrig..	.....	9	10	26	9	Holt	Feb.	7	1896	.....	222
19	Power	.....	33	3	26	9	Holt	Aug.	21	1898	.....	464
20	Irrig..	.....	.71	17	10	6 E	Lancaster ..	Jan.	4	1899	.....	489
21	Power	.....	3000	19	15	10 E	Sarpy	July	9	1901	626 689	....
22	"	.....	1000	29	13	10 E	Sarpy	Sept.	12	1902	687	....
23	Irrig..	.....	1	13	14	13 E	Sarpy	June	18	1895	.....	29
24	Ice...	.....	10	7	13	9 E	Saunders ...	Oct.	18	1897	.....	415
25	"	.....	10	7	13	9 E	Saunders ...	Dec.	6	1899	.....	524
26	Power	75	.....	32	22	1W	Madison....	.....	..	....	*998	....
27	Ice...	.....	10	34	13	9 E	Saunders ...	Sept.	22	1898	.....	473

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Little Blue....	Wilson, Chas. W.....	Hastings ..	....	1
"	Philleo, E. A.....	Ayr	Philleo, D.....	2
"	Myers & Seidenburg..	Oak	Oak Mill-Race	3

STREAMS IN DIVISION 1-C.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Irrig..	.....	10	18	5	10	Adams.....	.....	..	....	*989	....
2	"	.....	10	4	5	10	Adams.....	.....	..	....	*992	....
3	Power	.....	1.43	16	3	5	Nuckolls....	.....	..	....	*991	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Abitz Creek..	Fullerton, J. B.....	Atkinson ..	Fullerton Ditch No 2	1
Antelope Ck..	Julian, A. R.....	Chadron ..	Antelope Ditch	2
Ash Creek....	Spragg, C.....	Kirkwood .	Ash Creek Ditch...	3
Ashburn Ck..	McFarland, G. W....	Valentine .	....	4
Bear Creek...	Skinner, T.....	Sp'gview ..	Skinner Ditch	5
"	Cedarburg, P.....	"	Cedarburg Ditch Nos 1 and 2.....	6
Beaver Creek.	Hughes, F.....	Dustin	Hughes Ditch	7
Beeman Creek	Barnard, C. O.....	Sp'gview ..	Barnard Ditch	8
"	Beeman, J. D.....	"	Beeman Ditch	9
"	Rickman, A. L.....	"	Beeman & Rickman.	10
Benner Creek.	Gillespie, B. S.....	O'Neill	Benner Creek Ditc	11
"	Progress Irr. & Colonization Society.....	"	Progress 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	Robertson's Ditch...	16
"	Roberts, E. T.....	"	Robert's Ditch	17
Bluebird Ck..	Murphy, P.....	O'Neill	Murphy's Ditch	18
"	Bradt, Ella.....	"	Bradt Irr. Canal....	19
Boardman Ck.	Lee, Joseph S.....	Ch'terfield .	Lee Irr. Ditch.....	20
"	Lee, Joseph S.....	Kennedy ..	Lee Ditch	21
"	Beekley, Samuel S...	"	Beekley Irr. Ditch..	22
"	Ganow & Sons.....	"	Ganow & Sons.....	23
Box Butte Od	Sandoz, Wm.....	Grayson ..	Billy's Ditch	24
Brush Creek..	Neb. Townsite Co....	Perry	Brush Creek Pr. Co	25
"	Poynton, G. W.....	Omaha	....	26
Brush ck E Br	McCarthy, M. H., McCarthy, W. A.....	O'Neill	McCarthy No. 1....	27
Brush, W. Br.	McCarthy, M. H., McCarthy, W. A.....	"	McCarthy No. 2.....	28
Brush Creek..	Johnson, J. V.....	Celia	Brush Ditch	29
"	Armstrong, T. S.....	Butte	Brush Creek Pr. Co.	30
Burton Creek.	Mutz, Otto.....	Sp'gview ..	Burton Creek Ditch.	31
"	Mutz, Otto.....	"	One Trip Irr. Ditch.	32
"	Crampton, C. F.....	Lutes	Burton Creek Ditch.	33
"	Wiley, James.....	"	Wiley Ditch	34
Cedar Creek..	Bruce, Andrew.....	Penbrook .	Cedar Canon Mills.	35
Cedar Gulch..	Taft, R. L.....	Brodie	Cedar Ditch	36
Cottonwood ck	Morrissey, Tim	Dunlap	Morrissey's D.....	37
"	Fendrich & Lichter..	"	Fendrick & Lichte D.	38
"	Fenner, B. L.....	"	Beauty Ditch	39
"	Vifquain, E. T.....	Marlbank .	Vifquain Ditch	40
Crooked Ck..	Mutz, Otto.....	Sp'gview ..	....	41
"	Mutz, Otto.....	"	Crooked Ck. Ditch..	42
Cross Creek..	Hutchison, W. H.....	Penbrook .	Hutchison	43
Cub Creek....	Tissue & Patterson..	Sp'gview ..	Tissue & Patterson D	44

STREAMS IN DIVISION 2-C.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	.36	18	30	13	Holt.....	March	23	1896	.....	278
2	"	.....	1	20	32	40	Cherry	Aug.	19	1895	.....	119
3	"	.....	2.14	10	31	17	Rock.....	Feb.	10	1896	.....	233
4	"	.....	0.57	27	34	26	Cherry	June	17	1902	.....	676
5	"	.....	.22	15	32	21	Keya Paha..	June	20	1888	609	....
6	"	.....	.07	3	32	21	Keya Paha..	Oct.	3	1898	.....	479
7	"	.....	.86	18	33	15	Holt..... ...	Aug.	22	1895	.....	124
8	"	.....	.43	21	32	20	Keya Paha,.	June	1	1892	603	....
9	"	.....	1	23	32	20	"	May	20	1892	620	....
10	"	.....	.29	23	32	20	"	July	25	1895	613	....
11	"	.....	1.14	31	33	11	Holt..,.....	Jan.	6	1896	.....	213
12	"	.....	1.14	32	33	11	"	June	29	1896	.....	320
13	"	.....	2.57	27	30	22	Brown	Aug.	21	1895	.....	121
14	"	.....	7	16	31	21	"	Feb.	7	1896	.....	221
15	"	.....	1	20	31	11	Holt	Aug.	18	1894	267	....
16	"	.....	.20	32	31	11	"	Aug.	28	1894	270	....
17	"	.....	.43	29	31	11	"	June	25	1896	.....	318
18	"	.....	1	26	30	11	"	Sept.	7	1894	273	....
19	"	.....	1.14	26	30	11	"	Dec.	14	1895	.....	195
20	"	19	.....	6	29	33	Cherry	.....	..	....	*573	....
21	"	19	.....	6	29	33	"	March	28	1896	.....	*275
22	"	.....	1.71	13	30	31	"	July	14	1897	.....	398
23	"	.....	2	19	30	31	"	March	31	1899	.....	503
24	"	.....	1.14	29	29	45	Sheridan ...	Jan.	13	1900	.....	533
25	Power	.....	15	23	33	13	Holt	Sept.	28	1898	.....	474
26	Power	35	.....	23	33	13	"	Nov.	21	1901	.....	645
27	Irrig..	.....	.50	24	32	14	"	July	1	1894	264	....
28	"	.....	.63	26	32	14	"	Aug.	15	1894	266	....
29	"	.....	.71	26	32	14	"	March	26	1896	.....	272
30	Power	12 0	.....	23	33	13	"	June	21	1900	.....	*568
31	Irrig..	.....	.57	19	34	19	Keya Paha .	June	30	1895	608*b*	....
32	"	.....	2	2	33	20	"	Sept.	2	1895	.....	142
33	"	.....	.14	5	34	19	"	Sept.	9	1895	.....	150
34	"	.....	.17	8	34	19	"	Feb.	13	1896	.....	239
35	Power	.....	5	33	34	25	Cherry	Feb.	22	1897	.....	508
36	Irrig..	.....	1	14	32	16	Holt	Dec.	29	1896	.....	372
37	"	.....	.71	17	29	48	Dawes.....	Feb.	16	1895	481	....
38	"	.....	1.07	22	29	48	"	May	9	1896	.....	336
39	"	.....	1.71	22	29	48	"	Oct.	2	1900	.....	578
40	"	.....	1.14	21	35	22	Keya Paha.	April	23	1896	.....	293
41	Power	.....	3	19	34	19	"	Dec.	31	1889	608*a*	....
42	Irrig..	.....	1	19	34	19	"	June	30	1895	608*a*	....
43	"	.....	.21	8	33	24	"	Sept.	1	1888	615	....
44	"	.....	.03	16	33	22	"	June	30	1894	618	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Cub Creek....	Josiassin, S.....	Meadville .	McCumber Ditch ...	1
Cypiot Creek.	Cypiot, F. A.....	Lutes	Last Chance	2
Deer Creek...	Rush Creek Stock Co.	Rushville ..	Deer Creek Ditch...	3
Eagle Creek..	Alfs, J. D.....	Ray	100 Foot D.....	4
"	Alfs, J. D.....	"	....	5
"	Bokhof, W.....	Atkinson ..	Bokhof Ditch	6
"	Becker, S.....	"	Sam'l Becker Ditch.	7
"	Robertson, J. A.....	"	Eagle Valley Ditch.	8
"	Mann, J.....	O'Neill	John Mann's Ditch..	9
"	Bruder, J.....	Atkinson ..	Bruder Canal	10
Eagle C. N. Br	Tesch, F.....	Ray	Tesch Ditch	11
Fairfield Ck..	Kuhre, Wm. M.....	Norden ...	Kuhre's Pond	12
"	Kuhre, W. M.....	"	....	13
Gordon Creek.	Beer, Geo.....	Valentine .	Beer Canal No. 1...	14
"	Beer, Geo.....	"	Beer Canal No. 2...	15
Hay Creek...	Balch, F. C.....	Chadron ..	Balch Ditch	16
Holt Creek...	Schoetger, F. J.....	Enterprise .	Schoetger Ditch ...	17
"	Carnahan & Webster.	"	Carnahan & W. C..	18
Holt ck, E. Br	Akers, J. W.....	Sp'gview ..	Akers Ditch	19
Horse Head ck	Bruce, A.....	Penbrook .	Bruce Ditch	20
Horse Shoe L.	Hortz, A.....	Gordon ...	Hortz Canal	21
Huggins Ck..	Soper, H. K.....	Enterprise .	Soper Ditch	22
Jewett Creek.	Jewett, C. P.....	Meadville .	B. L. Ditch.....	23
Jordon Creek.	Thiede, F. L.....	Enterprise .	Thiede Ditch	24
"	Lewis, Frank A.....	"	F. A. Lewis Ditch..	25
Keya Paha R.	Yocum, J. C.....	Butte	Yocum's Ditch	26
"	Lewis, S. O.....	Lutes	Keya Paha River Water Elevator...	27
"	Donason, J.....	Mills	North Side Ditch...	28
"	Anderson, H. D. & Co	McLean ...	Keya Paha Canal...	29
Lewis Spring.	Lewis, R.....	Lutes	Lewis Ditch	30
Long Pine Ck.	F., E. & M. V. R. R..	Omaha	Long Pine Pump Sta	31
Middle, E Br.	McGuire, M. W.....	Norden ...	McGuire Ditch	32
Middle, W Br.	Allen, M. M.....	"	Allen Ditch	33
Minnechaduza	Bristol, S. D.....	Valentine .	Bristol Irri. D.....	34
"	Gilman, S. F.....	Dv'port, Ia.	....	35
"	Morrissey, A. M.....	Valentine .	Minnechaduza Ditch	36
Newman Ck..	Newman, Philo.....	Norden ...	Newman Ditch	37
Niobrara Riv.	Earnest, J. W.....	Harrison ..	Earnest D. No. 1...	38
"	Earnest, J. W.....	"	Earnest D. No. 2...	39
"	Richards, B.....	Chadron ..	Lakotah Ditch	40
"	Bruce, A.....	Penbrook .	Bruce's Mill.....	41
"	McGinley, A., Stover, W. C.....	Royville ..	McG. & S. Lr. N. D	42
"	Palmer & Co.....	Marsland ..	Pioneer Ditches ...	43
"	McGinley, A., Stover, W. C.....	Royville ..	McG. & S. Lower S D	44
"	McLaughlin	Marsland .	McLaughlin D.....	45

STREAMS IN DIVISION 2-C—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	.10	28	33	22	Keya Paha..	Aug.	15	1894	589	....
2	"	.....	.10	3	34	19	"	May	7	1896	.....	295
3	"	8	.....	32	30	42	Sheridan ...	Aug.	5	1899	.....	*519
4	"	.....	.43	2	30	13	Holt.....	Sept.	11	1894	276	....
5	Power	.....	1	2	30	13	"	Sept.	11	1894	276	....
6	Irrig..	.....	2.86	6	30	13	"	Sept.	18	1894	275	....
7	"	.....	1.14	8	30	13	"	Nov.	30	1894	274	....
8	"	.....	2.29	1	30	14	"	Mar.	15	1895	280	....
9	"	.....	.71	17	30	13	"	June	19	1895	.....	37
10	"	.....	.29	19	30	13	"	Feb.	6	1896	.....	227
11	"	.....	.07	27	31	13	"	Sept.	18	1895	.....	162
12	Power	.....	25	31	33	23	Brown.....	Sept.	1	1893	612	....
13	Irrig..	.....	.14	31	33	23	Brown.....	April	1	1894	612*b*	....
14	"	.....	.71	2	31	29	Cherry.....	Feb.	27	1899	.....	497
15	"	.....	1	1	31	29	"	Feb.	27	1899	.....	498
16	"	.....	1	11	32	40	"	Aug.	10	1895	.....	110
17	"	.....	.14	32	35	20	Keya Paha..	Feb.	23	1895	595	....
18	"	.....	.14	19	35	20	" ..	Aug.	15	1895	.....	116
19	"	.....	.14	1	34	21	" ..	Aug.	1	1894	611	....
20	"	.....	.36	16	33	24	" ..	Sept.	7	1895	.....	149
21	"	.....	1	11	34	40	Cherry.....	April	13	1896	.....	287
22	"	.....	.14	21	35	20	Keya Paha..	Nov.	6	1894	592	....
23	"	.....	.71	5	32	21	" ..	Oct.	23	1894	590	....
24	"	.....	.14	34	35	20	" ..	June	25	1897	.....	395
25	"	.....	1	23	35	20	" ..	June	28	1899	.....	514
26	"	.....	1.14	23	34	15	Boyd.....	Sept.	7	1894	573	....
27	"	.....	4.29	19	35	19	Keya Paha..	Aug.	23	1895	.....	127
28	"	.....	7	35	35	19	" ..	Oct.	26	1895	.....	166
29	"	.....	5	3	34	18	" ..	Oct.	26	1895	.....	167
30	"	.....	.14	29	35	19	" ..	Aug.	30	1895	.....	139
31	Power	.....	35	6	29	20	Brown.....	June	30	1902	.....	678
32	Irrig..	.....	.71	32	33	23	Keya Paha..	June	1	1884	606	....
33	"	.....	.50	29	33	23	" ..	June	1	1891	616	....
34	"	.....	1	35	34	28	Cherry.....	July	22	1895	.....	87
35	Power	.....	35	30	34	27	"	Sept.	12	1896	.....	359
36	"	35	.....	33	35	30	Cherry	April	24	1902	.....	662*z*
37	Irrig..	.....	.21	17	33	24	Keya Paha..	July	1	1888	617	....
38	"	.....	286	9	29	56	Sioux	May	1	1885	514*a*	....
39	"	.....	214	9	29	56	"	May	15	1891	514*b*	....
40	"	.....	7.14	1	30	57	Sioux	Oct.	1	1883	554	....
41	Power	.....	60	16	33	24	Keya Paha..	April	1	1886	610	....
42	Irrig .	.....	8.21	25	29	56	Sioux	May	1	1887	513*a*	....
43	"	.....	7.14	36	29	51	Dawes.....	Aug.	1	1887	442	....
44	"	.....	1.71	25	29	56	Sioux	May	1	1890	513*b*	....
45	"	.....	7.14	9	28	52	Box Butte ..	May	1	1888	566	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Niobrara Riv.	Cook, Jas. H.....	Royville ...	Cook D. Nos. 1 & 2..	1
"	Seymour, W. W. Bigelow, W. A.....	Harrison ..	Bigelow & Seymour.	2
"	Harris, O., Neece, R.	Belle	Harris & Neece D..	3
"	Palmer & Co.....	Marsland .	Pioneer Ditches ...	4
"	Roll Mill Co.....	"	Roll Mill	5
"	Hatch, G. W., Cross, Wm. D.....	H'm'ford ..	Meridian Ditch	6
"	Wood, J. C., et al....	Marsland .	Enterprise Ditch ...	7
"	Furman, H. G.....	"	Furman Ditch	8
"	Hughes, John	"	Hughes Ditch	9
"	Johnson, B. F.....	Harrison ..	Johnson Ditch	10
"	McMannis, J., Neeland, J. F.....	H'm'ford ..	McMannis & Neeland Ditch	11
"	Fienkin, C.....	G. Rapids..	....	12
"	McCully, S. J.....	Carns	McCully Ditch	13
"	Wilson, J. A.....	Spg'view ..	Wilson Canal	14
"	Mirage Irr. Co.....	Grayson ..	Mirage Canal	15
"	Lichte, H.....	Dunlap ...	Lichte Irr. Ditch...	16
"	Warneke, H.....	Harrison ..	Warneke's Ditch ...	17
"	McGinley & Stover...	Royville ..	McG. & S. Upp. Dit.	18
"	Harris, Octave	Belle	LaBelle Ditch	19
"	Snow, L.....	Marsland .	Snow Ditch	20
"	Vincent, D. C.....	"	Excelsior Ditch	21
"	Bourrett, W.....	Harrison ..	Bourrett Ditch	22
"	Bourrett, P.....	"	Bourrett Ditch Sr..	23
"	Hughes, J.....	Marsland .	Hughes Ditch	24
"	Harris, O.....	Belle	LaBelle Ditch	25
"	Ussher, H. C.....	Hay Spgs..	Ussher Canal	26
"	Moore, B. F.....	Belle	Moore Irr. Ditch...	27
"	McConaughey, A. N..	Mirage	McCon. Ditch No. 10	28
"	McGuire, M.....	Norden ...	McCon. Canal	29
"	Peters, H. A., Waterman, C. A., and Brown, J. S.....	Hay Spgs..	Hay Springs Irr. Can	30
"	Irion Bros.	Marsland .	Irion Irr. Ditch....	31
"	Mettlen, J., Moore, J., Irion, E.....	" "	Mettlen Ditch	32
"	Vincent, D. C.....	"	Excelsior Ditch	33
"	Rickman, A. L., and Wentworth, A. A...	Sp'gview ..	Rick. & Went. Ditch	34
"	McMannis & Neel'd..	H'm'ford ..	McM. & Neeland Di	35
"	Armstrong, T. S.....	Butte	Armstrong Canal ..	36
"	Hatch & Cross.....	H'm'ford ..	Meridian Ditch	37
"	Neeland, J. F.....	"	Neeland	38
"	Hough, W. H.....	Harrison ..	Hough Ditch	39

STREAMS IN DIVISION 2-C—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	.....	3.54	1	28	56	Sioux	May	31	1891	980	....
2	"	.....	2.40	19	31	57	"	June	8	1891	510	....
3	"	.....	8.58	3	28	55	"	July	1	1892	517	....
4	Power	.....	10	31	29	50	Dawes.....	Aug.	1	1893	442	....
5	"	.....	35	5	28	51	Box Butte ..	Sept.	10	1893	970	....
6	Irrig.	.....	.57	25	29	50	Dawes.....	Jan.	10	1894	459	....
7	"	.....	5.71	28	29	50	"	Jan.	27	1894	461	....
8	"	.....	3.64	29	29	50	"	Feb.	2	1894	462	....
9	"	10	.....	1	28	52	"	.....	..	....	*987	....
10	"	.....	2.86	36	31	57	Sioux.....	May	1	1894	511	....
11	"	.....	.86	29	29	49	Dawes.....	June	15	1894	463	....
12	"	.....	1	12	33	16	Boyd	Oct.	1	1894	575	....
13	"	.....	8.57	25	32	20	Keya Paha..	Aug.	7	1894	583	....
14	"	.....	5.71	18	32	21	" " ..	Oct.	18	1894	591	....
15	"	.....	150.	26	29	48	Dawes.....	Nov.	28	1894	474	....
16	"	.....	1.43	27	29	48	"	Jan.	24	1895	479	....
17	"	.....	1.57	37	31	57	Sioux.....	Feb.	13	1895	505	....
18	"	.....	2.86	23	29	56	"	Feb.	25	1895	521	....
19	"	.....	2	6	28	54	"	March	12	1895	518	....
20	"	.....	2.86	35	29	51	Dawes.....	March	26	1895	485	....
21	"	.....	2.86	10	28	52	Box Butte...	May	15	1895	568	....
22	"	.....	2.29	33	30	56	Sioux.....	June	8	1895	.....	4
23	"	.....	1.43	29	30	55	"	June	10	1895	.....	5
24	"	.....	3.29	1	28	52	Box Butte...	June	26	1895	.....	53
25	"	.....	4.43	6	28	54	Sioux.....	July	3	1895	.....	60
26	"	.....	1.86	19	29	46	Sheridan....	July	17	1895	.....	82
27	"	.....	14	9	28	53	S oux.....	July	22	1895	.....	88
28	"	.....	3.43	26	29	47	Dawes.....	Aug.	30	1895	.....	137
29	"	.....	8	26	33	24	Keya Paha..	Aug.	30	1895	.....	138
30	"	.....	14.29	29	29	47	Dawes.....	Sept.	27	1895	.....	173
31	"	.....	5	1	28	54	Sioux.....	March	29	1896	.....	257
32	"	.....	10	4	28	54	"	April	27	1896	.....	292
33	"	.....	1	10	28	52	Box Butte...	May	29	1896	.....	344
34	"	.....	2	22	32	20	Keya Paha..	June	29	1896	.....	321
35	"	.....	2.29	29	29	49	Dawes.....	April	9	1898	.....	448
36	Power	.....	150.	9	33	13	Boyd	May	14	1898	.....	452
37	Irrig.	.....	5.14	25	29	50	Dawes.....	Aug.	29	1898	.....	469
38	"	.....	4	31	29	48	"	Dec.	11	1899	.....	529
39	"	.....	1	32	30	56	Sioux.....	Jan.	22	1900	.....	538

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Niobrara Riv.	Bourrett, J. F.....	Harrison ..	Bourrett's Ditch ...	1
"	Bourrett, J. S.....	"	J. S. Bourrett Ditch	2
"	Hughes, John	Marsland .	Hughes D. Extension	3
"	Montague, Jas.	Dunlap ...	Montague Ditch ...	4
"	Brown, J. S., et al...	Hay Spgs..	Hay Springs D.....	5
"	Dierix, Camile	Rushville .	Camile D.....	6
"	Fendrich, B.....	Dunlap ...	Chladek D.....	7
"	Niob. Irr. & W. P. Co.	Niobrara .	N. I. & W. P. Can..	8
"	Niob. Irr. & W. P. Co.	"	" ..	9
"	Fendrich, G. H.....	H'm'ford ..	Fendrich D	10
"	Fendrich, G. H.....	"	"	11
"	Himes, J. E.....	Omaha ...	Himes Pwr. P.....	12
"	Cornell, C. H.....	Valentine .	Val. Pwr. P.....	13
"	Kay, J. L.....	Marsland ..	Kay Ditch	14
"	Niob. Irr. & W. P. Co.	Niobrara ..	N. I. & W. P. Can..	15
"	Niob. Irr. & W. P. Co.	"	" ..	16
"	Niob. Irr. & W. P. Co.	"	" ..	17
Pine Creek...	Clark, J.....	Rushville .	Pine Creek Roll Mill	18
Plum Creek...	Plum Creek Canal & Irrigation Co.....	Johnst'wn .	Johnstown D	19
"	Wilbert, R.....	Ainsworth .	Wilbert Ditch	20
"	Hoefs, Gus	Johnst'wn .	Plum Ck. Roll Mills.	21
Pole Creek...	Julian, A. R.....	Chadron ..	Julian Ditch	22
Rickman Ck..	Byington, W. W.....	Spg'view ..	Byington Ditch	23
Red Bird Ck.	Breman, J. A.....	O'Neill ...	Breman Irr. Ditch..	24
Rock Creek...	Rock Creek Irrigation & Power Co.....	Mariaville .	Copeland Ditch	25
"	Eastlick, B. J.....	Carns	Necessity Ditch	26
"	Wile, H.....	Mariaville .	Wiles Ditch	27
Rock Spgs. ck	Van Koten, J.....	Sp'gview ..	Van Koten Ditch...	28
"	Moore, W. S.....	Meadville .	Moores Ditch	29
"	Wicker, S.....	Spg'view ..	Wicker Ditch	30
"	Patterson, C. C.....	"	Patterson Ditch	31
Sandy Creek..	Morrow, J. C.....	Atkinson ..	Sand Creek Ditch...	32
"	Wheeler, T.....	"	Wheeler Ditch No. 3	33
"	Pickler, W. S.....	Badger ...	Badger Ditch	34
"	Pickler, W. S.....	"	Badger Mill	35
Schlegel Ck..	Ferritt, John	Valentine .	South Side Ditch...	36
Shobe Br.....	Lamb, A. J.....	Rochester .	....	37
Spring Creek.	Townsend, M. M.....	Sp'gview ..	Townsend Ditch ...	38
"	Opperman, H. M.....	"	Opperman Dit. No. 2	39
"	Opperman, L. L.....	"	Opperman Dit. No. 3	40
"	Kuskie, A. K.....	Sparks	Garden Ditch	41
Spring Br....	Wheeler, T.....	Atkinson ..	Wheeler Ditch No. 1	42
"	Wheeler, T.....	"	Wheeler Ditch No. 2	43
Str., no name..	Grant, C. G.....	Winfield ..	Grant Ditch	44
"	Opperman, L. B.....	Sp'gview ..	Opperman Ditch ...	45
"	Conger, C. K.....	Norden ...	Conger Ditch	46

STREAMS IN DIVISION 2-C—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE S.	T.	R.	COUNTY	DATE OF PRIORITY Month	D	Yr.	Docket No.	App. No.
1	Irrig..	.....	1	29	30	56	Sioux.....	March	5	1900	.....	542
2	"	.....	2	19	30	56	"	March	17	1900	.....	546
3	"	10	.....	1	28	52	Box Butte...	April	9	1900	.....	*556
4	"	.....	1	27	29	48	Dawes.....	Sept.	27	1900	.....	575
5	"	.....	15	29	29	47	"	Jan.	7	1901	.....	595
6	"	.....	2	19	30	43	Sheridan....	Feb.	1	1901	.....	598
7	"	.....	.57	26	29	48	Dawes.....	March	18	1901	.....	607
8	Power	.....	700	34	32	7	Knox.....	April	13	1901	.....	609
9	Irrig .	.....	21.43	34	32	7	"	April	13	1901	.....	610
10	"	.....	.29	32	29	48	Dawes.....	June	1	1901	.....	616
11	"	.....	.29	32	29	48	"	June	1	1901	.....	617
12	Power	.....	1000	34	33	11	Boyd	July	27	1901	.....	628
13	"	.....	1600	27	34	27	Cherry	Jan.	29	1902	.....	652
14	Irrig .	10	.....	6	28	53	Sioux.....	May	13	1902	.....	*666
15	Power	200	.....	34	32	7	Knox.....	May	31	1902	.....	*671
16	"	900	.....	34	32	7	"	July	1	1902	.....	*679
17	Irrig.	900	.....	34	32	7	"	July	1	1902	.....	*680
18	Power	.....	32	33	30	44	Sheridan ...	June	5	1893	415	....
19	Irrig..	.....	26	4	29	24	Brown.....	Dec.	18	1894	405	....
20	"	.....	.43	35	32	23	"	May	5	1896	.....	329
21	Power	.....	20.90	11	30	24	"	Oct.	29	1900	.....	582
22	Irrig..	.....	1	28	32	40	Cherry	Aug.	19	1895	.....	120
23	"	.....	1	22	32	20	Keya Paha..	May	19	1891	582	....
24	"	.....	.43	26	30	11	Holt.....	April	8	1896	.....	284
25	I. & P.	.....	6.43	33	32	18	Rock.....	Jan.	8	1895	394	....
26	Irrig..	.....	.35	29	32	18	"	Jan.	17	1895	395	....
27	"	.....	.86	9	31	18	"	April	3	1895	397	....
28	"	.....	.07	25	33	22	Keya Paha..	Jan.	1	1885	619	....
29	"	.....	1.43	12	32	22	" ..	June	30	1887	593	....
30	"	.....	.07	24	33	22	" ..	June	12	1896	.....	346
31	"	.....	.14	31	33	21	" ..	June	12	1896	.....	347
32	"	.....	6	10	31	15	Holt.....	July	5	1895	.....	61
33	"	.....	1.14	3	31	15	"	June	24	1896	.....	315
34	I. & P.	.....	1.17	12	33	14	"	May	16	1902	.....	667
35	Power	.....	35	12	33	14	"	Aug.	28	1902	.....	685
36	Irrig..	.....	.29	24	33	28	Cherry.....	Jan.	9	1899	.....	490
37	"	.....	.57	30	33	11	Holt.....	July	6	1896	.....	322
38	"	.....	1.14	35	34	19	Keya Paha..	Mar.	28	1896	.....	274
39	"	.....	.57	29	32	20	Brown.....	June	10	1896	.....	310
40	"	.....	.50	19	32	20	Brown	Dec.	12	1896	.....	369
41	"	.....	.08	27	34	25	Cherry.....	Mar.	30	1900	.....	555
42	"	.....	.50	4	31	15	Holt.....	June	24	1896	.....	316
43	"	.....	1	34	32	15	"	June	24	1896	.....	317
44	"	.....	.14	4	31	20	Rock.....	Jan.	1	1895	400	....
45	"	.....	.29	19	32	20	Brown	Feb.	10	1896	.....	254
46	"	.....	.14	5	33	24	Keya Paha..	Sept.	16	1895	.....	158

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Snider Creek.	Pickler, W. S.....	Sp'gview ..	Olds Ditch	1
Spotted Tail C	Rhodes, J. G.....	McLean ...	Spotted Tail Ditch..	2
Sweeney Can.	Hornback, J.....	Sparks	Canon Canal	3
Turkey Creek.	La Rue, Chas.....	Norden ...	Turkey Creek Ditch	4
"	La Rue, Chas.....	Norden ...	Turkey Creek Ditch	5
Verdigris Ck..	Hanson, J. W.....	Em'tbg, Ia.	Drayton Irr. Ditch..	6
"	Harvey, A.....	Sherman ..	....	7
Whistle Ck...	Miller, W. K.....	Alliance ...	Home Ditch	8
"	Irion, E.....	Lawn	Whistle Creek Ditch	9
Wooden Sp. Br	Rhodes, F. J.....	Sp'gview ..	Rhodes Ditch	10
"	Rhodes, F. J.....	"	"	11
Wyman Ck...	McCully, R. A.....	Carns	McCully Ditch	12
"	Horton, I.....	"	Horton Ditch	13
Young Creek..	Lamb, A. J.....	Rochester .	Harvey & Lamb Dit.	14

STREAMS IN DIVISION 2-C—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	.01	31	33	19	Keya Paha..	May	1	1894	607	....
2	"	.....	.14	4	34	17	" ..	May	17	1895	601	....
3	"	.....	.21	29	34	25	Cherry.....	Aug.	10	1893	414	....
4	"	.....	.50	35	33	23	Keya Paha..	Feb.	9	1890	.....	539
5	"	.....	.57	35	33	23	Keya Paha..	June	17	1901	.....	622
6	"	.....	2.86	8	28	8	Antelope ...	Aug.	11	1894	248	....
7	"	.....	.14	22	28	8	" ...	Aug.	9	1895	.....	106
8	"	.....	.86	13	28	54	Sioux.....	June	6	1895	.....	65
9	"	.....	1.71	12	28	54	"	June	28	1895	.....	58
10	"	.....	.21	25	35	20	Keya Paha..	June	19	1899	.....	512
11	"	.....	.14	25	35	20	" ..	Mar.	12	1900	.....	544
12	"	.....	.80	19	32	19	" ..	June	10	1891	604	....
13	"	.....	.14	7	32	19	" ..	June	5	1894	587	....
14	"	.....	.71	32	33	11	Holt.....	June	13	1896	.....	311

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Bear Creek...	Wolfe, J. V.....	Lincoln ...	Wat. Wks. Institute for Feeble Minded	1
Beaver Creek.	Wright, G. D.....	York	....	2
Blue R., W. fk	Kersenbrock, J. H....	Columbus .	J. Kersenbrock Ir. Pl	3
"	Kersenbrock, J. H....	"	J. H. Kersenbrock Pr. Plant	4
Lincoln Creek	Smith, Jennie A.....	York	Private Ditch	5
Turkey Creek	Lane, J. K.....	Pl'sant Hill	....	6
"	Lane, J. K.....	"	Lane's Model Ditch.	7
"	Lakin, W. H.....	Dorchester	....	8
"	James, W.....	Pl'sant Hill	....	9

STREAMS IN DIVISION 1-D.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	D & Ir	.....	1	36	4	6 E	Gage	May	20	1898	.....	455
2	Power	.....	40	7	10	2W	York	Nov.	1	1878	963	....
3	Irrig..	.....	7.14	32	9	3 E	Seward.....	Dec.	20	1895	.....	211
4	Power	.....	105	32	9	3 E	"	Dec.	20	1895	.....	214
5	Irrig..	.....	1	21	12	1W	York	March	2	1896	.....	269
6	Power	all	.....	4	7	3 E	Saline	.....	..	....	*990	....
7	Irrig .	.....	1.21	4	7	3 E	"	July	16	1895	.....	81
8	" ..	.....	.20	34	8	2 E	"	Jan.	27	1896	.....	218
9	" ..	.....	2.29	14	7	3 E	"	March	25	1896	.....	271

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Ash Creek....	Compton, W. L.....	Whitney ..	....	1
"	Connell, J.....	"	Connell Ditch	2
"	Cripps, Fred W.....	"	Cripps Ditch	3
Ash Ck., E. Br	Tomlin, H. B.....	"	Ox Yoke Ditch.....	4
"	Aird, Ida L.....	Crawford .	Barron Ditch	5
"	Sheldon, Clarence A.	"	Sheldon Ditch	6
"	Todd, Frank P.....	"	Todd Ditch	7
Ash Ck., W.Br	Vetter, A.....	"	Mace Ditch	8
"	Broadhurst, N., et al..	Whitney ..	West Ash Creek Irri. Co. Ditch	9
"	Woodard, S. D.....	"	Woodard Ditch	10
Beaver Creek.	Braddock, Wm.....	Adaton ...	Braddock Ditch ...	11
"	Braddock, J. F.....	Chadron ..	....	12
"	Stastney, F.....	"	Stastney Ditch	13
"	Novak, F.....	Hay Spgs..	Novak's Canal	14
"	Serbousek, A.....	"	Serbousek Canal ..	15
"	Hyser, F. B.....	Adaton ...	Hyser Ditch	16
"	Braddock, J. F.....	Chadron ..	Braddock	17
"	Dietel, J. M.....	Adaton.....	Dietel Canal	18
"	Cilek, Frank	"	Cilek Ditch	19
"	Rickman, A. W.....	Chadron ..	Rickman Ditch	20
Bordeaux Ck.	Locket, T. E.....	Chadron ..	Locket Ditch	21
"	Richards, H. B. J....	"	Richards Ditch	22
"	Bryant, S. A.....	"	Bryant's Irr. Ditch.	23
"	Hall, O. W.....	"	Hall's Ditch	24
"	Richards, H. B. J....	"	Richards Ditch	25
"	Mann, Wm.....	"	Mann's Ditch	26
"	Adams, S. L.....	"	Adams Ditch	27
"	County of Dawes....	"	County Ditch	28
"	Bacon, J. D.....	"	Bacon Ditch	29
"	Morrisey, M.....	"	Morrissey Canal ...	30
"	O'Donnell, J.....	"	O'Donnell's Ditch ..	31
"	Nelson, P. B.....	"	Nelson's Ditch	32
"	Nelson, P. B.....	"	Nelson's Irri. Plant.	33
"	Burns, Thomas C....	"	T. C. Burns Ditch..	34
"	Martens, Wm.....	"	Martens Irr. Ditch.	35
"	Martens, W.....	"	Martens Ditch	36
Bordeaux, Lit.	Hartzell, S., Hartzell, C.	"	Hartzell Canal	37
"	Butler, J. A.....	"	Jno. A. Butler Ditel	38
"	Frady, C. H.....	"	C. H. Frady Ditch..	39
Bull Creek...	Johnson, W. S.....	Glen	Johnson Ditch No. 1	40
Cedar Canyon	Golden, T. F.....	Adelia	Cedar Canon Ditch.	41
Chadron Ck..	Gallup, W. S.....	Chadron ..	Gallup's Ditch	42
"	Wilson, H. M.....	"	Tug Wilson Ditch..	43
"	Wilson, W. W.....	"	Wallace Wilson Dit.	44
"	Record, A. A.....	Hyannis ..	Half Diamond E. D.	45
"	Dorrington, F. M.....	Alliance ..	Dorrington Ditch...	46

STREAMS IN DIVISION 2-D.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	.03	12	32	51	Dawes.....	July	15	1893	455	....
2	"	.....	.86	6	32	50	"	June	17	1898	.....	459
3	"	.....	1	13	32	51	"	Jan.	10	1899	.....	491
4	"	.....	2.86	31	32	50	"	May	31	1880	447	....
5	"	.....	1.14	32	32	50	"	July	1	1888	438	....
6	"	.....	1.43	30	32	50	"	Jan.	26	1899	.....	493
7	"	.....	1	5	31	50	"	Sept.	12	1899	.....	520
8	"	.....	1	2	31	51	"	July	31	1884	428	....
9	"	.....	1.62	36	32	51	"	July	4	1893	452	....
10	"	.....	.14	25	32	51	"	Feb.	3	1898	.....	434
11	"	.....	.36	18	34	46	Sheridan....	April	15	1895	423	....
12	"	.....	.04	1	34	47	Dawes.....	April	15	1895	974	....
13	"	.....	.26	4	33	46	Sheridan....	July	30	1895	.....	330
14	"	.....	1	9	33	46	"	May	7	1896	.....	331
15	"	.....	.14	28	33	46	"	May	7	1896	.....	332
16	"	.....	.33	20	34	46	"	May	14	1896	.....	303
17	"	.....	.64	1	34	47	Dawes.....	Nov.	14	1897	.....	463
18	"	.....	.29	32	34	46	Sheridan....	April	11	1898	.....	447
19	"	.....	.36	4	33	46	"	June	19	1899	.....	513
20	"	.....	1	9	33	46	"	July	2	1902	.....	681
21	"	.....	.07	11	32	48	Dawes.....	June	30	1886	494	....
22	"	.....	.14	36	33	48	"	Sept.	10	1890	430	....
23	"	.....	.29	14	33	48	"	Feb.	4	1891	434	....
24	"	.....	.07	15	33	48	"	Mar.	1	1891	437	....
25	"	.....	.36	36	33	48	"	Sept.	7	1892	446	....
26	"	.....	.23	25	33	48	"	Dec.	31	1892	975	....
27	"	.....	.14	2	32	48	"	Mar.	5	1893	450	....
28	"	.....	.14	23	33	48	"	July	31	1893	983	....
29	"	.....	.21	21	34	48	"	July	1	1894	445	....
30	"	.....	.08	15	33	48	"	Aug.	25	1894	491	....
31	"	.....	.36	9	34	48	"	Jan.	17	1898	.....	432
32	"	.....	.36	14	33	48	"	Oct.	19	1898	.....	478
33	"	.....	.36	14	33	48	"	Jan.	28	1899	.....	494
34	"	.....	4.29	36	33	48	"	Nov.	5	1900	.....	584
35	"	8	.....	21	34	48	"	Nov.	26	1902	.....	*695
36	"	.....	.71	28	34	48	"	Sept.	22	1902	.....	690
37	"	.....	.57	13	33	48	"	June	1	1893	448	....
38	"	.....	.11	33	33	47	"	June	1	1894	443	....
39	I. & F	1	.....	30	33	47	"	.....	..	....	*1009	....
40	Irrig..	.....	.29	7	30	53	Sioux	Mar.	13	1895	519	....
41	"	.....	.43	16	33	53	"	Mar.	1	1897	.....	380
42	"	.....	.08	15	33	49	Dawes.....	Dec.	20	1890	426	....
43	"	.....	.20	12	32	49	"	July	13	1893	453	....
44	"	.....	.07	12	32	49	"	July	14	1893	454	....
45	"	.....	.57	1	32	49	"	June	17	1894	468	....
46	"	10	.....	36	33	49	"	July	13	1895	.....	*75

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Chadron Ck..	Mann, Charles	Chadron ..	Mann's Ditch	1
"	Frick, L.....	"	....	2
Charcoal Ck..	Weber, M. J.....	Glen	Klein Ditch ...	3
Cottonwood Ck	Rasmussen, N.....	Whitney ..	Rasmussen Ditch ..	4
"	Rasmussen, N.....	"	....	5
Rav. trib. "	Carlson, A. A.....	Crawford .	Carlson Ditch	6
Cotton'd Lit..	Stuart, Jno	"	Thos. Stewart Ditch	7
"	Stuart, Jas. G., Stuart, Jno. T.....	"	Stuart Bros. Ditch..	8
"	Kusel, Wm. T.....	Hooper ...	Kusel Ditch	9
"	Simmons, Raner	Whitney ...	Simmons Res. Ditch	10
"	Kusel, Wm. T.....	"	Kusel Ditch No. 2..	11
"	Spearman, C. K.....	Gretna	Spearman Ditch ...	12
"	Dunn, J. G.....	Crawford .	Dunn's Ditch	13
"	Stewart, J. W., et al..	"	Stewart & Maple D.	14
"	Kusel, Wm. T.....	Whitney ..	Kusel & Spearman D	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
"	Geiser, B. A.....	"	Geiser Ditch	20
Deadman Ck..	Phillips, W. S.....	Crawford .	....	21
"	Phillips, W. S.....	"	Phillips Ditch	22
"	Porter, J. E.....	"	P. R. Ditch.....	23
"	Linderman, Con.....	"	Con Linderman Dit.	24
"	Linderman, Con	"	Linderman D. No. 2.	25
Deep Creek...	Green, M. H.....	Glen	Deep Creek Ditch..	26
"	Green, M. H.....	"	Green Ditch	27
Dirty Creek...	Wisdom, A. O.....	Crawford .	Wisdom Ditch	28
Dry Creek....	Antrim, J.	Whitney ..	Antrim Can.	29
Hooper Creek	Vohlig, Max	Crawford ..	McMannas Ditch ...	30
Indian Creek.	Seegrist, I.	Whitney ..	....	31
"	Flood, M. F.....	"	Flood Ditch	32
"	Norman, Neils	"	Norman Ditch	33
"	Boyer, F.....	"	Boyer Ditch	34
Indian C. trib.	Kaiser, Omar	Coxville ...	Kaiser Ditch	35
Kyle Creek...	Colville, David	Glen	Kyle Creek Ditch...	36
Larabee Ck...	Davis, W. R.....	Rushville .	Davis Ditch	37
Sand Creek...	Bendix, F.....	Crawford .	Bendix Irr. Ditch...	38
"	Carlson, A. A.....	"	Carlson Ditch	39
"	Balser & Thomas....	Whitney ..	Bal. & Thos. Ditch.	40
Sand C.trib. of	Jordan, M. D.....	Adelia	Jordon Ditch	41
Sheridan Ck..	Getchell, G. C.....	Pine Ridge	Getchell Ditch	42
Soldier Creek.	Rodgers, J. J.....	Crawford .	Rodgers Ditch	43
Spring Br. (trib WhiteH)	Tucker, J. S.....	Glen	Tucker's Ditch	44
Spring Creek.	Forbes, J. D.....	Crawford .	Forbes Ditch No. 1..	45

STREAMS IN DIVISION 2-D—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Irrig.	.....	.43	24	32	49	Dawes.....	May	11	1896	.....	299
2	"	.....	.36	31	32	48	"	July	1	1897	.....	396
3	"	.....	.11	33	31	53	Sioux	Aug.	1	1882	982	....
4	"	.....	2.29	10	33	52	Dawes.....	Mar.	8	1898	.....	444
5	"	.....	18	10	33	52	"	Dec.	26	1899	.....	528
6	"	.....	1	21	33	52	"	Sept.	20	1897	.....	409
7	"	.....	.36	8	32	52	"	Dec.	21	1890	425	....
8	"	.....	2.86	8	32	52	"	June	10	1895	.....	8
9	"	.....	1.71	9	32	51	"	Oct.	16	1895	.....	183
10	"	.....	1.14	9	32	51	"	Sept.	12	1899	.....	521
11	"	2	.....	8	32	51	"	May	19	1900	.....	*560
12	"	.....	1.43	12	32	52	"	Jan.	9	1902	.....	647
13	"	.....	1.43	9	32	52	"	Jan.	14	1902	.....	649
14	"	.....	.86	3	32	52	"	March	10	1902	.....	656
15	"	2	.....	8	32	51	"	June	30	1902	.....	*677
16	"	.....	.01	32	32	49	"	Sept.	1	1890	493	....
17	"	.....	.03	32	32	49	"	April	10	1891	427	....
18	"	.....	.17	9	31	49	"	Aug.	27	1893	457	....
19	"	.....	.01	32	32	49	"	Aug.	1	1894	488	....
20	"	.....	2.29	17	32	49	"	March	18	1902	.....	658
21	"	.....	.57	19	30	52	"	May	8	1896	.....	334
22	"	.....	.21	18	30	52	"	March	19	1900	.....	547
23	"	.....	1.43	1	30	53	"	May	29	1900	.....	562
24	"	.....	.29	18	30	52	"	June	11	1900	.....	564
25	"	.....	1.14	7	30	52	"	Dec.	15	1900	.....	592
26	"	.....	.06	9	30	53	Sioux	May	1	1887	525	....
27	"	.....	.29	9	30	53	"	Oct.	5	1895	.....	203
28	"	.....	.29	7	33	52	Dawes.....	Feb.	3	1898	.....	435
29	"	.....	.71	1	33	52	"	Sept.	11	1895	.....	155
30	"	.....	1	7	31	51	"	Dec.	31	1889	492	....
31	"	.....	.03	3	31	50	"	Nov.	1	1893	489	....
32	"	.....	.07	33	32	50	"	Feb.	13	1894	460	....
33	"	.....	2.	9	32	50	"	April	6	1900	.....	554
34	"	.....	.86	28	32	50	"	April	30	1900	.....	559
35	"	.....	.57	28	32	50	"	Feb.	15	1900	.....	540
36	"	.....	.57	3	30	54	Sioux	June	30	1882	522	....
37	"	.....	.43	16	34	44	Sheridan ...	Sept.	29	1896	.....	361
38	"	.....	.57	35	33	53	Sioux	Nov.	19	1895	.....	189
39	"	.....	1.	32	33	52	Dawes.....	Feb.	28	1898	.....	440
40	"	.....	15.	3	32	52	"	Jan.	10	1900	.....	*531
41	"	.....	.50	31	33	53	Sioux	April	2	1900	.....	551
42	"	.....	.07	27	34	45	Sheridan ...	Aug.	1	1894	418	....
43	"	.....	.14	5	31	52	Sioux	April	30	1883	546	....
44	"	.....	.17	34	31	54	"	June	1	1883	557	....
45	"	1	.....	20	32	52	Dawes.....	April	28	1900	.....	663

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Spring Creek.	Forbes, J. D.....	Crawford .	Forbes Ditch No. 2.	1
"	Moszeter, J. R.....	"	Moszeter D.	2
Springs trib. Spring Ck..	Forbes, J. D.....	Crawford .	Forbes Ditch	3
Spg. Ck. trib. of Lt. Cot'd	Pinney, B. G.....	"	Spring Creek Ditch.	4
"	Demmon, O. J., Balser, R.	Lusk, Wyo.	Spring Ck Dit. No. 1	5
"	Simmons, R.....	Whitney ..	Simmons Ditch	6
Spgs. trib. to D. Horse Ck...	Goff, T. L.....	Chadron ..	....	7
Squaw Creek.	Daniels & Stetson....	Crawford .	Danl's & Stet. Ditch	8
"	Cooper, Wm.....	"	Cooper Ditch	9
"	Duncan, G. W.....	Crawford .	Duncan Irr. Ditch..	10
"	Barton, Albert G.....	"	Barton Ditch	11
Saw Log, E..	Detrick, J. L.....	"	Dietrick's Ditch ...	12
Trunk Butte C	Smock, M.....	Whitney ..	Smock's Ditch	13
W. Clay Ck...	McFarland, F.....	Crawford .	Frank McFarland D	14
"	Hazleton, Wm. S....	"	Hazleton Irr. Ditch.	15
"	White River Irri. Co.	"	White River Irr. D.	16
"	Cooper, Wm.....	"	Cooper Ditch	17
"	Brockway, D. L.....	"	Brockway Irr. Ditch	18
"	Pine Ridge Ind. Ag..	P. Ridge I. Ag, S. D.	Pine Ridge Irr. D..	19
"	Ball, R. M.....	Rushville .	Ball's Irri. Plant...	20
"	Hutzell, Levi	"	Draper Ditch	21
"	Hutzell, Levi	"	Leach Ditch	22
"	Hutzell, Levi	"	Hammond Ditch ...	23
"	Hutzell, Levi	"	Talbot Ditch	24
"	Rincker, H. C.....	Crawford .	Rincker Ditch	25
W Clay, E Br	Thornton, W. A.....	"	E. White Clay Ditch	26
W. Clay and Squaw Ck..	White River Irr. Co.	"	White River Irri. D	27
White River..	Jacobson, M.....	Glen	Jacobson Ditch	28
"	Hall, Leroy	Crawford .	Hall's Mill	29
"	Diedrickson, N.....	Glen	Diedrickson Ditch..	30
"	Harris & Cooper.....	Crawford .	Harris & Cooper D	31
"	Harris & Cooper.....	"	"	32
"	Harris & Cooper.....	"	"	33
"	Rasher, C.....	"	Rasher Ditch	34
"	Welling, N.....	"	Welling Ditch	35
"	Carpenter, E. J. & Co	Whitney ..	Carpenter Irri. Dit.	36
"	White River Irri. Co.	Crawford .	White Riv. Irr. Co.D	37
"	Hall, Leroy	"	Hall's Ditch No. 2..	38
"	Crawford Co.....	"	Crawford Citizens C	39
"	Swartz, E.	Harrison ..	Hughson Ditch	40
"	Butterworth, J.....	Crawford .	Butterworth Ditch..	41

STREAMS IN DIVISION 2-D—*Continued.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	2	.....	20	32	52	Dawes.....	April	28	1902	.....	664
2	"	2	.....	13	32	52	"	.....	..	....	*1014	....
3	"	.....	1.14	20	32	52	"	Feb.	11	1901	.....	599
4	"	.....	.86	13	32	52	"	May	10	1894	466	....
5	"	.....	2.	7	32	51	"	Dec.	1	1894	473	....
6	"	.....	.43	8	32	51	"	Jan.	3	1898	.....	426
7	"	.....	.14	30	32	49	"	April	2	1891	441	....
8	"	.....	1.	19	31	51	"	June	17	1895	.....	27
9	"	.....	2.29	36	32	52	"	May	8	1896	.....	333
10	"	.....	.29	28	31	51	"	Sept.	6	1898	.....	465
11	"	.....	.43	20	31	51	"	April	2	1900	.....	552
12	"	.....	.29	32	31	51	"	April	8	1897	.....	382
13	"	.....	.07	26	32	50	"	June	28	1895	465	....
14	"	.....	1.64	35	32	52	"	May	18	1891	960	....
15	"	.....	1.14	13	31	52	"	May	15	1894	475	....
16	"	.....	1	35	32	52	"	Dec.	31	1894	477	....
17	"	4	.....	2	31	52	"	June	22	1895	.....	*42
18	"	.....	1	36	31	52	"	Feb.	27	1896	.....	256
19	"	4.78	.....	...	...	....	Indian Res..	.....	..	....	*419	....
20	"	.....	.50	23	33	45	Sheridan ...	May	29	1896	.....	305
21	"	.....	.21	13	33	45	" ...	May	29	1896	.....	306*a*
22	"	.....	1	12	33	45	" ...	May	29	1896	.....	306*b*
23	"	.....	.21	14	33	45	" ...	May	29	1896	.....	306*c*
24	"	.....	1.43	14	33	45	" ...	May	29	1896	.....	306*d*
25	"	.....	1.43	11	31	52	Dawes.....	June	8	1901	.....	618
26	"	.....	.19	12	30	52	"	Sept.	6	1897	.....	406
27	"	.....	8	36	32	52	"	Mar.	3	1902	.....	655
28	"	.....	.14	32	31	53	Sioux.....	Oct.	1	1882	561	....
29	Power	.....	24.83	34	32	52	Dawes.....	Sept.	10	1885	†478*a*	....
30	Irrig..	.....	.21	1	30	54	Sioux	Sept.	1	1890	562	....
31	"	.....	16.78	25	32	52	Dawes.....	Mar.	9	1894		
32	"	.....	1.57	25	32	52	"	June	15	1894	†464	....
33	"	.....	.28	25	32	52	"	Oct.	31	1894		
34	"	.....	1.14	19	32	51	"	June	20	1894	467	....
35	I. & F.	.....	.57	17	32	51	"	July	13	1894	469	....
36	Irrig..	.....	2.86	1	32	51	"	Dec.	2	1894	†487	....
37	I. & P.	.....	8.71	35	32	52	"	Dec.	31	1894	†477	....
38	Irrig..	.....	26.04	34	32	52	"	Jan.	10	1895	†478*c*	....
39	"	.....	58	23	31	53	Sioux	Feb.	13	1895	†501 444	....
40	"	.....	.07	26	31	55	"	Mar.	15	1895	520	....
41	"	.....	.07	3	31	52	Dawes.....	May	7	1895	490	....

*Pending. †Contest pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
White River..	Force, F.....	Harrison ..	Force's Ditch	1
"	Mason, J.....	Glen	Mason's Ditch	2
"	Lewis, L. C.....	Harrison ..	Lewis Ditch	3
"	Jones, E. B.....	Chadron ..	Edgar B. Jones D..	4
"	Schwabe, Lena	"	Schwabe Ditch	5
"	Wilkinson, T.....	Crawford .	Wilkinson Ditch ...	6
"	Stewart, A.....	Whitney ..	Sandy Stewart Dit.	7
"	Thompson, H.....	Crawford .	Rasher Ditch	8
"	Zuen, A., & Schmelzle, W.	"	Zuen & Schmelzle D	9
"	Mecham, Garfield & Canfield	Whitney ..	Mecham, Garfield & Canfield Ditch ...	10
"	Schaffer & Blust.....	"	Schaffer & Blust D.	11
"	Rasher, Frank	Crawford .	Frank Rasher Ditch	12
"	Roby, I. M.....	"	Roby Ditch	13
"	Carlson, John	Whitney ..	Carlson Ditch	14
"	Blust, Aug.....	"	Blust Ditch	15

STREAMS IN DIVISION 2-D—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	.....	.03	31	31	54	Sioux	June	25	1895	.....	50
2	"	.....	.14	32	31	53	"	May	12	1896	.....	337
3	"	.....	.21	27	31	55	"	May	19	1896	.....	340
4	"	.....	1.29	18	34	48	Dawes.....	May	21	1897	.....	391
5	"	.....	1.14	25	34	49	"	June	24	1897	.....	394
6	"	.....	.86	24	32	52	"	Nov.	18	1897	.....	421
7	"	.....	.94	10	32	51	"	Jan.	8	1898	.....	427
8	"	.....	.50	19	32	51	"	May	23	1898	.....	456
9	"	.....	1	19	32	51	"	Oct.	13	1898	.....	475
10	"	.....	2.86	17	32	51	"	Mar.	15	1899	.....	500
11	"	.....	3	10	32	51	"	Dec.	18	1899	.....	525
12	"	.....	1.43	19	32	51	"	Jan.	16	1900	.....	534
13	"	.....	.33	3	31	52	"	Oct.	3	1900	.....	579
14	"	.....	1.14	6	32	50	"	Nov.	26	1900	.....	588
15	"	2.25	.....	10	32	51	"	Oct.	30	1901	.....	642

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Lodge Pole...	Bay State Live Stock Co.	Kimball ..	Bay State Ditch....	1
"	Adams & Tobin.....	Sidney	Adams & Tobin D..	2
"	Gunderson, A.....	Potter	Adams & Gunderson Irr. & Mill Ditch.	3
"	Runge, G.....	Sidney	Runge Ditch No. 1..	4
"	Runge, G.....	"	Runge Ditch No. 2..	5
"	Anderson, J.....	"	Anderson Dit. No.	6
"	Bay State Live Stock Co.	Kimball ..	Circle Arrow Ditch.	7
"	Urbach, M.....	Sidney	Urbach Ditch	8
"	Hale, L. H.....	"	Hale D. No. 3.....	9
"	Ha'e, L. H.....	"	Hale D. No. 4.....	10
"	Hale, L. H.....	"	Hale D. No. 5.....	11
"	Whitney, W. T.....	Seattle, W.	Whitney Ditch	12
"	Booth, Firth	Lodge Pole.	Booth's Canal	13
"	McAuliffe, F.....	Chappell ..	....	14
"	Kinney, J. J.....	Kimball ..	Kinney Ditch No. 2.	15
"	Libby, H. H.....	Lodge Pole	Libby Ditch	16
"	Dickinson, F.....	"	....	17
"	Howard, A. T.....	"	Howard Ditch	18
"	Krueger, F. W.....	Sidney	Krueger Ditch No. 3	19
"	Wolfe, H. D.....	Chappell ..	Wolf D.	20
"	Krueger, F. W.....	Sidney	Krueger Ditch No. 2	21
"	Borgquist, C. E.....	"	Borgquist Canal ...	22
"	Borgquist, C. E.....	"	" ...	23
"	Whitney, W. T.....	Seattle, W.	Upper Whitney Dit.	24
"	McLaughlin, M.....	Sidney	McLaughlin Ditch..	25
"	Hale, L. H.....	"	Hale D. No. 1.....	26
"	Mitchell, J.....	"	....	27
"	Tobin, M. H.....	"	Tobin Ditch	28
"	Jones, B. A.....	"	Bordwell Ditch	29
"	Kinney, L. C.....	Pine Bluffs Wyo. ...	Premier Ditch	30
"	Kinney, S. A.....	Pine Bluffs Wyo. ...	Smeed Ditch	31
"	Jones, B. A.....	Sidney	Bordwell Ditch	32
"	Hurley, J. W.....	Kimball ..	Polly Ditch	33
"	Pierce, S. A.....	Pine Bluffs Wyo. ...	Independent Ditch..	34
"	Kinney, J. J.....	Kimball ..	Kinney Ditch	35
"	Young, W. T.....	"	Young Ditch	36
"	Ruttner, K.....	"	Ruttner Ditch	37
"	Oberfelder, R. S.....	Sidney	Oberfelder Ditch ...	38
"	Hale, L. H.....	"	Hale No. 2.....	39
"	Harrington, E.....	Chappell ..	....	40
"	Persinger, A. B.....	Lodge Pole	Persinger D	41
"	Krueger, F. W.....	Sidney	Krueger Ditch	42

STREAMS IN DIVISION 1-E.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig.	.....	1.50	29	15	55	Kimball	Dec.	31	1876	347	....
2	"	.....	1.14	35	14	50	Cheyenne ..	Oct.	1	1878	368	....
3	"	.....	1.43	1	14	52	" ..	June	1	1879	305	....
4	"	.....	1.71	20	14	50	" ..	April	15	1880	339	....
5	"	.....	.50	20	14	50	" ..	April	15	1882	338	....
6	"	.....	2.50	8	14	51	" ..	June	30	1882	373	....
7	"	.....	3.71	30	15	54	Kimball	July	1	1882	346	....
8	"	.....	.86	14	14	51	Cheyenne ..	Sept.	1	1882	308	....
9	"	.....	.57	36	14	49	" ..	April	30	1883	320	....
10	"	.....	.71	36	14	49	" ..	April	30	1883	321	....
11	"	.....	.57	36	14	49	" ..	April	30	1883	322	....
12	"	.....	2.29	31	14	48	" ..	May	1	1883	317	....
13	"	.....	4.29	29	14	47	" ..	May	31	1883	309	....
14	"	.....	2.29	21	13	45	Deuel	Dec.	31	1884	814	....
15	"	.....	2.71	33	15	56	Kimball	Dec.	31	1884	348	....
16	"	.....	2	36	14	47	Cheyenne ..	Dec.	31	1884	312	....
17	"	.....	1.14	26	14	47	" ..	Jan.	1	1885	969	....
18	"	.....	.86	31	14	47	" ..	April	10	1885	336	....
19	"	.....	1.14	32	14	48	" ..	May	1	1885	323	....
20	"	.....	1	18	13	45	Deuel	Dec.	31	1885	813	....
21	"	.....	2.29	32	14	48	Cheyenne ..	Oct.	10	1886	324	....
22	"	.....	1.29	34	14	49	" ..	April	30	1887	301	....
23	"	.....	.71	34	14	49	" ..	April	30	1887	300	....
24	"	.....	2.29	36	14	49	" ..	May	1	1887	316	....
25	"	.....	1	25	14	48	" ..	May	1	1887	966	....
26	"	.....	1.14	36	14	49	" ..	July	1	1887	318	....
27	"	.....	.86	8	14	51	" ..	Sept.	1	1887	304	....
28	"	.....	2.29	28	14	47	" ..	July	31	1888	330	....
29	"	.....	1.43	35	14	49	" ..	Aug.	1	1888	303	....
30	"	.....	2.43	3	14	58	Kimball	April	11	1889	340	....
31	"	.....	1.43	8	14	58	"	April	12	1889	341	....
32	"	.....	.86	35	14	49	Cheyenne ..	April	27	1889	302	....
33	"	.....	.79	30	15	55	Kimball	May	6	1889	342	....
34	"	.....	3.14	7	14	58	"	May	6	1889	343	....
35	"	.....	2	33	15	56	"	May	14	1889	345	....
36	"	.....	.50	33	15	57	"	May	28	1889	349	....
37	"	.....	1.14	31	15	56	"	June	4	1889	350	....
38	"	.....	.43	31	14	46	Cheyenne ..	June	10	1889	333	....
39	"	.....	.43	36	14	49	" ..	June	20	1889	319	....
40	"	.....	9.14	3	13	46	Deuel	June	25	1889	296	....
41	"	.....	4.57	33	14	46	"	June	25	1889	297	....
42	"	.....	3	29	14	48	Cheyenne ..	June	26	1889	325	....

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Lodge Pole...	Brady, J. V.....	Dix	Brady Ditch	1
"	Gross, C. J.....	Pine Bluffs, Wyo.	Hoover Ditch	2
"	Ickes, C. S.....	Lincoln ...	Ickes Ditch	3
"	Adams, J. M.....	Potter	Adams Ditch	4
"	Hurley, J. W.....	Kimball ..	Hurley, Lilly & Polly Ditch	5
"	Christenson, H. L....	Sidney	Christenson Ditch..	6
"	Christenson, H. L....	"	Christenson Dit No 1	7
"	Trognitz, C.....	"	Trognitz Canal	8
"	Oberfelder, R. S.....	"	Oberfelder Ditch ...	9
"	Krueger, R.....	"	Richard Krueger D.	10
"	Anderson, J.....	"	Anderson Dit. No. 2	11
"	Adams, J. M.....	Potter	Adams Ditch	12
"	Lyngholm, N. P.....	Brownson .	Lyngholm Ditch ...	13
"	Adams, J. M.....	Potter	Adams Ditch	14
"	Dickinson, F.....	Sidney	....	15
"	McIntosh, J.....	Kimball....	McIntosh Ditch	16
"	Couch, A.....	Sidney.....	Couch Canal	17
"	Burg, C. C.....	Dix	....	18
"	Bullock, W. C.....	Lodge Pole	Bullock Canal	19
"	Forsling, A.....	Kimball ..	Maltese Ditch	20
"	Kinney, L. C.....	Bushnell ..	Bushnell Ditch	21
"	Cole, Luther L.....	Chappell ..	Cole Canal	22
"	Wiegand, Henry G...	"	Wiegand Canal	23
"	Neuman, A. G.....	"	A. G. Neuman	24
"	Wertz Bros.....	Chappell ..	Wertz Bros. Ditch..	25
"	Neuman, G. R.....	"	Neuman Ditch .	26
"	Johnson, J. C.....	"	Johnson Ditch	27
"	Bennett L. St. Co....	Ch'yne Wy	Bennett Liv. Stk. res	28
"	Nasland, J. A.....	Chappell ..	Nasland Ditch	29
"	Wilson, E. E.....	Dix	Wilson Ditch	30
"	Clausen, John	"	Clausen S. S. Ditch.	31
"	Clausen, John	"	Clausen N. S. Ditch.	32
"	Bennett L. St. Co....	Ch'yne Wy.	Bennett L. S. Co.'s D	33
Spg. Ck. trib. Lodge Pole.	Oberfelder, R. S.....	Sidney	Oberfelder Ditch ...	34
Spg. Ck. trib. to Lodge P.	Gunder, G. B.....	"	Private Ditch	35
Spring Br. trib Lodge Pole.	Libby, H. H.....	Lodge Pole	Spring Br. D.....	36

STREAMS IN DIVISION 1-E—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig	.....	.71	28	15	54	Kimball	Aug.	16	1889	352	....
2	"	.....	1.43	12	14	59	Kimball	Sept.	4	1899	353	....
3	"	.....	2.50	33	14	50	Cheyenne ..	March	25	1891	329	....
4	"	.....	1.43	3	14	52	" ..	July	1	1891	371	....
5	"	.....	2.57	26	15	56	Kimball	Oct.	1	1891	354	....
6	"	.....	.57	7	14	51	Cheyenne...	April	15	1893	366	....
7	"	.....	.43	7	14	51	" ..	April	15	1893	367	....
8	"	.....	1	36	14	50	" ..	June	1	1893	365	....
9	"	.....	2	31	14	46	" ..	Dec.	30	1893	306	....
10	"	.....	1	29	14	48	" ..	May	1	1894	968	....
11	"	.....	.57	10	14	51	" ..	June	1	1894	372	....
12	"	.....	1.43	10	14	52	" ..	Sept.	1	1894	370	....
13	"	.....	.36	14	14	51	" ..	Nov.	1	1894	337	....
14	"	.....	.50	10	14	52	" ..	Aug.	1	1895	369	....
15	"	.....	2.29	33	14	47	" ..	May.	10	1896	967	....
16	"	16	.....	23	15	55	Kimball	.....	..	....	*351	....
17	"	.....	.71	20	14	50	Cheyenne...	July	24	1895	.....	89
18	"	.....	.71	30	15	53	Kimball	March	3	1897	.....	381
19	"	.....	.57	4	13	46	Deuel	Feb.	16	1898	.....	437
20	"	.....	.21	36	15	57	Kimball	May	16	1898	.....	454
21	"	.....	5	2	14	58	"	April	15	1899	.....	504
22	"	.....	1	2	12	45	Deuel	Jan.	22	1900	.....	536
23	"	.....	2	17	13	45	"	May	31	1900	.....	563
24	"	.....	2	36	13	45	"	June	12	1900	.....	565
25	"	.....	2.86	12	13	46	Deuel	Feb.	14	1901	.....	600
26	"	.....	1.29	26	13	45	"	April	17	1901	.....	611
27	"	.....	2.14	23	13	45	"	April	17	1901	.....	612
28	"	.....	†	21	15	55	Kimball	March	13	1902	.....	657
29	"	.....	1.43	1	12	45	Deuel	April	16	1902	.....	661
30	"	2	.....	28	15	54	Kimball	June	11	1902	.....	*672
31	"	6	.....	27	15	54	"	July	25	1902	.....	*683
32	"	6	.....	26	15	54	"	July	25	1902	.....	*684
33	"	10	.....	23	15	55	"	Oct.	2	1902	.....	*691
34	"	.....	2.29	31	14	46	Cheyenne...	May	29	1889	307	....
35	"	.....	.04	14	13	51	" ..	March	19	1895	335	....
36	"	.....	1.43	36	14	47	" ..	July	1	1901	.....	623

*Pending. †700 acre feet granted for reservoir.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Antelope Ck.	Turner, Geo.....	Harrison ..	Turner Ditch	1
"	Story, S. R.....	Story	Story's Irr. Ditch...	2
"	Seaman, S. R.....	Harrison ..	S. L. Ellis Ditch ...	3
Boggy Creek..	Holly, Thos.....	Crawford .	....	4
"	Smith, J. W.....	Bodarc	Smith's Irr. Ditch..	5
Boggy C, E Br	Martin, Wm.....	"	Martin's Ditch	6
Boggy C, M Br	Bannon, J. F.....	"	Bannon's Ditch	7
Cedar Creek..	Schilt, C. E.....	Harrison ..	Schilt's Cedar Ck. D	8
"	Valdez, M.....	"	Valdez Ditch	9
Cherry Creek.	Ruffing, M.....	Bodarc	Cherry Creek Ditch.	10
Hat Creek....	Brewster, B. E.....	Harrison ..	W. Hat Ck. Ditch..	11
"	Coffee, Chas. F.....	Bodarc ...	C. F. Coffee Ditch..	12
"	Brewster, B. E.....	Harrison ..	W. Hat Ck. Ditch..	13
"	Antrim, Z. F.....	Bodarc ...	Antrim Ditch	14
"	Miller, Wm.....	"	Miller Ditch	15
"	Haas, Catharine	Gilchrist ..	Haas Ditch	16
"	Baumgard, Adam	Montrose .	Baumgard Ditch ...	17
"	Antrim, Z. F.....	Bodarc	Antrim's Ditch	18
Jim Creek....	Daut, L.....	Harrison ..	Daut Bros. Ditch ...	19
"	Nolan, Jas.....	"	Woodruff's South D.	20
"	Anderson, Nels	"	Jim Creek Ditch....	21
"	Slattery, Wm.....	"	Slattery Ditch	22
"	Slattery, Wm.....	"	"	23
Jim Creek, E.	Hunter, H. C.....	Adelia	Hunter's Ditch	24
"	Meyers, J. F.....	Montrose .	Meyers Ditch	25
Jim C, E T of	Wassenberger, J.....	"	Wassenberger Plant.	26
Halls Draw...	Geiser, Robt.....	Ardm're,SD	Geiser Dam	27
Little Red Ck	Zerbst, R.....	Harrison ..	Zerbst Ditch	28
Lickett Creek.	Coffee, S. B.....	Bodarc ...	Lickett Ditch	29
"	Coffee, S. B.....	"	"	30
Long Branch.	Borky, S.....	Ardm're,SD	Borky Dam	31
"	Ebert, L. J.....	"	Ebert Ditch	32
"	O'Connel, Dennis	"	O'Connel Ditch	33
Monroe Creek	Wilcox, E. J.....	Harrison ..	Big Monroe Creek D	34
"	Schilt, C. E.....	"	Schilt's Monroe Ck d	35
"	Noreisch, Wm.....	"	Noreisch's Ditch ...	36
"	Brumbaugh, S.....	"	Brumbaugh's Ditch.	37
"	Jordan, C.....	Harrison ..	Jordan Ditch	38
Prairie Dog ck	Schilt, C. E.....	"	Schilt's Prairie Dg.D	39
Petersons Dr..	Meier, August	Ardm're,SD	Meier Dam.....	40
Richards Br..	Woodruff, H. S.....	Adelia	Woodruff Ditch	41
Sow Belly Ck.	Schaefer, P.....	Bodarc	Old Sow Belly Ditch	42
"	Montgomery, S.....	"	Montgomery Ditch..	43
"	Jordan, S.....	Gilchrist ..	Jordan D	44
"	Burke, J. B.....	Bodarc	Burke Ditch	45
"	Jordan, S.....	Gilchrist ..	Jordan Ditch	46
"	Nutto, F.....	Harrison ..	Nutto's Ditch	47
"	Carroll, M. J.....	"	Carroll Ditch	48

STREAMS IN DIVISION 2-E.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE S.	T.	R.	COUNTY	DATE OF PRIORITY Month	D	Yr.	Docket No.	App. No.
1	Irrig..	.....	.86	26	34	57	Sioux	Oct.	31	18^4	537	....
2	"	.....	2	8	34	56	"	Nov.	11	1895	.....	168
3	"	.....	.29	9	33	57	"	May	17	1896	.....	338
4	"	.....	.11	30	33	54	"	Dec.	31	1888	956	....
5	"	.....	.29	31	33	54	"	May	1	1892	526	....
6	"	.....	.36	18	32	54	"	May	19	1896	.....	342
7	"	.....	.06	7	32	54	"	July	1	1886	560	....
8	"	.....	.57	35	33	56	"	May	15	1885	507	....
9	"	.....	.50	10	32	56	"	April	5	1886	976	....
10	"	.....	.03	29	33	54	"	May	1	1893	549	....
11	"	.....	.43	16	32	55	"	June	1	1880	553	....
12	"	.....	4.29	26	33	55	"	Sept.	1	1881	512	....
13	"	.....	.57	16	32	55	"	May	31	1886	553	....
14	"	.....	.57	3	32	55	"	June	17	1895	.....	25
15	"	.....	1	23	33	55	"	May	19	1896	.....	341
16	"	.....	.43	2	33	55	"	May	8	1899	.....	510
17	"	.....	.50	30	34	55	"	June	28	1900	.....	569
18	"	.....	.71	3	32	55	"	Dec.	24	1900	.....	594
19	"	.....	.86	7	33	56	"	May	15	1889	981	....
20	"	.....	.36	14	33	57	"	May	1	1890	536	....
21	"	.....	.43	8	33	56	"	Dec.	15	1890	502	....
22	"	.....	.29	13	33	57	"	May	31	1891	543	....
23	"	.....	.86	13	33	57	"	June	12	1895	.....	14
34	"	.....	.03	26	33	54	"	May	12	1898	.....	451
25	"	.....	.36	23	33	54	"	June	3	1898	.....	457
26	"	.....	2.29	29	34	54	"	Oct.	13	1900	.....	581
27	"	.....	1.71	33	35	54	"	Nov.	5	1900	.....	583
28	"	.....	.14	25	33	56	"	May	1	1893	551	....
29	"	.....	1.43	27	33	54	"	March	21	1900	.....	549
30	"	2	.....	27	33	54	"	.....	..	....	*1005	....
31	"	.....	1.14	23	35	54	"	April	19	1900	.....	557
32	"	.....	.14	19	35	53	"	Aug.	22	1901	.....	635
33	"	.....	.20	22	35	54	"	Nov.	10	1900	.....	587
34	"	.....	1.43	33	33	56	"	May	1	1888	506	....
35	"	.....	.50	27	33	56	"	July	2	1888	509	....
36	"	.....	.06	33	33	56	"	July	19	1895	.....	83
37	"	.....	.43	22	33	56	"	Aug.	12	1895	.....	112
38	"	2	.....	13	33	56	"	Oct.	3	1902	*693	....
39	"	.....	1.14	35	33	56	"	May	31	1886	508	....
40	"	.....	2	24	35	55	"	Nov.	5	1900	585	....
41	"	.....	.50	7	33	53	"	June	26	1895	.....	52
42	"	.....	3	7	32	55	"	June	1	1887	533	....
43	"	.....	1	21	33	55	"	Dec.	1	1890	559	....
44	"	.....	.29	21	33	55	"	June	1	1895	556	....
45	"	.....	.57	5	32	55	"	July	5	1895	.....	63
46	"	.....	1	21	33	55	"	May	11	1896	.....	424
47	"	.....	.43	24	32	56	"	Sept.	4	1897	.....	404
48	"	.....	.14	7	32	55	"	July	12	1899	.....	516

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE ADDRESS	NAME OF DITCH	
Sow Belly Ck.	Zimmerman, W. H...	Bodarc	Zimmerman Ditch..	1
"	Jordan, S.....	Harrison ..	Jordan Ditch	2
Spg. Ck. trib. Sow Belly..	Hall, W. S., Hall, F. M	Jerico	Hall's Spring Ck. D.	3
Spg. Ck. trib. Sow Belly..	Schaefer, P.....	Bodarc	Spring Creek Ditch.	4
Spg. Ck. trib. Sow Belly...	Hall, F. M.....	Harrison ..	Hall's Spr Ck D No 2	5
Sp Br trib to S W'rbon'et C.	Garton, O. A.....	Harrison ..	Garton Ditch	6
Sp Br trib to S W'rbon'et C	Kay, J. L.....	"	Kay's Ditch	7
Sp Br trib to S W'rbon'et C.	Biehle, C.....	"	Biehle Ditch	8
Sp Br trib to N W'rbon'et C.	Nolan, Jas.....	"	Nolan Ditch No. 1..	9
"	Nolan, Jas.....	"	Nolan Ditch No. 2..	10
Squaw Creek.	Dunn, Thos.....	"	Dunn's Ditch	11
"	Hamlin, N. D.....	"	Hamlin's Ditch	12
"	Dunn, Thos.....	"	Thos. Dunn's Ditch.	13
"	Hamlin, N. D.....	"	Hamlin Ditch	14
"	Dunn, P. D.....	"	Phillip Dunn's Ditch	15
Squaw Ck. W. Branch	Thomas, S. M.....	"	Thomas Irr. Ditch..	16
Squaw Ck trib Dry Canyon	Henry, J.....	Montrose .	Henry's Dam	17
Str. No name	Coffee, S. B.....	Bodarc	Homestead Ditch ..	18
Warbonnet Ck	Brewster, B. E.....	Harrison ..	Warbonnet Ditch ..	19
Warbonnet Ck North Br...	Ellis, R. T.....	"	R. T. Ellis Ditch...	20
Warbonnet Ck N Br of S B	Anderson, J.....	"	....	21
Warbonnet Ck N Br of S B	Anderson, J.....	"	....	22
Whitehead Ck	Harrison, R.....	Adelia	Harrison's Ditch ...	23
Canyon trib. Whitehead C	Raben, P.....	Adelia	Raben Ditch	24

STREAMS IN DIVISION 2-E—*Concluded.*

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig..	.....	.71	34	33	55	Sioux	Jan.	11	1900	.....	532
2	"	.....	1.43	21	33	55	"	May	26	1902	.....	668
3	"	.....	.57	6	32	55	"	March	26	1889	550	....
4	"	.....	.29	7	32	55	"	June	1	1893	532	....
5	"	.....	.57	6	32	55	"	Aug.	2	1899	.....	518
6	Irrig..	.....	1.43	31	33	56	Sioux	Oct.	16	1893	503	....
7	"	.....	.14	26	33	57	"	May	1	1887	958	....
8	"	.....	.23	32	33	56	"	April	1	1891	538	....
9	"	.....	.01	23	33	57	"	March	15	1887	957	....
10	"	.....	.29	23	33	57	"	May	1	1888	959	....
11	"	.....	.36	15	33	57	"	June	1	1890	552	....
12	"	.....	.01	10	33	57	"	April	1	1891	555	....
13	"	.....	.57	10	33	57	"	Aug.	5	1895	.....	100
14	"	.....	.43	10	33	57	"	June	12	1896	.....	313
15	"	.....	.86	3	33	57	"	Jan.	22	1897	.....	376
16	"	3	.....	10	33	57	"	July	23	1901	.....	*627
17	"	2	.....	30	34	55	"	Oct.	2	1902	.....	*692
18	"	.....	.22	27	33	54	"	May	31	1890	984	....
19	"	.....	3.63	21	33	56	"	July	31	1880	548	....
20	"	.....	.29	25	33	57	"	May	17	1896	.....	339
21	"	.....	.71	30	33	56	"	May	31	1889	539*a*	....
22	"	.....	.29	30	33	56	"	Dec.	31	1891	539*b*	....
23	"	.....	.06	13	33	54	"	May	30	1888	547	....
24	"	.....	.57	19	34	53	"	May	21	1901	615*b*	....

*Pending.

CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Nemaha Riv, Middle Br..	Christy, H. R.....	Palmyra ..	Christy Ditch	1

STREAMS IN DIVISION 1-F.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	County	M.	D	Y.		
1	Irrig .	.....	.57	4	8	9 E	Otoe.....	Aug.	13	1895	.....	115

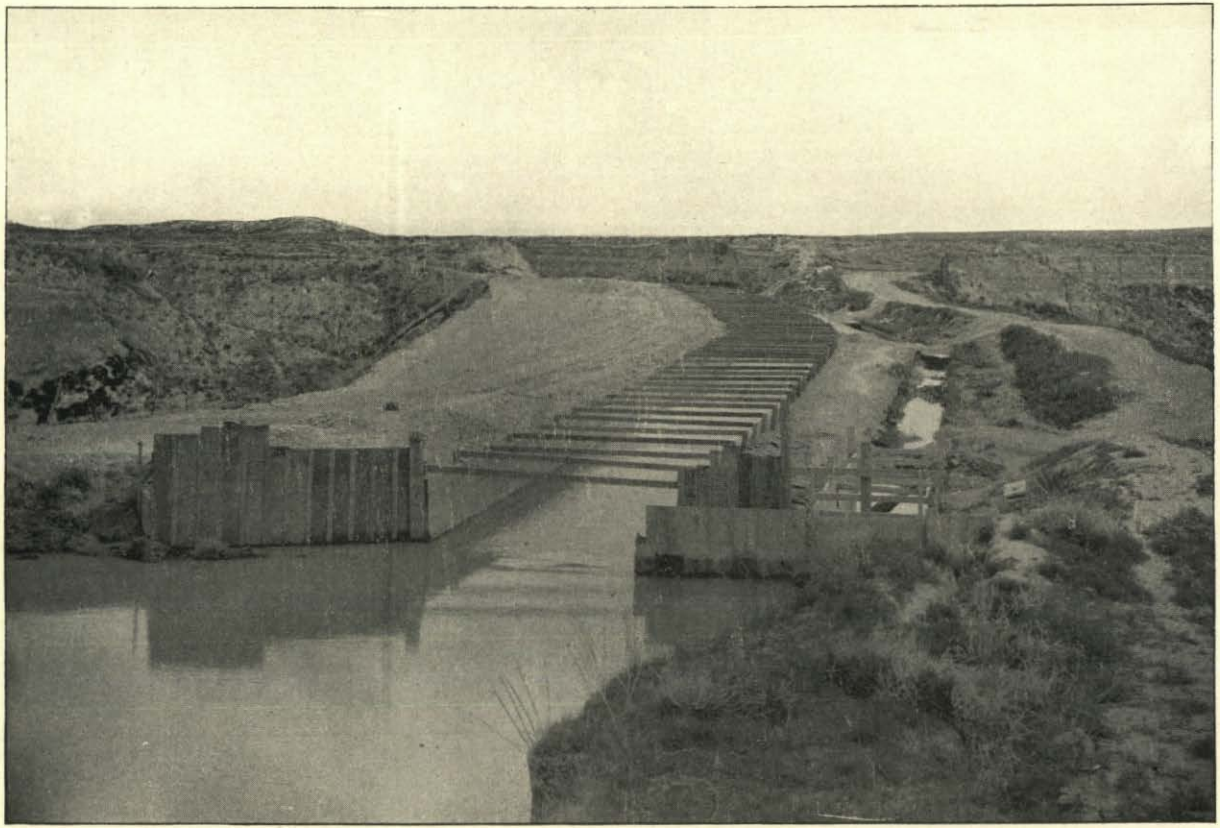
CLAIMS AND APPLICATIONS BY

STREAM	NAME OF CLAIMANT	POST-OFFICE	NAME OF DITCH	
Bazile Creek..	Packard, J. L.....	Creighton .	Creighton Mill Race	1
"	Schneider, Frank	"	Electric Light & P. Co.	2

STREAMS IN DIVISION 2-F.

	Use to which applied	Second feet applied for	Second feet granted	LOCATION OF HEADGATE				DATE OF PRIORITY			Docket No.	App. No.
				S.	T.	R.	COUNTY	Month	D	Yr.		
1	Power.....	.....	.....	21	29	5	Knox.....	.....	..	....	*1002	....
2	Power.....	25		34	29	5	Knox.....	March	25	1899	.....	509

*Pending.



FLUME, GERING CANAL

NEBRASKA AND COLORADO STREAMS.

It was thought that a comparison of some of our principal Nebraska streams with rivers of the arid West that have made for the country through which they flow a world-wide reputation as agricultural districts, would serve to show more concisely the immense wealth there is in Nebraska's water supply, and the possibilities that exist of making western Nebraska one of the principal agricultural districts of the West, were this supply brought to an economical and judicious development.

In the accompanying diagram an attempt has been made to show to the eye the results of the records obtained by the State Engineers of Nebraska and Colorado, in cooperation with the U. S. Geological Survey, during the six years previous to 1901, of the Arkansas at Canon City and the Cache la Poudre at Ft. Collins in Colorado; the North Platte at Camp Clarke and the Loup at Columbus in Nebraska.

These streams were chosen as being fairly representative streams, and ones on which the records are as complete as any for the years in question.

Below are given the means for six years of the mean daily discharges in second feet of these rivers for the months of April to October inclusive:

	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
Cache La Poudre	803	1702	1969	785	357	189	103
Arkansas	550	1600	2458	1262	549	304	318
Loup	3283	3081	3484	2461	2513	2301	2622
North Platte	3842	8083	9426	3774	1007	524	715

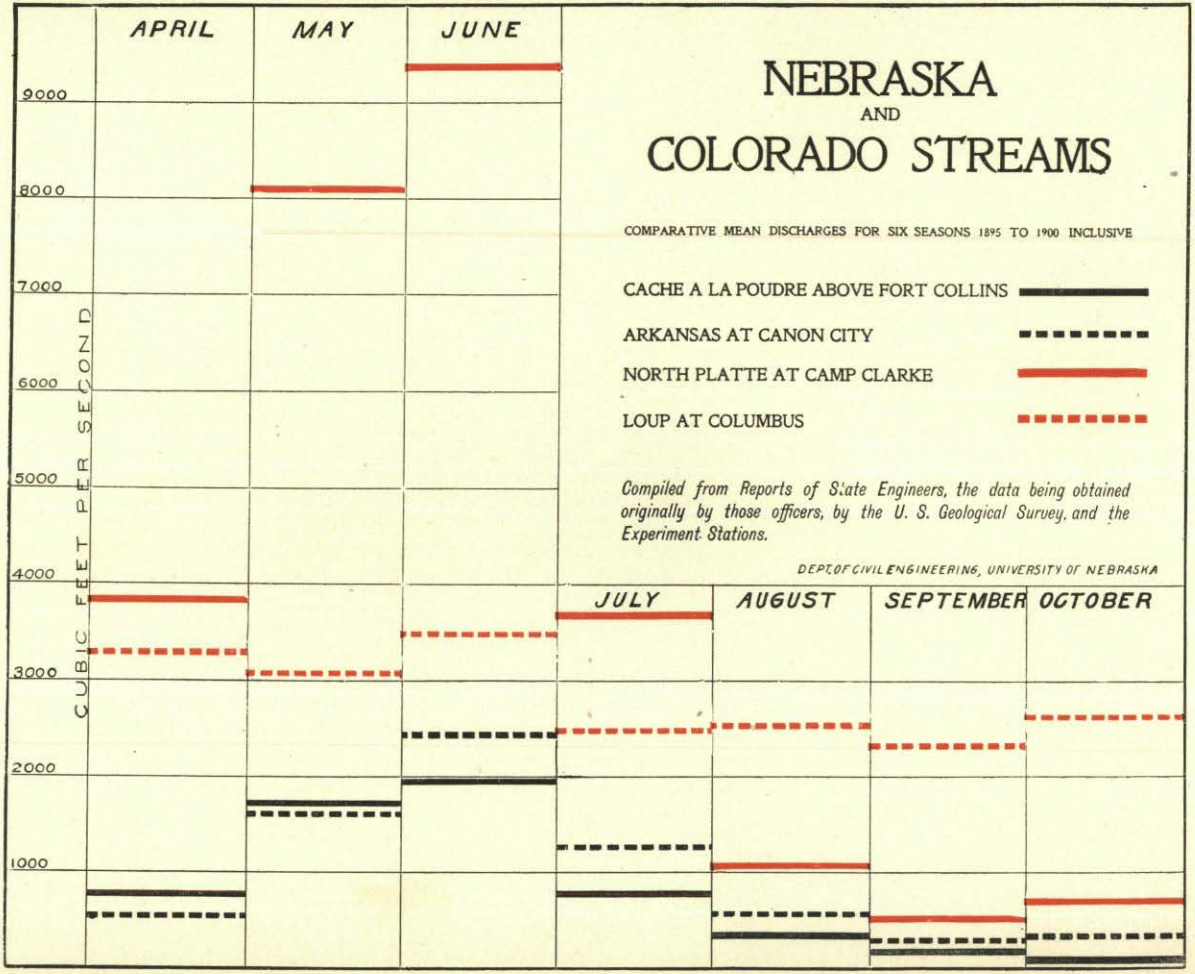
The question of uniformity of flow is perhaps best illustrated by noting the ratios which the maximum monthly discharges bear to the minimum. Considering the five months May to September inclusive, because the records for those months are in nearly all cases complete, these ratios are set forth in the following table reprinted from the Engineer's report to the Nebraska State Board of Agriculture:

	MAY	JUNE	JULY	AUGUST	SEPT.
Loup	1.41	1.35	1.68	1.90	2.35
North Platte	1.48	5.26	7.87	6.00	4.45
Cache La Poudre	4.24	3.83	3.17	3.00	3.77
Arkansas	2.47	3.64	3.72	4.00	3.33

"That is to say, for instance, that during the five years under consideration the total discharge of the Loup river during the month of May in the year of highest water for that month was 1.41 times what it amounted to during the same month in the year of lowest water in May. The figures in the table emphasize the remarkable uniformity in the rate of discharge of the Loup, the extreme variations of the North Platte, and the intermediate positions in this respect which are occupied by the Colorado streams.

"During the seven months, April to October inclusive, of the six seasons included in the comparison, the discharge of the North Platte was sufficient to have covered each year on the average an area of one and two-thirds million acres to a depth of one foot. The corresponding figures for the Loup are one and one-fifth million acres, for the Arkansas a little less than half a million acres, and for the Poudre nearly 360,000 acres, somewhat in excess of one-third of a million acres. In other words, the relative supplying capacities of these streams, as indicated by the records at hand, and taking the Poudre as unity, are 1.000, 1.193, 3.347, and 4.632 for the Poudre, Arkansas, Loup, and North Platte respectively."

Let no one infer that there is any attempt to cast any reflections whatever on the capacity of the rivers of our neighboring state. Their value to the Colorado irrigator has been demonstrated beyond a doubt. The Poudre river is the sole source of the prosperity of the country around Greeley and Ft. Collins, and one has only to visit the country watered by the Arkansas to become convinced of the truth of the statement applicable to the arid regions that "In water there is wealth."


APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
9000
8000
7000
6000
5000
4000
3000
2000
1000
CUBIC FEET PER SECOND
NEBRASKA
AND
COLORADO STREAMS
COMPARATIVE MEAN DISCHARGES FOR SIX SEASONS 1895 TO 1900 INCLUSIVE
CACHE A LA POUDRE ABOVE FORT COLLINS
ARKANSAS AT CANON CITY
NORTH PLATTE AT CAMP CLARKE
LOUP AT COLUMBUS
Compiled from Reports of State Engineers, the data being obtained originally by those officers, by the U. S. Geological Survey, and the Experiment Stations.
DEPT. OF CIVIL ENGINEERING, UNIVERSITY OF NEBRASKA

SUMMARY OF CANALS CONSTRUCTED AND AREA OF LAND UNDER THE SAME.

An examination has been made of the canals in the watersheds named below to determine approximately the length of canals constructed and the number of acres covered.

PLATTE AND NORTH PLATTE RIVERS.

In the valleys of the Platte and North Platte rivers are found the largest irrigation enterprises of the state. In many places the valley reaches a width of 10 to 12 miles and contains some of the best soil to be found anywhere in the state.

About 1,184 miles of canal have been actually constructed diverting water from these rivers. These canals cover about 560,000 acres.

REPUBLICAN RIVER.

On the Republican river and its tributaries some very successful ditches have been operated. The total length of these ditches is about 133 miles, covering about 35,000 acres.

WHITE RIVER, HAT CREEK, AND NIOBRARA.

In the northwestern part of the state a large number of canals have been built using the water from Hat creek, White river, and Niobrara river, and their tributaries. Most of these ditches are small, but they are of great value, as they furnish the means of supplying winter feed for the cattle which graze upon the range adjacent to these irrigated sections during the greater part of the year. These small ditches also enable the ranchman to raise a variety of products which would be impossible without irrigation.

LOUP RIVERS.

Many canals have been built taking their water from the Loup rivers and their tributaries. The largest of these, the

Great Eastern Canal, which heads a short distance above Genoa, has about 70 miles of canal constructed and in operation and covers about 40,000 acres of land. These streams flow for the greater portion of their lengths through a section of the state where the natural rainfall is generally sufficient for the production of good crops, and for this reason only a very small percentage of the flow has been diverted for use in irrigation.

Some very extensive schemes for the development of power have been planned involving the use of the waters of the Loup, Elkhorn, and Platte rivers, and it is probable that work on some one or more of these will be commenced at an early date.

ELKHORN RIVER.

Only a few canals have been taken out of the Elkhorn and lower Niobrara rivers for irrigation. Among the largest of these is the Elkhorn Valley Canal, which is about 12 miles in length and covers about 9,000 acres of land.

The Elkhorn river is used extensively for the development of power, and application has been made for water for several large power plants on the Niobrara.

LODGE POLE CREEK.

Some of the smaller streams, such as the Lodge Pole, Pumpkin Seed, and Frenchman rivers, irrigate an area very much in excess of what would be expected from an examination of the records of their discharge measurements.

The Lodge Pole, which rarely flows more than ten cubic feet per second at any point, supplies 77 miles of canal, covering about 12,000 acres of land, and a large percentage of this land receives sufficient water to insure the production of good crops.

In many localities in Nebraska the land under irrigation has reached a high state of cultivation and a large variety of crops is produced. Under the older canals many well

improved farms are found which will compare favorably with any to be found in the eastern portion of the state.

A great deal of alfalfa is grown under irrigation and the cultivation of sugar beets is being rapidly developed. The beets show a very large percentage of sugar and the tonnage is heavy. The abundance of sunshine and the fact that the amount of moisture supplied may be regulated so as to give the growing beets just the amount required, and the further fact that the soil seems to be particularly adapted to their growth, make this an ideal locality for sugar beet culture. Much of the land under irrigation has never been broken up and is devoted to the production of native hay. The native sod when irrigated produces large crops of hay of a very superior quality.

The following tables show the number of miles constructed and the acres covered by the canals in the watersheds named. We hope to be able to get this data on the remaining watersheds during the next season. These tables are compiled from the reports of under secretaries and field assistants by H. O. Smith, Under Secretary of Water Division No. 1:

NORTH PLATTE RIVER WATERSHED, DIV. 1-A.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Scotts Bluff	212.0	107,810
Banner	14.5	1,730
Cheyenne	159.0	81,960
Deuel	102.0	39,200
Keith	94.0	25,840
Lincoln	198.5	81,680
Totals	780.0	338,220

SOUTH PLATTE RIVER WATERSHED, DIV. 1-A.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Deuel	31.0	23,220
Keith	71.5	18,960
Lincoln	5.0	1,120
Totals	107.5	43,300

PLATTE RIVER WATERSHED, DIV. 1-A.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Lincoln	33.0	10,720
Dawson	213.5	137,380
Buffalo	32.5	18,660
Kearney	17.5	12,680
Totals	296.5	179,440

LODGE POLE CREEK WATERSHED, DIV. 1-E.

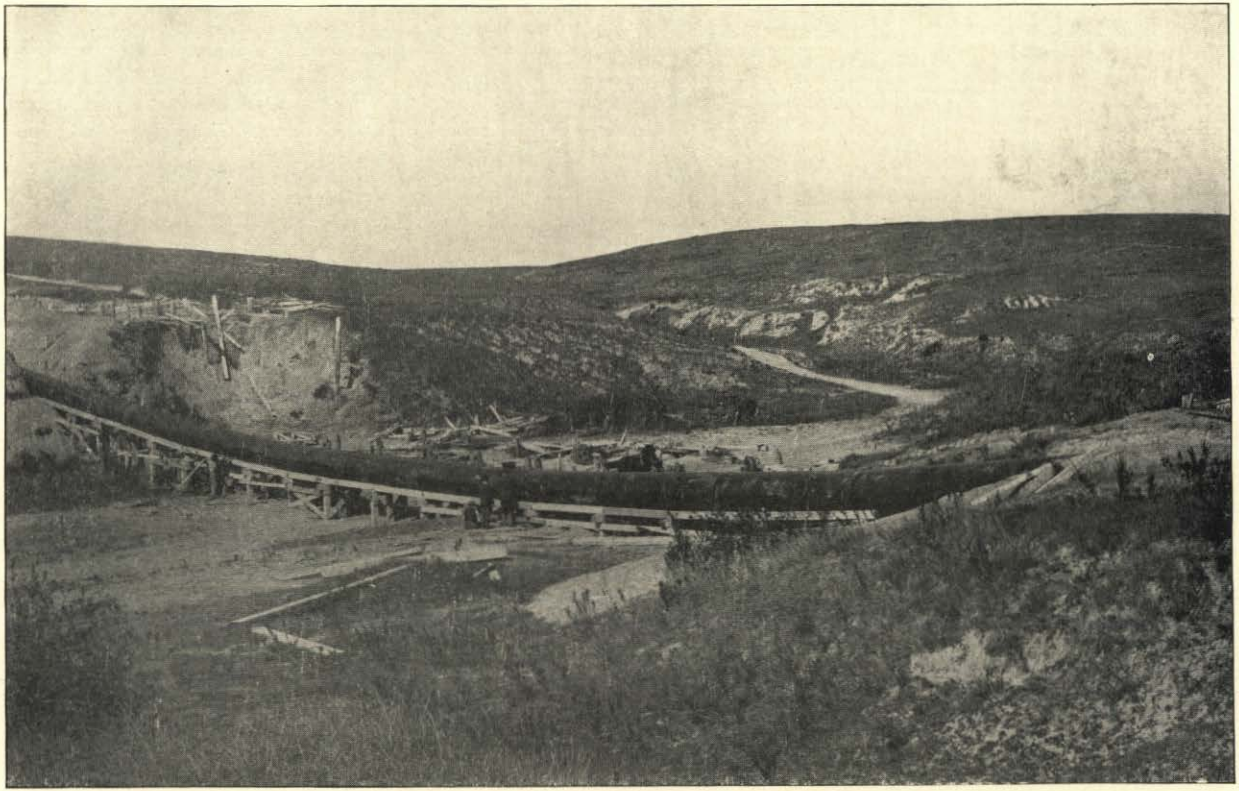
COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Kimball	34.0	4,680
Deuel	9.0	1,540
Cheyenne	34.0	5,755
Totals	77.0	11,975

REPUBLICAN RIVER WATERSHED, DIV. 1-B.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Dundy	85.0	17,415
Hitchcock	35.0	13,070
Red Willow	10.0	3,935
Franklin	3.5	650
Totals	133.5	35,070

FRENCHMAN RIVER WATERSHED, DIV. 1-B.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Chase	47.0	12,710
Hayes	8.5	1,280
Hitchcock	33.0	9,760
Totals	88.5	23,750



48-IN. RIVETED STEEL SYPHON REPLACING FLUME (SHOWN ON PAGE 188), CULBERTSON CANAL
O. V. P. STOUT, ENGINEER

HAT CREEK WATERSHED, DIV. 2-E.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Sioux	46.5	3,350
Totals	46.5	3,350

WHITE RIVER WATERSHED, DIV. 2-D.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Sioux	32.0	8,875
Dawes	65.5	7,205
Sheridan	3.5	175
Totals	101.0	16,255

NIOBRARA RIVER WATERSHED, DIV. 2-C.

COUNTIES	LENGTH IN MILES	AREA COVERED IN ACRES
Sioux	50.5	7,310
Dawes	50.0	10,130
Box Butte	6.5	860
Sheridan	5.5	220
Cherry	11.5	810
Brown	6.5	680
Rock	9.0	710
Keya Paha	33.5	2,510
Holt	6.5	205
Totals	179.5	23,435

SUMMARY.

COUNTIES	LENGTH OF CANALS (MILES)	AREA COVERED (ACRES)
Scotts Bluff	212.0	107,810
Cheyenne	193.0	87,715
Deuel	142.0	63,960
Keith	165.5	44,800
Banner	14.5	1,730
Kimball	34.0	4,680
Lincoln	236.5	93,520
Dawson	213.5	137,380
Buffalo	32.5	18,660
Kearney	17.5	12,680
Chase	47.0	12,710
Dundy	85.0	17,415
Hitchcock	68.0	22,830
Hayes	8.5	1,280
Red Willow	10.0	3,935
Franklin	3.5	650
Sioux	129.0	19,535
Dawes	115.5	17,335
Sheridan	9.0	395
Box Butte	6.5	860
Cherry	11.5	810
Brown	6.5	680
Rock	9.0	710
Keya Paha	33.5	2,510
Holt	6.5	205
Totals	1810.0	674,795

GAGING STATION AT MITCHELL

STREAM MEASUREMENTS.

The statute makes it the duty of the State Board of Irrigation to make measurements and keep a record of the flow of water in the various streams of the state. This is a very important feature of the work of the Board, and the longer the period covered by these records, the more valuable they become in determining the value of the stream for irrigation or power purposes. A single measurement of a stream, or even a series of measurements continued through a single season, will not always give a correct idea of what may be expected of a stream. In fact, such a record is often misleading as will be seen by an examination of the records which we have this far obtained.

During the past two years we have continued the system of cooperation with the Hydrographic Division of the U. S. Geological Survey which was inaugurated several years ago. The work of the U. S. G. S. has been carried on under the direction of F. H. Newell, the Chief of the Hydrographic Division, and the work in this state has been under the direct supervision of Prof. O. V. P. Stout of the University of Nebraska.

The discharge tables for the years prior to 1901 have been published in former reports of this office, but it was thought best to include them in this report for the convenience in comparing the flow of different years. To facilitate this comparison, diagrams have been prepared showing at a glance the variation in the daily flow of the more important streams of the state.

NORTH PLATTE RIVER AT MITCHELL.

Daily mean discharge in cubic feet per second.

DAY	APRIL	MAY	JUNE		JULY	
	1902	1902	1901	1902	1901	1902
1	.....	2703	.....	4695	4530	2910
2	.....	2958	.....	5110	4114	3777
3	.....	2649	10521	5627	3922	2635
4	917	3126	.....	6145	3555	2209
5	932	2795	.....	6510	3350	1853
6	947	2910	.....	6877	3288	1853
7	612	3203	.....	5590	3102	1798
8	494	3335	.....	5590	2818	1779
9	639	3363	9400	5477	2406	1724
10	598	3864	8405	6100	2126	1596
11	612	4186	7695	5839	1768	1406
12	818	4039	7695	6027	1650	1263
13	976	4371	7015	5926	1506	1232
14	1140	4896	7015	5839	1506	1326
15	1310	5110	12120	5969	1326	1080
16	1668	5365	8405	5515	1294	1050
17	1506	5665	8900	5254	1263	961
18	1524	5665	9920	5038	1263	846
19	1632	5926	9400	5038	1048	776
20	1650	5969	8850	4896	1217	734
21	1761	5290	8478	4729	.....	720
22	1687	6373	7987	4186	.....	720
23	1705	6056	6510	3835	.....	748
24	2545	5882	5838	3470	.....	666
25	2455	5515	5264	2982	.....	598
26	2934	5002	5075	2934	.....	639
27	2958	4371	4629	2958	.....	612
28	3229	3864	4595	2703	.....	598
29	3126	3777	4562	3497	.....	860
30	2910	3497	4560	3102	.....	918
31		3006			.....	652
Mean.	1603	4346	7514	4915	2353	1308

NORTH PLATTE RIVER AT MITCHELL.

Daily mean discharge in cubic feet per second.

DAY	AUG.		SEPT.		OCT.		NOV.	
	1901	1902	1901	1902	1901	1902	1901	1902
1	.....	533	210	34	298	130	454	397
2	.....	559	210	30	287	130	455	386
3	1038	507	227	32	287	140	.....	386
4	.....	432	218	34	298	145	.....	374
5	.....	443	420	34	287	.....	.....	386
6	.....	455	375	34	298	.....	.....	559
7	.....	298	398	37	287	.....	.....	572
8	.....	329	398	44	276	.....	.....	559
9	.....	329	363	44	266	.....	.....	559
10	.....	277	375	44	276	.....	.....	598
11	.....	245	422	48	302	.....	.....	572
12	566	209	375	48	235	201	.....	585
13	455	158	330	54	352	245	.....	585
14	398	175	320	58	432	245	.....	585
15	398	145	320	58	520	235	.....	585
16	432	124	308	62	443	266	.....	776
17	398	114	320	66	443	256	.....	585
18	386	104	298	66	444	256	.....	652
19	409	102	298	66	445	266	.....	652
20	409	102	340	79	481	287	.....	693
21	420	94	320	89	455	298	.....	679
22	363	89	330	109	455	329	.....	666
23	375	84	330	114	455	351	.....	.....
24	351	79	341	99	455	363	.....	.....
25	319	74	313	99	454	386	.....	.....
26	309	70	308	104	454	443	576	.....
27	303	66	330	104	454	432	.....	.....
28	245	62	287	124	454	443	.....	.....
29	245	54	287	119	438	455	.....	.....
30	320	51	308	124	454	443	.....	.....
31	218	44			432	420		
Mean.	398	206	322	69	384	299	495	563

NORTH PLATTE RIVER AT GERING.

Daily mean discharge in cubic feet per second.

DAY	APRIL			MAY			
	1898	1899	1900	1897	1898	1899	1900
1	1000	.....	.....	.....	4900	11308	10475
2	1000	.....	.....	.....	4200	11308	10190
3	1000	.....	.....	.....	4900	11019	10700
4	1000	.....	.....	.....	5700	8728	12380
5	1000	.....	.....	.....	6500	7793	12000
6	1450	.....	.....	.....	5700	6880	12090
7	1450	.....	.....	.....	4900	6213	10600
8	1450	.....	.....	.....	4900	5843	10260
9	1450	.....	.....	.....	4900	5698	10390
10	1450	3446	.....	.....	4900	5408	9480
11	1450	3155	.....	.....	4200	5265	10400
12	1450	3997	.....	.....	4200	4991	10100
13	2000	6141	.....	.....	3400	6290	11680
14	2000	9708	.....	.....	3400	7144	12200
15	2000	11900	.....	.....	3400	7709	13800
16	2000	13125	.....	.....	4200	9891	14600
17	2700	14180	.....	.....	4900	11209	14600
18	2700	12200	5300	.....	5750	12921	13800
19	2700	12818	4750	.....	6500	14405	12990
20	3400	10638	4400	.....	6500	14295	12380
21	4900	10828	4465	.....	7400	14295	12200
22	5750	9525	4770	.....	7400	13655	12390
23	5750	8045	6600	.....	8250	13023	11310
24	5750	7877	7000	.....	8250	15290	10700
25	5750	7625	6510	.....	7400	12405	10250
26	5750	7961	6390	.....	6500	10447	9870
27	5750	9525	7190	.....	18500	8465	10390
28	6500	12000	8100	.....	17100	8295	11680
29	6500	11900	8190	23360	18500	8550	11800
30	.....	11605	11900	27900	15700	9342	12400
31				24000	14600	11019	13210
Mean.	3165	9448	6582	24753	7345	9649	11671

NORTH PLATTE RIVER AT GERING.

Daily mean discharge in cubic feet per second.

DAY	JUNE				JULY			
	1897	1898	1899	1900	1897	1898	1899	1900
1	18700	12150	11114	13800	4269	5750	18085	5320
2	18700	11150	11209	14200	4269	4900	17250	5110
3	20400	11150	10733	15200	4269	4200	16541	5110
4	24000	10100	10352	15800	3552	3400	16085	5000
5	25900	10100	10352	14300	3552	3000	16200	4200
6	26000	9200	11605	14200	2909	3400	15514	3600
7	24000	9200	15741	13800	2340	2700	15067	3550
8	20400	9200	14625	13400	2340	2000	14625	2960
9	18700	9200	12920	13190	2909	2000	13869	2850
10	17300	8250	12000	13000	3557	2000	12200	2720
11	14300	8250	11700	12500	2340	2000	12818	2200
12	11400	8250	11700	12180	1847	2000	12303	1750
13	8700	7400	13020	12380	1847	2000	11209	1300
14	11400	8250	14187	14200	1428	2700	10542	1400
15	14300	8250	15513	13210	1428	2000	10733	2275
16	14300	10600	17974	11400	1428	2000	10923	1900
17	12650	11150	19190	10600	1428	2000	11114	2390
18	14300	11150	18686	9205	1847	2000	11114	2430
19	14300	10100	17490	8900	2340	2000	10352	4000
20	12650	10100	17600	9310	1428	2000	9708	3190
21	11400	9200	17843	8400	1428	1650	8552	2200
22	7600	8250	18208	7450	1428	1000	7709	2390
23	6600	8250	19694	6650	1428	1000	7224	1950
24	6600	8250	20324	6690	1428	1000	7144	2280
25	5650	8250	23002	6930	1428	1000	6595	2790
26	5650	7400	23500	6710	1428	1000	6213	1700
27	5650	7400	22554	6380	1428	650	5843	1690
28	6600	7400	19820	6380	1428	650	5553	1500
29	5650	6500	19190	5950	1428	650	5266	1200
30	4850	5750	18817	5400	1084	650	4582	1200
31					1084	.....	4582	1200
Mean.	13622	9028	16025	10717	2140	2110	10823	2688

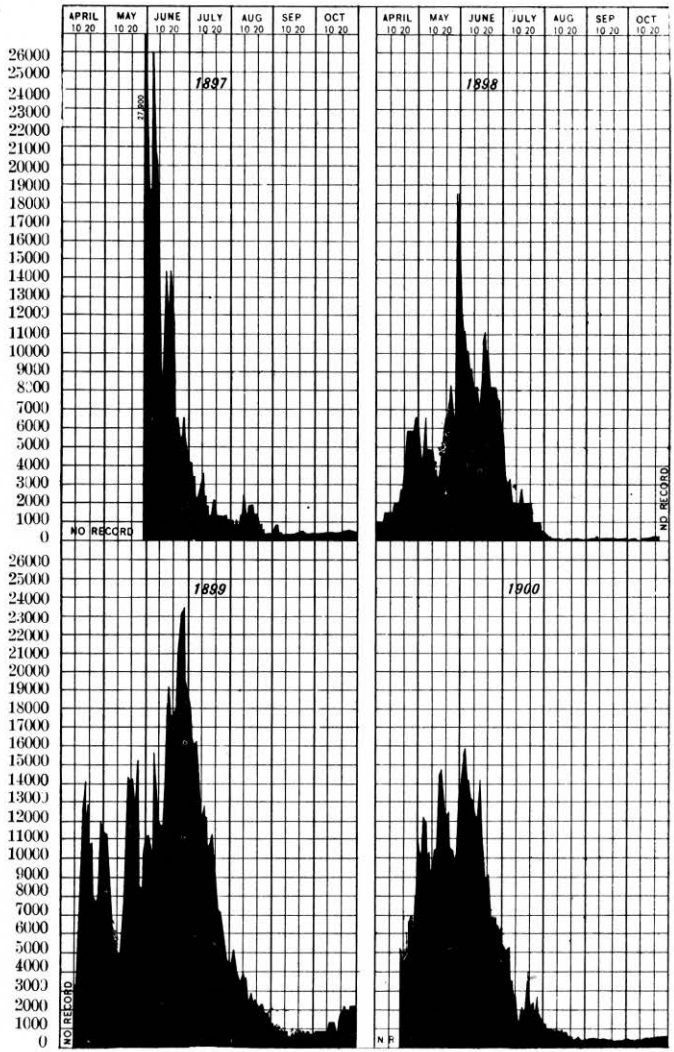
NORTH PLATTE RIVER AT GERING.

Daily mean discharge in cubic feet per second.

DAY	AUGUST				SEPTEMBER			
	1897	1898	1899	1900	1897	1898	1899	1900
1	1084	350	4452	1157	815	100	1316	400
2	815	350	4785	1150	815	100	1146	400
3	815	350	5197	1100	815	100	1020	400
4	1084	200	4854	1100	620	100	1062	400
5	815	200	4062	1050	620	50	1104	400
6	815	200	3936	1050	620	50	935	400
7	815	350	3753	1000	620	100	893	400
8	1428	200	3507	950	500	100	851	400
9	1428	200	3446	900	500	200	815	400
10	2340	200	3997	849	500	100	815	400
11	1428	200	3630	800	500	100	815	385
12	1428	100	3690	800	500	100	815	375
13	1428	100	3446	750	500	100	775	375
14	1847	100	2755	750	500	100	584	360
15	1847	100	2543	700	550	100	584	360
16	1847	100	2926	700	500	100	737	360
17	1847	200	2650	600	500	100	622	360
18	1428	200	2489	600	500	100	700	360
19	1428	200	2489	550	500	100	653	360
20	1428	100	2329	550	500	100	893	356
21	815	200	2077	550	500	100	893	360
22	815	200	2026	529	468	100	800	360
23	650	200	2275	500	468	100	854	360
24	620	200	2275	500	468	100	803	360
25	620	100	2275	475	468	100	737	375
26	500	100	1730	450	468	100	775	375
27	500	100	1730	400	468	100	893	375
28	500	100	1684	400	468	100	893	375
29	500	100	1777	400	455	100	700	375
30	500	100	1639	395	455	100	737	375
31	500	100	1454	.....				
Mean.	1093	177	2964	723	537	100	843	378

NORTH PLATTE RIVER AT GERING.

Discharge in cubic feet per second.



NORTH PLATTE RIVER AT GERING.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER			
	1897	1898	1899	1900
1	455	100	893	400
2	455	100	893	400
3	455	100	893	400
4	455	100	893	400
5	455	100	893	400
6	455	150	893	400
7	455	150	893	400
8	455	150	893	400
9	455	150	893	400
10	468	150	893	400
11	468	200	1316	400
12	468	200	1316	400
13	500	200	1316	450
14	500	200	1316	450
15	500	200	1316	450
16	500	200	1316	450
17	550	350	1316	450
18	550	350	900	475
19	550	350	1777	486
20	550	350	1770	399
21	550	350	2000	400
22	550	350	2275	400
23	550	350	2275	425
24	620	.....	2000	425
25	620	.....	2000	425
26	620	.....	2000	450
27	550	.....	2275	450
28	550	.....	2275	475
29	550	.....	2275	475
30	550	.....	2275	500
31	.....	.....	2275	522
Mean.	514	213	1501	431

NORTH PLATTE RIV. AT CAMP CLARKE.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER					NOV.
	1896	1897	1898	1899	1900	1896
1	875	380	110	1329	260	1046
2	932	370	150	1300	200	1137
3	875	400	150	1217	270	1137
4	875	400	160	1189	270	1186
5	932	400	150	1161	230	1212
6	914	410	150	1105	310	1338
7	914	410	160	1456	290	706
8	954	430	160	1161	290	1046
9	1290	430	190	1392	290	1160
10	1069	410	200	1329	270	.....
11	1023	475	220	1424	260	.....
12	1046	.....	220	1245	290	.....
13	1023	465	200	1487	300	.....
14	1046	450	200	1456	340	.....
15	1046	450	190	1646	380	.....
16	1046	465	165	1392	340	.....
17	1023	465	150	1550	340	.....
18	1000	475	150	1392	340	.....
19	1046	465	130	1300	380	.....
20	1000	515	125	1392	390	.....
21	1046	580	365	1894	410	931
22	1023	600	365	.....	450	.....
23	954	565	375	.....	450	.....
24	977	555	350	.....	450	.....
25	977	565	365	.....	450	.....
26	954	600	390	.....	440	.....
27	1046	610	425	.....	500	.....
28	1046	580	420	.....	500	.....
29	1023	600	410	.....	520	.....
30	1264	600	390	.....	600	.....
31	1023	600	425	.....	520	.....
Mean.	1008	491	245	1372	366	1074

NORTH PLATTE RIVER AT CAMP CLARKE.

Daily mean discharge in cubic feet per second.

DAY	AUGUST					SEPTEMBER				
	1896	1897	1898	1899	1900	1896	1897	1898	1899	1900
1	1316	740	800	3841	625	854	580	80	1077	425
2	1160	835	780	4500	771	1056	565	80	1025	210
3	1160	1160	725	5335	725	738	565	60	725	260
4	1114	1210	600	4903	900	835	580	60	725	260
5	1092	1040	300	4057	600	796	550	65	927	250
6	1114	1160	725	3950	620	816	500	65	1049	270
7	1114	1260	750	3841	630	835	490	80	682	260
8	1160	....	230	3435	550	895	475	80	903	190
9	1046	1400	275	2775	550	1023	475	80	952	425
10	954	2000	230	3100	575	1186	450	200	1025	350
11	854	2000	200	3485	450	1046	459	160	903	390
12	816	1560	160	3235	450	932	450	150	703	340
13	777	1650	150	4111	450	1114	490	150	725	425
14	706	1620	130	2819	480	895	475	160	1000	210
15	722	1420	125	2519	400	854	515	150	952	290
16	628	1270	190	3005	420	816	515	150	1000	230
17	706	1160	150	2960	420	796	530	150	1077	290
18	932	1135	200	2775	400	1114	500	150	1105	290
19	835	1000	190	2476	390	796	540	125	1217	230
20	758	835	150	2391	420	954	515	90	1273	190
21	895	720	125	2027	400	977	490	105	1245	210
22	1069	....	130	2110	400	932	450	105	1189	200
23	....	740	130	1930	450	1046	440	95	1300	180
24	....	645	125	1823	400	1160	450	80	1858	330
25	854	660	125	1930	390	1114	440	110	1487	390
26	816	610	110	1551	380	954	450	115	1245	390
27	777	580	60	1519	230	1092	465	115	1133	310
28	777	610	95	1551	230	875	450	140	1392	310
29	1000	610	95	1519	260	835	465	80	1133	300
30	835	550	95	1189	290	835	410	80	1245	260
31	796	580	90	1189	310					
Mean.	924	1061	266	2834	470	939	491	110	1076	288

NORTH PLATTE RIVER AT CAMP CLARKE.

Daily mean discharge in cubic feet per second.

DAY	JUNE				JULY				
	1896	1898	1899	1900	1896	1897	1898	1899	1900
1	.....	10600	14713	12110	2886	.....	4200	20125	4000
2	.....	10300	14925	12315	2552	4195	3350	20125	3960
3	.....	8500	13895	13700	2295	.....	2960	20250	3700
4	.....	7600	13400	14050	2042	3250	2800	20500	3420
5	.....	7550	12805	14275	1878	2950	2800	19410	3550
6	.....	6700	13793	14200	1655	2760	2400	20125	2700
7	.....	6500	15455	13700	1537	2440	2050	19350	2550
8	.....	5900	14820	13200	1566	2440	1900	19160	1850
9	.....	5300	13793	13650	1537	3000	1760	17773	1875
10	.....	6900	13591	12845	1508	3000	1650	15350	2050
11	.....	6700	11950	12010	1478	2700	1550	14610	2000
12	.....	6300	11575	12350	1160	2400	1800	13790	1700
13	.....	6300	12330	11260	1160	2400	1350	12235	1700
14	.....	6200	13200	11250	1137	2040	1200	10850	1700
15	.....	7200	15030	11640	1137	1850	1200	11760	2120
16	.....	7400	17885	10550	977	1560	1200	.....	2050
17	.....	7600	18585	10050	1046	1350	1200	.....	1700
18	.....	8100	15665	8410	1977	1710	1200	.....	2100
19	.....	7300	13591	8510	1685	2600	1350	10065	1875
20	.....	7400	.....	8210	1137	1650	1350	9560	3350
21	.....	7500	.....	8120	1186	1420	1200	8582	2470
22	.....	7400	18234	7675	1160	1480	1150	8342	2200
23	.....	7900	18117	5900	1226	1420	1260	7730	2250
24	.....	7550	18585	5820	1566	1560	1100	6715	2470
25	.....	7300	21619	5400	1368	1360	1075	6650	1675
26	.....	6500	23560	4990	1342	1210	1050	5712	1940
27	3600	5900	23560	4510	1566	1350	850	5148	1600
28	4100	5300	22900	4510	1114	1210	800	5271	1600
29	3324	4800	20875	3960	1394	1310	800	4500	1290
30	3102	4550	20750	3960	.....	1440	850	5950	1000
31					1960	930	780	4615	775
Mean.	3102	7030	16400	9771	1554	2034	1619	12230	2071

NORTH PLATTE RIVER AT CAMP CLARKE.

Daily mean discharge in cubic feet per second.

DAY	APRIL.				MAY		
	1897	1898	1899	1900	1898	1899	1900
1	2200	675	.....	.....	2600	10150	10305
2	2110	675	.....	.....	2350	10588	8370
3	2050	900	.....	.....	2600	7145	8150
4	1950	1050	.....	.....	2400	6037	10200
5	1850	1050	2648	.....	3700	7505	9855
6	1650	830	2866	.....	4000	7290	9820
7	1850	900	3005	.....	4000	4111	9100
8	2150	830	3235	2910	3350	4165	9410
9	2050	925	3335	3500	3150	3841	8800
10	1550	950	2866	4650	3050	4215	9850
11	1850	1000	2734	4450	3150	3841	9850
12	2050	1175	2734	4900	2700	4675	10500
13	1420	900	4384	4300	3150	5455	10900
14	1850	950	7000	4950	3300	5645	11740
15	1850	1000	11030	5810	2500	6855	12680
16	1900	1200	10500	5400	2600	8500	13600
17	1850	1250	9560	4450	2650	10413	14000
18	2000	1350	9560	5010	2650	11668	12800
19	2400	1650	9810	4650	2800	12914	11700
20	4195	1900	10040	4525	4000	19050	10900
21	.....	2400	9060	4310	5300	16220	11000
22	.....	2400	8265	4525	5700	17773	11150
23	.....	3050	6443	6400	6300	16867	10700
24	.....	3400	5907	6300	6100	16430	9400
25	.....	2900	5712	6400	5900	17207	9225
26	.....	2900	5647	5600	6200	14818	8550
27	.....	2900	6650	6200	13:00	12000	8195
28	.....	2450	9225	7025	.....	12044	9100
29	.....	2700	10065	8400	.....	12330	10040
30	.....	2800	10850	7700	13400	13200	10755
31					11300	14000	11700
Mean.	2038	1637	6659	5407	4628	10257	10414

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	JANUARY			FEBRUARY			
	1897	1898	1899	1897	1898	1899	1901
1	5715	4864	.....	4876	5296	7437	.....
2	5296	5296	5757	4876	5296	7437	.....
3	6554	5296	5757	4876	4864	7437	.....
4	6134	4861	5757	5715	5296	7437	.....
5	6554	5296	5757	5296	5296	7437	.....
6	6973	5296	5757	5296	5296	7437	.....
7	7392	5296	5757	5296	5296	7437	.....
8	7812	5848	5757	5296	5848	7437	.....
9	8231	5448	5757	6134	6333	7437	.....
10	7812	5296	5757	6973	5848	7437	.....
11	7812	5296	5757	7812	6333	7437	.....
12	7812	4864	5757	7812	7786	7437	.....
13	8650	5080	5757	8231	7786	7437	.....
14	8650	5296	5757	8650	8270	7437	.....
15	7812	4864	5757	8650	7786	7437	.....
16	8231	5080	5757	9489	6333	7437	.....
17	8231	4864	5757	9489	5296	7437	.....
18	8231	5296	5757	9489	5080	7437	.....
19	8231	5080	6317	9489	4864	7437	.....
20	8231	4864	6317	9489	4864	7437	.....
21	7812	4864	6317	9489	4864	7437	.....
22	6973	4864	6877	8650	4433	7437	.....
23	5715	5080	6317	7812	4217	7437	.....
24	4876	5296	6317	6974	3785	7437	6100
25	4876	4864	7437	2471	3570	7437	6100
26	5715	5296	7437	2645	3354	7437	5450
27	5715	5296	7437	2645	3354	7437	5450
28	5715	5296	7437	2645	2922	7437	6100
29	5715	5296	7437				
30	5715	5296	7437				
31	5715	5296	7437				
Mean.	6932	5178	6257	6663	5342	7437	5840

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	MARCH					
	1895	1897	1898	1899	1901	1902
1	10180	2341	3138	7437	7800	.....
2	8060	3689	2707	7437	9900	.....
3	4878	4457	2064	7437	7800	.....
4	4878	5296	2064	7437	7800	.....
5	4878	5712	1844	7437	7800	.....
6	4282	6554	1700	7437	4050	.....
7	3210	6973	1700	7437	2150	.....
8	4575	7392	2064	7437	2950	.....
9	2968	7812	2491	7437	2950	.....
10	1723	8650	2491	7997	2520	.....
11	3463	9489	2491	7997	2950	.....
12	2968	3167	2491	7997	2150	.....
13	963	3341	2275	7977	1800	.....
14	537	2993	2064	7997	1800	.....
15	455	2645	2491	7997	2150	.....
16	1389	2471	2064	7997	1800	950
17	1725	2993	2275	7437	1800	1320
18	2300	3515	1844	6317	1800	1800
19	2512	2471	2491	6316	2950	1800
20	2968	2296	2491	6317	1800	2150
21	2300	3167	2707	4637	1800	2150
22	2098	3167	2064	6317	1800	2150
23	2098	2993	1557	6317	1800	2520
24	2300	2645	1551	7717	1800	3440
25	2300	2122	1413	6877	1560	3440
26	3463	1774	1270	5197	1560	4050
27	2512	2296	1700	5197	1800	2950
28	2300	1948	2491	4917	1320	2950
29	2098	1774	3354	4637	1320	1800
30	1723	2122	2922	4917	1800	1320
31	1389	2296	2707	5197	7800	1320
Mean.	3016	3921	2252	6814	2360	2257

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	APRIL.						
	1895	1896	1897	1898	1899	1901	1902
1	1723	.....	2645	3138	3831	3440	1320
2	2512	.....	3515	2707	3023	3440	1800
3	1551	.....	4457	2491	6317	3440	2150
4	1551	.....	4457	2064	5757	2520	2520
5	1905	.....	5296	2707	5197	1800	2520
6	2968	.....	4038	3138	6317	2150	2520
7	3463	.....	4457	2707	6597	2150	1804
8	3210	.....	5296	2922	4917	1560	1800
9	2300	.....	4457	2491	4637	1560	1800
10	1551	1860	3863	1700	4637	2150	1800
11	2735	2335	3863	2064	4637	3440	1560
12	2735	3048	4896	2491	5197	4700	1320
13	2968	3560	3863	2707	5477	4050	1320
14	2512	3048	3515	2275	4637	2950	1800
15	1723	2680	3167	1844	4437	2950	2150
16	2512	2490	2471	2275	4637	2520	2520
17	3210	2870	2471	1557	8837	2520	2520
18	3725	2870	2645	1700	9111	2520	2520
19	3463	2490	2645	1700	9481	2150	2520
20	2968	2680	2819	2064	9851	2150	2520
21	4282	3225	3515	2064	9111	2150	2520
22	5191	2680	3863	2064	7997	1800	2950
23	5191	3048	5296	2491	7997	1800	3440
24	4878	2680	6973	2275	7997	1800	3440
25	4878	3225	8650	2491	7437	1560	3440
26	4281	3048	10328	2922	6877	1560	2950
27	5191	2680	13486	3785	7437	1560	3440
28	5848	2683	9489	3785	7437	1560	3440
29	6544	3048	8650	3785	7437	2150	3440
30	6544	3048	8231	3785	7997	2150	3440
31							
Mean.	3470	2823	5110	2540	6509	2408	2443

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	MAY						
	1895	1896	1897	1898	1899	1901	1902
1	5191	3225	8231	3785	10591	2150	4050
2	5848	3392	7812	4001	10591	5450	4050
3	5848	3048	8650	4433	9851	6900	3440
4	8464	3780	11854	4433	8837	6100	3440
5	9735	4555	11854	4433	8277	6900	4050
6	10635	6777	10328	4433	7437	6900	3723
7	10635	5655	11854	4648	7437	6900	3440
8	8878	6777	11854	4433	8837	6100	3440
9	6908	5111	14948	4433	8277	6100	3440
10	7282	4000	14217	4433	6317	6100	3440
11	7282	4000	14217	4001	6037	6900	3440
12	6191	3780	14948	4001	5197	6100	4700
13	5541	4555	14948	3785	5197	6100	5450
14	4878	5655	14217	3570	4637	6100	5450
15	5848	7888	14948	3785	5197	6100	6100
16	5848	5655	10328	4217	5477	6100	9900
17	6908	5655	13486	6817	6397	5450	7800
18	8060	6222	10328	5296	7717	5450	6900
19	6544	5111	10328	4864	7717	5450	6900
20	6908	5655	13486	4864	9851	5450	7136
21	6544	5655	11854	5296	11350	6100	7800
22	6908	5111	13486	5080	12554	6100	6900
23	6908	4000	13486	5296	12554	9900	6900
24	7282	4000	14217	4864	12967	11100	6900
25	6544	3780	15679	4864	12146	11100	6900
26	6191	3560	17872	5296	12962	12700	6100
27	6191	3225	20063	6817	13373	12700	6100
28	5848	3225	20796	6817	13373	14300	5450
29	5191	2680	20796	5848	12554	14300	5450
30	7280	2680	21527	14646	10591	11100	5450
31	9735	2870	20796	10074	10591	9900	4700
Mean.	7033	4558	13981	5276	9196	7680	5450

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	JUNE						
	1895	1896	1897	1898	1899	1901	1902
1	9735	3392	21527	12034	10961	9900	3440
2	8464	4000	20296	9559	12146	8800	3440
3	8060	3392	20796	8785	12962	7800	3158
4	12553	2680	18603	8528	12962	7800	2950
5	12553	14613	18603	8270	12146	9900	2950
6	12058	16300	18603	7786	11330	11100	4050
7	16875	14613	21527	7786	11738	11100	5450
8	15732	12927	23720	7817	12962	12700	5450
9	15732	11241	21849	6817	13782	12700	6100
10	15177	10117	17172	6817	13782	12700	5450
11	14632	9000	16637	6817	13373	12700	4700
12	12553	9000	16637	6817	12554	17700	6900
13	11573	9000	13490	6333	11738	9900	6100
14	12553	7333	11916	8270	10961	11100	6900
15	11573	5655	9768	7302	11330	11100	6900
16	11573	4000	11393	6333	12146	11100	6900
17	12550	3780	11393	5848	14195	11100	6100
18	10635	3780	12442	6333	14606	9900	6900
19	10635	5111	11393	6817	16257	8800	6610
20	9735	4000	11390	7302	15838	12700	6900
21	8878	3780	11393	6817	14195	9900	6100
22	10180	3560	11393	5848	13373	7800	6100
23	8878	3225	11393	5842	13784	9900	6100
24	8878	3560	9768	5848	13373	8800	5450
25	8464	4555	9768	5848	15839	7800	4050
26	7665	3780	7331	5296	17072	6900	4050
27	7665	3560	6518	5296	18305	6100	3050
28	7282	3560	7331	5080	17894	5450	3440
29	6191	4000	6518	4433	17072	4700	3440
30	5848	2680	6518	4648	16661	4050	4050
31							
Mean.	10829	6340	13920	6878	13844	9733	5139

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	JULY						
	1895	1896	1897	1898	1899	1901	1902
1	5191	2680	6197	4217	15428	4050	6100
2	4575	2680	5716	4001	16257	3440	5450
3	3725	2335	5556	4001	15839	3440	4991
4	4282	2020	5235	4433	15428	3440	4050
5	4575	1730	4914	3785	15428	2950	3440
6	3998	1600	4754	3570	15428	2950	4050
7	3998	1475	4432	3354	14606	2950	4050
8	4575	1130	4272	2491	14606	2520	3440
9	5191	1130	4593	2275	14606	2520	4050
10	5848	950	4112	3570	14606	2150	3440
11	5191	800	3174	2707	13784	1800	3440
12	4575	600	3409	3138	11738	1800	2950
13	3998	550	4272	1844	11330	1800	2520
14	3998	460	3174	1557	11330	1320	2150
15	3463	320	2940	1270	10961	1320	2520
16	2968	350	3409	984	9851	950	1320
17	2098	280	3409	1127	9111	943	1293
18	1551	250	3643	984	8557	950	1120
19	1551	350	3409	984	8837	950	1120
20	1905	405	4272	697	9111	950	950
21	1551	575	3409	697	9111	670	800
22	1723	875	3878	697	8557	465	670
23	2098	1600	4432	715	8277	280	670
24	2968	2335	2940	622	7437	210	565
25	2968	1240	2940	660	7157	150	465
26	2098	1040	2306	622	6317	565	370
27	1551	875	2306	622	6317	465	465
28	1551	675	2306	510	6597	370	694
29	1389	1350	2306	399	5757	100	800
30	1237	1040	1510	324	5757	75	800
31	842	1475	1090	473	4917	210	370
Mean.	3137	1134	3638	1846	10743	1508	2229

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	AUGUST						
	1895	1896	1897	1898	1899	1901	1902
1	628	1600	1090	548	5197	210	370
2	537	1475	1090	1270	5757	210	280
3	963	1730	1090	1413	5757	150	150
4	730	1860	1510	840	6317	100	100
5	537	1240	2306	510	6317	75	100
6	628	1475	4593	473	8557	75	75
7	842	1730	4432	548	5477	50	50
8	842	1240	4754	473	4637	75	50
9	628	800	4432	399	4637	100	55
10	628	950	4593	324	4235	100	50
11	628	675	4754	306	3831	210	50
12	628	600	4272	289	3831	465	30
13	537	600	3643	254	4033	465	30
14	384	550	4112	219	4637	370	50
15	455	520	4593	178	4637	280	50
16	628	460	4272	179	4235	370	50
17	455	520	4272	179	4033	370	30
18	384	637	4272	179	4235	370	49
19	323	800	4112	160	3831	370	100
20	384	875	3643	100	3831	280	100
21	272	1130	3643	100	3831	670	75
22	231	950	4309	100	2619	800	75
23	272	800	2306	254	2619	565	94
24	231	950	1510	271	2215	465	100
25	272	738	1090	199	2215	370	150
26	200	600	1090	160	2215	370	100
27	175	550	963	140	2215	370	100
28	537	600	963	90	2030	370	150
29	455	575	850	120	1668	465	210
30	384	550	743	90	1322	800	150
31	323	600	743	80	1668	800	150
Mean.	488	919	2876	353	3866	346	102

NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	SEPTEMBER						
	1895	1896	1897	1898	1899	1901	1902
1	323	550	850	150	2215	1120	150
2	323	738	850	70	1845	1320	150
3	323	637	743	90	1845	1120	150
4	200	637	679	90	1845	1320	100
5	200	600	615	120	1322	1320	100
6	200	600	679	80	1322	1320	100
7	150	550	550	100	1495	1320	100
8	150	550	422	160	1495	1320	100
9	175	600	422	219	1149	1320	100
10	175	675	486	324	1019	1320	100
11	175	800	679	436	1149	1560	100
12	175	800	743	660	1149	1800	150
13	200	950	615	548	1149	1800	150
14	200	1130	679	697	1149	1320	150
15	175	1130	615	984	1019	1120	210
16	272	950	679	697	889	950	210
17	272	800	679	660	889	800	150
18	200	875	743	548	889	800	210
19	200	950	615	473	889	1120	210
20	150	875	615	399	889	1120	150
21	200	875	615	362	875	1120	280
22	231	950	615	324	875	800	565
23	455	800	550	324	850	670	1800
24	384	875	486	324	850	670	1783
25	323	950	550	324	850	670	1320
26	272	1130	550	324	875	670	1320
27	272	.....	486	324	875	565	1320
28	200	.....	486	289	976	565	1120
29	231	.....	486	289	875	565	1120
30	323	.....	486	306	875	565	950
31							
Mean.	238	807	609	352	1145	1068	481

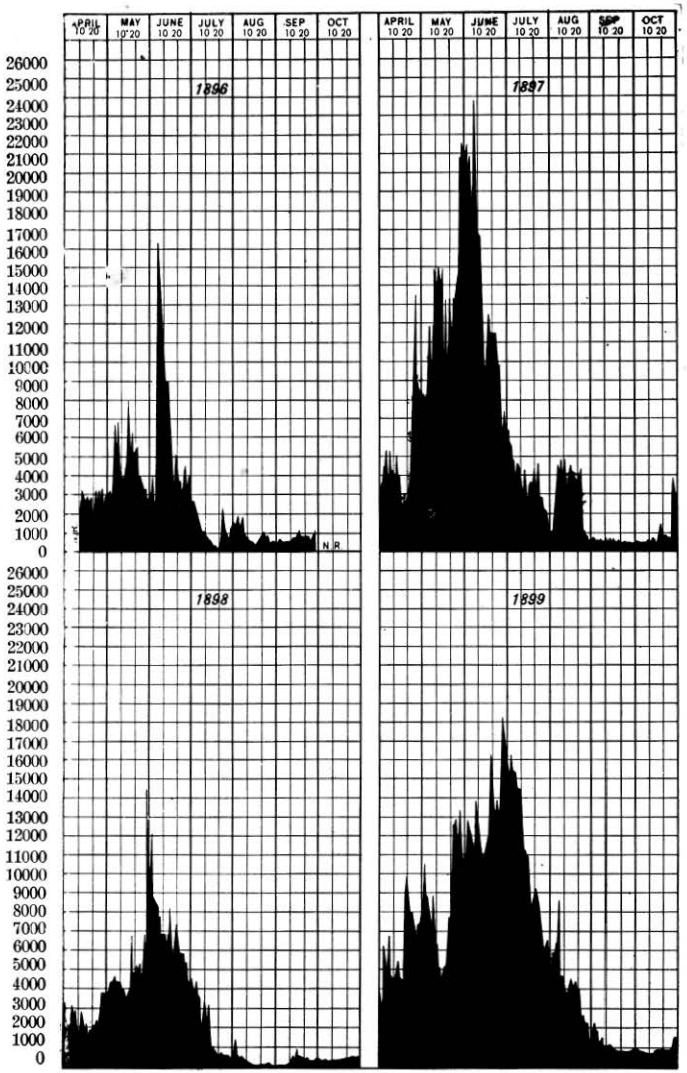
NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER						
	1895	1896	1897	1898	1899	1901	1902
1	272	.....	615	324	976	670	950
2	200	.....	486	289	850	670	950
3	231	.....	486	254	875	670	950
4	384	.....	486	289	713	670	950
5	384	.....	486	289	713	800	1120
6	384	.....	486	324	713	800	1120
7	384	.....	486	324	713	1120	950
8	537	.....	486	324	622	1120	800
9	730	.....	486	436	622	950	800
10	730	.....	679	399	622	1320	670
11	537	.....	550	399	622	1320	1120
12	842	.....	679	436	713	1320	1120
13	730	.....	743	399	713	950	1120
14	842	.....	679	399	667	1120	1120
15	842	.....	473	399	984	1120	1120
16	1095	.....	963	399	984	1120	1120
17	1095	.....	1090	399	984	1120	1120
18	1095	.....	1343	399	984	1120	1120
19	963	.....	1510	473	984	1120	950
20	842	.....	963	548	984	1120	950
21	842	.....	963	548	984	1320	1120
22	842	.....	743	548	984	1320	1120
23	1095	.....	743	622	984	1320	1120
24	1095	.....	743	622	984	1320	1120
25	1237	.....	743	622	984	1320	1120
26	1237	.....	1090	600	1270	1320	1120
27	1389	.....	1510	697	1557	1320	1120
28	1095	.....	3643	697	1557	1320	1120
29	1095	.....	3878	697	1557	1320	950
30	842	.....	3643	697	1557	1320	950
31	1237	.....	2940	697	413	1320	1120
Mean.	810	.....	1132	476	966	1121	1035

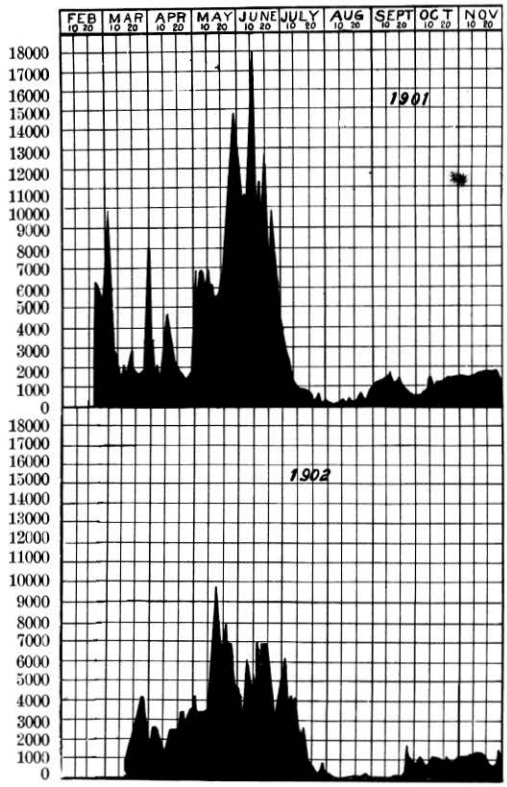
NORTH PLATTE RIVER AT NORTH PLATTE.

Discharge in cubic feet per second.



NORTH PLATTE RIVER AT NORTH PLATTE.

Discharge in cubic feet per second.



NORTH PLATTE RIVER AT NORTH PLATTE.

Daily mean discharge in cubic feet per second.

DAY	NOVEMBER						DECEMBER		
	1895	1897	1898	1899	1901	1902	1897	1898	1899
1	1095	2624	697	1270	1320	1120	4112	2275	1844
2	963	1510	697	1557	1320	1120	3174	2275	1844
3	1095	963	697	1557	1320	1120	4112	2275	1700
4	1389	743	697	1700	1320	1120	4112	2707	1700
5	1551	743	984	1844	1320	1120	4112	2707	2707
6	1389	963	984	2059	1320	1120	4112	2707	3570
7	1095	1510	984	1844	1320	1120	4112	2707	3570
8	1095	1510	697	1844	1320	1120	4112	2707	3570
9	1389	2624	984	1844	1320	1120	4432	2707	3138
10	963	2624	660	1844	1320	1120	4593	2707	3138
11	1095	1510	697	1844	1320	1120	4754	3570	3138
12	1237	1510	984	1844	1560	1120	4914	3570	3138
13	1905	1510	984	1557	1560	1120	5395	3570	3138
14	1551	1510	984	1557	1560	1120	5395	3570	3138
15	1551	1510	697	1700	1560	1320	5716	3570	3138
16	1551	1510	1127	1844	1800	1320	5716	3570	3138
17	1237	2624	984	1700	1800	1320	6037	3570	3138
18	1389	2624	1270	1557	1800	1320	6037	.....	3138
19	1237	2624	1844	1844	1800	1320	6037	.....	3138
20	1389	2624	1557	1844	1800	1120	6037	.....	3138
21	963	2624	1127	2275	1800	950	6037	.....	3138
22	1095	2306	984	2275	1800	800	6037	.....	3138
23	1237	2624	984	1844	1800	800	5716	.....	3138
24	1551	2624	984	1844	1800	800	5716	.....	3554
25	1905	963	984	1844	1800	800	5395	.....	3785
26	1905	2306	984	1844	1800	950	5395	.....	4433
27	1551	3409	984	1844	1800	1560	5395	.....	4433
28	1551	4112	1844	2275	1800	1120	5074	.....	4433
29	1237	4112	1557	1844	1560	845	5395	.....	4433
30	1551	4112	1557	1844	1560	.....	5716	.....	4433
31							5716	.....	4438
Mean.	1357	2152	1040	1830	1576	1104	5116	2986	3270

PLATTE RIVER AT LEXINGTON.

Daily mean discharge in cubic feet per second.

DAY	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.
	1902	1902	1902	1902	1902	1902	1902	1902
1	.....	3895	5232	.....	565	Dry	836	1226
2	.....	2693	2760	.....	Dry	"	1158	892
3	.....	2400	2400	.....	"	"	1124	1022
4	.....	2112	3092	.....	"	"	954	465
5	.....	2760	3160	5140	"	"	920	836
6	.....	2460	2580	5140	"	"	640	836
7	.....	3092	2340	4290	"	"	780	1302
8	2293	3160	1842	5600	"	"	1056	1106
9	.....	1950	3432	2820	"	"	892	.....
10	.....	2220	.....	5140	"	"	724	.....
11	.....	2280	3500	4373	"	"	1596	.....
12	.....	2280	3816	5232	"	"	1842	.....
13	.....	3228	7204	5692	"	"	1788	.....
14	.....	4885	6906	2580	"	"	1554	.....
15	2220	7714	5232	3579	"	"	1302	.....
16	1950	7714	6812	1788	"	"	1302	.....
17	1950	14672	4211	1788	"	"	1056	.....
18	1680	11264	6555	1158	"	"	1200	.....
19	2220	10004	6624	1002	"	"	1260	.....
20	2520	7918	6718	780	"	"	1896	.....
21	2220	5968	5416	696	"	"	1428	.....
22	1680	7408	7918	367	"	"	1056	.....
23	1680	7918	6530	160	"	"	1022	.....
24	2520	6812	8644	32	"	367	1022	.....
25	1950	5784	8748	Dry	"	2780	988	.....
26	1680	5692	5876	696	"	615	988	.....
27	3500	5968	5968	640	"	1896	1124	.....
28	2220	6342	.....	465	"	1842	1734	.....
29	2520	7204	.....	184	"	724	1030	.....
30	2820	6530	.....	590	275	836	1260	.....
31		5876		390	Dry		1260	
Mean.	2212	5490	5135	2234	.....	702	1191	961

PLATTE RIVER AT COLUMBUS.

(Above mouth of Loup.)

Daily mean discharge in cubic feet per second.

DAY	MARCH		APRIL			
	1901	1902	1899	1900	1901	1902
1	.....	.....	.....	.....	1483	2398
2	.....	.....	.....	.....	1300	1738
3	.....	.....	.....	.....	1300	1287
4	.....	.....	11300	.....	1455	1162
5	.....	.....	23700	.....	6180	1212
6	.....	.....	18000	.....	5555	915
7	.....	.....	16400	.....	5555	965
8	.....	5664	8200	1907	5555	955
9	.....	5610	6375	1800	5775	1005
10	.....	5100	6635	1738	6050	995
11	.....	3650	6910	1738	6700	995
12	.....	3180	7120	1707	8200	996
13	.....	2776	7330	1676	18000	996
14	.....	2736	4559	1648	21600	985
15	.....	2736	3950	1594	21600	996
16	.....	2696	3600	1594	28400	955
17	.....	2324	3750	1707	26000	965
18	.....	1387	4150	5100	21810	925
19	.....	1262	6715	6770	19790	935
20	.....	1125	7400	6050	14960	995
21	.....	1125	9100	5500	4824	955
22	.....	995	7960	7720	4850	1015
23	.....	995	8200	7720	4600	825
24	2054	1565	7880	7880	4650	855
25	2054	2188	8040	7960	4150	895
26	2398	3300	14125	8800	3700	1005
27	2436	3750	7800	10800	2898	1005
28	2123	3700	7260	12875	2736	1025
29	1799	3700	7800	14530	2816	1100
30	1800	3220	7960	10800	2324	1237
31	1816	2817				
Mean.	2060	2816	8230	5635	8827	1076

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

DAY	MAY							
	1895	1896	1897	1898	1899	1900	1901	1902
1	.....	.....	.....	1500	7720	7800	2361	1312
2	.....	4550	.....	2400	6505	7400	2394	1262
3	5550	.....	.....	4000	6980	7330	2228	1212
4	.....	.....	6700	4800	7330	7260	2054	1593
5	.....	.....	7000	6400	7960	14800	2088	1922
6	.....	.....	7350	6600	8600	15280	2435	2473
7	.....	.....	8200	6800	10080	35400	2857	2898
8	.....	.....	10300	6000	8200	27500	3260	3340
9	.....	.....	12250	5100	8700	25100	3750	3340
10	.....	.....	11250	4950	8200	25100	6799	3429
11	.....	.....	10800	3900	7720	27500	5250	3500
12	.....	.....	11250	4400	7260	27500	5250	3600
13	.....	.....	11250	3800	6840	21800	5200	3550
14	.....	.....	11250	3500	6505	21600	5450	3950
15	.....	.....	12700	3300	6050	20650	5665	4900
16	.....	.....	12250	3175	6310	19700	5665	4555
17	.....	.....	12250	3650	5150	18850	5610	6050
18	.....	.....	13400	4500	4950	18850	6115	10480
19	.....	.....	13400	3500	4750	17200	6375	13800
20	.....	.....	12100	6850	4700	16400	6310	12400
21	.....	.....	11250	10700	8800	19700	6635	8580
22	5896	.....	11250	8900	10800	22440	6570	8447
23	.....	.....	10300	7950	7880	29440	7190	8200
24	.....	.....	9250	9600	15600	26960	6440	8120
25	.....	.....	10800	8300	18850	20270	6375	7800
26	.....	.....	12250	6600	22400	19360	6110	7480
27	.....	.....	12100	9100	25770	18510	6245	6840
28	.....	.....	14675	8100	20745	15120	6840	6245
29	.....	.....	15250	6700	18340	12415	7480	5665
30	.....	.....	18000	7350	16720	12875	8200	5665
31	.....	.....	21600	9000	15120	11200	9200	5720
Mean.	.....	.....	11801	5885	10373	19075	5300	5462

PLATTE RIVER AT COLUMBUS.

(Above mouth of Loup.)

Daily mean discharge in cubic feet per second.

DAY	JUNE							
	1895	1896	1897	1898	1899	1900	1901	1902
1	.....	.....	21600	7800	12415	11600	9100	5852
2	.....	.....	22600	24600	10300	12415	9000	5885
3	.....	.....	21400	13900	9200	13850	8900	5885
4	9420	4890	27400	22200	9310	13720	8300	5400
5	8600	4320	22600	20200	5000	13000	7720	6910
6	7100	5260	19700	17100	6700	13850	7560	9950
7	5170	5750	19700	19000	9200	18000	8241	8960
8	7500	7050	20600	15800	7480	16880	7800	9450
9	11240	9715	21600	13100	6375	15760	7720	8040
10	12580	14900	22600	14100	6375	15600	7640	7640
11	27200	11975	23750	13900	14960	18170	7960	6570
12	22400	12185	31100	12400	16560	15920	8300	5940
13	22420	10925	28575	11900	19890	14665	8700	4900
14	19280	10400	20300	11400	22860	14125	9640	4900
15	17460	6100	17750	10900	23490	16720	10600	4150
16	16150	8250	16000	13200	23700	21600	11500	5150
17	17130	10400	13900	11700	23490	25770	11400	5940
18	16150	8250	9800	10300	9310	18510	11949	6910
19	16970	7950	8200	9300	9200	20080	11821	6910
20	16150	6100	5500	7600	9200	18850	12300	6635
21	14960	5750	11250	6200	11200	18340	12875	6635
22	14440	5510	12500	6350	13220	15600	12875	6635
23	13470	6380	11500	5750	14395	13450	12875	5995
24	12580	5750	11100	6400	16240	12530	11300	5995
25	12800	6380	11750	6350	12875	11600	9200	5995
26	12250	6100	12200	5700	13105	9600	8200	5995
27	10590	6450	12250	5100	13855	9275	7800	5500
28	11550	6380	11750	5200	18170	7800	7400	6050
29	11750	5145	10750	5300	19190	6900	6700	5995
30	11450	4535	8700	5600	25540	6700	5500	5995
Mean.	14027	7510	16914	11278	13760	14695	9363	6426

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

DAY	JULY							
	1895	1896	1897	1898	1899	1900	1901	1902
1	9315	4400	8200	6100	24850	5400	4500	5995
2	7900	4400	8200	5000	20840	5900	3600	7330
3	6600	4490	7600	5050	19190	5700	2938	7330
4	6210	4490	6400	5200	20270	5900	2324	11140
5	5170	4280	4700	4900	22440	10500	2154	11140
6	4165	3700	3900	4800	23280	6500	1984	11140
7	3895	3700	3500	3900	23280	3620	1946	11140
8	4345	3505	3500	3650	23700	3850	1270	11140
9	3720	3190	3500	3800	17040	4625	1150	10050
10	3720	3880	3100	3000	17360	4700	920	8580
11	3205	3570	2550	2770	17360	3550	725	6992
12	4435	2475	2000	2350	17200	2440	a	5995
13	4345	1975	2000	1700	17040	1750	a	4900
14	4615	1530	2000	1550	16880	1550	379	4950
15	4985	725	2000	1400	15920	5610	a	3900
16	4165	188	2000	1550	16080	2000	a	3340
17	3375	Dry	2000	1400	14665	2280	a	2978
18	2950	"	r	1300	12644	950	a	2978
19	3545	"	r	750	11400	1000	a	4050
20	3205	"	r	500	11400	1300	a	5720
21	2700	"	r	r	10400	400	a	3800
22	2530	"	r	r	9310	500	a	3300
23	2135	"	r	r	8600	520	a	2898
24	1980	"	r	r	8300	800	a	2510
25	1980	"	r	r	7400	500	a	2120
26	1745	"	r	r	7480	550	a	1799
27	1380	"	r	r	7560	660	a	1510
28	1380	"	*994	r	3380	650	a	1300
29	1525	"	r	*285	8800	394	a	1187
30	1525	"	r	r	8900	250	a	1062
31	1470	"	r	r	8120	200	a	995
Mean.	3685	3156	3786	2899	14551	2727	1991	5267

r No water at gage. *Measurement. a Small channels.

PLATTE RIVER AT COLUMBUS.

(Above mouth of Loup.)

Daily mean discharge in cubic feet per second.

DAY	AUGUST							
	1895	1896	1897	1898	1899	1900	1901	1902
1	1250	Dry	r	r	6980	a	a	845
2	970	620	r	r	6570	a	a	745
3	590	2375	r	r	6245	a	a	626
4	698	1850	r	r	6770	a	b	482
5	782	1250	r	r	8200	a	b	376
6	846	1140	r	r	9420	a	b	291
7	564	725	r	r	8400	a	b	250
8	444	425	r	r	9100	a	b	235
9	312	350	r	r	9000	a	b	220
10	472	188	r	r	8800	a	b	350
11	236	305	r	r	8040	a	b	250
12	264	420	r	r	10400	a	b	220
13	96	620	r	r	6245	a	b	190
14	1105	1715	r	r	5775	a	b	250
15	910	930	r	r	5350	a	b	285
16	910	188	r	r	3500	a	b	250
17	845	Dry	3300	r	3900	a	b	220
18	850	"	4400	r	3460	a	b	220
19	910	"	4400	r	3700	a	b	220
20	672	"	4900	r	3340	a	b	220
21	536	"	4900	r	3380	a	b	400
22	878	"	4900	r	3340	b	b	1150
23	1250	"	4400	r	3140	b	b	925
24	1340	"	3800	r	2938	b	b	825
25	1070	"	3400	r	2547	a	b	550
26	725	"	3400	r	2361	149	b	285
27	508	"	3400	r	1861	a	b	340
28	416	"	3100	r	.....	a	b	340
29	360	"	1400	r	.....	a	b	340
30	336	"	1400	r	.....	a	.....	346
31	1140	"	1400	r	.....	a	.....	290
Mean.	722	423	3520	.....	5658	.....	.....	404

a Water small in amount; separated into one, two, or three small channels.
b Water in pools. No flow.
r No water at gage.

PLATTE RIVER AT COLUMBUS,
(Above mouth of Loup.)

Daily mean discharge in cubic feet per second.

DAY	SEPTEMBER						
	1896	1897	1898	1899	1900	1901	1902
1	Dry	r	r	.....	a	b	253
2	"	r	r	.....	a	b	257
3	"	r	r	.....	a	b	257
4	"	r	2	.....	a	b	226
5	"	r	.....	.....	a	b	229
6	"	r	.....	.....	a	b	229
7	"	r	.....	.....	a	b	260
8	"	r	.....	.....	a	b	232
9	"	r	.....	.....	a	b	202
10	"	r	.....	.....	a	b	175
11	"	r	.....	.....	4600	b	*5
12	"	r	.....	.....	2350	b	b
13	"	r	.....	.....	1700	b	b
14	"	r	.....	.....	1030	b	b
15	"	r	.....	.....	550	b	b
16	"	r	.....	.....	403	b	b
17	"	r	.....	.....	400	b	b
18	"	r	*10	.....	a	a	b
19	"	r	.....	.....	a	a	b
20	"	r	.....	Dry	a	a	120
21	"	r	.....	.....	a	a	138
22	"	r	.....	.....	a	a	244
23	"	r	.....	.....	a	a	865
24	"	r	.....	Dry	a	a	865
25	"	r	.....	.....	a	a	865
26	"	r	r	.....	a	a	925
27	"	r	r	Dry	a	a	975
28	"	r	r	.....	a	a	975
29	"	r	r	.....	a	a	925
30	"	r	r	Dry	a	a	875
31							
Mean.	.....	.....	.....	.....	.....	.....	459

*Measurement.
r No water at gage.
a Water separated into small channels.

PLATTE RIVER AT COLUMBUS.

(Above mouth of Loup.)

Daily mean discharge in cubic feet per second.

DAY	OCTOBER						
	1896	1897	1898	1899	1900	1901	1902
1	188	r	r	.....	a	a	975
2	188	r	r	.....	.....	a	1025
3	305	r	r	.....	.....	a	1275
4	188	r	r	Dry	.....	a	1676
5	305	r	r	.....	.....	a	1989
6	425	r	r	.....	.....	20	2816
7	525	r	r	.....	.....	a	2816
8	620	r	r	Dry	.....	a	1826
9	725	r	r	.....	.....	a	1337
10	1250	r	r	.....	.....	a	1337
11	1250	r	r	.....	.....	a	1400
12	1030	r	r	.....	.....	a	2696
13	1030	r	r	.....	.....	a	3500
14	625	r	r	Dry	.....	a	4500
15	425	r	r	.....	.....	a	5000
16	425	r	*14	.....	.....	a	3100
17	425	r	r	Dry	.....	a	2898
18	188	r	r	.....	.....	a	2698
19	188	r	r	Dry	.....	a	1676
20	188	r	r	.....	.....	a	1400
21	188	r	r	Dry	.....	a	1275
22	188	r	r	.....	a	a	1150
23	350	r	r	.....	.....	a	1025
24	365	r	r	.....	920	a	925
25	620	r	r	Dry	920	a	875
26	620	r	r	.....	950	a	875
27	725	1400	r	.....	770	a	825
28	785	1400	r	Dry	680	a	775
29	845	1600	r	.....	610	a	690
30	2250	1600	*13	.....	600	.....	690
31	2500	.....	r	.....	998	.....	690
Mean.	649	.....	.....	.....	806	.....	1798

r No water at gage. * Measurement. *a* Small channels.

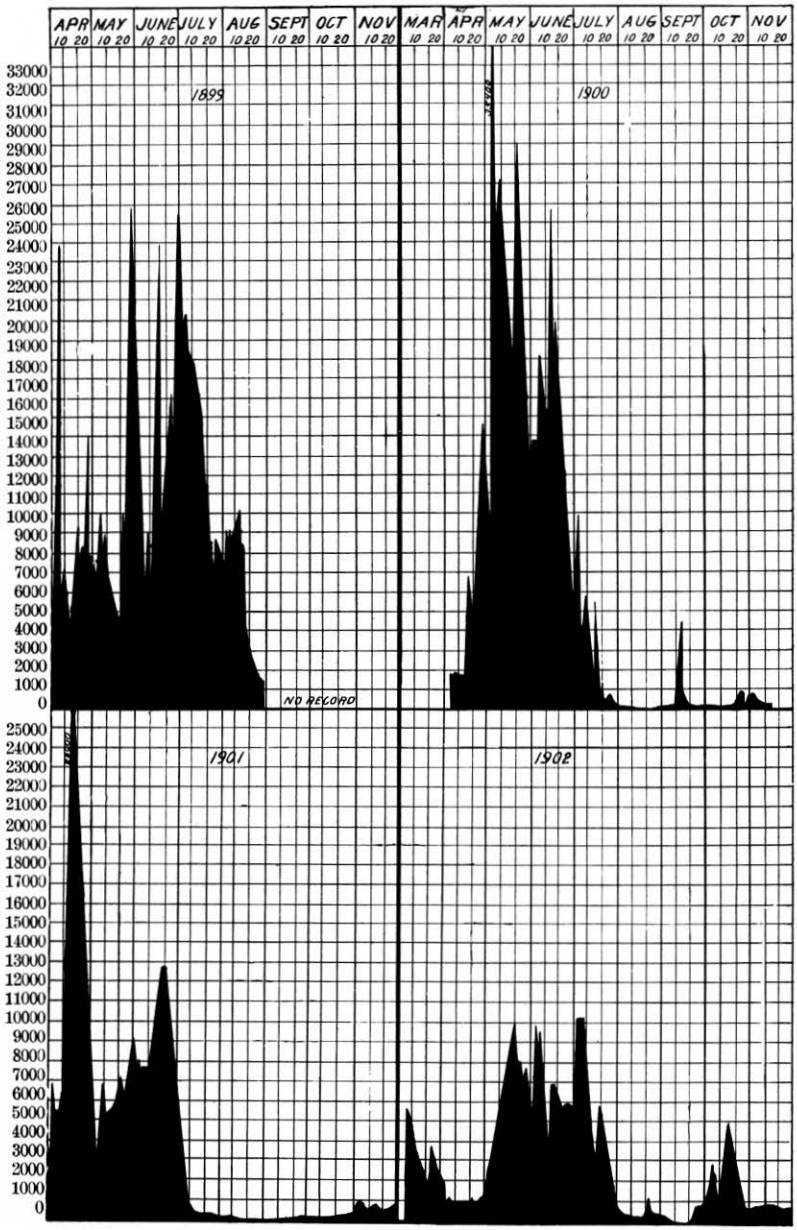
PLATTE RIVER AT COLUMBUS.
(Above mouth of Loup.)
Daily mean discharge in cubic feet per second.

DAY	NOVEMBER				
	1896	1898	1900	1901	1902
1	2250	r	950	375	635
2	2250	r	600	978	725
3	2250	r	500	978	775
4	2425	r	400	978	825
5	2500	r	400	850	825
6	2500	r	400	800	825
7	2640	.....	350	750	825
8	2780	.....	300	700	775
9	3535	.....	300	700	725
10	2780	.....	a	700	725
11	1600	*16	a	700	635
12	620	.....	a	590	550
13	620	.....	a	570	550
14	620	.....	a	570	635
15	.....	.....	a	550	825
16	.....	.....	a	500	825
17	.....	.....	.....	500	925
18	.....	.....	.....	500	925
19	.....	.....	.....	500	875
20	.....	.....	.....	500	875
21	.....	.....	.....	500	925
22	.....	.....	.....	500	925
23	.....	.....	.....	500	925
24	.....	.....	.....	600	925
25	.....	.....	.....	680	875
26	.....	.....	.....	720	875
27	.....	.....	.....	770	825
28	.....	.....	.....	820	775
29	.....	.....	.....	870	775
30	.....	.....	.....	922	.....
31					
Mean.	2098	.....	.....	683	797

* Measurement.
r No water at gage.
a Separated into small channels.

PLATTE RIVER AT COLUMBUS.

Discharge in cubic feet per second.



LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	MARCH		APRIL							
	1901	1902	1895	1896	1897	1898	1899	1900	1901	1902
1	.....	.....	3070	3205	.....	2130	.....	2380	2694	2382
2	.....	.....	3000	3558	.....	2730	4251	2380	2646	2243
3	.....	.....	2670	3205	7125	2700	4871	2380	2670	2130
4	.....	.....	2660	2945	.....	2730	5526	2380	2919	1976
5	.....	.....	2700	3126	.....	2800	5195	2380	3153	2175
6	.....	.....	2520	3048	.....	2850	3127	2380	3394	2646
7	.....	.....	2675	3126	.....	2960	2869	2380	2719	2382
8	.....	6826	3675	3205	3950	2850	3127	2406	2597	2382
9	.....	6760	3450	3338	3650	2700	2995	2430	2573	2382
10	.....	4101	3320	3393	3450	2820	2869	2548	2819	2382
11	.....	3232	3150	3365	3075	2800	3100	2546	3048	2359
12	.....	2945	2950	4430	2775	2960	2819	2597	3285	2405
13	.....	3178	2780	6950	3825	2860	2549	2894	3840	2532
14	.....	3355	2840	5795	4100	3520	2768	2945	4101	2405
15	.....	3285	2625	4650	3625	3375	3258	2945	4402	2405
16	.....	3258	2650	3725	3500	3125	3476	3048	4681	2265
17	.....	2995	2875	4160	3675	2820	3285	3153	4342	2265
18	.....	2970	2890	4650	4075	2675	3100	3232	3754	2265
19	.....	2660	2725	7018	3250	3150	2793	3367	3727	2243
20	.....	2621	2650	5938	3225	3050	2500	3670	3699	2221
21	.....	2645	2303	5157	3275	3150	2476	4588	3242	2221
22	.....	2645	2400	4017	3950	2550	2453	4619	3258	2311
23	.....	2693	2500	5032	3800	2425	2694	4650	3100	2358
24	2995	2719	2520	5060	3575	2400	2453	4744	3048	2334
25	2995	2945	2450	3205	3550	2520	2336	4619	2768	2311
26	2995	3152	2440	3126	3375	2775	2476	4619	3258	2464
27	2743	3285	2440	3100	3050	2630	2743	4619	2719	3206
28	2743	3312	2490	5326	2725	2600	3811	4619	3179	3047
29	2743	3366	2640	3613	2675	2650	4131	4464	3153	2793
30	2621	2793	2550	1970	3040	2500	5064	4464	2844	2793
31	3134	2500								
Mean.	2871	3343	2753	4081	3443	2793	3279	3352	3254	2409

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	MAY							
	1895	1896	1897	1898	1899	1900	1901	1902
1	2840	4807	2750	2425	3586	4130	2549	2298
2	4360	4220	2675	2425	2694	3811	2500	2298
3	4420	4220	2850	2550	1911	3642	2453	2265
4	3590	3897	2850	3075	2152	3670	2406	2382
5	3290	3312	2850	3775	2646	3699	2359	2500
6	3180	3390	2800	3625	2768	3586	2573	2743
7	2930	3048	2750	3530	3047	3670	2548	2970
8	2850	2768	2775	3400	27.3	4650	2621	2719
9	2750	2694	2775	3300	3312	4557	2743	2573
10	2675	2743	2875	3175	2894	3670	2615	2464
11	2690	2867	2675	3350	2743	3503	2500	2203
12	2800	2621	2675	3425	2359	3476	2476	2203
13	2740	2728	2575	3282	2453	5729	2476	2382
14	2700	2892	2525	3050	2694	4161	2243	2824
15	2600	2645	2525	2700	3530	3985	2220	3367
16	2620	3022	2500	2800	3100	3699	2197	3367
17	2710	3022	2425	2850	3049	3614	1975	3340
18	2770	2945	2375	3375	2549	3558	1975	4493
19	2820	2892	2350	3175	2646	3563	1954	5129
20	2830	2892	2225	3500	2768	3340	2062	5763
21	2730	2832	2250	4150	3670	2793	2152	7443
22	2820	2670	2300	4250	4871	2719	2383	4039
23	2850	2621	2500	4400	4072	2670	2243	3869
24	2800	2455	2575	5100	3699	2646	2359	3755
25	2880	2358	2000	4200	.....	2382	2476	3503
26	2740	2310	2225	4975	.....	2476	2573	4372
27	2750	2621	2100	4450	.....	3073	2573	2695
28	2750	2645	2300	4150	.....	2814	2312	2597
29	2650	2867	2175	3525	3869	2869	2312	2500
30	3350	2917	2025	3550	.....	2573	2063	2429
31	3470	2621	1850	3250	.....	.....	1847	2524
Mean.	2966	2985	2503	3509	3035	3489	2346	3226

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	JUNE							
	1895	1896	1897	1898	1899	1900	1901	1902
1	4330	2694	1975	3375	.....	2920	1847	2585
2	4000	3126	1800	3300	2945	2549	1825	2869
3	9080	3153	1800	3525	.....	2085	1825	3047
4	7190	3205	2675	3900	2646	2920	2018	4151
5	5580	3613	2350	5600	.....	2970	2243	5425
6	4775	.....	2675	6675	4043	2844	2023	5763
7	3800	.....	2500	5750	.....	2670	2023	5936
8	3420	8000	2500	5600	.....	2430	2023	3047
9	3010	3441	2500	5375	.....	2197	2023	2793
10	2780	3073	2425	5000	.....	2154	1975	2585
11	2900	1991	2425	4600	3727	3375	1763	2359
12	2835	2203	2600	4325	.....	3450	1743	2265
13	3176	2063	2800	4450	.....	3535	1743	2298
14	3384	2086	2775	4550	.....	3650	1723	2211
15	3205	2106	2850	4600	.....	4060	1723	2265
16	2822	2180	2850	4450	2040	4350	7097	2500
17	3205	2106	2850	4400	.....	14300	7097	2479
18	4264	1991	2775	4050	1804	6650	4861	2500
19	4296	1928	3150	4050	.....	5615	5195	3421
20	3350	2406	3000	4100	.....	3075	5526	4650
21	3039	2867	2575	4325	2743	2985	5902	3503
22	2562	3338	2350	4550	.....	3355	5729	3394
23	3011	3725	2200	4100	.....	2700	5593	2768
24	2850	3258	2175	3025	3985	2715	5293	3047
25	2337	4160	2275	2425	.....	2575	4681	2824
26	2361	4494	2525	2275	7287	2690	4402	2621
27	2337	3021	9550	2175	.....	2575	3985	3179
28	2588	2743	4000	2120	7713	2520	3783	3258
29	2562	2670	3600	2000	.....	2500	3232	3840
30	2690	2621	4250	2100	.....	2390	3126	3927
Mean.	3591	3009	2891	4026	3893	3493	3467	3250

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	JULY							
	1895	1896	1897	1898	1899	1900	1901	1902
1	2822	2817	11825	2025	6289	2320	3048	7363
2	2849	2694	5350	2025	.....	3860	2970	9936
3	2613	2832	3525	1925	6984	2460	2743	10895
4	2562	2792	3300	1975	.....	4235	2793	7910
5	2588	2670	3050	2425	5459	3410	2844	7990
6	2562	2597	2975	2530	.....	5380	2406	7871
7	2434	2500	2025	2400	4191	3860	1890	8152
8	2240	2572	1750	2400	.....	4300	1784	7830
9	2288	2768	1650	2200	.....	4550	1661	7517
10	2027	2621	1850	2025	1188	3615	1523	9892
11	2074	3670	2075	2075	.....	3490	1389	6586
12	2051	3258	2375	2050	596	3050	1426	5326
13	1980	3048	2300	2000	931	2900	1445	4526
14	2361	2892	2225	2100	998	2490	1211	5146
15	2562	2525	2975	2100	1082	2370	1170	5277
16	2337	2334	2650	2050	1014	3200	1241	4712
17	2191	2334	2050	2025	1315	4150	1223	4657
18	2074	2310	2050	1865	1334	4210	1206	4712
19	2004	2406	1850	1780	1135	3740	1188	4691
20	1980	2406	2250	1700	1170	3120	1260	4372
21	1824	2455	2325	1725	1200	2820	1911	4043
22	1736	2420	2150	1700	1465	2800	1681	3727
23	1758	2482	2075	1825	1784	2700	1485	3558
24	1846	2482	2050	1650	1682	3900	1260	3394
25	1957	2596	1975	1820	1702	4030	1064	3690
26	1935	2727	1975	1630	1661	3775	883	3718
27	2004	2945	1850	1680	1661	2150	795	3586
28	1588	2970	1650	1680	1682	2350	1014	3727
29	1567	2970	1625	1700	1702	2000	915	3699
30	1523	2970	1600	1750	2265	1980	1153	3699
31	1446	3021	1725	1680	2040	2000	1315	3530
Mean.	2122	2712	2616	1946	2104	3265	1609	5669

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	AUGUST							
	1895	1896	1897	1898	1899	1900	1901	1902
1	1525	3100	1600	1650	1805	2230	1206	3530
2	1546	3203	1450	1725	1702	2300	1082	3258
3	1546	3258	1350	1820	1581	2090	1064	2970
4	4104	3258	1275	2600	1682	2075	1047	2970
5	1588	3021	1675	3450	2312	2075	1031	2695
6	2264	2868	2500	1725	3258	2125	1064	2695
7	1957	3311	2225	4325	3153	1610	1047	2573
8	1891	3338	2400	3500	2894	1800	1031	2463
9	1846	2668	3025	3175	2995	3175	981	4043
10	2074	2620	3050	2900	2869	3350	964	1685
11	2562	2620	3275	2725	2597	3050	1710	3698
12	2408	2384	2725	2625	2970	2800	1484	3125
13	1891	2429	2500	2550	1484	2900	1291	3100
14	1980	2482	2375	2460	1278	2850	1582	3073
15	2743	2429	2125	2440	2063	3419	1484	3073
16	2796	2382	1950	2475	1445	6290	1484	3125
17	2280	2288	1800	2675	1825	6700	1484	3203
18	2288	2382	1600	3050	1868	7350	1381	4402
19	2191	2406	1500	2950	2018	6200	1311	6255
20	2240	2454	1450	2675	2285	3300	1260	6183
21	2191	2502	1425	2550	2719	3220	1260	6255
22	2097	2454	1275	2600	2476	3200	1260	6005
23	2434	2596	1325	2530	2622	3100	1323	6075
24	2743	2596	1300	2500	2743	3220	1523	5867
25	2902	2502	1275	2490	2768	3710	2152	6724
26	2664	2358	1325	2490	2743	3950	1825	6901
27	2264	2288	1200	2490	2793	4310	1794	6541
28	2536	2264	1100	2300	2768	4230	1640	6614
29	2460	2264	1275	2050	2524	3750	1640	6901
30	2313	2180	1300	1950	2312	3200	1640	6725
31	2613	2106	1425	1850	2549	2955	1640	8152
Mean.	2289	2629	1812	2558	2357	3436	1377	4573

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	SEPTEMBER							
	1895	1896	1897	1898	1899	1900	1901	1902
1	3011	2063	1350	1800	2793	2575	1763	6040
2	2875	2150	1275	1715	2945	2610	1763	5000
3	2410	2264	1175	1620	2819	2650	1784	3476
4	2191	2455	1175	1600	2819	2500	1932	3224
5	2191	2430	1050	1575	2573	2600	2220	2995
6	1957	2287	1075	1520	2335	2490	2453	2671
7	1913	2170	1150	1500	2220	2440	2720	2743
8	1935	2063	1000	1500	2085	2450	2844	2406
9	2027	2063	1075	1460	2793	2400	2844	2382
10	1913	2170	1350	1600	2549	2375	3258	2335
11	1891	2287	1525	1620	2312	7600	3258	2514
12	1758	2572	1625	1700	2085	4600	4251	2382
13	1736	2694	1650	2470	1975	5510	4588	2265
14	1673	2867	1625	2950	1847	6090	4744	2220
15	1736	2968	1625	2730	1847	5510	4744	2063
16	1715	2968	1550	2650	1847	4000	4776	1911
17	1957	2832	1700	2700	1847	3150	4161	1693
18	2074	2694	1550	2490	1847	2650	3868	2062
19	2121	2548	1475	2490	1868	2680	3339	2265
20	2121	2597	1450	2350	1868	5510	2359	2597
21	2822	2645	1425	2200	1868	2710	2359	2909
22	3793	2670	1450	1870	1868	2790	2483	5867
23	3465	2728	1475	1700	1890	2850	2483	6909
24	4264	2524	1550	1925	1890	2820	2406	3586
25	4995	2370	1600	2080	1890	2850	2172	3530
26	2849	2334	1625	2080	1910	2870	1975	3530
27	2536	2370	1600	2080	1911	2930	1975	4402
28	2337	2406	1550	2075	1911	2900	1975	3783
29	2239	2310	1550	2025	1911	2930	1975	3476
30	2312	2287	1550	2025	1933	2790	2106	3312
Mean.	2427	2460	1427	2003	2135	3354	2853	3219

LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER							
	1895	1896	1897	1898	1899	1900	1901	1902
1	2239	2402	1600	2025	1933	2900	2220	3152
2	2144	2380	1650	2075	1933	2930	2336	3126
3	2044	2287	1675	2080	1954	3010	2360	3100
4	1913	2287	1675	2225	1954	3050	2358	3048
5	2312	2240	1750	2175	1945	3100	2354	2819
6	2288	2287	1800	2200	1911	3150	2324	2869
7	2433	2358	1900	2225	1890	3300	2354	2869
8	2337	2477	1925	2200	1825	3300	2336	2743
9	2288	2548	1975	2325	1764	3302	2430	2500
10	2433	2548	2075	2375	1682	3400	2647	2500
11	2488	2694	2350	2600	1581	3350	2622	2995
12	2434	2817	2725	2900	1445	3300	2000	4712
13	2485	2817	2825	2725	1315	3250	2574	4402
14	2485	2768	2850	2500	1581	3240	2550	4101
15	2562	2832	2950	2425	1954	3175	2524	3811
16	2690	2743	3125	2400	1784	3125	2382	3530
17	2536	2645	3575	2425	1954	3020	2242	3250
18	2460	2645	4700	2450	1911	2975	2200	2995
19	2485	2621	4800	2650	1764	3020	2062	2743
20	2536	2597	4375	2800	1620	3100	2019	2743
21	2485	2817	4325	2650	1682	*3100	1975	2743
22	2562	2918	4250	2550	2175	*3200	1953	2743
23	2113	2945	4200	2525	2018	*3200	1921	2743
24	2636	3022	4500	2425	2085	*3300	1898	2743
25	2390	2945	4250	2775	2040	*3400	1997	2743
26	2690	2968	4200	2525	2108	*3500	1997	2743
27	2613	3022	4800	2725	2153	*3600	1975	2743
28	2511	2832	10400	2725	2085	3700	1953	2522
29	2434	3022	4875	2650	2242	3675	1930	2622
30	2536	3585	4750	2550	2500	3175	2040	2500
31	3613	3613	.....	2900	2524	3020	2359	2500
Mean.	2450	2732	3422	2477	1914	2738	2243	3011

* Discharge from October 21-27 inclusive has been interpolated, the record gage heights being not available.

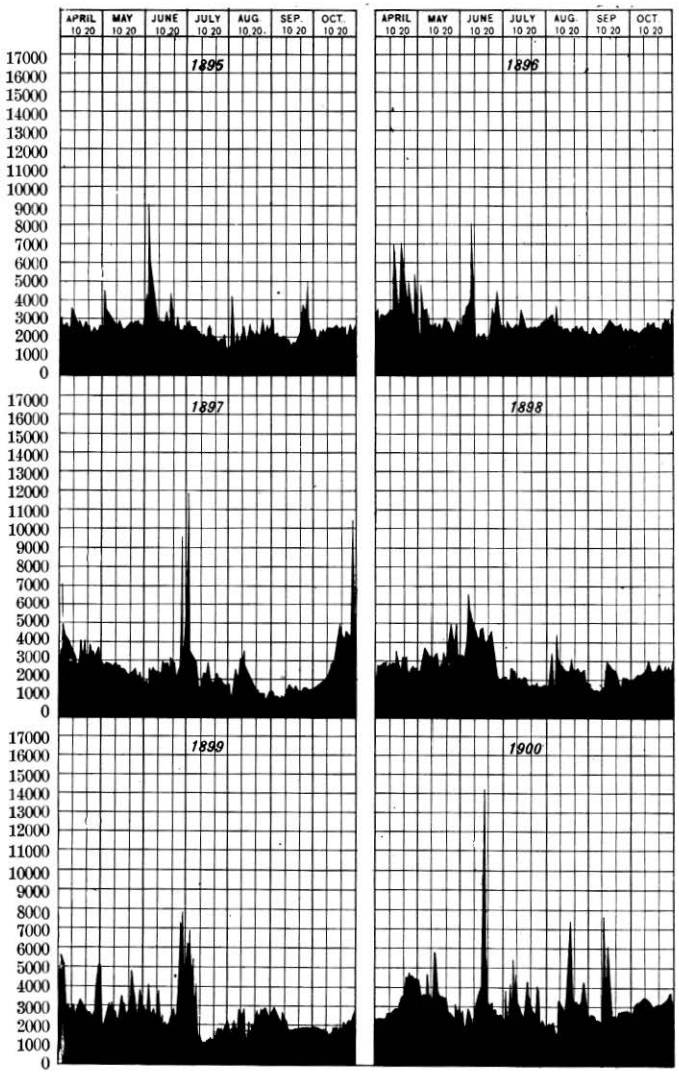
LOUP RIVER AT COLUMBUS.

Daily mean discharge in cubic feet per second.

DAY	NOVEMBER				
	1895	1898	1900	1901	1902
1	2562	2800	2875	2335	2477
2	2613	2675	2790	3294	2500
3	2664	2550	2650	3367	2500
4	2822	2450	2390	3126	2622
5	2928	2450	2400	2818	2622
6	2822	2550	2350	2670	2622
7	2875	2550	2300	2452	2743
8	2955	2675	2375	2242	2869
9	3011	2800	2450	1825	2869
10	3011	2800	2550	1743	2869
11	3067	2900	2750	1763	2500
12	3132	2825	2820	1800	2265
13	3178	.....	2975	1840	2155
14	3292	.....	2900	1997	2155
15	3378	.....	2940	1932	2155
16	3523	.....	2870	1974	2040
17	3643	.....	3150	2017	2155
18	3378	.....	.....	2059	2265
19	3095	.....	.....	2101	2383
20	2928	.....	.....	2152	2500
21	2822	.....	.....	2196	2500
22	2875	.....	.....	2240	2500
23	2690	.....	.....	2285	2525
24	.....	.....	.....	2332	2622
25	.....	.....	.....	2382	2622
26	.....	.....	.....	2429	2622
27	.....	.....	.....	2477	2622
28	.....	.....	.....	2646	2622
29	.....	.....	.....	2696	2622
30	.....	.....	.....	2869	.....
Mean.	3011	2669	2738	2335	2501

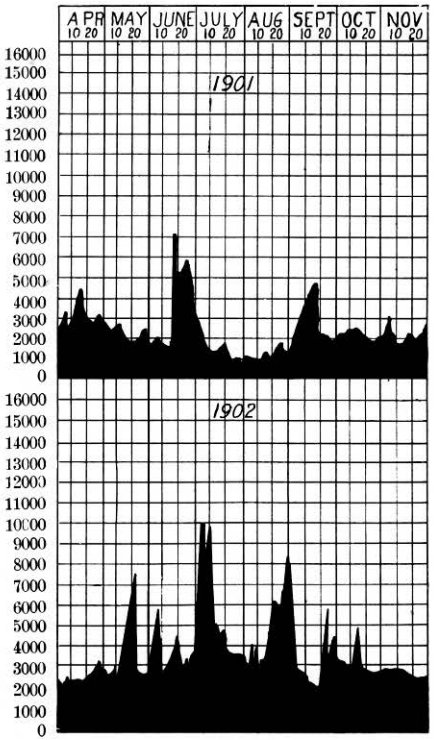
LOUP RIVER AT COLUMBUS.

Discharge in cubic feet per second.



LOUP RIVER AT COLUMBUS.

Discharge in cubic feet per second.



NORTH LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	APRIL			MAY			
	1896	1897	1899	1895	1896	1897	1899
1	1076	.....	.....	.....	1521	1250	1310
2	1139	.....	.....	.....	1455	1220	1270
3	930	.....	.....	.....	1233	1180	1226
4	1078	.....	.....	.....	1263	1210	1184
5	844	.....	.....	1520	1263	1180	1166
6	987	.....	.....	1486	1139	1180	1099
7	1139	.....	.....	1421	1047	1190	1610
8	987	.....	.....	1293	987	1140	1590
9	909	.....	.....	1137	1139	1160	1330
10	844	.....	.....	1293	987	1100	1251
11	844	.....	.....	1618	901	1100	1192
12	2519	.....	.....	1421	958	1080	1064
13	1962	.....	.....	1293	901	1060	966
14	1455	.....	.....	1293	930	1110	957
15	1553	.....	.....	1293	901	1080	915
16	1263	.....	.....	1137	1078	1080	932
17	1455	.....	.....	1137	1203	1050	940
18	3767	.....	1680	1168	987	1030	915
19	1962	.....	1610	987	873	1020	867
20	1293	1280	1630	1047	987	1030	907
21	958	1320	1500	987	844	1020	1490
22	958	1300	1490	842	901	1020	1280
23	1048	1400	1430	871	958	1030	1156
24	958	1230	1470	842	930	1030	1146
25	901	1210	1470	929	901	1030	1127
26	844	1130	1380	842	702	1040	1127
27	779	1140	2925	871	2327	1040	1064
28	1139	1170	2356	929	759	1010	1064
29	1962	1210	1940	871	570	970	1090
30	1618	1210	1350	1962	702	940	1071
31				1618	873	915	1080
Mean.	1305	1242	1710	1189	1040	1080	1141

NORTH LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	JUNE				JULY			
	1895	1896	1897	1899	1895	1896	1897	1899
1	1453	1698	880	1056	1017	1138	1680	2250
2	1456	1455	905	1040	958	1110	1360	16.0
3	3766	1139	940	1056	1107	1120	1890	1166
4	1952	1139	990	1040	958	1080	1030	1030
5	1787	1170	960	1040	900	1080	1030	1090
6	1357	4100	930	1040	842	1072	890	1016
7	1453	2825	900	1000	1047	1100	860	983
8	1453	1540	920	1016	958	1128	800	983
9	1618	1340	890	1008	987	1460	690	992
10	1453	1260	860	975	987	1350	740	1000
11	1618	1337	850	1000	987	1200	750	1048
12	1618	1290	840	983	958	1128	740	966
13	1357	1270	840	932	1077	1120	780	932
14	1387	1230	930	891	1107	1128	740	899
15	1293	1200	970	883	1107	1090	690	1510
16	1357	1165	960	915	987	1048	620	1660
17	1787	1155	905	940	900	1032	720	1410
18	1618	1147	990	957	842	1056	680	1300
19	987	1257	970	957	814	1072	780	1147
20	1137	1330	900	949	842	1064	700	810
21	987	1540	740	924	702	1032	680	827
22	987	1930	1430	949	842	1008	650	750
23	1047	1590	1230	974	842	1016	670	759
24	1077	1530	1050	1700	842	1056	680	736
25	987	1560	940	1400	702	991	690	736
26	1047	1370	720	1200	675	1184	670	767
27	1230	1370	.....	7500	620	983	770	759
28	1325	1300	1770	5050	437	1056	670	701
29	1137	1212	1200	3700	566	923	650	672
30	1200	1184	2550	2900	566	1184	610	743
31					620	1155	620	759
Mean.	1531	1494	1032	1533	864	1102	824	1034

NORTH LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	AUGUST				SEPTEMBER			
	1895	1896	1897	1899	1895	1896	1897	1899
1	702	1072	640	743	987	860	610	949
2	842	992	620	767	987	813	610	940
3	900	957	620	776	842	835	690	966
4	1293	992	620	1201	648	883	650	818
5	1047	974	670	1500	702	890	650	851
6	987	949	630	1380	758	908	680	915
7	900	915	900	1340	702	932	690	1128
8	702	932	790	1300	987	883	690	1156
9	1618	957	770	1184	702	851	600	1048
10	1453	860	780	1109	900	883	1100	1008
11	900	850	740	1218	871	860	800	949
12	702	890	690	1072	702	908	780	915
13	1618	900	670	1243	702	932	770	899
14	1137	883	690	1201	648	1016	740	875
15	987	900	670	1024	1077	1000	720	867
16	1077	867	570	1032	1351	883	720	891
17	987	875	720	975	1047	908	690	818
18	758	900	730	907	1107	957	690	835
19	702	843	690	975	929	1016	690	793
20	675	835	670	1000	1137	983	700	793
21	702	867	670	1040	1047	940	700	793
22	702	890	650	1008	3991	890	680	801
23	1787	875	690	1000	1787	867	690	793
24	1389	890	640	975	1293	932	690	835
25	702	867	630	966	1293	923	690	818
26	648	867	610	958	1262	949	710	801
27	593	867	590	966	1200	923	670	818
28	842	890	610	915	1137	923	680	843
29	702	900	650	907	1017	890	670	843
30	1453	883	630	915	987	923	700	867
31	987	890	590	915				
Mean.	984	904	675	1049	1094	913	705	888

NORTH LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER				NOV.
	1895	1896	1897	1899	1895
1	1137	949	740	118	987
2	1137	965	740	867	1857
3	1231	915	760	843	1293
4	1293	932	720	843	1293
5	1293	932	720	859	1293
6	1453	923	740	818	1200
7	1293	923	770	801	1262
8	1262	940	770	801	1200
9	1231	940	800	883	1137
10	1293	940	820	907	1047
11	1293	940	820	867	987
12	1293	965	820	827	987
13	1293	983	860	859	900
14	1325	949	900	843	758
15	1293	949	920	1300	842
16	1351	949	1000	1251	842
17	1389	923	1260	1201	702
18	1293	915	1210	958	758
19	1293	965	1020	924	702
20	1040	965	1130	924	702
21	958	949	1080	883	566
22	987	923	1080	867	.....
23	987	940	1100	883	.....
24	900	923	1100	883	.....
25	928	888	1200	899	.....
26	928	837	1210	883	.....
27	842	880	1230	924	.....
28	900	940	1230	907	.....
29	842	1220	1290	867	.....
30	900	1220	1320	859	.....
31	842	1120	.....	867	
Mean.	1146	958	979	907	1015

MIDDLE LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	APRIL			MAY			
	1896	1897	1899	1895	1896	1897	1899
1	1490	.....	.....	.....	1440	1210	877
2	1360	.....	.....	.....	1300	1270	907
3	1060	.....	.....	.....	1150	1290	818
4	1020	.....	.....	.....	1230	1350	945
5	1030	.....	.....	1380	1050	1380	1050
6	900	.....	.....	1325	900	1410	970
7	1020	.....	.....	1254	1015	1360	1043
8	1170	.....	.....	1117	870	1410	1240
9	1310	.....	.....	1018	1360	1490	1119
10	1200	.....	.....	1018	1015	1440	1110
11	1050	.....	.....	1066	890	1440	1092
12	1800	.....	.....	1083	1030	1360	1101
13	1700	.....	.....	1151	1060	1410	1110
14	1230	.....	.....	1168	1150	1360	1101
15	1310	.....	.....	1134	1080	1200	1035
16	1330	.....	.....	1100	1440	1200	1083
17	1060	.....	.....	1151	1300	1200	1101
18	2000	.....	990	1134	1260	1300	1203
19	2430	.....	990	1134	1165	1240	1137
20	1730	.....	1020	1202	1210	1180	1137
21	1070	1780	1005	1185	1310	1350	1183
22	910	1780	1020	1185	1080	1150	1518
23	1170	1540	958	1151	1170	1260	1327
24	1210	1760	971	1151	1080	1180	958
25	1340	1880	998	1202	1170	1210	907
26	1000	1720	976	1219	1210	1160	834
27	1190	1730	1083	1151	1200	1250	877
28	1300	1620	1372	1050	1000	1190	938
29	1860	1800	1013	933	1215	1140	784
30	1860	1420	856	1334	1070	1060	706
31				1666	1345	1055	796
Mean.	1364	1697	1019	1173	1154	1274	1036

MIDDLE LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	JUNE				JULY			
	1895	1896	1897	1899	1895	1896	1897	1899
1	1520	1720	1030	706	1100	1315	1800	855
2	2200	1550	1040	628	1050	1240	1740	780
3	3965	1430	1240	610	1000	1270	1220	785
4	2987	1460	1140	667	1000	1270	955	820
5	2300	1290	1130	684	1066	1270	895	1420
6	1723	1215	960	616	967	1195	866	1920
7	1307	.....	1015	634	950	1080	845	1300
8	1117	2250	1030	579	993	960	815	1035
9	1032	1775	990	568	835	1332	800	861
10	1117	1515	1005	547	820	1770	865	843
11	1151	1400	1080	883	787	1420	870	835
12	1185	1465	1020	870	755	1270	915	883
13	1134	1330	960	938	820	1300	880	1800
14	1117	1300	960	931	1018	1100	800	1250
15	1132	1560	1000	925	933	1040	780	1155
16	1166	1590	970	931	850	1000	815	998
17	1393	1540	990	919	771	1110	780	895
18	1570	1485	970	913	614	1170	790	856
19	1307	1560	945	860	678	1160	780	856
20	1254	1470	860	843	694	1170	805	843
21	1202	1660	870	938	694	1200	770	856
22	1066	1650	895	951	771	1220	745	865
23	917	1580	905	919	850	1210	755	895
24	933	1795	860	919	933	1300	735	847
25	967	1820	870	951	900	1300	720	833
26	850	1645	970	1400	885	1450	715	856
27	820	1505	1005	3900	850	1540	670	1020
28	1050	1417	920	2610	771	1480	660	958
29	1254	1315	905	1800	835	1350	690	.....
30	1151	1455	2600	1155	787	1280	685	925
31					771	1670	600	1184
Mean.	1396	1542	1037	1443	861	1271	865	1007

MIDDLE LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	AUGUST				SEPTEMBER			
	1895	1896	1897	1899	1895	1896	1897	1899
1	803	1685	605	1035	1134	806	670	1074
2	785	1550	625	964	1018	806	650	1057
3	787	1450	625	1005	1000	854	602	1074
4	771	1200	620	2133	933	914	615	964
5	767	1210	685	1659	917	818	620	938
6	787	1125	700	1619	850	962	855	964
7	803	955	685	1568	803	782	600	938
8	835	942	755	1468	740	794	585	1005
9	614	900	745	1593	740	806	600	1035
10	630	955	885	1137	707	974	690	1050
11	820	980	707	1092	645	1058	685	1050
12	787	942	720	1074	614	1010	700	1035
13	1168	840	700	1043	662	1034	705	1013
14	1117	885	690	1146	645	1190	695	990
15	1343	870	685	1294	630	1142	705	1028
16	1325	890	670	1261	770	1070	700	1028
17	1117	810	655	1212	803	1058	680	1110
18	950	890	645	1203	820	1000	675	1092
19	933	870	660	1174	850	1058	690	1074
20	950	955	650	1119	755	1118	685	1028
21	787	984	660	1110	1134	1130	695	1028
22	803	1000	655	1065	1220	1046	705	1028
23	1270	880	670	1110	1950	1015	710	1028
24	985	840	660	1119	1270	926	705	1005
25	1000	880	620	1058	985	985	700	998
26	1168	820	610	1083	833	1034	720	983
27	1151	760	615	1050	740	1034	705	1005
28	1168	820	605	1013	695	1106	720	998
29	1134	855	660	983	740	1154	670	983
30	1290	746	685	990	662	1094	695	971
31	1117	720	690	1035				
Mean.	973	975	672	1227	877	993	674	1019

MIDDLE LOUP RIVER AT ST. PAUL.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER				NOV.
	1895	1896	1897	1899	1898
1	662	970	710	983	1066
2	644	1022	705	958	967
3	622	914	735	1070	933
4	740	880	765	1057	933
5	803	985	785	1083	1000
6	850	1010	770	1110	933
7	803	930	770	1083	.....
8	803	1000	790	1057	.....
9	835	914	795	1074	.....
10	695	1046	870	1074	.....
11	755	1082	900	1057	.....
12	740	1010	900	1083	.....
13	707	974	870	1074	.....
14	803	1034	960	1110	.....
15	883	1110	965	1101	.....
16	883	962	1040	1193	.....
17	840	974	1140	1174	.....
18	787	1000	1170	1193	.....
19	771	1070	1170	1128	.....
20	740	1106	1150	1110	.....
21	771	1010	1140	1119	.....
22	820	1082	1200	1128	.....
23	820	1000	1290	1119	.....
24	967	1070	1340	1110	.....
25	967	985	1370	1155	.....
26	967	1094	2130	1128	.....
27	1000	1070	2800	1155	.....
28	1100	1010	1960	1146	.....
29	1220	1370	1760	1174	.....
30	900	1478	1440	1193	.....
31	1100	1106	1840	1193	
Mean.	840	1041	1169	1077	972

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY	JAN.	FEB.	MAR.		APRIL					
	1897	1897	1897	1902	1897	1898	1899	1900	1901	1902
1	.....	900	.....	.....	.....	.....	737	703	650	730
2	555	.....	636	.....	820	.....	727	718	637	710
3	.....	.....	.....	.....	.....	.....	692	648	668	600
4	.....	.....	.....	.....	880	.....	682	621	771	665
5	.....	.....	.....	.....	.....	.....	780	618	774	620
6	600	900	506	.....	.....	.....	753	630	956	590
7	.....	.....	506	.....	990	.....	842	628	900	500
8	.....	.....	.....	.....	1388	.....	759	580	903	570
9	.....	.....	.....	760	1190	.....	747	565	951	590
10	.....	.....	457	740	1074	.....	728	630	974	620
11	.....	900	.....	670	1095	.....	698	634	1019	595
12	.....	.....	.....	680	1190	.....	618	665	1060	740
13	600	.....	.....	630	1252	.....	623	856	1045	570
14	.....	.....	.....	690	1050	.....	607	759	1189	555
15	.....	900	516	670	1095	.....	606	980	1347	510
16	.....	.....	.....	650	.....	.....	480	1120	1507	500
17	.....	.....	385	530	.....	.....	532	1370	1416	580
18	.....	.....	.....	690	1252	.....	529	1226	1349	520
19	.....	880	.....	680	1074	.....	522	1015	1284	485
20	700	.....	425	505	990	590	470	970	1296	570
21	.....	.....	.....	455	945	580	478	1396	1155	510
22	.....	.....	650	570	920	940	412	1140	1025	530
23	900	.....	465	630	740	.....	414	972	885	510
24	900	880	....	620	880	885	425	1671	870	510
25	900	.....	.....	550	840	430	375	920	741	485
26	900	.....	.....	655	675	580	407	1035	726	545
27	900	.....	457	670	620	560	434	1087	756	460
28	900	.....	.....	920	.....	560	412	1150	680	445
29	900		.....	330	.....	490	470	1080	644	445
30	900		.....	715	800	520	385	895	655	390
31	.....		610	830						
Mean.	805	893	511	644	946	613	578	909	961	555

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY	MAY					
	1896	1898	1899	1900	1901	1902
1	665	500	388	850	622	400
2	575	1310	363	812	560	335
3	500	700	396	785	530	555
4	480	710	995	757	527	470
5	457	765	383	717	552	525
6	475	930	366	935	555	445
7	445	995	331	1073	516	775
8	420	1100	394	2945	490	950
9	575	960	417	2066	469	1220
10	600	1210	416	1306	416	730
11	470	980	452	1080	393	570
12	440	910	442	847	363	510
13	420	1170	452	670	347	690
14	370	1310	457	630	325	660
15	360	740	451	566	331	675
16	341	910	499	520	364	530
17	330	870	453	508	390	525
18	305	890	418	460	395	630
19	280	845	407	438	379	2810
20	255	1000	735	418	267	2500
21	230	1465	1800	401	302	2120
22	250	1445	873	401	272	1750
23	1130	1350	587	390	265	1290
24	445	930	517	419	239	1600
25	425	890	465	470	206	2095
26	395	1050	544	421	206	3115
27	445	910	436	404	216	3105
28	280	1015	410	370	218	2365
29	270	.....	361	365	250	2540
30	220	1630	334	320	146	1420
31	180	1170	292	342	159	1425
Mean.	418	1022	511	735	363	1269

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY	JUNE						
	1896	1897	1898	1899	1900	1901	1902
1	.....	190	1295	236	532	167	1095
2	.....	180	1030	274	367	136	960
3	.....	220	1000	346	4[illegible]8	129	1030
4	.....	220	960	311	306	144	1530
5	.....	180	1000	268	349	161	880
6	.....	241	1240	256	345	190	3235
7	.....	370	980	268	307	124	3125
8	.....	270	1720	262	290	133	3225
9	.....	230	1380	238	256	147	2230
10	.....	212	1325	245	250	148	1800
11	.....	750	.....	228	390	135	2000
12	.....	550	1625	213	605	138	1180
13	.....	.....	1530	209	674	143	1110
14	.....	.....	1610	493	457	157	835
15	.....	.....	1565	348	390	301	1160
16	.....	.....	1575	428	430	153	690
17	.....	.....	1600	266	365	117	760
18	.....	.....	1380	238	340	170	860
19	.....	.....	.....	158	349	184	1920
20	720	490	1430	152	322	215	1530
21	600	405	1275	162	326	465	15.0
22	530	320	1040	141	410	370	1315
23	551	290	1240	306	450	415	1090
24	441	330	1045	364	390	480	990
25	450	226	910	241	439	347	830
26	1052	.....	710	201	442	336	755
27	642	.....	750	4036	461	295	690
28	673	.....	685	2570	418	265	645
29	642	.....	630	1304	369	225	820
30	610	.....	560	1174	315	181	320
Mean.	628	315	1182	531	392	219	1372

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY	JULY						
	1896	1897	1898	1899	1900	1901	1902
1	685	555	511	906	250	154	3430
2	4300	.....	540	738	240	154	4525
3	4850	.....	495	608	267	140	3690
4	.....	.....	345	574	133	108	1895
5	3025	.....	430	590	223	109	4960
6	2147	.....	430	743	216	124	m
7	1750	.....	420	837	184	89	m
8	1940	.....	420	793	132	80	12490
9	1904	.....	530	490	179	36	m
10	1525	1010	1345	412	294	31	10460
11	1325	770	1000	355	225	30	5380
12	1165	506	530	327	180	30	3000
13	941	350	560	355	139	20	3000
14	813	265	910	342	73	10	2515
15	720	230	725	302	67	7	1750
16	652	190	560	319	94	5	1520
17	551	190	540	318	102	5	1260
18	570	220	480	304	77	5	2515
19	552	170	430	287	90	5	2865
20	532	230	380	293	164	5	1265
21	580	206	345	371	142	5	1315
22	450	160	420	320	95	5	1235
23	484	140	340	285	103	5	1065
24	450	165	340	215	123	5	970
25	441	120	270	234	88	5	1125
26	423	165	295	209	137	5	m
27	382	165	280	214	87	5	9060
28	374	640	270	238	77	5	7665
29	398	206	270	1384	349	5	2380
30	432	131	220	501	210	5	1490
31	1004	119	230	316	192	119	2670
Mean.	1179	294	279	458	159	42	3080

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY	AUGUST						
	1896	1897	1898	1899	1900	1901	1902
1	928	94	210	812	82	30	1920
2	903	110	230	868	158	15	1500
3	864	94	215	650	102	10	1200
4	467	90	210	475	81	5	1490
5	467	110	210	397	100	5	1050
6	467	330	210	320	134	5	790
7	1279	1460	185	345	47	5	785
8	730	395	185	247	45	5	650
9	1816	390	195	238	83	5	645
10	467	310	185	245	267	5	690
11	415	305	165	207	51	856	790
12	341	390	150	231	39	812	620
13	304	375	155	242	24	114	480
14	268	380	230	350	44	112	690
15	261	101	100	247	.....	28	670
16	228	119	165	229	1278	22	600
17	1395	119	165	378	311	18	485
18	1466	140	150	306	.....	16	480
19	1042	155	160	230	.....	10	385
20	611	212	.....	212	.....	8	345
21	580	171	145	160	.....	5	335
22	790	206	.....	154	.....	5	335
23	695	190	.....	156	.....	5	520
24	632	395	380	136	.....	5	435
25	611	341	270	188	.....	10	330
26	522	265	215	258	.....	10	345
27	467	212	205	421	.....	10	450
28	432	180	180	193	.....	10	435
29	365	165	200	150	.....	10	440
30	333	119	.....	187	.....	10	540
31	296	105	.....	146	.....	20	455
Mean.	660	258	195	303	178	70	674

REPUBLICAN RIVER AT SUPERIOR.

Daily mean discharge in cubic feet per second.

DAY	SEPTEMBER					
	1896	1897	1898	1899	1901	1902
1	282	110	.....	102	15	680
2	261	85	.....	78	15	520
3	311	64	.....	90	15	570
4	268	.....	.....	52	10	560
5	216	75	.....	49	25	400
6	210	74	410	29	2032	440
7	204	64	360	34	1657	370
8	197	.....	305	43	1826	315
9	204	.....	360	38	2575	270
10	268	.....	345	37	2237	225
11	325	.....	350	66	4123	260
12	304	70	410	56	4941	240
13	289	85	285	58	3247	320
14	423	60	240	61	1957	170
15	289	64	230	41	2827	185
16	289	241	185	49	2115	165
17	275	180	190	6	1784	155
18	406	180	240	58	462	255
19	296	125	210	45	453	190
20	303	1330	210	47	453	240
21	268	82	470	16	433	225
22	296	75	410	49	415	2760
23	311	.....	380	48	406	10875
24	282	64	270	41	397	4380
25	223	70	275	45	408	2780
26	.....	.....	240	71	388	2705
27	268	.....	220	60	388	1700
28	254	.....	220	62	379	1310
29	289	.....	215	25	815	1030
30	282	82	205	31	565	970
Mean.	279	149	289	50	1245	1175

REPUBLICAN RIVER AT SUPERIOR.

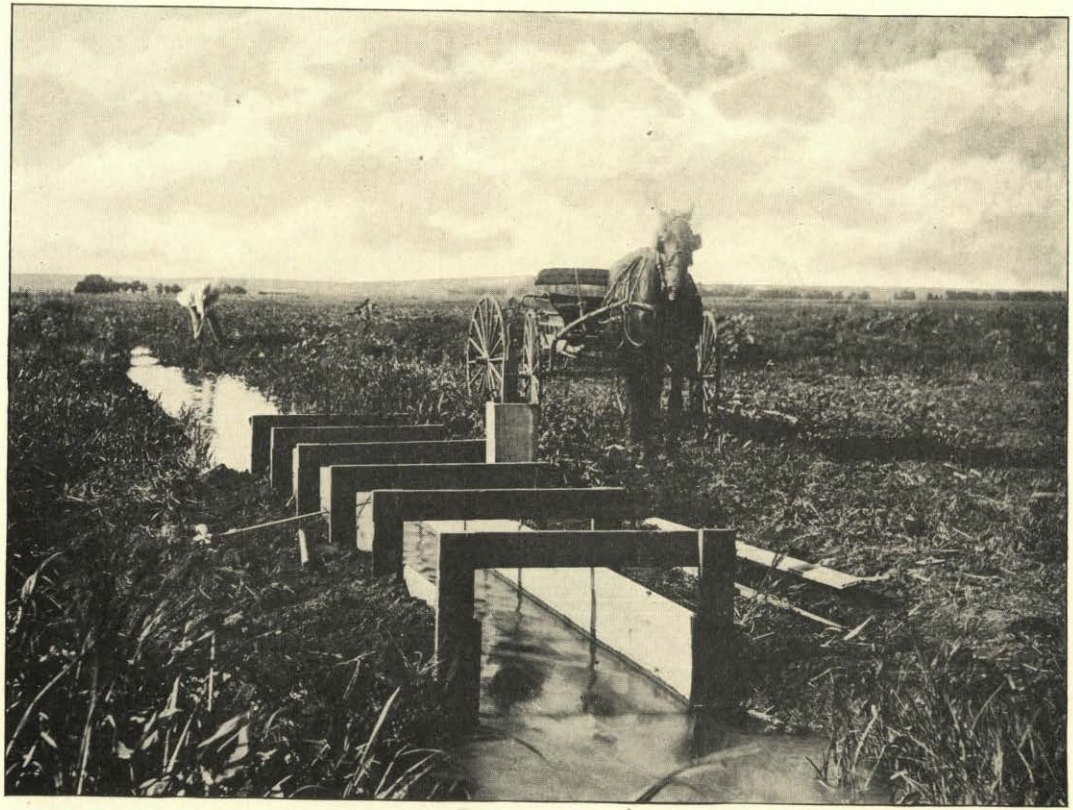
Daily mean discharge in cubic feet per second.

DAY	OCTOBER						NOVEMBER			
	1896	1897	1898	1899	1901	1902	1896	1898	1901	1902
1	223	.....	200	27	515	890	333	320	527	635
2	204	.....	230	42	1490	865	282	330	1030	610
3	223	60	165	27	980	1050	373	340	377	635
4	229	.....	165	54	430	1370	342	370	370	620
5	241	.....	170	38	495	1775	325	340	442	620
6	229	.....	165	37	375	1050	342	340	336	635
7	210	.....	185	52	435	1050	333	360	324	660
8	191	.....	200	48	507	890	415	350	442	660
9	204	.....	145	61	525	890	406	360	341	635
10	191	.....	195	61	384	845	441	345	312	710
11	223	.....	270	25	384	940	398	350	391	660
12	193	.....	300	24	384	1205	432	410	370	460
13	204	.....	290	45	398	1995	441	415	427	720
14	191	.....	280	37	363	1125	476	410	427	530
15	191	.....	270	32	377	830	442	420	370	560
16	204	75	330	78	363	770	532	420	358	570
17	204	.....	.....	50	384	1050	512	470	312	510
18	197	.....	.....	68	363	890	476	450	419	570
19	191	.....	.....	74	377	915	390	450	391	510
20	204	1142	.....	53	305	830	325	.....	398	520
21	223	1160	.....	101	351	820	357	.....	442	500
22	268	1130	.....	25	363	735	382	.....	391	535
23	229	1160	325	101	295	910	415	.....	442	685
24	217	.....	295	40	351	910	365	.....	312	970
25	229	1010	290	65	363	860	941	.....	442	970
26	217	1070	295	63	295	760	1137	.....	442	620
27	229	.....	265	90	285	650	450	.....	427	690
28	223	.....	330	78	305	590	459	.....	469	460
29	415	.....	320	.....	363	530	.....	.....	427	570
30	382	.....	365	54	525	520	493	.....	406	.....
31	365	.....	330	81	420	530				
Mean.	231	886	255	53	443	937	449	381	419	622

FRENCHMAN RIVER AT PALISADE.

Daily mean discharge in cubic feet per second.

DAY	MAR.	APRIL	MAY		JUNE	
	1895	1895	1895	1896	1895	1896
1	118	107	123	200	600	92
2	112	105	144	140	215	89.2
3	107	112	123	140	171	89.2
4	118	115	130	130	130	89.2
5	118	118	130	140	138	86.5
6	118	140	146	123.5	150	85.5
7	107	150	140	120.5	142	82.3
8	100	150	134	116.6	122	79.5
9	102	156	132	116.6	122	79.5
10	102	150	128	116.6	130	78
11	107	147	128	118	229	76.6
12	102	146	130	108.5	128	74
13	104	147	130	104.3	109	74
14	104	146	130	104.3	104	69.7
15	104	144	125	103	104	65.5
16	104	144	123	116.5	109	61.4
17	104	142	125	112.3	118	60
18	104	144	125	113.6	109	50.5
19	109	146	128	110	104	51.3
20	109	147	134	107	94	53
21	107	150	130	100.2	109	71.2
22	102	156	125	103	99	66.8
23	100	140	125	105.7	94	116.5
24	100	134	125	104.3	84	93.4
25	99	140	130	100.2	89	101.5
26	98	134	118	100.2	69	103
27	100	122	118	98.8	58	93.4
28	100	122	137	98.7	50	87
29	102	118	111	97.2	65	89.2
30	100	130	111	92	84	800
31	102		158	105.7		
Mean.	105.3	137	129	114.4	131	103.6



RATING FLUME ON SMALL CANAL.

FRENCHMAN RIVER AT PALISADE.

Daily mean discharge in cubic feet per second.

DAY	JULY		AUGUST		SEPTEMBER	
	1895	1896	1895	1896	1895	1896
1	94	110.2	85	79.5	68	81
2	94	110.2	95	76.6	68	78
3	84	109.8	130	75.3	71	78
4	74	112.3	101	75.3	74	83.6
5	69	109.8	85	74	77	86.6
6	69	107	85	72.6	71	81
7	79	103	85	74	71	83.6
8	142	92	79	71.2	71	76.6
9	54	85	85	71.2	71	76.6
10	69	83.6	71	69.7	71	81
11	94	83.6	74	66.8	74	81
12	94	85	74	64.1	71	76.6
13	84	87.8	437	64.1	68	83.6
14	580	90.6	216	62.8	71	83.6
15	239	92.7	85	64.1	71	83.6
16	195	105	85	64.1	71	81
17	154	93.4	85	83.6	74	83.6
18	135	90.6	82	81	79	83.6
19	121	89.2	77	78	77	81
20	111	89.2	77	81	79	81
21	113	86.5	64	85	85	81
22	580	85	66	92	88	83.6
23	513	86.5	71	83.6	91	81
24	203	86.5	71	81	95	83.6
25	174	86.5	71	83.6	91	83.6
26	143	87.8	74	83.6	91	89.2
27	135	87.8	71	81	85	83.6
28	117	86.5	71	76.6	88	83.6
29	104	85	68	72.6	95	83.6
30	101	82.3	71	81	98	81
31	91	79.5	71	76.6		
Mean.	158.3	93.8	95.5	75.7	78.4	81.6

FRENCHMAN RIVER AT PALISADE.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER			NOV.	DEC.
	1894	1895	1896	1894	1894
1	.....	101	81	113	91.3
2	.....	.....	83.6	110.5	96.6
3	.....	.....	86.5	107.5	102
4	.....	.....	89.2	110.5	107.5
5	.....	104	89.2	110.5	99.3
6	.....	.....	87.8	104.5	96.3
7	.....	.....	83.6	102	99.3
8	.....	107	81	104.5	104.5
9	.....	.....	81	104.5	104.5
10	.....	.....	76.6	99.3	107.5
11	.....	.....	76.6	99.3	104.5
12	.....	107	81	102	107.5
13	.....	.....	81	96.6	110.5
14	102	.....	76.6	102	110.5
15	104.5	107	81	99.3	125
16	110.5	.....	83.6	110.5	118.5
17	107.5	.....	83.6	99.3	96.6
18	110.5	.....	83.6	104.5	88.7
19	102.5	111	87.8	110.5	93.8
20	99.3	.....	86.5	99.3	75.9
21	96.6	.....	89.5	104.5	83.5
22	102	117	83.6	104.5	83.5
23	99.3	.....	83.6	107.5	78.4
24	107.5	.....	83.6	110.5	78.4
25	110.5	.....	81	99.3	75.9
26	110.5	128	81	9C C	.....
27	113	.....	76.6	99.3	.....
28	125	.....	76.6	96.6	.....
29	122	121	81	122	.....
30	122	.....	.....	110.5	.....
31	118.5	.....	.....		.....
Mean.	109	111.4	82.5	104.6	97.2

SOUTH FORK ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY	MAR.	APRIL.				
	1902	1898	1899	1900	1901	1902
1	....	500	.....	390	431	855
2	....	495	.....	380	441	1022
3	....	495	.....	432	452	1028
4	....	490	.....	343	471	999
5	....	490	.....	343	479	999
6	....	490	.....	340	471	876
7	....	465	490	330	471	840
8	....	470	477	318	471	821
9	....	460	490	352	475	797
10	553	455	502	367	479	749
11	575	455	532	340	482	659
12	584	473	536	350	501	575
13	644	480	553	340	516	527
14	630	480	553	330	593	508
15	630	480	545	346	584	508
16	....	480	523	390	640	497
17	....	473	523	648	729	497
18	....	480	519	565	782	504
19	....	485	528	560	782	497
20	598	490	490	568	792	482
21	630	480	519	563	792	501
22	598	460	477	580	901	482
23	584	455	469	650	933	479
24	571	450	464	840	880	447
25	580	440	464	850	875	444
26	580	425	477	910	875	516
27	584	415	502	1080	841	570
28	607	405	515	1280	841	570
29	580	399	490	1570	758	621
30	566	410	427	1210	687	644
31	544					
Mean	591	462	503	586	648	651

SOUTH FORK OF ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY	MAY					
	1897	1898	1899	1900	1901	1902
1	940	410	515	1180	640	663
2	840	405	660	1210	630	687
3	780	460	562	1190	617	687
4	740	460	700	1210	516	659
5	680	490	788	1200	457	668
6	660	515	788	1280	503	635
7	620	565	694	1150	881	630
8	620	550	647	2400	765	607
9	720	565	594	830	767	584
10	630	565	567	840	687	540
11	590	530	528	670	635	516
12	560	490	480	624	593	497
13	560	480	460	600	550	497
14	540	490	431	545	589	475
15	530	560	435	545	454	457
16	500	455	423	526	454	471
17	500	455	404	545	441	489
18	500	530	374	490	425	523
19	460	525	400	485	425	659
20	440	840	1700	465	399	749
21	430	830	1750	445	375	773
22	420	790	1500	440	370	744
23	420	730	772	440	357	720
24	390	760	780	380	332	715
25	385	1470	868	385	344	691
26	370	1320	905	383	332	640
27	370	1300	953	400	332	644
28	350	1170	858	395	332	640
29	340	1160	580	360	332	635
30	320	1045	519	370	319	607
31	330	895	464	367	306	607
Mean.	533	730	713	721	489	616

SOUTH FORK OF ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY	JUNE					
	1897	1898	1899	1900	1901	1902
1	330	860	469	465	282	580
2	370	800	456	492	270	516
3	370	730	419	513	270	457
4	355	1060	392	445	307	425
5	340	.....	392	428	297	782
6	340	.....	404	370	270	840
7	340	.....	660	383	277	566
8	320	.....	553	358	287	584
9	310	.....	431	290	282	557
10	310	.....	396	320	332	512
11	305	.....	370	430	309	489
12	290	.....	370	358	319	435
13	290	.....	334	290	332	403
14	290	1380	334	290	384	497
15	290	1140	340	265	419	497
16	285	1000	347	283	777	621
17	310	930	334	280	881	663
18	305	870	309	257	983	635
19	310	805	326	257	1383	603
20	275	810	330	257	1879	557
21	265	780	334	280	2164	504
22	265	690	323	283	1991	438
23	270	640	296	257	2300	438
24	265	585	334	250	2503	378
25	255	585	545	246	2997	329
26	260	580	416	230	3330	301
27	255	550	972	220	3435	290
28	280	520	2200	223	3438	282
29	280	500	1900	230	2831	265
30	320	475	1400	230	2567	259
Mean.	302	776	556	316	1270	490

SOUTH FORK OF ELKHORN AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY.	JULY.						
	1896	1897	1898	1899	1900	1901	1902
1	.....	320	435	820	225	2003	287
2	.....	325	430	633	230	1857	691
3	.....	290	350	532	225	1608	1462
4	.....	285	400	408	213	1324	1170
5	.....	260	405	448	220	1590	909
6	.....	240	405	439	215	1517	673
7	.....	240	410	419	188	1390	607
8	.....	220	430	431	188	1294	531
9	.....	220	420	416	190	1235	571
10	.....	325	405	420	180	1058	598
11	.....	380	400	439	145	983	593
12	.....	290	380	460	160	787	630
13	.....	260	370	423	153	663	635
14	.....	255	350	408	150	598	882
15	.....	240	340	370	294	544	1234
16	191	230	350	352	294	493	1146
17	186	220	285	341	304	468	977
18	184	210	280	330	294	404	977
19	185	2.0	280	323	290	357	701
20	178	260	255	330	256	344	954
21	174	260	235	306	250	344	825
22	175	230	210	292	250	332	729
23	216	230	235	266	250	326	653
24	225	225	240	250	250	319	640
25	206	210	245	256	248	302	531
26	226	210	215	256	177	294	489
27	226	200	210	259	210	282	457
28	213	195	210	259	200	275	344
29	194	180	200	259	210	270	394
30	206	180	215	246	285	256	370
31	321	180	230	250	173	215	344
Mean.	206	244	317	376	223	765	710

SOUTH FORK ELKHORN RIVER AT NORFOLK

Daily mean discharge in cubic feet per second.

DAY	AUGUST						
	1896	1897	1898	1899	1900	1901	1902
1	570	165	215	243	167	231	321
2	409	180	215	253	160	211	321
3	294	195	210	266	153	207	309
4	253	215	210	282	143	199	309
5	233	215	210	286	145	197	304
6	213	255	210	286	135	192	299
7	206	230	215	296	135	187	299
8	203	275	310	292	130	184	296
9	197	275	320	327	127	182	292
10	191	265	390	266	117	179	287
11	191	245	400	266	110	176	287
12	179	240	440	334	127	166	282
13	180	225	385	334	130	162	272
14	177	240	380	282	150	161	270
15	186	240	360	286	177	156	263
16	176	225	340	282	400	155	277
17	183	195	330	299	290	149	277
18	188	210	310	259	283	182	284
19	186	210	320	256	293	179	290
20	185	195	325	250	310	176	290
21	193	180	305	256	280	162	296
22	186	180	250	246	248	157	301
23	186	180	220	227	204	156	314
24	179	180	260	224	214	154	352
25	176	180	265	212	220	152	557
26	170	170	250	209	240	156	626
27	167	170	250	206	260	158	682
28	165	170	250	161	260	161	729
29	163	160	245	156	240	156	544
30	165	170	220	166	230	152	378
31	162	150	220	163	204	151	378
Mean.	210	206	285	254	202	172	354

SOUTH FORK OF ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY	SEPTEMBER						
	1896	1897	1898	1899	1900	1901	1902
1	158	150	195	158	210	150	454
2	163	160	75	158	195	149	593
3	161	150	70	105	190	149	548
4	163	160	70	90	204	147	508
5	158	145	65	80	213	147	381
6	158	135	65	180	190	142	329
7	157	130	60	186	185	142	341
8	155	130	65	194	185	152	349
9	158	115	75	203	180	169	344
10	170	155	85	194	185	170	354
11	172	155	75	194	280	201	357
12	167	150	210	186	290	254	360
13	170	150	220	174	264	327	357
14	178	150	210	161	250	349	352
15	176	150	215	171	247	362	341
16	174	175	210	186	238	360	334
17	179	190	215	177	230	332	321
18	192	190	220	183	220	322	321
19	183	185	235	163	230	319	319
20	185	170	175	161	242	339	360
21	185	185	195	156	242	337	461
22	186	170	175	159	220	334	497
23	182	170	245	161	230	332	471
24	179	180	200	197	228	326	589
25	178	170	210	180	230	324	668
26	182	165	220	174	210	322	797
27	180	160	240	180	200	326	994
28	186	150	195	177	210	328	1886
29	186	155	195	180	210	332	2534
30	182	145	195	177	200	326	2750
Mean.	173	158	163	168	2[illegible]	265	642

SOUTH FORK ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY.	OCTOBER.						
	1896	1897	1898	1899	1900	1901	1902
1	182	145	185	180	198	322	2408
2	182	145	200	197	200	319	2597
3	185	140	185	206	210	312	2381
4	186	140	210	215	205	310	2232
5	188	140	210	203	205	308	1787
6	186	140	210	206	205	308	1684
7	185	150	200	203	213	308	1544
8	213	170	195	218	205	310	1462
9	213	160	200	221	205	310	1408
10	213	170	200	209	210	310	1342
11	213	170	235	194	210	308	1312
12	216	170	245	194	198	310	1462
13	226	210	240	221	195	315	1384
14	216	210	235	215	210	322	1234
15	213	185	235	234	210	326	1105
16	213	205	210	221	205	332	965
17	210	235	240	227	210	332	758
18	213	245	.....	224	210	332	739
19	220	260	.....	227	205	334	1146
20	213	255	260	234	213	337	1105
21	213	250	250	227	292	337	1011
22	210	240	250	227	340	337	971
23	210	235	255	227	425	337	954
24	213	230	270	221	375	342	898
25	210	235	265	237	375	337	860
26	203	240	265	221	368	332	830
27	223	250	280	227	380	326	782
28	203	275	275	227	375	324	734
29	213	280	275	218	375	322	729
30	243	285	.....	221	395	322	710
31	298	295	.....	215	400	322	668
Mean.	210	209	233	217	265	323	1265

SOUTH FORK OF ELKHORN RIVER AT NORFOLK.

Daily mean discharge in cubic feet per second.

DAY	NOVEMBER			
	1896	1900	1901	1902
1	313	380	322	701
2	313	375	319	621
3	298	365	324	616
4	298	362	329	598
5	.....	365	332	598
6	.....	362	337	571
7	.....	362	339	566
8	.....	365	352	566
9	.....	365	357	520
10	.....	360	352	520
11	.....	365	349	504
12	.....	340	344	457
13	.....	337	337	428
14	.....	343	332	397
15	.....	343	332	411
16	.....	337	332	378
17	.....	340	337	367
18	.....	.....	337	362
19	.....	.....	337	362
20	.....	.....	337	378
21	.....	.....	339	378
22	.....	.....	339	394
23	.....	.....	344	405
24	.....	.....	327	.....
25	.....	.....	327	.....
26	.....	.....	332	.....
27	.....	.....	332	.....
28	.....	.....	322	.....
29	.....	.....	322	.....
30	.....	.....	322	.....
Mean.	305	365	332	482

ELKHORN RIVER AT ARLINGTON.

Daily mean discharge in cubic feet per second.

DAY	MAR.	APRIL				MAY			
	1902	1899	1900	1901	1902	1899	1900	1901	1902
1	.....	.....	559	833	968	808	1673	1069	1518
2	.....	.....	555	841	1048	882	1615	1053	1582
3	.....	.....	559	856	1115	793	1542	983	1640
4	.....	.....	551	881	1244	820	1495	963	1495
5	.....	.....	526	932	1342	945	1435	1019	1236
6	.....	.....	518	958	1305	1411	1400	1160	1070
7	.....	.....	504	963	1256	2290	1428	1927	999
8	.....	.....	501	878	1214	1838	1526	2019	952
9	.....	.....	484	958	1184	1781	1098	2133	912
10	2029	.....	498	953	1115	.....	2283	1891	906
11	1673	.....	491	943	1053	.....	2105	1953	876
12	1534	.....	484	922	1015	.....	1518	2067	838
13	1550	.....	484	958	958	.....	1286	1756	843
14	1689	.....	491	958	912	.....	1178	1406	847
15	1698	.....	501	1005	917	.....	1120	1220	828
16	1421	.....	515	1081	912	.....	1076	1119	776
17	1664	.....	544	1126	886	.....	1044	1009	771
18	.....	.....	646	1199	843	.....	1021	958	749
19	771	.....	676	1220	833	.....	937	901	727
20	968	.....	745	1274	808	.....	901	856	718
21	1005	.....	896	1317	818	.....	863	807	740
22	1236	.....	943	1311	799	.....	833	775	762
23	1143	.....	958	1335	740	.....	705	762	753
24	1059	.....	1015	1305	740	.....	700	732	771
25	1021	.....	1026	1237	731	.....	671	721	828
26	1026	.....	1075	1188	762	.....	662	704	804
27	983	.....	1081	1194	808	.....	718	691	776
28	952	796	1190	1130	823	.....	696	674	790
29	963	789	1447	1103	896	2480	658	670	780
30	952	804	1811	1081	1190	2365	700	633	799
31	937					2390	654	613	780
Mean.	1192	796	742	1065	974	1567	1166	1136	931

ELKHORN RIVER AT ARLINGTON.

Daily mean discharge in cubic feet per second.

DAY	JUNE				JULY			
	1899	1900	1901	1902	1899	1900	1901	1902
1	1988	692	596	776	1184	384	3825	585
2	1828	718	589	767	1184	378	3538	650
3	1809	667	574	740	1443	387	3018	740
4	1692	745	581	696	1313	381	2775	1026
5	1618	722	687	740	1233	448	2554	1442
6	1626	731	574	767	1177	416	2097	3749
7	1727	740	541	709	1072	395	1951	4203
8	1273	692	574	705	1017	387	1781	3816
9	1155	637	596	813	1017	367	1640	7586
10	1080	629	785	1280	976	355	1518	9568
11	1069	613	870	1220	976	364	1400	8917
12	1088	590	841	1126	934	347	1331	6462
13	4315	617	847	968	900	344	1238	6654
14	3560	927	808	886	897	325	1161	6206
15	2925	605	853	862	867	325	1064	4105
16	2340	578	916	780	852	544	999	3762
17	2572	654	905	731	826	461	942	3324
18	2830	675	1377	762	793	433	891	2832
19	1847	597	1706	896	770	480	848	4119
20	1436	582	3013	1005	762	582	767	5470
21	1188	567	3181	843	733	570	763	5356
22	1222	537	4370	727	700	772	744	4705
23	1220	508	4745	671	710	983	713	3565
24	1181	491	3989	633	6 2	1293	696	2417
25	1129	474	3630	613	602	1120	662	1793
26	1013	480	3460	563	583	1032	646	2011
27	1054	512	3373	548	575	922	633	1937
28	1006	480	3500	465	564	866	646	1631
29	1051	451	3789	566	564	646	596	1402
30	1173	390	3800	570	538	570	564	1126
31					538	533	544	1456
Mean.	1701	610	1869	781	871	562	1372	3633

ELKHORN RIVER AT ARLINGTON.

Daily mean discharge in cubic feet per second.

DAY	AUGUST				SEPTEMBER			
	1899	1900	1901	1902	1899	1900	1901	1902
1	571	498	533	2653	388	808	307	1400
2	542	454	519	1846	392	637	311	1202
3	509	429	508	1250	344	548	318	1037
4	575	404	504	1037	329	498	320	968
5	628	398	494	896	314	474	300	922
6	586	378	487	799	318	461	322	881
7	646	361	474	705	325	454	300	818
8	811	347	477	642	325	448	363	813
9	700	332	480	570	322	454	395	818
10	650	322	464	552	336	426	438	758
11	688	327	464	529	340	555	441	740
12	594	347	445	487	344	1021	501	722
13	597	358	419	497	340	4160	593	700
14	579	435	428	471	351	4074	617	654
15	606	705	419	629	333	3683	645	633
16	635	799	410	2522	318	2501	671	613
17	632	629	398	3114	314	2077	705	593
18	602	794	404	1837	314	1775	696	563
19	557	1250	398	1286	314	1615	745	537
20	546	1081	381	968	288	1479	675	530
21	490	927	387	804	295	1442	629	735
22	494	808	382	1421	310	1485	578	994
23	485	871	429	1214	325	1463	556	1367
24	531	767	375	1542	340	1300	582	1615
25	538	831	365	1802	344	1208	586	1599
26	459	828	370	2194	318	1342	563	1449
27	456	806	350	2878	314	1076	559	1479
28	471	780	352	2971	300	906	559	1566
29	456	753	327	2809	288	790	578	1471
30	445	723	327	2417	288	755	562	1846
31	384	896	317	1715				
Mean.	563	627	421	1744	326	1331	547	1001

ELKHORN RIVER AT ARLINGTON.

Daily mean discharge in cubic feet per second.

DAY	OCTOBER				NOVEMBER		
	1899	1900	1901	1902	1900	1901	1902
1	300	723	613	2096	1855	563	1196
2	300	679	629	3066	2000	537	1184
3	291	670	621	2936	1837	590	1126
4	284	638	654	2686	1749	625	1120
5	284	621	658	2619	1574	642	1103
6	295	601	613	2469	1400	666	1175
7	295	582	567	2253	1184	696	1053
8	310	570	554	2174	1092	679	1026
9	314	559	544	2086	967	706	1037
10	322	545	552	1982	901	713	1036
11	336	537	586	1982	881	726	1015
12	344	530	607	2512	871	696	1048
13	351	519	621	3199	858	692	1190
14	359	508	626	3162	823	688	1463
15	362	498	630	2809	794	658	1367
16	366	484	602	2344	776	654	1196
17	359	477	679	2086	740	638	1126
18	355	470	602	1937	740	606	1059
19	359	474	629	1811	745	594	1026
20	273	481	609	1749	723	601	1010
21	381	484	597	1615	692	597	968
22	396	633	582	1558	633	580	983
23	403	714	582	1534	609	594	968
24	426	745	574	1456	590	597	963
25	434	780	551	1407	.....	586	912
26	430	843	563	1367	.....	594	891
27	434	881	570	1305	.....	574	871
28	437	953	570	1244	.....	578	862
29	434	3656	545	1238	.....	566	852
30	437	2522	555	1214	.....	566	804
31	430	2115	563	1161			
Mean.	361	822	599	2034	1043	627	1054

Photo by H. A. Mark, Alliance

SCOTTS BLUFF

In the following tables will be found a summary of all discharge measurements made on Nebraska streams at points other than the regular gaging stations since 1894.

As the work of the U. S. Geological Survey has been more particularly confined to the larger streams, the major part of the measurements on the smaller streams have been made from this office.

Where the point of measurement is at some distance from a post-office, it has been located by the section, township, and range in the order named, range numbers being west of the 6th P. M. unless otherwise indicated.

SUMMARY OF ALL STREAM MEASUREMENTS.

Made in Nebraska at points other than regular gaging stations for the years 1894 to 1902 inclusive.

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Ash Creek, E. Br.	Half mile above mouth.....	E. T. Youngfelt..	June 25, '96	1.09	Tributary White River.
" "	Head of Tomlin D. 30-32-50..	C. B. Channel....	May 15, '99	3.35	" " "
" "	Head of Sheldon D. 33-32-50..	A. B. McCoskey..	Aug. 18, '99	0.33	" " "
" "	Quarter mile above fork.....	T. J. O'Keefe....	June 22, '00	0.25	" " "
" "	Head Tomlin D. 31-32-50....	A. B. McCoskey..	July 17, '00	0.38	" " "
" "	Quarter mile above fork....	T. J. O'Keefe....	Aug. 20, '00	Dry.	" " "
Ash Creek, W. Br.	N. line sec. 25-32-51.....	E. T. Youngfelt..	June 25, '96	1.73	" " "
" "	Woodward's 25-32-51.....	C. B. Channel...	May 15, '99	0.19	" " "
" "	Head of Mace D. 2-32-51.....	A. B. McCoskey..	Aug. 18, '96	0.96	" " "
" "	Quarter mile above fork.....	T. J. O'Keefe....	June 22, '00	0.14	" " "
" "	Quarter mile above fork.....	"	Aug. 20, '00	Dry.	" " "
" "	Ab. Br'dhurst Dam 35-32-51..	A. B. McCoskey..	July 17, '00	0.97	" " "
Ash Creek.....	Sec. 12-32-51	" ..	Sept. 21, '98	0.50	" " "
"	At Cripps 13-32-51.....	C. B. Channel....	May 15, '99	0.50	" " "
"	At mouth	"	May 15, '99	0.76	" " "
Ash Creek.....	Ab. Spraggs' Dam 10-31-17..	"	June 20, '98	2.19	Tributary Niobrara Riv.
Antelope Creek..	Section 12-32-40	A. B. McCoskey..	June 2, '98	3.1	" " "
Baker Creek.....	North line sec. 19-31-13.....	C. B. Channel....	June 19, '99	0.35	" " "
Beaver Creek....	Genoa	O. V. P. Stout...	Sept. 7, '94	71	Tributary Loup River.
"	"	" ...	July 14, '96	1.10	" " "
"	"	W. J. McEathron	Aug. 14, '96	112.2	" " "
"	"	O. V. P. Stout....	June 21, '98	149.7	" " "
"	"	"	Aug. 8, '00	50.18	" " "
"	Albion	"	July 21, '96	47.4	" " "
"	"	Glen E. Smith...	Apr. 23, '98	88.6	" " "
"	Below diversion Gt. E. Can..	O. V. P. Stout...	Aug. 8, '00	7.21	" " "
"	At Hyser's 20-44-46.....	C. B. Channel...	May 22, '99	8.97	Tributary White River.
"	Genoa	O. V. P. Stout...	July 12, '01	74.7	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Beaver Creek....	Genoa	O. V. P. Stout...	July 30, '01	85.5	.....
"	Albion	B. E. Forbes....	Dec. 3, '01	92.3	.....
Blue Creek.....	....	U. S. Geol. Sur..	....	105	Tributary No. Platte R.
Blue Creek.....	N. E. ¼ of sec. 30-16-42.....	Adna Dobson....	Mar. 28, '97	115.00	.....
"	Sec. 33-17-42	A. B. McCoskey..	Aug. 31, '98	80.6	.....
"	S. line sec. 18-17-42.....	H. H. Pickens...	May 22, '99	90.12	.....
"	Above Graff Dam 19-16-42...	E. D. Johnson...	July 26, '00	27.39	.....
"	Sec. 6-16-42	H. O. Smith.....	July 17, '02	90.0	.....
"	Sec. 19-16-42	"	Aug. 18, '02	50.0	.....
Birdwood Creek.	....	U. S. Geol. Sur..	....	126	Tributary No. Platte R.
" "	Below Bratt's Ditch.....	O. V. P. Stout...	Sept. 9, '96	133	Bratt's D., diverting 28.2 sec. feet.
" "	Ab. Beauchamp's D. 15-15-33.	C. B. Channel...	May 7, '98	123.32	.....
" "	One mile above mouth.....	H. H. Pickens...	May 25, '99	183.47	.....
" "	Sec. 35-15-33	H. O. Smith.....	Aug. 29, '01	183.	.....
" "	Sec. 15-15-33	"	Oct. 30, '01	170.4	.....
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.
"	DeWitt	" ...	July 2, '98	202	1000 feet below mill.
"	"	" ...	June 7, '00	235	.....
"	Blue Springs	" ...	June 7, '00	250	.....
"	Wilbur	" ...	June 7, '00	189.8	.....
"	Wymore	" ...	July 12, 01	235	.....
"	Seward	J. C. Stevens....	Apr. 5, '02	50.0	.....
"	Crete	"	Apr. 18, '02	143.0	.....
"	"	" ...	Apr. 18, '02	132	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Blue River.....	Wymore	J. C. Stevens.....	Sept. 16, '02	234	.....
Blue River, Little	Ayr, Neb.	"	Aug. 23, '00	1.71	.....
" "	W. line 18-5-10.....	"	Aug. 23, '00	1.58	.....
Boardman Creek.	Two miles above mouth.....	"	July 24, '97	Est. 1	.....
" "	Sec. 6-29-33	A. B. McCoskey..	May 20, '98	Est. 40	.....
" "	Beckley's 13-30-31	C. B. Channel...	June 3, '99	16.4	.....
Boggy Creek.....	L. bet. secs. 17 & 18-32-54....	A. B. McCoskey..	May 8, '97	.15	Tributary Hat Creek.
"	N. line sec. 31-33-54.....	" ..	May 8, '97	.35	.....
"	N. line sec. 31-33-54.....	" ..	May 24, '99	.05	.....
Bone Creek.....	Ainsworth	C. B. Channel...	June 12, '98	3.72	.....
"	At Strenger's 16-31-21.....	" ...	June 17, '99	12.46	.....
Bordeaux Ck., Big	Sec. 25-33-48	A. B. McCoskey..	Sept. 22, '98	1.9	.....
Brush Creek.....	Sec. 23-33-13	P. T. Francis....	Aug. 14, '02	25.0	.....
Buck Creek.....	Sec. 14-31-41	A. B. McCoskey..	Sept. 1, '98	Est. 4	.....
Burton Creek....	At mouth T. 35, R. 19.....	C. B. Channel...	Sept. 17, '98	5.57	.....
Buffalo Creek....	Sec. 7-1-40	W. A. Channel..	Nov. 22, '00	9.9	.....
"	Sec. 33-9-18	H. O. Smith.....	July 5, '02	6.4	.....
"	Sec. 30-10-20	"	July 5, '02	2.0	.....
Calamus River...	Burwell	O. V. P. Stout...	July 10, '96	368	.....
"	"	Glen E. Smith...	May 17, '99	372	.....
"	Sec. 8-24-19	C. B. Channel...	Sept. 20, '99	152	.....
"	Burwell	B. E. Forbes....	Mar. 25, '02	407	.....
Cedar River.....	Fullerton	O. V. P. Stout...	Sept. 15, '94	210.6	.....
"	"	" ...	July 11, '96	338	.....
"	"	" ...	July 21, '98	277	.....
"	Cedar Rapids	" ...	July 21, '96	212	.....
"	Ericson	W. J. McEathron	Mar. 16, '95	152	.....
"	"	"	June 1, '95	214	.....
"	"	"	Aug. ... '95	112.1	.....
"	Ericson above dam.....	Glen E. Smith...	May 17, '99	107.4	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Cedar River.....	Ericson below dam.....	Glen E. Smith..	....	113	.....
"	Fullerton	Adna Dobson....	Nov. 21, '01	291	.....
Cedar R., Dry Br.	At mouth near Ericson.....	"	May 17, '99	5	.....
Cedar Creek.....	At Bruce's mill 33-34-25.....	C. B. Channel...	July 9, '99	7.41	.....
Clear Creek.....	Sec. 29-16-41	Adna Dobson....	Nov. 23, '96	12.8	Keith County.
"	700 yards below Barber & Marsh headgate 32-16-41...	H. H. Pickens...	May 19, '99	7.84	Keith County.
"	At Schlademans 5-14-34.....	C. B. Channel...	Dec. 16, '99	3.40	Lincoln County.
"	Sec. 29-16-41	H. O. Smith.....	Aug. 8, '01	10.7	.....
Chadron Creek...	Above Chadron W. W. 18-32-48	A. B. McCoskey..	Sept. 14, '97	1.59	.....
"	Above Chadron W. W. 18-32-48	C. B. Channel...	May 17, '99	2.24	.....
"	Below Chadron W. W. 18-32-48	A. B. McCoskey..	Sept. 14, '97	0.96	.....
"	Below Chadron W. W. 18-32-48	C. B. Channel...	May 17, '99	2.15	.....
"	Sec. 36-33-49	A. B. McCoskey..	Sept. 23, '98	1.23	.....
"	Sec. 36-33-49	C. B. Channel...	May 17, '99	8.71	.....
Cot'nwood C., Big	6 miles west of Whitney....	E. T. Youngfelt..	June 25, '96	.20	Tributary White River.
Cot'nwood C., Big	Sec. 21-35-22	C. B. Channel...	June 12, 99	1.20	" " "
Cot'nwood C., Lit	Sec. 7-32-51	E. T. Youngfelt..	June 25, 96	.10	" " "
" "	West line Twp. 31, R. 51....	C. B. Channel...	May 15, '99	.29	" " "
" "	Below mouth of Spring Ck..	" ...	May 16, '99	.35	.....
Coon Creek.....	Above Winterer's D. 34-15-37	" ...	May 19, '98	.78	.....
Coldwater Creek.	Sec. 26-18-46	" ...	May 25, '98	2.93	.....
Crooked Creek...	Head Mutz D. sw¼ 20-35-19..	" ...	June 18, '98	.76	.....
"	At Mutz 19-34-19.....	" ...	June 13, '99	1.23	.....
"	Sec. 1-1-11	B. E. Forbes....	July 2, '02	175	Flood .....
Cook Creek.....	Sec. 2-2-18	H. O. Smith.....	Sept. 24, '01	.9	.....
Center Creek....	Sec. 36-2-15	"	June 10, '02	7.6	.....
"	Sec. 7-1-5	"	June 10, '02	7.7	.....
Dead Horse Creek	Sec. 31-33-50	A. B. McCoskey..	Sept. 21, '98	Est. .3	.....
"	Sec. 7-32-49	" ..	Sept. 23, '98	Est. .6	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Dead Horse Creek	North line sec. 31-33-49	C. B. Channel	May 17, '99	3.46	
"	At Slattery's D. sec. 32-33-49	"	May 17, '99	3.98	
Deer Creek	Sec. 22-30-43	A. B. McCoskey	June 1, '98	12	
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	
"	"	A. B. McCoskey	Apr. 21, '99	334.48	
Deadman Creek	Head Phillips D. 19-30-52	T. J. O'keefe	Oct. 2, '00	1.8	
"	Head P. & R. D. 1-30-53	"	Oct. 2, '00	1.1	
Elkhorn River	Atkinson	Adna Dobson	Oct. 2, '96	11.1	
"	"	A. B. McCoskey	May 24, '98	110.5	
"	Arlington	A. Rosewater	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	
Elkhorn River	"	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	
Elkh'n Riv. S. Br	"	O. V. P. Stout	Sept. 3, '97	18.17	
Elkh'n Riv. N. Fk	Norfolk	"	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	
" "	"	Glen E. Smith	Apr. 27, '99	122	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Elkh'n Riv. N. Fk	Norfolk	Glen E. Smith..	May 25, '99	414	
" "	"	"	Feb. 20, '99	119	
" "	"	"	Aug. 17, '99	81.30	
" "	"	"	Sept. 25, '99	85.20	
" "	Norfolk Junction Bridge	O. V. P. Stout...	May 27, '00	75.9	
" "	" " "	"	Aug. 3, '00	89	
" "	" " "	C. B. Channel...	May 31, '01	550	
" "	" " "	O. V. P. Stout...	July 31, '01	150	
" "	" " "	J. C. Stevens....	Mar. 21, '02	118	
" "	" " "	"	Apr. 13, '02	150	
" "	" " "	"	May 12, '02	116	
" "	" " "	"	June 16, '02	137	
" "	" " "	"	July 26, '02	168	
" "	" " "	"	Aug. 22, '02	170	
" "	" " "	"	Sept. 29, '02	242	
" "	" " "	"	Nov. 14, '02	118	
Flag Creek	Sec. 3-2-19, above dam	H. O. Smith	Sept. 24, '01	1.5	
"	Sec. 3-3-19, below dam	"	Sept. 24, '01	.6	
"	2 miles below dam	"	Sept. 24, '01	.5	
Frenchman River	Sec. 33-4-32	O. V. P. Stout...	June 19, '96	26.3	
"	Culbertson	E. T. Youngfelt..	June 19, '96	13.4	
"	"	U. S. Geol. Sur..	Nov. 25, '92	177	
"	"	O. V. P. Stout...	Mar. 22, '95	120	
"	"	A. B. McCoskey..	Sept. 16, '99	29.72	
"	"	O. V. P. Stout...	Aug. 17, '00	84	
"	Wauneta	Adna Dobson....	Apr. 14, '97	127.93	
"	"	A. B. McCoskey..	Sept. 19, '99	62.91	
"	"	"	July 27, '00	74.30	
"	Palisade	O. V. P. Stout...	July 2, '97	63.23	
"	"	"	July 19, '97	73.3	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Frenchman River	Palisade	Glen E. Smith	July 7, '98	92	Ab. head Culbertson D..
"	"	H. H. Pickens	May 29, '99	97.32	"
"	"	A. B. McCoskey	Sept. 16, '99	65.83	"
"	"	"	July 27, '00	91.24	"
"	Maranville	E. D. Johnson	July 8, '99	19.33	
"	Head Maranville D. 12-6-41	A. B. McCoskey	July 26, '00	3.39	Ditch diverting all water
"	Bel. H'd of Inman's D. 17-6-40	E. D. Johnson	July 9, '99	16.62	
"	Head of Inman's D. 17-6-40	A. B. McCoskey	July 26, '00	7.98	Ditch diverting all water
"	Head of Inman's D. 17-6-40	E. D. Johnson	Sept. 29, '00	6.20	
"	Below head Wirsig D. 24-6-40	"	July 10, '99	20.98	
"	Head of Wirsig D. 24-6-40	A. B. McCoskey	July 26, '00	13.97	Ditch diverting all water
"	2 miles above Culbertson	Adna Dobson	June 26, '00	79	
"	W. line sec. 3-5-38	H. H. Pickens	June 3, '99	29.54	
"	Sec. 24-6-40	H. O. Smith	May 31, '01	11.6	
"	Sec. 17-6-40	"	May 31, '01	10.6	
"	Sec. 24-6-40	"	June 18, '01	14.8	
"	Sec. 17-6-40	"	June 18, '01	18.0	
"	Sec. 21-6-39	"	June 18, '01	47.3	
"	Sec. 5-5-36	"	June 21, '01	93.0	
"	Wauneta	"	June 21, '01	112.9	
"	Palisade	"	June 21, '01	175.7	
"	Culbertson	"	July 23, '01	62.1	
"	"	F. Dobson	Apr. 25, '02	92	
"	Enders	H. O. Smith	June 13, '02	60.0	
"	Culbertson	J. C. Stevens	Sept. 18, '02	65.9	
Flowing Well	Sec. 13-6-40	H. O. Smith	July 24, '01	0.5	
Goose Creek	Sec. 10-22-27	C. B. Channel	Apr. 27, '99	30.27	
Gordon Creek	Sec. 15-32-29	O. V. P. Stout	July 23, '97	3.53	
Golden Creek	Sec. 25-15-39	H. O. Smith	Aug. 19, '02	0.6	
Hat Creek, East	Sec. 23-32-55	A. B. McCoskey	July 10, '97	.3	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Hat Creek, East.	Above mouth 10-32-55	A. B. McCoskey	July 10, '97	1.05	
Hat Creek, West.	Above mouth 10-32-55	"	July 10, '97	.53	
" "	Below confluance 10-32-55	"	July 10, '97	1.6	
" "	Head of Steel D. 16-32-55	"	July 16, '97	.69	
" "	Sec. 23-33-55	"	Sept. 30, '98	1.41	
" "	Above Coffee's D. 26-33-55	"	May 24, '99	3.60	
Harney Creek	Sec. 31-33-23	C. B. Channel	June 11, '98	23.49	
Horse Creek	Neb.-Wyo. state line	A. B. McCoskey	Oct. 15, '97	10.5	Scotts Bluff County.
"	Neb.-Wyo. state line	"	June 16, '99	11.1	" " "
"	B. & M. Ry. crossing	E. T. Youngfelt	June 16, '96	.22	Dundy County.
"	Sec. 11-1-39	W. A. Channel	Nov. 22, '00	1.20	" "
Horse Head Creek	Sec. 16-33-24	C. B. Channel	June 9, '99	1.15	
Holt Creek	Head Webster Dit. 19-35-20	"	June 12, '99	3.58	
Indian Creek	Near mouth	E. T. Youngfelt	June 25, '96	.06	Dundy County.
"	Line bet. secs. 10 & 11-2-37	W. A. Channel	Nov. 14, '00	1.30	" "
"	North line sec. 33-32-50	A. B. McCoskey	Aug. 18, '99	.50	Dawes County.
Jim Creek	Ab. W'druff's dam 14-33-57	"	July 22, '97	.22	
Keya Paha River	Ab. mth Burton C. T. 35, R. 19	C. B. Channel	June 17, '98	62.02	
"	Sec. 24-35-20	"	June 13, '99	38.99	
Lawrence Fork	Sec. 36-19-52	R. H. Wills	June 10, '01	1.7	
"	Sec. 36-19-52	F. Dobson	July 22, '02	1.4	
"	Sec. 11-18-52	R. H. Willis	July 22, '02	1.6	
"	Sec. 1-18-52	"	July 29, '02	2.9	
"	Sec. 15-18-52	"	July 31, '02	2.2	
Lodge Pole Creek	Kimball	Adna Dobson	May 26, '96	4.5	
"	3 miles east of Sidney	H. H. Pickens	May 15, '99	10.95	
"	4 miles west of Kimball	E. D. Johnson	Aug. 9, '99	7.43	
"	1 mile west of Kimball	"	Aug. 9, '99	2.41	
"	¾ mile east of Kimball	"	Aug. 11, '99	2.04	
"	½ mile above Kinney Ditch.	"	Aug. 10, '99	6.52	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Lodge Pole Creek	Above Young's Ditch.....	E. D. Johnson...	Aug. 10, '99	15.57	.....
"	Sec. 33-14-49	" ...	May 15, '00	3.86	.....
"	½ mile w. Jones dam 34-14-49	" ...	May 15, '00	6.26	.....
"	Sec. 14-14-51	" ...	May 17, '00	2.34	.....
"	Sec. 31-14-47	" ...	May 18, '00	2.60	.....
"	Sec. 3-13-46	" ...	May 21, '00	2.26	.....
"	Sec. 12-12-45	" ...	May 22, '00	1.33	.....
"	Sec. 23-23-15	" ...	May 23, '00	7.33	.....
"	Sec. 36-15-57	" ...	May 25, '00	4.75	.....
"	Sec. 2-14-58	" ...	May 26, '00	9.23	.....
"	Sec. 36-13-45	" ...	Aug. 7, '00	3.12	.....
"	Sec. 3-14-58	" ...	Aug. 8, '00	6.23	.....
"	Sec. 23-15-55	" ...	Aug. 9, '00	6.34	.....
"	Sec. 33-15-57	" ...	Aug. 10, '00	12.34	.....
"	Sec. 3-12-45	" ...	Aug. 10, '00	1.34	.....
"	Sec. 33-14-49	" ...	Aug. 14, '00	6.42	.....
"	Sec. 31-14-47	" ...	Aug. 16, '00	2.50	.....
"	Sec. 14-14-51	" ...	Aug. 17, '00	2.35	.....
"	Sec. 2-13-46	" ...	Aug. 22, '00	2.85	.....
"	Above Polly D. 30-15-55.....	" ...	Sept. 10, '00	2.44	.....
"	Below Polly D. at bridge....	" ...	Sept. 10, '00	1.13	.....
"	1 mile west of Kimball.....	" ...	Sept. 10, '00	1.29	.....
"	Kimball	" ...	Sept. 12, '00	4.92	.....
"	"	" ...	Sept. 15, '00	1.14	.....
"	"	" ...	Sept. 18, '00	4.30	.....
"	Above Neumann's Dam.....	" ...	Oct. 3, '00	3.26	.....
"	Lodge Pole Station.....	" ...	Oct. 8, '00	2.12	.....
"	Chappell	" ...	Oct. 18, '00	3.11	.....
"	Sidney	H. O. Smith.....	July 1, '01	6.7	.....
"	Sec. 9-14-51	"	July 1, '01	5.6	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Lodge Pole Creek	Sec. 29-14-48	H. O. Smith	July 2, '01	4.0	
"	Sec. 29-14-47	"	July 2, '01	2.2	
"	Sec. 31-14-46	"	July 3, '01	3.4	
"	Sec. 12-14-59	"	July 30, '01	2.9	
"	Sec. 27-15-56	"	July 31, '01	6.2	
"	Sec. 36-14-47	"	Apr. 13, '02	4.0	
"	Sec. 35-15-55	"	Apr. 25, '02	12.0	
"	Kimball	"	June 2, '02	5.6	
"	Sec. 25-15-56	"	July 2, '02	7.5	
"	Sec. 31-15-56	"	July 2, '02	10.5	
Lonergan Creek	Sec. 17-15-39	C. B. Channel	May 22, '98	6.1	
"	Sec. 19-15-39	H. O. Smith	Aug. 18, '02	2.5	
Lost Creek	Sec. 10-1-15	"	June 10, '02	0.7	
Long Pine Creek	Long Pine	Adna Dobson	Oct. 3, '96	47.1	
"	"	C. B. Channel	June 20, '98	50.41	
"	"	Glen E. Smith	Aug. 21, '98	44.3	
"	"	"	Sept. 8, '98	138	
"	Below Miller's Mills 5-31-20	C. B. Channel	June 15, '99	5.9	
"	Long Pine	B. E. Forbes	Aug. 9, '02	49.7	
Looking Glass Cr.	Near mouth	W. J. McEathron	July ... '96	15	
Loup River	Fullerton	O. V. P. Stout	Sept. 16, '94	170.4	
"	"	"	July 11, '96	2900	
"	Sec. 13-7-2	"	Aug. 19, '94	1335	From notes L. F. Gottschalk.
Loup Riv., North	Moulton	G. H. Lawrence	Nov. 2, '94	460	
" "	Burwell	O. V. P. Stout	July 9, '96	625	River 4 in. above normal
" "	"	Glen E. Smith	May 16, '99	984	
" "	Below mouth Wanaduza Ck.	O. V. P. Stout	July 24, '97	129.8	
" "	Brownlee	C. B. Channel	May 1, '99	359.79	
" "	"	"	Sept. 23, '99	195.84	
" "	Brewster	"	Sept. 21, '99	361.92	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Loup Riv., North	Burwell	B. E. Forbes	Mar. 25, '02	1088	
" "	St. Paul	"	May 23, '02	1186	
Loup River, Mid.	Forks 8½ miles above Mullen	O. V. P. Stout	Aug. 20, '95	41.8	
" "	Mullen	"	Aug. 20, '95	120	
" "	Seneca	"	Aug. 21, '95	216.2	
" "	"	"	Aug. 30, '96	212.3	
" "	"	Glen E. Smith	Apr. 28, '98	221.6	
" "	"	"	Nov. 1, '98	198	
" "	"	C. B. Channel	May 2, '99	225.34	
" "	Arcadia	A. B. McCoskey	Apr. 18, '99	809.66	
" "	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	
" "	"	A. B. McCoskey	Apr. 21, '99	408.23	
" "	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	
" "	St. Paul	B. E. Forbes	May 23, '02	1538	
Loup Riv., 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	
Mathew's Creek	Sec. 28-15-37	C. B. Channel	May 19, '98	1.71	
Methodist Creek.	Sec. 2-1-18	H. O. Smith	Sept. 24, '01	2.6	
Middle Creek, E.	Sec. 32-33-23	C. B. Channel	June 10, '99	.27	

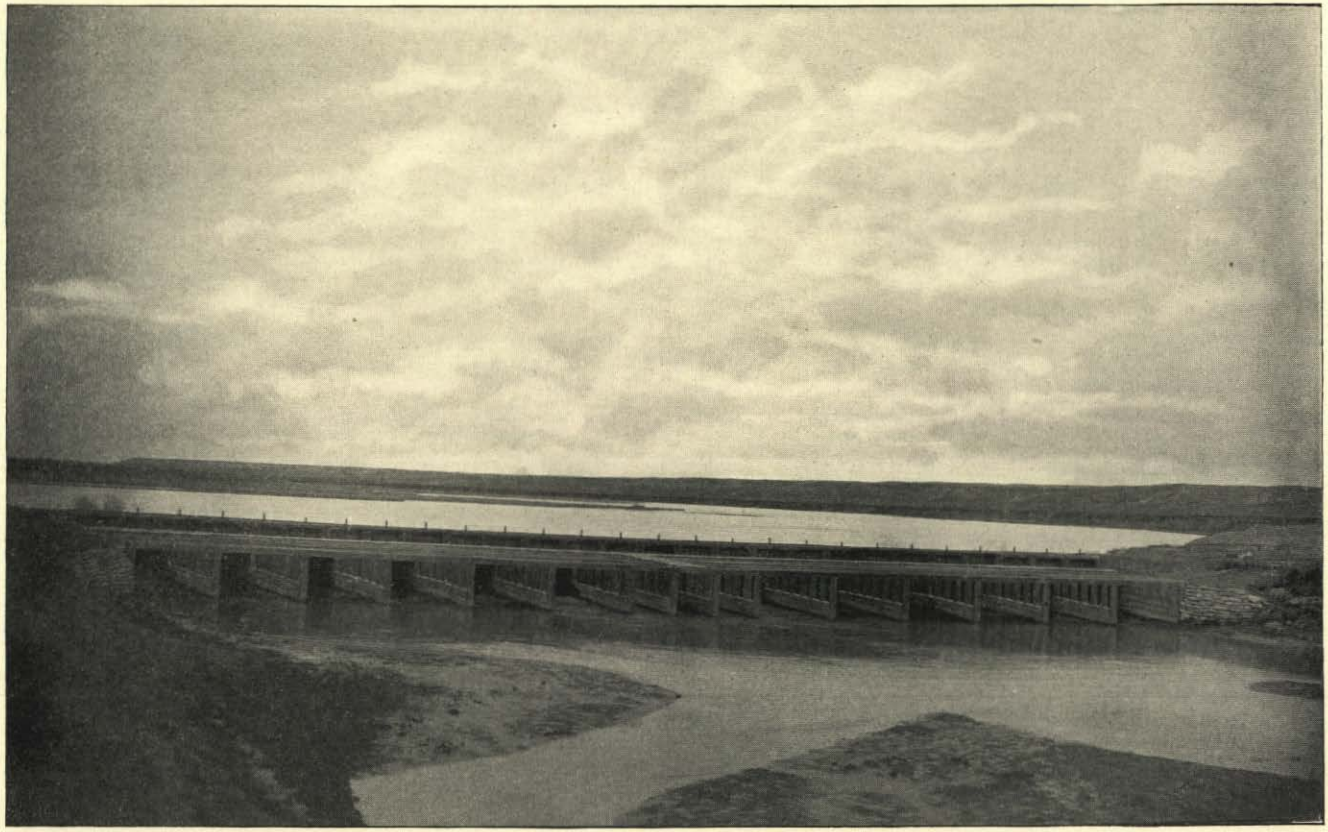


Photo by H. A. Mark, Alliance

HEADGATE FARMERS CANAL

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Middle Creek, W.	Sec. 32-33-23	C. B. Channel	June 10, '99	1.48	
Minnechaduza	Ft. Niobrara	Adna Dobson	May 26, '96	4.5	
"	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	
"	"	"	Jan. 27, '99	26.2	
"	"	"	Feb. 21, '99	45	
"	"	"	Mar. 15, '99	25.7	
"	"	"	Apr. 26, '99	32.6	
"	"	"	May 11, '99	35	
"	"	"	May 26, 99	64.7	
"	"	"	June 26, '99	23	
"	"	"	Aug. 13, '99	19	
"	"	"	Sept. 13, '99	23.5	
"	"	"	Sept. 26, '99	26.5	
"	"	O. V. P. Stout	Aug. 1, '01	27.3	
"	"	B. E. Forbes	Nov. 14, '01	26.6	
"	"	J. C. Stevens	Mar. 22, '02	38.1	
"	Sec. 29-35-30	"	Apr. 11, '02	14.9	
"	Sec. 2-34-30	"	Apr. 11, '02	17.3	
"	Sec. 8-34-29	"	Apr. 11, '02	26.0	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Minnechaduza ...	Sec. 30-34-28	J. C. Stevens....	Apr. 11, '02	33.8	.....
"	Valentine	"	Apr. 12, '02	38.3	.....
"	"	"	June 15, '02	23.1	.....
"	"	"	July 4, '02	27.4	.....
"	"	"	July 20, '02	22.7	.....
"	"	"	Aug. 20, '02	23.8	.....
Monroe Creek....	Head of Schilt Ditch 27-33-56	A. B. McCoskey..	July 20, '97	.22	.....
"	Head Wilcox Ditch 33-33-56..	" ..	July 21, '97	1.02	.....
"	" " "	T. J. O'Keefe....	Sept. 24, '00	.84	.....
"	Sec. 14-33-56	A. B. McCoskey..	Sept. 30, '98	Est. .3	.....
Medicine Creek..	Cambridge	Adna Dobson....	June 28, '00	24.5	.....
Muddy Creek....	3 miles above Arapahoe.....	"	June 28, '00	3.7	.....
Niobrara River..	Dawes County	Prof. L. E. Hicks	May 4, '87	98	.....
"	Marsland	E. T. Youngfelt..	June 23, '96	4	.....
"	"	Glen E. Smith...	Oct. 31, '98	23.24	.....
"	"	C. B. Channel...	May 29, '99	36.16	.....
"	Above Marsland 6-28-51.....	McCoskey & O'Keefe.	July 18, '00	7.03	.....
"	Gregg's Br. near Marsland..	T. J. O'Keefe....	Sept. 7, '00	11.25	.....
"	Niobrara City	O. V. P. Stout...	June 22, '97	759	.....
"	Valentine	Adna Dobson....	Oct. 4, '96	712	.....
"	5 miles south of Valentine..	Glen E. Smith...	Mar. 5, '99	650	.....
"	Lavaca P. O.	O. V. P. Stout...	June 25, '97	105	.....
"	"	Glen E. Smith...	Apr. 26, '98	209.9	.....
"	"	A. B. McCoskey..	June 2, '98	152.1	.....
"	"	Glen E. Smith...	Oct. 30, '98	203.4	.....
"	Neb.-Wyo. state line.....	A. B. McCoskey..	Oct. 20, '97	3.56	.....
"	Ab. Warneke's D. 27-30-57...	" ..	Oct. 20, '97	5.12	.....
"	Ab. Bourrett's D. 33-30-56...	" ..	Oct. 21, '97	6.36	.....
"	At Bourrett's 32-30-56.....	C. B. Channel...	May 27, '99	13.65	.....
"	Ab. Ernest's Dam 9-29-56....	A. B. McCoskey..	Oct. 21, '97	7.36	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Niobrara River..	At Ernest's Ranch 23-29-56..	A. B. McCoskey..	Oct. 21, '97	16.34	
"	At McGinley's 31-29-56.....	" ..	Oct. 22, '97	9.27	
"	At O. Harris' house, T. 28, R. 54	" ..	Oct. 23, '97	13.44	
"	Near Belle P. O. 8-28-53.....	" ..	Oct. 23, '97	11.92	
"	B. T. Moore's R. 11-28-53....	" ..	Oct. 25, '97	17.1	
"	" "	T. J. O'Keefe....	Sept. 6, '00	10.80	
"	McLaughlin's 10-28-52	A. B. McCoskey..	Oct. 25, '97	16.79	
"	H. of proposed Golden D. 13-31-41	Engrs. in employ of Golden Irr. D	Apr. 26, '97	190	
"	½ mile below proposed Golden D		Apr. 27, '97	195	
"	Dunlap	A. B. McCoskey..	May 20, '98	75.4	
"	"	" ..	Aug. 7, '00	14.12	
"	Sec. 22-29-48	" ..	May 31, '98	55.5	
"	Bridge N. of Ainsworth.....	C. B. Channel...	June 13, '98	958.6	
"	Fort 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	
"	Mouth of Whistle Creek.....	C. B. Channel...	May 28, '99	33.04	
"	Hd Hatch & Cross D. 25-29-50	" ...	May 29, '98	47.94	
"	Cook's Ranch 6-28-55.....	A. B. McCoskey..	Aug. 3, '99	13.87	
"	Cook's Ranch 6-28-55.....	" ..	Aug. 16, '99	10.65	
"	Head of Mirage Can. 26-29-48	McC'y & O'Keefe.	Aug. 7, '00	14.50	
"	Head of Hay Spr. C. 29-29-47.	" .	Aug. 7, '00	4.03	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Niobrara River..	Niobrara	O. V. P. Stout...	Apr. 6, '01	1591	
"	"	"	Apr. 7, '01	2115	
"	Valentine	C. B. Channel...	May 12, '01	628	
"	"	C. V. P. Stout...	June 26, '01	724	
"	"	"	Aug. 1, '01	751	
"	Niobrara	"	Aug. 27, '01	990	
"	Valentine	B. E. Forbes....	Nov. 14, '01	821	
"	"	J. C. Stevens....	Mar. 22, '02	971	
"	Fort Niobrara	"	Mar. 22, '02	1226	
"	"	"	Apr. 12, '02	877	
"	Valentine	"	Apr. 12, '02	784	
"	Niobrara	"	May 11, '02	1637	
"	W. line sec. 26-29-46	A. Dobson	June 3, '02	25.4	
"	Valentine	J. C. Stevens....	June 15, '02	585	
"	Fort Niobrara	"	June 15, '02	588	
"	Valentine	"	July 4, '02	800	
"	Fort Niobrara	"	July 4, '02	714	
"	Niobrara	"	July 6, '02	2021	
"	Valentine	"	July 20, '02	727	
"	Fort Niobrara	"	July 20, '02	705	
"	Niobrara	"	July 25, '02	1401	
"	Valentine	"	Aug. 20, '02	681	
"	Niobrara	"	Aug. 21, '02	1106	
"	Valentine	"	Sept. 26, '02	733	
"	Niobrara	"	Sept. 28, '02	2201	
"	Valentine	"	Nov. 13, '02	797	
Newman Creek..	Head Newnan D. 17-33-24...	C. B. Channel...	June 9, '99	0.73	
Oak Creek.....	3 miles N. W. of Lincoln....	McC'y & Pickens	May 10, '99	27.46	
"	3 miles N. W. of Lincoln....	McC'y & Johnson	July 3, '99	703.25	Swollen by heavy rains.
"	Dannebrog	Glen E. Smith...	May 19, '99	5	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Platte River.....	Columbus	O. V. P. Stout...	Sept. 17, '94	Dry.	.....
"	"	" ...	Oct. 6, '94	Dry.	Water 3½ ft. below surf.
"	Fremont	" ...	Aug. 14, '94	1420	.....
"	"	A. Rosewater....	Late Aug'94	1209	.....
"	"	O. V. P. Stout...	Aug. 13, '00	2300	.....
"	Grand Island	" ...	Sept. 7, '98	Dry.	.....
"	"	" ...	Sept. 15, '98	12	.....
"	Central City	Glen E. Smith...	Sept. 8, '99	50	.....
"	Lexington	H. O. Smith.....	May 14, '01	5804	.....
"	"	"	May 24, '01	10167	.....
"	"	"	June 5, '01	9888	.....
"	"	"	June 18, '01	12406	.....
"	"	"	July 8, '01	2501	.....
"	"	"	July 20, '01	Dry.	.....
"	Kearney	"	July 22, '01	Dry	.....
"	Fremont	O. V. P. Stout...	Aug. 11, '0	1152	.....
"	Kearney	J. C. Stevens....	Sept. 7, '02	Dry.	.....
Platte Riv., North	Douglas, Wyo.	State Eng'r, Wyo.	June 3, '91	10130	.....
" "	"	"	Dec. 4, '91	807	.....
" "	"	"	Nov. 5, '92	595	.....
" "	Fairbanks, Wyo.	"	Oct. 13, '91	579	.....
" "	North Platte	U. S. Geol. Sur..	Sept. 14, '92	770	.....
" "	"	" ..	Nov. 2, '92	1070	.....
" "	"	" ..	Nov. 22, '92	1370	.....
" "	"	A. B. McCoskey..	Sept. 2, '98	Est. 12	.....
" "	Camp Clarke	U. S. Geol. Sur..	May 29, '91	8075	.....
" "	"	" ..	Oct. 8, '92	335	.....
" "	"	O. V. P. Stout...	July 26, '94	1900	Approximate measurement by floats.
" "	Lewellen Bridge	A. B. McCoskey..	Sept. 1, '98	Est. 5	
" "	"	H. H. Pickens...	May 22, '99	15901.88	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Platte Riv., North	Gering Bridge	A. B. McCoskey	Nov. 7, '98	593.42	
" "	"	"	June 14, '99	16104.80	
" "	"	"	Sept. 26, '00	333.14	
" "	"	"	Nov. 5, '00	624.81	
" "	"	O. V. P. Stout	June 1, '01	10360	
" "	Camp Clarke	R. H. Willis	June 27, '01	5800	
" "	"	"	July 10, '01	2900	
" "	Bridgeport	"	July 27, '01	800	
" "	Sec. 18-14-33	H. O. Smith	July 28, '01	394	
" "	Sec. 18-14-33	E. F. Seeberger	Aug. 7, '01	150	
" "	Lewellen	H. O. Smith	Aug. 7, '01	100	
" "	"	"	Aug. 8, '01	758	
" "	Bridgeport	R. H. Willis	Aug. 28, '01	125	
" "	"	F. Dobson	June 3, '02	4501	
" "	"	"	June 14, '02	5433	
" "	"	R. H. Willis	July 10, '02	2084	
" "	"	F. Dobson	July 19, '02	835	
" "	"	"	Aug. 9, '02	190	
" "	Sec. 3-23-58	"	Aug. 26, '02	31.5	
" "	Sec. 3-23-58	R. H. Willis	Aug. 28, '02	31	
" "	Sec. 3-23-58	"	Sept. 8, '02	8	
" "	Sec. 3-23-58	"	Sept. 22, '02	630	
Platte River, So.	Julesburg, Colorado	U. S. Geol. Sur.	October ...	653	
" "	North Platte	"	Early Nov., '92	450	
" "	"	"	Late Nov., '92	645	
" "	"	O. V. P. Stout	June 29, '96	0.0	
" "	"	Glen E. Smith	Apr. 19, '99	883	
" "	"	"	May 6, '99	86.6	
" "	"	"	May 22, '99	88	
" "	"	"	June 6, '99	Dry.	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Platte River, So.	North Platte	Glen E. Smith	June 19, '99	Dry.	
" "	Sutherland	H. H. Pickens	May 23, '99	50	
" "	North Platte	O. V. P. Stout	July 17, '01	Dry.	
" "	"	H. O. Smith	Apr. 9, '02	Dry.	
" "	"	"	May 20, '02	200	
" "	Big Spring	J. C. Stevens	Sept. 5, '02	Dry.	
" "	"	H. O. Smith	Sept. 23, '02	173	
Prairie Creek	Sec. 26-16-5	A. Dobson	Nov. 21, '01	8.4	
Paxton Spring	Sec. 29-15-27	H .O. Smith	May 7, '02	0.8	
Pawnee Creek	Above Plummer's D. 19-13-27.	C. B. Channel	Apr. 25, '98	4.94	
"	Above Holcomb's D. 12-13-28.	"	Apr. 25, '98	4.73	
Pine Creek	Sec. 33-30-44	A. B. McCoskey	June 1, '98	24.5	
Plum Creek	At mouth 13-32-22	C. B. Channel	June 13, '98	101.13	
"	Sec. 35-32-23	"	June 10, '99	81.07	
"	Hoef's Mill, sec. 27-31-24	A. B. McCoskey	Oct. 26, '00	28.77	
Pole Creek	Sec. 28-32-40	" "	June 1, '98	Est. 2	
Republican River	Culbertson	U. S. Geol. Sur	Nov. 25, '92	209	
"	Oxford	O. V. P. Stout	June 3, '95	16000	
"	"	"	Sept. 12, '95	55	
"	Culbertson	C. E. Crownover	May 16, '96	78.4	
"	Oxford	"	May 17, '96	255	
"	"	O. V. P. Stout	June 16, '96	109	
"	Sec. 24-1-39	"	June 16, '96	88	
"	Haigler	E. T. Youngfelt	June 16, '96	6.0	
"	Benkelman	O. V. P. Stout	June 16, '96	29.0	
"	Haigler	"	June 17, '96	8.2	
"	"	E. T. Youngfelt	June 17, '96	14.9	
"	Culbertson	O. V. P. Stout	June 19, '96	6.5	
"	Haigler	"	July 16, '96	9.8	
"	"	"	Aug. 25, '96	10.0	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Republican River	Sec. 19-1-39	O. V. P. Stout	Aug. 25, '96	5.0	
"	Benkelman	"	Aug. 25, '96	5.0	
"	Culbertson	"	Sept. 10, '96	00	
"	Haigler	"	Sept. 18, '96	24.5	
"	McCook	Adna Dobson	Apr. 13, '97	745	
"	"	O. V. P. Stout	July 19, '97	Dry.	
"	Oxford	"	June 24, '98	385	
"	Culbertson	"	June 25, '98	91.3	
"	"	"	May 29, '99	Dry.	
"	Oxford	Glen E. Smith	Sept. 6, '99	Dry.	
"	Culbertson	A. B. McCoskey	Sept. 19, '99	Dry.	
"	Orleans	"	Sept. 6, '99	0.3	
"	Head of Meeker Canal	E. D. Johnson	Sept. 19, '99	17.5	
"	McCook	A. B. McCoskey	Sept. 19, '99	12.3	
"	Cambridge	Adna Dobson	June 28, '00	7.2	
"	Oxford	E. D. Johnson	July 18, '00	14.3	
"	Edison	"	July 18, '00	16.6	
"	McCook	A. B. McCoskey	July 27, '00	104	
"	Benkelman	O. V. P. Stout	Aug. 18, '00	41.7	
"	Sec. 22-3-31	H. O. Smith	June 22, '01	Dry.	
"	Sec. 22-3-31	O. V. P. Stout	July 20, '01	Dry.	
"	McCook	"	July 20, '01	Pools.	
"	Oxford	H. O. Smith	July 22, '01	Pools.	
"	Culbertson	F. Dobson	Apr. 25, '02	204	
"	Ives	"	Apr. 26, '02	39	
"	Stratton	"	Apr. 26, '02	85	
"	Haigler	"	Apr. 26, '02	52.3	
"	Oxford	"	Apr. 27, '02	255	
"	McCook	"	Apr. 27, '02	137	
"	Franklin	H. O. Smith	June 10, '02	743	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Republican River.	Benkelman	H. O. Smith	June 12, '02	35	
"	Oxford	J. C. Stevens	Sept. 17, '02	37	
"	McCook	"	Sept. 17, '02	29	
"	Benkelman	"	Sept. 17, '02	45	
"	Culbertson	"	Sept. 18, '02	41	
Republican Riv., Arickaree Fk.	Haigler	O. V. P. Stout	June 17, '96	6.1	
Republican, S. Fk	Benkelman	"	Aug. 18, '00	3	
" "	State line	H. O. Smith	June 12, '02	32.8	
Rock Creek	B. & M. Ry. crossing nr. Ives	O. V. P. Stout	June 16, '96	12.16	Dundy County.
"	"	E. T. Youngfelt	Aug. 25, '96	12.20	" "
"	Sec. 21-1-39	W. A. Channel	Nov. 22, '00	8.8	" "
"	Ives	F. Dobson	Apr. 26, '02	9.9	
Rock Springs Ck.	Above Moore's D. 12-32-22	C. B. Channel	June 14, '98	2.37	Keya Paha County.
Rock Creek	Sec. 4-31-18	"	June 20, '98	2.08	Rock County.
"	Sec. 28-32-18	"	June 20, '98	4.39	" "
Salt Creek	Lincoln	Adna Dobson	Aug. 17, '00	5807	Flood.
"	"	O. V. P. Stout	May 20, '01	44	
"	"	Adna Dobson	July 7, '02	5438	Flood.
"	"	"	July 10, '02	10136	Flood.
"	"	B. E. Forbes	Oct. 1, '02	92.4	
Sandy Creek	Sec. 3-31-15	C. B. Channel	June 17, '99	8.28	
Shobe Branch	At Lambs 32-33-11	"	June 20, '99	1.66	
Sand Creek	Sec. 14-15-40	H. O. Smith	Aug. 19, '02	1.3	
Shell Creek	Platte Center	O. V. P. Stout	July 21, '96	47.4	
"	Schuyler	"	July 24, '96	26.3	
Snake River	4 miles E. of sec. 2-30-31	Engrs Gold'n I. D	Mar. 16, '97	222	
"	Sec. 2-30-31	"	Mar. 22, '97	250	
"	Sec. 2-30-31	"	Apr. 13, '97	225	
"	4 miles E. of sec. 2-30-31	"	Apr. 13, '97	240	

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Snake River	At mouth	O. V. P. Stout...	July 23, '97	280	.....
"	At mouth of Boardman Ck..	" ...	July 24, '97	215	.....
Soldier Creek....	5 miles above Ft. Robinson..	" ...	Aug. 14, '97	2.28	.....
"	Fort Robinson	E. T. Youngfelt..	June 24, '96	3.23	.....
"	"	Glen E. Smith...	Apr. 27, '98	3.67	.....
"	"	T. J. O'Keefe....	Aug. 22, '00	1.8	.....
"	"	"	Sept. 22, '00	2.5	.....
Sowbelly Creek..	Ab. head of Shaefer D. 7-32-55	A. B. McCoskey..	July 16, '97	1.45	.....
"	Bodarc P. O. 5-32-55.....	" ..	July 14, '97	1.54	.....
"	Bridge S. of Gilchrist	" ..	July 24, '97	.08	.....
"	Sec. 19-33-55	" ..	Sept. 30, '98	Est. 1	.....
"	N. line sec. 19-32-55	" ..	Aug. 1, '99	1.37	.....
"	Head of Nutto's D. 24-32-56..	T. J. O'Keefe....	Sept. 24, '00	3.15	.....
Squaw Creek.....	Patrick Dunn's 15-33-57.....	A. B. McCoskey..	July 22, '97	.13	Sioux County.
"	Sec. 1-31-52	E. T. Youngfelt..	June 24, '96	.66	Dawes County.
"	Duncan's sec. 28-31-51.....	C. B. Channel...	May 11, '99	1.21	" "
"	Stetson's sec. 18-31-51.....	" ...	May 11, '99	.33	" "
"	Head Daniels & Stetsons D. 19-31-51	" ...	May 11, '99	.79	" "
"	Head Cooper D. 36-32-52.....	" ...	May 12, '99	.72	" "
Skunk Creek....	A. Miller's D. 1-14-37.....	" ...	May 18, '98	2.02	.....
Spring Creek....	Sec. 28-16-41	" ...	May 23, '98	4.5	.....
"	Sec. 29-16-41	" ...	May 23, '98	6.7	.....
"	At Mills P. O. 9-34-18.....	" ...	June 16, '98	7.30	Tributary to Keya Paha
"	Head Townsend Dit. 35-34-19.	" ...	June 13, '99	5.18	" " "
"	Head Opperman Dit. 29-32-20	" ...	June 15, '99	0.31	Tributary to Niobrara.
"	At mouth	" ...	May 16, '99	0.29	Trib. to Lit. Cottonwood
"	Sec. 25-10-21	H. O. Smith.....	July 11, '01	4.4	.....
"	Sec. 30-10-21	"	Aug. 18, '02	1.0	.....
"	Sec. 36-14-47	"	Apr. 23, '02	2.4	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
Spring Creek.....	Sec. 29-15-37	C. B. Channel...	May 19, '98	1.1	.....
"	Sec. 30-15-37	H. O. Smith.....	May 7, '02	2.5	.....
Stinking Water..	Palisade	O. V. P. Stout...	June 19, '96	12.24	Above Palisade mill.
"	"	E. T. Youngfelt..	Sept. 17, '96	20	Below Palisade mill.
"	"	Glen E. Smith...	July 7, '98	**23.6**	.....
Trunk Butte Ck.	North line sec. 36-33-50.....	C. B. Channel...	May 17, '99	1.45	.....
"	North line sec. 36-33-50.....	A. B. McCoskey..	Aug. 18, '99	0.34	.....
Turkey Creek....	Sec. 30-4-21	E. D. Johnson...	Sept. 6, '99	2.26	Furnas County.
"	Naponee	O. V. P. Stout...	Aug. 24, '00	7	Franklin County.
Thompson Creek.	Sec. 4-2-13	E. D. Johnson...	Sept. 8, '99	3.45	.....
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	.....
Verdigre Ck.....	At mouth 6-31-6	O. V. P. Stout...	Apr. 7, '01	105	.....
W'bonnet Spr. Br	Head Biehle Ditch 32-33-56..	A. B. McCoskey..	July 21, '98	.27	.....
W'bonnet Mid. Br	Head Garton Dit. 31-33-56...	" ..	July 21, '98	.26	.....
Warbonnet Creek	Brewster's Ranch 21-33-56...	" ..	July 23, '97	.51	.....
"	" ...	" ..	Sept. 29, '98	1.23	.....
"	" ...	" ..	May 25, '99	2.50	.....
"	" ...	T. J. O'Keefe....	Sept. 25, '00	.75	.....
White Horse Ck.	Above Lamplugh Lk. 5-14-30.	C. B. Channel...	May 3, '98	2.33	.....
White Tail Creek	Ab. White Tail Can. 22-15-38.	" ...	May 20, '98	24.67	.....
"	Above Reed Ditch 15-15-38...	" ...	May 20, '98	24.62	.....
"	Above Holloway Can. 36-15-38	" ...	May 20, '98	26.06	.....
"	S. line 36-15-38.....	H. O. Smith.....	May 7, '02	24.7	.....
"	N. line 36-15-38.....	"	May 7, '02	36.0	.....
"	N. E.¼ sec. 26-15-38.....	"	May 7, '02	33.0	.....
West Middle Ck..	Above Allen's Ditch 29-33-23.	"	June 11, '98	**1.84**	.....
"	N. E. of N. W. 29-33-23.....	"	June 11, '98	.87	.....
White Clay Ck...	At Brook's 2-33-45.....	"	May 20, '99	5.27	Sheridan County.
"	Sec. 32-15-51	C. B. Channel...	May 11, '99	0.72	Dawes.

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
White Clay Ck...	Sec. 1-31-52	T. J. O'Keefe....	Aug. 23, '00	1.50	"
Wood River.....	Glenwood	C. B. Channel...	Aug. 8, '98	5.82	.....
"	Sec. 12-9-16	J. C. Stevens....	Sept. 7, '02	27.3	.....
Wooden Spr. Br.	Sec. 25-35-29	C. B. Channel...	June 13, '99	2.14	.....
White River.....	Sec. 23-31-53	E. T. Youngfelt..	June 24, '96	23.3	.....
"	Crawford	" ..	June 24, '96	30.7	.....
"	Whitney	" ..	June 25, '96	27.2	.....
"	"	A. B. McCoskey..	Sept. 21, '98	Est. 8	.....
"	1 mile below mouth Kyle Ck.	" ..	Aug. 11, '97	6.6	.....
"	R. R. bridge above Glen....	" ..	Aug. 13, '97	5.7	*When these measurements were taken the water was all diverted into the Crawford ditch. The gagings at the bridge below Crawford show only 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 on the same date.
"	Head of Crawford Ditch....	Stout & McCoskey	Aug. 14, '97	11.9 } 19.9*	
"	Bridge below Crawford.....	A. B. McCoskey..	Aug. 14, '97	8 }	
"	"	" ..	Sept. 9, '97	6.96	
"	Head of Crawford Ditch.....	" ..	Sept. 20, '97	10.44 } 17.97*	
"	Bridge below Crawford.....	" ..	Sept. 20, '97	7.53 }	
"	Head of Crawford Ditch.....	" ..	Oct. 18, '97	15.25 } 25.38*	
"	Bridge below Crawford.....	" ..	Oct. 18, '97	10.13 }	
"	Head of Crawford Ditch.....	" ..	Nov. 5, '97	15.87 } 26.45*	
"	Bridge below Crawford.....	" ..	Nov. 5, '97	10.58 }	
"	Head of Crawford Ditch.....	Glen E. Smith...	Apr. 27, '98	18.3 } 29.4*	
"	Bridge below Crawford.....	" ...	Apr. 27, '98	11.1 }	
"	"	A. B. McCoskey..	Sept. 20, '98	7.7	
"	Head of Crawford Ditch.....	" ..	Sept. 24, '97	13.65	
"	Whitney	C. B. Channel...	May 15, '99	10.37	
"	Below Crawford	A. B. McCoskey..	May 17, '99	18.68	
"	Force's Ranch 31-31-54.....	" ..	May 19, '99	4.41	
"	Head of Crawford Ditch.....	" ..	May 19, '99	16.70 } 34.75*	
"	Bridge below Crawford.....	" ..	May 19, '99	18.05 }	
"	"	" ..	May 22, '99	45.89	swollen by heavy rains
"	"	" ..	Aug. 19, '99	16.20	.....

SUMMARY OF ALL STREAM MEASUREMENTS—*Continued.*

STREAM	LOCALITY	HYDROGRAPHER	DATE	DISCHARGE CUBIC FEET PER SEC.	REMARKS
White River.....	At Andrews' Siding.....	C. B. Channel...	May 26, '99	4.93	.....
"	Head of Crawford Ditch.....	McC'y & O'Keefe	July 16, '00	15.48	Ditch not diverting any wat r
"	Bridge below Crawford.....	"	July 16, '00	28.29	.....
"	Head of Crawford Dam.....	T. J. O'Keefe....	Aug. 22, '00	14.00	.....
"	Bridge below Crawford	"	Sept. 1, '00	13.5	.....
"	Whitney	"	Sept. 3, '00	5	.....
"	Crawford	B. E. Forbes....	July 11, '01	11.5	.....
"	Sec. 23-31-53	C. Spearman....	July 24, '01	16.3	.....
"	Sec. 34-32-52	A. Dobson.....	June 2, '02	64.9	.....
"	Sec. 25-32-52	B. E. Forbes....	Aug. 20, '02	10.4	.....
No name.....	Sec. 25-2-19	H. O. Smith.....	Sept. 24, '01	1.36	.....
"	Sec. 31-2-18	" ...	Sept. 24, '01	0.3	.....
"	Sec. 32-2-18	" ...	Sept. 24, '01	0.6	.....

THE DUTY OF WATER.

O. V. P. STOUT.

In proceeding to the rational design of a system of irrigation, one of the most important and at the same time most perplexing considerations is that which relates to the adjustment, relatively to each other, of the water supply and the extent of area to be irrigated. The familiar term which has been coined and used in this connection is "duty of water." It has been the custom to express the duty of water in terms of the number of acres which a continuous flow of one cubic foot per second will irrigate during the season. More recently it has become a common practice to state the depth of water which it is necessary to apply to the land in order to produce a crop.

In whatever manner the quantitative relation between the area irrigated and the water applied, or the rate at which it is supplied, be stated, it has been found to be an insistent fact that the duty of the water is materially modified by variation in any one of a large number of conditions. Prominent among these conditions are: amount and value of the water supply, which affects methods of conveyance, distribution, and application; on a single field, the particular crop which is grown; in a region of considerable extent, the range in variety of crops grown; the length of time the ditch has been in service, and the land irrigated; the skill and experience of irrigators; and the endless range of variation in soil, topography, geology, and climatic or meteorological conditions.

It must, then, be realized that the best of judgment must be exercised and extreme caution be observed in using the duty of water, as determined in one locality and under a certain set of conditions, as the basis of an estimate relating to another locality or to changed conditions.

In order that the limits of the uncertainty which attaches to this question may be narrowed, the United States Department of Agriculture, operating through the Irrigation Investigations of the Office of Experiment Stations, has undertaken an extensive series of observations and records of irrigation practice throughout the country. The figures obtained have been reduced and analyzed and published. They already go far in the direction of affording bases for estimates of the amount of water required for the irrigation of stated land and crops. The value of the ascertained facts does not accrue to new projects alone, for indications are also furnished as to the direction and extent of the modification of present practice which can be introduced to insure better and larger yields and to extend the irrigated area under conditions of limited water supply.

It is proposed in the following pages to present a summary of the work of investigation which has been done in Nebraska and also at points in Colorado and Wyoming where conditions are in considerable degree similar to those which are encountered in irrigated localities in Nebraska.

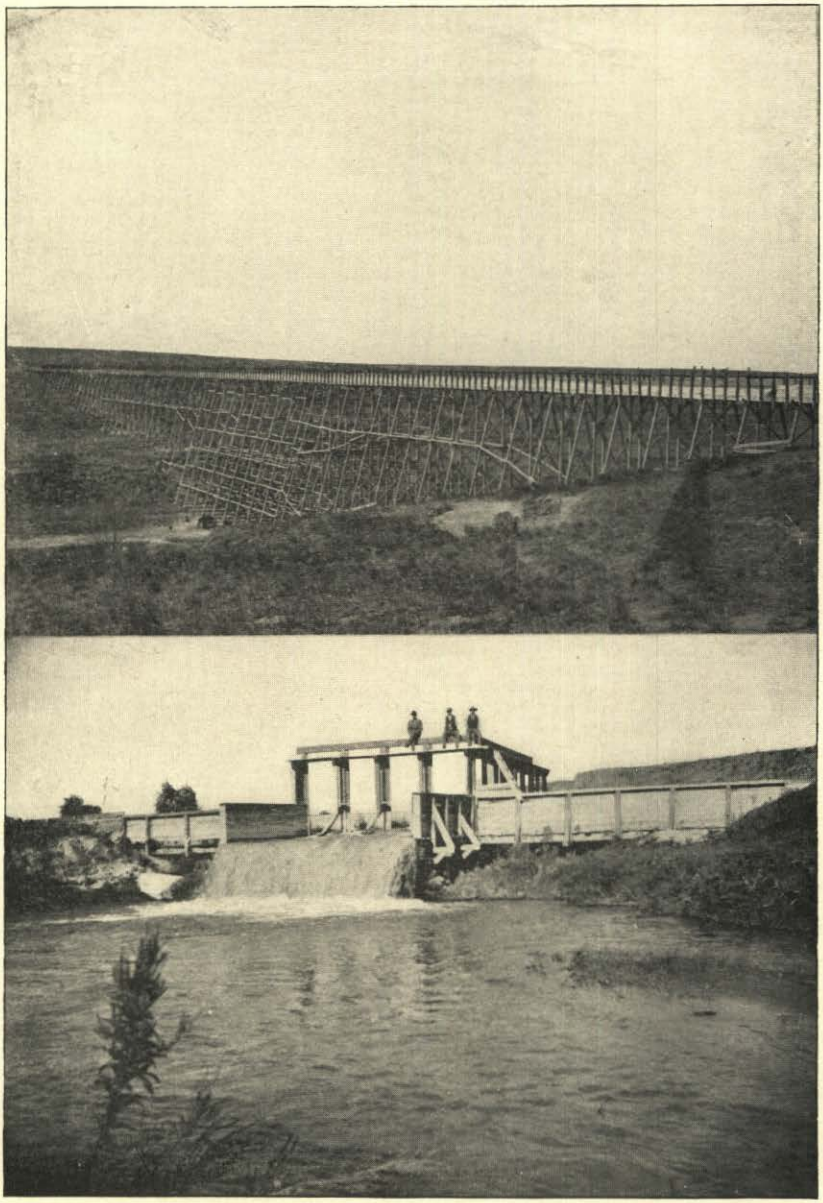
OBSERVATIONS IN COLORADO.

The observations in Colorado were conducted in 1899 in the valley of the Arkansas river from the Kansas state line westward and up-stream for a distance of about 85 miles. The most definite results obtained were those relating to operations under the Amity Canal, which, during the season of five months from May to September inclusive, received at its headgate nearly 60,000 acre-feet of water. The percentage of the whole amount received each month is as follows: 15 in May, 40 in June, 19 in July, 19 in August, and 7 in September. The area irrigated was 15,796 acres, of which 42 per cent was fall and spring wheat, oats, and barley; 19 per cent was corn and cane; 30 per cent was alfalfa, and the remaining 9 per cent was devoted to flax, broom corn, cantaloupes, orchard, millet, and garden.

The five months' flow of the canal is equivalent to a depth of 3.80 feet over the entire irrigated area. Between January 1 and May 1 the equivalent of 1.12 feet over the land flowed into the canal. The depth of rainfall at the nearest station was 0.91 feet, making a total depth of water equal to 5.83 feet received by the land during the first nine months of 1899, assuming that all of the water which entered the canal reached the fields. Of course this assumption can not be true, but it must be made in computing the headgate duty, as it is sometimes called.

A record which was kept of the discharge of a single lateral through which water was furnished for 1,884 acres of land showed a depth of irrigation amounting to 1.82 feet, corresponding to a duty of 175 acres for each cubic foot per second of average flow in the lateral for the season of 160 days. The author of the report states that the excess of the average depth of water applied under the entire canal over that applied under the lateral can not all be ascribed to loss in conveyance to the point of use; that the soil and the configuration of the land are favorable to high duty; that the temporary low duty is due to the short time, for the most part not exceeding two or three years, that the land has been irrigated; and to the inexperience of the irrigators, who are mostly eastern people previously entirely unfamiliar with irrigation. The table of crop yields which is presented makes also a most unfavorable showing, which we may infer may be accounted for on the same ground as the low duty of water.

The duty of water on the Big Thompson river, the stream on which Loveland, Col., is situated, has been made the subject of a few paragraphs in a bulletin treating of irrigation from the waters of that river. It is shown that 103,800 acres are under ditches carrying water from the Big Thompson, and that 78,400 acres were irrigated in 1901. The water diverted for that purpose during the first nine months of the year amounted to 150,533 acre-feet, corresponding to an average depth of 1.91 feet over the land irrigated. The amounts



FLUME AND WASTE GATE, CULBERTSON CANAL

carried by the different ditches vary from that corresponding to a depth of 1.55 feet over 3,000 acres irrigated to 5.80 feet over 1,500 acres irrigated. Of the total amount of 150,533 acre-feet used in irrigation, 109,033 acre-feet passed direct from the stream to the fields, while 41,500 acre-feet, representing the early season and excess flow of the stream and the late irrigation, was first stored in reservoirs. The diversions from the stream in the different months bore the following relation to the total amount diverted: January 1 to April 30, 9 per cent; May, 25 per cent; June, 34 per cent; July, 19 per cent; August, 9 per cent; September, 4 per cent. In this connection further we can do no better than to quote from the bulletin:

"It will be noticed that the smaller ditches have a much smaller duty than the larger ones, and those with reservoirs generally show a higher duty than those without. One cause of the low duty under the small ditches is that they cover the lowlands lying near the river, which, on account of their porous subsoil, require more water, and which, being generally rough, require a larger volume to force the water over the uneven surface. Another cause is that the smaller ditches in this district have the older and probably excessive decrees, making economy of use unnecessary. With these decrees and the poor construction and management, it is surprising that the duty is not lower than shown.

"It is hard to compare the duty under the ditches with and without reservoirs, as conditions opposite to the above exist under the ditches themselves. Being able to use water when and how it is most beneficial, the owners feel that economy of use means greater acreage irrigated. Loss, of course, occurs from the reservoirs through seepage and evaporation and partially offsets the economy practiced; but as this loss is not allowed for in the tables, it would appear that the better land irrigated, the better management, better ditches, and more economical use not only make up for all loss from the reservoir, but leave a large margin besides."

OBSERVATIONS IN WYOMING.

The observations in Wyoming have been made principally at the Experiment Station at Laramie City and on the lands of the Wyoming Development Company near Wheatland. The work of the Experiment Station is set forth in Bulletin No. 81 of the Office of Experiment Stations of the United States Department of Agriculture. A few paragraphs and a table, which constitute in some degree a summary of the work, are copied from the bulletin and presented below:

"Barley, which produced profitable crops, received at different times and places in our experiments from 12.8 to 37 inches of water; oats received from 20.6 to 48.8 inches of water; corn received 14.8 inches of water. This is merely a statement of the depth of water applied to the crops, and takes no account of the water lost by waste from the surface or by seepage below. Leaving out of account the unknown variations in soils and climatic conditions, it would not appear from these figures that excessive amounts of water were used in irrigation.

"The following table shows the quantity of water used for a given quantity of crop harvested:

CROP	PLACE	YEAR	WATER RECEIVED BY IRRIGATION PER ACRE		DEPTH OF WATER OVER SURFACE	YIELD PER ACRE	WATER USED PER POUND OF CROP PRODUCED
			Cu. Ft.	Pounds	Feet	Pounds	Pounds
Alfalfa, 3 crops	Wheatland	1893	113184	7071000	2.60	15752	448.9
Alfalfa, 2 crops	Laramie	1896	47356	2959750	1.09	4664	634.6
Alfalfa, 1st year, 1 crop	"	1898	129388	8086750	2.97	2220	3642.7
Alfalfa, 2 crops	"	1898	113101	7068813	2.60	8668	815.5
Barley, 3 varieties	Wheatland	1893	39744	2484000	.92	1008	2464.3
Barley, 9 varieties	Laramie	1896	52895	3365937	1.21	896	3756.7
Barley, subsoiled	"	1896	63296	3958000	1.45	1325	2987.2
Barley, not subsoiled	"	1896	63296	3958000	1.45	1292	3063.5
Barley	"	1897	69345	4334062	1.59	1927	2249.1
Barley, Highland Chief	"	1898	117711	7356937	2.70	1392	5285.2
Barley, Highland Chief, subsoiled, straw and grain	"	1898	75159	4697337	1.73	2168	2166.7
Barley, Highland Chief, subsoiled, grain	"	1898	75159	4697337	1.73	527	8913.4
Barley, Highland Chief, not subsoiled, straw and grain	"	1898	75159	4697337	1.73	2273	2066.6
Barley, Highland Chief, not subsoiled, grain	"	1898	75159	4697337	1.73	751	6254.8
Corn, Minnesota King	Wheatland	1893	47520	2970000	1.09	2414	1230.3
Flax	Laramie	1897	69345	4334062	1.59	2104	2059 9
Flax, Belgian	Wheatland	1893	95040	5940000	2.18	504	11785.7
Flax, White Russian	"	1893	95040	5940000	2.18	480	12375.0
Oats, 3 varieties, average	Laramie	1896	53981	3373812	1.24	1555	2169.7
Oats	"	1897	69345	4334062	1.59	1162	3729.8
Oats, Bonanza	"	1898	82647	5165237	1.90	2465	2095.4
Oats, Early Archangle	Wheatland	1893	68256	4256000	1.57	1024	4156.3

WATER APPLIED AND THE CROP PRODUCED—*Continued.*

CROP	PLACE	YEAR	WATER RECEIVED BY IRRIGATION PER ACRE		DEPTH OF WATER OVER SURFACE	YIELD PER ACRE	WATER USED PER POUND OF CROP PRODUCED
			Cu. Ft.	Pounds	Feet	Pounds	Pounds
Oats, Giant Side	Wheatland	1893	76896	4806000	1.77	1603	2998.1
Oats, Lincoln, cultivated	Laramie	1897	107012	6688250	2.46	1662	4024.2
" " "	"	1898	75853	4740812	1.74	992	4779.0
Oats, Lincoln, field culture	"	1897	107012	6688250	2.46	1456	4593.6
" " " "	"	1898	75853	4740812	1.74	530	8944.9
Oats, Lincoln, on sod	"	1898	112579	7041181	2.58	698	10087.7
Oats, not subsoiled	"	1896	66296	3958000	1.46	1345	2942.8
Oats, on sod	"	1896	41886	2617875	.96	542	4830.0
Oats, subsoiled	"	1896	63296	3958000	1.46	1520	2603.9
Oats, Surprise	"	1898	82647	5165237	1.90	2150	2402.4
Oats, Surprise, not subsoiled, grain	"	1898	75159	4697337	1.73	1576	2980.5
Oats, Surprise, not subsoiled, grain and straw	"	1898	75159	4697337	1.73	4445	1056.8
Oats, Surprise, subsoiled, grain	"	1898	160835	10052187	3.69	1634	6151.9
Oats, Surprise, subsoiled, grain and straw	"	1898	160835	10052187	3.69	5484	1833.0
Oats, Surprise, subsoiled, grain	"	1898	75159	4697337	1.73	1303	3607.8
Oats, Surprise, subsoiled, grain and straw	"	1898	75159	4697337	1.73	3645	1288.7
Oats and vetch for hay, cured hay	"	1898	68753	4295062	1.58	5563	772.1
Peas, straw, and grain	"	1897	74699	4668687	1.71	3232	1444.5
Peas	"	1898	124309	7769312	2.85	828	9383.2
Potatoes, 22 varieties	Wheatland	1893	61776	3861000	1.42	7344	525.7
Potatoes	Laramie	1895	11683	730186	.27	9000	81.1
Potatoes, not subsoiled, irrigated 3 times	"	1898	49825	3114062	1.14	8759	355.5

WATER APPLIED AND THE CROP PRODUCED—*Continued.*

CROP	PLACE	YEAR	WATER RECEIVED BY IRRIGATION PER ACRE		DEPTH OF WATER OVER SURFACE	YIELD PER ACRE	WATER USED PER POUND OF CROP PRODUCED
			Cu. Ft.	Pounds	Feet	Pounds	Pounds
Potatoes, not subsoiled, irrigated twice	Laramie	1898	12925	807812	.30	4972	162.5
Potatoes, subsoiled, irrigated 3 times	"	1898	49825	3114062	1.14	8591	362.5
Potatoes, subsoiled, irrigated twice	"	1898	12925	807812	.30	5290	152.7
Rye	"	1897	69345	4334062	1.59	1518	2855.1
Rye, spring	Wheatland	1893	56160	3510000	1.29	974	3603.7
Rye, winter	"	1893	38448	2403000	.88	739	3251.7
Sugar beets, 4 varieties	"	1893	107128	6695500	2.46	12912	518.5
Sugar beets and rutabagas	Laramie	1898	69875	4367187	1.60	5622	776.8
Timothy	Wheatland	1893	102384	6410000	2.35	2212	2897.8
Turnips and rutabagas	Laramie	1895	112733	7047812	2.59	18000	391.5
Wheat, 18 varieties, aver	"	1896	53891	3373812	1.24	1868	1806.1
Wheat, 5 varieties, aver	"	1898	158001	9775062	3.63	1573	6214.3
Wheat, Blount No. 16, cultivated	"	1897	107012	6688250	2.46	630	10616.3
" " " " "	"	1898	75853	4740812	1.74	841	5637.1
Wheat, Blount No. 16, field culture	"	1897	107012	6688250	2.46	965	6930.8
" " " " "	"	1898	75853	4740812	1.74	930	5097 6
Wheat, not subsoiled	"	1896	63296	3958000	1.46	997	3969.9
Wheat on sod land	"	1896	41886	2617875	.96	428	6116.5
Wheat, Scotch of Scotch, not subsoiled, grain	"	1898	75159	4697337	1.73	833	5639.1
Wheat, Scotch of Scotch, not subsoiled, str. and gr	"	1898	75159	4697337	1.73	2127	2208.4
Wheat, Scotch of Scotch, subsoiled, grain	"	1898	75159	4697337	1.73	527	8913.4
Wheat, Scotch of Scotch, subsoiled, straw and grain	"	1898	75159	4697337	1.73	2170	2164.7

WATER APPLIED AND THE CROP PRODUCED—*Concluded.*

CROP	PLACE	YEAR	WATER RECEIVED BY IRRIGATION PER ACRE		DEPTH OF WATER OVER SURFACE	YIELD PER ACRE	WATER USED PER POUND OF CROP PRODUCED
			Cu. Ft.	Pounds	Feet	Pounds	Pounds
Wheat, subsoiled	Laramie	1896	63296	3958000	1.46	943	4197.2
Wheat, White Russian	Wheatland	1893	69984	4374000	1.61	1962	2229.4
Wheat, winter Fultz	"	1893	41040	2565000	.94	48_6	5277.8

In 1899 the records and measurements made in connection with operations on the lands of the Wyoming Development Company showed that under Canal No. 2 of that company's system 6,502 acres were irrigated, the amount of water supplied for that purpose being sufficient to cover the land 2.53 feet deep. Wheat, oats, corn, potatoes, and hay were grown to the extent respectively of 35, 22, 12, 5, and 26 per cent of the total acreage. A special record was kept of the amount of water applied to a field of oats and one of corn, with the result that it was found that water had been applied to the corn field sufficient in amount to have covered it .70 feet deep, and the corresponding depth on the oats field was 1.55 feet. The author of the report calls attention to the fact that the duty of water under the canal as a whole is much less than that measured in the lateral at the edge of the field, and states that the difference is almost entirely due to the loss of water from the canal through seepage and evaporation. The following relates to the work of 1900 in the same locality:

DUTY OF WATER UNDER CANAL NO. 2, 1900.

Area irrigated.....acres,	5,122
Water used.....acre-feet,	25,123
Depth of water used in irrigation.....feet,	4.90
Loss by seepage and evaporation, estimated at 30 per cent.....	1.48
Net depth of irrigation.....feet,	3.42

The estimate of 30 per cent loss on account of seepage and evaporation is based on some very careful measurements of those quantities which were made in connection with the other work.

Measurements made at the edge of the field in 1900 showed that 2.37 feet in depth of water was applied to oats, and 3.63 feet to potatoes.

From data given in the report, the following table has been prepared, with a view to showing readily the relative amounts of water supplied to the different crops:

CROP.	AREA, PER CENT OF WHOLE.	WATER USED, PER CENT OF WHOLE.
Wheat	25	24
Oats	19	20
Corn	19	11
Potatoes	..	..
Alfalfa	36	45
Garden	..	..

The acreage of potatoes and garden, and the water applied to the same, were of small amount as compared with the acreage and irrigation of the other crops.

The greater quantity of water used in 1900 as compared with that used in 1899 is explained, so far as appears in the report, solely by the fact that more water was available than in the preceding year.

OBSERVATIONS IN NEBRASKA.

The North Platte Valley between Gering and Camp Clarke was selected as the location of the observations in Nebraska in 1899. The canals which diverted water from the river at points between these two towns carried water to irrigate a little more than 14,000 acres of land.

Hay was grown on 58 per cent of this area, alfalfa on 16 per cent, oats or wheat on 14 per cent, and corn on 9 per cent. The balance of the area produced barley, millet, trees, and garden. An examination of the records as they relate to the operations under the individual canals shows that, according to the data secured, the amount of water which was applied to the fields, together with that which was lost by evaporation and seepage between the point of measurement and the fields, and with that which may have been in some cases wasted and returned to the river, was sufficient to have covered the fields to depths ranging from one and one-half feet to a little more than five feet. In the case of one of the canals, under which about one-fourth of the acreage was alfalfa, and in connection with which one of the best records was obtained, it was found that the amount of water used in

irrigation during the period from June 6 to September 21 was sufficient to have covered the irrigated fields to a depth of 1.89 feet. The estimate of 5.1 feet of water used in irrigation is made in connection with a canal from which it was impossible to obtain complete records, and hence is not to be accepted as conclusive. The rain which fell during the season of record upon the area under investigation is estimated from the weather bureau records for the stations at Gering and Camp Clarke. On the basis of these records it has been estimated that the irrigation was supplemented by rainfall to the extent of an average depth of 0.98 feet over the ground.

The work of 1900, 1901, and 1902 has been done on the Great Eastern Canal in Platte county. This canal diverts the water of Beaver creek near Genoa, and carries it as far as a point several miles east of Columbus. During the present year connection with the Loup river has been made, so that the waters of that stream are now available.

It is the farthest east of any irrigation canal of considerable magnitude in the country. Consequently the results obtained by irrigation from that canal should have a peculiar interest. The canal is located in a region of country in which men have made comfortable fortunes in a few years by the practice of agriculture without irrigation. The burden of proof under such circumstances is upon the irrigation canal to justify its existence. The investigations have not as yet progressed far enough to permit of the presentation in large volume of striking figures on this point. The indications are, however, very favorable to the case of the canal. In 1901 crop failure prevailed in that region so far as crops other than those of early maturity were concerned. Irrigated corn, however, returned [illegible] yields.

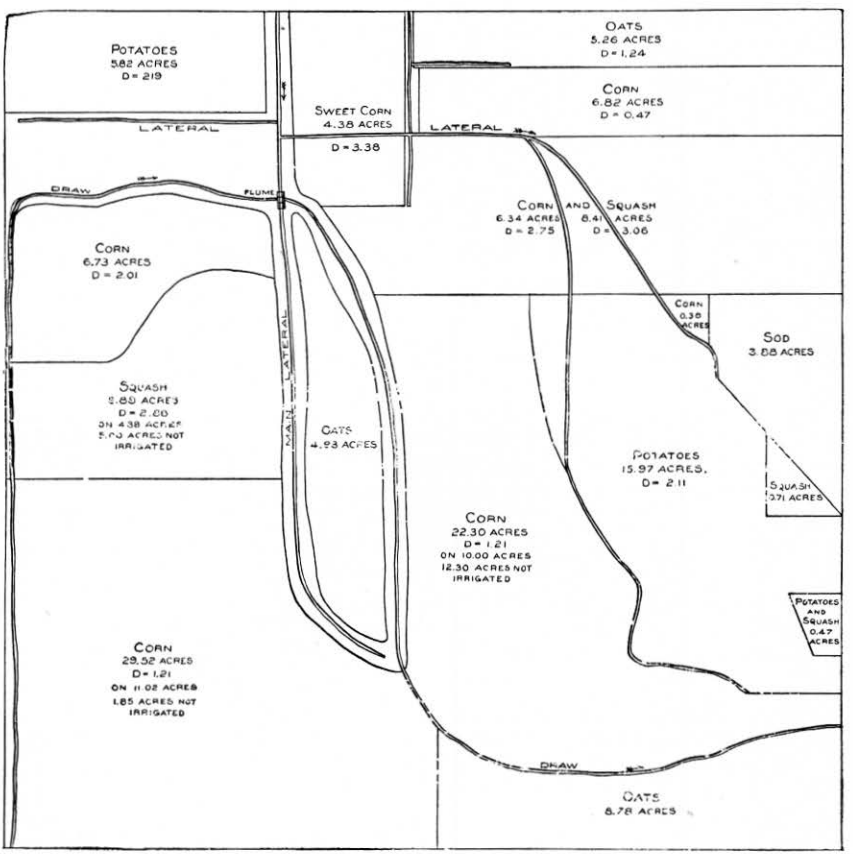
As to the amount of water used, a register which was maintained at a point past which water flowed to irrigate 2,255 acres in 1900 indicated that the water which passed the point between the dates July 14 and August 17 was sufficient to

have covered the land to a depth of 1.185 feet. A register was in service at the same point from May 19 to September 7 inclusive in 1901, and indicated that during that period the recorded water was equal to a depth of 2.343 feet over the 2,509 acres which it irrigated. From July 14 to August 17 in 1901 the estimated depth applied was 1.253 feet, differing by less than one inch from the amount for the corresponding period of 1900.

Registers were in some instances maintained at the edges of the fields. In one instance it was found that 171 acre-feet of water was applied to 86.81 acres of very poor sandy land, south of Oconee, between the dates June 27 and August 1 in 1900. This corresponds to an average depth of 1.97 feet over the ground. The crops were raised mostly for seed, and consisted largely of sweet corn and squash. The yield of irrigated squash was 113 pounds of seed per acre. A field of squash which was not irrigated yielded 56 pounds of seed per acre. The depth of water applied to the squash patches averaged approximately three feet. The yield of irrigated sweet corn, 48.7 acres, averaged 15.2 bushels of seed per acre, while 30.82 acres not irrigated yielded at the rate of a little less than six bushels per acre.

The accompanying sketch shows in relation to the crops raised on this farm, the acreage of each, and the depth of water applied.

Another farm, which consists in part of a reclaimed swamp, was devoted to the raising of seed crops. In 1900 the vine crops suffered great damage from rains in the early fall, while in 1901 the only unfavorable feature aside from drouth was the ravages of squash bugs. Two varieties of squash in 1901 yielded at a rate about 70 per cent in excess of the average in 1900, while another variety, which had been the especial prey of the bugs, yielded at only about one-half the rate which prevailed in 1900. The average rate of yield of cucumber seed in 1901 was greater by one-third than that in 1900. The depth of water applied to the several patches



ILLUSTRATING DUTY OF WATER.

ranged in 1900 from 0.31 feet to 1.75 feet, and in 1901 from less than an inch to 1.62 feet. The maximum yields were, in the case of squash seed, an average of 486 pounds per acre on 2.23 acres, being nearly equaled by a yield of 432 pounds per acre on 12.78 acres; and in the case of cucumber seed an average yield of 282 pounds per acre on 11.01 acres.

The results of the work of 1900 are published in detail in Bulletin No. 104 of the Office of Experiment Stations of the United States Department of Agriculture. At the time this is written the results for 1901 have not as yet been published. The value of the work of 1902 has been almost if not totally destroyed through the various effects of the unusually heavy rains which prevailed during the growing season.

CONCLUSIONS.

From the data which have been presented it should be possible to draw some fairly definite conclusions as to the amount of water to be provided for specified land and crops in Nebraska. Alfalfa, being one of the most important crops raised under irrigation in Nebraska, will be chiefly considered. The Wyoming Experiment Station found that three crops in one year, with a yield of nearly 8 tons to the acre, was produced with the application of 2.60 feet in depth of water. Other fields yielded one and two crops per year with the yield per acre relatively less, with water applied from 1.09 to 2.97 feet in depth. The best of these, however, is a case in which the depth of water applied was 2.60 feet. Thus we see that within the range of conditions and localities included in the observations, the best results at two such widely separated points as Laramie and Wheatland were obtained with the application of 2.60 feet of water over the surface of the fields. The figures quoted in this paragraph are based upon measurements made at the edge of the field. As an instance of headgate duty, *i. e.*, the water being measured at the head of the canal and therefore including losses in conveyance in addition to the amount actually applied to

the field, may be cited that noted at Wheatland in 1903, when it was found that the equivalent of 5.98 feet in depth of water over the alfalfa fields had been furnished for the irrigation of that crop.

In Nebraska no records of the irrigation of alfalfa have been kept at the edge of the field. As previously noted, the headgate duty measured on the Castle Rock Canal in the North Platte valley, under which about one-fourth of the acreage irrigated was alfalfa, was that corresponding to a depth of 1.89 feet over the field. This irrigation, however, was supplemented by nearly a foot of rainfall, as compared with an amount in Wyoming which was relatively insignificant. It then appears that the entire amount of water received by the growing crop in Nebraska, including both irrigation and rainfall, is not widely different from that which produced the best observed results in Wyoming. It may be remarked, however, that the headgate duty in Nebraska is here compared with the field-side duty in Wyoming. As the Nebraska canal was about 12 miles in length and carried water to about 3,500 acres, there must have been some appreciable loss in conveyance, and if allowance be made for this it will appear that the conditions under this Nebraska canal were favorable to a higher duty than that which obtained under the Wyoming conditions. The Alliance Canal, another which diverts water from the North Platte river, and which has a length of about 11 miles, irrigated only 568 acres, of which nearly half was alfalfa. To accomplish this irrigation it took from the river enough water to cover the irrigated area nearly four feet deep. It is to be presumed that the disproportion between the length of canal and the area irrigated will account for the low duty of water observed.

It is conceded that alfalfa requires more water during the growing season than any other crop generally produced in this region except wild hay. Undoubtedly, also, it is destined to occupy a considerable, possibly a major fraction,

of the irrigated area in Nebraska. Consequently, in the present state of our information on the subject of the duty of water in Nebraska, we can assume the data in regard to alfalfa as constituting a criterion for the estimation of the duty of water in western Nebraska.

The figures, then, which have been given indicate that if the combined rainfall and irrigation during the growing season are equivalent to a depth of $2\frac{1}{2}$ feet over the surface of the fields, we may feel assured that when ordinary judgment has been used in the application of the irrigation water to the land, substantial results, in some degree approaching the maximum, will ensue on all except the lands which are newest in respect to irrigation, or which in some other way depart from the normal condition of the irrigated lands of the region.

It is field-side duty which has been discussed in the preceding paragraph, and in any given case it remains to reduce this to terms of headgate duty. This can be accomplished whenever it is known what allowance must be made for losses in conveyance from the river to the fields. Some of the most comprehensive investigations which have been made on this point indicate that about 30 per cent of the amount diverted from the river is a proper allowance, on the average, to make for losses which occur through evaporation and seepage. The seepage, however, is an exceedingly variable quantity, and for reliable estimates must be considered strictly in reference to the particular case in hand. On the basis, however, of the general average value which has been noted, it appears that the losses between the headgates and field-side are to the amount reaching the field-side about in the proportion of 3 to 7. We must then divert from the river an amount of water 43 per cent in excess of that which will be required at the field-side. If one foot of rainfall can be depended upon in the North Platte valley during the growing season of crops, canals should then be able to furnish at their headgates water sufficient during the same season to cover the fields to a depth of 2.15 feet. If the irrigat-

ing season be considered as extending over a period of 150 days, during which it is assumed as possible to use the water at a uniform rate, we shall have a duty equal to 140 acres for each cubic foot per second of water turned into the canal at its head. If this estimate can be accepted with a good degree of confidence, it is apparent that the statutory provision which in Nebraska limits the appropriation of water from streams to one cubic foot per second for each 70 acres irrigated, is sufficiently liberal for even extreme cases.

The writer is of the opinion that the foregoing estimates of the amount of water required for irrigation in western Nebraska is large enough for any but abnormal cases or situations. The quantity will fall below the estimated amount, that is, less water will be required, whenever crops are selected and varied with a view to extending the length of the irrigating season; whenever fall and winter irrigation are practiced; whenever natural conditions are found or artificial conditions are produced which reduce the losses in conveyance; and whenever the irrigator acquires the skill and develops the desire to exercise the utmost economy in the use of water on the land.

The data upon which the foregoing discussion is based may be found in the following publications of the Office of Experiment Stations of the United States Department of Agriculture:

Bulletin 81. The Use of Water in Irrigation in Wyoming. By B. C. Buffum.

Bulletin 86. The Use of Water in Irrigation. Report of investigations made in 1899, under the supervision of Elwood Mead, expert in charge, and C. T. Johnston, assistant.

Bulletin 104. The Use of Water in Irrigation. Report of investigations made in 1900, under the supervision of Elwood Mead, expert in charge, and C. T. Johnston, assistant.

Bulletin 118. Irrigation from Big Thompson River. By John E. Field, assistant state engineer of Colorado.

LATERAL AND IRRIGATED FIELD

REPORT OF H. O. SMITH, UNDER SECRETARY, WATER DIVISION NO. 1.

To Mr. Adna Dobson, State Engineer and Secretary of the State Board of Irrigation:

I submit herewith my official report for the biennium ending November 30, 1902.

During the year 1901 I inspected and reported to your office 134 ditches, and made and reported 77 gagings of streams, of which 16 were of the Platte river at various points, including Lexington, North Platte, Lewellen, Bridgeport, and Mitchell.

In 1902 I inspected and reported on 192 ditches, and made 112 gagings of streams, of which 26 were of the Platte river, making a total for the two years of:

Ditches inspected 326
Stream gagings 189

At the beginning of my term of office there was but one under assistant secretary in my division, Mr. Robert H. Willis, whose district comprised the North Platte river and its tributaries in Scotts Bluff and Cheyenne counties, and who has continued to perform the duties of that office through this biennium.

In 1901 Mr. Fremont G. Durand was appointed as under assistant secretary for water district No. 1, water division No. 1-A, which comprises the North Platte river and its tributaries in Deuel and the two western tiers of townships in Keith county. Over water district No. 1, water division No. 1-B, Mr. Henry H. Prouty was appointed as under assistant secretary in 1902.

As my division covers a large territory and about two-thirds of the mileage of ditches and irrigated territory of the state, the maintenance of these districts seemed necessary for the prompt attention to complaints and the needs of

irrigators, and the work accomplished by these under assistants has been very satisfactory.

During the months of July and August, 1901, there was a shortage of water in nearly all the streams that are depended upon for irrigation, especially the Frenchman and Platte rivers and Blue creek, which caused controversy between the various ditch owners. I had but little difficulty, however, in making a division of the water in these cases that was apparently satisfactory to all parties, where a division was possible, and where it was impossible by reason of insufficiency of water to divide, gave the water to the prior appropriator, to which the subsequent appropriator has generally acquiesced, after the rules and the law has been explained to him.

It has been my policy not to deprive a subsequent appropriator of water where I was convinced that the most of the water so taken would be lost or absorbed before reaching the prior appropriator. I do not know of any law for this, but believe that it has been the custom of former administrations, and in my opinion conserves the greatest and most perfect use of the water.

Owing to the abnormal rainfall of the season of 1902 there were but few complaints of shortage of water, and those were on the North Platte river in Lincoln county and the Lodge Pole in Kimball county. On the latter I opened up two dams and closed three headgates in July, keeping them closed about thirty days for the benefit of a prior appropriator. The trouble in Lincoln county occurred late in the season, and on two occasions I closed one ditch and within twenty-four hours there was water for both of them. On a third complaint I found there was no water for either party.

Notwithstanding the abundant and frequent rains of the past season, irrigation has been generally practiced over my division, and has proved a success, as is shown by the universally and materially increased yield of fields irrigated over those depending on rainfall alone. A season like the

last occurring five years ago would have caused a set-back to irrigation in the sub-humid region by producing apathy in the minds of the public on the matter, but there is no apathy noticeable now. The results and possibilities are better known and public interest is aroused, and a season or two of moisture can not dispel entirely the memory of many seasons of failure, partial and complete, for the lack of the water that ran to waste before their doors.

Land values have been slow to respond to the expectations of the advocates of irrigation, but during the last two years the increase in demand in values of irrigated and irrigable land has been very marked, in many instances reaching 50 and 100 per cent, and lands have shown an increase of production that fully justifies the advance.

Respectfully submitted,

H. O. SMITH,

Under Secretary Water Division No. 1, State Board of Irrigation.

Lexington, Nebraska, December 1, 1902.

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

To H. O. Smith, Under Secretary of State Board of Irrigation, Division No. 1:

SIR—By request and in accordance with an established custom, I have the pleasure to submit to you and our honorable superiors, in as brief manner as possible, the experiences met with in my attempt to perform the duties of under assistant during the past two years, and incidentally a few general remarks on the management and success of irrigation canals and the crops grown under them, which may be of interest to many who will read the State Engineer's report, for such information as will acquaint them with the ways and methods of irrigation in the North Platte valley.

My district now includes part of the North Platte river in Scotts Bluff and Cheyenne counties, all of Pumpkinseed creek and its tributaries, Lawrence Fork, and Greenwood creeks being the principal tributaries, representing 405 miles of completed canals and 196,000 acres of land susceptible to irrigation. The discharge of the Pumpkinseed creek ranges from 0.5 cu. ft. to 20 cu. ft. per second, the latter discharge being near the mouth. Greenwood discharges from 5 to 8 cu. ft. per second, and Lawrence Fork averages about 7 cu. ft. per second.

No complaints were made on Greenwood creek.

A great many complaints received from Lawrence Fork creek, only three or four from Pumpkinseed creek, and two from North Platte river. One irrigator on the Lawrence Fork creek did conclude at the beginning of the season of 1901 that the present irrigation laws did not apply to that creek; accordingly he diverted water at several places along the creek by building ditches and dams, and applying the water to his land to the detriment of irrigators with prior

rights. On complaints of the latter I attempted to divide the waters of the stream according to sec. 35 of the Nebraska Irrigation Laws, and was forcibly prevented by the parties who were unlawfully taking the water, but not having any witnesses, I could not file complaint. Later I went over the stream shutting down gates, opening dams belonging to the violators, placing notices at each point of diversion, warning them not to interfere with the works without my permission. However, I had not left the stream twenty-four hours before the violators had destroyed the notices, opened the gates, replaced dams, and continued to use the water. Having several witnesses, I filed a complaint before the county judge against one of the violators, who was arrested, pleaded guilty, and was fined one dollar and costs on promising the judge that such work would not be repeated.

Within twenty-four hours the notices were destroyed and the water again diverted unlawfully. For this offense, under the advisement of the county attorney, the same party was again arrested under sec. 50 of the Nebraska Irrigation Laws, making me complaining witness. The trial was before the district judge at Sidney, November 18, 1902. The case was dismissed on the grounds that the section under which the action was brought did not provide a penalty for stealing water from a natural stream. It is hoped that an action brought under sec. 35 will again result in a conviction.

As to the results attained by the application of water to the land in my district, I must say they have been very flattering. Alfalfa and wild hay are the leading crops in the North Platte valley.

Under the Mitchell Canal, which is operated by the district system, alfalfa is the chief crop, although small grains are grown successfully and in large areas under this canal, and the yield of grain is of the highest quality. The farms under this canal are in appearance similar to farms in Iowa, Illinois, and other middle states, well fenced and improved, with elegantly constructed buildings.

Canals on the north side in the vicinity of Scotts Bluff and Mitchell are also supplying water to farms that will soon be in the highest state of cultivation, producing thousands of tons of alfalfa hay and bushels of grain of superior quality. Farms under canals in the vicinity of Bayard and Minatare, on both sides of the river, are in a later state of cultivation, and at present, irrigated wild hay is the predominating crop, which consists principally of wheat grass. Farms under canals in the vicinity of Bridgeport are in a still later state of cultivation for farm crops, but the land here is fast coming under the tilled class.

An experiment was made during the season of 1902 in raising sugar beets, which has proved very successful. About fifty acres were planted and harvested, the test being from 13 to 16.7 per cent sugar. The soil and climate are highly adapted to sugar beet raising.

The condition of the canals in general at this time is better than ever before. The irrigators are realizing the necessity of having canals large enough, and cleaned from silt and rank growth of water weeds, and the importance of having the canals cleaned and put in shape in the fall instead of doing the work in the spring, thus giving all their time in the spring to preparing the soil for early planting. The ambition of the irrigator to get water over his land and putting in a large acreage of crops has caused them to overlook the danger he is threatened with in ruining his farm by too much water standing, which can be seen in many places along the North Platte river.

The necessity of constructing drainage ditches to carry off the water is as important as the laterals to bring the water to the land, and should be in operation as soon as the laterals are built to water the land, thereby improving the land instead of injuring it, by carrying off the alkali that will accumulate if no drainage had been provided.

The systems of canal operation are four in number, viz., district system, mutual corporation system, corporation system, and private ownership.

The first two mentioned have thus far proved to be far the most successful, and give the most satisfaction to all concerned. The cost under these systems range from 50 cents to 75 cents per acre.

Under the district system, the canal works belong to the irrigated land under that system and receiving water through its canal. The cost of construction of canals under the district systems varies according to the stability of the soil, flumes, and gates, and the neatness in the finish of the completed works, which has been from five dollars to thirteen dollars per acre.

The mutual system differs but little from the district system.

The corporation canal system sells water from ten dollars to fifteen dollars per acre, and assessments run from fifty cents to one dollar per acre. Under this system all of the land does not take water, because not costing anything when not using water. Therefore, it lays too long without being improved, and losing its portion of the franchise for water.

The advent of the Burlington railroad in the North Platte valley has been the means of injecting new energy into the old, and bringing in new settlers, which creates a scene of activity in the valley that never was here before. The irrigators who, before the coming of the railroad, raised only what they needed for their families, and hay for their cattle, now are pushing with new ambition striving to produce more; to get his land in proper shape to irrigate; to do his part toward completing the canal through which he gets his water; planting trees, and in a general way improving their property. As the railroad can carry to a market all he can raise, his land has increased in value from five and ten dollars per acre to twenty-five and forty dollars per acre; his alfalfa fields producing (in three cuttings a season) five to seven tons of hay per acre; corn, from thirty-five to sixty bushels per acre; wheat, from twenty-five to forty bushels per acre; oats, forty to ninety bushels per

acre; alfalfa seed, six to fifteen bushels per acre; potatoes, from one hundred to four hundred bushels per acre; wheat hay, from 1½ to 3 tons per acre, and many other products that sunshine and judicial application of water will raise.

A few words regarding the discharge of the North Platte river would not be out of place here, although it is probable that the state engineer will include in his report tables showing the discharge. This river has its maximum discharge at the time it is most needed, June, July, and August. In June the discharge is as high as 25,000 cubic feet per second, falling gradually to 500 cubic feet in the middle of September, after which it raises to 1,200 or more cubic feet per second by the first of October, at which stage it is practically stationary until April, when the river discharge raises to the maximum for the season in the latter part of May or first of June.

A greater acreage can be supplied with water by the storage of water which goes to waste during the months of maximum discharge and winter months.

The rainfall varies from twelve inches to eighteen inches per annum, and such rainfalls are local.

Respectfully submitted,

ROBT. H. WILLIS,

Under Assistant Secretary, Water Division No. 1, District No. 2.

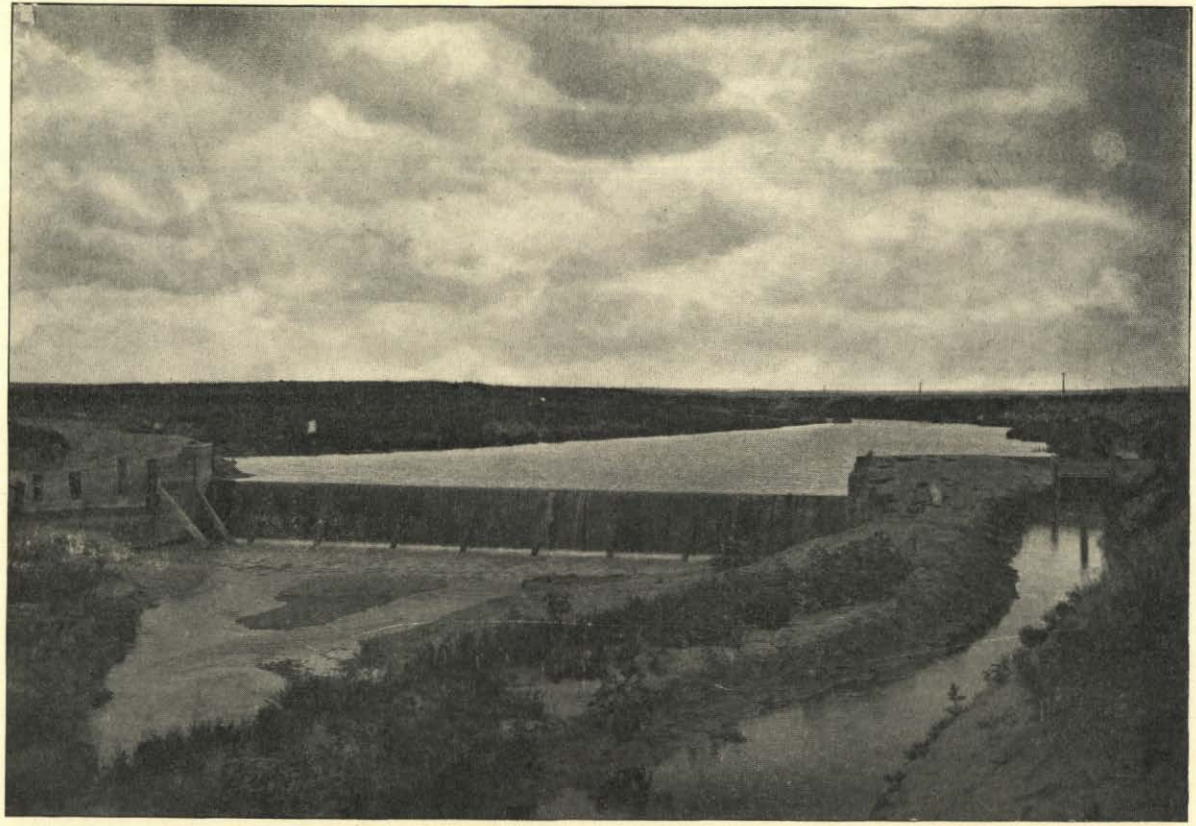


Photo by R. H. Willis

L. B. CAREY'S DAM AND IRRIGATION CANAL, PUMPKINSEED CREEK

THE NATIONAL IRRIGATION BILL.

The bill recently passed by Congress setting aside the money derived from the sale of public lands in several states as a reclamation fund to be used in the construction of storage reservoirs and other irrigation works will open a new era in irrigation development. The report of the Industrial Commission on Irrigation recently published contains the following: "It is evident that as the population of the county increases there will be a steadily growing pressure for land, especially in times of depression, when men seek work in vain. At such times in the past, the vacant public lands have afforded a great outlet for the active, progressive element in our population. Although one-third of the whole United States, exclusive of Alaska and outlying possessions, consists of vacant public land, much of which is quite fertile, yet there are few localities where homes can now be made by even the most sturdy pioneer. This is not because the soil is rough or infertile, but is due to the lack of the one essential element—water. There is water to be had, but the easily available sources have already been employed in the reclamation of small portions of government land." In our own state the amount of water which annually runs to waste is enormous, and there is plenty of fertile land which only lacks the application of this water to make it remarkably productive. A diagram published herewith shows the discharge of the North Platte and Loup rivers as compared with the Arkansas and Cache La Poudre rivers in Colorado. This diagram illustrates the necessity of storage in order to utilize the water, particularly in streams of the nature of the North Platte river, which carry the greatest volume during a few months in the early part of the irrigation season.

We have received many inquiries in regard to the National Irrigation Bill, and it was thought best to publish a copy of it in the report, in order to give those interested an oppor-

tunity to become familiar with its provisions. The work under this act will be under the direct supervision of the hydrographic division of the U. S. Geological Survey which is in charge of F. H. Newell, Chief Engineer. The long experience of this department in irrigation matters and the fact that it has been carrying on the work of investigating the nature and flow of the principal streams in the arid region for a number of years will be a guarantee that the money which is available in this fund will be expended in a careful and economical manner and the greatest amount of benefits possible will be obtained.

[PUBLIC—No. 161.]

An Act appropriating the receipts from the sale and disposal of public lands in certain states and territories to the construction of irrigation works for the reclamation of arid lands.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all moneys received from the sale and disposal of public lands in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming, beginning with the fiscal year ending June 30th, 1901, including the surplus of fees and commissions in excess of allowances to registers and receivers, and excepting the five per centum of the proceeds of the sales of public lands in the above states set aside by law for educational and other purposes, shall be, and the same are hereby reserved, set aside, and appropriated as a special fund in the Treasury to be known as the "reclamation fund," to be used in the examination and survey for and the construction and maintenance of irrigation works for the storage, diversion, and development of waters for the reclamation of arid and semi-arid lands in the said states and territories, and for the payment of all other expenditures provided for in this act;

Provided, That in case the receipts from the sale and disposal of public lands other than those realized from the sale and disposal of lands referred to in this section are insufficient to meet the requirements for the support of agricultural colleges in the several states and territories, under the Act of August 30, 1890, entitled "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress approved July 2, 1862," the deficiency, if any, in the sum necessary for the support of the said colleges shall be provided for from any moneys in the Treasury not otherwise appropriated.

SEC. 2. That the Secretary of the Interior is hereby authorized and directed to make examinations and surveys for, and to locate and construct, as herein provided, irrigation works for the storage, diversion, and development of waters, including artesian wells, and to report to Congress at the beginning of each regular session as to the results of such examinations and surveys, giving estimates of cost of all contemplated works, the quantity and location of the lands which can be irrigated therefrom, and all facts relative to the practicability of each irrigation project; also the cost of works in process of construction as well as of those which have been completed.

SEC. 3. That the Secretary of the Interior shall, before giving the public notice provided for in sec. 4 of this Act, withdraw from public entry the lands required for any irrigation works contemplated under the provisions of this Act, and shall restore to public entry any of the lands so withdrawn when, in his judgment, such lands are not required for the purposes of this Act; and the Secretary of the Interior is hereby authorized, at or immediately prior to the time of beginning the surveys for any contemplated irrigation works, to withdraw from entry, except under the homestead laws, any public lands believed to be susceptible of

irrigation from said works; *Provided*, That all lands entered and entries made under the homestead laws within areas so withdrawn during such withdrawal shall be subject to all the provisions, limitations, charges, terms, and conditions of this Act; that said surveys shall be prosecuted diligently to completion, and upon the completion thereof, and of the necessary maps, plans, and estimates of cost, the Secretary of the Interior shall determine whether or not said project is practicable and advisable, and if determined to be impracticable or unadvisable he shall thereupon restore said lands to entry; that public lands which it is proposed to irrigate by means of any contemplated works shall be subject to entry only under the provisions of the homestead laws in tracts of not less than forty nor more than one hundred and sixty acres, and shall be subject to the limitations, charges, terms, and conditions herein provided; *Provided*, That the commutation provisions of the homestead laws shall not apply to entries made under this Act.

SEC. 4. That upon the determination by the Secretary of the Interior that any irrigation project is practicable, he may cause to be let contracts for the construction of the same, in such portions or sections as it may be practicable to construct and complete as parts of the whole project, providing the necessary funds for such portions or sections are available in the reclamation fund, and thereupon he shall give public notice of the lands irrigable under such project, and limit of area per entry, which limit shall represent the acreage which, in the opinion of the Secretary, may be reasonably required for the support of a family upon the lands in question; also of the charges which shall be made per acre upon the said entries, and upon lands in private ownership which may be irrigated by the waters of the said irrigation project, and the number of annual instalments, not exceeding ten, in which such charges shall be paid and the time when such payments shall commence. The said charges shall be determined with a view of returning to the

reclamation fund the estimated cost of construction of the project, and shall be apportioned equitably; *Provided,* That in all construction work eight hours shall constitute a day's work, and no Mongolian labor shall be employed thereon.

SEC. 5. That the entryman upon lands to be irrigated by such works shall, in addition to compliance with the homestead laws, reclaim at least one-half of the total irrigable area of his entry for agricultural purposes, and before receiving patent for the lands covered by his entry shall pay to the Government the charges apportioned against such tract, as provided in sec. 4. No right to the use of water for land in private ownership shall be sold for a tract exceeding one hundred and sixty acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood of said land, and no such right shall permanently attach until all payments therefor are made. The annual instalments shall be paid to the receiver of the local land office of the district in which the land is situated, and a failure to make any two payments when due shall render the entry subject to cancellation, with the forfeiture of all rights under this Act, as well as of any moneys already paid thereon. All moneys received from the above sources shall be paid into the reclamation fund. Registers and receivers shall be allowed the usual commissions on all moneys paid for lands entered under this Act.

SEC. 6. That the Secretary of the Interior is hereby authorized and directed to use the reclamation fund for the operation and maintenance of all reservoirs and irrigation works constructed under the provisions of this Act; *Provided,* That when the payments required by this Act are made for the major portion of the lands irrigated from the waters of any of the works herein provided for, then the management and operation of such irrigation works shall pass to the owners of the lands irrigated thereby, to be maintained at their expense under such form of organiza-

tion and under such rules and regulations as may be acceptable to the Secretary of the Interior; *Provided*, That the title to and the management and operation of the reservoirs and the works necessary for their protection and operation shall remain in the Government until otherwise provided by Congress.

SEC. 7. That where, in carrying out the provisions of this Act, it becomes necessary to acquire any rights or property, the Secretary of the Interior is hereby authorized to acquire the same for the United States by purchase or by condemnation under judicial process, and to pay from the reclamation fund the sums which may be needed for that purpose, and it shall be the duty of the Attorney-General of the United States upon every application of the Secretary of the Interior under this Act, to cause proceedings to be commenced for condemnation within thirty days from the receipt of the application at the Department of Justice.

SEC. 8. That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any state or territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any state or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof; *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.

SEC. 9. That it is hereby declared to be the duty of the Secretary of the Interior in carrying out the provisions of this Act, so far as the same may be practicable and subject to the existence of feasible irrigation projects, to expend the major portion of the funds arising from the sale of public

lands within each state and territory hereinbefore named for the benefit of arid and semiarid lands within the limits of such state or territory; *Provided*, That the Secretary may temporarily use such portion of said funds for the benefit of arid or semiarid lands in any particular state or territory hereinbefore named as he may deem advisable, but when so used the excess shall be restored to the fund as soon as practicable, to the end that ultimately, and in any event, within each ten-year period after the passage of this Act, the expenditures for the benefit of the said states and territories shall be equalized according to the proportions and subject to the conditions as to practicability and feasibility aforesaid.

SEC. 10. That the Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this Act into full force and effect.

Approved, June 17, 1902.

OPINION OF ATTORNEY GENERAL.

MEASUREMENT OF WATER TO APPROPRIATORS.

LINCOLN, June 9, 1902.

Adna Dobson, Esq., State Engineer and Secretary of State Board of Irrigation, Lincoln, Neb.:

DEAR SIR—I have the honor to acknowledge your communication as follows:

"Under sec. 20, art. 2, chap. 93*a*, Compiled Statutes, the question of allowance of water in excess of one-seventieth of a cubic foot per second per acre to provide for loss by evaporation and seepage has been a puzzling one. In the case of the Mirage Canal taking water from the Niobrara river, there is not much water used for several miles below the head of the canal, and the loss in this distance is enormous. They claim that to measure the water to them at the head of the canal on the basis of one-seventieth of a cubic foot for each acre actually irrigated would practically ruin their canal. On the other hand, the Hay Springs Ditch heading on the opposite side of the river at a point a short distance below, irrigates land nearer the head of its ditch, and they claim that they could use the water beneficially. They claim that, although their appropriation is subsequent to the Mirage Canal, they are entitled to all the water in excess of one-seventieth of a cubic foot per second for each acre of land actually irrigated by the Mirage Canal.

"The matter resolves itself into the question of whether we may allow an appropriator to divert a large amount of water into his canal which is wasted in transmission, and is not beneficially used, where the formation is such that it seems to be impossible to prevent this loss without great expense. Or, shall we limit the amount admitted *at the head of the canal* to one-seventieth of a cubic foot per second for each acre actually irrigated?

"I submit herewith measurements of the water flowing in the Mirage Canal and giving the quantity at various points and the distance from the headgate. No water is drawn from the canal for surface irrigation above the point twelve and one-half miles below the headgate, and in this distance the amount of water is reduced from 13.8 cubic feet per second to 4.4 cubic feet per second at the point where the first water is diverted.

"Following are the measurements of Mirage Ditch, June 3, 1902:

"At headgate				13.84	cu.	ft.	per	second.
" 1	mile	below	headgate	11.84	"	"	"	"
" 3	"	"	"	11.37	"	"	"	"
" 4.6	"	"	"	9.76	"	"	"	"
" 6.25	"	"	"	7.41	"	"	"	"
" 9	"	"	"	6.48	"	"	"	"
" 12.5	"	"	"	4.36	"	"	"	"

In absence of a statute which provides for the disposition of water for the purposes of irrigation, a prior appropriator has the right to divert from the natural stream a sufficient quantity of water to supply his needs at the place where it is used. In countries where irrigation is necessary it is unlawful to waste water which can be utilized, and the paramount interests of the public prevent a prior appropriator from diverting more water than is essential for beneficial uses or for domestic purposes. The ditches, flumes, and other means of carrying water to places of distribution on the lands must be constructed so as to prevent unnecessary waste or loss. These rules have been enforced by the courts of California and other states for many years. In Burrows vs. Fox, 98 Cal., 67, the court said:

"Plaintiffs have the right to divert from the stream a quantity of water sufficient to yield at the place of use the quantity required after the loss by absorption and evaporation of so much thereof as is necessarily so lost in a ditch

and flume well constructed and kept in good condition. Ditches and flumes are the usual and ordinary means of diverting water in this state, and parties who have made their appropriations by such means can not be compelled to substitute iron pipes, though they may be compelled to keep their flumes and ditches in good repair so as to prevent any unnecessary waste."

In Natoma Water and Mining Co. vs. Hancock, 101 Cal., 51, this language is used:

"While the right of the prior appropriator is carefully protected, he is compelled to exercise it with due regard to the rights of others and the paramount interests of the public. The quantity of his lawful appropriation can not be diminished, but he must return the surplus to the stream without unnecessary waste, and he must use reasonable diligence and reasonably efficient appliances in making his diversion in order that the surplus may not be rendered unavailable to those who are entitled to it."

The following cases sustain the same principles: Barnes vs. Sabron, 10 Nev., 233; Low vs. Schaffer, 24 Ore., 245.

The rules stated are by statute made the law of this state (Compiled Statutes, ch. 93*a*, art. 2), but the amount of water which a prior appropriator may divert from the natural stream is limited to one cubic foot per second for each seventy acres of land. The effect of the latter provision, within the limitation stated, is to make the appropriator responsible for all waste in his own ditch. This rule seems to be proper in this state owing to the absorbing character of the soil through which ditches must necessarily pass. Sec. 20, art. 2, chap. 98*a*, Compiled Statutes, limits an appropriator to a beneficial use, and provides:

"No allotment for irrigation shall exceed one cubic foot per second for each 70 acres of land for which said appropriation shall be made."

Under sec. 11 of the article cited the under secretary acting for the State Board of Irrigation has authority to dis-

tribute water to the appropriators. The statute makes provision for only one place of distribution to the appropriators, namely, at the headgate. The statutory provision is, in part, as follows:

"The appropriators of any of the public waters of the state shall maintain to the satisfaction of the under secretary of the division in which such appropriation is made a substantial headgate at the point where the water is diverted, which shall be of such construction that it can be kept locked and closed by the under assistant, and such appropriator shall construct, and maintain, when required by the under secretary, a flume or measuring device as near the head of such ditch as is practicable, for the purpose of assisting the under assistant in determining the amount of water that may be diverted into said ditch from the stream." (Compiled Statutes, ch. 93*a*, art. 2, sec. 37.)

I am therefore of the opinion that, under the statutes of this state, no appropriator of water for irrigation is entitled to more than "one cubic foot per second for each 70 acres of land," where other appropriators are demanding water, and that measurements for purposes of distribution to appropriators must be made at the headgate.

Very respectfully,

F. N. PROUT,

Attorney General.

RECOMMENDATIONS.

The Nebraska Irrigation Law passed in 1895 is very complete and has proven quite satisfactory.

Under it about one thousand claims for water rights acquired prior to April, 1895, have been before the Board for adjudication, and 694 applications have been made under the law of 1895. In nearly all these cases the decision of the Board has been taken as final, and there have been very few appeals to the courts.

This is a very satisfactory condition when we consider the confusion which existed in irrigation matters before the passage of the present law and the organization of the State Board of Irrigation.

There are a few minor amendments to the law which I believe should be made.

DISTRICT IRRIGATION LAWS.

The District Irrigation Law relating to the bonds of irrigation districts provides that "upon presentation of the coupons and bonds due at the office of the State Treasurer, at Lincoln, Neb., it shall be the duty of the treasurer of the county in which the district was originally organized to pay the same from said bond funds, and all expenses of remittance and postage shall be a proper charge against said district and shall be allowed said county treasurer in his settlement; and it is hereby made the duty of the State Treasurer to accept such remittances and pay the same to the parties entitled thereto, on said coupons and bonds."

This seems to be an unnecessary complication, and the State Treasurer has refused to accept such remittances and make the payments.

This law should be amended so as to authorize the county treasurer of the county in which the district was originally

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organized to pay these coupons and bonds. The law should also be amended so as to require the bonds issued by an irrigation district to be registered in the office of the Auditor of the State, the same as other bonds.

Before any proposition to issue bonds is submitted to a vote the estimates of the cost of the proposed work and the description of the lands included in the district should be submitted to the State Board of Irrigation so that an examination could be made to ascertain whether there is unappropriated water available for the irrigation of the lands in the district, whether all the lands included in the district are susceptible to irrigation from the proposed canal, and whether the estimates of cost are reasonably accurate. Such an examination would sometimes prevent expensive mistakes.

The secretary of each irrigation district should be required to report to the office of the State Board of Irrigation a list of the officers of the district, the amount of bonds issued, and such other facts as will enable the office to have a complete record of the condition of the districts.

OFFICIAL SEAL.

The Secretary should be authorized to provide the office with an official seal, and the seal should be attached to all papers of an official nature, and it would be a great convenience if the secretaries and under secretaries were given power to administer oaths.

I would recommend that the appropriation for field help be increased so that accurate surveys could be made of all the canals constructed, showing the amount of land actually irrigated from each. This would enable the Secretary to determine more closely when a stream is fully appropriated. Many of the canals have been granted an amount of water for the purpose of irrigating a large territory where only a small portion of the canal has been built and the amount of water actually required is correspondingly less.

LATERAL HEADGATES.

The irrigation law should be amended so as to provide that every appropriator of the public waters of the state shall maintain a substantial headgate and measuring box or weir at the head of each lateral diverting water from the main ditch or canal, which shall be constructed in accordance with plans and specifications approved by the Secretary of the State Board of Irrigation. A very large percentage of the disputes and controversies among users of water would be avoided if the water could be accurately measured so that each man would know just how much water he was using.

As the matter now stands, many of the canals have no measuring device whatever, and others have those which are supposed to measure the quantity of water taken, but which are entirely misleading.

STATE AND GOVERNMENT COOPERATION.

I would recommend that the system of cooperation with the U. S. Geological Survey and the Bureau of Irrigation Investigations of the U. S. Department of Agriculture be continued and extended as much as possible. It will be seen by the data published elsewhere in this report that the state has acquired a large amount of valuable information from the work of these departments. We are all working to promote the development of the irrigation interests of the country, and I believe that the State Board of Irrigation should cooperate with the federal departments to the full extent of the means at our disposal.

Respectfully submitted,

ADNA DOBSON,

State Engineer, Secretary.