NINTH BIENNIAL REPORT

OF

The State Board of Irrigation

Highways and Drainage

TO THE

GOVERNOR OF NEBRASKA

November 30, 1910 to September 1, 1912

The Claflin Printing Company
University Place, Nebr.

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OFFICE OF THE STATE BOARD OF IRRIGATION,

To His Excellency, Chester H. Aldrich, Governor of Nebraska:

Sir:—I have the honor to submit herewith the following report of the work of this office during the past two years.

Yours very respectfully,

DONALD D. PRICE,
State Engineer.
Lincoln, Nebraska.

September 1, 1912.

IRRIGATING WHEAT IN WESTERN NEBRASKA

LIST OF OFFICERS OF STATE BOARD OF IRRIGATION, HIGHWAYS AND DRAINAGE, STATE OF NEBRASKA.

Members of Board.

CHESTER H. ALDRICH, Governor, President.
GRANT G. MARTIN, Attorney-General.
E. B. COWLES, Commissioner of Public Lands and Buildings.

Office Force.

DONALD D. PRICE, State Engineer.
H. W. ROBERTS, Assistant State Engineer.
J. E. CLARK, Chief Draftsman.
L. W. ERICKSON, Bridge Inspector.
C. T. GRAHAM, Bridge Inspector.
G. K. LEONARD, Bridge Inspector.
C. G. HRUBESKY, Bridge Inspector.
J. F. DUDGEON, Bridge Inspector.
W. F. CHALOUPKA, Bridge Inspector.
F. M. PRICE, Bridge Inspector.
J. B. CHESSINGTON, Bridge Inspector.
D. P. WEEKS, JR., Hydrographer.
MISS LAURA E. DARROW, Chief Clerk.
C. E. THORNTON, Stenographer.

Water Superintendents.

R. H. WILLIS, Water Division No. 1, Bridgeport, Nebraska.
PAGE T. FRANCIS, Water Division No. 2, Crawford, Nebraska.

Water Commissioners.

W. H. LANE.
P. C. WADE.
J. C. McCOY.
G. F. PALMER.
H. C. SCHADE.
R. A. BLAKE.
J. H. O'KANE.
TOM GASS.
JAMES D. SPEARMAN.
M. J. GAYHART.
JOHN COOK

WATER DIVISIONS AND WATER DISTRICTS.

Section 6780 of Cobbeys' Annotateo Statutes:

Irrigation and Water Power.—Water divisions:

"The State of Nebraska is hereby divided into two water divisions, denominated water division No. 1 and water division No. 2, respectively."

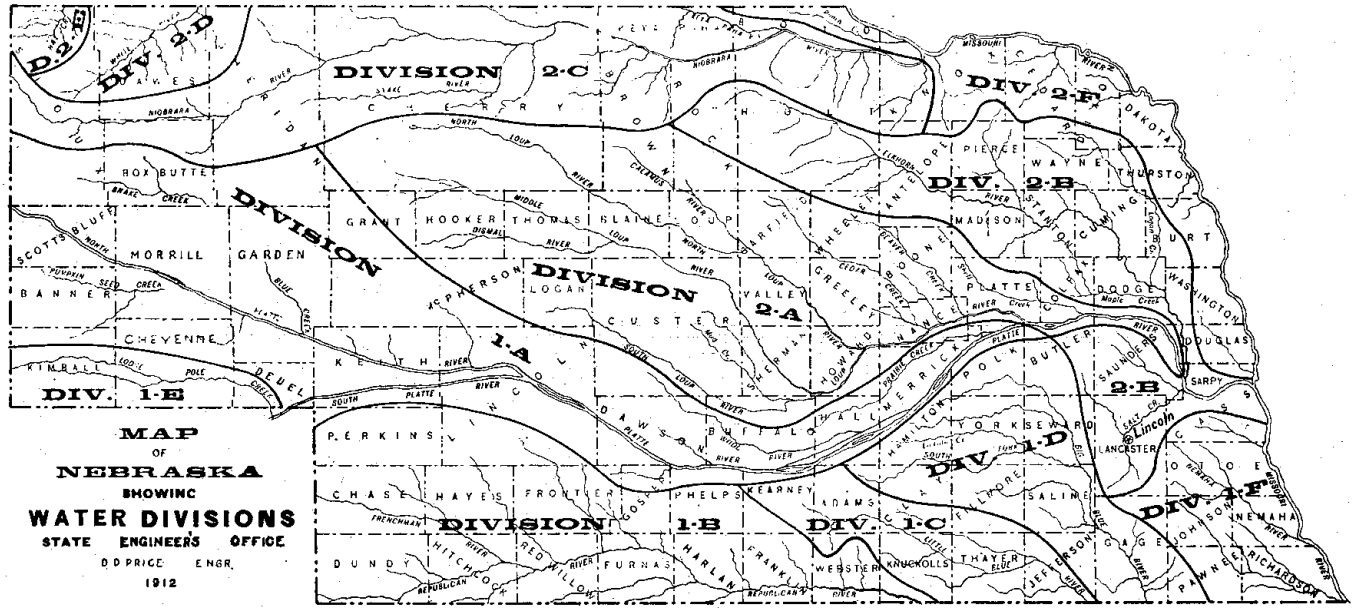
Section 6781—Boundaries of Division One:

"Water division No. 1 shall consist of all the lands of the state drained by the Platte River; and also all other lands lying south of the Platte and South Platte rivers that may be watered from other superficial or subterranean streams not tributary to said Platte River."

Section 6782—Boundaries of Division Two:

"Water division No. 2 shall consist of all lands that may be watered from the Loup, White, Niobrara and Elkhorn Rivers and their tributaries and all other 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, 2-F, as shown on the accompanying map.


DIV. 2-D
DIV. 2-E
DIVISION 2-C
DIV. 2-F
DIV. 2-B
DIVISION 1-A
DIVISION 2-A
DIV. 1-E
2-B
DIV. 1-D
DIV. 1-F
DIVISION 1-B
DIV. 1-C
DAWES
BOX BUTTE
SCOTTS BLUFF
MORRILL
GARDEN
BANNER
CHEYENNE
KIMBALL
DEUEL
GRANT
HOOKER
THOMAS
BLAINE
LOUP
GARFIELD
WHEELER
VALLEY
GREELEY
MCPHERSON
LOGAN
CUSTER
KEITH
PERKINS
DAWSON
BUFFALO
HALL
HAMILTON
MERRICK
POLK
BUTLER
SAUNDERS
SARPY
DOUGLAS
WASHINGTON
BURT
CUMING
STANTON
MADISON
PIERCE
WAYNE
THURSTON
DAKOTA
DIXON
CEDAR
KNOX
YORK
SEWARD
LANCASTER
Lincoln
SALINE
FILLMORE
JEFFERSON
GAGE
JOHNSON
NEMAHA
RICHARDSON
PAWNEE
CHASE
HAYES
FRONTIER
GOSPER
PHELPS
KEARNEY
ADAMS
CLAY
WEBSTER
NUCKOLLS
THAYER
FRANKLIN
HARLAN
FURNAS
RED WILLOW
HITCHCOCK
DUNDY
NIOBRARA
NORTH LOUP
MIDDLE LOUP
DISMAL RIVER
SOUTH LOUP
CALAMUS
LONG PINE
SNAKE
BRAVE
PUMPKIN
SEED
CREEK
BLUE
WEST
STRAIGHT
POLE
SOUTH PLATTE
PLATTE
BEAVER
PRAIRIE
MAD CREEK
SHERMAN
LOUP CITY
CENTRAL CITY
SILVER
CREEK
CLEAR
CREEK
MISSOURI
ELKHORN
LOGAN
PAPILLION
SALT CR.
BIG BLUE
LITTLE BLUE
REPUBLICAN
FRENCHMAN
REPUBLICAN
MAP
OF
NEBRASKA
SHOWING
WATER DIVISIONS
STATE ENGINEER'S OFFICE
D.D. PRICE ENGR.
1912

IRRIGATION.

During the past biennium, we have been favored with a good supply of water for irrigation purposes on the North Platte River. In the early part of the season of1911 a shortage was felt for a short time, due partly to the lateness of the spring rains and the cool weather in the mountains, holding back the melting of the snow. This shortage occurred during the latter part of May and the early part of June. The Pathfinder Reservoir was being filled at this time by the United States Reclamation Service and the shortage was partly due to the fact that the needs of the canals on the North Platte River were under-estimated. The local representatives of the Reclamation Service did everything in their power to correct this condition at once and it lasted for only a short time, more than that the water which was stored in the Pathfinder Reservoir in excess of the needs of the Government project was turned down the river during the months of July, August and September, thus giving the canals in Nebraska an ample supply of water throughout the months of July, August and part of September, when the natural flow of the river would have furnished less than one-half the amount of water needed.

The season of 1912 on the North Platte River was more favorable to irrigation for the reason that the snow fall in the mountains during the winter of 1911 and 1912 was a great deal above the normal, and that the rainfall during the irrigation season was also above normal.

The Pathfinder Reservoir was filled during the early spring to very nearly its capacity and the outlet gates were later opened up and during the entire irrigation season the river ran bank full, by far exceeding the use of all irrigation ditches along the North Platte and Platte Rivers, including the North Platte Reclamation Project, and water running throughout the river the entire length of the State.

The flow of the river at Bridgeport did not drop below 5000 cubic feet per second from July first to November first, while 1500 cubic feet per second, passing Bridgeport, would have amply supplied the needs of all the irrigators east of that point during the past season. The Government Reclamation Service charged nothing whatever for the use of all this storage water. The above conditions demonstrate clearly the fact that with the Pathfinder Reservoir to supplement the natural flow of the river all of the irrigable lands in this valley can be furnished with water and a shortage will be unknown. The present administration has

at all times been highly in favor and encouraged the buying of storage rights in the Pathfinder Reservoir by irrigation ditches along the North Platte River for supplemental appropriation. The United States Government passed a law permitting this and the Secretary of the Interior set a time limit of January 1, 1913, by which time all applications for the purchase of storage rights in the Pathfinder should be on file with the Department of the Interior. To arouse more enthusiasm during the past summer in the purchase of storage water rights the North Platte Chamber of Commerce ran a special train from North Platte over the Union Pacific to Gering.

Notwithstanding these facts, however, the ditch companies have been slow to take advantage of this opportunity and only a few have made application for the purchase of water at this time, but it is to be hoped that an extension of time will be granted by the Reclamation Service in which the ditch companies may make such applications.

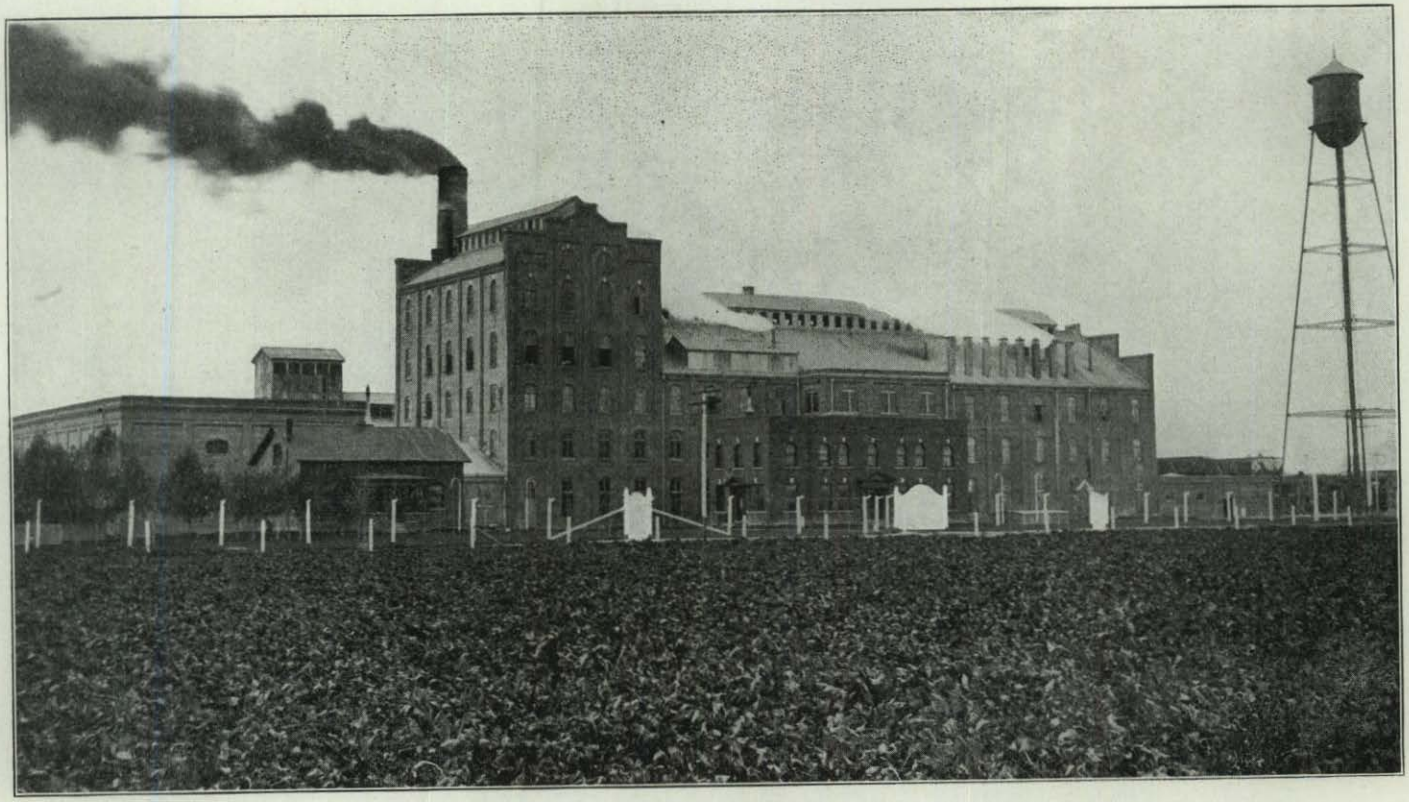
In the last few years the North Platte Valley has forged ahead very rapidly in intensified farming. The second largest beet sugar factory in the United States has been built at Scottsbluff. Thousands of tons of beets are raised annually in this valley and delivered to this factory.

The raising of sugar beets, potatoes and other crops have necessitated the irrigation of the same during the months of August and September when the normal flow of the river is very low. Without the use of storage water to supplement the direct flow of the river appropriations now held by the canals, it would be impossible to raise and irrigate these kinds of crops. It is this imperative need of storage water that will soon confront the irrigators along the North Platte River.

Under the present conditions, much of the land being held in large tracts, it is impossible for the entire area of irrigable land to be brought to the highest state of production. This can only be accomplished by decreasing the size of the individual farm, the ideal unit being about eighty acres. If all the land susceptible of irrigation in the North Platte Valley in Nebraska could be brought to its highest state of cultivation, it seems probable that with the assistance of the Pathfinder Reservoir practically the entire flow of the North Platte River could be utilized, and this valley made the most productive section of the state and the most productive irrigated section in the United States.

During the past season, this office has made actual field examination and surveys of all the canals throughout this valley and the land irrigated thereunder, which disclose the fact that there are now 600,000 acres subject to irrigation lying under canals which are already constructed and in most cases ready to serve the land; but the surprising fact which this work revealed was that only 230,000 acres were actually being irrigated the past season. Nearly all of these canals are in operation to some extent and all of the canals can be put in first class operating condition at a very nominal cost.

It would seem from these facts that instead of spending large sums of money to develop new enterprises at a very high cost per acre of



SCOTTSBLUFFS SUGAR FACTORY, SECOND LARGEST IN UNITED STATE

land actually irrigated that new inducements and encouragements should be given toward the development of the land which now has ditches built to supply water to the same and only lacks the proper management and insured water supply to put the same in the list of intensified farm units.

As the country develops and the farmers acquire experience in irrigation, the duty of water will be materially increased. It is a fact that by actual measurement one of the largest projects in the state in the season of 1911 delivered to the land more than five acre feet of water per acre.

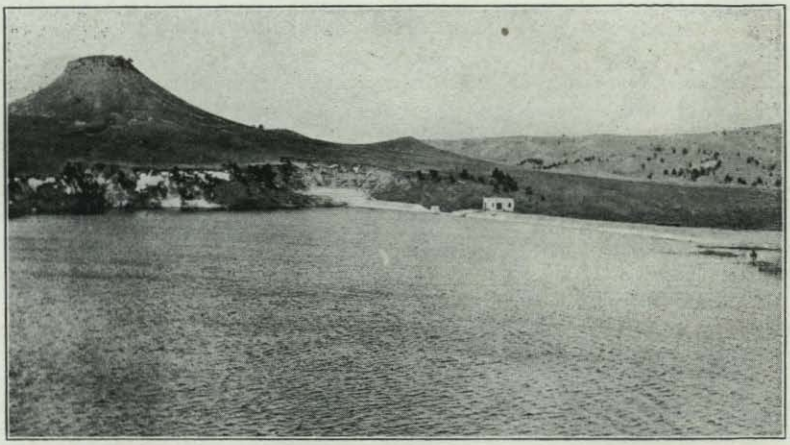
In my judgment, the greatest amount of water actually needed for irrigation purposes under the most intensified farming methods should be limited to two and one-half acre feet per acre. The canal companies should each maintain a satisfactory headgate and measuring device near the head of the canal, as required by the Irrigation Laws, and also have a competent canal superintendent, whose duty it should be to turn out the water to irrigators, as they need the same, and keep a careful record of the amount of water in acre feet applied to each piece of land. This data would be of great value to the farmers throughout the irrigated section, and allow them to arrive more closely at the exact amount of water needed for the different crops, and the greatest duty that can be derived from the use of the water.

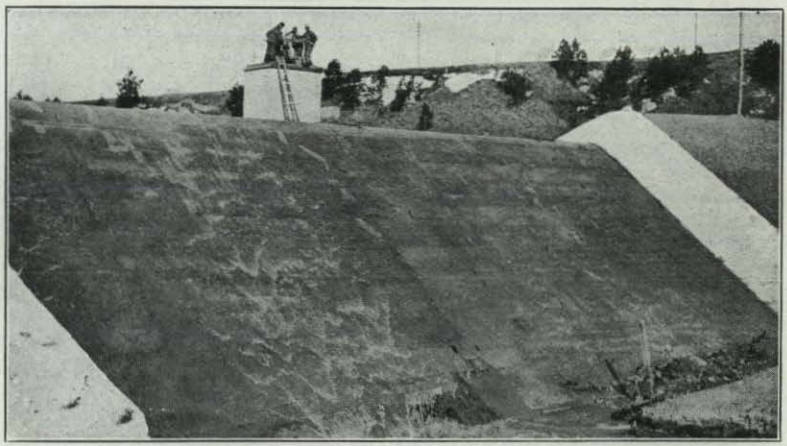
Several tracts of land in this valley have become seeped because of the use of too large an amount of water for irrigation purposes by the canals and the carelessness of the irrigators themselves.

This condition is constantly growing worse by reason of the completion of high line canals and the irrigation of the tablelands thereunder. The surplus water from over-irrigation on these higher lands is gradually finding its way back to the river through the sub-soil, and is slowly but surely raising the water table on all the low-lying lands in this district. In practically all of the towns along the river, the water table is now so close to the surface of the ground that the maintenance of basements is impracticable. This condition can only result in making the soil alkaline and rendering it unfit for farming purposes until some drainage system is installed. It is impossible to lay the blame of the seepage upon any one canal for the reason that the water appears in greatest quantities on the low-lying lands close to the river, or what is ordinarily known as the first bottom. It would therefore seem that in order to curtail this seepage question a more careful use of water for irrigation purposes be exercised and of not applying any more to the land than is actually needed for beneficial use, as the continuance of carelessness and extravagant use of water for irrigation purposes is fast working a hardship upon the owners of the low lands.

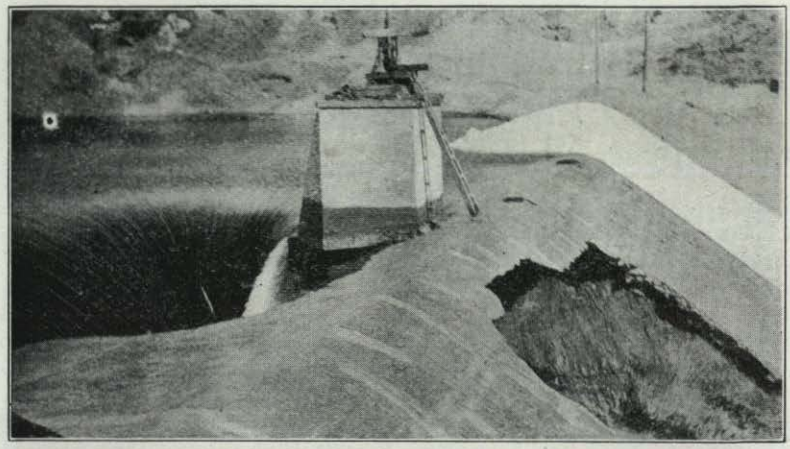
The only limit which our laws put upon the amount of appropriation per acre was from 1895 to 1911, one cubic foot per second of time for each seventy acres of land arrigated, running continuously through the entire irrigation season.

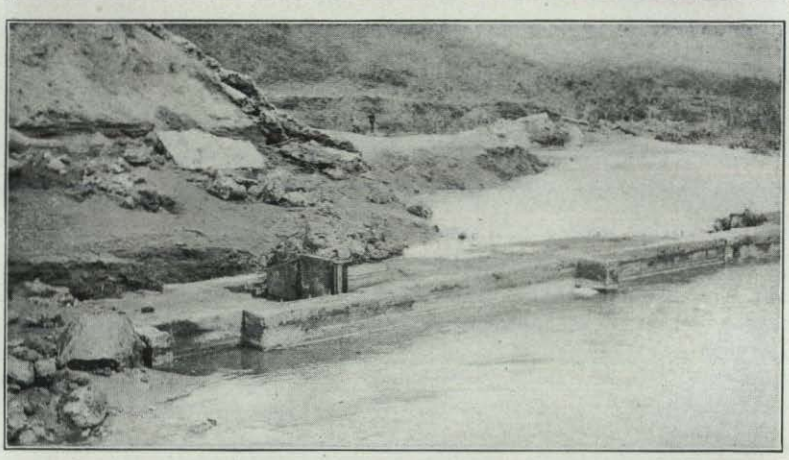
The legislature of 1911 amended this law, placing a limit of three acre feet of water per acre in the aggregate during one calendar year.

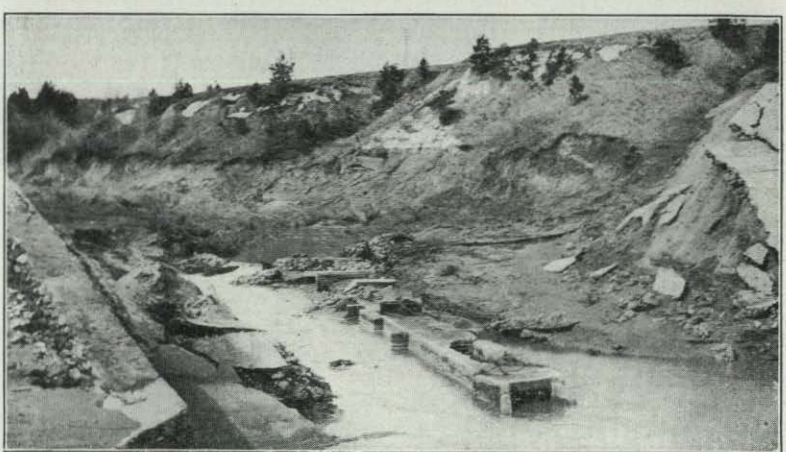




DAM FAILURE OF







VALENTINE MUNICIPAL POWER PLANT

It is recommendd that this section be further amended, limiting the amount of any appropriation to two and one-half acre feet in the aggregate during one calendar year for each acre of land which any appropiration shall be made to cover.

The irrigators on the small streams, both in the northwestern and southwestern portions of the State, have suffered to a certain extent from a shortage of water, but since many of them secure their supply from streams whose flow is intermittent, this condition will always prevail until provisions are made for the proper storing of the flood waters, and also the natural flow of the streams outside of the irrigation season in reservoirs.

Too much stress cannot be laid upon the benefits which can be derived from such storage reservoirs. A notable example is the Kimball Irrigation District, located on the Lodge Pole Creek in Kimball County. This Lodge Pole Creek is a small stream fed by springs and having a very small normal discharge. The Kimball Irrigation District by the construction of their reservoir have secured a water supply sufficient to irrgigate 12,000 acres, and this from a stream whose normal flow does not exceed fifteen cubic feet per second and for a considerable part of the irrigation season is much less than this.

There are also many valuable reservoir sites along the Frenchman River and Stinking Water Creek in the southwestern part of the State, and in fact, on nearly all the small streams within the irrigated territory. This question of storage reservoirs brings up the proper construction of dams.

The present irrigation laws require plans for all dams more than ten feet in height to be approved by the State Engineer, but no penalty is attached to the construction of such dams without having obtained such approval. This law should be amended, so as to provide a severe penalty for the construction of any dam without having obtained the State Engineers' approval, and the limiting height of ten feet should be stricken out. A notable example, which demonstrates the need for such a penalty is found in the hydro-electric plant which was constructed by the City of Valentine for municipal lighting purposes. Power was to be obtained by means of a dam thirty feet in height across Minnechaduza Creek. The plans for this dam were presented to the office of the State Engineer and were disapproved. Notwithstanding this fact, the City proceeded to let the contract, the dam was constructed, the plant was completed and the reservoir filled with water. The action of the State Engineer in refusing to approve the plans was justified by the fact that the dam failed as soon as the reservoir was filled and before the water had been turned into the wheels at all. The accompanying cuts illustrate fully the weakness of the design and the manner in which the failure occurred.

Up to within the last few years very few diversion dams have been built by irrigation ditches, but of late the increased value of water has necessitated the building of these diversion dams and the controlling

of the streams. In order that the rights of all appropriators can be fully protected, it is necessary that the designs of all diversion dams and the construction of the same be approved by the State Engineer's Office, and I therefore wish to emphasize the above recommendations.

The ideal way of handling an irrigation canal is under the irrigation district system. Up to within the last two years, there were very few irrigation districts in this state, but during the past biennium many of the older canals which have been operating for many years have changed from a mutual company or corporation into an irrigation district formation.

Under a mutual company or corporation it is impossible to get the co-operation and enforce the use of the water by the people under the canal and the payment of maintenance dues. Under the district formation, however, the lands included within and under the district, and which are susceptible to irrigation are specifically described and bonds are voted for the purchase of the canal and water rights for the land. Interest and principle on these bonds, together with the maintenance tax for the operating expenses for the district are collected by the County Treasurers of the County in which the canal is located, and the delinquent taxes in this way become a lien upon the land the same as any other county or state tax.

In this way every land owner who has land included in any district must pay his share of the taxes and maintenance and operating expenses of the canal. When a person is compelled to do this he is going to use the water and get the best results therefrom that it is possible to obtain. This insures the early development of the lands in any district.

Under a mutual company or corporation a non-resident land owner may refuse to buy water rights and refuse to develop his holdings, but simply sit back and allow his land to increase in value, while the adjoining resident land owners are working hard and improving their own holdings, and are thus assuming all the risk that there is to be taken. This is unfair and leads purely to speculation which should be avoided as far as possible. Many mutual companies have failed by reason of these non-resident land owners refusing to buy water and develop their lands.

Among the old canals which have lately come into the irrigation district formation or are at present proceeding to change to this system of operation are the Nine Mile Canal & Reservoir Co.; Short Line Irrigation Co.; Culbertson Irrigation and Water Power Canal Co.; McCook Irrigation and Water Power Co.; Tri-State Canal Co.; Belmont Canal Co.; Alliance Irrigation Canal & Water Power Co., and the North Platte Irrigation and Land Co.

There has been only one large irrigation project built in the state during the last two years. This is the Kimball Irrigation District, located in Kimball County, near Kimball, Nebraska.

WHEAT FIELD KIMBALL IRRIGATION DISTRICT

The source of supply for this district is Lodge Pole Creek, a small stream which heads in eastern Wyoming and runs through the southern part of the west end of the state. The actual normal flow of this stream is very small compared with other streams in this state, and yet there is more actual irrigation on Lodge Pole Creek compared to the amount of water in the creek, than there is on any other stream in the state.

The Kimball Irrigation District built a large dam directly across Lodge Pole Creek, forming what is now known as the Oliver Reservoir. The location of this dam was picked because of the natural lay of the land at this point. High bluffs coming down on both sides of the stream formed an ideal place for the dam. The dam itself is forty-five feet in height, forty-nine hundred feet in length, and is composed of earth with inside slope of one and one-half to one, and outside slopes of three to one in the main part of the dam. The inside or water face of the dam is faced with reinforced concrete to protect it from the wave action.

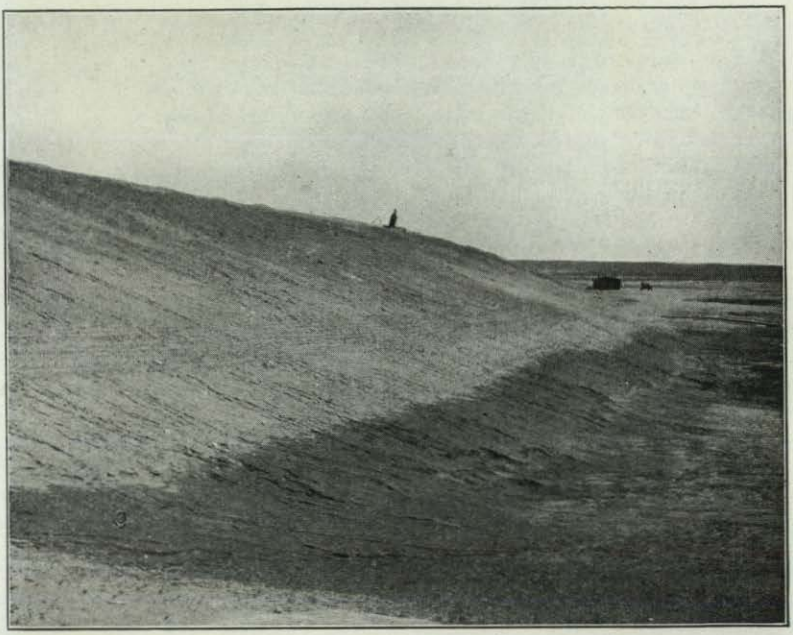
Two canals extend down the valley, one on each side of the creek, reclaiming all of the irrigable land to a considerable distance on both sides of the town of Kimball. The Oliver Reservoir was completed on November 8, 1911, and enough water stored to furnish water for irrigation purposes to all the lands which were available and ready for irrigation during the past season.

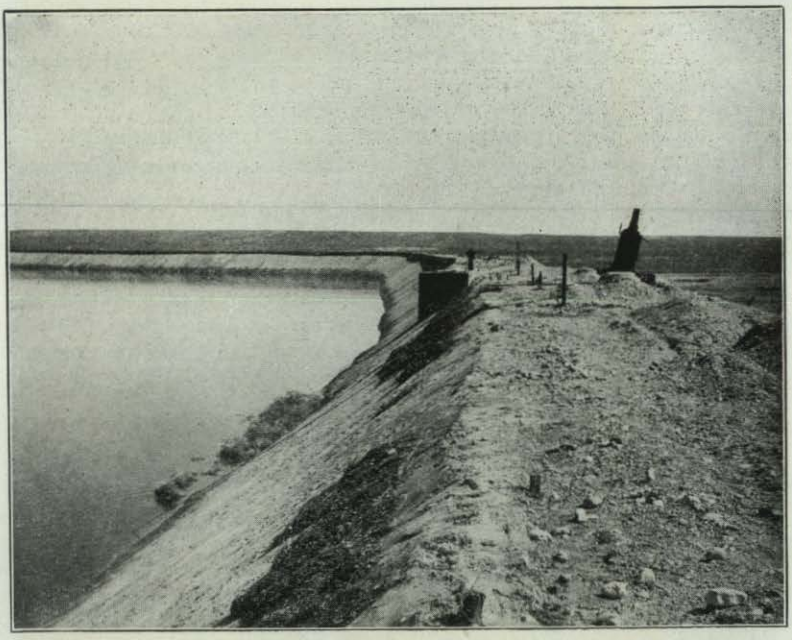
The bonds of the Kimball Irrigation District were ready for the market just after the bottom had fallen out of the irrigation securities in the summer of 1910. It is a deplorable fact that irrigation securities are hard to dispose of for the reason that so many wild cat and promotion schemes have been attempted and pulled off in irrigation lines. It is a noteworthy fact, however, that no Nebraska irrigation project has ever failed, in its payment of bonds. This is largely due to the laws which we have in this state and the general state supervision given especially to irrigation districts and in fact to all irrigation enterprises wthin the state.

At the present time the State Treasurer of our state is authorized under and by virtue of the laws of this state to purchase municipal and school bonds with state money. It is to be hoped that the next legislature, and it is so recommended, pass a law requiring bonds of irrigation districts to be registered in the office of the State Auditor the same as municipal bonds, and when approved by the State Auditor, the State Treasurer shall be authorized to purchase these bonds the same as any municipal bonds.

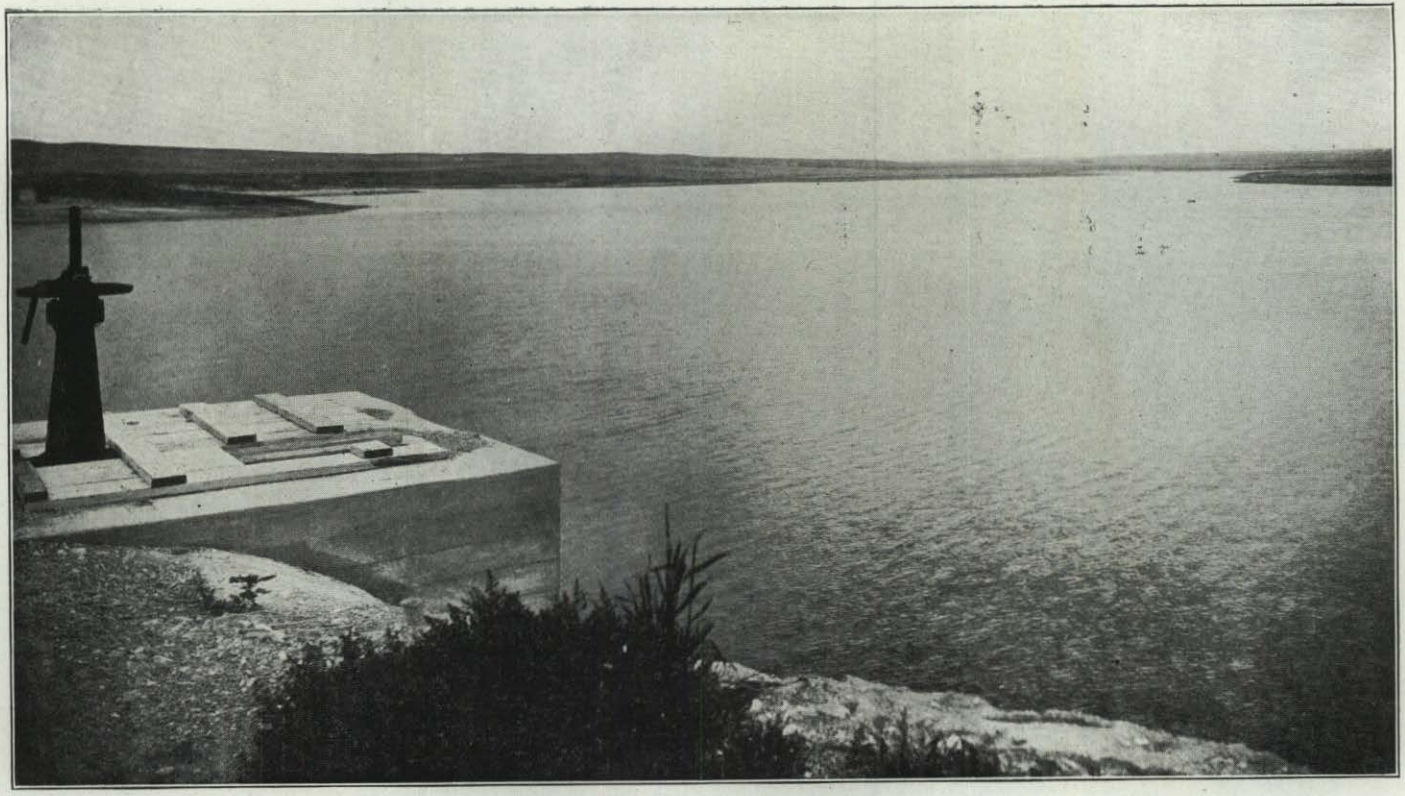
All the encouragement possible should be given to the formation of irrigation districts and the raising of the standard of irrigation securities, and under this proposed form of state inspection and registry of irrigation bonds they should be of a very high class of securities.

Nebraska is so situated that its larger streams, which are used practically entirely for irrigation purposes, have their origin in states to the west, being in general Colorado and Wyoming. In the extreme southwestern portion of the state the Republican River heads in east-





DAM KIMBALL RESERVOIR



KIMBALL RESERVOIR

ern Colorado; next to the north comes the South Platte River, which heads in Colorado; next, Lodge Pole Creek, which heads in eastern Wyoming, and the North Platte River, which heads in Colorado, also.

When irrigation was first started in this state the South Platte River flowed as much water near the city of North Platte as the North Platte River did. Today, with the exception of an occasional extraordinary flood, the South Platte River is dry. Some of the first irrigation ditches which were built in this state were along the South Platte River between North Platte, Nebraska, and Julesburg, Colorado. Many of these canals have been abandoned or partially abandoned for the reason that no water can be obtained during the irrigation season for irrigation purposes.

This shortage of water is due to the development of irrigation along the South Platte River in Colorado. There have been many reservoirs built in Colorado, so that now all the water, even the flood waters, of the South Platte River are stored within the borders of that state and none of it is allowed to run into Nebraska. This condition exists even though the ditches in Nebraska have an earlier priority, or a prior right to the use of the water over the ditches in Colorado, which have been constructed within recent years.

This same condition is fast becoming apparent on all of the other above mentioned streams. It will only be a question of time until a shortage of water on all streams arising in Colorado and Wyoming will be noticed within this state. The Government Reclamation Service stands ready to and does recognize priority on streams and water sheds regardless of state lines. This is the only just and equitable solution that can be found for this problem.

The state of Kansas has fought against Colorado on the Arkansas River for a number of years to establish their right to the use of some of the water of the Arkansas River. At the present time the State of Wyoming has a suit pending, relating to the right to the use of the Laramie River, from which canals in Colorado have diverted water for use in Colorado. Yet even Wyoming will not at this time recognize any claims to water by right of priority of use in Nebraska on streams arising in Wyoming and flowing into this state.

It is recommended that the coming legislature make an adequate appropriation, so as to enable the Attorney General to bring suits against the States of Wyoming and Colorado, compelling them to recognize the priority of use of water on streams regardless of state lines. This is necessary in order to protect the rights of different irrigation canals within the State of Nebraska.

Bridgeport, Nebraska, October 30, 1912.

To the Honorable State Board of Irrigation, Highways and Drainage, State Engineer, Secretary.

Conforming with the usual custom, I am submitting, herewith, my official report, covering a review of my experiences with the flow in the North Platte river during the past three years.

My reasons for including the year 1910 in this report is for comparison, and for the further reason that the flow of the river has been partially controlled by the Pathfinder reservoir for this period.

The mean daily inflow of the Pathfinder reservoir, in second feet, for the past three seasons, is approximately as follows:

	1910	1911	1912
June	3278	4676	12,934
July	414	1135	4,429
August	268	359	1,865
September	375	277	1,199

The mean daily outflow of the Pathfiinder reservoir for the same seasons was as follows:

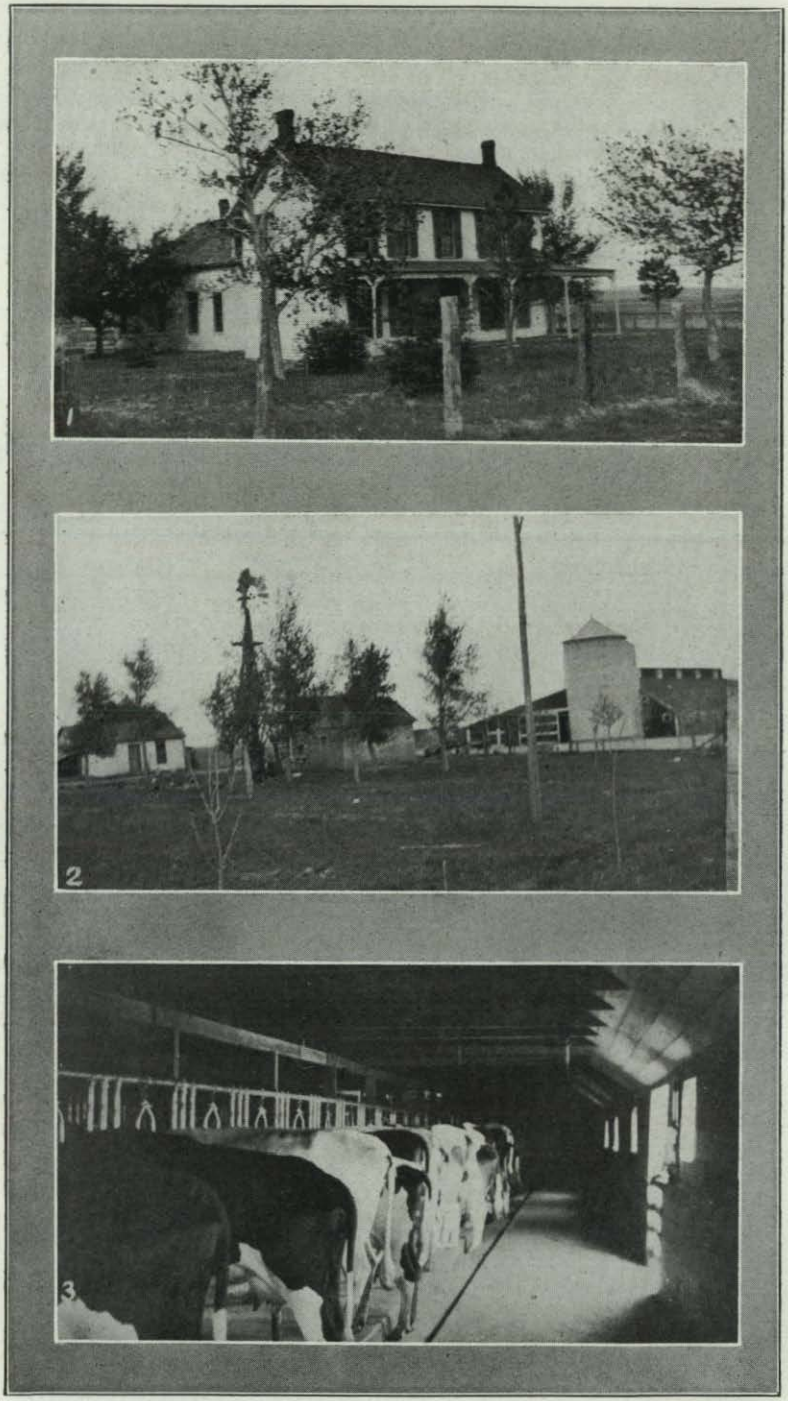
	1910	1911	1912
June	2500	3250	3750
July	2100	3400	5700
August	1950	2600	6300
September	1800	2400	5650

The mean daily inflow of the Pathfinder reservoir, in second feet, in one year with another of the three years, and assumed to be the amount of water available for the Nebraska canals, as follows:

	1910	1911	1912
June	1027	2060	2430
July	1056	2430	4150
August	555	1553	5725
September	510	1165	5125

The government project, the Inter-State canal, has approximately a maximum discharge of 1300 second feet, and the above discharge measurements for Whalen is exclusive of the amount of water taken by the Inter-State canal.

Comparing the inflow of the Pathfinder with the flow into the State of Nebraska, it can be seen, for the months of July, August and September, that the mean daily discharge into Nebraska included storage water.



DAIRY FARM NEAR KIMBALL

The amount of water needed during the months of June, July, August and September to supply all canals, varies materially during the season, depending on the amount of rainfall, wind and temperature, and the kind of crops. Also the seasons vary to a great extent. Seasons of 1910 and 1911 required more irrigation than the season of 1912.

On an average, after July 10th of each year, it will be quite certain that no canal having an appropriation dating later than 1890 can draw water from the direct or natural flow of the North Platte or Platte rivers. The purchase of storage water will be the only guarantee against a dry ditch.

It is estimated that the Inter-State canal will require not less than 350,000 acre feet to mature crops in an average season, and all the canals taking water from the Platte or North Platte rivers in Nebraska will require not less than 300,000 acre feet to supplement the flow of these rivers after July 10th of each year.

Unless the Nebraska canals make application to purchase storage capacity in the Government reservoir before January 1, 1913, according to the present ruling of the Secretary of the Interior, they will be dry canals after July 10th in an average year.

The Pathfinder reservoir has a capacity of 1,025,000 acre feet.

The amount of water stored in 1910 (storage began April 17) was approximately 256,000 acre feet. In 1911 the total amount stored was 390,000 acre feet. In 1912 the reservoir was filled. The filling began February 8th and was completed July 8th.

Prior to the year 1910 I drove over the areas under the Tri-State and Inter-State canals, and the amount of vegetation growing on a quarter section of that land in a season could be hauled off in one or two hayracks. In 1912 I passed over the same ground. I found over half of the areas under the Tri-State and Inter-State canals farmed and producing all kinds of crops, amounting to at least 800 hayracks full of alfalfa hay, for the season, or 32,000 bushels of potatoes, or 2400 tons of sugar beets to the quarter section of land.

It is not the intention of this report to mislead; on the contrary, to give reliable information, and it is impossible for one who has seen such transformation to refrain from giving it at least a mentioning.

The distribution of water in my division for the season of 1911 was not quite so strenuous as the season of 1910. However, the season of 1911 required close attention, and with the exception of a few days in the early part of June, there was just enough water to supply the canals needing water on the North Platte and Platte rivers as far as the Gothenburg canal, which favorable condition was due to the Pathfinder storage reservoir.

The season of 1912 was a rainy one, the river was bank full to Nov. 1st and prospects of continuing so until the 1st of December, having an average discharge of more than 5000 second feet since July 1st. Conse-

qnently the water commissioners of my division have had a very quiet season.

Before closing I wish to make a few suggestions for the good of the work. A self-registering river gauge would be very beneficial to the service at Bridgeport and near the state line. It would furnish a continuous record of the gauge heights, and in connection with frequent gaugings would not only give the water superintendent great assistance in keeping the discharge under the best control, but the seepage data would be of great value.

A self registering gauge would also be valuable at North Platte, Nebraska.

The present law relative to the compensation of water commissioners has not been very satisfactory, and I wish to suggest a change. The state should pay the water commissioner, but still have the commissioner a resident of the district in which he operates.

The law pertaining to the duties of the water commissioner would be more satisfactory if changed so as to give him more duties to perform. As it is at present his duty is to open or close gates in order to divide and deliver the amount of water needed, particularly in the time of scarcity. The difficulty with such limited duties is that it is hard to keep a man for this work, since he cannot afford to keep himself in readiness to act immediately on notice, to close or open gates in time of scarcity, and be paid only for those occasions. He may not get a call during the season, and yet he must be ready, for a call for his services must necessarily be very important, and a delay may cause serious damage.

In order that the office may be attractive to the kind of men who would be valuable to the service, he must receive reasonable remuneration to hold him in readiness. He should have authority, in addition to his present duties, to patrol the district for which he is appointed, watch the use of the water under each canal, see there is no waste, that the water is being placed on the lands entitled to it under the appropriations, keep a record of the flow of the canals in his district, thus conserve the use of the water.

Let him be paid by the day and fix a limit for the season, and valuable results will be attained.

The time is coming when the water for irrigation will be handled by the acre foot, and then it will be necessary for the water commissioner to devote his whole time to handling the water and keeping a record of every acre foot used in his district.

In closing, I wish to acknowledge the courtesy of Mr. Andrew Weiss, U. S. Project Engineer, in furnishing daily reports of the river discharge at Whalen and the Pathfinder reservoir.

Respectfully submitted,

ROBERT H. WILLIS,

Superintendent Water Division No. 1.

Crawford, Nebraska, Nov. 30, 1912.

D. D. Price, Sec. State Board of Irrigation.
Lincoln, Nebr.

Dear Sir:—I herewith submit my official report for the biennium ending November 30, 1912.

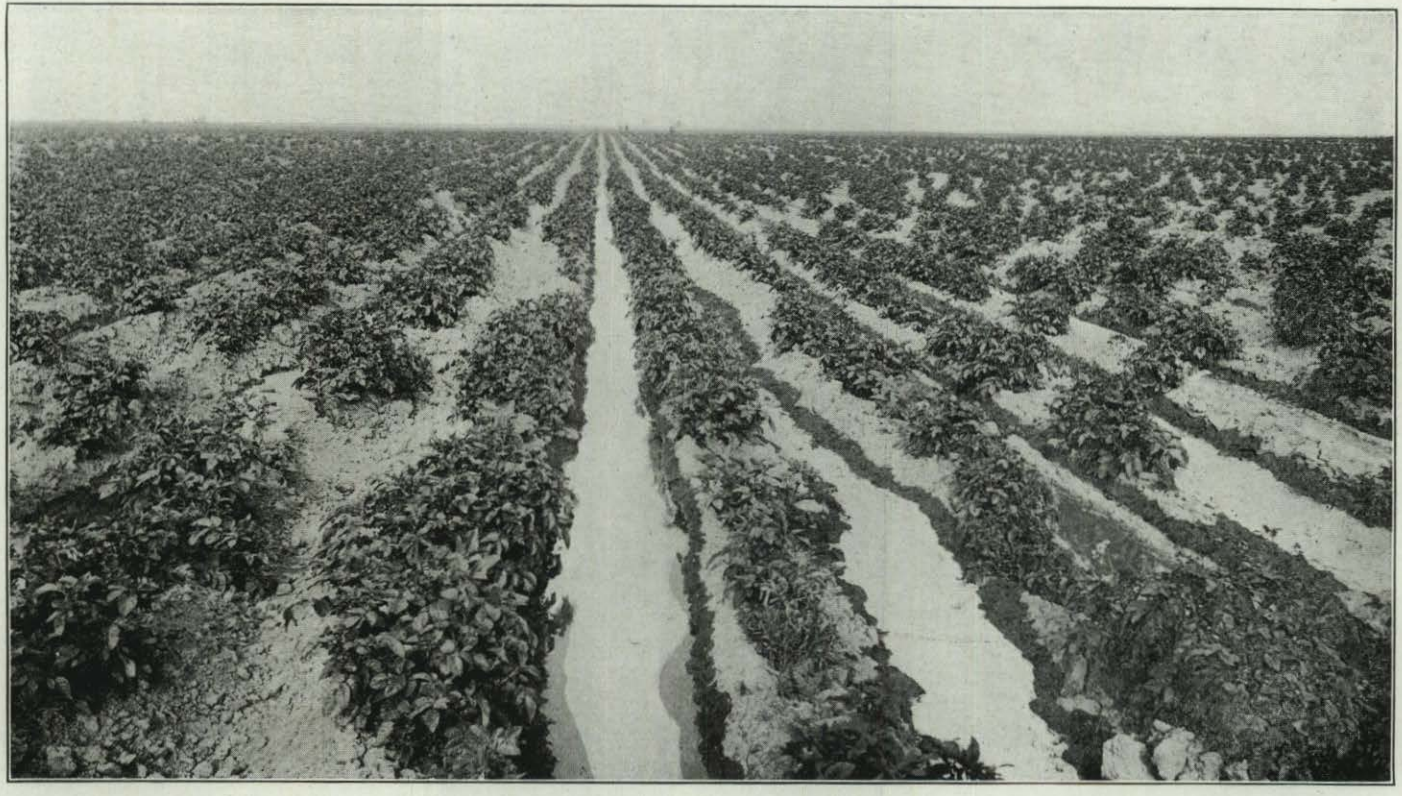
The people of this district are slowly gaining a knowledge of the benefits of irrigation and also are improving in their methods in the application of water to the land. The streams of ths part of the state, consisting of the Niobrara River, White River, Hat Creek and their tributaries are all small streams and during the months of June, July and August (which is usually considered the main part of the irrigation season) are often so low that there is but little more than enough for domestic purposes. But the people having ditches are learning that they can obtain good results by irrigating at any time when the ground is not frozen, so are using the water early in the spring and late in the fall; they have also demonstrated the fact that a thorough irrigation of alfalfa in the fall insures three good crops of hay, or one crop of hay and one of seed, the following season.

Some few have built storage reservoirs to hold storm and winter waters and many more are planning to build them. Some of the plans are on quite an expensive scale for private capital, but I think a good many will be built in the next few years. I think the time will come when the full flow of the streams in this part of the state will be used for irrigation.

The amendment to the irrigation law requiring the users of water to put in headgates and measuring boxes has been a great help to the water commissioners in distributing the water according to priorities, though I have had lots of trouble to get the law enforced. In fact, not all the ditches have suitable headgates and measuring boxes yet, but I think all will have before the next season. Another trouble I have had in the last two years has been to get commissioners that would look after the distribution of the water without fear or favor. But the last ones appointed are doing the work quite successfully. Therefore, the complaints between the different users of water are very much less than they were a few years ago.

Yours respectfully,

PAGE T. FRANCIS,
Superintendent Water Division No. 2.



IRRIGATING POTATOES

NORTH PLATTE PROJECT—NEBRASKA-WYOMING.

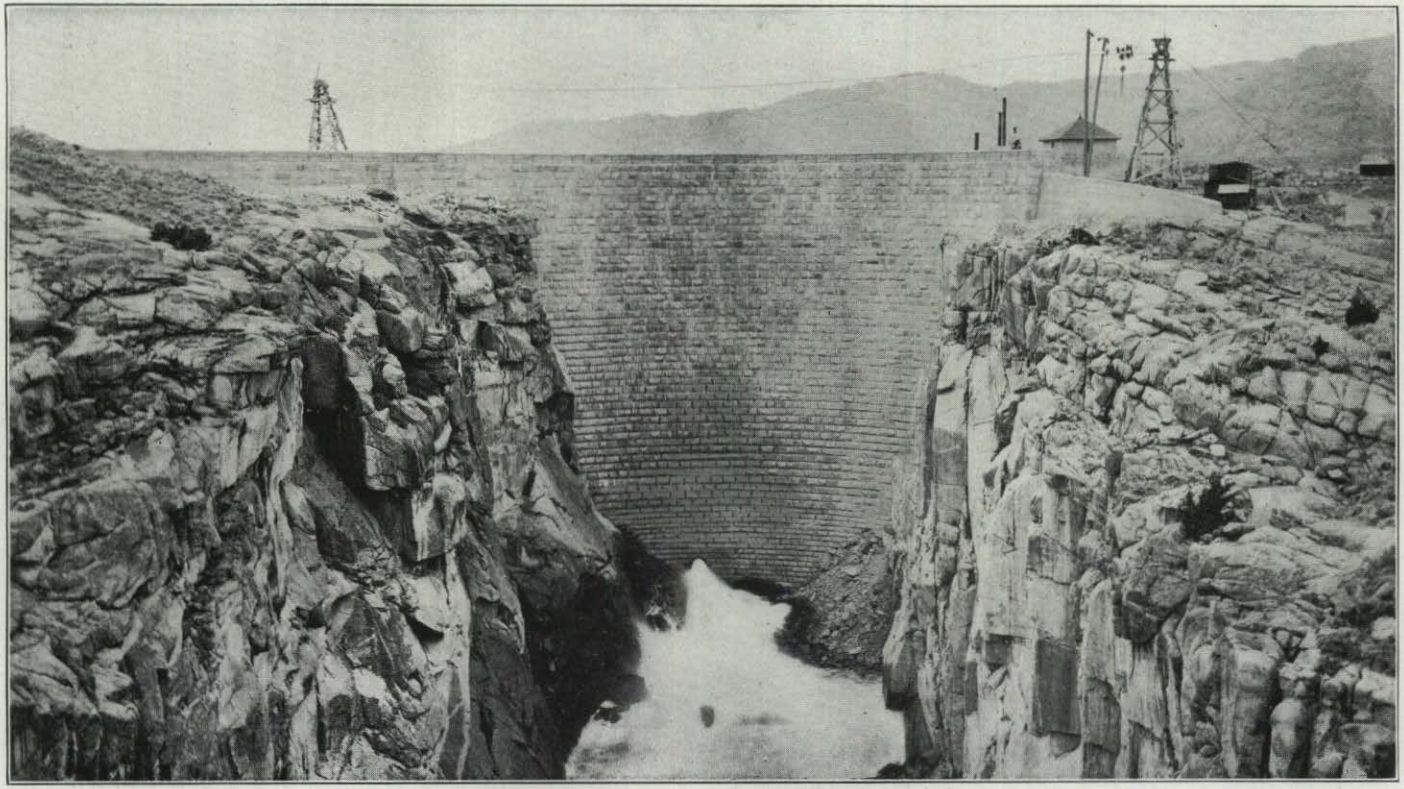
The North Platte Project for the irrigation of lands in the North Platte Valley is being developed under the Reclamation Act of June 17, 1902. This project, as it is at present planned, will consist of a storage reservoir and two canal systems, covering lands in eastern Wyoming and western Nebraska.

The storage reservoir is located in central Wyoming, at the junction of the Sweetwater and North Platte Rivers. This reservoir is formed by the construction of a dam known as the Pathfinder dam built across a narrow canyon in the North Platte River, about 47 miles southwest of Casper, Wyoming. This dam is of the arch masonry type, with a maximum height of 218 feet and a crest length of 432 feet and contains over 60,000 cubic yards of masonry. In addition to the masonry dam there has been an earth dike constructed across a saddle a short distance south of the masonry dam. The dam and dike have both been completed. The reservoir has a capacity of about 1,070,000 acre feet and covers about 22,000 acres.

The Interstate unit covers about 129,270 acres of irrigable land north of the North Platte River, between Whalen, Wyoming, and the divide between Red Willow and Indian Creeks, in Nebraska. Water for this unit is diverted from the river at Whalen, Wloming, by means of a concrete diversion dam with overflow crest 300 feet in length. Joined to the south end of the concrete dam is an earth dike 2,000 feet in length, with two and one-half to one side slopes. The reinforced concrete headgates of the Interstate canal join the overflow dam on the north. These diversion works were completed early in 1909.

At the intake, the Interstate canal has a capacity of 1,400 second feet. This capacity is maintained for 28 miles, where it is reduced to 1,200 second feet. Successive reductions in the canal capacity are made thereafter, in accordance with the requirements. At the ninety-fifth mile the capacity is 800 second feet. At this point the main canal connects with a chain of three reservoirs, of which the first and third are now under construction, and which supply the Low Line canal and laterals, in the vicinity of Winters Creek and eastward beyond Red Willow Creek. Reservoir No. 1, called Lake Alice, has a capacity of 14,000 acre feet and reservoir No. 3, known as Lake Minatare, is being built to a capacity of 67,000 acre feet. The High Line canal is a continuation of the main canal beyond Lake Alice to a point in the NE¼ of Section 36, Township 22 North, Range 52 West, a distance of 36 mlies from the diversion point at Lake Alice. The total length of the Low Line canal from its headgate at the outlet of Lake Minatare to its end is 42 miles. The above reser-

SITE PATHFINDER DAM U. S. R. S., NORTH PLATTE PROJECT



PATHFINDER DAM, U. S. R. S., NORTH PLATTE PROJECT

voirs are formed by means of earthen dams, containing a total of about 1,130,000 cubic yards of earth fill and 52,000 cubic yards of paving. The total completed system will consist of about 780 miles of canals and laterals.

The Interstate Unit is divided into four districts. The first district contains 17,840 acres of irrigable land, located between Whalen and the sand hills, north of Torrington, Wyoming. This is a Carey Act segregation and is under the control of the North Platte Canal and Colonization Company. The United States delivers water to the headgates of this company's laterals under special arrangement. The remainder of the land under the Interstate Unit is divided into three lateral districts as follows: First Lateral District extending from the Sand Hills near the state line in Wyoming to Dry Spotted Tail Creek, in Nebraska, and containing about 36,760 acres of irrigable land; the Second Lateral District, extending from Dry Spotted Tail Creek to Winters' Creek, and containing about 34,100 acres of irrigable land; the Third Lateral District, containing all the irrigable land east of Winter's Creek, about 38,000 acres. The First Lateral District was opened to irrigation in 1908 and the second in 1909 and 1910. A portion of the Third District was opened to irrigation in 1911 and an additional amount in 1912. The remainder of this district will be opened in succeeding years as rapidly as completed. In addition to the lands in the above districts there are about 2,540 acres of irrigable land in small tracts, which will be opened to irrigation as soon as practicable.

The following table shows the land opened to irrigation in 1912 and prior years:

Nebraska	84,669 acres
Wyoming, U. S. R. S.	2,005 acres
Wyoming, N. P. C. & C. Co.	17,837 acres
Total	104,511 acres

Of the above 48,200 acres under the Reclamation Act, and 5,534 acres under the North Platte Canal and Colonization Company were in crops in 1912.

The present rate of payments for land under the Reclamation Act is as follows: Building charges $55.00 per acre, payable in ten annual installments, beginning with $1.00 per acre, and increasing by units uniformly to $10.00 per acre in the tenth and fianl installment. Operation and maintenance charges are at present $1.25 per acre each year. This rate is regulated by the actual cost and is expected to decrease as the system becomes settled and seasoned, owing to the substantial character of construction adopted.

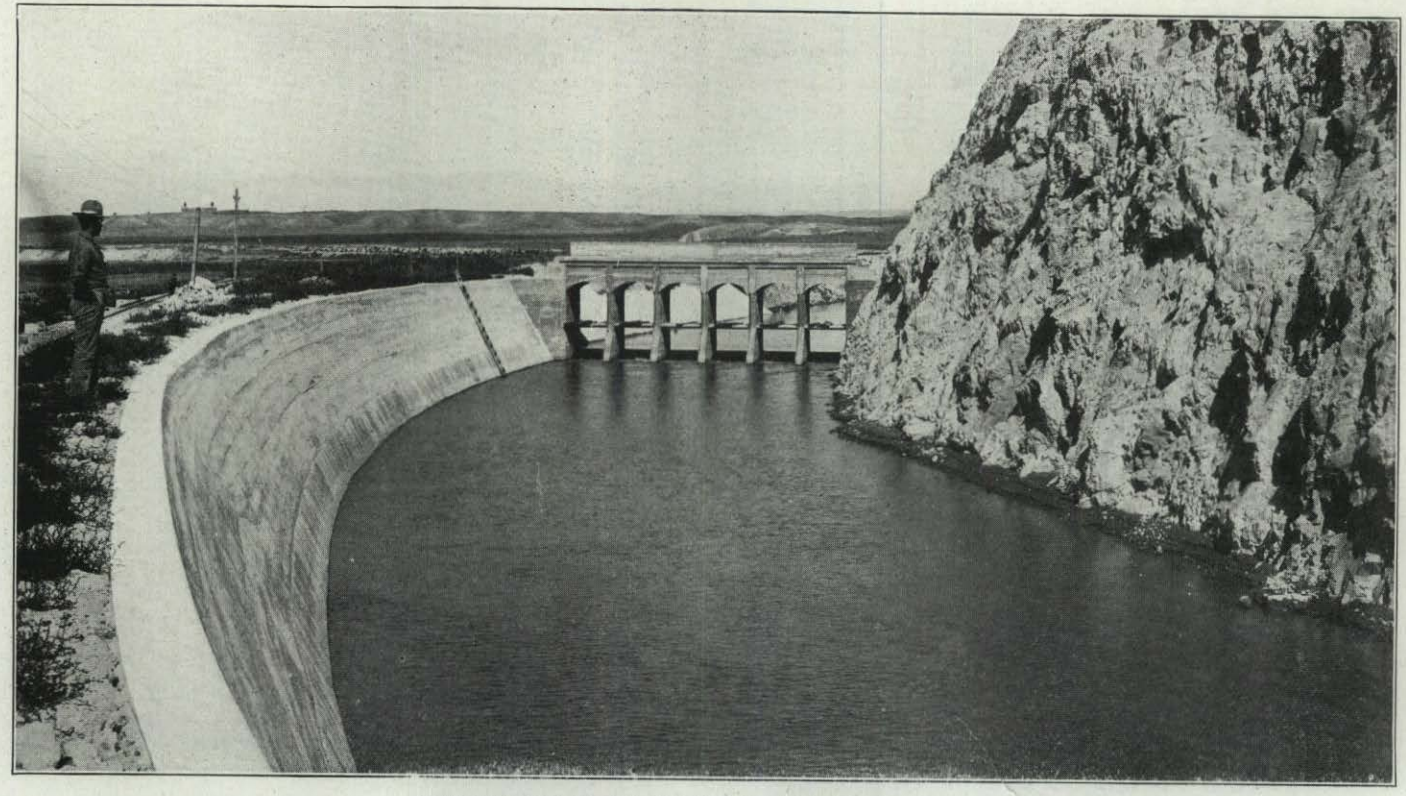
The Fort Laramie Unit, the construction of which was conditionally approved by the Department, will comprise a canal system on the south side of the North Platte River, which will cover about 107,000 acres of irrigable land, situated between Whalen, Wyoming, and a point south

of Minatare, Nebraska. The Main Canal will take out of the river at the Whalen diversion dam directly opposite the intake of the Interstate canal. The capacity of the canal at the intake will be about 1,370 second feet, which capacity will be gradually diminished to the end of the canal. The land covered by this canal will include 59,000 acres in Wyoming and 48,000 acres in Nebraska, of which 7,000 acres in Wyoming and 37,400 in Nebraska are in private ownership. On account of the large proportion of land in private ownership, the unit is approved only on condition that 95 per cent of the private land holders will pledge their land for the building charges of the irrigation system and to dispose of their holdings in excess of 160 acres to parties qualified to make water right applications for this land under the Reclamation Act.

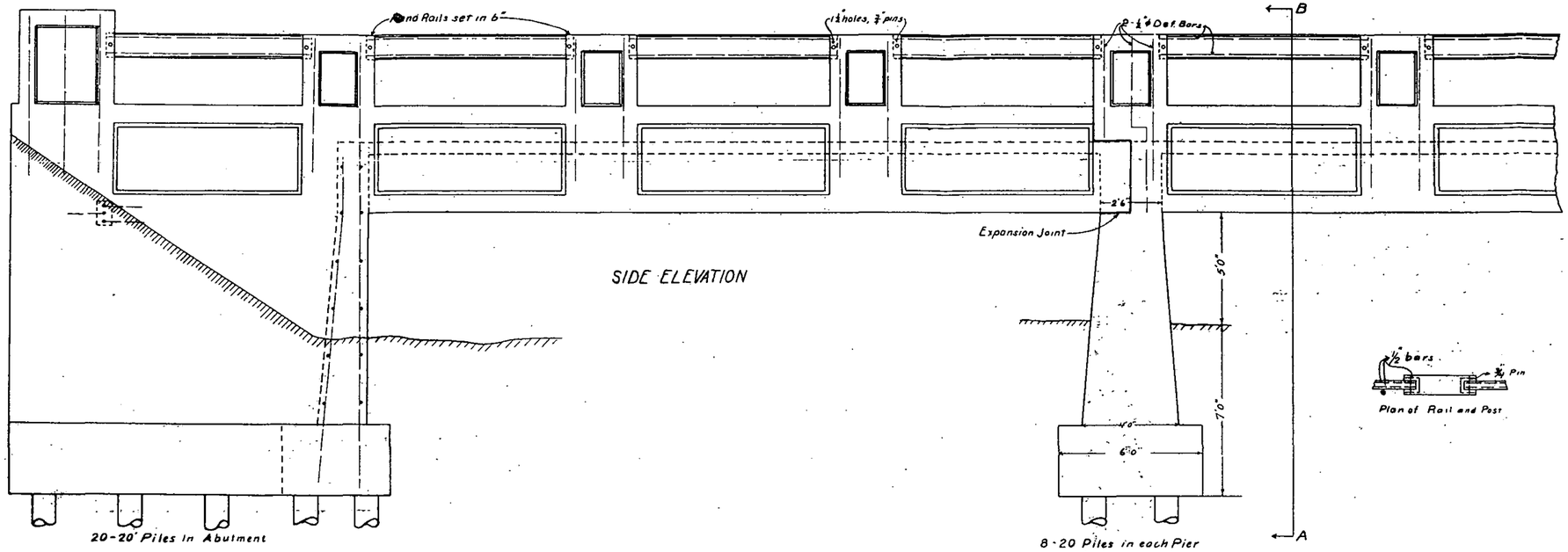
The irrigable land under the North Platte project is divided into farm units of approximately 80 acres of irrigable land. Under the Reclamation Law one person cannot obtain water for over 160 acres of land, whether it is in private or public ownership.

Practically all land under the Interstate Unit has been entered under the homestead law, but there are occasional vacant units yet available for entry. Land is reserved from all forms of entry under the Fort Laramie Unit. There are, however, many opportunities to purchase private lands, or lands upon which final proof as to residence and cultivation has been made, both under the Interstate and Fort Laramie Units. Purchasers should make themselves familiar with local conditions, the Reclamation Law, and the various public notices relating to the lands prior to making purchases. Careful preliminary investigation may save much misunderstanding and resulting troubles and difficulties. As a rule, a person should not attempt to settle on the average unimproved reclamation homestead with a working capital of less than $1,500 or $2,000, and a larger sum would be required in many cases. It must be remembered that ordinarily it will take the products of several seasons to pay for improvements, machinery and seed, and the returns from these unimproved western soils are usually light for the first several years, while the expense of preparing the ground for irrigation, seeding to alfalfa and purchasing necessary farm equipment is correspondingly heavy during this period.

ANDREW WEISS, Project Engineer, U. S. R. S.

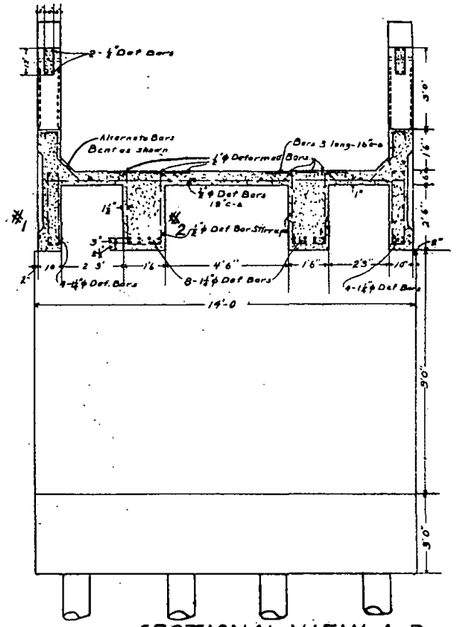


GOVERNMENT CANAL NORTH PLATTE PROJECT

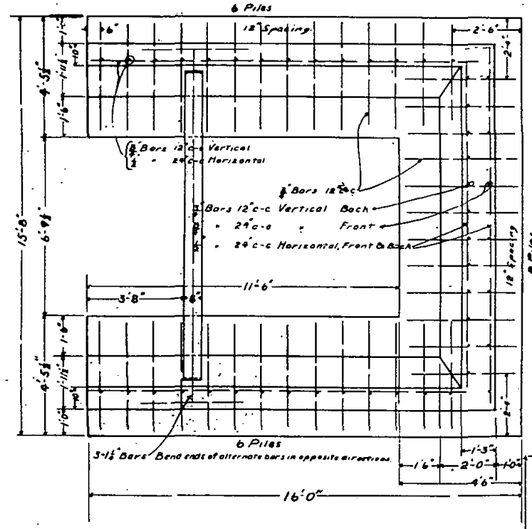


SIDE ELEVATION

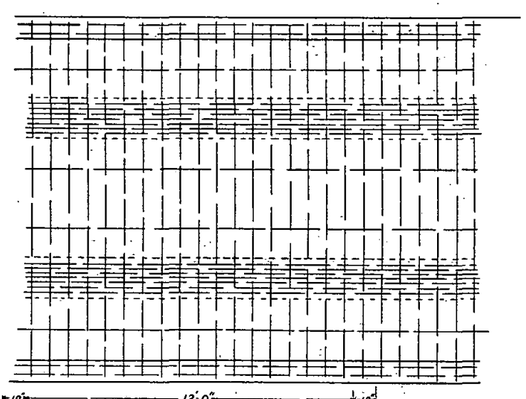
Plan of Rail and Post



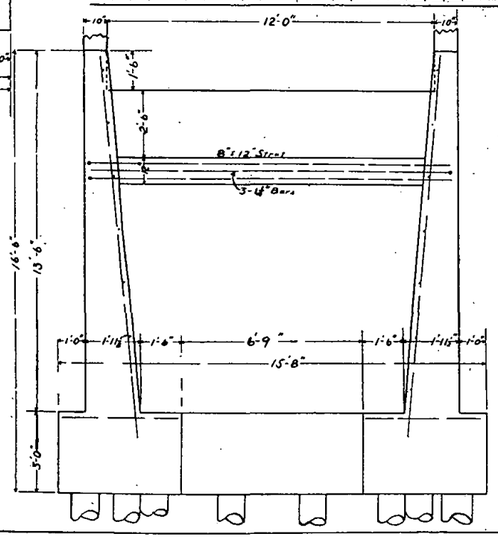
SECTIONAL VIEW A-B



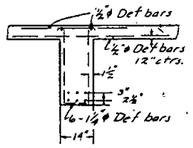
PLAN OF ABUTMENT

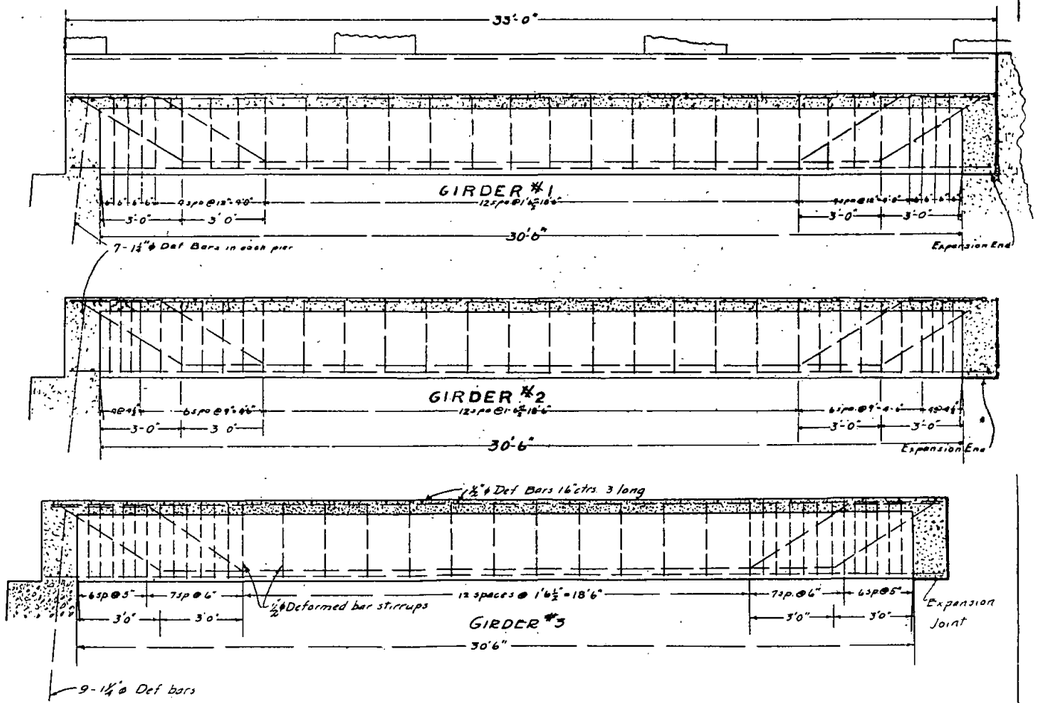


PLAN OF FLOOR REINFORCEMENT



END ELEVATION





GENERAL NOTES.

All concrete to be of 1:2:4 mixture except rail beams and piers to the bottom of girders which can be of 1:2½:5 mixture.

Each girder shall be built continuously. Forms shall not be removed until concrete is thoroughly set.

Expansion joint to be ¾". A sheet of galvanized iron or zinc is to be placed between girder and pier to prevent adhesion. Joint in floor slab to be covered with a 1"x4" strip of creosoted timber.

Piles to be not less than 12" at large diameter nor less than 9" at small diameter. One foot of top of piles to be imbedded in concrete. The contractor shall protect pile against brooming while being driven.

BAYARD STATE AID BRIDGE

State Engineer's Office

STANDARD PLAN CONCRETE GIRDER BRIDGE

33' SPAN

To carry 20 ton traction engine

Designed by H.W. Roberts

Approved Donald D. Price

January 1912 State Engineer

FARM UNDER GOVERNMENT CANAL NORTH PLATE VALLEY

RULES OF PROCEDURE

Adopted by

STATE BOARD OF IRRIGATION, HIGHWAYS AND DRAINAGE

Governing Matters Coming Before the Department

CLAIMS

Section 6795, Cobbey's Annotated Statutes of Nebraska for 1911, reads as follows:

(Same—Determination of Priorities.) It shall be the duty of the State Board to make proper arrangements for the determination of priorities of right to use the public waters of the State, and determine the same. The method of determining the priority and amount of appropriation shall be fixed by the said Board."

Filing of Claim Affidavit:—

1. Claimants of the right to the use of public waters of the State of Nebraska for irrigation, power, or other useful purposes, who base their claims upon the law of 1877, upon the law of 1889, or by actual and beneficial use, shall file in the office of the State Engineer, a claim affidavit, which shall be made upon a blank, prepared by the State Engineer, furnished by him free of cost, and filed by him under date of its receipt at his office.

2. This claim shall give the location of the diversion works, the land through which the canal runs, specifically describe the land irrigated, if for irrigation purposes; the location of all dams, flumes, headgates, canals, power house, etc., if for power or other purposes.

The claim also set forth the date of beginning construction work, the date of completion, and the time of the application of the water to the beneficial use for which it is claimed.

3. Upon the filing of any such claim affidavit, the State Engineer shall fix a time and place for the holding of a hearing.

Notices:—

Notice of hearing shall be served in the following manner:

1. The State Engineer shall prepare an official notice, setting forth the time and place of the hearing, together with a general description of the rights claimed, and calling upon all interested parties to appear and protect their rights, to be inserted in a local paper of general circulation in the county in which the diversion works or plant of claimant is located,

and also in some newspaper of general circulation in the State published at the State Capital, which notice shall run for four consecutive weeks in said papers at the expense of the claimant.

2. The State Engineer shall send by registered mail a duly certified copy of the above notice to each water user in the watershed, in which the claim is located, as their names and addresses appear on the records in the State Engineer's office, at least thirty days before the date of said hearing, together with a copy of these rules.

3. Letters so addressed shall be registered, according to the rules of the postoffice department, with a request for a return, which card when returned, shall be preserved with the papers in such case.

Hearing:—

1. A hearing shall be held for the purpose of receiving testimony, offered by parties in interest in support of and adverse to the rights claimed, and shall be presided over by the State Engineer, or one of his Assistants, as he may designate, who shall keep a complete record of the proceedings thereof.

2. All evidence shall be submitted in typewritten or printed form. If oral, it shall be taken down and transcribed at the expense of the claimant or contestant offering the same.

3. Claimants may appear in person or by attorney; but appearance must be made at time and place specified for hearing.

4. If any party to the proceedings shall desire to take the testimony of witnesses residing outside the State, or whose attendance cannot be secured at any of the times and places fixed by the State Engineer, the testimony of such witnesses may be taken by deposition in the same manner and upon the same notice as that required for the taking of depositions in cases pending in the District Court.

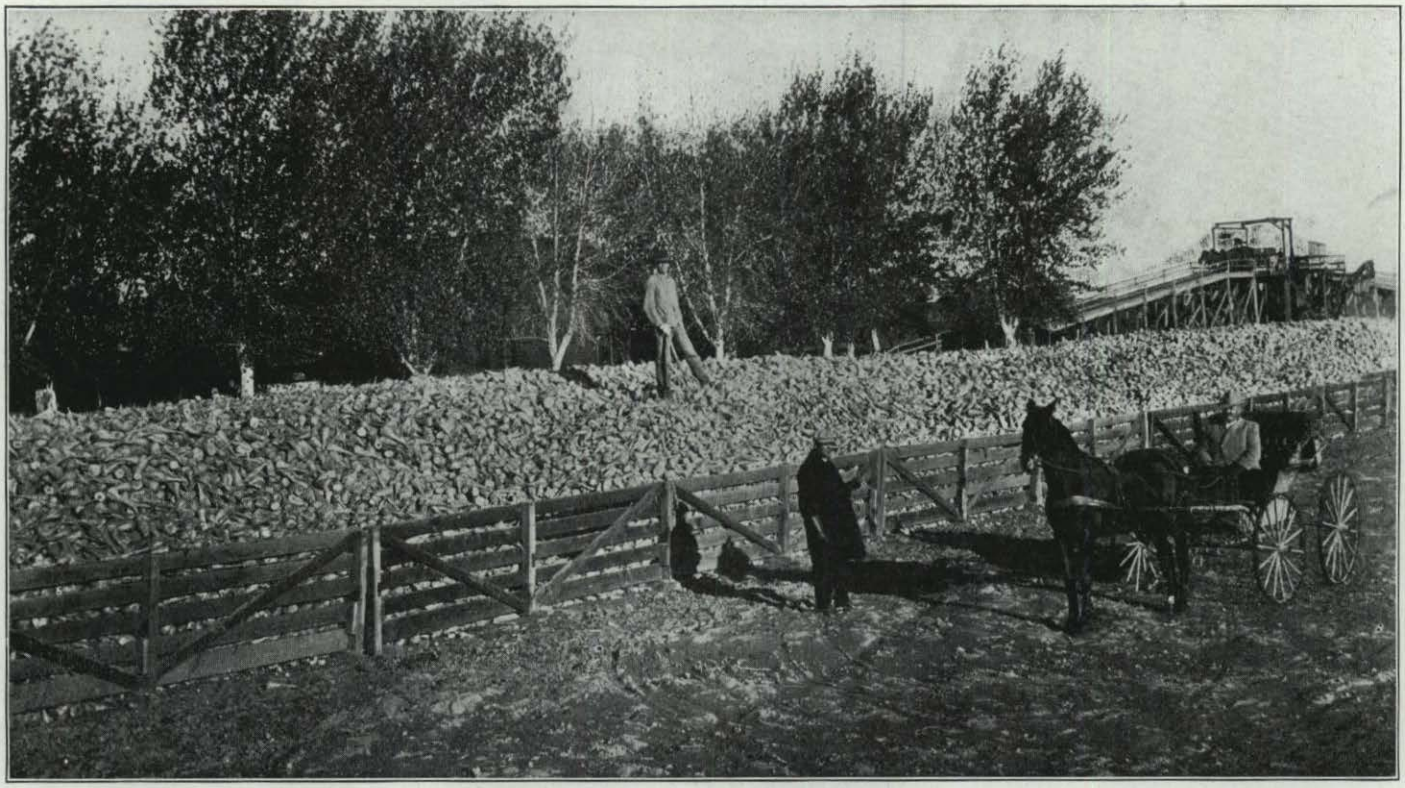
5. The State Engineer shall have the power to limit the time for the completion of the taking of testimony.

6. When the taking of such testimony shall be completed, or the time fixed for the completion thereof shall have expired, the State Engineer shall fix the time for hearing argument upon the evidence taken, and permit interested parties to file briefs.

Opinion:—

1. Upon receipt of the written testimony, taken at the hearing and any other investigations that the State Engineer may deem necessary to make, and briefs, if presented, there shall be rendered an opinion of facts and of law based upon the evidence presented.

2. Upon the rendition of a decision, the State Engineer shall forward a duly authorized copy of the same by registered mail to all water users within the watershed, as their names and addresses appear upon the records in the State Engineer's Office, together with a copy of these rules. Return registry cards shall be requested and filed with papers in such cases.



SUGAR BEETS IN NORTH PLATTE VALLEY

Rehearings and Contests:—

1. Any person deeming himself aggrieved by any decision may at any time within thirty days after receipt of such decision file with the State Engineer a petition for a rehearing. Said petition shall set forth the grounds relied upon for a rehearing and be duly verified.

2. In case sufficient reasons are found in the petition, provided for above, to grant a rehearing, the petitioner will be notified of the same by the State Engineer.

3. Notices of holding of rehearings shall be given by mail to interested parties or their attorneys appearing of record.

4. The said rehearing shall be held at a time and place designated, and interested parties may file briefs and oral argument may be made and limited to a reasonable time. In general, rules governing the original hearing shall apply to rehearing.

5. A contest against a claimant shall not be heard until after the rendition of a decision on the claim.

APPLICATIONS

Any application made in accordance with the Irrigation Laws of the State of Nebraska to appropriate any of the public waters of the State shall be acted upon in the following manner:

Blanks:—

1. Applications shall be made on blanks furnished by the State Engineer's Office free of charge.

2. All questions may be fully and carefully answered.

3. A careful drawing on township plat, showing all streams with their names, canals and other improvements should be made; if for irrigation, land to be irrigated must be carefully shaded.

4. If application for permit to irrigate, owners of land should acknowledge their consent to have their lands watered through the allowance of the proposed application before a Notary.

Filing Fees:—

1. IRRIGATION—$5 for each 1,000 acres irrigated, or fraction thereof.

2. STORAGE—$5 for each 5,000 acre feet or fraction thereof stored.

3. POWER—$5 for each 50 theoretical horsepower or fraction thereof.

Rule on determining theoretical horsepower: The amount of theoretical water horsepower upon which fees shall be paid under the provisions of Section 6918 of Cobbeys' Annotated Statutes of Nebraska for 1911, shall be computed by multiplying the maximum amount of water claimed or diverted, expressed in cubic feet per second, by the average total fall utilized, expressed in feet, and dividing the product by 8.8.

Filings:—

Upon receipt at the State Engineers' Office of an application accompanied by the proper filing fee, the application shall be filed under date received and duly recorded.

Corrections:—

1. Thirty days shall be given after date of filing for the State Engineer to examine an application and if any defect is found therein, to return the same to the applicant for correction with the endorsement of the State Engineer upon the same, as to the corrections desired.

2. If application is returned, corrected within thirty day limit, it shall take priority of original filing.

Action Taken:—

1. The State Board, through the State Engineer, shall approve or dismiss the application according to the results of his investigation of the same, as set forth by law.

2. The State Engineer shall return to the applicant by registered mail his application, with the endorsement of the State Engineer thereon, accompanied with a copy of these rules. Registry receipts shall be requested and filed with papers in above case.

3. Upon the receipt of an approved application by the applicant, the applicant shall be duly authorized to begin work of construction.

Work:—

Section 6841 of Cobbey's Annotated Statutes for 1911 reads as follows: (Prosecution of work on appropriation.) Within six months after the approval of any application for water under this act by the State Board of Irrigation the person, persons, corporation or association making such application shall commence the excavation or construction of the works in which it is intended to divert the water and shall vigorously, diligently and uninterruptedly prosecute such work to completion unless temporarily interrupted by some unavoidable and natural cause, and a failure to comply with this section shall work a forfeiture of the appropriation and all rights thereunder.

Maps:—

Section 6808 of Cobbey's Annotated Statutes for 1911 reads as follows: (Map—Plat—Penalty.) Upon approval and allowance of an application, the applicant shall file in the office of the State Board of Irrigation, Highways and Drainage, within six months thereafter, a map or plat, which map or plat shall be made to conform to the rules and regulations of said Board as to material, size and coloring, and upon a scale of not less than two inches to the mile. Such map or plat shall show the source from which the proposed appropriation is to be taken, and all proposed dams, dykes, reservoirs, canals, power houses and any other structures for the purpose of storing, conveying or using water for any purpose whatsoever under the Irrigation Law of this

State, and their true courses or positions in connection with the boundary lines and corners of lands which they occupy, and when lands are listed for irrigation, such lands must be shown in government subdivisions, or fractions thereof, as the case may be, and no rights shall be deemed to have been acquired until this section of the Statutes shall have been complied with, and a failure to comply with this section shall work a forfeiture of the appropriation and all rights thereunder.

2. (1) All maps filed to comply with the above law, must be on tracing cloth 14 inches wide and 16 inches long, with a one inch margin on the top, bottom and right hand end and a 3 inch margin on the left hand end for binding. Where the whole area cannot be shown on one sheet, additional sheets must be used, each sheet representing a township, until the whole area is covered.

(2) Short ditches and small areas must be made on a scale of 4, 6 or 8 inches to the mile, where, by using such scale, the area of the map will not exceed 12 inches square. In all other cases, where this cannot be done and where larger areas are to be shown, a scale of 2 niches to the mile is to be used.

(3) The position of the headgate must be indicated by some tie to a government section or quarter section corner, giving the course and distance therefrom. The course of the ditch or canal must also be shown.

(4) At intersections of section lines the distance from the nearest government corner to the center line of the ditch must be given in feet and where the land reclaimed is fractional, the fractional area to be irrigated, of each quarter-quarter section must be marked on plat in acres.

(5) The center line of the proposed canal must be in red. Any other canals and all streams and drains must be in medium blue. The area proposed to be irrigated must be carefully shaded in light red. If topography is shown by contour lines, such lines must be in burnt sienna. All other matter, such as hatching, land lines, lettering, figures, etc., must be in black.

(6) All maps must be made from actual measurements on the ground and properly certified by some competent engineer or surveyor.

(7) The presumption of the law is, that after a permit is allowed, it will require not more than six months to make the proper surveys, get the necessary information and construct and file the required map.

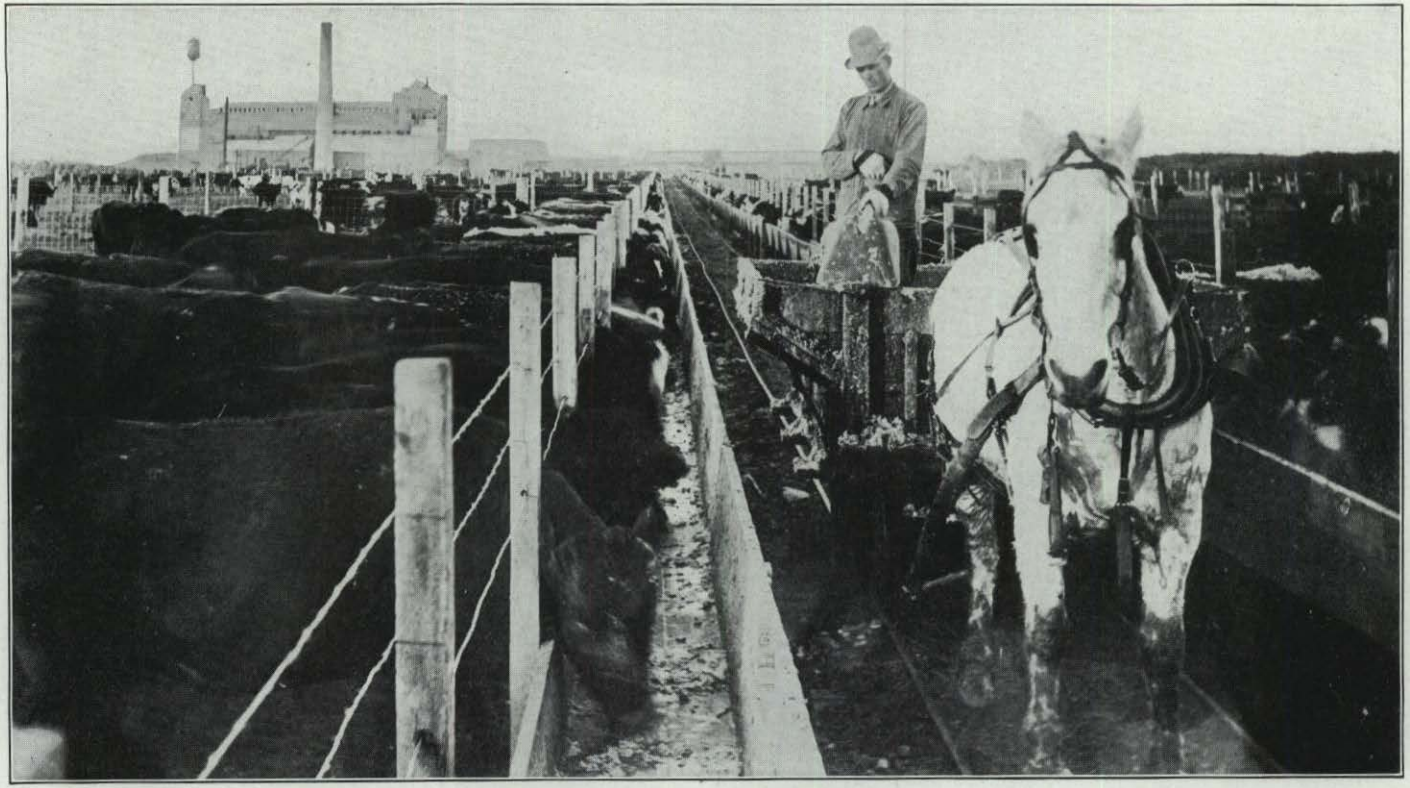
(8) The following certificates must be printed upon the first sheet properly filled out and signed:

State of Nebraska }
..... County } SS.

I hereby certify that the survey of.....
.....was made under my direction, and is accurately represented on this map consisting of..... sheets.

.....
Engineer (or Surveyor)

Dated.....19.....



UTILIZING BEET PULP, SCOTTSBLUFFS, NEBR.

State of Nebraska }
..... County } SS.

I hereby certify that this map consisting of..... sheets was made with my full knowledge and consent, and at my request, and correctly shows the location and course of the distributing works, the course from which the appropriation is taken, and the legal subdivisions of the land upon which the water appropriated is to be applied, as shown by Application No....., filed in the office of the State Board of Irrigation on the..... day of.....

Dated.....19.....

(9) If the appropriation is for any purpose other than irrigation, this certificate must be so worded as to agree with the facts.

(10) At the time an application is filed, a preliminary map is to be made upon the township plats accompanying the blanks furnished by this office, and which is made a part of the application, and the applicant should follow out the foregoing instructions as to color and shading and such other matter as is possible to gather and place upon a preliminary map. This map must contain sufficient data upon which to base an opinion in handling the application."

Contests and Hearings:—

1. Any person deeming himself aggrieved by any decision may at any time within thirty days after the receipt of such decision, file with the State Engineer a petition for a hearing. Said petition shall set forth the grounds relied upon for such hearing and must be duly verified.

2. In case sufficient reasons are found in the petition, provided for above, to grant a hearing, the time and place for holding the same shall be set and notices of the same shall be given interested parties by registered mail by the State Engineer thirty days in advance of the holding of said hearing.

3. Interested parties may file with the State Engineer a brief, and also appear in person to introduce evidence and make oral argument.

4. A duly verified copy of a final decision shall be sent to all interested parties by registered mail by the State Engineer.

5. After the allowance of an application, contests may be brought by any interested party to show that the applicant has not faithfully complied with the Irrigation Laws of this State, or that the proposed project is a detriment to the public welfare.

DAMS

Plans and specifictaions of dams and petitions for approval of same.

Section 6817 of Cobbey's Annotated Statutes for 1911 reads as follows: "(Dams) Any person, corporation or association hereafter intending to construct any dam for reservoir purposes or across the channel of any running stream above ten feet in height, shall, before beginning such construction, submit the plan of the same to the State Board

of Irrigtaion for their examination and approval, and no dam above ten feet in height shall be constructed until the same shall have been approved by such Board."

Drawings:

The drawings representing the plan of a proposed dam should be made with a good quality of India ink upon sheets of tracing cloth 14 inches wide and 16 inches long with a 3 inch margin on the left hand end for binding (but extra lengths not to exceed 30 inches, are allowable if necessary) as many such sheets to be used as requirements demand. These drawings must be numbered and given a proper title. They must include:

1. A map of the site showing the position of the dam, the meanders of the stream and the flow line boundaries of the reservoir, all properly connected to land lines and government corners, also the surface area of the reservoir and the cubic contents in acre feet.

2. A cross section of the stream where the dam is to be built, showing the surface of the ground in profile with a sufficient number of soundings to indicate the underlaying formation, the elevation of the dam and spillway, the surface of the impounded water and such openings or conduits through the dam as are contemplated.

3. A sketch of the dam in plan, or as viewed from above, outlining the top and slope lines of the dam, the water line, spillway, side walls, buttresses, etc.

4. Cross sections of the dam at several points such as will show the mechanical construction of the different parts.

5. Specifications must accompany the drawings, explaining them and setting forth the material to be used and the methods of construction in clear, plain and unmistakable terms.

6. Drawings must be certified to by some competent engineer and also by applicant with a certificate of the general form of the one set forth under maps of application.

Petition for Approval:—

Following is a general form of petition for approval of plans which can be varied according to requirements. This petition should show whether the petitioner is an individual, a partnership or a corporation and by what authority the waters of the State of Nebraska are appropriated.

BEFORE THE STATE BOARD OF IRRIGATION, HIGHWAYS AND DRAINAGE

In the matter of the Petition for Approval of plans for the Construction of a proposed dam under Application No..... made by ..... to appropriate the waters of the State of Nebraska for .....

To the Honorable State Board of Irrigation, Highways and Drainage:

Comes now your petitioner ..... and states:

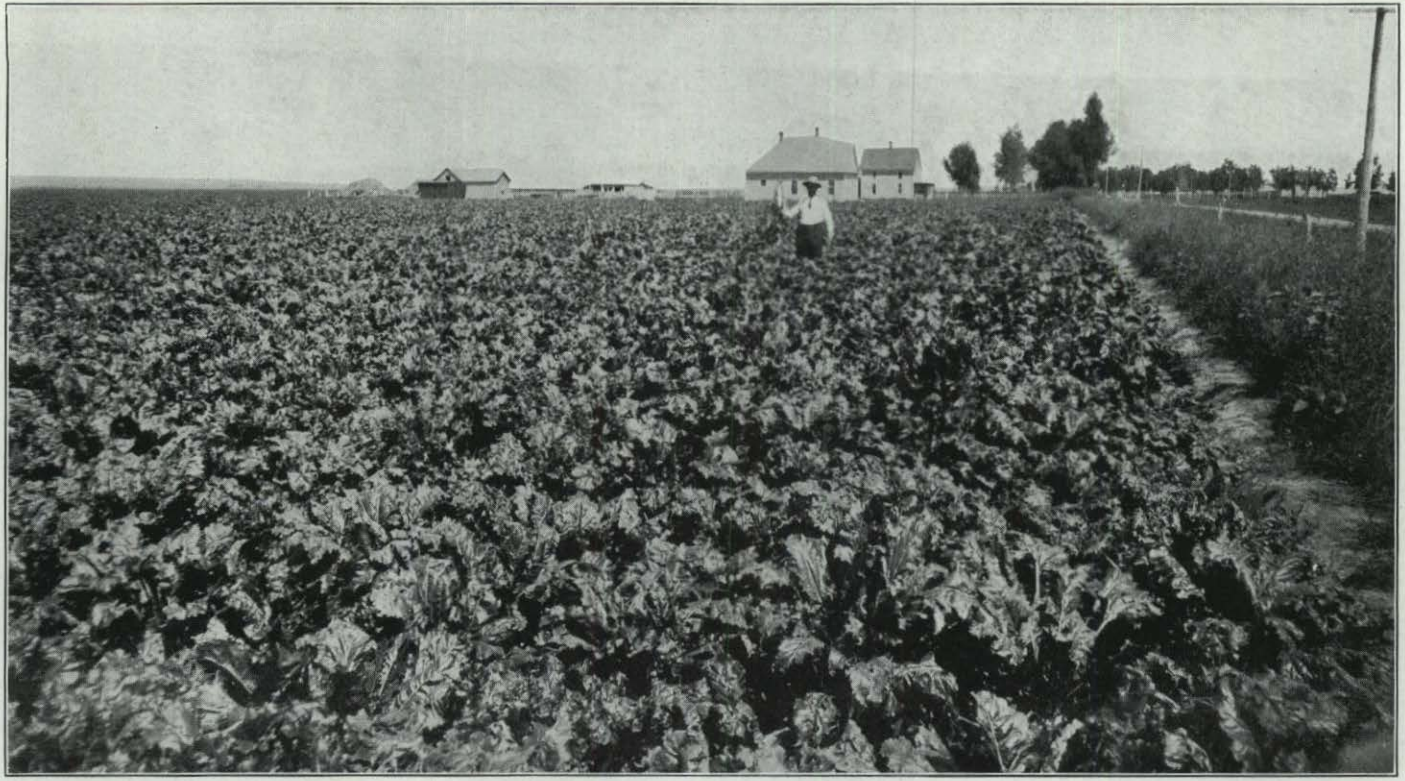
1. That he is the original applicant for the appropriation of water from ..... in the ..... ¼..... ¼..... of Section ..... T.....N., R..... in..... County, Nebraska, under Application No....., filed in your office .....19....., and approved .....19.....

2. That in order to carry out, perfect and consummate the object of said appropriation, it is necessary to construct a dam across said ..... to a height of more than ten feet, and according to the laws of the State of Nebraska, in such cases made and provided a plan of such proposed dam must be submitted to the State Board for their examination and approval, which approval must be obtained before such proposed dam can be constructed.

3. That your petitioner has employed engineers to make proper soundings and other measurements at the site of the proposed dam and to make plans and specifications for the proper construction of the same, which specifications are submitted herewith with plans marked: Sheet No. 1, General Map; Sheet No. 2, Cross Section of dam site, showing borings; Sheet No. 3, General drawings of dam; Sheet No. 4, Details of Dam with cross sections; Sheet No. 5, Details and location of power house; each of said sheets being also marked "....." and each of said sheets, with specifications, being made a part of this petition.

Wherefore your petitioner prays that said plans and specifications as above described and as submitted herewith be approved and that such order be made by this Board as shall be just and equitable to this petitioner.

.....



SUGAR BEET FIELD WESTERN NEBRASKA

State of Nebraska.)
..... County) ss.

..... being first duly sworn upon his oath says that he is the original applicant for an appropriation of water under Application No. ..... and that the matters and facts set forth in the foregoing Petition are true as he verily believes.

.....

Subscribed in my presence and sworn to before me this..... day of .....19.....

.....

Notary Public.

In cases where the petitioner is a corporation and in cases where transfers have been made, the following forms of statements are suggested, but in all cases the facts must be shown, and the petition verified to correspond:

"Comes now your petitioner ..... and states that it is a corporation duly organized and existing under and by virtue of the laws of the State of Nebraska, being organized for the purpose of ....."

"That on the.....day of..... filed in your office Application No....., for a permit to appropriate the waters of the State of Nebraska, which application was on the .....day of..... approved by this Board."

"That on the.....day of..... said ..... assigned to this petitioner all of his rights and privileges under said permit, and that this petitioner then undertook to fulfill the conditions necessary to complete the appropriation contemplated under said permit."

Where the petitioner is a partnership, the statement should read:

"Comes now your petitioners..... and state that they are a partnership doing business under the name and style of ....."

Action:—

1. Upon receipt of plans of a dam and petition for approval of the same, they shall be filed under date of arrival and the plans shall be given an official number for filing purposes.

2. The State Engineer may require more complete data than that shown upon plans and specifications or may require changes in the same as in his judgment is best and shall have the right to return plans and specifications for corrections.

3. If at the discretion of the State Engineer, or upon request of any person, he deem it necessary, a personal inspection shall be made of the proposed dam site.

4. The State Engineer shall first act on the plans and specifications for a dam, which action shall be subject to the approval of the State Board.

Contests and Hearings:—

1. Any person deeming himself aggrieved by any decision may at any time within thirty days after the receipt of such decision file with the State Engineer a petition for a hearing. Said petition shall set forth the grounds relied upon for such hearing and must be duly verified.

2. In case sufficient reasons are found in the petition provided for above to grant a hearing, the time and place for holding the same shall be set, and notices of the same shall be given interested parties by registered mail by the State Engineer fifteen days in advance of the holding of said hearing.

3. Interested parties may file with the State Engineer a brief and also appear in person to introduce evidence and make oral argument.

4. A duly verified copy of a final decision shall be sent to all interested parties by registered mail by the State Engineer.

5. After the approval of dam plans, contests may be brought by any interested party to show that the applicant has not faithfully complied with the Irrigation Laws of the State, or that the proposed dam is a detriment to the public welfare.

Fees:—

1. For examination of plans for any proposed dam, fifty cents for each foot in height and actual expenses while visiting and examining the site thereof.

2. The height of a dam shall be measured from the deepest part of the foundations to the crest or top of the dam.

3. Piling of any sort shall be considered as part of the foundations.

PETITIONS

Petitions for extension of time in which to complete work:

Following is a general for of petition for extension of time which can be varied according to requirements. This petition should state whether the petitioner is an individual, a partnership or a corporaiton and by what authority the waters of the State of Nebraska are appropriated and all transfers of title if any.

FORM FOR PETITION FOR EXTENSION OF TIME

BEFORE THE STATE BOARD OF IRRIGATION, HIGHWAYS AND DRAINAGE

In the Matter of the petition for an extension of time in which to complete work under Application No.....made by ..... for a permit to appropriate the waters of the State of Nebraska.

To the Honorable State Board of Irrigation, Highways and Drainage:

Comes now your petitioner.....and states:

1. That he is the original applicant for an appropriation of water from.....in the.....¼.....¼ of Section....., T.....N, R.....E, in.....County, Nebraska, under Application No.....filed in your office.....and approved.....

2. Your petitioner represents that he has used due diligence in the prosecution of the work of construction required to complete the ditch, and other work by the time required. (State reasons for cause of delay, which reasons must constitute good and sufficient grounds upon which to base an extension of time.)

3. Your petitioner represents that notwithstanding the foregoing hindrances and embarrassments, the causes of delay are now removed, and he is now ready, willing and able to complete said work of construction and the application of water by.....19.....

Wherefore your petitioner prays that the time for completing said canal under said permit granted under Application No..... be extended for a period of at least.....from and after.....or until .....19....., and the date for the application of water to beneficial use be fixed not earlier than....., 19....., and that such order be made by this Board as shall be just and equitable to this petitioner.

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

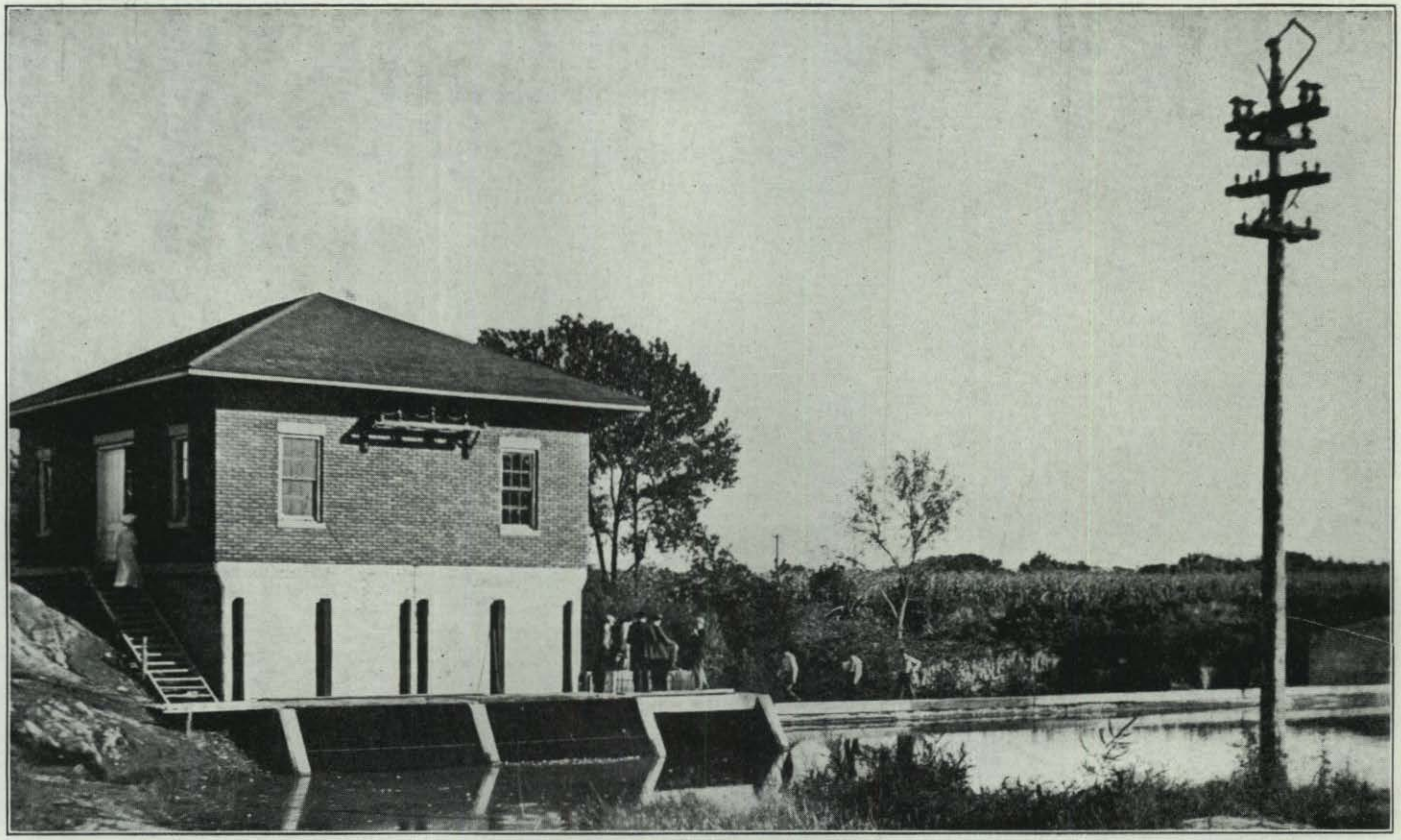
.....being first duly sworn on his oath states that he is the original applicant under Application No..... for the appropriation of waters of the State of Nebraska; that he has read the above and foregoing petition and knows the contents thereof and that the facts therein set forth are true, as he verily believes.

.....

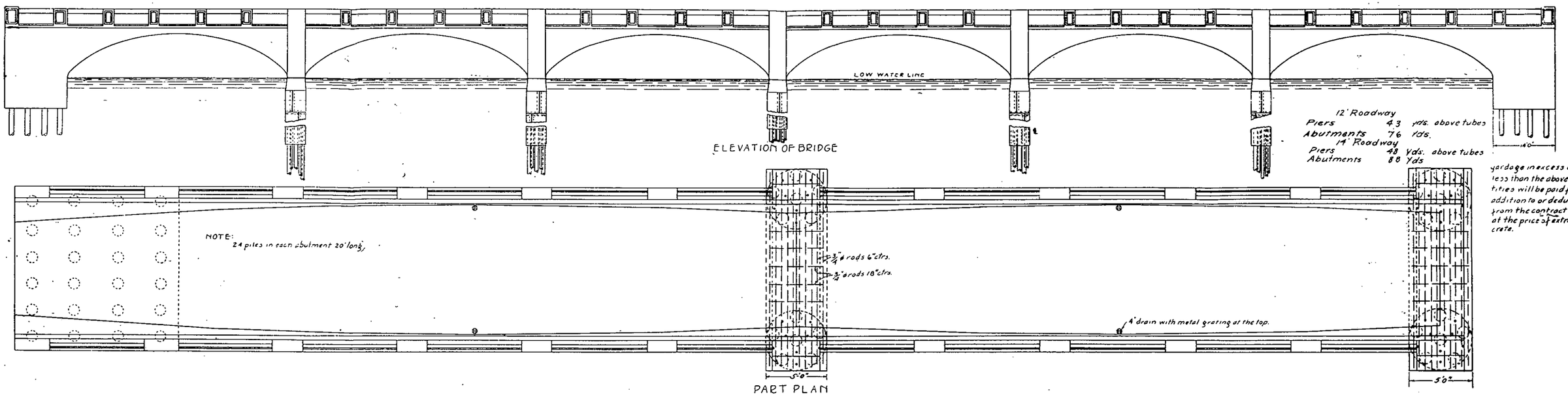
Subscribed in my presence and sworn to before me this..... .....day of....., 19.....

.....

Notary Public.

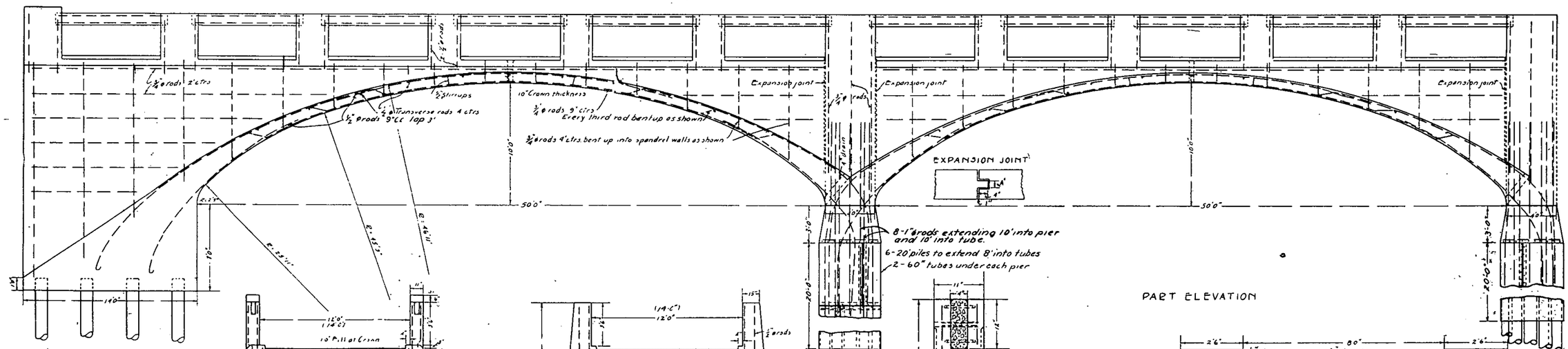


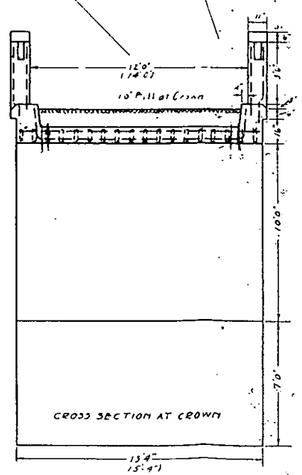
BLUE RIVER POWER CO., MILFORD

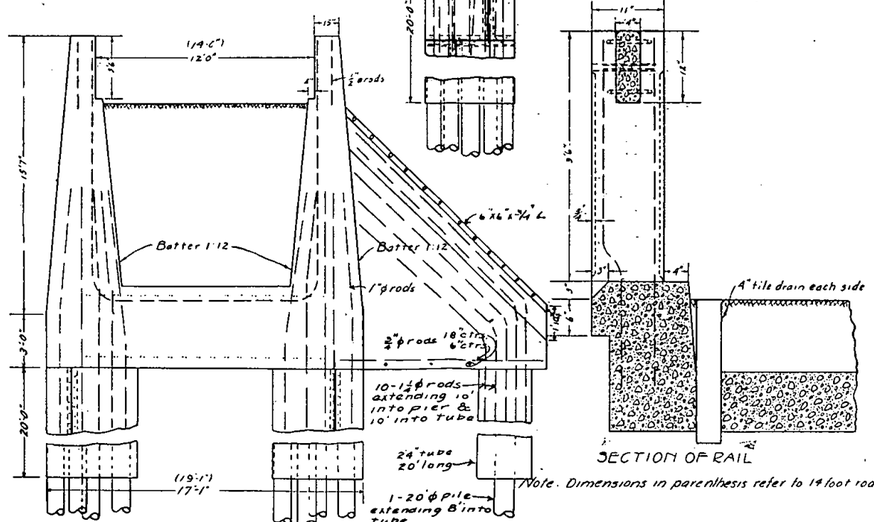


12' Roadway
Piers 43 yds. above tubes
Abutments 76 yds.
14' Roadway
Piers 48 Yds. above tubes
Abutments 88 Yds

yardage in excess of or less than the above quantities will be paid for in addition to or deducted from the contract price at the price of extra concrete.

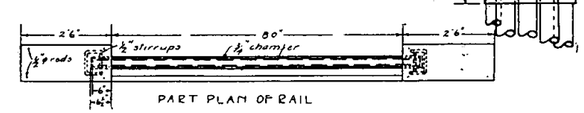


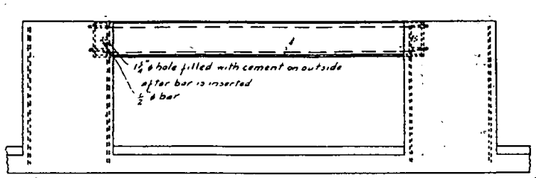


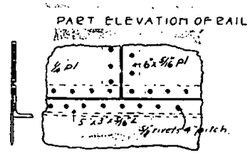


Note. Dimensions in parenthesis refer to 14 foot roadway

PART ELEVATION







GENERAL NOTES

Concrete in arch ring and spandrel walls to be 1 2 4 mixture, in abutments, piers, and rail beams 1 : 2½ : 5 mixture
Arch ring shall be cast in longitudinal sections and the work to be carried on continuously until the section is completed
Centers shall not be struck until the fill is made over the arches and the filling shall not commence until the concrete is thoroughly set
Contractors bid must include cost of fill over arches
Piles to be not less than 9" at small diameter
Contractor must protect top of piles from brooming while being driven. All piles shall be 20' long, & of the top of piles under abutment shall be imbedded in concrete
Tubes to be ¼" in thickness, 5' in diameter, 20' long, butt joints, ⅝" rivets 4" pitch; filled with 1 2½ : 5 concrete

CARNS NEBR.

STATE ENGINEER'S OFFICE
STANDARD PLAN
CONCRETE ARCH BRIDGE
50' SPAN
To carry 20 ton traction engine
Designed by H.W. Roberts
Drawn by L.M. Erickson
Approved [signature] Feb 1912
State Engineer

Action:—

1. Upon receipt at the State Engineer's Office, the petition shall be filed under date of arrival and shall be acted upon by the State Board through the State Engineer.

Hearing:—

1. Any person deeming himself aggrieved by any decision may at any time within thirty days after the receipt of such decision file with the State Engineer a petition for a hearing. Said petition shall set forth the grounds relied upon for such hearing and must be duly verified.

2. In case sufficient reasons are found in the petition provided for above to grant a hearing, the time and place for holding the same shall be set, and notices of the same given interested parties by registered mail by the State Engineer thirty days in advance of the holding of said hearing.

3. Interested parties may file with the State Engineer a brief, and also appear in person to introduce evidence and make oral argument.

4. A duly verified copy of a final decision shall be sent to all interested parties by registered mail by the State Engineer.

Fee:—

A filing fee of fifty cents shall be charged for filing of above petition.

CONTESTS

General Rules:—

1. Any party desiring to contest a claim shall file with the State Engineer a written notice of contest and petition setting forth the grounds therefor, together with a verified proof of service of notice and petition upon the opposite party. Within fifteen days from the date of service of said notice and petition, the contestee shall file with the State Engineer his answer thereto, if any he desires to make, together with a verified proof of service of a copy of said answer upon the contestant, who shall then have ten days from the date of service of same in which to file with the said Engineer a reply; provided, however, that the State Engineer may extend the time for answer and reply upon good cause shown.

2. Where the contestee is a non-resident or cannot be found within the State, then the said contestant shall file with the State Engineer in lieu of said verified proof of service of notice and petition, an affidavit setting forth the fact, that service cannot be made in the State, whereupon the State Enginer shall designate some newspaper published at the county seat of the county within which the original notice of appropriation was filed, in which newspaper shall be published for four consecutive weeks, a notice setting forth the following facts: (a) That such contest has been instituted, together with the name and address of the contestant or his attorney of record; (b) the name of the claimant and the name of the stream from which the contested appropriation is

claimed, together with the location of the point of diversion of such appropriation; (c) that a notice of contest and petition stating the grounds therefor are on file with the State Engineer; (d) the date upon or before which the answer must be filed by the contestee, which date shall not be earlier than ten days from the last date of publication of notice.

3. On or before the date set for the filing of the contestee's answer, said non-resident or absent contestee shall file the same with the State Engineer, together with a verified proof of service of a copy thereof upon the contestant or his attorney of record.

4. That said petition stating grounds of contest and answer thereto shall be verified.

5. Service upon corporations may be made upon the same officers and in the same manner as provided in the case of a summons issued by a court of law.

6. Proof of publication of the above notice shall be filed with the State Engineer on or before the date set for the filing of the contestee's answer.

7. When the issues have thus been made up, the State Engineer shall set a date and place for taking testimony and the hearing of the cause and each party thereto shall be notified thereof by registered mail.

8. At the time and place designated for hearing, each party shall produce his evidence, the contestant opening and closing.

9. Continuances may be granted at the discretion of the State Engineer to either party at or before the time for hearing upon good cause shown.

10. The testimony offered may be oral or by deposition. If oral, it should be taken down by a stenographer and transcribed at the expense of the party offering the same, except in case of cross examination, the expense of which shall be borne by the opposite party; the stenographer to receive the legal rate per folio therefor, payable at the time such evidence is offered. Depositions submitted must have been taken in accordance with the rules in a court of law.

11. Copies of decisions in matters of contests shall be mailed to parties in interest.

12. If the postoffice address of any person is unknown, then the decision shall be mailed to said claimant in care of the County Clerk of the County within which the claim is located.

Rehearing:—

1. Any person deeming himself aggrieved by any decision, may at any time within thirty days after receipt of such decision file with the State Engineer a petition for a rehearing. Said petition shall set forth the grounds relied upon for a rehearing and be duly verified.

2. In case sufficient reasons are found in the petition provided for above, to grant rehearing, the petitioner shall be notified of the same by the State Engineer.

3. Interested parties may file with the State Engineer a brief and also appear in person to introduce evidence and make oral argument.

4. In general, the case shall be made up and be controlled by the rules governing contests.

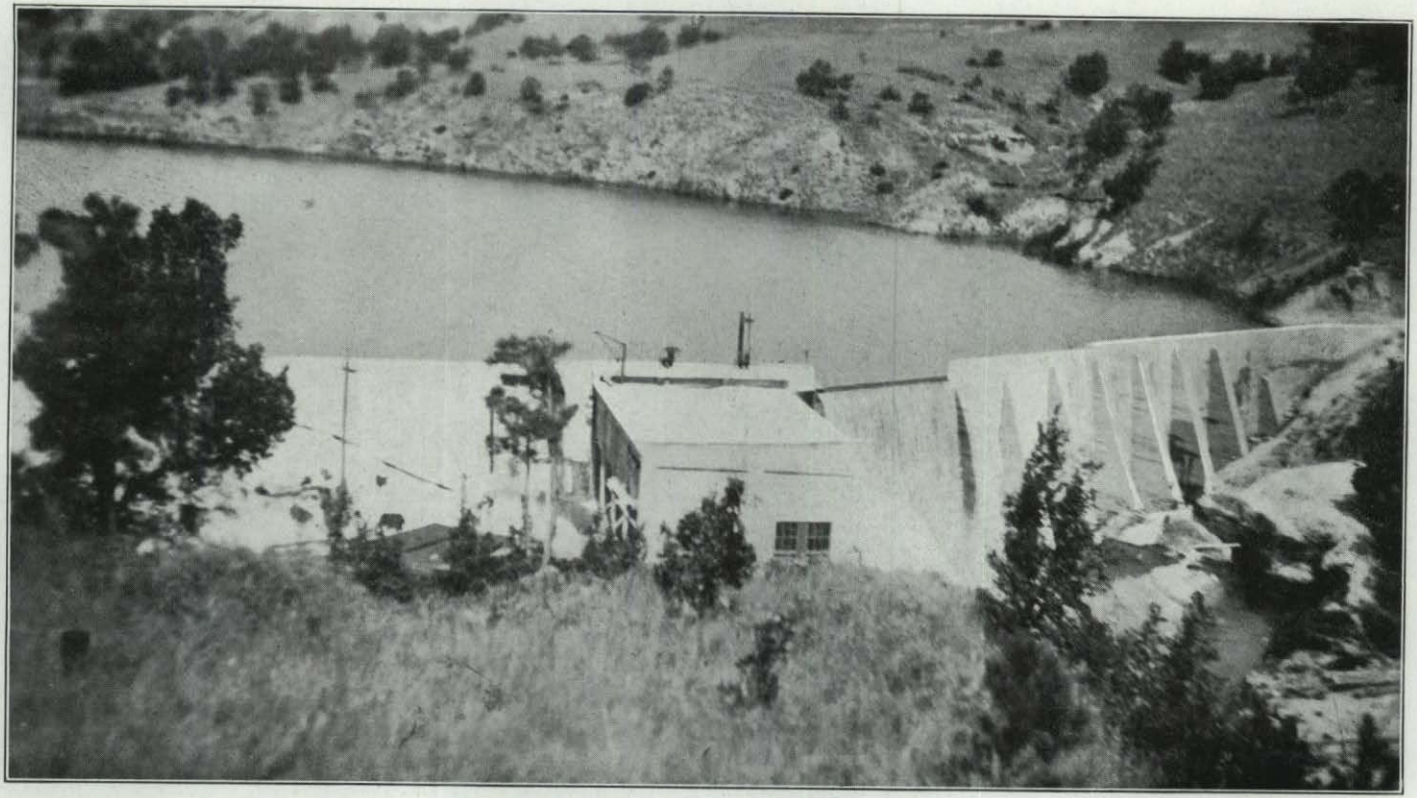
The above Rules and Regulations have this day been approved and adopted by the State Board of Irrigation, Highways and Drainage.

CHESTER H. ALDRICH,
President;
GRANT G. MARTIN,
E. B. COWLES.

DONALD D. PRICE,
State Engineer, Secretary.

Witness my hand and the seal of the State Board of Irrigation, Highways and Drainage, this seventh day of February, 1912.

(Seal)



AINSWORTH POWER PLANT

WATER POWER

During the last two years a great deal of publicity has been given to proposed water power developments along the lower Loup and Platte Rivers by the newspapers. The Board has held hearings on all the different proposed power projects in the above territory and have disposed of many of the older claims, which have been outlawed by reason of non-use and non-compliance with the irrigation law. The outcome of these hearings and contests has been to allow the first project on the lower Loup, which is commonly known as the "Columbus Development," to H. E. Babcock, who is backed by Henry L. Doherty and Company of New York City. This proposed project diverts the water at a point on the Loup River southwest of Genoa, Nebraska, and returns the water to the Loup River just west of Columbus.

The next project is what is known as the "Boggs Filing," backed by the Commonwealth Power Company and George G. Moore of Detroit, Michigan. This proposed project diverts the water just west of Columbus from the Loup River and makes the development of power north and a little west of the city of Schuyler, returning the water to the Platte River in that vicinity.

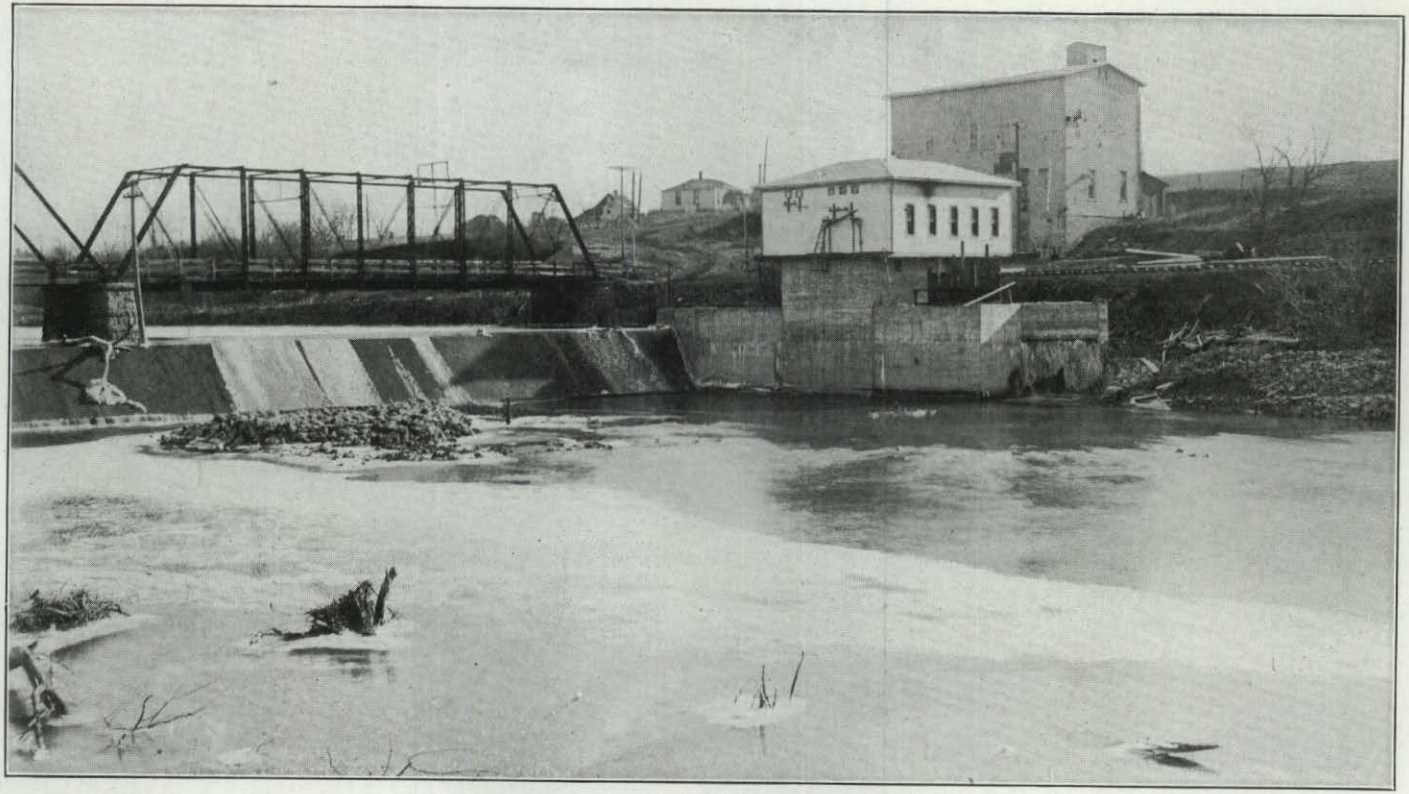
The third project is what is known as the "Fremont or Richards Filing." Under this, it is proposed to divert the water from the Platte River south and east of Schuyler on the south side of the river and make the development of power in the bluffs on the south side of the Platte River south of Fremont and return the water to the Platte River in that vicinity. Mr. Richards is backed by Kountze Brothers, bankers, in the development of this proposed project.

This leaves free for development without any conflict one with the other three large water powers, but, as yet, no signs of actual work of construction has developed under any one of the above.

The great interest taken in the proposed development of these large water powers in the State has increased the interest in water power throughout the entire State. Numerous filings have been made on small water power sites and actual developments in many cases are being made at the present time. The importance to the State at large of the development of water power cannot be over-estimated. At present, practically the only industry in the State is agriculture and this condition will prevail until such time as large manufacturing industries are able to secure advantageous conditions in regard to power, as are available in other states.

The amount of power which could be developed from the Loup River alone would more than supply the present demand of the central and eastern portion of the State and also attract manufacturing interests by reason of cheap power.

The greatest benefit to the people at large would result from the building of interurban electric lines, an industry which has never been



HOLMESVILLE MILL AND POWER CO.

developed in this State on account of the exceeding high cost of operation, due to the high cost of manufacturing power. Numerous small water plants are at present furnishing electricity for lighting purposes to many small towns throughout the State. There are still a large number of these small water developments which are yet unimproved, the development of which would furnish cheap power to small cities. All the encouragement possible should be given to the development of water power wherever available.

At the present time, the State has no official records to show how much water power can be developed on any of its streams. A survey of the important streams, which would show the amount of power that could be developed and the various locations where power plants could be built advantageously would undoubtedly stimulate the development of water power.

The present laws in regard to the prosecution of the work of construction on applications to appropriate the waters of the State for power purposes should be amended, so as to leave no room for any dispute as to whether or not the applicant was complying with all the requirements of the law.

It is further recommended that a law be passed prohibiting a nonresident or foreign corporation from procuring, purchasing or holding any interest in any water right within the State. This will enable the State Railway Commission to completely regulate all power and irrigation developments in the State.

HIGHWAYS

Under the present law this Board does not have charge of the highways further than the supervision of the building of State Aid Bridges. There has been a great deal of talk concerning the improvements of roads throughout the state, and the interest taken during the past two years would seem to indicate that some action will be taken by the coming legislature for the establishment of a highway department in this office.

The soil conditions in this state are of such a character that good earth roads can be built and maintained at a very moderate cost. Under the proper supervision the building and maintenance of good earth roads will cost no more than is at present being expended upon the highway system of this state. At present the major portion of the money which is paid out upon the roads is expended under the supervision of road overseers. These road overseers are almost invariably men who have little or no knowledge of the proper methods of road construction and who are elected by the voters of their township without any regard to their qualificatins.

If the amount of money which is being spent at the present time could be used under the supervision and direction of a competent road builder and this continued for a period of five years throughout the state, we would have as a result the finest system of dirt roads in the world. This system could be maintained at a cost far below what the counties are now paying for their road work by an efficient plan of dragging. Permanent roads, such as brick or concrete, are out of the question on account of the necessity of improving so many miles of road in each county at once and the extremely high cost of these materials. Macadam roads, while cheaper, are still very expensive to build and more expensive to maintain than the brick or concrete. Under a traffic of motor driven vehicles a macadam road goes to pieces very fast and is less satisfactory than an earth road.

It is recommended for the consideration of the legislature that this office be given charge of the highways of the state and that an assistant, who shall be a capable engineer and understand thoroughly road building and construction, be authorized, together with such other assistants and help as may be necessary to carry on the work. It is further recommended that the present office of road overseer be abolished and that the road work in the various counties be placed entirely under the supervision of the County Highway Engineer, to be appointed by the County Commissioners or Supervisors, subject to the approval of the State Engineer. This last provision is necessary in order to prevent the office of County Highway Engineer from becoming a political office, rather than an office to be held by virtue of a man's qualifications.

It is further recommended that it be made the duty of the County

Highway Engineer to oversee all road work and especially the dragging of the roads, and the dragging to be done at the right time, and that a proper fund should be provided for by the County Commissioners of each county to enable the carrying out of this work within their own county. The work to be done by the additional assistant, who may be added to the State Engineers' office, and who might be called State Highway Engineer, will be entirely of an advisory nature, conferring with the County Highway Engineers and giving them the benefit of his advice and experience, except any work in which state money is to be expended, which should be entirely under the supervision of the State Highway Engineer.

BRIDGES

County.

In Section 6139 of Cobbeys' Annotated Statutes of Nebraska, 1911, it is made the duty of this office to furnish bridge plans to counties upon request of the County Board for any bridges that they may desire. This section was enacted by the State Legislature of 1905 and an appropriation of $3,000 was made for preparing a set of standard plans. These plans were prepared and the remainder of this appropriation allowed to lapse; these plans were to be furnished to the county for the actual cost of preparing the same.

Section 6141 of Cobbey's Annotated Statutes, 1911, being a bill enacted at the 1911 session of the eLgislature, it is provided that all bridges shall be constructed so that they will sustain a load of not less than twenty tons. The enactment of this law rendered valueless all plans which had been prepared previous to 1911 in this office, none of them being designed to carry a twenty ton load. Although this section is somewhat indefinite as to what is meant by load of twenty tons, this office has interpreted the same to mean a concentrated load, which would be a twenty-ton traction engine with axles 11 ft. 6 in. centers and 8 ft. gauge, two-thirds of the load to be carried on the rear axles and distributed over twelve feet in width. These are the dimensions of a twenty-ton traction-engine, which is considered to be the heaviest concentrated load coming upon an ordinary highway bridge.

A standard set of plans, together with a number of special designs, have been prepared to meet the requirements of different counties during the past two years. Several counties have ordered sets of these standard plans, but by no means all of them. This law should be amended so as to compel the counties to obtain all plans for bridges from this office. This will give us uniformly designed bridges throughout the state and will thus guarantee the safety of all bridges and their carrying capacity. The necessity for this is shown by the fact that each year there are a number of bridges, which fail under the twenty-ton-traction loading, and these failures are invariably accompanied by injuries to the men in charge of the traction engine and not infrequently lives have been lost.

It is also a fact that under the present system of county bridge letting each bridge company either files their own plan and bids upon the same, or the county board adopts a plan furnished by some bridge company, and all of the bidders base their bids upon these plans, and also under the general bridge laws, specifying the way in which bids are to be received, it is next to impossible for any one to determine who is the lowest and best bidder. The responsibility and reputation of a bidder, together with his past experience, should always be taken into consideration in letting a contract, together with the amount of his bid. The

plans furnished counties by bridge companies are always general and all details are left off; in many cases they are merely a sort of picture of a bridge, and none of the sizes and heights of the members are given, and the specifications are always a joke. This is in no way a reflection on the bridge company, but is merely a matter of self-preservation, which is permitted under the present bridge law, each company having to fight and use any method that they may to get a contract.

By adopting a standard set of plans and specifications throughout the entire state compelling all bridges built within the state to comply with the same, will work to the benefit, not only of the people of the state, but also to the bridge companies, themselves, for the reason that each company will be placed upon the same footing and will be bidding upon the same plans and specifications. There should also be a state inspector of bridges and an adequate appropriation made for this office to enable it to furnish standard plans and specifications to all counties free of charge and also furnish an inspector free of cost, to inspect the work while under construction and to advise with county boards in letting of contracts. This will in no way detract from the power of the present county boards or interfere with them, but will enable them to procure better work and better results for the money expended.

There should be a penalty fixed and made the duty of some officer to enforce the law against the building of bridges which do not meet with the standard requirements.

This office during the past two years has furnished inspectors on bridge work to counties requesting the same at the actual traveling and hotel expenses while away from this office to do such inspection work. Several counties who have procured plans for bridges from this office, have also had inspection work done.

State Aid.

Under the State Aid Bridge law enacted by the legislature of 1911, there was created a levy of one-fifth of one mill per annum on each dollar of assessed value of the Grand Assessment Roll of the state. This amounted to about $85,000 for the year 1911 and $90,000 for the year 1912. The proceeds of this levy constitute what is known as "The State Aid Bridge Fund," which is used in the construction of bridges over streams one hundred and seventy-five feet in width or more, providing the county or counties desiring to construct such a bridge pay one-half of the cost of construction and the state pay the other half. The following counties have made application for State Aid and action taken in regard to each of these applications is shown in the appended list, which is made up in the order in which the applications were filed:

County	Amt. Appro.	Standing	Contract Price
Boone	$17,000	Withdrawn	
Boyd & Holt	25,000	Pending	$25,000
Garden	4,600	Withdrawn	
Morrill	40,000	Contract Let	41,500

Washington	10,000	Contract Let	14,150
Rock & Keya Paha	27,000	Contract Let	27,000
Red Willow	9,000	Continued	
Platte	34,000	Contract Let	31,500
Dodge & Saunders	68,000	Contract Let	79,060
Scottsbluff	20,000	Contract Let	21,653
Lancaster	30,000	Refused	
Sherman	14,000	Contract Let	19,800
Dawson	36,000	Plans Ready	36,000
Merrick	20,625	Withdrawn	
Howard	15,000	Continued	
Dodge & Saunders	40,000	Contract Let	78,665
Howard	15,000	Refused	
Nance	24,000	Contract Let	24,000
Lincoln	30,000	Pending	30,000

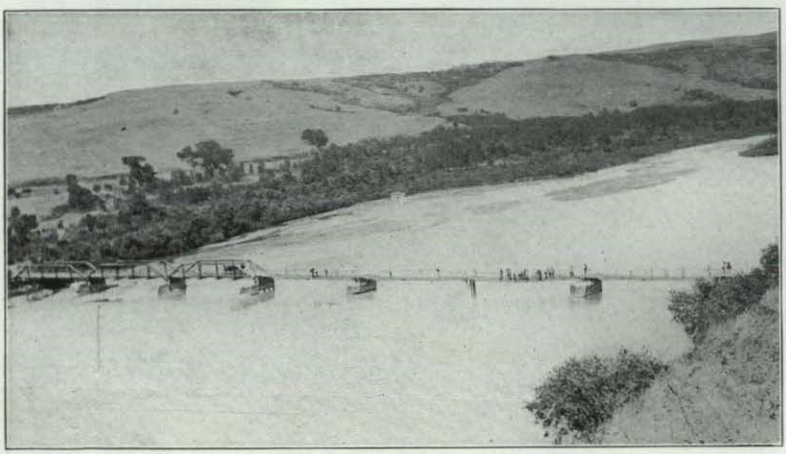
In designing State Aid bridges, the State Board has refused to consider anything other than permanent structures for the reason that the law provides, that where the maintenance on any bridge for any one year exceeds one hundred dollars, the State shall pay one-half of the cost of said maintenance. These bridges have also been designed to carry a twenty ton traction engine or a uniform live load of eighty to one hundred pounds per square foot of floor surface, depending upon the length of the span.

This law has done more than any other to stimulate the interest of counties in the building of permanent bridges, and sets an excellent example of the form of bridge construction in this State, and it is to be hoped that it will eventually work a reform towards the building of permanent bridges in the State.

The contract prices of all of the State Aid bridges which have been let have been very satisfactory and fairly uniform; with two exceptions, the contracts have been let at a figure below the cost, as estimated by this office, the exceptions being the Arlington Bridge in Washington County and the Loup City Bridge in Sherman County, which contracts were let at a fair price to the contractor, county and State. At all of the State Aid bridge lettings, there has been plenty of competition, and with the exception of the first-attempted bridge letting at Springview, Keya Paha County, where the bids seemed to indicate previous agreement between the bridge companies represented, the competition has been genuine. This would indicate that it would be better for counties building large bridges to let the contract for each bridge separately, rather than to attempt to build such structures under a yearly contract, as is the custom at present.

PROPOSED PARSHALL STATE AID BRIDGE, NIOBRARA RIVER, BOYD AND HOLT COUNTIES

Plans and specifications for the above bridge were prepared in this office and submitted to the Counties of Boyd and Holt for their approval; one design was a steel structure, the other a concrete bridge. As yet, the two counties have failed to agree upon the exact location of the proposed bridge.



SUSPENSION BRIDGE NEAR BUTTE

BRIDGEPORT AND BAYARD STATE AID BRIDGES, NORTH PLATTE RIVER, MORRILL COUNTY

For the above two bridges, this office prepared a design of two concrete bridges, one being a girder bridge, consisting of twenty-three 33 ft. spans with twelve-foot roadway and a turn-out in the middle of the bridge. The other design consisted of fifteen 50 ft. concrete arches with a twelve-foot roadway and a turn-out in the middle of the bridge; both bridges to be approximately eight hundred feet long with an earth fill at the end, made by reason of the narrowing of the channel, approximately fifteen hundred feet long.

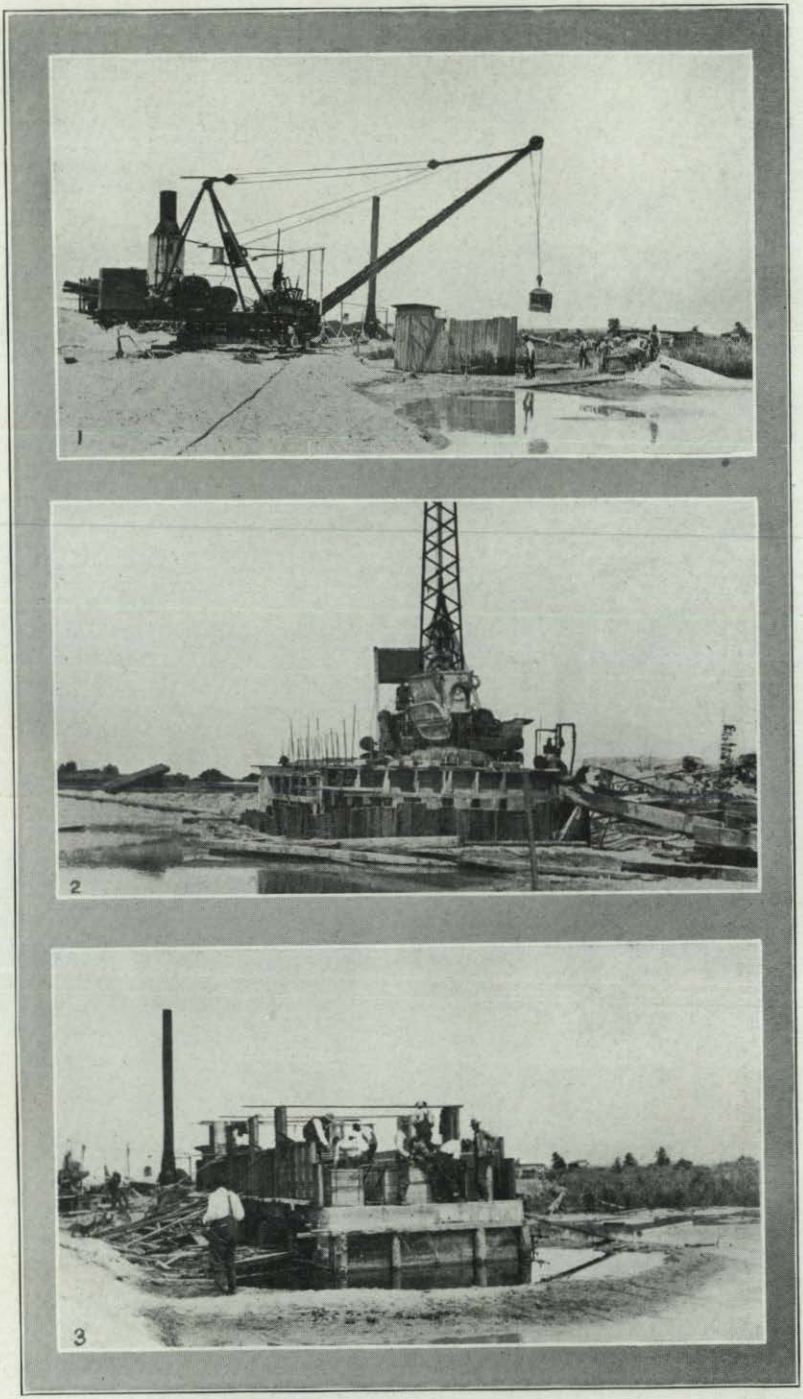
Bids were received and opened at Bridgeport on February 20, 1912. The lowest bid was submitted by a contractor, who had no experience, whatever, in building structures of this character, and who lacked the necessary financial backing to handle the job. His bid was so much below the actual cost of the bridge that it was evident that he would have been unable to complete the work, and for these reasons his bid was rejected. The contract was finally awarded for both bridges to J. L. Mullen of Lincoln, who bid only on the girder type of the bridge. Special attention is called to the design of this bridge and the detailed plans for the same follow.

The construction of these bridges has been delayed by reason of high water in the North Platte River throughout the entire summer of 1912. The material for the bridges is practically all on the ground and the contractor will push the work to completion as soon as the weather conditions permit.

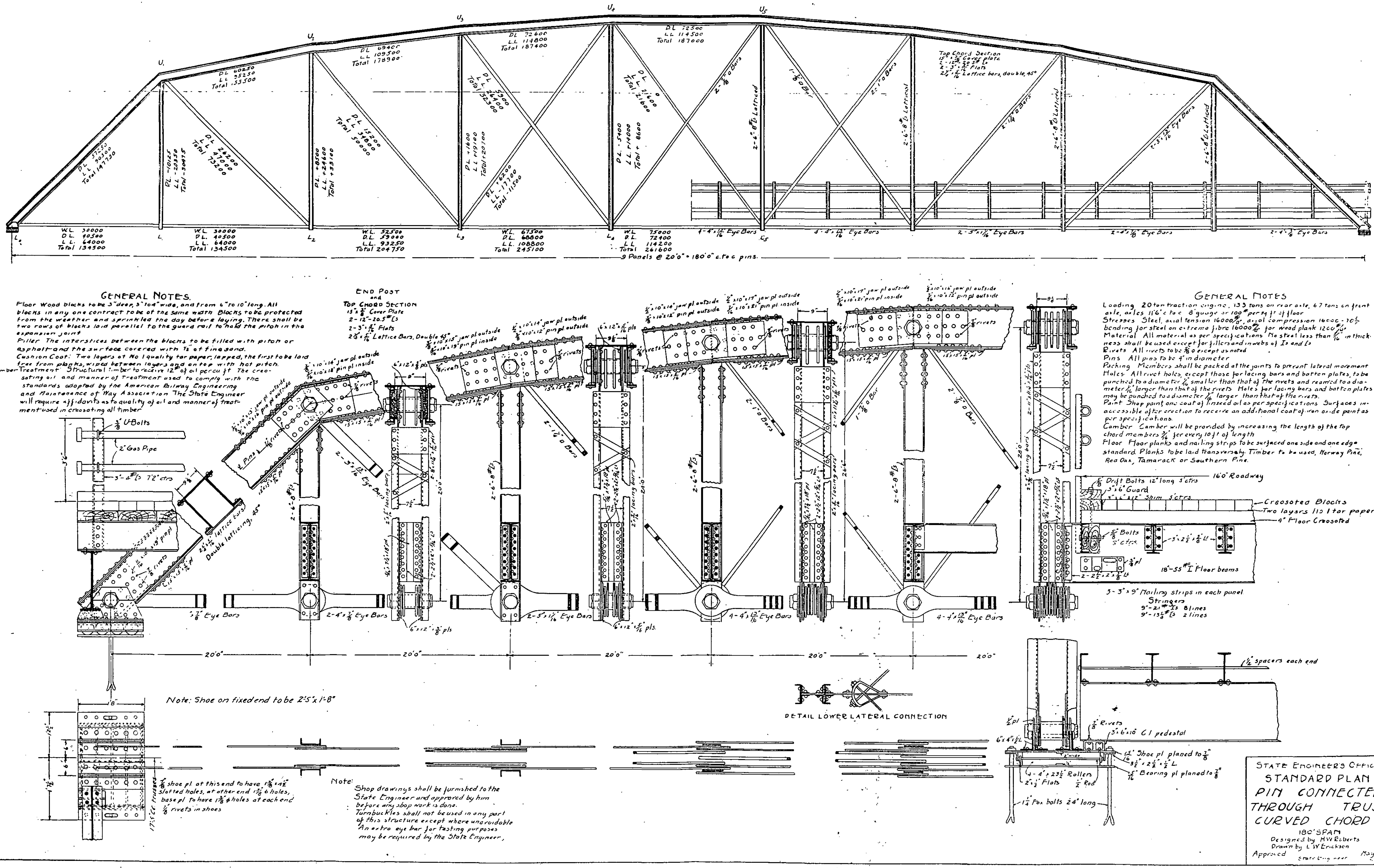
LIST OF BIDS SUBMITTED ON BRIDGEPORT AND BAYARD STATE AID BRIDGES
Morrill County, Nebraska, Febr. 20, 1912.

BIDDERS	Bartlett & Kling Cedar Rapids, Ia.	C R Inman Cheyenne, Wyo.	Midland Bridge Co. Kansas City, Mo.	Pueblo Bridge Co. Pueblo, Colo.	Ward and Weigh-ton Audubon, Ia.	Collier Constr Co. Fairbury, Nebr	Herrington & Anderson Fort Collins	Lincoln Constr. Co. Lincoln, Nebr.	Western Br. Construction Co. Omaha, Nebr.	Chas. G. Sheely Denver, Colo.	J. W. Turner Imp. Co. Des Moines, Ia.	J. L. Mullen Lincoln, Nebr.	Liggett & Welton Ft. Morgan, Col.	C. A. Edwards Kearney, Nebr.
BOTH BRIDGES														
Concrete Arch Bridges	$39200.00	$30000.00	$57310.00	$39985.00	$36000.00	$38739.00	$39099.00	$35400.00	$47400.00	$38000.00	$46500.00		$46052.00	
Concrete Girder Bridges	48400.00	30000.00	64320.00	41650.00		39929.00	39168.00		55200.00	45000.00	49080.00	* $41500.00	44500.00	
Earth Fill in Approach pr yd.	.17½	.20	.50								.40		.20	.13½
Gravel Surfacing per yd	1.00	1.00	1.50							1.20	1.50		.47½	.40
Extra Concrete per yd	5.00	7.50	10.00	11.50	14.00	10.00	15.00	15.00		20.00	15.00	Pl. 12.00 Rf. 15.00	Pl. 6.95	
Extra round piling per ft	.50	.50	.65	.85	.52	1.00	.60	.50		.50	.50	.60	.42	
Extra Wakefield piling per ft	.30	.75	.50			1.10	.42	.75		65.00 MBM	6.00	25.00 MBM	H.B.M.03½	
Steel												.03½		
												Conc. along fill only		.30

*Including fills and surfacing.



CONSTRUCTION BAYARD STATE AID BRIDGE



GENERAL NOTES.

Floor Wood blocks to be 3" deep, 3" to 4" wide, and from 6" to 10" long. All blocks in any one contract to be of the same width Blocks to be protected from the weather and sprinkled the day before laying. There shall be two rows of blocks laid parallel to the guard rail to hold the pitch in the expansion joint

Filler The interstices between the blocks to be filled with pitch or asphalt and the surface covered with 1/2" of fine sand.

Cushion Coat: Two layers of No 1 quality tar paper, lapped, the first to be laid free from planks, wiped between layers and on top with hot pitch.

Timber-Treatment Structural timber to receive 12# of oil per cu ft The creosoting oil and manner of treatment used to comply with the standards adopted by the American Railway Engineering and Maintenance of Way Association The State Engineer will require affidavits as to quality of oil and manner of treatment used in creosoting all timber

GENERAL NOTES

Loading 20 ton traction engine, 13.3 tons on rear axle, 6.7 tons on front axle, axles 11'6" c to c 8' guage or 100# per sq ft of floor

Stresses Steel, axial tension 16000#/□", axial compression 16000 - 70 l/r bending for steel on extreme fibre 16000#/□" for wood plank 1200#/□"

Material All material as per specifications No steel less than 5/16" in thickness shall be used except for fillers and in webs of Is and [s

Rivets All rivets to be 5/8 ⌀ except as noted

Pins All pins to be 4" in diameter

Packing Members shall be packed at the joints to prevent lateral movement

Holes All rivet holes, except those for lacing bars and batten plates, to be punched to a diameter 1/16" smaller than that of the rivets and reamed to a diameter 1/16" larger than that of the rivets Holes for lacing bars and batten plates may be punched to a diameter 1/16" larger than that of the rivets.

Paint Shop paint, one coat of linseed oil as per specifications Surfaces inaccessible after erection to receive an additional coat of iron oxide paint as per specifications.

Camber Camber will be provided by increasing the length of the top chord members 3/16" for every 10 ft of length

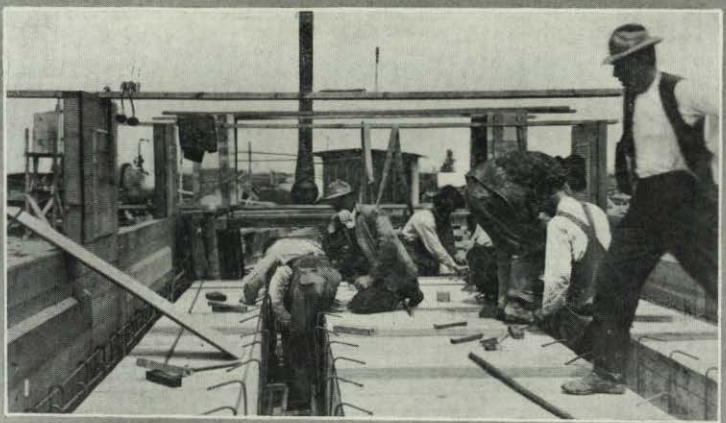
Floor Floor planks and nailing strips to be surfaced one side and one edge standard Planks to be laid transversely. Timber to be used, Norway Pine, Red Oak, Tamarack or Southern Pine.

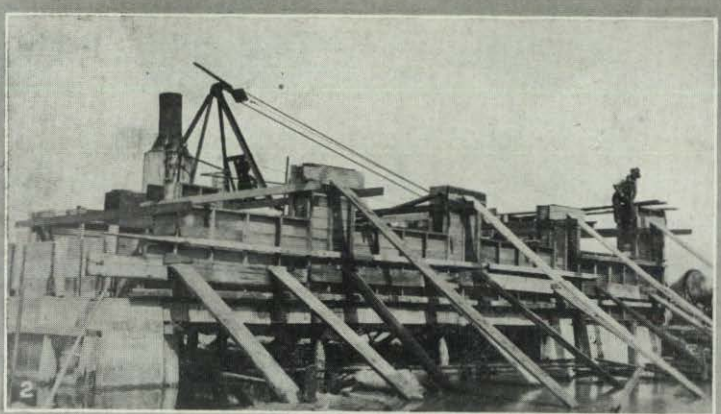
Note: Shoe on fixed end to be 2'5" x 1'-8"

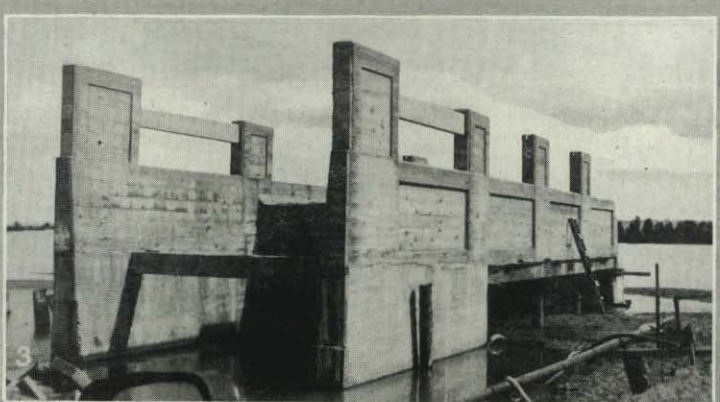
7/8" shoe pl. at this end to have 1 3/8" x 1 1/2" slotted holes, at other end 1 3/8" ⌀ holes, base pl to have 1 3/8" ⌀ holes at each end 7/8" rivets in shoes

Note: Shop drawings shall be furnished to the State Engineer and approved by him before any shop work is done.
Turnbuckles shall not be used in any part of this structure except where unavoidable
An extra eye bar for testing purposes may be required by the State Engineer,

STATE ENGINEER'S OFFICE
STANDARD PLAN
PIN CONNECTED
THROUGH TRUSS
CURVED CHORD
180' SPAN
Designed by H W Roberts
Drawn by L W Erickson
Approved State Engineer May 19[illegible]







BAYARD STATE AID BRIDGE UNDER CONSTRUCTION

ARLINGTON STATE AID BRIDGE, ELKHORN RIVER, WASHINGTON COUNTY

The plans prepared for this bridge consisted of a steel bridge of a single one hundred and eighty-foot span with a 16 ft. roadway, or a concrete bridge consisting of two ninety-foot spans with a 14 ft. and also a 16 ft. roadway. These bids were opened at Blair, Nebraska, April 30, 1912, and contract awarded to E. S. Beaty of Blair, Nebraska, for the steel bridge. At the present time, the two concrete abutments are in place and the entire bridge should be finished by January 15, 1913.

TEMPORARY FOOT BRIDGE ST. PAUL

BIDS ON ARLINGTON STATE AID BRIDGE
Received at Blair, Nebr., April 30, 1912

NAME OF BIDDER	Monarch Engineering Co. Falls City	Massillon Bridge & Structural Co. Kansas City, Mo.	Empire Bridge Co. Falls City	Nebraska Construction Co Lincoln	Lincoln Construc- Lincoln	Ward & Weighton Audubon, Iowa	Omaha Structural Steel Wks Omaha	Midland Bridge Co Kansas City, Mo.	Canton Bridge Canton, Ohio	E. S. Beaty Blair, Nebr.
Concrete Arch with 14 ft. Roadway Complete					$14,400.00	$14,350.00		$15,500.00		$14,150.00
Concrete Arch with 16 ft. Roadway Complete					14,950.00	14,800.00		16,250.00		14,600.00
Steel Bridge Complete	$11,450.00	$11,500.00	$11,850.00	$11,950.00			$11,724.00	11,650.00	$11,474.00	11,200.00
Extra Plain Concrete, per yard in place	15.50	15.25	16.00	18.00			16.00	16.75	15.90	15.00
Extra Reinforcing Steel, per pound in place	.0375	.04	.0365	.03			.035	.037	.0375	.035
Extra round piling, per lin. ft. in place	.60	.65	.62	.55			.58	.70	.59	.55
Extra Wakefield piling, per lin. ft. in place	1.05	1.10	1.00	1.10			1.10	1.15	.98	.95
Extra 60-in. steel tubing per lin. ft. in place								13.50		16.50

NOTE—Contract let to E. S. Beatty, of Blair, Nebraska, for $11,200.00 for one 180-ft. high truss steel span with creosoted wood block floor. Time of completion—October 1, 1912.

CARNS AND McCULLEY STATE AID BRIDGES, NIOBRARA RIVER, ROCK AND KEYA PAHA COUNTIES

The original plans for the Carns bridge called for two one hundred and sixty foot steel spans with a 16-ft. roadway.

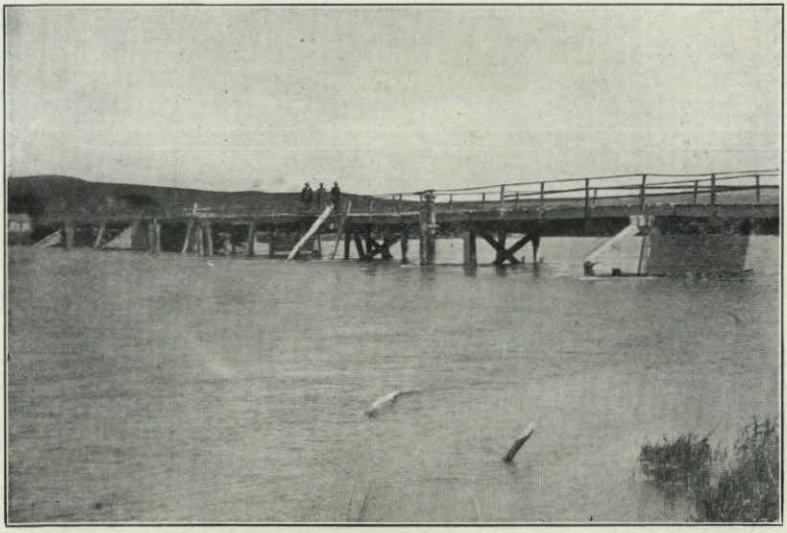
Bids were received on this design and opened at Springview, Nebraska on August 28, 1911. From the bids received, it was evident that there had been no competition in the bidding and the bids were all rejected. New plans were made and the contract finally let in conjunction with the contract for the McCulley bridge at Springview on May 7, 1912. The plans, as finally submitted for the Carns bridge, consisted of six 50 ft. concrete arches, 14 ft. roadway, and also 12 ft. roadway, or eight 40 foot concrete girders, 14 ft. roadway and 12 ft. roadway, or four 80 ft. steel spans with 16 ft. roadway.

The plans for the McCully bridge consisted of five 50 ft. concrete arches, 14 ft. roadway or 12 ft. roadway; seven 40 ft. concrete girders, 14 ft. and 12 ft. roadway, or four 70 ft. steel spans, 16 ft. roadway.

The contract was awarded to the Lincoln Construction Company for the concrete arch bridges with 14 ft. roadway for both bridges.

Work on these two bridges has progressed very favorably and will be completed and opened to travel before February 1, 1913.

These will constitute the first concrete bridges ever built across the Niobrara River. Special attention is called to the design of the Carns bridge, where the concrete arches rest upon sixty inch tubes filled with concrete. The plans of the design of this bridge follow.



SITE CARNS STATE AID BRIDGE

BIDS ON STATE AID BRIDGES

Received at Springview, Nebr., May 7, 1912.

CARNS BRIDGE

Concrete Arches 6 50-ft. spans. Concrete Girders 8 40-ft. spans.
Steel Bridge 4 80-ft. spans.

	Monarch Engineering Co. Falls City	Massillon Bridge & Structural Co. Kansas City, Mo.	Canton Bridge Co. Canton, Ohio	Western Bridge & Construction Co. Omaha	Lincoln Construction Co. Lincoln
Concrete Arches—12 ft. Roadway Complete	$14,860.00	$16,200.00		$14,650.00	$14,500.00
Concrete Arches—12 ft. Roadway Complete	14,375.00	14,500.00		13,850.00	13,900.00
Concrete Girders 14 ft. Roadway Complete	16,325.00	16,400.00		16,100.00	15,600.00
Concrete Girders 12 ft. Roadway Complete	15,930.00	15,800.00		15,700.00	15,000.00
Steel Bridge, 4 70-ft. Spans, Complete	15,600.00	15,200.00	$15,760.00	14,750.00	14,600.00
Extra round piling, per lin. ft., in place	.55	.52		.45	.50
Extra sheet piling, per lin ft. in place	1.15	1.28		1.35	1.25
Extra Concrete per cu. yd. plain, in place	16.75	16.75		17.00	15.50
Extra reinforcing steel, per pound in place	.06	.04		.04	.05
Less Concrete					

McCULLEY BRIDGE

Concrete Arches 5 50-ft. spans. Concrete Girders 7 40-ft. spans.
Steel Bridge 4 70-ft. spans.

	Monarch Engineering Co. Falls City	Massillon Bridge & Structural Co. Kansas City, Mo.	Canton Bridge Co. Canton, Ohio	Western Bridge & Construction Co. Omaha	Lincoln Construction Co. Lincoln
Concrete Arches—12 ft. Roadway Complete	$13,325.00	$13,200.00		$13,000.00	$12,500.00
Concrete Arches—12 ft. Roadway Complete	12,500.00			12,300.00	11,900.00
Concrete Girders 14 ft. Roadway Complete	16,275.00			15,625.00	15,500.00
Concrete Girders 12 ft. Roadway Complete	15,850.00			15,300.00	14,900.00
Steel Bridge, 4 70-ft. Spans, Complete	12,000.00	11,650.00	$13,000.00	11,225.00	11,150.00
Extra round piling, per lin. ft., in place	.55		.60	.45	.50
Extra sheet piling, per lin ft. in place	1.15	1.28	1.40	1.35	1.25
Extra Concrete per cu. yd. plain, in place	16.75	16.75	15.75	17.00	15.50
Extra reinforcing steel, per pound in place	.06	.04	.035	.04	.05
Less Concrete		14.00			

NOTE—Contract let to Lincoln Construction Co., of Lincoln, Nebraksa, for construction of 6 50-ft. concrete arches at Carns, and 5 50-ft. concrete arches at McCulley, for $27,000.00. Time of completion—November 1, 1912.

MONROE STATE AID BRIDGE, LOUP RIVER, PLATTE COUNTY

The plans of this bridge consist of six 136 feet 6 inches steel spans and one 80 foot steel span with sixteen foot roadway. Bids were received and opened at Columbus, Nebraska, on May 14th, 1912. Contract was let to the Omaha Structural Steel Works of Omaha, Nebraska. The 80 ft. span is at present completed, and the main bridge across the Loup river will be completed and open to travel about March 1st, 1913.

OLD BRIDGE CARNS, NEBR.

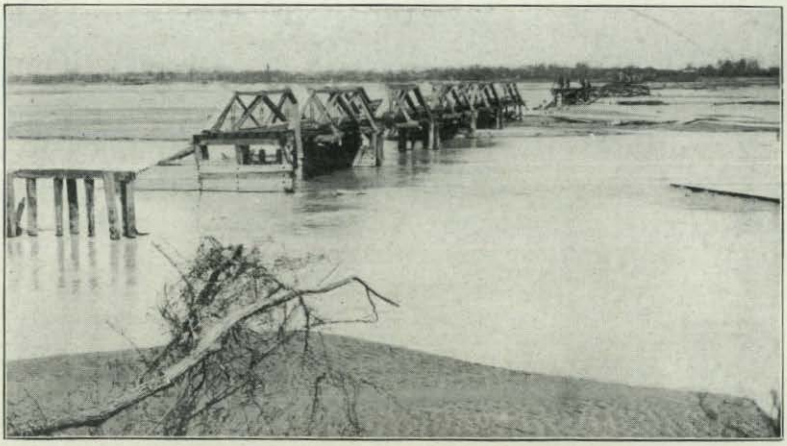
BIDS RECEIVED ON MONROE STATE AID BRIDGE
At Columbus, Nebr., May 14, 1912.

BIDDERS	Omaha Structural Steel Works Omaha	Midland Bridge Co. Kansas City, Mo.	Illinois Steel Bridge Co. Omaha	Kansas City Bridge Co. Kansas City, Mo.	Western Bridge & Construction Co. Omaha	Beach Mfg. Co. Sioux City, Ia.	Massillon Bridge & Construction Co. Kansas City, Mo.	A. E. Shorthill Co. Marshalltown, Ia.	Interstate Bridge Co. Kansas City, Mo.
6 136-ft. 6-in. and 1 80-ft. steel spans, tube piers and conc. abut	$29,975.00	$33,900.00	$32,324.00	$33,550.00	$33,900.00	$34,000.00	$34,000.00	**$34,000.00**	$33,500.00
Same with Concrete Piers	31,500.00	36,100.00	31,884.00	33,550.00	35,600.00	35,600.00	35,800.00	35,400.00	**35,000.00**
Extra plain concrete, per cu. yd	10.00	13.25	8.50		14.50	15.00	15.00	12.00	14.00
Extra Steel	.03	.036	.04		.035	.0375	.035	.04	.035
Extra Round Piling	.47	.67	.60		.65	.66	.60	.75	.50
Extra Sheet Piling	.80	.94	1.00		.87	1.05	.95	1.45	1.10
Extra 60-inch tubing	17.50	24.75	25.00		22.50	24.00	24.00	16.00	23.00

NOTE—Contract let to Omaha Structural Steel Works, of Omaha, Nebraska, for 6 136-ft. 6-in. steel high truss spans and 1 80-ft. low truss steel span, all with concrete piers and abutments, for $31,500.00.

NORTH BEND STATE AID BRIDGE, PLATTE RIVER, DODGE AND SAUNDERS COUNTIES

The plans of this bridge consist of eight 180 ft. spans, steel, with 16 ft. roadway, and concrete piers and abutments, with an earth fill at the north end of this bridge of approximately fifteen hundred feet. Bids were received and opened at Wahoo, Nebraska, May 25, 1912. The contract was let to Stupp Bros. Bridge and Iron Co., St. Louis, Mo., for the steel bridge with creosoted wood block floor. Special attention is called to the design of this bridge, plans of which follow. The concrete piers are of special note, resting on two sixty inch and one thirty-six inch steel tubes filled with concrete. Ice breakers are very effective and should withstand a great amount of hard treatment by the ice. Long spans were used so as to balance the cost of the piers with the spans and also to give plenty of clearance and not cause any ice jams. This is one of the very largest highway bridges undertaken within the state. At the present time all of the foundation work for this bridge is practically complete and the placing of the steel will begin immediately. It is expected to have the bridge completed and opened to traffic by the middle of March, 1913.



SITE NORTH BEND STATE AID BRIDGE

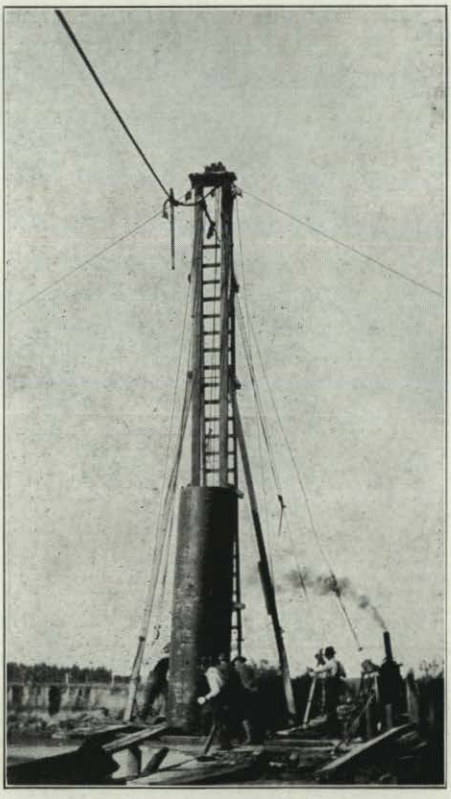
BIDS RECEIVED ON NORTH BEND STATE AID BRIDGE
At Wahoo, Nebr., May 25, 1912.

	A. W. Van Hafften Co. Minneapolis, Minn.	Elkhorn Constr. Co Fremont, Nebr.	Dildine Br. & Iron Works Hannibal, Mo.	A. E. Shorthill Co. Marshalltown, Ia.	Midland Bridge Co Kansas City, Mo.	Stupp Bros. Bridge & Iron Co. St. Louis, Mo.	Standard Bridge Co. Omaha, Nebr.	Canton Br. Co. Omaha, Nebr.
8 180-ft. spans with concrete piers and abutments		$85,140.00	$73,750.00	$80,000.00	$72,175.00	$58,733.00	$69,400.00	$67,900.00
Creosoted floor 4-in. thick	$ 5,750.00	8,425.00	7,165.00	8,150.00	6,740.00	5,788.00	6,700.00	6.500.00
Creosoted wood block floor	9,764.00	13,975.00	12,925.00	13,875.00	12,175.00	10,312.00	12,000.00	11,560.00
Reinforced concrete floor		10,250.00	9,250.00	9,420.00	8,897.00	4,600.00	9,400.00	7,975.00
Earthwork in fills complete in place			.40	.39	.35		.29	.30
Surfacing or fill per yd. in place			1.75	1.85	1.78		1.00	1.50
Extra plain concrete per cu. yd. in place		8.80	8.10	8.50	7.70	9.50	7.50	7.55
Extra reinforcing steel per pound in place		.04	.03¾	.04	.03¾	.02½	.03½	.03 4-10
Extra round piling per lineal foot in place		.50	.45	.47	.40	.50	.35	.40
Extra Wakefield piling per lineal foot in place		1.70	1.70	1.75	1.63	.65	1.45	1.50
Extra 60-in. tube filled with concrete per lin. ft. in place		24.00	24.80	24.90	23.75	15.00	23.00	23.25
Extra 36-in. tube filled with concrete per lin. ft. in place		15.80	15.20	15.40	14.60	11.60	13.80	14.00
Extra fabricated steel per pound in place		.06		.05¾	.05¾	.04355	.05½	.05¼
Extra steel sheet piling per sq. ft. in. place		2.50	.16	2.60	2.55	1.00	2.65	2.60
Extra Bethlehem H's per lineal foot in place		3.00	2.60	3.00	2.97	.90	3.25	3.20
Removing old combination spans and clearing site			2.00	1.50	2.00	600.00	2.00	1.50

NOTE—Contract let to Stupp Bros. Bridge & Iron Co.

McGREW STATE AID BRIDGE, NORTH PLATTE RIVER, SCOTTS-BLUFF COUNTY

The plans for this bridge consist of fifteen 50 ft. concrete arches with 12 ft. and 14 ft. roadways, or twenty-three 33 ft. concrete girder spans with 12 ft. and 14 ft. roadways. Bids were received and opened at Gering, Nebraska, May 28th, 1912. The contract was let to J. L. Mullen for the girder bridge complete, with fill of approximately fifteen hundred feet. This work has been delayed for the reason of high water in the North Platte River during the summer of 1912. Material for the construction of this bridge is delivered on the bridge site and construction will be pushed to completion as soon as weather conditions will permit.

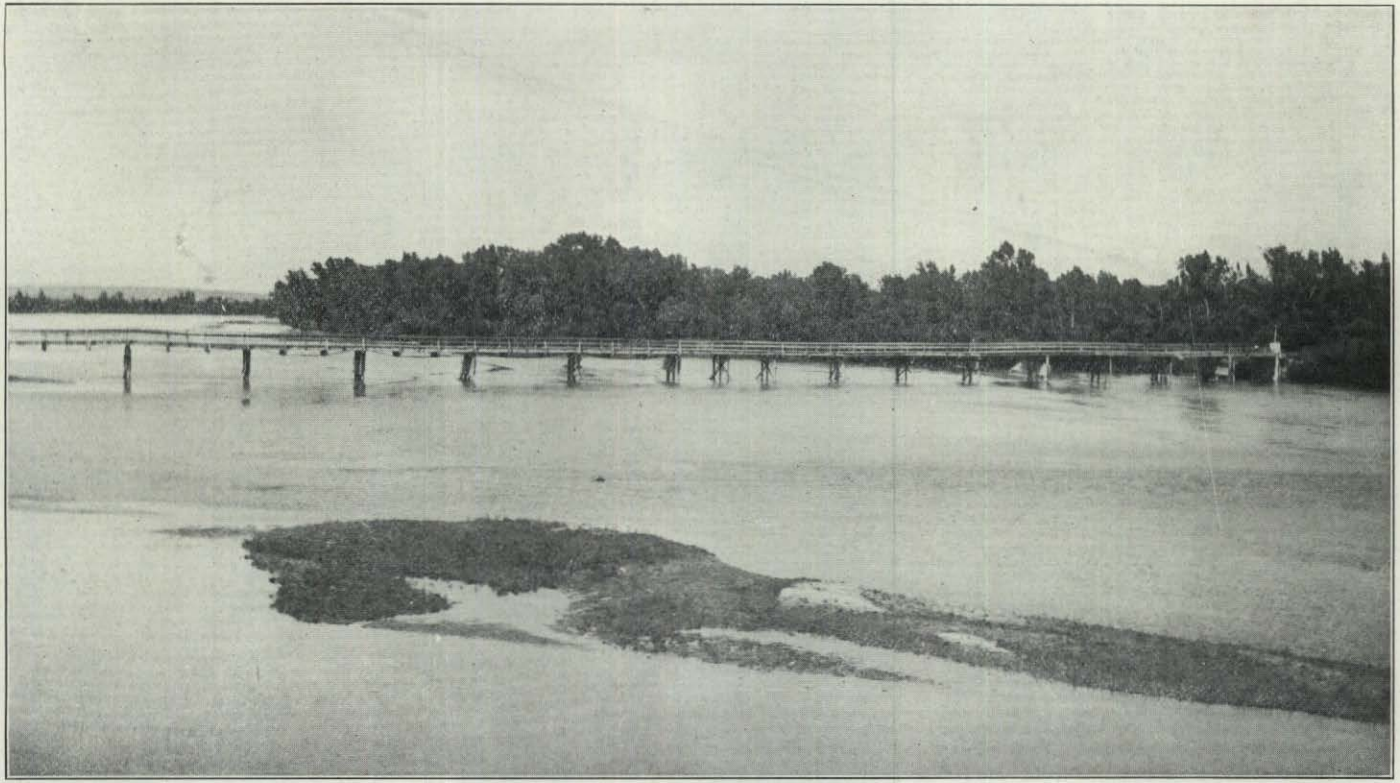


PLACING STEEL TUBE

BIDS RECEIVED ON McGREW STATE AID BRIDGE AT GERING, NEBR.
May 29, 1912

	C. R. Inman Cheyenne, Wyo.	Jno. L. Mullen Lincoln, Nebr.	Massillon Bridge & Structural Co. Kansas City, Mo.	H. T. Ward & Co. Tecumseh, Nebr.	Omaha Structural Steel Works Omaha, Nebr.	Lincoln Constr. Co. Lincoln, Nebr.	Monarch Eng. Co. Falls City, Nebr.	Midland Bridge Co. Kansas City, Mo.
Arch bridge	$19,245.00		$20,050.00	$19,800.00	$21,000.00	$18,500.00	$21,298.00	$20,295.00
		Complete with fills						
Girder bridge	19,245.00	$21,653.00	22,000.00	21,900.00	23,000.00	21,000.00	22,990.00	22,475.00
Earthwork cu. yd	.15	.15	.60	.19				.24
Gravel surfacing cu. yd		.50	1.25	.59				1.45
Extra pl. concrete	11.00	12.00	18.75	20.00	18.00	19.50	17.00	18.50
Extra steel	.14	.04	.04	.05	.04½	.05	.04½	.04½
Extra round piling	.55	.50	.50	.50	.55	.50	.55	.53
Extra Wakefield piling	30.00 M	.85	1.35	1.30	1.50	1.25	1.35	1.22

NOTE—Contract let to John L. Mullen, Lincoln, Nebr.



SITE LOUP CITY STATE AID BRIDGE

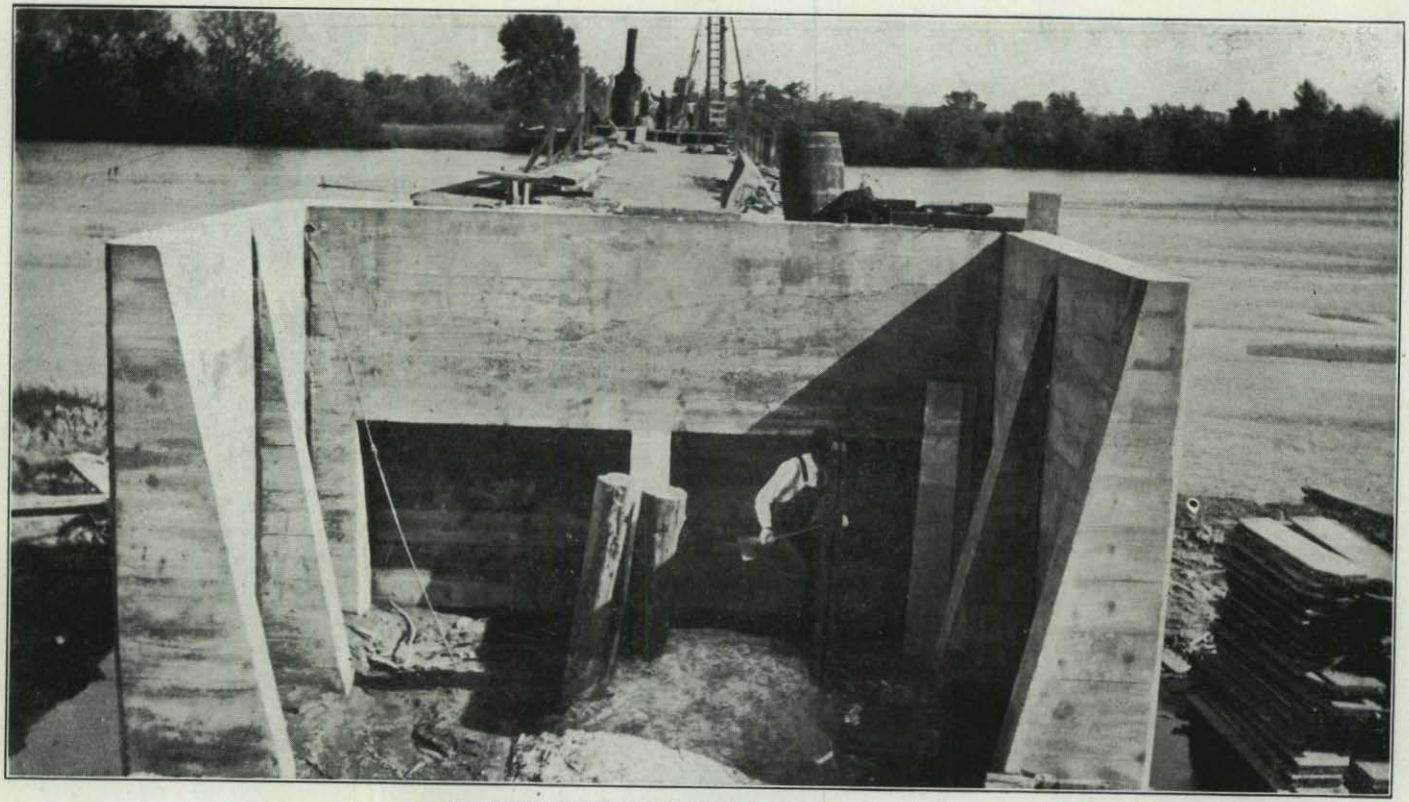
LOUP CITY STATE AID, BRIDGE, MIDDLE LOUP RIVER, SHERMAN COUNTY

Plans of this bridge consist of four 120 ft. steel spans with 16 ft. roadway. Bids were received and opened at Loup City, Nebraska, June 4, 1912. The contract was let to the Standard Bridge Co. of Omaha, Nebraska. At present all the concrete piers and abutments are in place and the first span of steel is swung and the bridge will be ready and opened to traffic about February 1st, 1913.

BIDS RECEIVED ON STATE AID BRIDGE AT LOUP CITY, NEBR.
June 4, 1912

	Stupp Bros. Bridge & Iron Co. St. Louis, Mo.	Massillon Bridge Co. Kansas City, Mo.	Federal Bridge Co. Des Moines, Ia.	Interstate Bridge Co.	Standard Bridge Co. Omaha, Nebr.
120-ft. spans concrete piers on 48-inch tubes	$20,944.00	$20,600.00	$22,000.00	$22,500.00	$19,800.00
120-ft. spans on 60-inch tubes	20,252.00	19,600.00	22,000.0	24,000.00	19,200.00
Extra plain concrete cu. yd	12.00	9.00	10.00	9.00	8.75
Extra reinforcing steel per lb	.03	.04	.03¼	.04½	.03½
Extra round piling per lin. ft	.55	.50	.55	.60	.45
Sheet piling per ft	1.25	.85	1.65	1.50	1.00
60-inch tube per ft	21.00	18.00		25.00	17.50
48-inch tube per ft	16.50	15.00		19.00	15.00

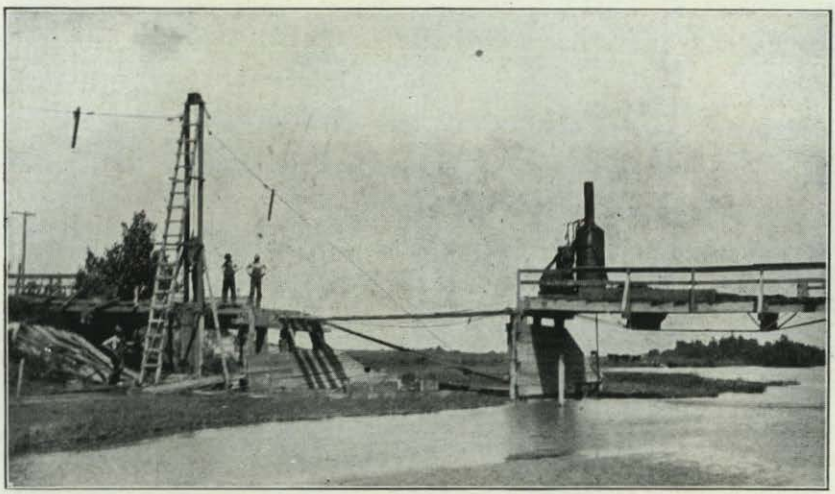
NOTE—Contract let to Standard Bridge Co., Omaha, Nebr.



CONSTRUCTION LOUP CITY STATE AID BRIDGE

LEXINGTON STATE AID BRIDGE, PLATTE RIVER, DAWSON COUNTY

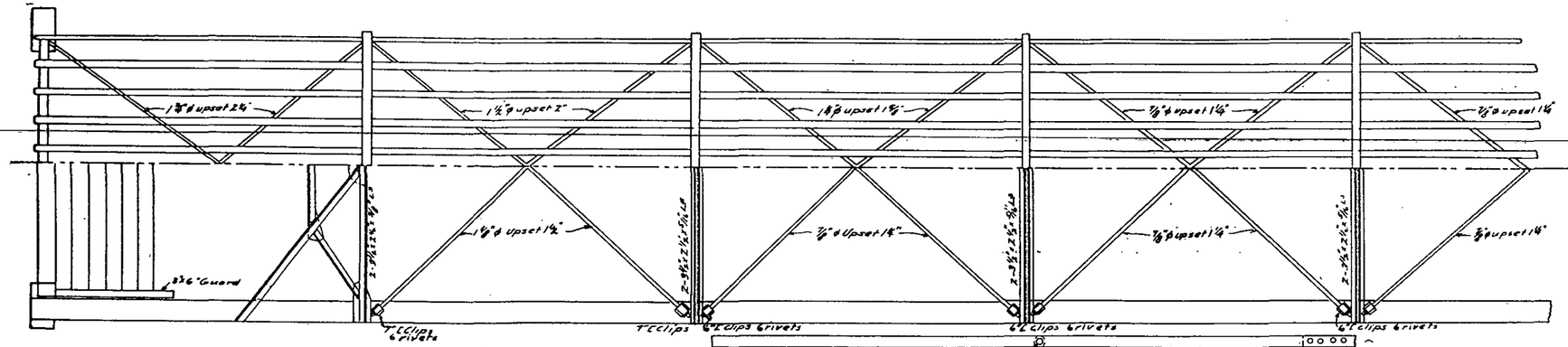
Plans for this bridge will be for a concrete structure about one thousand feet in length, with an earth fill on each end. Total length of fill approximately twenty-eight hundred feet. Plans are now prepared and bids will be called for during the month of January, for the construction of this bridge.



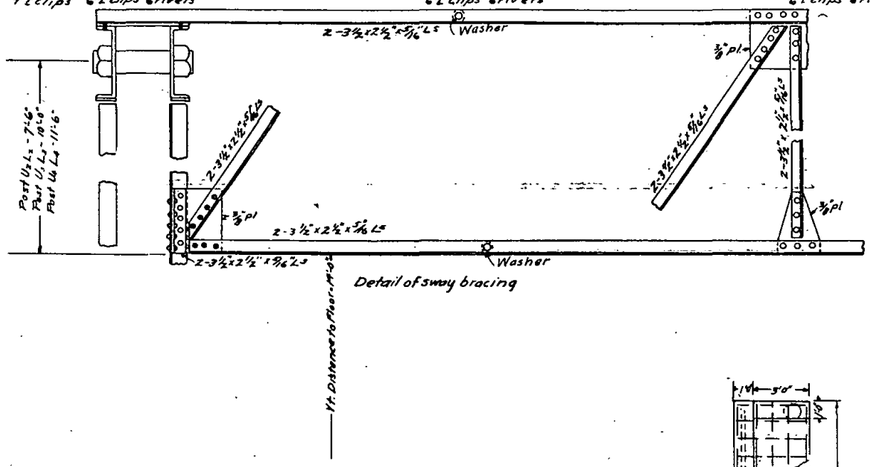
CONSTRUCTION LOUP CITY STATE AID BRIDGE

FREMONT STATE AID BRIDGE, PLATTE RIVER, DODGE AND SAUNDERS COUNTIES

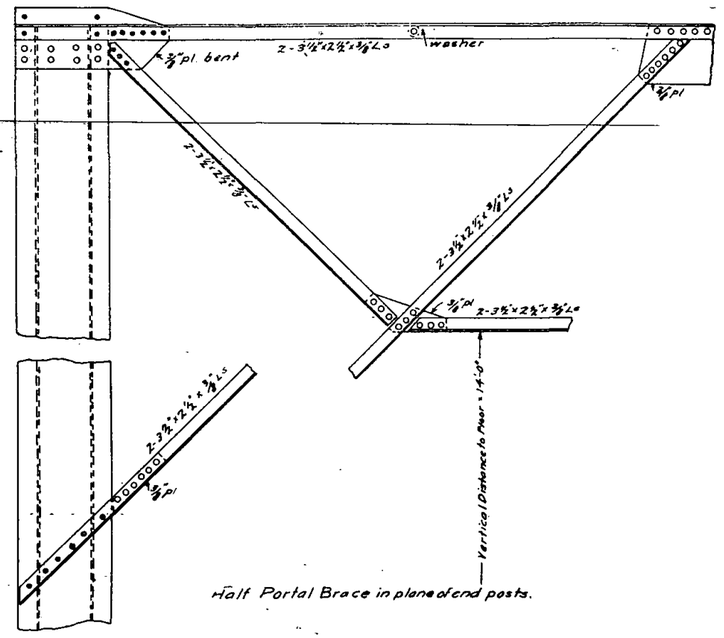
Plans for this bridge as bid upon consisted of seven 180 ft. steel spans and three 100 ft. steel spans with concrete piers and abutments and 16 ft. roadway. Bids were received and opened at Wahoo, Nebraska, on May 25, 1912. Contract let for steel bridge with creosoted wood block floor to Stupp Bros. Bridge and Iron Co., St. Louis, Mo. The design of this bridge has, since letting the contract, been changed to nine 180 ft. steel spans, doing away with the three 100 ft. spans. This bridge is practically the same as the North Bend bridge. A large amount of material for this bridge is now on the bridge site and the actual work of construction will be commenced about the 1st of January, 1913. The bridge is supposed to be completed and opened to travel the 1st of April, 1913.



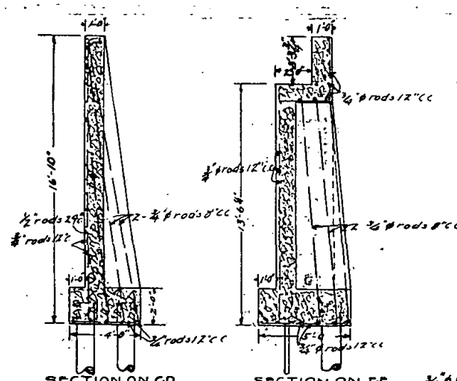
Plan of upper and lower lateral systems



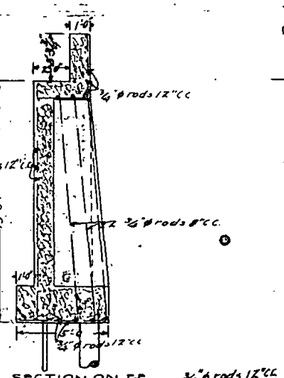
Detail of sway bracing



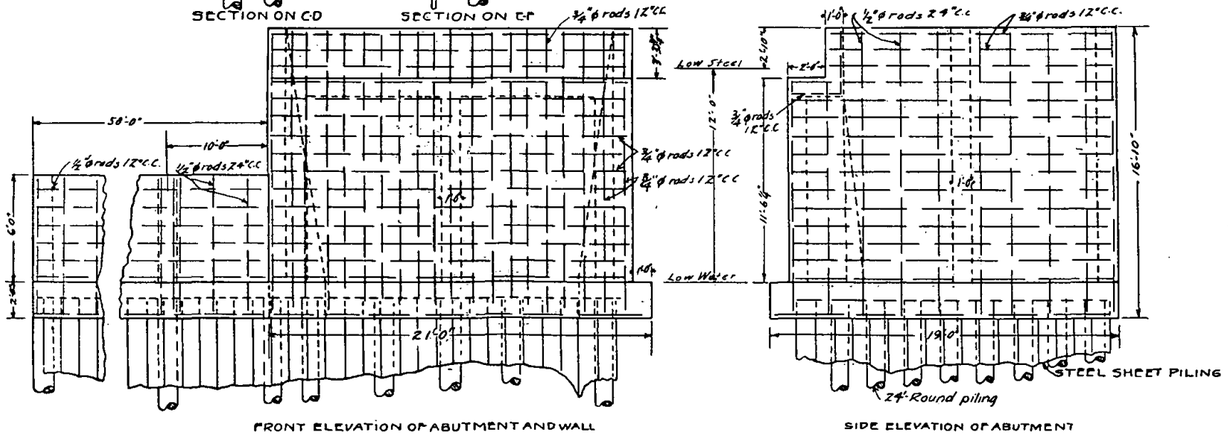
Half Portal Brace in plane of end posts.



SECTION ON CD



SECTION ON EF

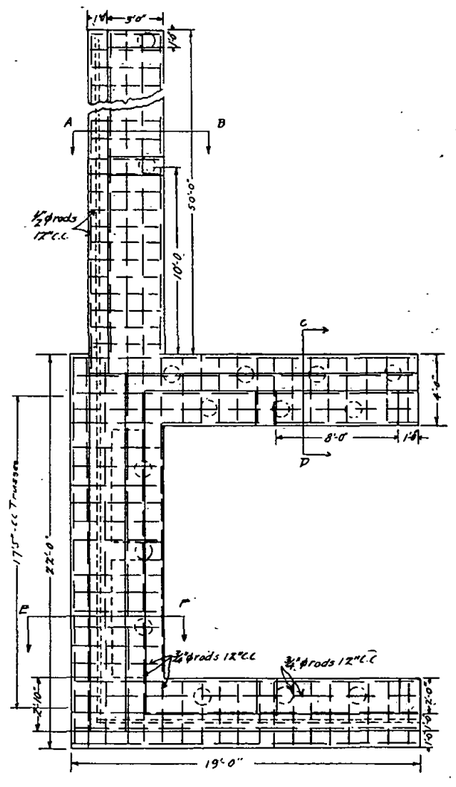


FRONT ELEVATION OF ABUTMENT AND WALL

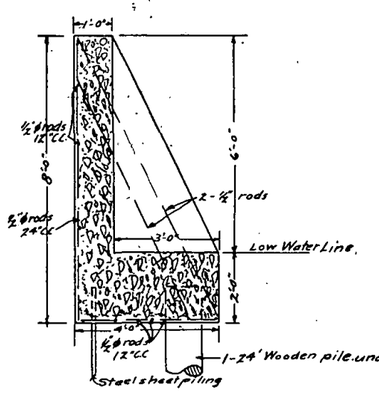
SIDE ELEVATION OF ABUTMENT

GENERAL NOTES

All concrete to be of 1:2:4 mixture.
Round piling to be not less than 9" at smaller diameter and 24' long and imbedded 1' in concrete.
Steel sheet piling to weigh not less than 30# per sq. ft. and shall be approximately 35' in length.



PLAN OF ABUTMENT AND WALL



SECTION ON A-B

Note. Counterforts to be placed every 10' on wall

NORTH BEND STATE AID BRIDGE

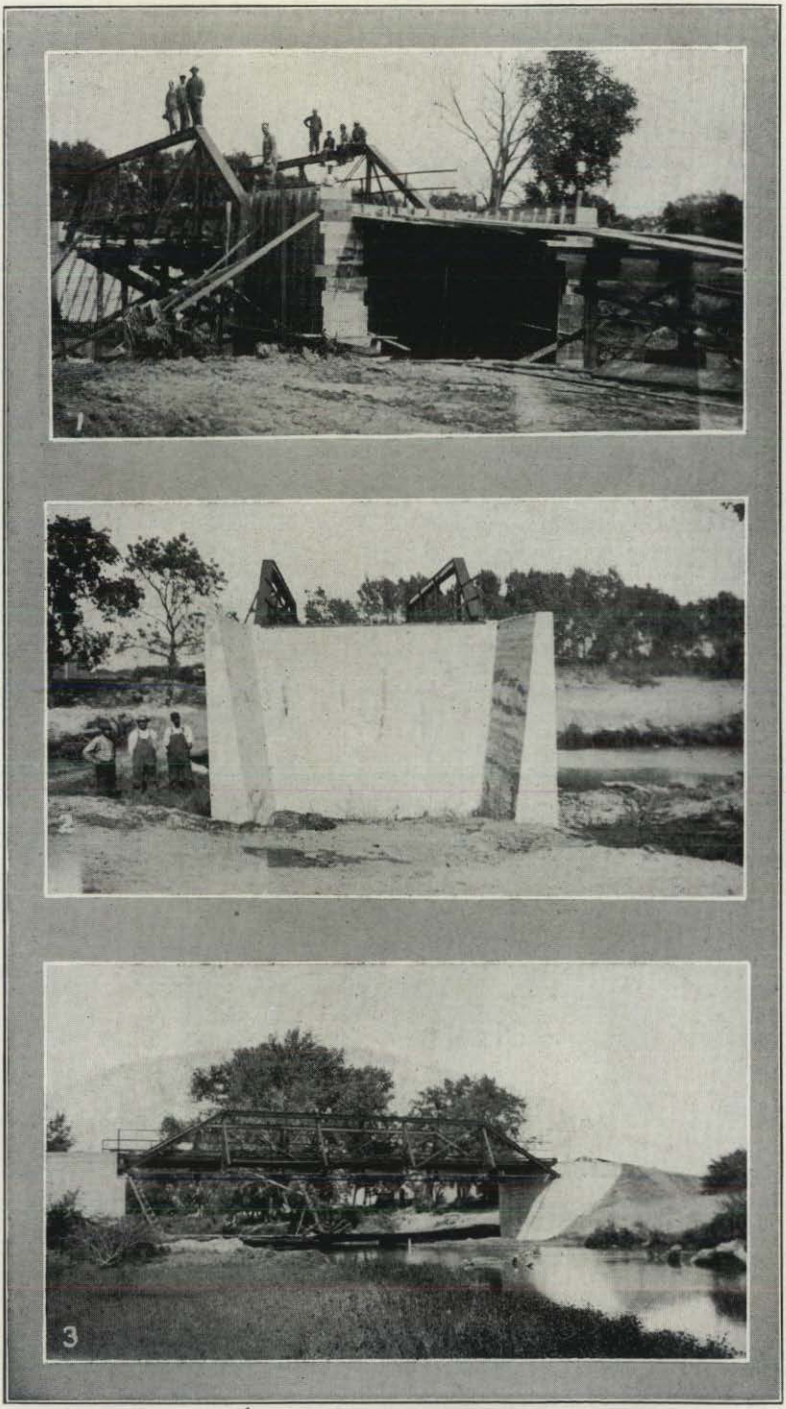
STATE ENGINEER'S OFFICE
STANDARD PLAN
PIN CONNECTED THROUGH CURVED CHORD TRUSS
180' SPAN

Designed by H.W. ROBERTS
Drawn by C.T. Graham
Approved by Donald MacRae
State Engineer

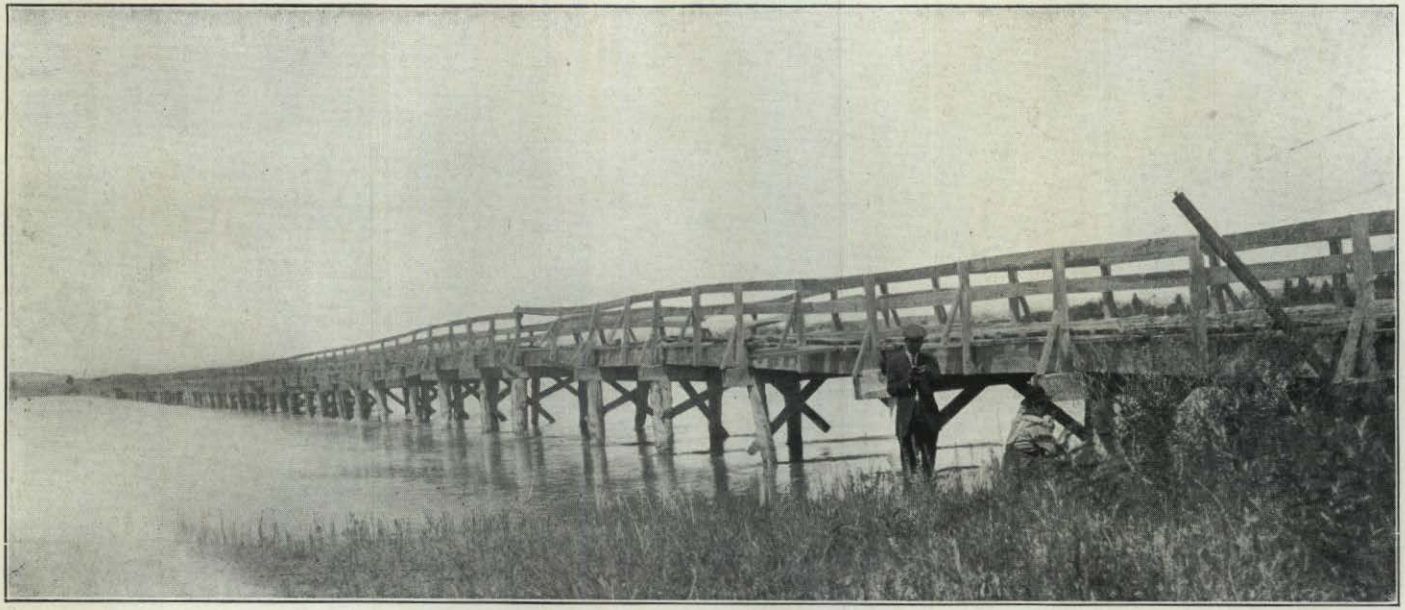
BIDS RECEIVED ON FREMONT STATE AID BRIDGE AT WAHOO, NEBR., MAY 25, 1912

	A. W. Van Hatten Co., Minneapolis, Minn.	Dildine Br. & Iron Works Hannibal, Mo.	A. E. Shorthill Co., Marshalltown, Ia.	Midland Bridge Co., Kansas City, Mo.	Stupp Bros. Bridge & Iron Co., St. Louis, Mo.	Standard Bridge Co. Omaha, Nebr.	Canton Br. Co., Omaha, Nebr.
7 180-ft. and 3 100-ft. spans concrete piers and abutments		$75,900.00	$80,500.00	$72,150.00	$59.072.00	$68,400.00	$69,500.00
Creosoted plank floor	$ 6,385.00	7,675.00	8,200.00	7,245.00	6,344.00	6,950.00	7,100.00
Creosoted wood block floor	10,760.00	13,525.00	13,950.00	12,925.00	10,898.00	12,500.00	13,000.00
Reinforced concrete floor		10,000.00	10,160.00	8,990.00	5,000.00	8,500.00	8,200.00
Earth work in fills per cu. yd. in place		.40	.40	.34		.25	.35
Surfacing on fills per cu. yd. in place		1.75	1.85	1.87		1.00	1.50
Extra plain concrete per cu. yd. in place		8.10	8.50	7.70	9.00	7.50	7.55
Extra reinforcing steel per pound in place		.03¾	.04	.03¾	2.45	.03¾	.03 4-10
Extra round piling per lineal foot in place		.45	.47	.40	.50	.35	.40
Extra Wakefield piling per lineal foot in place		1.70	1.75	1.63	.65	1.40	1.50
Extra 60-in tube per lineal foot in place		24.80	24.90	23.75	14.50	22.50	23.25
Extra 36-inch tube per linear foot in place		15.20	15.40	14.60	11.00	13.50	14.00
Extra fabricated steel per pound in place		.06	.05½	.05¾	.03½	.05½	.05½
Extra sheet steel piling per sq. ft. in place		2.60	2.60	2.55	1.00	2.70	2.60
Extra Bethelem H's per lineal foot in place		2,95	3.00	2.97	.90	3.25	3.20
Removing old 100-ft. spans per lineal foot of span		2.00	2.00	1.50	2.00	1.50	2.00
Removing old 150-ft. spans per lineal foot of span		2.50	2.25	2.20	2.25	2.00	2.00
Removing old combination spans per lineal foot of span			1.50	1.60	1.50	1.00	1.50
Removing old tubes per ft.			6.50	1.25	5.00	5.00	4.00
Cutting off old piles each			.30	.25	.50	.25	.50

NOTE—Contract let to Stupp Bros. Bridge & Iron Co.



IDEAL SMALL BRIDGE



OLD BAYARD BRIDGE

GENOA STATE AID BRIDGE, LOUP RIVER, NANCE COUNTY

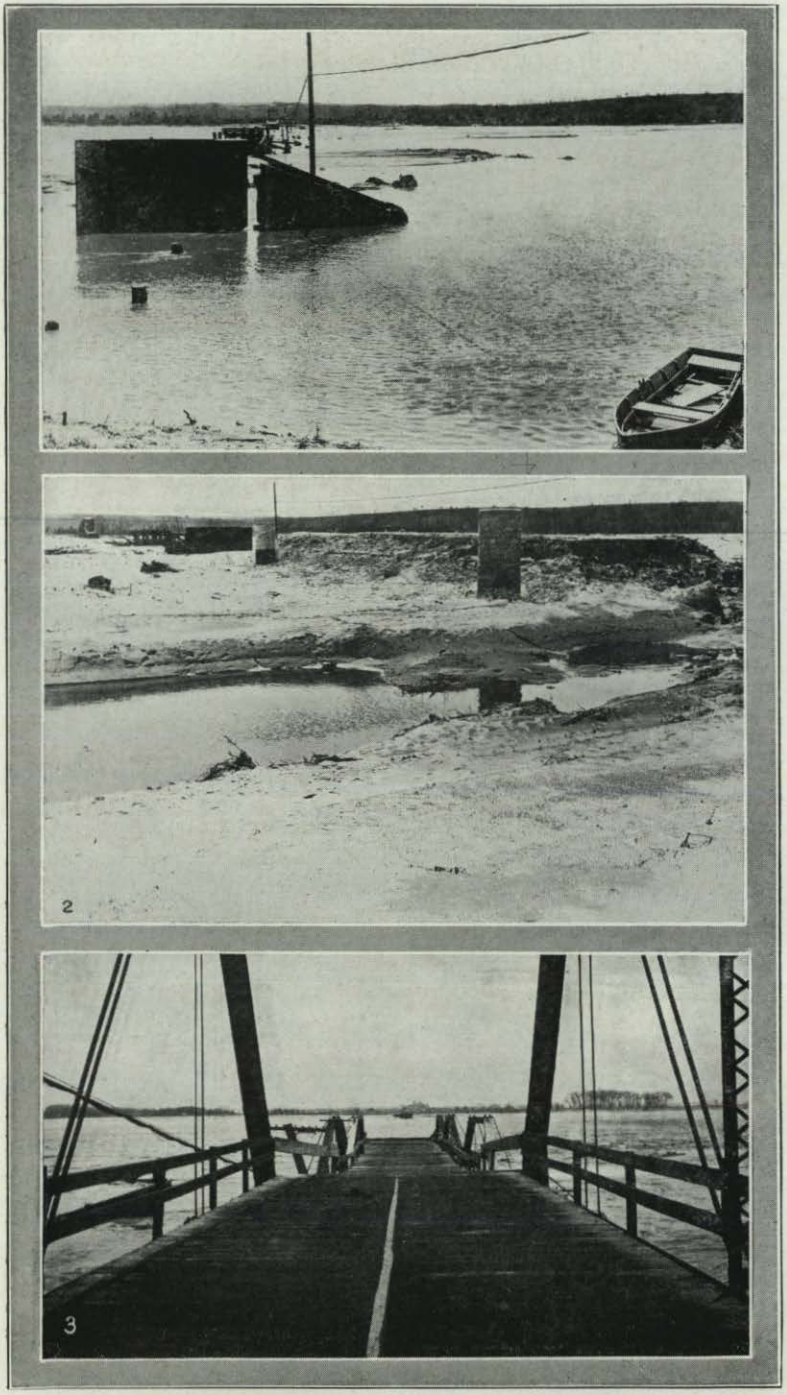
Plans for this bridge consist of five 136 ft. 6 in. steel spans with concrete piers and abutments and 16 ft. roadway. Bids were received and opened on July 16, 1912, at Fullerton, Nebraska. The contract was let to the Massillon Bridge and Structural Co., Kansas City, Mo. At present about one-half of the foundation work of this bridge is completed. The work is being hurried along, but the bridge will probably not be completed and opened to travel until April 1st, 1913.

EXCAVATING TUBE

BIDS RECEIVED ON GENOA STATE AID BRIDGE AT FULLERTON, NEBR., JULY 16, 1912
Contract awarded to Massillon Br. Co., Kansas City, Mo.

	Des Moines Br. & Iron Co. Des Moines, Ia.	Stupp Bros. Bridge & Iron Co. St. Louis, Mo.	Ward & Weighton Audubon, Ia.	Elkhorn Const. Co. Fremont, Nebr.	Massillon Br. Co. Kansas City, Mo.	Standard Bridge Co. Omaha, Nebr.	Illinois Steel Br. Co. Omaha, Nebr.	Western Bridge & Constr. Co. Omaha, Nebr.	Midland Bridge Co. Kansas City, Mo.	Omaha Structural Steel Co. Omaha, Nebr.	Elkhart Bridge & Constr. Co.	Beach Mfg. Co. Sioux City, Ia.	H. T. Ward & Co. Tecumseh, Nebr.
5 136-ft. 6-in. steel spans on concrete piers and abutments	$22696.00	$24864.00	$27139.00	$24303.00	$20390.00	$24650.00	$21640.00	$23295.00	$24917.00	$21495.00	$25900.00	$25999.00	$24932.00
5 136-ft. 6-in steel spans on 60-in. tubular piers and concrete abutments	22986.00	24040.00	25875.00	24907.00	21500.00	24900.00	22075.00	23427.00	24672.00	21675.00	22780.00	22940.00	25900.00
Floor No. 1.—Creosoted plank	2026.00	3600.00	3140.00	2822.00	2430.00	3500.00	2660.00	3300.00	3280.00	2730.00			4000.00
Floor No. 2.—Wood block	4786.00	5650.00	5300.00	4989.00	5200.00	5500.00	4932.00	5000.00	6160.00	4850.00			5932.00
Floor No. 3.—Oak plank	2506.00	2750.00	2000.00	2058.00	2450.00	2300.00	1950.00	2090.00	2400.00	2000.00			2700.00
Earthwork—Fills and approaches per yd	.35	.40	.35	.34	.65	.40	.30	.30	.30	.55			.41
Extra plain concrete per cu. yd.	10.00	9.50	12.00	10.50	12.00	12.50	8.50	14.00	10.00	10.25	11.25	11.00	12.80
Extra reinforcing steel per lb		.0295	.035	.053	.035	.050	.03	.04	.03	.03¼	.04½	.04½	.05¾
Extra fabricated steel per lb.	.0395	.0375	.0525	.05	.06	.06	.05	.05	.05	.045	.045	.045	.065
Extra round piling per lin. ft.	.30	.60	.45	.70	.50	.45	.50	.45	.75	.55	.50	.38	.49
Extra Wakefield piling per lin. ft.	.40	.90	.75	.78	.64	1.25	1.00	1.00	.75	1.00	1.75	1.60	1.60
Extra 60-in. tubes per ft	30.00	17.50	14.50	16.00	18.00	25.00	17.50	25.00	13.00	22.75	18.00	18.70	26.50
Extra Bethelehem H's per lin. ft.	1.38	1.10	1.25	1.65	1.00	1.75	1.50	1.75	1.20	2.15	1.15	1.20	1.80
Extra sheet steel piling per lin. ft.	1.50	1.25	1.25	1.55	1.00	2.25	1.50	2.00	1.20	2.60	1.35	1.25	3.00
Removing old 70-ft. steel spans per ft		2.00	2.00		2.00			3.50	2.00				
Cutting off old tub. piers per tube		25.00	15.00		10.00			25.00	150.00				

NOTE—Contract awarded to Massillon Br. Co., Kansas City, Mo.



SITE FREMONT STATE AID BRIDGE

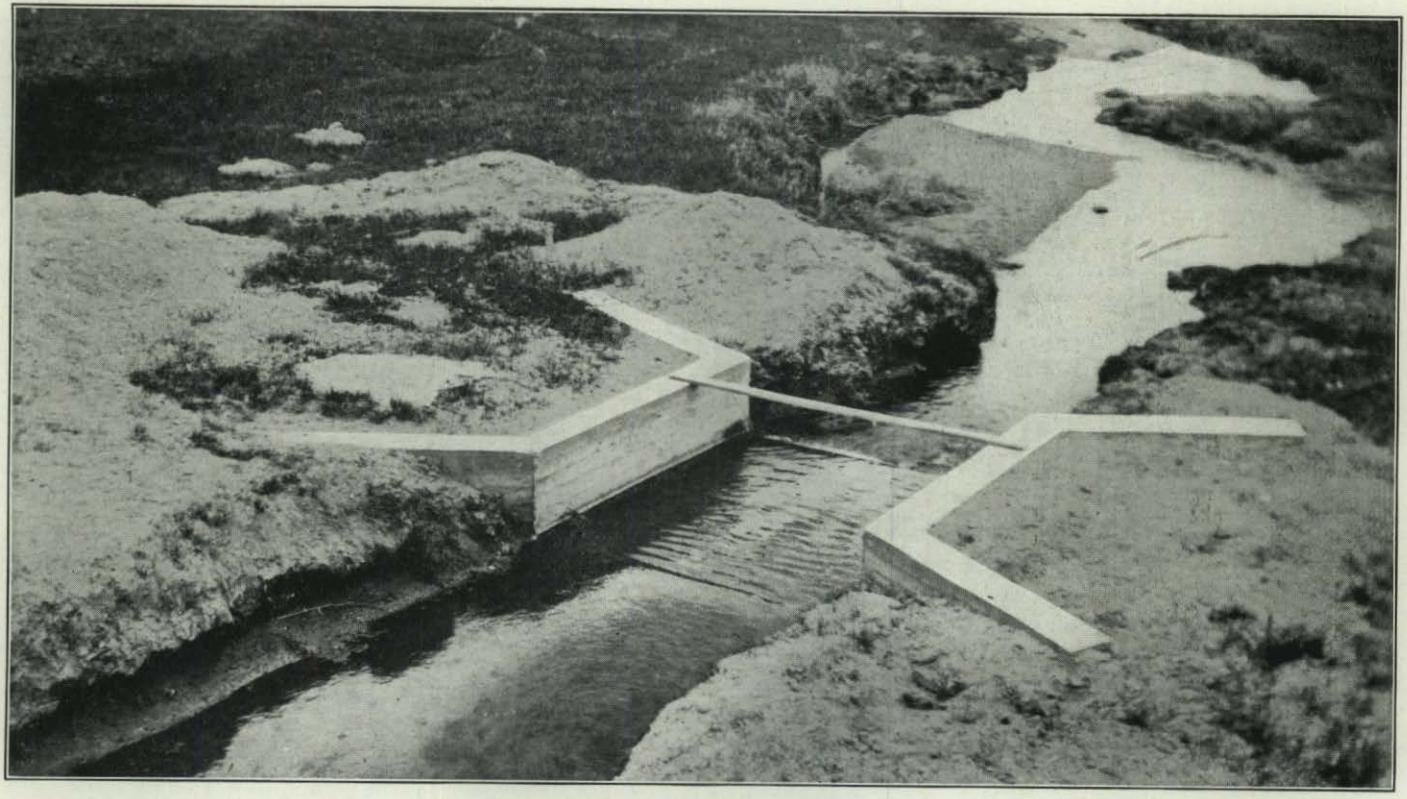
DRAINAGE

At the present time this office does not have any general supervision over drainage work, with the exception of draining of lakes of a certain size which might be of more use and value as pleasure resorts and for fish culture than the land which they cover would be for agricultural purposes.

During the past few years there have been a large number of drainage districts formed throughout the State. In many cases these have been formed for the purpose of straightening out and shortening the channels of small streams. Several instances have come to the attention of this office where several districts have been formed for the straightening out of the channel of the same stream. Different engineers were employed to work out the plan and locate the drainage ditches of each different district. The district higher up on the stream would often build a canal of larger cross section than the one lower down the stream, which should have been designed to carry more water than the upper one. This shows clearly that one or the other of these canals was not built to the best advantage and economically.

Different questions like this arise which are greatly influenced by the local people, who desire special favors and privileges and the best results for drainage as a whole are not accomplished. It is recommended that a law be passed compelling all drainage districts to file an application, setting forth all the facts pertaining to their proposed drainage project and that the same be acted upon by the State Board, the same as an application for irrigation or power purposes and that the drainage district be required to file detailed plans of their proposed project, and that the same be approved by the State Board, subject to any change which they may see fit to make before the construction work can begin. In this way the drainage work of the entire state will be put under the supervision of the State Board, and the State Engineer may go upon the ground and make such surveys and examinations as he may deem necessary, so as to enable him to recommend to the Board and the Drainage Districts the best plan for carrying out the proposed project, which opinion will be unbiased by any local conditions or favors that might exist otherwise. Thus a uniform plan for the straightening of the channels of different streams can be successfully worked out throughout their entire length.

Surveys might be made by the State Engineer's office of different streams and all low and seep lands, showing the best and most feasible ways of draining and straightening and shortening the channels of creeks, so that proposed districts could be formed more easily and to a better advantage than they are under the system which is in use at this time.



IDEAL MEASURING FLUME

The following statement shows the amount of money in the various funds on November 30, 1910, and the amount drawn from each of these funds, and also the balance remaining unexpended which reverted to the General Fund. It also shows the amount appropriated for the biennium beginning the first Wednesday in April, 1911, and the amount drawn from each of these funds to October 30th, 1912, and the balance remaining in each fund to this date. It shows also the amount of fees received by this department during the period from November 30th, 1910, to October 30th, 1912, all of which has been paid to the State Treasurer. The fees up to and including November, 1911, were paid into the General Fund. The fees since December, 1911, have been paid into the Institution Cash Fund, and the statement below shows the amount received and the amount expended from that fund.

FUND	Balance Nov. 30, 1910	Drawn from Bal. Nov. 30, 1910	Unused	Appropriation of 1911	Expended April 1, 1911, to Oct. 30, 1912	Balance Oct. 30, 1912
Secretary	$1,000.00	$1,000.00		$4,000.00	$3,000.00	$1,000.00
Assistant Secretary	500.00	500.00		2,400.00	1,870.00	530.00
Under Secretaries	1,099.60	1,099.43	$ .17	3,200.00	2,749.71	450.29
Stenographer	350.00	350.00		1,680.00	1,330.00	350.00
Field Help and Office Expense	1,157.59	1,155.69	1.90	7,000.00	6,036.53	963.47
		Paid				
Fees	Collected	Treas'rer	On Hand			
Paid to General Fund	973.65	973.65			Expend'd	Balance
Paid to Institution Cash Fund	13,301.18	13,301.18			6,457.24	6,843.94

FUND	Amount of 1911 Levy	Collected by State Treasurer Oct. 31, 1912	Expended to Oct. 31, 1912	Balance on Hand Oct. 31, 1912
State Aid Bridge Fund	$83,134.01	$72,271.76	$18,648.61	$53,623.15

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CLAIMS AND APPLICATIONS GRANTED AND PENDING

The following tables give a complete list of all claims and applications for water, which have been granted by the State Board of Irrigation, and which have never been cancelled; also all applications and claims now pending.

In these tables, the claims and applications have been arranged in each water division by streams in alphabetical order, and the appropriations on each stream are arranged in order of their priority and for that stream only; but in the table immediately following the priority is given for each water division.

Range numbers refer to ranges west of the 6th Principal Meridian, unless otherwise indicated.

Those having docket numbers are claims made covering rights acquired under the law prior to April 4, 1895, and those having application numbers are applications for permits to appropriate water made under the law of 1895.

These tables will be found valuable in ascertaining relative rights of appropriators from any stream.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
Ash Creek	Vance, Roscoe	Lewellen	Vance Ditch	Irrig.	1.14	27	16	42	Deuel	June	14	1890	765	
Ash Creek	Gillard, George	Lewellen	Gillard Ditch	Irrig.	1.43	3	16	42	Deuel	Dec.	31	1890	812	
Ash Creek	McCormick, O.	Lewellen	McCormick	Irrig.		16	16	42	Deuel	May	24	1900	1011	*
Beaver lake	Baldridge, A. F	Alliance	Beaver	Irrig.		16	20	44	Garden	Aug.	6	1910		1018
Birdwood creek	Eq. Farm & S. Imp. Co.	N. Platte	Birdwood Canal	Irrig.	100.	35	15	33	Lincoln	Oct.	21	1893	646	
Birdwood creek	Eq. Farm & S. Imp. Co.	N. Platte	W. Side Birdwood Canal	Irrig.	8.57	22	15	33	Lincoln	Jan.	16	1894	652	
Birdwood creek	Beauchamp, W. K.	Sutherland	Beauchamp Canal	Irrig.	3.	15	15	33	Lincoln	Sept.	19	1894	677	
Birdw'd ck. E. B.	McCabe, N.	N. Platte	McCabe Ditch	Irrig.	5.	3	16	33	Lincoln	Mar.	1	1901		602
Blue creek	Union Irr. & W. P. Co.	Lewellen	Union Irr. & W. P Canal	Irrig.	24.64	18	16	42	Deuel	May	16	1890	763	
Blue creek	Ia. Irr. & Imp.Co.	Lewellen	Blue Creek Ditch	Irrig.	12,86	6	16	42	Deuel	Sept.	7	1893	781	
Blue creek	Blue Creek Irr. Dist.	Lewellen	Blue Creek Canal	Irrig.	107.29	33	17	42	Deuel	Dec.	27	1893	785	
Blue creek	Ia. Irr. & Imp.Co.	Lewellen	Ia. Irr. & Imp. Co. D.	Irrig.	12.	7	16	42	Deuel	Feb.	24	1894	786	
Blue creek	Graf, Robert E.	Lewellen	Graf Canal	Irrig.	61.43	19	16	42	Deuel	April	2	1894	788	
Blue creek	Winterer, Jacob H.	Lewellen	High Line Ditch	Irrig.	20.	21	17	42	Deuel	Sept.	27	1894	795	
Blue creek	Bergenson, Nels. et al	Lewellen	West Side Ditch	Irrig.	21.	28	17	42	Deuel	Nov.	20	1894	800	
Blue creek	Ramsey & Paisley	Lewellen	Paisley Irr. Ditch	Irrig.	4.	33	17	42	Deuel	July	14	1899		515
Blue creek	Slesser, David	Oshkosh	Fair View	P'wer	62.5	4	18	43	Garden	July	18	1910		1009
Blue creek	J. E. Eggers	Lewellen	The Eggers Extension	Irrig.	.42	33	17	42	Garden	Jan.	4	1912		1154
Brown's creek	Haxby, Geo. H.	Bridgeport	Hackberry Ditch	Irrig.	0.43	19	20	48	Cheyenne	July	17	1903		717
Buckhorn spgs.	Maddox, P. P.	Keystone		Irrig.	2.28	8	14	36	Keith	Oct.	3	1908		918
Buffalo creek W.	Henry, Absalom	Cozad	Henry Canal	Irrig.	0.07	23	11	23	Dawson	July	2	1900		570

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Ditch	Address Post-Office	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
Camp creek	Stillwell, Wm.	Lisco	Camp Creek Ditch	Irrig.	1.43	13	18	49	Cheyenne	Mar.	16	1892	866	
Cedar creek	Major, John	Paxton	Clear Creek Ditch	Irrig.	1.57	17	4	35	Keith	Jan.	3	1911		1051
Clear creek	Hooper, D. C.	Lewellen	Clear Creek Ditch	Irrig.	2.86	32	16	41	Keith	July	1	1888	748	
Clear creek	Barber, F. H., Marsh, W. F.	Lewellen	Clear Creek Canal	Irrig.	14.57	29	16	41	Keith	May	30	1893	754	
Clear creek	Green, Nelson A.	Lewellen	Clear Creek Ditch	Irrig.	1.14	32	16	41	Keith	May	30	1893	756	
Clear creek	Green, Nelson A.	Lewellen	Green Ditch	Irrig.	1.14	29	16	41	Keith	June	1	1893	745	
Clear creek	Scott, G. T., Williams E. C.	Lewellen	Scott & Williams Ditch	Irrig.	1.	28	16	41	Keith	May	18	1894	747	
Clear creek	Barber, F. H.	Lewellen	Finch Ditch	Irrig.	1.43	4	15	41	Keith	June	30	1895	964	
Clear creek	Barber, F. H. et al	Lewellen	Clear Creek Extension	Irrig.	1.14	31	16	41	Garden	July	5	1911		1111
Cold Water creek	Lisco Irr. Co.	Lisco	Cold Water Ditch	Irrig.	4.29	26	18	46	Deuel	Sept.	29	1894	796	
Coon creek	Winterer, Wm. H.	Keystone	Coon Creek Ditch	Irrig.	0.71	34	15	37	Keith	July	3	1895		69
Crescent lake	Orr, George B., et al	Lewellen	Crescent Canal	Irrig.		20	20	44	Garden	Sept.	22	1910		1024*
Dougout creek, S. W. Lower	Cooper, Eliza A.	Bridgeport	Cooper Ditch	Irrig.	0.86	4	19	48	Cheyenne	Aug.	15	1892	872	
S. W. Lower	Mulloy, Coote C.	Irving	Mulloy Ditch	Irrig.	1.	27	20	48	Cheyenne	July	18	1907		865
S. W. Lower	Hubbard, Henry	Broadwater	Hubbard Ditch	Irrig.	.29	4	19	48	Morrill	June	23	1910		1005
S. W. Lower	Hubbard, Henry	Broadwater	Hubbard Ditch	Stor.		4	19	48	Morrill	Aug.	26	1912		1222*
Fremont creek	Eq Farm & S. Imp. Co.	N. Platte	Fremont Creek Ditch	Irrig.	9.29	15	13	30	Lincoln	Jan.	31	1894	686	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

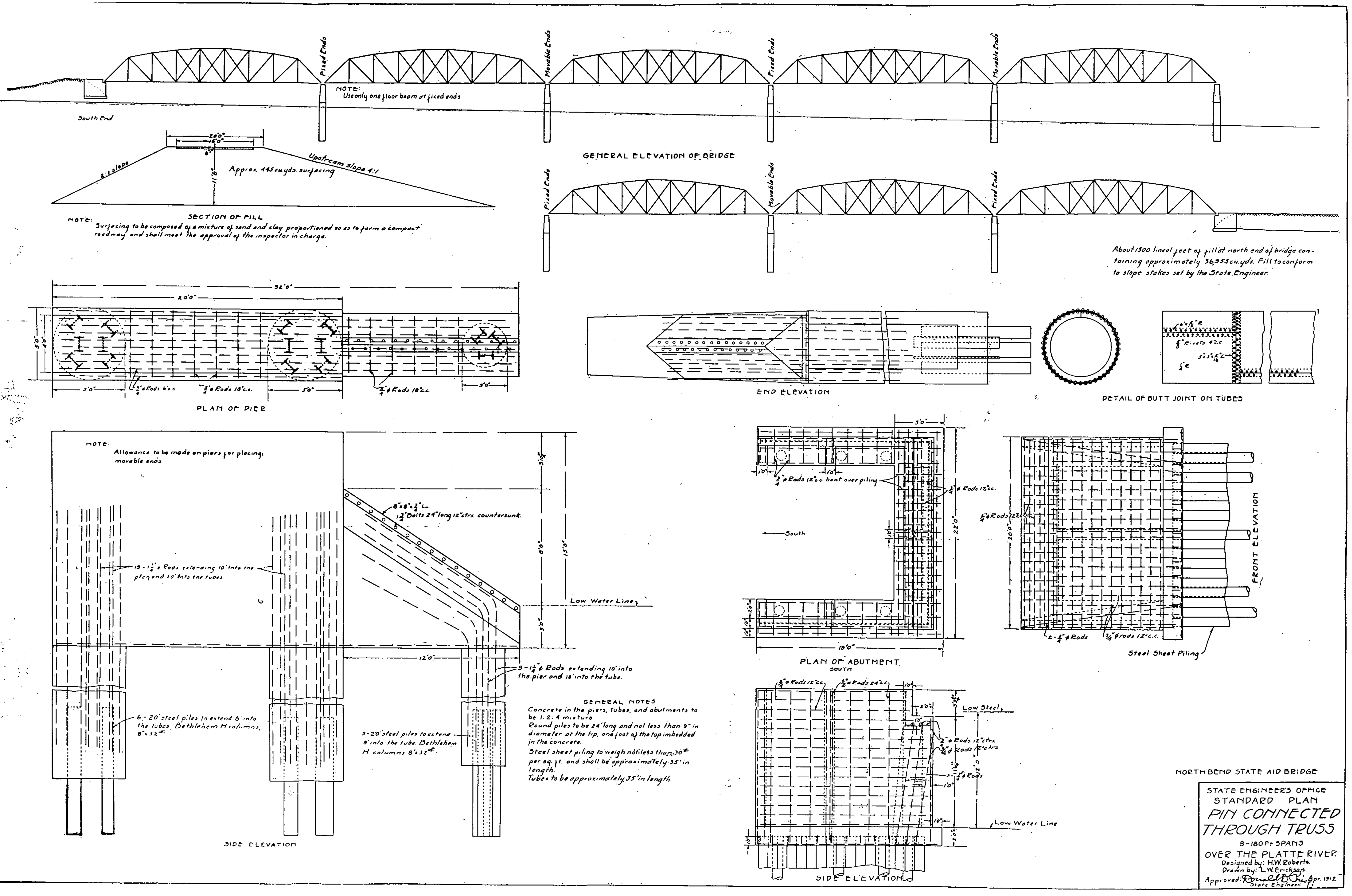
Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Golden creek	Thies, Micheal J.	Ogalalla	Theis Ditch	Irrig.	2.71	25	15	39	Keith	Sept.	17	1895		160
Greenwood creek	Coulter, D. M. & H. M.	Lovel'd Col.	Coulter Ditch	Irrig.	4.	15	18	50	Cheyenne	Feb.	3	1896	830	
Greenwood creek	Trinnier, J. E.	Redington	Trinnier Canal	Irrig.	6.29	28	18	50	Cheyenne	April	1	1892	849	
Greenwood creek	Nelson & Trinnier	Redington	Nelson Canal	Irrig.	3.	33	18	50	Cheyenne	April	1	1892	845	
Greenwood creek	Capron, A., Lamb, J.	Redington	Capron & Lamb Ditch	Irrig.	2.	15	18	50	Cheyenne	Jan.	1	1893	800	
Greenwood creek	Meglemre, Sara A.	Longm't, Col.	Meglemre Ditch	Irrig.	0.57	10	18	50	Cheyenne	May	6	1896		294
Greenwood creek	Dean, H. T.	Bridgeport	Dean Ditch	Irrig.	8.86	10	18	50	Cheyenne	Dec.	5	1906		844
Greenwood creek	Meglemre, Sarah A.	Longm't Col.	Meglemre Ext.	Irrig.	1.50	10	18	50	Cheyenne	March	11	1907		853
Greenwood creek	North, Robson Dean Co.	Bridgeport		Irrig.	1.50	10	18	50	Morrill	Dec.	14	1910		1045
Horse creek	Mihan, John	Caldwell	State Line Ditch	Irrig.	.50	33	23	58	Scotts Bluff	Sept.	19	1897		407
Horse creek	Brazel, P., Marsh, G.	Caldwell	Marsh & Braziel Canal	Irrig.	8.	4	22	60	Wyoming	Nov.	24	1908		921
Horse creek	Gilmore, F. D.	Mitchell	Gilmore Ditch	Irrig.	9.	33	23	58	Scottsbluff	Feb.	21	1910		983
Horse creek	Mihan, John	Caldwell	State Line Ditch	Irrig.	2.	33	23	58	Scotts Bluff	April	21	1910		994
Horse creek	Jackson, Joel	Caldwell	Jackson Extension	Irrig.	1.07	27	23	58	Scotts Bluff	May	19	1910		1000
Horse creek	Foster, C. B. et al	Caldwell	Caldwell	Irrig.	5.28	3	22	60	Wyoming	Mar.	28	1911		1078*
Horse creek	Marsh-Braziel Canal Ex.	Caldwell	Marsh-Braziel Canal Ex.	Irrig.		4	22	60	Wyomiing	Dec.	16	1911		1126*
Horse & Owl cks.	Pizer, H. J.	Mitchell	Horse Creek Ditch	Irrig.	0.86	34	23	58	Scotts Bluff	Feb.	29	1904		742
Huntington spg.	Cord, Fred	Hull	Cord Ditch	Irrig.	1.43	9	20	58	Scotts Bluff	Dec.	23	1904		778
Kiowa creek	Currie, Edwin A.	Mitchell	Currie Ditch	Irrig.	9.14	13	21	57	Scotts Bluff	March	23	1892	938	
Kiowa creek	Kellums, J. H.	Caldwell	Kellums Ditch	Irrig.	2.43	11	22	58	Scotts Bluff	Oct.	18	1901		641
Kiowa creek	Lowry, Ellis	Mitchell	Lowry Canal	Irrig.	0.52	31	32	57	Scotts Bluff	March	25	1904		746
Kiowa creek	Kellums, J. H.	Caldwell	Kellums No. 2	Irrig.	0.57	1	22	58	Scotts Bluff	Nov.	29	1907		880

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Second feet granted	Use to which applied	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Lawrence fork	Lindburg, F.	Redington		Irrig.	0.50	28	18	52	Cheyenne	Dec.	31	1886	825	
Lawrence fork	Gilman, Byron, Crigler, E. S.	Redington	Redington Ditch	Irrig.	0.57	36	19	52	Cheyenne	Oct.	9	1889	820	
Lawrence fork	Lindberg, Fred R.	Bridgeport	E. S. Crigler Ditch	Irrig.	.57	1	18	52	Cheyenne	Sept.	11	1891	861	
Lawrence fork	Harper, John W.	Higgins	Spring Branch Ditch	Irrig.	1.	11	18	52	Cheyenne	Oct.	23	1891	862	
Lawrence fork	Redington, H. V.	Redington	H. V. Redington Ditch	Irrig.	0.50	11	18	52	Cheyenne	May	1	1893	893	
Lawrence fork	Doran, Edmond	Sidney	Doran Canal	Irrig.	1.14	15	18	52	Cheyenne	June	1	1894	850	
Lawrence fork	Harper, John W.	Sidney	Spring Branch Extension	Irrig.	0.57	1	18	52	Cheyenne	Oct.	13	1898		476
Lawrence fork	Crigler, E. S.	Redington	Crigler Extension	Irrig.	1.43	1	18	52	Cheyenne	Nov.	25	1898		486
Lawrence fork	Neithus, Henry	Redington	Neihus Ditch	Irrig.	1.	11	18	52	Cheyenne	March	23	1900		550
Lawrence fork	Harper, J. W.	Sidney	Harper Ditch	Irrig.	1.43	11	18	52	Cheyenne	May	27	1902		669
Lawrence fork	Harper, John W.	Sidney	Bicket Ditch	Irrig.	0.57	11	18	52	Cheyenne	May	27	1902		670
Lawrence fork	Randall Bros.	Redington	Randall Bros Ditch	Irrig.	4.57	21	18	52	Morrill	May	15	1911		1100
Lonergan creek	Soehl, Herman A.	Lemoyne	Soehl Canal	Irrig.	2.	17	15	39	Keith	May	10	1889	697a	
Lonergan creek	Jacobs, Lee	Ogalalla	E. Lonergan Ditch	Irrig.	9.14	17	15	39	Keith	May	25	1889	699	
Lonergan creek	Soehl, Herman A.	Lemoyne	Soehl Canal	Irrig.	0.86	17	15	39	Keith	April	27	1893	697b	
Lonergan creek	Haney, August C.	Ogalalla	Haney Ditch	Irrig.	1.14	17	15	39	Keith	July	1	1893	719	
Mathews creek	Mathews, Benj. G.	Keystone	Mathesws Canal	Irrig.	1.14	23	15	37	Keith	April	1	1895	750	
North Platte R.	N. Platte Irr. & L. Co.	N. Platte	North Platte Canal	Irrig.	300.	13	14	34	Lincoln	May	31	1884	635	
North Platte R.	Farmers Canal Co.	Omaha	Farmers' Canal	Irrig.	1142.86	3	23	58	Scotts Bluff	Sept.	16	1887	918	
North Platte R.	Minatare Mut. C. & I. Co.	Minatare	Minatare Ditch	Irrig.	249.43	32	22	54	Scotts Bluff	Jan.	14	1888	919	
North Platte R.	Winters Creek Irr. Co.	Gering	Winter Creek Canal	Irrig.	124.29	17	22	55	Scotts Bluff	Oct.	18	1888	952	
North Platte R.	Enterprise Ditch Co.	Scotts Bluff	Enterprise Ditch	Irrig.	173.71	27	23	57	Scotts Bluff	March	28	1889	920	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Priority Date of			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
North Platte R.	Castle Rock Irr. Canal & Water Power Co.	McGrew	Castle Rock Irr. Canal	Irrig.	82.57	4	21	54	Scotts Bluff	April	18	1889	921	
North Platte Riv.	Logan, Chas E.	Bridgeport		Irrig.	5.71	19	24	50	Cheyenne	Oct.	17	1889	821	
North Platte Riv.	Belmont, I. C. & W. P. Co.	Omaha	Belmont Canal	Irrig.	270.	18	20	51	Cheyenne	Dec.	19	1889	823	
	Central I.C.& W.P.Co.	Gering	Central I. C. & W. P. Co. Canal	Irrig.	36.	27	22	55	Scotts Bluff	June	23	1890	926	
North Platte Riv.	Myers, T. A. et al	Ogalalla	Myers & Phelps Canal	Irrig.	7.14	34	15	39	Keith	Sept.	11	1890	709	
North Platte Riv.	Sheridan, J. Wake	Ogalalla	Sheridan & Wilson Ditch	Irrig.	10.	20	14	35	Keith	Oct.	9	1890	710	
North Platte Riv.	Chimney Rock Irr. Can. & Water Power Co.	Bridgeport	Chimney Rock Canal	Irrig.	60.	1	20	53	Cheyenne	Dec.	3	1890	844	
North Platte Riv.	Empire Canal Co.	Bridgeport	Empire Canal	Irrig.	28.57	18	20	51	Cheyenne	June	25	1891	858	
North Platte Riv.	Kah, David	Minatare	Kah Ditch	Irrig.	4.57	11	21	54	Scotts Bluff	Nov.	1	1891	944	
North Platte Riv.	Brown's Cr. I. C. Co.	Bridgeport	Brown's Ck Canal	Irrig.	188.71	29	20	50	Cheyenne	Jan.	20	1892	857	
North Platte Riv.	Hale, Will A.	Gering	Homestead Ditch	Irrig.	11.43	21	22	55	Scotts Bluff	June	29	1892	941	
North Platte Riv.	Alliance I. C. & W. P. Co.	Bridgeport	Alliance Canal	Irrig.	100.	5	20	52	Cheyenne	Dec.	26	1892	874	
North Platte Riv.	Clark, Henry T.	Bridgeport	H. T. Clarke Canal	Irrig.	9.43	22	20	51	Cheyenne	Feb.	2	1893	875	
North Platte Riv.	Nichols, Yorrick and C.	Morrill	Ramshorn Ditch	Irrig.	45.71	13	23	58	Scotts Bluff	March	20	1893	945	
North Platte Riv.	Short Line Irr. Co.	Bayard	Short Line Canal	Irrig.	65.57	25	21	53	Scotts Bluff	May	1	1893	946	
North Platte Riv.	Lisco Irr. Dist.	Lisco	Lisco Ditch	Irrig.	32.86	14	18	47	Cheyenne	July	1	1893	856	
North Platte Riv.	Nine Mile C. & Res. Co.	Bayard	Nine Mile Canal	Irrig.	200.	18	21	53	Scotts Bluff	Dec.	6	1893	925	
North Platte Riv.	Cody & Dillon I. C. Co.	N. Platte	Cody & Dillon I. C. Co.	Irrig.	127.	9	14	31	Lincoln	Dec.	29	1893	649	
North Platte Riv.	Keith & Lincoln Co. Irr. Dist.	Sutherland	S. & P. L. & I. C.	Irrig.	186.	18	14	36	Keith	Feb.	2	1894	722	
North Platte Riv.	Paxton & Hershey Irr. Canal & Land Co.	Omaha	Paxton & Hershey C.	Irrig.	130.	18	14	33	Lincoln	Feb.	12	1894	653	



Fixed Ends
Movable Ends
NOTE: Use only one floor beam at fixed ends
South End
GENERAL ELEVATION OF BRIDGE
20'0"
16'0"
2:1 slope
Upstream slope 4:1
Approx. 445 cu.yds. surfacing
11'0"
SECTION OF FILL
NOTE: Surfacing to be composed of a mixture of sand and clay proportioned so as to form a compact roadway and shall meet the approval of the inspector in charge.
About 1500 lineal feet of fill at north end of bridge containing approximately 36955 cu.yds. Fill to conform to slope stakes set by the State Engineer.
32'0"
20'0"
3/4" ϕ Rods 6" c.c.
3/4" ϕ Rods 18" c.c.
PLAN OF PIER
END ELEVATION
DETAIL OF BUTT JOINT ON TUBES
NOTE: Allowance to be made on piers for placing movable ends
6"x6"x3/4" L
1 3/4" Bolts 24" long 12" ctrs. countersunk.
19 - 1 1/4" ϕ Rods extending 10' into the pier and 10' into the tubes.
6 - 20' steel piles to extend 8' into the tubes. Bethlehem H columns, 8"x32#.
9 - 1 1/4" ϕ Rods extending 10' into the pier and 10' into the tube.
3 - 20' steel piles to extend 8' into the tube. Bethlehem H columns 8"x32#.
Low Water Line
12'0"
SIDE ELEVATION
GENERAL NOTES
Concrete in the piers, tubes, and abutments to be 1:2:4 mixture.
Round piles to be 24' long and not less than 9" in diameter at the tip, one foot of the top imbedded in the concrete.
Steel sheet piling to weigh not less than 30# per sq. ft. and shall be approximately 35' in length.
Tubes to be approximately 35' in length.
3/4" ϕ Rods 12" c.c. bent over piling
3/4" ϕ Rods 12" c.c.
South
19'0"
22'0"
PLAN OF ABUTMENT.
SOUTH
2 - 3/4" ϕ Rods
3/4" ϕ rods 12" c.c.
Steel Sheet Piling
FRONT ELEVATION
1/2" ϕ Rods 24" c.c.
Low Steel
Low Water Line
SIDE ELEVATION
NORTH BEND STATE AID BRIDGE
STATE ENGINEER'S OFFICE
STANDARD PLAN
PIN CONNECTED THROUGH TRUSS
8 - 180 Ft SPANS
OVER THE PLATTE RIVER
Designed by: H.W. Roberts.
Drawn by: L.W. Erickson.
Approved: State Engineer. Apr. 1912

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
North Platte Riv.	Lisco Irr. Co	Lisco	Bower Ditch	Irrig.	21.37	6	17	45	Deuel	March	27	1894	787	
North Platte Riv.	Far. & Mer. Land Co.	N. Platte	Farm. & Mer. Canal	Irrig.	183.	12	14	33	Lincoln	May	22	1894	662	
North Platte Riv.	South Side I. &. L. Co.	N. Platte	So. Side I. & L. Co. C.	Irrig.	270.	14	14	34	Lincoln	June	6	1894	667	
North Platte Riv.	Roberts, C. F.	Oshkosh	Midland Ditch	Irrig.	12.	2	16	44	Deuel	June	9	1894	789	
North Platte Riv.	Keith, Morrell C.	N. Platte	Keith Canal	Irrig.	71.	36	14	30	Lincoln	July	7	1894	657	
North Platte Riv.	Maycock, Joseph	Morrill	Rooster Ditch	Irrig.	5.71	10	23	58	Scotts Bluff	July	29	1894	950	
North Platte Riv.	Smith, Augustus	N. Platte	Smith Canal	Irrig.	20.	36	14	30	Lincoln	Aug.	9	1894	676	
North Platte Riv.	Fox, B. M.	Oshkosh	Overland I. C. Can	Irrig.	20.	1	16	44	Deuel	Aug.	14	1894	791	
North Platte Riv.	Hannah Irr. Can. Co.	Lisco	Hannah I. Canal	Irrig.	5.71	24	18	47	Cheyenne	Sept.	24	1894	886	
North Platte Riv.	Gumaer, H. G., et al	Oshkosh	Oshkosh Canal	Irrig.	40.	33	17	44	Deuel	Oct.	5	1894	797	
North Platte Riv.	Smith, A. H., et al	Bridgeport	Beerline Canal	Irrig.	30.	24	19	49	Cheyenne	Oct.	13	1894	887	
North Platte Riv.	Spohn, Wm.	Oshkosh	Spohn Ditch	Irrig.	13.14	13	17	45	Deuel	Dec.	6	1894	801	
North Platte Riv.	Rush Creek Ir. Can. Co.	Lodge Pole	Rush Creek Irr. Canal	Irrig.	9.64	2	17	46	Deuel	Dec.	11	1894	802	
North Platte Riv.	Lyons I. C. & W. P. Co.	Oshkosh	Lyons Irr. Canal	Irrig.	42.14	30	17	44	Deuel	Dec.	22	1894	803	
North Platte Riv.	Orr, Geo. B., et al	Lewellen	Orr & Vance Canal	Irrig.	2.93	29	16	42	Deuel	Dec.	24	1894	811	
North Platte Riv.	Williams, E. C. et al	Lewellen	Robb's & Williams Canal	Irrig.	26.57	35	16	42	Deuel	Jan.	4	1895	804	
North Platte Riv.	Gyger, J. C.	Oshkosh	Gyger Ditch	Irrig.	10.86	10	16	44	Deuel	Jan.	5	1895	806	
North Platte Riv.	Dikeman, S. F.	N. Platte	Dikeman Canal	Irrig.	30.	9	14	32	Lincoln	Jan.	14	1895	684	
North Platte Riv.	Simpson, Geo. M. et al	Oshkosh	Signal Bluff Ditch	Irrig.	30.13	16	16	43	Deuel	Jan.	16	1895	807	
North Platte Riv.	Jacobs, Lee	Ogalalla	Hay Land Canal	Irrig.	5.71	29	15	39	Keith	Jan.	19	1895	732	
North Platte Riv.	Hubartt, E.	N. Platte	Hubbartt & Hall D.	Irrig.	65.70	20	14	30	Lincoln	March	8	1895	691	
North Platte Riv.	Thies, Perry J.	Ogalalla	Fernstrom & Nissen	Irrig.	4.	25	15	39	Keith	March	23	1895	737	
North Platte Riv.	Alfalfa Irr District	Ogalalla	Alfalfa Irr. Dis. Can.	Irrig.	100.	1	15	42	Keith	March	25	1895	738	
North Platte Riv.	Bushnell, H. J. & E. N.	Oshkosh	Bushnell Bros. Ditch	Irrig.	7.14	12	16	44	Deuel	March	27	1895	809	
North Platte Riv.	Peterson, E. J.	Inavale	Holcomb Ditch	Irrig.	15.49	16	15	40	Keith	June	4	1895		1
North Platte Riv	Steamboat Ditch Co.	Gering	Steamboat Ditch	Irrig.	15.	4	21	54	Scotts Bluff	Oct.	22	1895		183

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
North Platte Riv.	Lisco Irr. Co.	Lisco	North River Irr. Canal	Irrig.	168.29	14	18	47	Cheyenne	Feb.	24	1896		243
North Platte Riv.	Rush Cr. L. & L. Stk. C.	Lisco	LaMore Ditch	Irrig.	20.	34	19	48	Cheyenne	July	18	1896		327
North Platte Riv.	Steamboat Ditch Co.	Gering	Steamboat Ditch	Irrig.		4	21	54	Scotts Bluff	July	22	1896		350
North Platte Riv.	Tetreault, Amedee	Bridgeport	Tetreault Ditch No. 2	Irrig.	3.43	1	19	50	Cheyenne	Aug.	15	1896		353
North Platte Riv.	The Gering Irr. District	Gering	Gering Canal	Irrig.	208.62	4	23	58	Scotts Bluff	March	15	1897		365
North Platte Riv.	Schermerhorn, A. D.	Omaha	Schermerhorn Canal	Irrig.	29.71	16	20	51	Cheyenne	Oct.	25	1897		418
North Platte Riv.	Frank, Wm.	Grand Island	Columbia Canal	Irrig.	600.	3	23	58	Scotts Bluff	April	14	1902		660
North Platte Riv.	Secretary of Interior	Wash., D. C.	Pathfiinder	Irrig.		19	29	83	State of Wyoming	Sept.	19	1904		768
North Platte Riv.	Belmont I. C. & W. P. Co.	Omaha	Belmont Canal	Irrig.	115.71	18	20	51	Cheyenne	March	28	1907		862
North Platte Riv.	White, D. W.	Bridgeport	Empire Ext	Irrig.	1.	18	20	51	Cheyenne	July	20	1907		866
North Platte Riv.	Lisco, Reuben	Lisco	Lisco Ditch	Irrig.	3.	14	18	47	Garden	April	6	1910		991
North Platte Riv.	Halligan, J. J.	North Platte	Round House Rock Canal	Irrig.		4	21	54	Scotts Bluff	April	13	1910		*992
North Platte Riv.	French, John E.	Henry	French Ditch	Irrig.	11.	9	23	60	Wyoming	Dec.	21	1911		1149
North Platte Riv.	Liebhardt Bros.	Denver, Colo.	Liebhardt Lateral	Irrig.	2.92	4	21	54	Morrill	Feb.	1	1912		1165
North Platte Riv.	Dobson, W. B.	Northport	Dobson's Lateral	Irrig.	3.14	5	20	52	Morrill	Feb.	28	1912		1181
North Platte Riv.	Nolte, Henry A.	Bridgeport	Nolte Ditch	Irrig.		32	19	48	Morrill	Aug.	9	1912		1214*
Spring Creek trb to N. Platte	Union Pacific Ry.	Omaha	Frazier Lake	Ice	4.	35	14	30	Lincoln	Sept.	6	1907		868
Spring Creek trb to N. Platte	Keystone Irr. Co.	Keystone	Spring Creek No. 1	Irrig.	1.13	19	15	37	Keith	May	27	1910		1002
Spring Creek trb to N. Platte	Gatch, Chas. E.	Melbeta	Gatch Ditch	Irrig.		25	21	54	Scotts Bluff	Aug.	21	1912		1220*
Borrow Pit, trib. to N. Platte	Taylor, A. O.	Minatare	Borrow Pit Ditch	Irrig.	.29	19	21	52	Scotts Bluff	April	23	1904		751

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Otter creek	Howell, R. B	Omaha	Cascade Canal	Irrig.	20.	5	15	40	Keith	Mar.	17	1911		1073
Otter creek	Peterson, E. J	Lemoyne	Peterson & Fairchild	Irrig.		4	15	40	Keith	Sept.	29	1911		1130*
Otter creek	Nissen, Pete & Co	Belmar	Otter Canal	Irrig.		5	15	40	Keith	May	24	1912		1198*
Owl creek	Kellums, John H.	Caldwell	Sunflower Ditch	Irrig.	.79	12	22	58	Scotts Bluff	Sept.	17	1897		411
Owl creek	Kellums, John H.	Caldwell	Sunflower Ditch	Irrig.	1.14	12	22	58	Scotts Bluff	Oct.	10	1904		770
Owl creek	Kellums, John H.	Caldwell	Sunflower Ditch No. 2	Irrig.	2.86	12	22	58	Scotts Bluff	Nov.	29	1907		879
Owl creek	Kellums, John H.	Caldwell	Sunflower Ditch Ext. No. 1	Irrig.	0.57	12	22	58	Scotts Bluff	Nov.	29	1907		881
Pawnee creek	Holcombe, M. N.	Brady Island	Holcombe's Ditch	Irrig.	8.	13	13	28	Lincoln	Oct.	18	1890	636	
Pawnee creek	Murphy, E. D.	Brady Island	Murphy's Ditch	Irrig.	8.57	29	13	27	Lincoln	June	9	1894	669	
Pawnee creek	Plumer, Wm. H	Maxwell	Plummer Ditch	Irrig.	10.	19	13	27	Lincoln	June	15	1894	672	
Surface & Seepage Nine Mile Canon	Elower, L. F	Minatare	Side Hill Irr. Canal	Irrig.	15.	34	22	53	Scotts Bluff	July	11	1912		1164*
Platte river	Gothenburg P. & I. Co.	Gothenburg	Gothenburg P. & I. C.	I.&P	200.	29	12	26	Lincoln	July	5	1890	645a	
Platte river	Farmers' D. & C. Co.	Brady Island	Farm. D. & C. Co. D.	Irrig.	280.	17	13	29	Lincoln	June	2	1894	666	
Platte river	Farmers' Irr. Co.	Lexington	Farmers Irr. Co's. D.	Irrig.	114.	25	10	23	Dawson	June	14	1894	621	
Platte river	Farm. & Mer. Irr. Co.	Lexington	Farmers & Merchants C.	Irrig.	1142.86	18	10	23	Dawson	June	26	1894	622	
Platte river	Fowells, Russell H.	Maxwell	Maxwell Canal	Irrig.	27.14	29	13	28	Lincoln	July	5	1894	673	
Platte river	Appleford, Henry	Maxwell	Appleford Canal	Irrig.	10.	15	13	29	Lincoln	July	7	1894	674	
Platte river	Sides, Leroy	Lowell	Leroy Sides' Ditch	Irrig.	20.	13	8	14	Kearney	July	23	1894	629	
Platte river	Farmers' Union D. Co.	Kearney	Farmers' Union Canal	Irrig.	128.57	6	8	19	Dawson	Aug.	10	1894	623	
Platte river	Platte R. Irr. Co	Lexington	Platte R. I. Co. Canal	Irrig.	400.	13	9	22	Dawson	Sept.	15	1894	624	
Platte river	Gothenburg P. &. I. Co.	Gothenburg	Gothenburg P. & I. C.	Irrig.	240.	29	12	26	Lincoln	Sept.	22	1894	645b	
Platte river	Farmers' Mut. Irr. Co.	Kearney	Farmers' Canal	Irrig.	180.	12	8	16	Buffalo	Sept.	24	1894	628	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Second feet granted	Use to which applied	Location of Headgate S	T	R	County	Date of Priority Month	D	Yr.	Docket No.	App. No.
Platte river	McCullough, John	Maxwell	McCullough Ditch	Irrig.	30.	35	13	28	Lincoln	Oct.	20	1894	679	.....
Platte river	Six Mile Ditch Co.	Gothenburg	Six Mile Ditch	Irrig.	40.	11	11	26	Lincoln	Oct.	22	1894	680	.....
Platte river	Gothenburg South Side Irr. Co.	Gothenburg	Gothenburg S. S. Irr. Co.	Irrig.	357.14	30	12	26	Lincoln	Oct.	26	1894	681	.....
Platte river	Booker, H. C.	Gothenburg	Booker Canal	Irrig.	160.	16	11	25	Dawson	Nov.	9	1894	625	.....
Platte river	Cozad Irr. Co.	Cozad	Cozad Irr. Canal	Irrig.	614.29	15	11	25	Dawson	Dec	28	1894	626	.....
Platte river	Orchard & Alfalfa Irr.	Cozad	Orchard & Al. Irr. D.	Irrig.	300.	9	10	24	Dawson	Jan.	23	1895	627	.....
Platte river	Lincoln & Dawson County Irr. Dist. 1.	Gothenburg	Lincoln & Dawson Co. Irr. Dist Canal	Irrig.	612.86	9	13	29	Lincoln	Feb.	22	1895	687	.....
Platte river	Appleford, Henry	Maxwell	Appleford Canal	Irrig.	2.86	15	13	29	Lincoln	March	28	1895	690	.....
Platte river	Lex. So. Side Irr. Co.	Lexington	Lex. So Side Ditch	Irrig.	58.	8	9	22	Dawson	Sept.	28	1900	.....	576
Platte river	Koenig, A. C.	Omaha	.....	Power	500.	20	17	7	Merrick	Sept.	28	1910	.....	1028
Platte river	Kearney W. & Elec. Pow. Co.	Kearney	Kearney W. & Elec. Pow. Co.	I. & P.	.....	3	8	16	Buffalo	Dec.	27	1911	1023*	.....
	Fowles, R. H.	N. Platte	Maxwell Canal	Irrig.	.....	27	13	28	Lincoln	July	29	1911	.....	1118*
Pumpkin Seed	Wright, John S.	Harrisburg	J. S. Wright Ditch No. 1	Irrig.	2.	5	19	54	Banner	Dec.	31	1882	904	.....
Pumpkin Seed	Kelly, Wm. J.	Harrisburg	Kelley Ditch	Irrig.	1.43	5	19	54	Banner	May	10	1886	915	.....
Pumpkin Seed	Heard, Henry L.	Freeport	Heard's D's Nos. 1 & 2	Irrig.	1.29	14	19	54	Banner	June	1	1887	916	.....
Pumpkin Seed	Wright, John S.	Harrisburg	J. S. Wright D. No. 2	Irrig.	2.86	5	19	54	Banner	Dec.	31	1887	905	.....
Pumpkin Seed	Logan, John E.	Gering	Logan Ditch	Irrig.	4.	7	19	55	Banner	July	16	1890	902	.....
Pumpkin Seed	Court House Rock I. Co.	Bridgeport	Court House I. Canal	Irrig.	30.59	30	19	50	Cheyenne	Oct.	6	1890	840	.....
Pumpkin Seed	Smith, Eliza, C., Wheeler, Chas. G.	Sidney	Smith & Wheeler So. D.	Irrig.	1.57	26	19	51	Cheyenne	Oct.	16	1890	842	.....
Pumpkin Seed	Mutual Ditch Co.	Redington	Mutual Ditch	Irrig.	8.57	33	19	52	Cheyenne	Nov.	1	1890	843	.....

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Pumpkin Seed	Waitman, P. P	Redington	Waitman's Ditch	Irrig.	2.86	25	19	53	Banner	March	12	1891	847	
Pumpkin Seed	Endered, Chas. O., et al	Freeport	Endered Ditch	Irrig.	1.	21	19	53	Banner	May	27	1891	903	
Pumpkin Seed	Cary, L. B.	Bridgeport	Meredith & Amner Ditch	Irrig.	18.86	23	19	50	Cheyenne	Feb.	20	1893	876	
Pumpkin Seed	Hampton, R. R. and Wm. D.	Harrisburg	Hampton Ditch	Irrig.	1.29	25	20	57	Banner	April	5	1893	906	
Pumpkin Seed	Finn, J. L., Dean, H. T.	Bridgeport	Last Chance	Irrig.	8.	27	19	50	Cheyenne	April	12	1894	883	
Pumpkin Seed	Munn, Lee	Redington	Round House Rock D	Irrig.	3.	28	19	51	Cheyenne	May	29	1894	884	
Pumpkin Seed	Maxwell, Jos. J.	Redington	J. J. Maxwell Irr. Ditch	Irrig.	.50	23	19	52	Cheyenne	June	30	1894	885	
Pumpkin Seed	Dunlap, J.P.	Dwight	Dunlap Ditch	Irrig.	.36	24	19	51	Cheyenne	March	1	1895	889	
Pumpkin Seed	Willard, Wm. M.	Redington	Wm. M. Willard D.	Irrig.	1.43	25	19	51	Cheyenne	March	27	1895	888	
Pumpkin Seed	Thompson, R. S., et al	Redington	Birdcage Ditch	Irrig.	1.	19	19	51	Cheyenne	June	1	1895	892	
Pumpkin Seed	Smith, E. &. Wheeler, Chas. G.	Sidney	Smith & Wheeler North Ditch	Irrig.	.71	26	19	51	Cheyenne	June	1	1896	842	
Pumpkin Seed	Wisner, S. R., et al	Freeport	Abbott & Wisner Ditch	Irrig.		23	19	53	Banner				917	*
Pumpkin Seed	Peters, John F.	Harrisburg	Peters Ditch	Irrig.		34	20	56	Banner				913	*
Pumpkin Seed	Egleston, T. C.	Harrisburg	Airedale Canal No. 1	Irrig.	3.	2	19	55	Banner	Jan.	24	1903		698
Pumpkin Seed	Egleston, T. C.	Harrisburg	Airedale Canal No. 2	Irrig.	3.	1	19	55	Banner	Jan.	24	1903		699
Pumpkin Seed	Scott, Ambrose E.	Harrisburg	Reservoir Nos. 1, 2, 3,	Irrig.	1.31	7	19	55	Banner	June	24	1903		711
Pumpkin Seed	Smith, T. H.	Redington	Smith	Irrig.	.57	25	19	53	Cheyenne	Aug.	19	1903		722
Pumpkin Seed	Johnson, Theo.	Freeport		Irrig.	2.29	2	19	55	Banner	April	20	1906		819
Pumpkin Seed	Beatty, D. E.	Harrisburg	Beatty Ditch	Irrig.	0.84	8	19	55	Banner	Sept.	1	1906		836
Pumpkin Seed	Swanger, R.	Bridgeport	Swanger	I.&P	0.43	29	19	50	Cheyenne	Feb.	28	1907		851
Pumpkin Seed	Elter & Betebenner	Bridgeport	Pumpkin Creek Mills	P'wer	25.	23	19	50	Cheyenne	March	26	1907		855
Pumpkin Seed	Beaty, Daisy E	Harrisburg	Beaty Canal	Irrig.	.19	5	19	55	Banner	June	2	1910		1004
Pumpkin Seed	Seeley, W. J.	Dunlap, Iowa	Seeley Irr. Ditch	Irrig.	.57	28	19	52	Morrill	Jan.	19	1911		1052

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Pumpkin Seed	Egleston, T.C	Harrisburg	Airedale Canal No. 2	Irrig.	1.57	1	19	55	Dawes	Oct.	26	1911		1133
Pumpkin Seed	Court House, Rock I. C.	Bridgeport	Court House Rock I. Canal	Irrig.		30	19	50	Morrill	May	11	1912	1028*	
Sand creek	Holcomb, G. J., et al	Ogalalla	Holcomb & Smith	Irrig.	7.	10	15	40	Keith	May	20	1889	693	
Sand creek	Patrick, Herman A.	Ogalalla	Patrick Ditch	Irrig.	2.43	3	15	40	Keith	May	31	1891	725	
Sand creek	Nissen, P.	Ogalalla	Nissen Ditch	Irrig.	3.07	10	15	40	Keith	March	18	1901		606
Sand creek	Maddox, P. P. Sillasen, S. J.	Keystone	Sand Creek Ditch	Irrig.	15.70	9	14	36	Keith	Jan.	3	1910		974
Seepage from lake	Huffman, M. J.	Gering	Huffman's Ditch	Irrig.	6.43	26	21	54	Scotts Bluff	March	19	1909		937
Schuetz Spring	Schuetz, Louis	Bridgeport	Schuetz Spring Canal	Irrig.	.21	28	18	50	Cheyenne	May	10	1892	881	
Sheep creek	Nichols, Yorick	Henry	Little Moon	Irrig.	1.	10	24	58	Sioux	March	23	1904		745
Sheep creek	Covert, Pitt	Cheyenne, Wyoming	Nebraska Rererevoir	Irrig.	3.57	36	27	58	Sioux	May	18	1907		859
Sheep creek	West Fork Ditch Co.	Empire	West Fork Ditch	Irrig.	5.14	1	26	58	Sioux	Setp.	21	1907		871
Sheep creek	Cunningham, H. B.	Empire	Lower Canal	Irrig.	0.37	11	25	58	Sioux	Nov.	2	1907		875
Sheep creek	Speese, R. L.	Empire	Home Ranch Ditch	Irrig.	1.79	25	26	58	Sioux	Nov.	2	1907		876
Sheep creek	Speese, R. L.	Empire	Horse Pasture Reservoir	Irrig.	1.29	25	26	58	Sioux	Nov.	2	1907		877
Sheep creek	Speese, R. L.	Empire	Horse Camp Reservoir	Irrig.	2.86	36	27	58	Sioux	Jan.	20	1908		885
Sheep creek	Cunningham, H. B.	Empire	No. Two	Irrig.	2.50	2	25	58	Sioux	Feb.	24	1908		890
Sheep creek	Sheep Creek Lateral Co.	Morrill	Sheep Creek Lateral	Irrig.		17	23	57	Scotts Bluff	Feb.	26	1912		1176*
Draw, Trib to Sheep creek	Hovey, Ethel A.	Empire	Favorable	Irrig.	.27	19	26	57	Sioux	Oct.	25	1907		873

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No
						S	T	R	County	Month	D	Yr.		
Draw, Trib to Sheep creek	Woodman, H. J.	Morrill	Gen. Utility Light & Pow. Plt	P'wer		17	23	[illegible]	Scotts Bluff	Aug.	17	1912		1217*
Skunk creek	Miller, Adam	Keystone	Miller Ditch	Irrig.	2.29	1	14	37	Keith	April	1	1895	740	
Skunk creek	Maddox, P. P.	Keystone	Skunk Creek Ditch	Irrig.	5.	6	14	36	Keith	Nov.	5	1909		968
Snake creek	Oasis Ditch Co.	Alliance	Oosis Ditch	Irrig.	54.86	6	24	51	Box Butte	June	6	1894	567	
Snake creek	Elmore, Mike	Alliance	Elmore Canal	Irrig.	5.71	30	25	51	Box Butte	June	22	1895		41
Snake creek	Kilpatrick Bros. Co.	Beatrice	Kilpatrick Res. No. 1	Irrig.	200.	1	24	52	Box Butte	June	22	1911		1104
Snake creek	Kilpatrick Bros. Co.	Beatrice	Kilpatrick Res. No. 2	Irrig.		[illegible]	2	[illegible]	Box Butte	Jan.	25	1912		1159*
South Platte Riv.	Eaton, John J.	Brule	Eaton & McGrath Ditch	Irrig.	20.	25	13	41	Keith	April	3	1894	755	
South Platte Riv.	Hollingsworth & Sons	Ogalalla	Hollingsworth Ditch	Irrig.	30.	12	13	39	Keith	June	5	1894	723	
South Platte Riv.	Stebbins, Lucien	N. Platte	Stebbins Canal	Irrig.	30.	34	14	32	Lincoln	Dec.	17	1894	683	
South Platte Riv.	Searle, E. M.	Ogalalla	Riverside	Irrig.	2.86	17	13	39	Keith	Dec.	22	1894	744	
South Platte Riv.	Miller, F.L.	Big Springs	Miller & Warren	Irrig.	53.86	7	12	42	Deuel	Jan.	5	1895	805	
South Platte Riv.	Ryan, J. T.	Brule	Home Irr. Ditch	Irrig.	3.14	30	13	40	Keith	March	2	1895	736	
South Platte Riv.	Shireman, W. H.	Ogalalla	So Side Plano Ditch	Irrig.	1.43	17	13	39	Keith	April	27	1895	733	
South Platte Riv.	Kimball, W., et al	Big Springs	Big Springs Canal	Irrig.	8.93	35	13	42	Deuel	April	27	1895	810	
South Platte Riv.	Stafford, David	Paxton	Paxton Southern Ditch	Irrig.	1.43	2	13	36	Deuel	Oct.	17	1895		184
South Platte Riv.	Lute & Sheridan	Ogalalla	Lute & Sheridan Ditch	Irrig.	13.43	5	13	37	Deuel	Feb.	17	1896		231
South Platte Riv.	Meyer, Henry	Brule	Meyer Canal	Irrig.	1.46	22	13	40	Deuel	April	14	1896		283
South Platte Riv.	Carnahan, H., Reed, O.	Brule	Cereal Irr. Ditch	Irrig.	4.86	16	13	39	Deuel	July	10	1896		357
South Platte Riv.	Allen, Wm. F.	Omaha	Allen Ditch	Irrig.	9.	24	13	40	Keith	Dec.	15	1896		370
South Platte Riv.	Western Irrig. District	Big Springs	Western Irrigation	Irrig.	18.00	14	12	43	Deuel	June	14	1897		393
South Platte Riv.	Leech, E. E. et al	Big Springs	Kimball's Und'rfl'w	Irrig.	3.57	4	12	42	Deuel	Nov.	8	1898		482

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
South Platte Riv.	Tressler, Wesley	Ogallala	Carnahan	Irrig.	4.28	16	13	39	Keith	May	7	1908		903
Spotted Tail Ck.	Stewart, H. G.	Mitchell		Irrig.	1.	10	23	56	Scotts Bluff	May	2	1898		449
Spotted Tail Ck.	Stewart, H. G.	Mitchell	Stewart Res.	Irrig.	1.43	2	23	56	Scotts Bluff	March	2	1904		743
Spotted Tail creek	Brown, E. W.	Mitchell	Brown Ditch	Irrig.	2.28	2	23	56	Scotts Bluff	Mar.	17	1911		1072
Spotted Tail creek	Tri-State Land Co.	Scotts Bluff	Tri-State Land Co. Canal No. 2	Irrig.		10	23	56	Scotts Bluff	Aug.	21	1911		1123*
Spotted Tail creek	Whitehead, Jas. T.	Mitchell	Whitehead Power Plant.	P'wer		26	24	56	Sioux	Aug.	10	1912		1215*
Spring Branch	Brogan Bros.	Paxton	Brogan Bros. D.	Irrig.	.57	35	15	37	Keith	Sept	24	1897		410
Spring Br., trib. to Lawr. Fork	Harper. J. W.	Sidney	Harper Ditch No. 2	Irrig.	2.	1	13	52	Cheyenne	June	16	1902		674
Spring creek	Holcomb, G.F.	Ogalalla	Spring Creek Ditch	Irrig.	.57	12	15	40	Keith	June	18	1891	724	
Spring creek	Freiday, Florian F.	Lexington	Freiday Canal	Irrig.	1.	20	9	20	Dawson	Nov.	23	1910		1040
Spring creek	McGinley, George	Keystone	Spring Creek Ditch	Irrig.	2.28	19	15	37	Dawson	Feb.	20	1912		1173
Spring Ck., trib. to White Tail	Keystone Irr. Co.	Keystone	Spring Creek Ditch	Irrig.	1.57	19	15	37	Keith	June	21	1890	704	
Spring Ck. Lit.	Ware Costin Cattle Co.	Omaha	Little Spring Ditch	Irrig.	.57	29	15	37	Keith	April	1	1902		659
Springs, trib to Middle creek	Bartliing, Henry	Redington	Bartling Ditch	Irrig.	.29	28	18	51	Cheyenne	July	31	1891	870	
Springs, trib. to Middle creek	Bartling, Henry	Redington	Bartling Ditch No. 2.	Irrig.	.29	28	18	51	Cheyenne	June	1	1894	891	

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Sprs. on Sec. 28-18-49	Finn Brothers	Bridgeport	Finn Bros.' Ditch	Irrig.	.50	28	18	49	Cheyenne	July	1	1890	836	
Springs & Sloug	Cundall, Harry	Stratton	Cundall Ditch	Irrig.	2.	19	50	51	Morrill	Dec.	15	1911		1148
Strm. (no name)	Newberry, H.	N. Platte	Newberry Ditch	Irrig.	1.14	22	14	32	Lincoln	Feb.	25	1895	688	
Tub Springs	Tri-State Land Co	Scotts Bluff	Tri-State Land Co. No. 2	Irrig.		27	23	55	Scotts Bluff	June	3	1911		1103*
Willow creek	Everett, R. L.	Harrisburg	Willow Springs Ditch 1	Irrig.	.57	16	19	56	Banner	Jan.	21	1902		650
Willow creek	Everett, R. L.	Harrisburg	Willow Springs Ditch 2	Irrig.	.86	16	19	56	Banner	Jan.	21	1902		651
White Horse creek	Lamplough, Isaac	N. Platte	Lamplugh's Lakes	Irrig.	2.86	8	14	30	Lincoln	Dec.	31	1883	658	
White Tail creek	McCarthy, John M.	Keystone	J. M. McCarthy	Irrig.	1.	36	15	38	Keith	July	15	1890	749	
White Tail creek	Keystone Irr. Co	Ogalalla	Halloway & Phelps Ditch	Irrig.	4.	36	15	38	Keith	June	1	1893	717	
White Tail creek	Leonard Brothers	Keystone	Little Dandy	Irrig.	2.	22	15	38	Keith	Oct.	12	1894	727	
White Tail creek	Keystone Irri. Co	Keystone	Foster Keystone Canal	Irrig.	13.86	36	15	38	Keith	Oct.	30	1894	730	
White Tail creek	Reed, Fred	Keystone	Reed Ditch	Irrig.	.57	15	15	38	Keith	May	15	1895	751	
White Tail creek	Bower, John H.	Ogalalla		Irrig.	1.42	36	15	38	Keith	Oct.	29	1897		420
White Tail creek	Keystone Irri. Co	Omaha	Keystone Canal	Irrig.	45.70	26	15	38	Keith	April	26	190[illegible]		f b
White Tail creek	Keystone Irri. Co	Omaha	Keystone Ditch	Irrig.	4.29	26	15	38	Keith	Nov.	30	1906		843
White Tail creek	Keystone Irrig. Co	Omaha	West Keystone	Irrig.	1.75	26	15	38	Keith	May	27	1910		1001
White Tail creek	Keystone Irr. Co	Omaha	Keystone	Irrig.	9.	27	15	38	Keith	May	27	1910		1003
Wind Springs	Lancomer, Geo. & Chas.	Gering	Wind Springs Canal	Irrig.	1.43	12	24	55	Sioux	March	1	1892	954	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Wind Springs	Smith, Jas S	Mitchell	Smith's Ditch	Irrig.	2.86	12	24	55	Sioux	March	14	1910		986
Winters creek	Bouton, Chas. A.	Gering	Bouton's Ditch	Irrig.	1.0	3	22	54	Scotts Bluff	Aug.	17	1890	923	
Winters creek	Shumway, G. L	Scotts Bluff		P'wer		8	22	54	Scotts Bluff	Jan.	3	1911		1050*
Winters creek	Imperial Land Co	Scotts Bluff	Winters Creek	Irrig.		19	22	54	Scotts Bluff	Feb.	16	1912		1170*
Wood river	Davis, J. H. & Sons	Gibbon		P'wer	40.	13		14	Buffalo	Nov.	1	1873	993	
Wood river	Shelton Mill & G. Co.	Shelton		P'wer	40.	1	9	13	Buffalo	Oct.	16	1873	994	
Wood river	Bears, S	Kearney		P'wer	25.40	13	9	16	Buffalo	May	1	1881	995	
Wood river	Klein, J. J	Kearney	White Bridge Park	Irrig.	.03	8	9	15	Buffalo	March	14	1900		545a
Wood river	Klein, J. J	Kearney	White Bridge Park	P'wer	10.	8	9	15	Buffalo	Mar.	14	1900		545b
Wood river	Jacobson, C. A	Riverdale	C. A. Jacobson Canal	Irrig.	0.5	31	10	16	Buffalo	Nov.	10	1910		1038
Wood River, Br.	Jacobson, C. A	Riverdale	Richaeson Reservoir	Irrig. & Str	1.	19	10	16	Buffalo	Mar.	27	1912		116
Wood River, Br.	Kimbrough, Cora	Shelton	Kimbrough Canal	Irrig. & Str	4.57	36	10	13	Buffalo	Feb.	3	1912		1166

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Arickaree river	Jenkins, Chas. T	Haigler	Haigler Reservoir & Irr. Co.	Irrig.	171	15	18	42	State of Colo.	Jan.	21	1910		976
Big Cottonwood	Hansberry, Jon. T.	Bloomington	Bloomington Ditch	Irrig.	.50	25	2	16	Franklin	Dec.	31	1881	185	
Big Cottonwood	Hansberry, Jon. T.	Bloomington	Bloomington Mill R.	P'wer		25	2	16	Franklin	Dec.	31	1881	185	
Big Cottonwood	Zulauf, Chas. E.	Ravenna	Bloomington Mill R.	P'wer	7.06	25	2	16	Franklin	Nov.	23	1898		483
Buffalo creek	Allen, N. J., Sr., et al	Haigler	Allen & Larned Ditch	Irrig.	6.	18	1	41	Dundy	Oct.	16	1890	117	
Buffalo creek	Porter, J. R. & Sons	Haigler	Porter & Sons' Ditch	Irrig.	2.86	1	1	41	Dundy	Nov.	26	1890	171	
Buffalo creek	Jenkins Land & Live Stock Co	Haigler	Jenkins Land & Live Stock Co.'s Ditch No. 1	Irrig.	4.29	18	1	40	Dundy	Dec.	12	1908		924
Brush creek	Lofton, Frank S	McCook	Brush Creek Reservoir	Stor.	3.5	3	2	29	Red Willow	June	1	1912		1201
Center creek	Gregory, A. B. & P. C.	Franklin	Gregory Ditch	Irrig.	4.	1	1	15	Franklin	Aug.	11	1894	182	
Center creek	Rose,, O. H.	Franklin	Rose Ditch	Irrig.	.29	36	2	15	Franklin	Jan.	10	1902		648
Coates creek	Burton, R. D.	Franklin		Irrig.	.37	33	2	14	Franklin	March	6	1899		501
Cook creek	Sharpnac, W. A.	Alma	Sharpnac Ditch	Fish	1.	1	1	11	Webster	May	7	1902		665
				Irrig.	1.	4	1	18	Harlan	Feb.	21	1896		251
Crooked creek	Kaley, O. H.	Red Cloud	Fish Pond											
Crooked creek	Slawson, E. R.	Red Cloud	Slawson Ice Pond	Stor.		1	1	11	Webster	Aug.	8	1912		1213*
Frenchman river	Athey, H. E	Wauneta	Wauneta Mills	P'wer	35.0	11	5	36	Chase	July	31	1886	178	
Frenchman river	James, R. P.	Champion	Champion Mills	P'wer	28.3	21	6	39	Chase	Dec.	31	1887	179	
Frenchman river	McGillen, W. J.	Imperial	Harlem Ditch	Irrig.	2.	1	5	38	Chase	July	1	1888	56	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Frenchman river and Stinking Water creek	Culbertson Irr. & Water Power Co.	Culbertson	Culbertson Irr. & Water Power Canal	Irrig.	215.	31	5	33	Hayes	May	16	1890	24 25 29 30	
Frenchman river	Chase Co. L. & L. S. Co	Champion	Champion Water Power and Irr. Ditch	Irrig.	64.86	23	6	40	Chase	Dec.	23	1890	47	
Frenchman river	McGillen, W. J.	Imperial	Aberdeen Ditch	Irrig.	2.	3	5	38	Chase	Feb.	1	1891	50	
Frenchman river	Farmers Canal Co.	Culbertson	Farmers' Canal	Irrig.	.10	11	3	32	Hitchcock	Dec.	19	1893	10	
Frenchman river	Fuller, C. D.	Imperial	Fuller Ditch	Irrig.	25.	4	5	36	Chase	June	12	1891	62	
Frenchman river	River Side Canal & Irrigation Co.	Culbertson	Riverside Canal	Irrig.	12.	33	4	32	Hitchcock	July	28	1891	18	
Frenchman river	Dissmore, Geo. A.	Des Moines	Frenchman Val. Canal	Irrig.	10.	32	5	33	Hayes	Aug.	23	1894	38	
Frenchman river	Gould, Wilson S.	Omaha	Gould or Harlem Ditch	Irrig.	2.	1	5	38	Chase	Oct.	9	1894	67	
Frenchman river	Grant, Allen	Imperial	Grant or Aberdeen Ditch	Irrig.	2.	3	5	38	Chase	Oct.	16	1894	68	
Frenchman river	Maranville, E., et al	Lamar	Maranville Ditch	Irrig.	6.	12	6	41	Chase	Dec.	8	1894	70 71	
Frenchman river	Wise, J. S.	Palisade	Wise Ditch	Irrig.	2.	15	5	35	Hayes	Dec.	28	1894	42	
Frenchman river	Gurnsey, D. & Co.	Wauneta	N. Side Gurnsey Ditch	Irrig.	5.	3	5	37	Chase	Jan.	14	1895	74	
Frenchman river	Gurnsey, D. & Co.	Wauneta	S. Side Gurnsey Ditch.	Irrig.	24.	10	5	37	Chase	Jan.	14	1895	75	
Frenchman river	Inman, N.	Champion	Inman Ditch	Irrig.	1.50	17	6	40	Chase	Feb.	28	1895	79	
Frenchman river	Daschosifsky, G.	Lamar	Lamar Rolling Mill	P'wer	30.	18	6	40	Chase	Sept.	30	1887	1013	
Frenchman river	North Side Irr. Ditch Co.	Champion	North Side Irr. Ditch	Irrig.	.79	21	6	39	Chase	Feb.	26	1896		246
Frenchman river	Shallenberger, P. H.	Imperial	Shallenberger Canal	Irrig.	1.77	25	6	39	Chase	Dec.	21	1897		423
Frenchman river	Inman Ditch & Irr. Co.	Imperial	Inman Ditch	Irrig.	6.43	17	6	40	Chase	Feb.	10	1898		436
Frenchman river	Hoke, J. A.	Champion	Hoke Pow. & Irr. Plant	P'wer	34.40	21	6	39	Chase	Dec.	12	1900		591
Frenchman river	Follett & Krotter	Palisade	Follett & Krotter Ditch	Irrig.	4.29	35	5	34	Hayes	April	30	1903		*705
Frenchman river	Follett & Krotter	Palisade	Krotter Power Plant	P'wer	19.	35	5	34	Hayes	May	12	1903		708

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Frenchman river	Dissmore, Geo A	Des Moines	Goker Ditch Extension	Irrig.	20.	8	4	33	Hitchcock	July	6	1903		714
Frenchman river	Follett & Krotter	Palisade	Follett & Krotter	Irrig.	2.57	35	5	34	Hayes	Aug.	11	1903		720
Frenchman river	Follett & Krotter	Palisade	Krotter Power Plant	P'wer	12.	35	5	34	Hayes	April	5	1904		748
Frenchman creek	Hagerman, William	Hamlet		Irrig.	.86	19	5	34	Hayes	March	11	1909		935
Frenchman creek	Krotter, F. C	Palisade	Follett & Krotter Ditch	Irrig.	10.43	35	5	34	Hitchcock	Jan.	15	1910		975
Frenchman river	Krotter, F. C	Palisade	Krotter Power Pl. No. 2	Irrig.	8.	35	5	34	Hitchcock	Dec.	15	1910		1046
Frenchman river	Krotter, F. C	Palisade	Krotter Power Pl. No. 3	Irrig.	2.42	35	5	34	Hitchcock	Dec.	15	1910		1047
Frenchman creek	Krotter, F. C	Palisade	Krotter Power Plant	P'wer	55.	35	5	34	Hitchcock	Aug.	17	1910		1021
Frenchman river	Kilpatrick Bros	Beatrice	Kilpatrick Res. No. 1	Stor.	60.	23	6	40	Chase	June	22	1911		1108
Frenchman river	Sheridan, R. B	McCook	Ex. Aberdeen Canal	Irrig.	1.57	2	5	38	Chase	July	29	1911		1117
Frenchman river	Bishop, Stephen S	Lincoln	Inman Storage Res	Irrig.	125.	17	6	40	Chase	Dec.	8	1911		1145
Frenchman river	Arterburn, E.	Lincoln	Arterburn Storage Res	Irrig.	150.	11	6	41	Chase	Nov.	28	1911		1142
Frenchman river	Theobald & Athey	Wauneta	Wauneta M. & Elec. P. Plant	P'wer	75.	11	5	36	Chase	Nov.	16	1911		1136
Frenchman river	Hoke, J. A	Champion	Hoke's Power & Pump Plant	Irrig.	2.22	1	6	39	Chase	May	1	1911		1094
Frenchman river	Sandburg, John	Denver	Lovella	I.&S	400.	5	5	38	Chase	Feb.	7	1912		1168
Frenchman river	Kilpatrick Bros. Co	Beatrice	Kilpatrick Res. No. 2	I.& S	60.	23	6	40	Sheridan	May	2	1912		1194
Frenchman river	Kimberling, V. & C	Champion	Kimberling Pumping Sta.	Irrig.	.57	20	5	40	Chase	May	9	1912		1196
Frenchman river	Frenchman Val Irr. Dist.	Culbertson	Frenchman Val. Irr. Dist. Res	Stor.	150.	36	5	34	Hayes	June	18	1912		1203
Horse creek	Nesbit, J. M., et al	Parks	Horse Creek Ditch	Irrig.	1.86	23	1	39	Dundy	Aug.	31	1885	{159 {173	
Spring trib. to Horse creek	Pringle, Esther L.	Parks	Pringle Ditch	Irrig.	.57	11	1	39	Dundy	Jan.	12	1897		364
Spring trib. to Horse creek	Pringle, Geo, N	Benkelman	Pringle Ditch	Irrig.	1.57	14	1	39	Dundy	May	11	1906		824

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Indian creek	Thompson & Van Sickle	Benkelman	Thompson & Van Sickle	Irrig.	.93	8	2	37	Dundy	June	20	1895		237
Indian creek	Kimsey, J. W., C. C.	Benkelman	Kimsey Ditch	Irrig.	.31	10	2	37	Dundy	June	20	1895		261
Indian creek	Wilson, Ed.	Stratton	Wilson Ditch	Irrig.	1.43	23	2	36	Dundy	June	22	1895		268
Indian creek	Chamberlain, J. C.	Mt. Sterling, Ill.	Chamberlain Ditch	I. & F	.06	28	2	36	Dundy	Oct.	4	1895		240
Indian creek	Stoneberg, Sanford	Max	Stoneberg Ditch	Irrig.	1.	2	2	37	Dundy	Mar.	13	1911		1070
Kilpatrick Res. No. 1	Kilpatrick Bros. Co.	Beatrice	Kilpatrick Res. Ditch	Irrig.		30	6	39	Chase	Jan.	25	1912		1160*
Medicine creek	Cambridge Milling Co.	Cambridge		P'wer	68.	29	4	25	Furnas	Dec.	31	1878	92 93	
Medicine creek	Sanders, John L.	Stockville	Sanders Irr. Plant	Irrig.	1.43	27	7	27	Frontier	Feb.	8	1895	83	
Medicine creek	Hagodorn, A. D.	Curtis	Curtis Lake	W. S. & P.		32	8	28	Frontier				*364	
Medicine creek	Maywood Milling Co.	Maywood	Maywood Milling Co.	P'wer	11.88	16	8	29	Frontier	May	4	1907		858
Mauer Springs	C. B. & Q. R. R.	Lincoln	Burlington Pipe Line	Irrig.	1.	23	2	11	Chase	Nov.	28	1911		1143
Muddy Creek	Sarver, W. E.	Stratton	W. B. Sarver Res.	Stor.	50.	5	2	35	Hitchcock	Mar.	9	1912		1167
Red Willow creek	Moore, Wm. H.	Indianola	Red Willow Mill	P'wer		16	3	28	Red Willow	Jan.	1	1886	181	
Red Willow creek	Holland, L. J.	Indianola	L. J. Holland Ditch	Irrig.	35.	16	3	28	Red Willow	Jan.	23	1891	95	
Red Willow creek	Helm, John F.	Red Willow		Irrig.	2.	17	3	28	Red Willow	Feb.	18	1895	111	
Red Willow creek	Clark, A. R.	Indianola	Red Willow Val. M.	Irrig.	14.29	31	4	28	Red Willow	Feb.	27	1905		781
Red Willow creek	Helm Irr. Ditch Co.	McCook	Helm Ditch	Irrig.	10.	8	3	28	Red Willow	Dec.	5	1910		1042
Red Willow creek	Allen, Joseph	McCook	Allen Ditch	Irrig.	1.42	6	4	29	Red Willow	Jan.	29	1912		1162
Red Willow creek	Masters, Chas.	Indianola	Master's Ditch	Irrig.	1.14	6	3	28	Red Willow	July	29	1912		1212

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Red Willow Lake	Cooper, James	Wallace		Irrig.	2.	36	9	33	Lincoln	Dec.	20	1893	647	
Republican river	Carson, Andrew	McCook	Carson Ditch No. 1	Irrig.	1.43	27	3	30	Red Willow	July	1	1888	103	
Republican river	Brown, W. A.	Haigler	Sand Point Ditch Co.	Irrig.	11.	11	1	42	Dundy	Sept.	25	1890	115	
Republican river	Dundy Co. Irr. Co.	Benkelman	Dundy Co. Ditch	Irrig.	45.	24	1	39	Dundy	Nov.	22	1890	118	
Republican river	Trites, W. H., et al.	Culbertson	Trites-Davenport Canal	Irrig.	7.	20	3	31	Hitchcock	Dec.	18	1890	3	
Republican river	McCook I. & W. P. Co.	McCook	Meeker Canal	Irrig.	143.	15	3	31	Hitchcock	Dec.	22	1890	4, 9 8, 7	
Republican river	Trenton Farmers' Irrigation Association	Trenton	Trenton Farmers' I. D.	Irrig.	32.	10	2	34	Hitchcock	Dec.	24	1890	5	
Republican river	Carson, Andrew	McCook	Carson Ditch No. 2	Irrig.	18.	27	3	30	Red Willow	May	5	1891	102	
Republican river	Neighbors, E. G.	Benkelman	Neighbors Ditch	Irrig.	2.86	24	1	39	Dundy	March	18	1891	133	
Republican river	Cambridge & Araphoe Irr. & Imp. Co.	Arapahoe	C. & A. I. & I. Co. D	Irrig.	170.	28	4	25	Furnas	Aug.	26	1891	89	
Republican river	Republican River Irr. Co.	Benkelman	Republican Riv. I. Co. D	Irrig.	30.	29	1	38	Dundy	May	2	1892	147 148	
Republican river	Larned, W. H., et al.	Haigler	White & Larned Co.	Irrig.	3.	22	1	40	Dundy	April	29	1893	150	
Republican river	Marr, Lorenzo	Culberston	Marr Ditch	Irrig.	4.29	16	3	31	Hitchcock	Jan.	22	1894	11	
Republican river	Anderson, Anders	Benkelman	Anders Anderson Ditch	Irrig.	2.	1	1	37	Dundy	Jan.	26	1894	151	
Republican river	Groesbeck & Cannon	Max	Groesbeck Ditch	Irrig.	10.	10	1	37	Dundy	March	27	1894	153	
Republican river	Thomas, A. J.	Haigler	Thomas Ditch	Irrig.	2.	24	1	40	Dundy	June	5	1894	154	
Republican river	Ballard, Henry L.	Oxford	Ballard Ditch	Irrig.	8.	8	3	21	Furnas	June	9	1894	91	
Republican river	Byfield, William	McCook	Byfield Ditch	Irrig.	12.	23	3	29	Red Willow	June	11	1894	108	
Republican river	Wilcox, F. S.	McCook	Wilcox Ditch	Irrig.	4.50	32	3	29	Red Willow	Oct.	4	1894	109	
Republican river	Delaware-Hickman Ditch Co.	Benkelman	Delaware-Hichman Ditch	Irrig.	20.	17	1	37	Dundy	Jan.	7	1895	157	
Republican river	Allen, E. M., et al.	Arapahoe	Allen Irr. Ditch	Irrig.	14.	2	3	26	Red Willow	Jan.	26	1895	110	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Republican river	Spooner, J. A.	Parks	Private Ditch	Irrig.	1.	25	1	40	Dundy	Oct.	7	1897		413
Republican river	Lee, Wm.	McCook	Harmon Ice Pond Ditch	Ice	10.	32	3	29	Red Willow	Jan.	22	1900		535
Republican river	Walsh, Patrick	McCook	P. Walsh Canal	Irrig.	11.	35	3	30	Red Willow	Jan.	31	1900		537
Republican river	Rep. Riv. Irr. Co	Benkelman	Rep. River Irr. Canal	Irrig.	20.	29	1	38	Dundy	Aug.	22	1900		577
Republican river	Eller, T. A. et al	Trenton	Campbell Canal	Irrig.	9.14	9	2	34	Hitchcock	July	13	1906		828
Republican river	Arapahoe Mun. L. & P. Co.	Arapahoe	Arapahoe Mun. L. & P Co.	P'wer	150.	27	4	23	Furnas	June	1	1909		949
Republican river	Dickson, W. H. Holmes, H. R., and	Denver	Haigler Res. No. 2	Irrig.	24.	27	1	41	Dundy	April	29	1910		997
Republican river	Capper, Geo.	Trenton	McConnell Bros. Irr. Co.	I.& P	38.	26	3	29	Red Willow	Jan.	3	1911		1049
Republican river	McConnell Bros	Trenton	H. D. Irr. Canal	Irrig.	180.	10	2	34	Hitchcock	Jan.	23	1911		1055
Republican river	Hurst, J. C. et al	McCook	Geo. Cappell Ditch	Irrig.	7.	28	2	35	Hitchcock	Mar.	7	1911		1068
Republican river	Rogers, W. M.	McCook	Shadeland Park	Irrig.	1.57	19	3	30	Red Willow	May	1	1911		1193
Republican river	Anderson, C. et al	Benkelman	Cottonwood Ditch	Irrig.	3.35	6	1	36	Dundy	Feb.	19	1912		1172
Republican river	Struve, Carl L.	Oxford	Struve Ditch	Irrig.	1.07	7	3	20	Harlan	Feb.	21	1912		1174
Republican river	Pioneer Irr. Co	Haigler	Haigler L & C. Co	Irrig.		2	1	43	Dundy	Mar.	30	1912	1025	*
Republican river	Rupert Ditch Co	Culbertson	Rupert Ditch	Irrig.	20.	32	3	32	Red Willow	April	19	1912		1192
Republican river	Gearhart & Benson	Arapahoe	Arapahoe Star Mill	Irrig.		27	4	23	Furnas	June	12	1912	1029	*
Republican river	Pringle, Geo. N.	Parks	Parks Ditch	Irrig.		20	1	39	Dundy	June	18	1912		1202*
Republican river	Calkins, H. G. et al	Omaha		P'wer		15	1	9	Webster	Aug.	26	1912		1221*
Repub. riv. S. Fk	Karr, J. W.	Benkelman	Karr's Ditch	Irrig.	2.	20	1	37	Dundy	July	28	1894	155	
Repub. riv. S. Fk	Riverside Ditch Co.	Benkelman	Riverside Ditch	Irrig.	13.	29	1	37	Dundy	Aug.	5	1894	156	
Repub. riv. S. Fk	McDonald, J. A.	Benkelman	McDonald Ditch	Irrig.	.79	36	1	38	Dundy	Nov.	13	1901		644
Rock creek	Highland, E. F., et al	Denver, Colo.	Phelan Ditch	Irrig.	4.29	17	1	39	Dundy	Dec.	31	1883	138	
Rock creek	Owens, J. S., et al	Parks	Owens' Ditch	Irrig.	.36	31	2	39	Dundy	June	20	1895		265

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-B—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No
						S	T	R	County	Month	D	Yr.		
Rock creek	Campbell, R. R.	Parks	Rock Creek Ditch Co.	Irrig.	.33	13	2	40	Dundy	Dec	18	189[illegible]		726
Rock creek	Rock Cr. P. & L. Co.	Benkelman	Rock Creek P. & L. Co.	P'wer	16.	19	1	37	Dundy	April	26	1911		1090
Sappa creek	Zulauf, Geo. W.	Stamford	Stamford Mills	P'wer		21	2	20	Harlan	Dec.	30	1898	*207	
Spring creek	Callihan, Oscar	Benkelman	Benkelman Ditch	Irrig.	1.29	19	1	37	Dundy	Dec.	31	1896		373
Stinking Water ck	Chase Co. Land & Live Stock Co.	Beatrice	Chase Co. L. & L. S.	Irrig.	2.86	10	7	38	Chase	March	10	1894	57	
Stinking Water ck	McLain, Frank	Imperial	McLain Ditch	Irrig.	2.50	28	7	37	Chase	Sept.	24	1894	65	
Stinking Water ck	Chase Co. L. & L. S. Co	Beatrice	Chase Co. L. & L. S. Co., Ditch 7	Irrig.	4.57	36	7	37	Chase	Dec.	21	1894	72 175	
Stinking Water ck	Chase Co. L. & L. S. Co	Beatrice	Chase Co. L. & L. S. Co., Ditch 6	Irrig.	2.	13	7	38	Chase	Jan.	28	1895	76	
Stinking Water ck	Chase Co. L. & L. S. Co	Beatrice	Chase Co. L. & L. S. Co., Ditch 5	Irrig.	1.50	14	7	38	Chase	Jan.	29	1895	77	
Stinking Water ck	Chase Co. L. & L. S. Co	Beatrice	Chase Co. L. & L. S. Co., Ditch 3	Irrig.	1.71	14	7	38	Chase	Jan.	29	1895	78	
Stinking Water ck	Chase Co. L. & L. S. Co	Beatrice	Chase Co. L. & L. S. Co., Ditch 4	Irrig.	.91	14	7	38	Chase	June	27	1895		56
Stinking Water ck	Kilpatrick Bros.	Beatrice	Chase Co. L. & L. S. Co., Ditch 1	Irrig.	.70	4	7	38	Chase	June	27	1895		57
Stinking Water ck	Troutman, A. C.	Palisade	E. L. Light & Power Co.	P'wer	30.	30	5	33	Hayes	June	30	1908		907
Stinking Water ck	Krotter, F. C.	Palisade	F. C. Krotter No. 2	Irrig.	3.	35	5	34	Hayes	Dec.	15	1910		1046
Stinking Water ck	Troutman, A. C.	Palisade	Troutman Irr. Ditch	Irrig.	.71	30	5	33	Hayes	Feb.	12	1912		1169
Turkey creek	Wilt & Polly	Naponee		P'wer		4	1	16	Franklin				*183	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-C

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Little Blue river	Myers & Seidenburg	Oak	Oak Mill-Race	P'wer		16	3	5	Nuckolls				*991	
Little Blue river	Williams, Robt. T	Edgar	Blue Bluffs Elec. Co	P'wer	180.	20	4	6	Clay	Feb.	17	1912		1171
Little Blue river	Larkin, M. E	Hastings	Crystal Lake	Stor.		27	6	10	Adams	Aug.	17	1912		1219*

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-D

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Bear creek	Wolfe, J. V.	Lincoln	Wat. Wks. Institute for Feeble-Minded	D&Ir	1.	36	4	6e	Gage	May	20	1898		455
Beaver creek	Wright, G. D.	York		P'wer	40.	7	10	2w	York	Nov.	1	1878	963	
Blue River, Big	Boyes, Burdette	Seward		P'wer	200.00	19	9	4e	Seward	July	8	1910		1006
Blue River, Big	Ashton, Edmund J	Lincoln		P'wer	500.00	4	8	8e	4 8 8e Saline		31	1910		1035
Blue River, Big	Holmesville M. & P. Co.	Holmesville	Holmesville M. & P. Pl.	P'wer	500.	29	3	7e	Gage	May	3	1911		1095
Blue River, Big	Helmer, Arthur	Beatrice	Blue Valley Power Plant	P'wer		1	3	6e	Gage	May	6	1911		1097*
Blue River, Big	Jacobs, E	Staplehurst	Jacob's Elec. Light Plant	P'wer	41.	26	12	2e	Seward	Nov.	24	1911		1135
Blue River, Big	Blue Riv. Pow. Co	Seward	Big Blue Power Plant	P'wer	100.	32	9	3e	Seward	Jan.	3	1912		1153
Turkey creek	Lane, J. K.	Pleasant Hill		P'wer		4	7	3e	Saline				990	*
Turkey creek	Lane, J. K.	Pleasant Hill	Lane's Model Ditch	Irrig.	1.21	4	7	3e	Saline	July	16	1895		81

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-E

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Lodge Pole	Bickel, L. W.	Kimball	Bay State Ditch	Irrig.	1.50	29	15	55	Kimball	Dec.	31	1876	347	.....
Lodge Pole	Adams & Tobin	Sidney	Adams & Tobin Ditch	Irrig.	1.14	35	14	50	Cheyenne	Oct.	1	1878	368	.....
Lodge Pole	Gunderson, A.	Potter	Gunderson Ditch	Irrig.	1.43	1	14	52	Cheyenne	June	1	1879	305	.....
Lodge Pole	Callahan, Chas	Sidney	Runge Ditch No. 1	Irrig.	1.71	20	14	50	Cheyenne	April	15	1880	339	.....
Lodge Pole	Callahan, Chas	Sidney	Runge Ditch No. 2	Irrig.	0.50	20	14	50	Cheyenne	April	15	1882	338	.....
Lodge Pole	Anderson, John	Sidney	Anderson Ditch No. 1	Irrig.	2.50	8	14	51	Cheyenne	June	30	1882	373	.....
Lodge Pole	Bennett Live Stock Co.	Kimball	Circle Arrow Ditch	Irrig.	3.71	30	15	54	Kimball	July	1	1882	346	.....
Lodge Pole	Pomeroy, E. V. S., et al	Sidney	Urbach Ditch	Irrig.	0.86	14	14	51	Cheyenne	Sept.	1	1882	308	.....
Lodge Pole	DeGraw, Geo.	Sidney	Hale Ditch No. 3	Irrig.	0.57	36	14	49	Cheyenne	April	30	1883	320	.....
Lodge Pole	DeGraw, Geo.	Sidney	Hale Ditch No. 4	Irrig.	0.71	36	14	49	Cheyenne	April	30	1883	321	.....
Lodge Pole	Hale, L. H.	Sidney	Hale Ditch No. 5	Irrig.	0.57	36	14	49	Cheyenne	April	30	1883	322	.....
Lodge Pole	Whitney, W. T.	Seattle, W.	Whitney Ditch	Irrig.	2.29	31	14	48	Cheyenne	May	1	1883	317	.....
Lodge Pole	Booth, Firth	Sunol	Booths Canal	Irrig.	4.29	29	14	47	Cheyenne	May	31	1883	309	.....
Lodge Pole	McAuliffe, F.	Chappell	McAuliffe Ditch	Irrig.	2.29	21	13	45	Deuel	Dec.	31	1884	814	.....
Lodge Pole	Kinney, J. J.	Kimball	Kinney Ditch No. 2	Irrig.	2.71	33	15	56	Kimball	Dec.	31	1884	388	.....
Lodge Pole	Libby, H. H.	Lodge Pole	Libby Ditch	Irrig.	2.	36	14	47	Cheyenne	Dec.	31	1884	312	.....
Lodge Pole	Dickinson, F.	Lodge Pole		Irrig.	1.14	26	14	47	Cheyenne	Jan.	1	1885	969	.....
Lodge Pole	Howard, A. T.	Lodge Pole	Howard Ditch	Irrig.	0.86	31	14	47	Cheyenne	April	10	1885	336	.....
Lodge Pole	Krueger, Richard	Sidney	Krueger Ditch No. 3	Irrig.	1.14	32	14	48	Cheyenne	May	1	1885	323	.....
Lodge Pole	Wolf, H. D.	Chappell	Wolf Ditch	Irrig.	1.	18	13	45	Deuel	Dec.	31	1885	813	.....
Lodge Pole	Bennett, L. S. Co.	Kimball	McIntosh Ditch	Irrig.	3.31	23	15	55	Kimball	April	16	1886	351	.....
Lodge Pole	Krueger, Richard	Sidney	Krueger Ditch No. 2	Irrig.	2.29	32	14	48	Cheyenne	Oct.	10	1886	324	.....
Lodge Pole	Borgquist, C. E.	Sidney	Borgquist Canal	Irrig.	1.29	34	14	49	Cheyenne	April	30	1887	301	.....
Lodge Pole	Borgquist, C. E.	Sidney	Borgquist Canal	Irrig.	0.71	34	14	49	Cheyenne	April	30	1887	300	.....
Lodge Pole	Whitney, W. T.	Seattle, W.	Upper Whiteny Ditch	Irrig.	2.29	36	14	49	Cheyenne	May	1	1887	316	.....
Lodge Pole	McLaughlin, M.	Sidney	McLaughlin Ditch	Irrig.	1.	26	14	48	Cheyenne	May	1	1887	966	.....
Lodge Pole	DeGraw, Geo.	Sidney	Hale Ditch No. 1	Irrig.	1.14	36	14	49	Cheyenne	July	1	1887	318	.....

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-E—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Lodge Pole	Mitchell, J.	Sidney		Irrig.	0.86	8	14	51	Cheyenne	Sept.	1	1887	304	
Lodge Pole	Craig, John	Sidney	Tobin Ditch	Irrig.	2.29	28	14	47	Cheyenne	July	31	1888	330	
Lodge Pole	Charlton, Jessie	Clinton, Iowa	Bordwell Ditch	Irrig.	1.43	35	14	49	Cheyenne	Aug.	1	1888	303	
Lodge Pole	Kinney, L. C.	Pine Bluffs, Wyo.	Premier Ditch	Irrig.	2.43	3	14	58	Kimball	April	11	1889	340	
Lodge Pole	Kinney, S. A.	Pine Bluffs, Wyo.	Smeed Ditch	Irrig.	1.43	8	14	58	Kimball	April	12	1889	341	
Lodge Pole	Charlton, Jessie	Clinton, Iowa	Bordwell Ditch	Irrig.	0.86	35	14	49	Cheyenne	April	27	1889	302	
Lodge Pole	Eubank, John	Kimball	Polly Ditch	Irrig.	0.79	30	15	55	Kimball	May	6	1889	342	
Lodge Pole	Cook, Chas.	Pine Bluffs, Wyo.	Independent Ditch	Irrig.	3.14	7	14	58	Kimball	May	6	1889	343	
Lodge Pole	Howe, H. H.	Kimball		Ir&P	0.43	30	15	55	Kimball	May	6	1889	344	
Lodge Pole	Kinney, J. J.	Kimball	Kinney Ditch	Irrig.	2.	33	15	56	Kimball	May	14	1889	345	
Lodge Pole	Young, W. T.	Kimball	Young Ditch	Irrig.	0.50	33	15	57	Kimball	May	28	1889	349	
Lodge Pole	Yoder, B. F.	Kimball	Ruttner Ditch	Irrig.	1.14	31	15	56	Kimball	June	4	1889	350	
Lodge Pole	Oberfelder, R. S.	Sidney	Oberfelder Ditch	Irrig.	0.43	31	14	46	Cheyenne	June	10	1889	333	
Lodge Pole	DeGraw, Geo.	Sidney	Hale Ditch No. 2	Irrig.	0.43	36	14	49	Cheyenne	June	26	1889	319	
Lodge Pole	Bullock, W. C.	Lodge Pole		Irrig.	9.14	3	13	46	Deuel	June	25	1889	296	
Lodge Pole	Persinger, A. B.	Lodge Pole	Persinger Ditch	Irrig.	4.57	33	14	46	Deuel	June	25	1889	297	
Lodge Pole	Krueger, Richard	Sidney	Krueger Ditch No. 1	Irrig.	3.	29	14	48	Cheyenne	June	26	1889	325	
Lodge Pole	Bennett, L. S. Co.	Kimball	Brady Ditch	Irrig.	.71	28	15	54	Kimball	Aug.	16	1889	352	
Lodge Pole	Gross, C. J.	Pine Bluffs, Wyo.	Hoover Ditch	Irrig.	1.43	12	14	59	Kimball	Sept.	4	1889	353	
Lodge Pole	McAdam, Andrew & Quinton	Potter	Ickes Ditch	Irrig.	2.50	33	14	50	Cheyenne	March	25	189	329	
Lodge Pole	Adams, J. M.	Potter	Adams Ditch	Irrig.	1.43	3	14	52	Cheyenne	July	1	189	371	
Lodge Pole	Girrard, F. G. & A. B.	Kimball	Hurley, Lilly & Polly D.	Irrig.	2.57	26	15	56	Kimball	Oct.	1	189	354	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-E—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied.	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Lodge Pole	Thornstensen, Nels	Sidney	Christenson Ditch	Irrig.	.57	7	14	51	Cheyenne	April	15	1893	366	
Lodge Pole	Thornstensen, Nels	Sidney	Christenson Ditch No.1	Irrig.	.43	7	14	51	Cheyenne	April	15	1893	367	
Lodge Pole	Trognitz, C.	Sidney	Trognitz Canal	Irrig.	1.	36	14	50	Cheyenne	June	1	1893	365	
Lodge Pole	Oberfelder, R. S.	Sidney	Oberfelder Ditch	Irrig.	2.	31	14	46	Cheyenne	Dec.	30	1893	306	
Lodge Pole	Krueger, Richard	Sidney	Richard Krueger Ditch	Irrig.	1.	29	14	48	Cheyenne	May	1	1894	968	
Lodge Pole creek	Kinney, J. J.	Kimball	Kinney Ditch No. 2	Irrig.	2.71	33	15	56	Kimball	Dec.	31	1884	348	
Lodge Pole	Anderson, J.	Sidney	Anderson Ditch No. 2	Irrig.	.57	10	14	51	Cheyenne	June	1	1894	372	
Lodge Pole	Adams, J. M.	Potter	Adams Ditch	Irrig.	1.43	10	14	52	Cheyenne	Sept.	1	1894	370	
Lodge Pole	Lyngholm, N. P.	Sidney	Lyngholm Ditch	Irrig.	.36	14	14	51	Cheyenne	Nov.	1	1894	337	
Lodge Pole	Adams, J. M.	Potter	Adams Ditch	Irrig.	.50	10	14	52	Cheyenne	Aug.	1	1895	369	
Lodge Pole	Dickinson, F.	Lodge Pole		Irrig.	2.29	33	14	47	Cheyenne	May	10	1896	967	
Lodge Pole	Burg, C. C.	Dix		Irrig.	.14	30	15	53	Kimball	March	3	1897		381
Lodge Pole	Bullock, W. C.	Lodge Pole	Bullock Canal	Irrig.	.57	4	13	46	Deuel	Feb.	16	1898		437
Lodge Pole	Forsling, A.	Kimball	Maltese Cross	Irrig.	.21	36	15	57	Kimball	May	16	1898		454
Lodge Pole	Kinney, L. C.	Bushnell	Bushnell Ditch	Irrig.	3.	2	14	58	Kimball	April	15	1899		504
Lodge Pole	Wiegand, Henry G.	Chappell	Wiegand Canal	Irrig.	2.	17	13	45	Deuel	May	31	1900		563
Lodge Pole	Neuman, A. G.	Chappell	Neuman C. No. 1 & 2	Irrig.	1.89	36	13	45	Deuel	June	12	1900		565
Lodge Pole	McHatton, James W.	Chappell	Wertz Bros. Ditch	Irrig.	2.86	12	13	46	Deuel	Feb.	14	1901		600
Lodge Pole	Neuman, G. R.	Chappell	Neuman Ditch	Irrig.	1.29	26	13	45	Deuel	April	17	1901		611
Lodge Pole	Johnson, J. C.	Chappell	Johuson Ditch	Irrig.	2.01	23	13	45	Deuel	April	17	1901		612
Lodge Pole	Bennett, L. St. Co.	Ch'yne Wyo.	Bennett L. S. Res	Irrig.	700 acre feet	21	15	55	Kimball	March	13	1902		657
Lodge Pole	Nasland, J. A.	Chappell	Nasland Ditch	Irrig.	.90	1	12	45	Deuel	April	16	1902		661
Lodge Pole	Clausen, John	Dix	Clausen S. S. Ditch	Irrig.	.57	27	15	54	Kimball	July	25	1902		683
Lodge Pole	Clausen, John	Dix	Clausen N. S. Ditch	Irrig.	.57	26	15	54	Kimball	July	25	1902		684
Lodge Pole	Bennett, L. St. Co.	Ch'yne Wyo.	Bennett L. S. Co's. D.	Irrig.	1.87	23	15	55	Kimball	Oct.	2	1902		691
Lodge Pole	Forsling, Alf.	Kimball	Forsling Ditch	Irrig.	1.50	34	15	57	Kimball	April	24	1903		703
Lodge Pole	Forsling, C. A.	Kimball		Irrig.	1.83	33	15	56	Kimball	July	25	1903		718

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-E—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Lodge Pole	Bickel, L. W.	Kimball	Bickel Ditch	Irrig.	.93	30	15	55	Kimball	Aug.	8	1903		719
Lodge Pole	Pomerory, E. V. S.	Sidney	Pomerory Ditch No. 1	Irrig.	.57	15	14	51	Cheyenne	Aug.	20	1903		723
Lodge Pole	Faden, E. L.	Kimball		Irrig.	.14	30	15	55	Kimball	Sept.	9	1903		724
Lodge Pole	Bennett, L. St. Co.	Ch'yne, Wyo.	Owasco	Irrig.	22.28	29	15	55	Kimball	Sept.	12	1903		725
Lodge Pole	Yoder, B. F.	Kimball	New Ruttner	Irrig.	.51	36	15	57	Kimball	Sept.	16	1903		727
Lodge Pole	Bennett, L. St. Co.	Ch'yne, Wyo.	Owasco	Irrig.	1.75	29	15	55	Kimball	Dec.	15	1903		734
Lodge Pole	Forsling, Alfred	Kimball	Forsling Ditch	Irrig.	.79	34	15	57	Kimball	Dec.	6	1905		806
Lodge Pole	Clarke, H. A.	Columbus	Clarke Ditch	Irrig.	2.	36	15	57	Kimball	Nov.	16	1906		842
Lodge Pole	McNew, H. C.	Julesburg, Col	Ralton	Irrig.	19.86	36	13	45	Deuel	Jan.	4	1907		847
Lodge Pole	McNew, H. C.	Julesburg, Col	Smith	Irrig.	3.57	12	12	45	Deuel	Aug.	18	1906		850
Lodge Pole	Forsling, Clarence	Kimball	Yoder Extension	Irrig.	2.86	36	15	57	Kimball	April	9	1907		857
Lodge Pole	Walker, I. S.	Kimball	Walker Ditch	Irrig.	1.57	31	15	56	Kimball	Sept.	16	1907		869
Lodge Pole	Wilkinson, Mrs. John	Pine Bluff, Wyo.	Tracy Ditch	Irrig.	.50	12	14	59	Kimball	Sept.	21	1907		870
Lodge Pole	McNew, H. C.	Julesburg, Col	Ralton	Irrig.	12.4	36	13	45	Kimball	Dec.	4	1907		882
Lodge Pole	Walker, I. S.	Kimball	Kimball Storage	Irrig.	20.000 acre ft	36	15	57	Kimball	April	15	1908		897
Lodge Pole creek	Wilds, Turner	Chappell	Wilds Ditch	Irrig.	.85	11	13	46	Deuel	June	2	1908		904
Lodge Pole	Ruttner, Carl	Sidney	Ruttner Canal	Irrig.	0.50	30	14	47	Cheyenne	June	25	1908		906
Lodge Pole	Forsling, C. A.	Kimball	Ex. of Yoder North Ditch	Irrig.	1.	36	15	57	Kimball	Dec.	1	1908		922
Lodge Pole	Bennett L. St. Co.	Kimball	Bennett Ditch No. 5	Irrig.	1.	29	15	55	Kimball	Feb.	17	1909		934
Lodge Pole	Bennett L. St. Co.	Cheyenne, Wyo.	Bennett Reservoir	Irrig.		30	15	54	Kimball	Aug.	10	1910		1020*
Lodge Pole creek	Maginnis, P.	Kimball	Maginnis Ice Pond	Stor.	3.	26	15	56	Kimball	Sept.	19	1911		1127
Lodge Pole creek	Forsling, Gustav A.	Bushnell	S. Bar	Irrig.		35	15	57	Kimball	July	8	1912		1208*
Lodge Pole creek	Kucera, Vaclav F.	Sidney	Kucera Canal	Irrig.		36	14	48	Cheyenne	July	25	1912		1211

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-E—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Spg. ck. trib. to Lodge Pole	Oberfelder, R. S.	Sidney	Oberfelder Ditch	Irrig.	2.29	31	14	46	Cheyenne	May	26	1889	307	
Spg. ck. trib. to Lodge Pole	Chambers, C. P.	Sidney	Private Ditch	Irrig.	.04	14	13	51	Cheyenne	March	19	1895	335	
S. Br. trib. L. P.	Libby, H. H.	Lodge Pole	Spring Branch Ditch	Irrig.	.29	36	14	47	Cheyenne	July	1	1901		623
Flood wat. from hill	Fifield, C. M.	Kimball	Fifield Ditch	Irrig.	1.	22	15	56	Kimball	Ajril	27	1911		1091

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 1-F

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Weeping Water ck	Gilmore, Chas. R.	Weeping W'ter	Gilmore Ditch	Stor.	8.	2	10	11e	Cass	Aug.	5	1909		955
Weeping Water ck	Weeping Water Lake and Power Co.	Weeping W'ter	Weeping Water Plant	P'wer	40.	2	10	11e	Cass	Nov.	5	1910		1087

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-A

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Barton creek	Lewis, Geo. H.	Syracuse, N. Y.	Lewis and Baxter	Irrig.	3.	6	24	19	Loup	July	20	1904		764
Beaver river	Quackenbush, J. W.	Albion	Pioneer Ditch	Irrig.	3.57	22	20	6	Boone	Dec.	8	1894	287	
Beaver river	Babcock, H. E.	Columbus	Great Eastern Canal	Irrig.		24	17	4	Nance	Jan.	22	1896		219b
Beaver river	Long, Wm. M.	Genoa	Windmill Irrigation	Irrig.	.14	14	17	4	Nance	March	31	1896		277
Beaver river	Rice, H.	Albion	Albion E. L. & P. P.	P'wer	67.	26	20	6	Boone	Oct.	3	1901		639
Beaver river	St. Edward Elec. Co.	St. Edward	St. Edward Elec. Co.	P'wer	134.	9	19	5	Boone	Feb.	11	1911		1058
Cedar river	Neb. Irr. & Power Co.	Ord	Cedar River Canal	Irrig.	175.	22	21	12	Wheeler	Sept.	14	1894	221	
Cedar river	Bennett, I. I.	Hastings	Fullerton Elec. & Pow.	P'wer	200.	12	16	6	Nance	Sept.	9	1901		636
Cedar River	Arnold, F. G.	Fullerton		P'wer	390.	30	17	6	Nance	Sept.	8	1910		1023
Cow creek	Edgar, H. R.	Brownlee	Homestead Ditch	Irrig.	2.29	7	26	27	Cherry	July	14	1894	194	
Dry creek, trib. to Calamus	Fisher, Conrad	Burwell	Fisher Canal	Irrig.	4.29	24	23	17	Garfield	Dec.	27	1905		807
Dave creek	Koupal, Frank	Ord		Irrig.		20	19	14	Valley	July	5	1912		1207*
Goose creek	Erickson, P. C. &. J. M.	Brewster	Erickson Ditch	Irrig.	8.	18	25	24	Brown	April	3	1895	209	
Goose creek	Giles, R. P., et al	Purdum	Giles Ditch	Irrig.	10.	2	25	25	Cherry	June	1	1895	187	
Goose creek	Crook, F.	Giles	Crook Ditch	Irrig.	6.80	33	25	24	Brown	June	2	1896		345
Gracie creek	Krueger, G.	Prime	Gracie High Line	Irrig.	.29	25	23	17	Loup	July	9	1897		397
Looking Class ck.	Gerrard, E. A. & F. H.	Monroe	Monroe Irr. Ditch	Irrig.	2.86	1	17	3	Platte	June	12	1894	289	
Looking Class ck.	Babcock, H. E.	Columbus	Great Eastern Canal	Irrig.	64.33	5	17	3	Platte	Jan.	22	1896		219b

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-A—(Continued).

Stream	Name of Ditch	Address Post-Office	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
Loup river	Babcock, H. E	Columbus	Neb. Cen. Irr. Co	Irrig.	1200.	17	17	3	Nance	Aug.	24	1895		129
Loup river	Babcock, H. E	Columbus	Great Eastern Canal	Irrig.	64.33	27	17	4	Nance	Jan.	22	1896		219b
Loup river	Neb. Cen. Irr. Co.	Columbus	New York Canal	Irrig.	300.	13	15	8	Nance	April	28	1896		291
Loup river	Neb. Cen. Irr. Co.	Columbus	Great Eastern Canal	P'wer	800.	27	17	4	Nance	Dec.	26	1899		527
Loup river	Neb. Cen. Irr. Co.	Columbus	Great Eastern Canal	Irrig.	200.	27	17	4	Nance	Dec.	26	1899		527
Loup river	Neb. Cen. Irr. Co.	Columbus	Columbus Power Plant	P'wer	1200.	27	17	4	Nance	Feb.	1	1902		653
Loup river	Neb. Cen. Irr. Co.	Columbus	Columbus Development	P&I.	2700.	27	17	4	Nance	June	10	1903		709
Loup river	Koenig, Arnold C	Omaha		P'wer		32	17	4	Nance	Sept.	30	1910		1029*
Loup River	Babcock, H. E	Columbus		Stor.		17	17	1	Platte	Feb.	27	1912		1178*
Loup River	Babcock, H. E	Columbus	Loup River Power Co	P'wer		21	18	5	Platte	Feb.	27	1912		1179*
Loup River	Babcock, H. E	Columbus		Stor.		17	17	1	Platte	Feb.	27	1912		1180*
Loup River	Boggs, Chas. T	Lincoln	Schuyler Development	P'wer		28	17	1	Platte	May	3	1912		1187*
Loup river, N. B	Nor. Loup Irr. & Im. Co	North Loup	North Loup Ditch	Irrig.	143.	27	19	14	Valley	Sept.	30	1893	227 228 232 188	
Loup river, N. Br	Lee, J. R.	Brownlee	Lee Ditch	Irrig.	40.	25	27	29	Cherry	Aug.	7	1894	189	
Loup river, N. Br	Burwell Irr. Co.	Burwell	Burwell Irr. Ditch	Irrig.	110.	27	21	17	Loup	Sept.	7	1894	224	
Loup river, N. Br	Newton Irr. Co.	Moulton	Newton Irr. Canal	Irrig.	115.14	35	23	21	Blaine	Feb.	5	1895	205	
Loup river, N. Br	Erickson, P. C.	Brewster	State Central Canal	Irrig.	51.43	27	23	22	Blaine	Sept.	10	1895		152
Loup river, N. Br	Tzschuck Canal Co.	Taylor	Tzschuck Canal	Irrig.	242.86	30	22	19	Loup	June	5	1896		301
Loup River, N. B.	Burwell Elec Co	Burwell	Burwell Elc. Pow. P	P'wer	1000.	10	21	16	Garfield	Mar.	29	1911		1077
Loup River, N. B.	Farmers Land Co	Omaha	Homestake Irr. Canal	Irrig.		27	23	22	Blaine	July	20	1912		1210*
Loup R. Mid. Br.	Sherman C. Irr. Water Power & Imp. Co.	Loup City	Sherman County Canal	P'wer	125.	26	17	16	Valley	Fall of		1888	229	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-A—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Loup R. Mid. Br.	Middle Loup Valley Irr. Canal Co.	Sargent	Middle Loup Val. I. C.	Irrig.	560.29	15	21	22	Blaine	June	6	1894	202	.....
Loup R. Mid. Br.	Douglas Grove Irr. Dist.	Comstock	Westcott Irr. Ditch	Irrig.	88.57	15	19	18	Custer	Aug.	8	1894	214	.....
Loup R. Mid. Br.	Sherman Co. Irr. Wat. Pr. & Imp. Co.	Loup City	Sherman County Canal	Irrig.	244.	26	17	16	Valley	Aug.	13	1894	229	.....
Loup R. Mid. Br.	Thedford Irr. & Pr. Co.	Thedford	Thedford Ditch	Irrig.	43.	4	23	29	Thomas	Aug.	25	1894	198	.....
Loup R. Mid. Br.	Purdum, J. W.	Thedford	Norway Irr. Ditch	Irrig.	2.86	31	24	29	Thomas	Sept.	8	1894	199	.....
Loup R. Mid. Br.	Lillian P. D. & P. Co.	Gates	Lillian Prec. Ditch	Irrig.	140.00	30	21	21	Blaine	Oct.	19	1894	{204	.....
Loup R. Mid. Br.	Butcher, A., et al	Gates	Butcher & Greible Ditch	Irrig.	18.29	36	20	21	Custer	Feb.	17	1895	}216	.....
Loup R. Mid. Br.	Jewett, L. H.	Broken Bow	Jewett Ditch	Irrig.	4.29	30	22	24	Blaine	Aug.	12	1895	220	.....
Loup R. Mid. Br.	Harris, L. H.	Dunning	Harris Canal	Irrig.	5.71	16	22	25	Blaine	Feb.	21	1896	.....	113
Loup R. Mid. Br.	Patton, J. A.	Ord	Arcadia Canal	Irrig.	20.	16	17	16	Valley	March	6	1896	.....	248
Loup R. Mid. Br.	Webster, L. E.	Comstock	Webster Canal	Irrig.	1.71	20	19	17	Custer	March	5	1898	.....	262
Loup R. Mid. Br.	Sargent, R. H.	Walworth	Walworth Mills	P'wer	27.	35	20	20	Custer	Aug.	16	1900	.....	442
Loup riv. Mid. br	Knudson, S. B.	St. Paul	St. Paul Elec. L. & P. Co.	P'wer	300.	10	14	16	Howard	Oct.	29	1910	.....	573
Loup R. Mid. Br.	Longwood Irr. Canal Co.	Comstock	Longwood Irr. Canal	Irrig.	12.99	20	19	17	Custer	Feb.	21	1912	.....	084
Loup R. Mid. Br.	Bennett, Edw. D.	Arcadia	Custer & V. P. & L. Co.	P'wer	850.	35	18	17	Valley	Feb.	2	1912	.....	1175
Loup R. Mid. Br.	Muhlback, Fred	Mullen	Mullen Grist & L. Plant	P'wer	124.	6	24	32	Hooker	Mar.	12	1912	.....	1177
Loup R. Mid. Br.	Lundy, Jas. W.	Sargent	Lundy Mill & Power Plt.	P'wer	.....	9	19	19	Custer	.....	.....	.....	1024	1185
Loup R. Mid. Br.	St. Paul Elec. Light Wk.	St. Paul	St. Paul Elec. L. Works	P'wer	.....	3	14	10	Howard	Aug.	12	1912	.....	*
Loup R. So. Br.	Tillson, W. Z.	Poole Siding	Tillson Ditch	Irrig.	15.57	29	12	15	Buffalo	Dec.	28	1894	236	1216*
Loup R. So. Br.	Boblitz, E. J.	Tuckerville	Boblitz Ditch	Irrig.	.50	10	14	21	Custer	Jan.	17	1895	219	.....
Loup R. So. Br.	Boblitz, E. J.	Tuckerville	Boblitz Ditch	P'wer	20.	10	14	21	Custer	Jan.	17	1895	219	.....
Loup R. So. Br.	Callaway Mill Co.	Calaway	.....	P'wer	.....	2	15	23	Custer	.....	.....	.....	*988	.....
Loup R. So. Br.	Brown, A. D.	Milldale	Brown Canal	P. & I.	60.86	31	17	24	Custer	Feb.	23	1897	.....	363

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-A—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Loup R. So. Br.	Hartzell, B. F.	Logan	Hartzell's Ditch	Irrig.	.37	27	18	26	Logan	May	18	1897		390
Muddy creek	Penn, C.	Broken Bow	Penn's Ditch	Irrig.	.50	33	17	20	Logan	Aug.	14	1894	215	
Muddy creek	Benson, Wm. C.	Litchfield	Litchfield Mills	P'wer		33	14	16	Sherman				999	*
Mira creek	McClellan, M. E.	North Loup	Mira Reservoir	Stor.	1.14	26	18	13	Valley	Mar.	8	1912		1182
Platte river	Fremont C. & P. Co.	Fremont	Fremont Canal	P&I.	2500.	30	17	4e	Butler	June	21	1895		40
Platte river	Keene, Lewis M.	Fremont	Fremont Pr. Canal	P'wer	2500.	30	17	4e	Butler	Jan.	2	1900		530
Platte river	Rosewater, A.	Omaha	Fremont Power Plant	P'wer	1500.	29	17	4e	Butler	July	6	1901		624
Platte river	Fremont & Omaha P. Co	Omaha	Fremont & Omaha	P'wer		30	17	4e	Butler	March	25	1908		*894
Shell creek	Schmitt, P.	Columbus	Schmitt's Irr. Canal	Irrig.	3.	19	18	1e	Platte	Dec.	17	1894	292	
Shell creek	Schmitt, P.	Columbus	Schmitt's Irr. Canal	P'wer	30.50	19	18	1e	Platte	Dec.	17	1894	292	
Shell creek	Gottberg, M.	Columbus	Gottberg Irr. Pl.	Irrig.	1.	24	18	1	Platte	June	6	1895		2
Shell creek	Babcock, H. E.	Columbus	Great Eastern Canal	Irrig.		27	17	4	Nance	Jan.	22	1896		219b
Spring creek	Hendryx, H. J.	Monroe	Hendryx Ditch	Irrig.	1.33	2	17	3	Platte	June	25	1894	290	
Victoria creek	Daily, Gilligan & Co.	Anselmo	Victoria Irr. Plant	Irrig.	2.29	1	19	21	Custer	March	17	1894	210 212	
Victoria creek	Victoria Ditch Ass'n	Gates	Victoria Ditch	Irrig.	4.29	1	19	21	Custer	July	17	1894	213	
Victoria creek	Laughran, T., et al	New Helena	Laughran & Bell Ditch	Irrig.	4.	3	19	21	Custer	Sept.	22	1894	217	
Victoria creek	Bishop, E. N.	Gates	Victoria Ditch	Irrig.		1	19	21	Custer	April	2	1912		1189*

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-B

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
Battle creek	Sanders, J. E.	Battle creek	Battle Creek Mills	P'wer	10.67	36	24	3	Madison	Nov.	12	1898		484
Battle creek	Sanders, J. E.	Battle creek	Battle Creek Mills	P'wer	20.	36	24	3	Madison	April	20	1906		818
Elkhorn river	Rehburg, F. & Co	Atkinson	Atkinson Mill	P'wer	38.50	30	30	14	Holt	Nov.	1	1883	271	
Elkhorn river	Elkhorn Irr. Co.	O'Neill	Elkhorn Irr. Canal	Irrig.	131.43	22	29	13	Holt	Feb.	3	1894	259	
Elkhorn river	Davis, J.	O'Neill	Davis Ditch	Irrig.	1.43	31	29	11	Holt	Feb.	8	1894	263	
Elkhorn river	Carlon, T.	O'Neill	Carlon Ditch No. 1	Irrig.	1.	32	29	11	Holt	Feb.	8	1894	260	
Elkhorn river	Carlon, T.	O'Neill	Carlon Ditch No. 2	Irrig.	5.	30	29	11	Holt	Feb.	8	1894	261	
Elkhorn river	Ashton, W. B.	O'Neill		Irrig.	.71	24	29	13	Holt	Feb.	8	1894	262	
Elkhorn river	Cain, N. E., et al	O'Neill		Irrig.	5.	32	29	11	Holt	Feb.	18	1895	282	
Elkhorn river	Murphy, J. G., et al	Atkinson	Atkinson Milling & Irr. Co. Ditch	Irrig.	2.29	30	30	14	Holt	Feb.	20	1895	283	
Elkhorn river	Ross, Chas. P	Omaha	Platte River Hydro Elec. Power Co	P'wer	500.	14	12	10e	Douglas	Nov.	14	1898		443
Elkhorn River	Coad, Wm. J	Omaha	Central Service Res	P'wer		2	12	10	Douglas	Jan.	24	1909		971
Elkhorn, N. Fk.	Sugar Cy. Cereal	Norfolk	Sugar Cy. Cereal	P'wer	100.	23	24	1	Madison	March	13	1912		1151*
Elkhorn, S. Br.	Sanders, M. T.	Ewing	Flouring Mill	P'wer	33.	3	26	9	Holt	Aug.	1	1870	996	
Middle creek	Malone, Robert	Lincoln	Malone Ice Plant	P&I.	10.	30	10	6e	Lancaster	Dec.	21	1898		464
Oak creek	Eiche, Herman	Lincoln	Eiche Irri. Plant	Irrig.	.71	17	10	6e	Lancaster	Jan.	26	1907		885
Platte river	Ross, Chas. P	Omaha	Platte River Hydro Elec. Power Co.	P'wer	2500.	6	14	10e	Douglas	Nov.	4	1899		489
Platte River	Coad, Wm. J	Omaha	Central Service Co	P'wer		6	14	10	Douglas	Jan.	24	1909		970
											13	1912		1150*

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-B—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Ryan's Lake	Elk Riv. Drainage Dist.	Fremont	Cutoff "H"	Drain						Oct.	16	1909		966
Springs	Newton Land Co.	Omaha	Sp. Br. Aqueduct	Irrig.	.07	13	14	13e	Sarpy	June	18	1895		29
Silver creek	Armour & Co.	So. Omaha	Armour & Co. Res.	Ice	10.	7	13	9e	Saunders	Oct.	18	1897		415
Union and Taylor creeks	Biey, Louis G.	Madison	Union Val. R. Mills	P'wer		32	22	1w	Madison				*998	
Wahoo creek	Swift & Co.	Omaha	Swift & Co. Res'rv	Ice	10.	34	13	9e	Saunders	Sept.	22	1898		473

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Abitz creek	Fullerton, J. B.	Atkinson	Fullerton Ditch No. 2	Irrig.	.36	18	30	13	Holt	March	23	1896		278
Antelope creek	Julian, A. R., et al	Gordon	Antelope Ditch	Irrig.	.36	21	32	40	Cherry	June	29	1905		798
Ashburn creek	McFarland, G. W.	Valentine	Ashburn Canal	Irrig.	.43	27	34	26	Cherry	June	17	1902		676
Bear creek	Skinner, T.	Springview	Skinner Ditch	Irrig.	.22	15	32	21	Keya Paha	June	20	1888	609	
Bear creek	Cedarburg, P.	Springview	Cedarburg D. Nos. 1 & 2	Irrig.	.02	3	32	21	Keya Paha	Oct.	3	1898		479
Beeman ck., Old	Barnard, C. O.	Springview	Barnard Ditch	Irrig.	.43	21	32	20	Keya Paha	June	1	1892	603	
Beeman creek	Beeman, J. D.	Springview	Beeman Ditch	Irrig.	1.	23	32	20	Keya Paha	May	20	1892	620	
Beeman creek	Rickman, A. L.	Springview	Beeman & Rickman	Irrig.	.29	23	32	20	Keya Paha	July	25	1895	613	
Big Sandy creek	Pickler, W. S.	Badger	Badger Ditch	Irrig.	1.14	12	33	14	Holt	May	16	1902		667
Big Sandy creek	Johnson, C. A.	Wood Lake	Badger Mill	P'wer	35.	12	33	14	Holt	Aug.	28	1902		685
Blackbird creek	Mullen, A. F.	O'Neill	Mullen Ditch	Irrig.	1.	20	31	11	Holt	Aug.	18	1894	267	
Blackbird creek	Robertson, J. A.	Joy	Robertson Ditch	Irrig.	.20	32	31	11	Holt	Aug.	28	1894	270	
Bluebird creek	Murphy, P.	O'Neill	Murphy's Ditch	Irrig.	1.	26	30	11	Holt	Sept.	7	1894	273	
Boardman creek	Lee. Joseph S.	Chesterfield	Lee Ditch	Irrig.	6.86	6	29	33	Cherry	April	25	1895	973	
Boardman creek	Bachelor, J. H.	Valentine	Boardman Ditch	Irrig.	28.57	53	30	32	Cherry	Jan.	17	1912		1155
Box Butte creek	Sandoz, Wm.	Monaw	Billy's Ditch	Irrig.	.21	29	29	45	Sheridan	Jan.	13	1900		533
Brush creek	Neb. Townsite Co.	Perry	Brush creek Power Co.	P'wer	15.	23	33	13	Holt	Sept.	28	1898		474

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Brush ck. E. Br.	McCarthy, M. H., et al	O'Neill	McCarthy No. 1	Irrig.	.50	24	32	14	Holt	July	1	1894	264	
Brush W. Br.	McCarthy, M. H., et al	O'Neill	McCarthy No. 2	Irrig.	.63	26	32	14	Holt	Aug.	15	1894	266	
Burton creek	Mutz, Otto	Springview	Burton Creek Dicth	Irrig.	.57	19	34	19	Keya Paha	June	30	1895	608b	
Burton creek	Mutz, Otto	Springview	One Trip Ditch	Irrig.	.36	2	33	20	Keya Paha	Sept.	2	1895		142
Canyon	Gilmor, Emery	Glen	Gillmor Canal	Irrig.	14.29	36	30	54	Sioux	July	5	1907		863
Cedar creek	McNamee, K. M	Wood Lake	Cedar Lake Ditch	Irrig.	.43	4	30	24	Cherry	Sept.	28	1910		1027
Cottonwood ck.	Morrissey, Tim	Dunlap	Morrissey's Ditch	Irrig.	.71	17	29	48	Dawes	Feb.	16	1895	481	
Cottonwood ck.	Fendrich & Lichte	Dunlap	Fendrick & Lichte Ditch	Irrig.	.64	22	29	48	Dawes	May	9	1896		336
Cottonwood creek	Lichte, Hugo	Dunlap	Dunlap Ditch	Irrig.	.50	22	29	48	Dawes	Sept.	2	1911		1113
Crooked creek	Mutz, Otto	Springview		P'wer	3.	19	34	19	Keya Paha	Dec.	31	1889	608b	
Crooked creek	Mutz, Otto	Springview	Crooked Creek Ditch	Irrig.	1.	19	34	19	Keya Paha	June	30	1895	608a	
Cross creek	Hutchison, W. H.	Penbrook	Hutchinson	Irrig.	.21	8	33	24	Keya Paha	Sept.	1	1888	615	
Cub creek	Tissue & Patterson	Springview	Tissue & Patterson Ditch	Irrig.	.03	16	33	22	Keya Paha	June	30	1894	618	
Cub creek	Josiassin, S.	Meadville	McCumber Ditch	Irrig.	.10	28	33	22	Keya Paha	Aug.	15	1894	589	
Eagle creek	Alfs, J. D.	Ray	100 Foot Ditch	Irrig.	.43	2	30	13	Holt	Sept.	11	1894	276	
Eagle creek	Alfs, J. D.	Ray		P'wer	1.	2	30	13	Holt	Sept.	11	1894	276	
Eagle creek	Bokhof, W.	Atkinson	Bokhof Ditch	Irrig.	2.86	6	30	13	Holt	Sept.	18	1894	275	
Eagle creek	Robertson, J. A.	Atkinson	Eagle Valley Ditch	Irrig.	2.29	1	30	14	Holt	March	15	1895	280	
Eagle ck. S. Br.	Becker, S.	Atkinson	Sam'l Becker Ditch	Irrig.	1.14	8	30	13	Holt	Nov.	30	1894	274	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Fairfield creek	Kuhre, Wm. M.	Norden	Kuhre's Pond	P'wer	25.	31	33	23	Brown	Sept.	1	1893	612	
Fairfield creek	Kuhre, Wm. M.	Norden		Irrig.	.14	31	33	23	Brown	April	1	1894	612b	
Holt creek	Schoetger, F. J.	Enterprise	Schoetger Ditch	Irrig	.14	32	35	20	Keya Paha	Feb.	23	1895	595	
Holt creek, S. Br.	Akers, J. W.	Springview	Akers Ditch	Irrig	.14	1	34	21	Keya Paha	Aug.	1	1894	611	
Horse Head creek	Bruce, A.	Penbrook	Bruce Ditch	Irrig.	.17	16	33	24	Keya Paha	Sept.	7	1895		149
Huggins creek	Soper. H. K.	Enterprise	Soper Ditch	Irrig.	.14	21	35	20	Keya Paha	Nov.	6	1894	592	
Jewett creek	Jewett, C. P.	Meadville	B. L. Ditch	Irrig.	.71	5	32	21	Keya Paha	Oct.	23	1894	590	
Keha Paha river	Yocum, J. C.	Butte	Yocum's Ditch	Irrig.	1.14	23	34	15	Boyd	Sept.	7	1894	573	
Keha Paha river	Bruce, Andrew & Son	Naper	Bruce Roller Mills	P'wer	100.	24	34	16	Boyd	Oct.	5	1903		729
Kirby creek	Green, Martha, J	Read	Green Ditch	Irrig.	.01	28	34	16	Boyd	April	1	1904		747
Lewis Spring	Lewis, R.	Enterprise	Lewis Ditch	Irrig.	.14	29	35	19	Keya Paha	Aug.	30	1895		139
Long Pine creek	Kyner, S. H	Long Pine	Long Pine Light & Pr. Plant	P'wer	48.	30	30	20	Brown	April	2	1909		941
Long Pine creek	Village of Long Pine	Long Pine		W. S.	50.	31	30	20	Brown	Aug.	1	1910		1016
Middle E. Br.	McGuire, M. W.	Norden	McGuire Ditch	Irrig.	.71	32	33	23	Keya Paha	June	1	1884	606	
Middle W. Br.	Allen, M. M.	Norden	Allen Ditch	Irrig.	.50	29	33	23	Keya Paha	June	1	1891	616	
Middle W. Br.	Allen, M. M.	Norden	Continuance Ditch	Irrig.	1.	29	33	23	Keya Paha	May	2	1904		753
Minnechaduza	Gilman, S. F.	Neligh	Pierce Milling Co	P'wer	35.	30	34	27	Cherry	Sept.	12	1896		359

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Minnechaduza	City of Valentine	Valentine	Valentine Water & E. L. Plant	P'wer	44.	29	34	27	Cherry	June	24	1912		1205
Newman creek	Newman, Philo	Norden	Newman Ditch	Irrig.	.21	17	33	24	Keya Paha	July	1	1888	617	
Niobrara river	Richards, B.	Chadron	Lakotah Ditch	Irrig.	7.14	1	30	57	Sioux	Oct.	1	1883	554	
Niobrara river	Earnest, J. W.	Harrison	Earnest Ditch No.1	Irrig.	2.86	9	29	56	Sioux	May	1	1885	514a	
Niobrara river	Bruce, A.	Penbrook	Bruce's Mill	P'wer	60.	16	33	24	Keya Paha	April	1	1886	610	
Niobrara river	McGinley, A., et al	Agate	McG. & S. Ditch	Irrig.	8.21	25	29	56	Sioux	May	1	1887	513a	
Niobrara river	Kendrick, H. P.	Marsland	Pioneers Ditches	Irrig.	7.14	36	29	51	Dawes	Aug.	1	1887	442	
Niobrara river	McLaughlin, A. H.	Marsland	McLaughlin Ditch	Irrig.	7.14	9	28	52	Box Butte	May	1	1888	566	
Niobrara river	McGinley, A, Cook, J.H.	Agate	McG. & S. L'r S D.	Irrig.	1.71	25	29	56	Sioux	May	1	1890	513b	
Niobrara river	Earnest, J. W.	Harrison	Earnest Ditch No. 2	Irrig.	2.14	9	29	56	Sioux	May	15	1891	541b	
Niobrara river	Cook, J. H.	Agate	Cook Ditch Nos. 1 & 2	Irrig.	3.54	1	28	56	Sioux	May	31	1891	980	
Niobrara river	Seymour, W. W., et al	Harrison	Bigelow & Seymour	Irrig.	2.40	19	31	57	Sioux	June	8	1891	510	
Niobrara river	Harris, O., Neece, R.	Marsland	Harris & Neece Ditch	Irrig.	8.57	3	28	55	Sioux	July	1	1892	517	
Niobrara river	Kendrick, H. P. & E. C.	Marsland	Pioneer Ditches	P'wer	10.	31	29	50	Dawes	Aug.	1	1893	442	
Niobrara river	Roll Mill Co.	Marsland	Roll Mill	P'wer	35.	5	28	51	Box Butte	Sept.	10	1893	970	
Niobrara river	Hatch, G. W., et al	H'm'ford	Meridian Ditch	Irrig.	.57	25	29	50	Dawes	Jan.	10	1894	459	
Niobrara river	Wood, J. C., et al	Marsland	Enterprise Ditch	Irrig.	5.71	28	29	50	Dawes	Jan.	27	1894	461	
Niobrara river	Furman, H. G.	Marsland	Furman Ditch	Irrig.	3.64	29	29	50	Dawes	Feb.	2	1894	462	
Niobrara river	Hughes, John	Marsland	Hughes Ditch	Irrig.		1	28	52	Box Butte				*987	
Niobrara river	Johnson, B. F.	Harrison	Johnson Ditch	Irrig.	2.86	36	31	57	Sioux	May	1	1894	511	
Niobrara river	McMannis, J. T., et al	H'm'ford	McM. & Neeland Ditch	Irrig.	.86	29	29	49	Dawes	June	15	1894	463	
Niobrara river	Fienken, Chas.	G. Rapids		Irrig.	1.	12	33	16	Boyd	Oct.	1	1894	575	
Niobrara river	McCully, S. J.	Carns	McCully Ditch	Irrig.	8.57	25	32	20	Keya Paha	Aug.	7	1894	583	
Niobrara river	Wilson, J. A.	Springview	Wilson Canal	Irrig.	5.71	18	32	21	Keya Paha	Oct.	18	1894	591	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Niobrara river	Mirage Irr. Co.	Mirage	Mirage Canal	Irrig.	150.	26	29	48	Dawes	Nov.	28	1894	474	
Niobrara river	Lichte, H.	Dunlap	Lichte Ditch	Irrig.	1.43	27	29	48	Dawes	Jan.	24	1895	479	
Niobrara river	Warneke, H.	Harrison	Warneke's Ditch	Irrig.	1.57	27	31	57	Sioux	Feb.	13	1895	505	
Niobrara river	McGinley & Stover	Agate	McG. & S. Upp. Ditch	Irrig.	2.86	23	29	56	Sioux	Feb.	25	1895	521	
Niobrara river	Harris, Octave	Marsland	LaBelle Ditch	Irrig.	2.	6	28	54	Sioux	March	12	1895	518	
Niobrara river	Snow, L.	Marsland	Snow Ditch	Irrig.	2.86	35	29	51	Dawes	March	26	1895	485	
Niobrara river	Vincent, D. C.	Marsland	Excelsior Ditch	Irrig.	2.86	10	28	52	Box Butte	May	15	1895	568	
Niobrara river	Bourrett, W.	Harrison	Bourrett Ditch	Irrig.	2.	33	30	56	Sioux	June	8	1895		4
Niobrara river	Bourrett, P.	Harrison	Bourrett Ditch Sr.	Irrig.	1.16	29	30	56	Sioux	June	10	1895		5
Niobrara river	Hughes, J.	Marsland	Hughes Ditch	Irrig.	.86	1	28	52	Box Butte	June	26	1895		53
Niobrara river	Harris, O.	Marsland	LaBelle Ditch	Irrig.	3.14	6	28	54	Sioux	July	3	1895		60
Niobrara river	Bond & Tissot	Mirage	Ussher Canal	Irrig.	1.16	19	29	46	Sheridan	July	17	1895		82
Niobrara river	Bennett, Sadie C.	Omaha	Moore Ditch	Irrig.	5.71	9	28	53	Sioux	July	22	1895		88
Niobrara river	Peters, H .A., et al	Hay Spgs.	Hay Springs Canal	Irrig.	14.29	29	29	47	Sioux	Sept.	27	1895		173
Niobrara river	Mettlen, J., et al	Marsland	Mettlen Ditch	Irrig.	1.	4	28	54	Sioux	April	27	1896		292
Niobrara river	McMannis & Neeland	H'm'ford	McM. & Neeland Ditch	Irrig.	1.97	29	29	49	Dawes	April	9	1898		448
Niobrara river	Armstrong, T. S.	Butte	Armstrong Canal	P'wer	150.	9	33	13	Boyd	May	14	1898		452
Niobrara river	Hatch & Cross	H'm'ford	Meridian Ditch	Irrig.	5.14	25	29	50	Dawes	Aug.	29	1898		469
Niobrara river	Bourrett, J. F.	Harrison	Bourrett's Ditch	Irrig.	1.	29	30	56	Sioux	March	5	1900		542
Niobrara river	Bourrett, J. S.	Harrison	J. S. Bourrett Ditch	Irrig.	1.71	19	30	56	Sioux	March	17	1900		546
Niobrara river	Montague, Jas.	Dunlap	Montague Ditch	Irrig.	.43	27	29	48	Dawes	Sept.	27	1900		575
Niobrara river	Fendrich, B.	Dunlap	Chladek Ditch	Irrig.	.30	27	29	48	Dawes	Mar.	18	1901		607
Niobrara river	Fendrich, G. A.	Dunlap	Fendrich Ditch	Irrig.	.29	32	29	48	Dawes	June	1	1901		616
Niobrara river	Fendrich, G. A.	Dunlap	Fendrich Ditch	Irrig.	.27	32	29	48	Dawes	June	1	1901		617
Niobrara river	Cornell, C. H.	Valentine	Valentine Power Plant	P'wer	1600.	27	34	27	Cherry	Jan.	29	1902		652
Niobrara river	Potmesil Bros.	Dunlap	Potmesil Ditch	Irrig.	6.	26	29	48	Dawes	May	19	1904		757

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No
						S	T	R	County	Month	D	Yr.		
Niobrara and Pepper creek	Taylor, D. T.	Hay Springs	Taylor's Ditch	Irrig.	4.57	28	29	47	Dawes	Aug.	8	1904		766
Niobrara river	Kay, John L.	Marsland	Kay Ditch	Irrig.	2.	6	28	53	Dawes	May	12	1905		791
Niobrara river	Kirk, E. L.	Sioux City, Ia	Nebraska Power Co.	P'wer	900.	34	32	7	Knox	Sept.	24	1909		961
Niobrara river	Kirk, E. L.	Sioux City, Ia	Nebraska Power Co.	P'wer		34	32	7	Knox	Aug.	9	1910		1019
Niobrara river	Koenig, Arnold C.	Omaha	Niobrara Power Plant	P'wer		24	32	8	Knox	April	23	1910		996
Niobrara river	Baisar, J. H.	Harrison	Baiser Ditch	Irrig.	.75	4	29	56	Sioux	Jan.	23	1911		1056
Niobrara river	Baisar, J. H.	Harrison	Ex. Bourkett Ditch	Irrig.	1.21	33	30	56	Sioux	Jan.	23	1911		1057
Niobrara river	Iodence, W. M.	Dunlap	Lichte Irr. Ditch	Irrig.	3.	27	29	48	Dawes	April	7	1911		1086
Niobrara river	Kieriex, Camille	Rushville	Camille Ditch	Irrig.	1.53	19	30	43	Sheridan	April	10	1911		1087
Niobrara river	Montague, Jas.	Dunlap	Lichte Ditch	Irrig.	.71	27	29	48	Dawes	April	19	1911		1088
Niobrara river	Knight, R. E.	Alliance	Niobrara Reservior	Stor.	234.	12	28	53	Sioux	May	24	1911		1101
Niobrara river	Hopkins, Thos. L.	Hemingford	Potmasil Bros.	Irrig.	.28	25	29	48	Box Butte	Feb.	20	1912		1152
Niobrara river	Bourrett, John	Harrison	John Bourrett Ex. No. 1	Irrig.	.11	29	30	56	Box Butte	Mar.	25	1912		1188
Niobrara river	Wells, Harry E.	Long Pine	Wells Pumping System	Irrig.	1.64	32	32	40	Sheridan	May	2	1912		1193
Niobrara river	Sotwell, F. A.	Omaha	Shotwell Power Co.	P'wer		33	32	7	Knox	May	31	1912		1200*
Niobrara river	Hitshew, Geo.	Marsland	Geo. Hitshews Ditch	Irrig.		5	28	52	Box Butte	June	24	1912		1206*
Niobrara river	Bourrett, John	Harrison	John Bourrett Ex. No. 2	Irrig.		32	30	56	Sioux	July	19	1912		1209*
Pine creek	Clark, J.	Rushville	Pine Creek Mill	P'wer	32.	33	30	44	Sheridan	June	5	1893	415	
Plum creek	Plum Creek Irr. Co.	Johnstown	Johnstown Ditch	Irrig.	26.	4	29	24	Brown	Dec.	18	1894	405	
Plum creek	Wilbert, R.	Ainsworth	Wilbert Ditch	Irrig.	.43	35	32	23	Brown	May	5	1896		329
Plum creek	Ainsworth L. & P. Co.	Ainsworth	Plum Creek Plant	P'wer	150.	29	32	22	Brown	May	15	1909		947
Pole creek	Julian, A. R., et al.	Gordon	Pole Creek Ditch	Irrig.	.57	28	32	40	Brown	June	29	1905		799

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Rickman creek	Byington, W. W.	Springview	Byington Ditch	Irrig.	1.	22	32	20	Keya Paha	May	19	1891	582	
Rock creek	Rock Creek I. & P. Co	Mariaville	Copeland Ditch	I&P.	6.43	33	32	19	Rock	Jan.	8	1895	394	
Rock creek	Eastlick, B. J.	Carns	Necessity Ditch	Irrig.	.35	29	32	18	Rock	Jan.	17	1895	395	
Rock creek	Wile, H.	Mariaville	Wile's Ditch	Irrig.	.86	9	31	18	Rock	April	3	1895	397	
Rock Spgs Ck	Van Koten, J.	Springview	Van Koten Ditch	Irrig.	.07	25	33	22	Keya Paha	Jan.	1	1895	619	
Rock Spgs Ck	Moore, W. S.	Meadville	Moore's Ditch	Irrig.	1.43	12	32	22	Keya Paha	June	30	1887	593	
Shobe Br	Lamb, A. J.	Spencer		Irrig.	.14	30	33	11	Holt	July	6	1896		322
Spring creek	Kuskie, A. K.	Sparks	Garden Ditch	Irrig.	.08	27	34	23	Cherry	March	30	1900		555
Springs	Bakewell, Geo. C.	Woodlake	Glen Cover Ditch	Irrig.	.85	26	33	24	Brown	Mar.	1	1911		1067
Str., no name	Grant, C. G.	Winfield	Grant Ditch	Irrig.	.14	4	31	26	Rock	Jan.	1	1895	400	
Str., no name	Conger, C. K.	Norden	Conger Ditch	Irrig.	.11	5	33	24	Keya Paha	Sept.	16	1895		158
Snider creek	Pickler, W. S.	Springview	Olds Ditch	Irrig.	.01	31	33	19	Keya Paha	May	1	1894	607	
Spotted Tail C	Rhodes, J. G.	McLean	Spotted Tail Ditch	Irrig.	.07	4	34	17	Keya Paha	May	17	1895	601	
Sweeney canyon	Hornback, J.	Sparks	Canon Canal	Irrig.	.21	29	34	25	Cherry	Aug.	10	1893	414	
Turkey creek	La Rue, Chas.	Norden	Turkey Creek Ditch	Irrig.	.43	35	33	23	Keya Paha	Feb.	9	1900		539

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-C—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No
						S	T	R	County	Month	D	Yr.		
Turkey creek	La Rue, Chas.	Norden	Turkey Creek D. No. 2	Irrig.	2.	35	33	23	Keya Paha	May	11	1904	754	
Verdigris Ck	Hanson, J. W.	Em'tbg, Ia.	Drayton Ditch	Irrig.	2.86	8	28	8	Antelope	Aug.	11	1894	248	
Whistle creek	Miller, W. K.	Alliance	Home Ditch	Irrig.	.86	13	28	54	Sioux	June	6	1895		65
Whistle creek	Watson, Mat	Lawn	Whistle Creek Ditch	Irrig.	1.	12	28	54	Sioux	June	28	1895		58
Willow creek	Hollibough, C. G.	Marsland	Hollibough Ditch	Irrig.	0.43	10	29	50	Dawes	April	20	1908		898
Wooden Sp. Br.	Rhodes, F. J.	Springview	Rhodes Ditch	Irrig.	.21	25	35	20	Keya Paha	June	19	1899		512
Wooden Sp. Br.	Rhodes, F. J.	Springview	Rhodes Ditch	Irrig.	.14	25	35	20	Keya Paha	March	12	1900		544
Wyman creek	McCully, R. A.	Carns	McCully Ditch	Irrig.	.80	19	32	19	Keya Paha	June	10	1891	604	
Wyman creek	Horton, I.	Carns	Horton Ditch	Irrig.	.14	17	32	19	Keya Paha	June	5	1894	587	
Walnut Spring	Village of Long Pine	Long Pine		W. S.	1.	31	30	20	Brown	Aug.	1	1910		1015
Young creek	Lamb, A. J.	Spencer	Harvey & Lamb Ditch	Irrig.	.21	32	33	11	Holt	June	13	1896		811

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Ash creek	Compton, W. L.	Whitney		Irrig.	.03	12	32	51	Dawes	July	15	1893	455	
Ash creek	Connell, J.	Whitney	Connell Ditch	Irrig.	.63	6	32	50	Dawes	June	17	1898		459
Ash creek	Cripps, M. A.	Whitney	Cripps Ditch	Irrig.	1.	13	32	51	Dawes	Jan.	10	1899		491
Ash creek	Cripps, Minerva A.	Whitney	Cripps Ditch No. 2	Irrig.	1.14	13	32	51	Dawes	Dec.	26	1903		735
Ash creek	Howard, W. C.	Whitney	Cripps Ditch	Irrig.	.57	13	32	51	Dawes	Aug.	27	1906		835
Ash Ck. E. Br.	Tomlin, H. B.	Whitney	Ox Yoke Ditch	Irrig.	2.86	31	32	50	Dawes	May	31	1880	447	
Ash Ck. E. Br.	Aird, Ida L.	Crawford	Barron Ditch	Irrig.	1.14	32	32	50	Dawes	July	1	1888	438	
Ash Ck. E. Br.	Sheldon, C. A.	Crawford	Sheldon Ditch	Irrig.	1.43	30	32	50	Dawes	Jan.	26	1899		493
Ash Ck. E. Br.	Todd, Frank P.	Crawford	Todd Ditch	Irrig.	.38	5	31	50	Dawes	Sept.	12	1899		520
Ash Ck., W. Br.	Vetter, A.	Crawford	Mace Ditch	Irrig.	1.	2	31	51	Dawes	July	31	1884	428	
Ash Ck., W. Br.	Broadhurst, N., et al	Crawford	W. Ash. C. I. Co. D.	Irrig.	1.62	36	32	51	Dawes	July	4	1893	452	
Ash Ck., W. Br.	Woodard, S. D.	Whitney	Woodard Ditch	Irrig.	.14	25	32	51	Dawes	Feb.	3	1898		434
Beaver creek	Braddock, Wm.	Adaton	Braddock Ditch	Irrig.	.36	18	34	46	Sheridan	April	15	1895	423	
Beaver creek	Braddock, J. F.	Chadron		Irrig.	.04	1	34	47	Dawes	April	15	1895	974	
Beaver creek	Stastney, F.	Chadron	Stastney Ditch	Irrig.	.36	4	33	46	Sheridan	July	30	1895		336
Beaver creek	Braddock, Wm.	Chadron	Braddock	Irrig.	.6	1	34	47	Dawes	Nov.	14	1897		463
Beaver creek	Rickman, A. W., et al	Chadron	Cilek Ditch	Irrig.	.36	4	33	46	Dawes	June	19	1899		513
Beaver creek	Rickman, A. W.	Chadron	Rickman Ditch	Irrig.	1.	9	33	46	Dawes	July	2	1902		681
Bordeaux creek	Locket, T. E.	Chadron	Locket Ditch	Irrig.	.07	11	32	48	Dawes	June	30	1886	494	
Bordeaux creek	Richards, H. B. J., et al	Chadron	Richards Ditch	Irrig.	.14	36	33	48	Dawes	Sept.	10	1890	430	
Bordeaux creek	Bryant, S. A.	Chadron	Bryant's Ditch	Irrig.	.29	14	33	48	Dawes	Feb.	4	1891	434	
Bordeaux creek	Hall, O. W.	Chadron	Hall's Ditch	Irrig.	.07	1b	33	48	Dawes	March	1	1891	437	
Bordeaux creek	Richards, H. B. J.	Chadron	Richards Ditch	Irrig.	.36	36	33	48	Dawes	Sept.	7	1892	446	
Bordeaux creek	Mann, Wm.	Chadron	Mann's Ditch	Irrig.	.23	25	33	48	Dawes	Dec.	31	1892	975	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Bordeaux creek	Adams. S. L.	Chadron	Adams Ditch	Irrig.	.14	2	32	48	Dawes	May	5	1893	450	
Bordeaux creek	County of Dawes	Chadron	County Ditch	Irrig.	.14	23	33	48	Dawes	July	31	1893	383	
Bordeaux creek	Bacon, J. D.	Chadron	Bacon Ditch	Irrig.	.21	21	34	48	Dawes	July	1	1894	445	
Bordeaux creek	Morrisey, M.	Chadron	Morrissey Canal	Irrig.	.08	15	33	48	Dawes	Aug.	25	1894	491	
Bordeaux creek	O'Donnell, J.	Chadron	O'Donnell's Ditch	Irrig.	.14	9	31	48	Dawes	Jan.	17	1898		432
Bordeaux creek	Nelson, P. B.	Chadron	Nelson's Ditch	Irrig.	.36	14	33	48	Dawes	Oct.	19	1898		478
Bordeaux creek	Nelson, P. B.	Chadron	Nelson's Irr. Plant	Irrig.	.14	14	33	48	Dawes	Jan.	28	1899		494
Bordeaux creek	Burns, Thomas C.	Chadron	Burns Ditch	Irrig.	4.29	36	33	48	Dawes	Nov.	5	1900		584
Bordeaux creek	Martens, Wm.	Chadron	Martens Ditch	Irrig.	.57	28	34	48	Dawes	Sept.	22	1902		690
Bordeaux creek	Martens, Wm.	Chadron	Martens Ditch	Irrig.	1.14	21	34	48	Dawes	Jan.	14	1907		848
Bordeaux, Lit	Hartzell, S. and C.	Chadron	Hartzell Canal	Irrig.	.57	13	33	48	Dawes	June	1	1893	448	
Bordeaux, Lit	Butler, J. A.	Chadron	Butler Ditch	Irrig.	.11	33	33	47	Dawes	June	1	1894	443	
Bordeaux, Lit	Frady, C. H.	Chadron	Frady Ditch	Irrig.		30	33	47	Dawes				*1009	
Bordeaux, Lit	Collon, Jacob	Chadron	Collins Res	Irrig.	.31	14	32	48	Dawes	Feb.	27	1905		780
Bordeaux, Lit	Good, J. W.	Chadron	Good Ditch	Irrig.	7.	29	33	47	Dawes	March	6	1905		782
Bull creek	Johnson, W. S.	Glen	Johnson Ditch No. 1	Irrig.	.29	7	30	53	Sioux	March	13	1895	519	
Cedar Canyon	Golden, T. F.	Crawford	Cedar Canon Ditch	Irrig.	.43	16	33	53	Sioux	March	1	1897		380
Chadron creek	Gallup, W. S.	Chadron	Gallup's Ditch	Irrig.	.08	15	33	49	Dawes	Dec.	20	1890	426	
Chadron creek	Wilson, H. M.	Chadron	Tug Wilson Ditch	Irrig.	.20	12	32	49	Dawes	July	13	1893	453	
Chadron creek	Wilson, W. W.	Chadron	Wallace Wilson Ditch	Irrig.	.07	12	32	49	Dawes	July	14	1893	454	
Chadron creek	Record, A. A.	Hyannis	Half Diamond E. D.	Irrig.	.57	1	32	49	Dawes	June	17	1894	468	
Chadron creek	City of Chadron	Chadron	Chadron Water Works	W. S.		18	32	48	Dawes	June	26	1911	1022	*

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Charcoal Ck	Weber, M. J.	Glen	Klein Ditch	Irrig.	.11	33	31	53	Sioux	Aug.	1	1882	982	
Cottonwood Ck	Rasmussen, N.	Whitney	Rasmussen Ditch	Irrig.	2.29	10	33	52	Dawes	March	8	1898		444
Cottonwood	Rasmussen, N.	Whitney		Irrig.	18.	10	33	52	Dawes	Dec.	26	1899		528
Rav.t'b. C't'd ck	Carlson, A. A.	Crawford	Carlson Ditch	Irrig.	.71	21	33	52	Dawes	Sept.	20	1897		409
Rav.t'b. C't'd ck	Pilster, John A.	Whitney	Pilster Ditch	Irrig.	5.71	9	33	51	Dawes	Dec	9	1904		776
Cottonwood Lit	Stuart, Jno. T.	Crawford	Thos. Stuart Ditch	Irrig.	.33	8	32	52	Dawes	Dec.	21	1890	425	
Cottonwood Lit	Price, J. A. B., Golden, T. F.	Crawford	Stuart Bros. Ditch	Irrig.	2.86	8	32	52	Dawes	June	10	1895		8
Cottonwood Lit	Kusel, Wm. T.	Whitney	Kusel Ditch	Irrig.	1.14	9	32	51	Dawes	Oct.	16	1895		183
Cottonwood Lit	Simmons, Raner	Whitney	Simmons Ditch	Irrig.	1.14	9	32	51	Dawes	Sept.	12	1899		521
Cottonwood Lit	Kusel, Wm. T.	Whitney	Kusel Ditch No. 2	Irrig.	.43	8	32	51	Dawes	May	19	1900		560
Cottonwood Lit	Dunn, J. G.	Crawford	Dunn's Ditch	Irrig.	1.43	9	32	52	Dawes	Jan.	14	1902		649
Cottonwood Lit	Stewart, J. W., et al	Crawford	Stewart & Maple Ditch	Irrig.	.29	3	32	52	Dawes	March	10	1902		656
Cottonwood Lit	Kusel, Wm. T.	Whitney	Kusel & Spear'n Ditch	Irrig.	.71	8	32	51	Dawes	June	30	1902		677
Cottonwood, little	Dodd, Calvin H.	Crawford	Dodd & McDowell Ditch	Irrig.	.29	13	32	53	Sioux	April	22	1910		995
Dead Horse Ck	Kemery, J.	Chadron		Irrig.	.01	32	32	49	Dawes	Sept.	1	1890	493	
Dead Horse Ck	Woodruff, F. B. & E. F	Chadron	Flag Butte Ditch	Irrig.	.03	32	32	49	Dawes	April	10	1891	427	
Dead Horse Ck	Goff, L. L.	Chadron	Goff Ditch	Irrig.	.17	9	31	49	Dawes	Aug.	27	1893	457	
Dead Horse Ck	Harley, J.	Chadron		Irrig.	.01	32	32	49	Dawes	Aug.	1	1894	488	
Dead Horse Ck	Geiser, B. A.	Chadron	Geiser Ditch	Irrig.	.55	17	32	49	Dawes	Mar.	18	1902		658
Dead Horse Ck	Slattery, Roy A.	Chadron		Irrig.	1.29	32	33	49	Dawes	April	6	1904		749
Deadman Ck	Phillips, W. S.	Crawford		Irrig.	.21	19	30	52	Dawes	May	8	1896		334
Deadman Ck	Phillips, W. S.	Crawford	Phillips Ditch	Irrig.	.14	18	30	52	Dawes	March	19	1900		547
Deadman Ck	Porter, J. E., et al	Crawford	P. &. Ras. Ditch	Irrig.	1.43	1	30	53	Sioux	May	29	1900		562

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Deadman Ck	Linderman, Con.	Crawford	Linderman Ditch	Irrig.	.14	18	30	52	Dawes	June	11	1900		564
Deep creek	Green, M. H.	Glen	Deep Creek Ditch	Irrig.	.06	9	30	53	Sioux	May	1	1887	525	
Deep creek	Green, M. H.	Glen	Green Ditch	Irrig.	.20	9	30	53	Sioux	Oct.	5	1895		208
Dry Run	Campbell, F. J.	Chadron	Campbell Ditch	Irrig.	1.	35	34	49	Dawes	Nov.	9	1908		919
English creek	McDowell, E. C.	Glen	McDowel Stor. Sys.	Irrig.	.87	12	31	52	Dawes	Oct.	24	1904		772
Hooker creek	Uhlig, Max	Glen	McMannis Ditch	Irrig.	1.	7	31	51	Dawes	Dec.	31	1889	492	
Hooker creek	Alcorn, John	Glen	Alcorn Ditch	Irrig.	1.21	31	32	51	Dawes	Nov.	17	1905		803
Hooker creek	Souther, Mable G.	Crawford	Souther Lake	F. & I	1.43	30	32	51	Dawes	Sept.	24	1908		915
Indian creek	Seegrist, I.	Crawford	Seegrist Ditch	Irrig.	.03	3	31	50	Dawes	Nov.	1	1893	489	
Indian creek	Flood, M. F.	Crawford	Flood Ditch	Irrig.	.07	33	32	50	Dawes	Feb.	13	1894	460	
Indian creek	Boyer, F.	Crawford	Boyer Ditch	Irrig.	.86	28	32	50	Dawes	April	30	1900		559
Indian Ck. trib	Kaiser, Omar A.	Whitney	Kaiser Ditch	Irrig.	.57	28	32	50	Dawes	Feb.	15	1900		540
Indian creek trib.	Honnold Bros.	Whitney	Honnold-Wilson Ditch	Irrig.		3	31	50	Dawes	May	25	1912		1199*
Kane creek	McConnell, J. F.	Whitney	McConnell Ditch & Res.	Irrig.	4.29	29	34	50	Dawes	Jan.	14	1909		931
Kyle creek	Colville, David	Glen	Kyle Creek Ditch	Irrig.	.57	3	30	54	Sioux	June	30	1882	522	
Lone Tree, S. Fk.	Thomas, J. C.	Whitney	Thomas Ditch	Irrig.	1.	28	34	51	Dawes	April	29	1905		789
Madden creek	Flannigan, F.	Chadron	Dams	Irrig.	.57	26	35	49	Dawes	July	11	1904		763

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Madden creek	Trier, Phillip	Chadron	Trier Ditch	Irrig.	1.21	6	34	48	Dawes	Aug.	1	1906		830
Madden and North creeks	Flannigan, O. R.	Chadron	Dams	Irrig.	.57	31	35	48	Dawes	Oct.	17	1904		771
Rush creek	Braddock, H. T.	Chadron	Braddock Ditch	Irrig.	3.	10	34	49	Dawes	May	4	1903		706
Rush creek	Braddock, H. F.	Chadron	Braddock Ditch Exten.	Irrig.	1.57	11	34	49	Dawes	May	31	1906		825
Sand creek, trib to L. Cotton'd	Metz, Scott	Crawford	Bendix Ditch	Irrig.	.57	35	33	53	Sioux	Nov.	19	1895		189
to L. Cotton'd	Carlson & Rasmussen	Crawford	C. &R. Sand Creek D.	Irrig.	30.	32	33	52	Dawes	Sept.	12	1904		767
Sand creek, trib. to L. Cotton'd	Arner, J. & H.	Crawford	Arner Ditch	Irrig.	2.59	26	33	53	Sioux	Jan.	12	1905		779
Sand creek, trib. to L. Cotton'd	Rasmussen, K.	Whitney	K. Rasmussen Ditch	Irrig.	17.	3	32	52	Dawes	Jan.	8	1906		811
Sand creek, trib. to L. Cotton'd	Rasmussen, John J	Whitney	Syndicate Reservoir	Stor.	28.	32	33	52	Dawes	Mar.	19	1912		1186
Sand creek, trib. to L. Cotton'd	Rasmussen, John J	Whitney	Kirstian Reservoir	Stor.	10.	32	33	52	Dawes	April	4	1912		1191
Sand creek, trib. to L. Cotton'd	Dunn, John G.	Crawford	Syndicate Ditch	Irrig.		32	33	52	Dawes	April	2	1912		1190*
Draw, trib. of Sand creek	Jordon, M. D.	Adelia	Jordon Ditch	Irrig.	.50	31	33	53	Sioux	April	2	1900		551
Saw Log, East	Stewart, H. E.	Crawford	Little Saw Log Ditch	Irrig.	.71	12	30	52	Dawes	Jan.	23	1907		849
Saw Log, East	Stephenson, Chas.	Crawford	Stephenson Ditch	Irrig.	1.14	25	31	52	Dawes	March	5	1907		852
Saw Log, East	Baker, A. D.	Crawford	Baker Ditches	Irrig.	.29	5	30	51	Dawes	Jan.	13	1908		884

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Saw Log, East	Van Treek, P. H.	Crawford	Van Treek Canal & Ponds	Irrig.	.37	4	30	51	Dawes	May	8	1911		1098
Sheridan creek	Getchell, G. C.	Pine Ridge	Getchell Ditch	Irrig.	.07	27	34	45	Sheridan	Aug.	1	1894	418	
Soldier creek	Rodgers, J. J.	Crawford	Rodgers Ditch	Irrig.	.14	5	31	53	Sioux	April	30	1883	546	
Soldier creek	Swanson, Geo.	Crawford	Swanson Ditch	Irrig.	1.43	4	31	53	Sioux	March	25	1905		786
Spring Br. trib. White river	Tucker, J. S.	Glen	Tucker Ditch	Irrig.	.17	34	31	54	Sioux	June	1	1883	557	
Spring creek	Forbes, J. D.	Crawford	Forbes Ditch No. 1	Irrig.	.43	20	32	52	Dawes	April	28	1902		663
Spring creek	Swinbank, Sam'l	Crawford	Meszeter Ditch	Irrig.		13	32	52	Dawes				*1014	
Spring creek	Wolff, Ferdinand	Crawford	Wolff Ditch	Irrig.	1.71	21	32	52	Dawes	Jan.	15	1904		739
Spg. ck, trib. of Lit. Cottn'd	Pinney, B. G.	Crawford	Spring Creek Ditch	Irrig.	.86	13	32	52	Dawes	May	10	1894	466	
Lit. Cottn'd	Balser, R.	Lusk, Wyo.	Spring Creek Ditch No.1	Irrig.	2.	7	32	51	Dawes	Dec.	1	1894	473	
Lit. Cottn'd	Broadhurst, N. & H.	Crawford	Spring Creek Ditch No.1	Irrig.	2.28	13	32	52	Dawes	April	7	1905		788
Spgs. trib. to D. Horse creek	Goff, T. L.	Chadron		Irrig.	.14	30	32	49	Dawes	April	2	1891	441	
Squaw creek	Daniels & Stetson	Crawford	Daniels & Stetson Ditch	Irrig.	.29	19	31	51	Dawes	June	17	1895		27
Squaw creek	Cooper, Wm.	Crawford	Cooper Ditch	Irrig.	2.29	36	32	52	Dawes	May	8	1896		333
Squaw creek	McDowell, E. C.	Crawford	Squaw Creek	Irrig.	3.	12	31	52	Dawes	Oct.	3	1911		1132
Trunk Butte C.	Smock, M.	Whitney	Smock's Ditch	Irrig.	.07	26	32	50	Dawes	June	28	1895	465	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
W. Clay Ck	Davidson, J. E.	Crawford	McFarland Ditch	Irrig.	1.64	35	32	52	Dawes	May	18	1891	960	
W. Clay Ck	Hazleton, Wm. S.	Crawford	Hazleton Ditch	Irrig.	1.14	13	31	52	Dawes	May	15	1894	475	
W. Clay Ck	White River Irr. Co.	Crawford	White River Ditch	Irrig.	1.	35	32	52	Dawes	Dec.	31	1894	477	
W. Clay Ck	Copper, Wm.	Crawford	Cooper Ditch	Irrig.	3.71	2	31	52	Dawes	June	22	1895		42
W. Clay Ck	Brockway, Horace	Crawford	Brockway Ditch	Irrig.	.71	36	31	52	Dawes	Feb.	27	1896		256
W. Clay Ck	Pine Ridge Ind. Ag.	P. Ridge I. Ag., S. D.	Pine Ridge Irr. Ditch	Irrig.					Sheridan				*419	
W. Clay Ck	Rincker, H. C.	Crawford	Rincker Ditch	Irrig.	.57	11	31	52	Dawes	June	8	1901		618
W. Clay Ck	Hutzel, John C.	Rushville	Hutzel Ditch	Irrig.	.57	13	31	52	Dawes	April	30	1903		704
W. Clay Ck	Thornton, H. A.	Crawford	Thornton Ditch	Irrig.	1.14	24	31	52	Dawes	Oct.	24	1904		773
White Clay creek	Brooks, J. N.	Rushville	Brooks Ditch	Irrig.	.42	36	35	45	Sheridan	Aug.	2	1911		1120
White Clay creek	Townsend, Charles	White Clay	Townsend Ditch	Irrig.	.80	25	35	45	Sheridan	Jan.	21	1911		849
W Clay, E. Br	Stewart, H. E.	Crawford	Little Saw Log Ditch	Irrig.	.71	12	30	52	Dawes	Jan.	23	1911		849
W. Clay and Squaw creek	White River Irr. Co.	Crawford	White River Irr.	Irrig.	8.	36	32	52	Dawes	March	3	1902		655
White River	Jacobson, M.	Glen	Jacobson Ditch	Irrig.	.14	32	31	53	Sioux	Oct.	1	1882	561	
White River	Hall, Leroy	Crawford	Hall's Mill	P'wer	24.83	34	32	52	Dawes	Sept.	10	1885	478a	
White River	Diedrickson, N.	Glen	Diedrickson Ditch	Irrig.	.21	1	30	54	Sioux	Sept.	1	1890	562	
White River	Harris & Cooper	Crawford	Harris & Cooper Ditch	Irrig.	16.78	25	32	52	Dawes	March	9	1894		
White River	Harris & Cooper	Crawford	Harris & Cooper Ditch	Irrig.	1.57	25	32	52	Dawes	June	15	1894	464	
White River	Harris & Cooper	Crawford	Harris & Cooper Ditch	Irrig.	.28	25	32	52	Dawes	Oct.	31	1894		
White River	Rasher, C.	Crawford	Rasher Ditch	Irrig.	1.14	19	32	51	Dawes	June	20	1894	467	
White River	Welling, N.	Crawford	Welling Ditch	I.&F	.57	17	32	51	Dawes	July	13	1894	469	
White River	Carpenter, E. J. & Co.	Whitney	Carpenter Ditch	Irrig.	2.86	1	32	51	Dawes	Dec.	2	1894	487	

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
White River	White River Irr. Co.	Crawford	White R. Irr. Co. Ditch	I.&P	8.71	35	32	52	Dawes	Dec.	31	1894	477	.....
White River	Hall, Leroy	Crawford	Halls' Ditch No. 2.	Irrig.	26.04	34	32	52	Dawes	Jan.	10	1895	478c	.....
White River	Crawford Co.	Crawford	Crawford Citizens Canal	Irrig.	58.	23	31	53	Sioux	Feb.	13	1895	501 444	.....
White River	Swartz, E.	Andrews	Hughson Ditch.	Irrig.	.07	26	31	55	Sioux	March	15	1895	520	.....
White River	Butterworth, J.	Crawford	Butterworth Ditch	Irrig.	.07	3	31	52	Dawes	May	7	1895	490	.....
White river	Chicago Bur. & Q. R. R. Co	Lincoln	C. B. & Q. Pipe Line at Crawford	ID&P		3	31	52	Dawes				1030	*
Seepage near White River	Mason, J. F.	Glen	Mason's Ditch	Irrig.	.14	32	31	53	Dawes	May	12	1896	.....	337
White River	Lewis, L. C.	Harrison	Lewis Ditch	Irrig.	.14	27	31	55	Sioux	May	19	1896	.....	340
White River	Bartlett, A. M.	Chadron	E. Jones Ditch	Irrig.	.71	18	34	48	Dawes	May	21	1897	.....	391
White River	Schwabe, Lena	Chadron	Schwabe Ditch	Irrig.	1.14	25	34	49	Dawes	June	24	1897	.....	394
White River	Wilkinson, Thos.	Crawford	Wilkinson Ditch	Irrig.	.71	24	32	52	Dawes	Nov.	18	1897	.....	421
White River	Stewart, A.	Whitney	Sandy Stewart Ditch	Irrig.	.94	10	32	51	Dawes	Jan.	8	1898	.....	427
White River	Thompson, H.	Crawford	Rasher Ditch	Irrig.	.50	19	32	51	Dawes	May	23	1898	.....	456
White River	Zuen, A., et al	Crawford	Zuen & Schmelzle Ditch	Irrig.	1.	19	32	51	Dawes	Oct.	13	1898	.....	475
White River	Mecham, G. & C. C. S.	Whitney	Mecham Ditch	Irrig.	2.86	17	32	51	Dawes	March	15	1899	.....	500
White River	Schaffer & Blust	Whitney	Schaffer & Blust Ditch	Irrig.	3.	10	32	51	Dawes	Dec.	18	1899	.....	525
White River	Rasher, Frank	Crawford	F. Rasher Ditch	Irrig.	1.43	19	32	51	Dawes	Jan.	16	1900	.....	534
White River	Carlson, John	Whitney	Carlson Ditch	Irrig.	1.43	6	32	50	Dawes	Nov.	26	1900	.....	588
White River	Village of Crawford	Crawford	Crawford Pump Station	P'wer	18.	3	31	52	Dawes	March	30	1903	.....	702
White River	Hebbert, Wm. S	Chadron	Hebbert Irr. Ditch	Irrig.	3.	34	33	50	Dawes	May	11	1903	.....	707
White River	Simmons & Harris Irr. Co.	Whitney	S. H. Irr. Co. Ditch	Irrig.	1.43	16	32	51	Dawes	Oct.	26	1903	.....	730

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-D—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
White River	Rasher, Chas. E.	Crawford	Ext. to C. Rasher Ditch	Irrig.	1.27	20	32	51	Dawes	Feb.	5	1904		740
White River	Schwabe, August	Whitney	Schwabe Ditch	Irrig.	.57	24	34	49	Dawes	June	13	1904		758
White River	Schwabe, August	Chadron	Schwabe Power Plant	P'wer	5.	24	34	49	Dawes	June	13	1904		759
White River	Wright Bros.	Chadron	Wright's Ditch	Irrig.	4.	16	32	51	Dawes	Dec.	5	1904		775
White River	Schwabe, Aug.	Chadron	Schwabe Ditch	Irrig.	.26	24	34	49	Dawes	March	19	1906		815
White River	Roby, I. M.	Crawford	Roby Ditch	Irrig.	.33	13	31	52	Dawes	Sept.	13	1906		838
White River	Stephenson, Ira J.	Crawford	Stephenson Power Plant	P'wer	15.	34	31	53	Sioux	March	15	1907		854
White river	White River Irr. Co.	Crawford	White River Irr. Co.'s S. Br.	Irrig.	4.27	25	3.	52	Dawes	March	11	1909		936
Canons' trib to White River	Martens, Wm.	Chadron	Marten's Ditch	Irrig.	.29	14	34	48	Dawes	Dec.	26	1902		696
White River	Jones, Sarah M.	Crawford	Jones Ditch	Irrig.	.29	9	31	51	Dawes	May	20	1907		860
White River	Schwabe, August	Chadron	Schwabe Canal	Irrig.	3.43	31	34	48	Dawes	July	23	1908		908
White river	Jenson, J. L.	Whitney	Jenson Irr. Plant	Irrig.	1.14	26	33	53	Dawes	June	27	1911		1110
White river	Pinney, B. G. & Denslow, J.	Crawford	Pinney & Denslow Res. 1-2-3	I.&S.	20.	26	32	52	Dawes	Aug.	10	1911		1122
White river	Forbes, Wm. T.	Crawford	Forbes Extension	Irrig.	.85	19	32	51	Dawes	Sept.	26	1911		1128
White creek	Denslow, J. H.	Glen	Denslow Pumping Plant	Irrig.		1& 2	31	54	Sioux	Mar.	8	1912		1183*

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-E

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Antelope creek	Turner, Geo	Harrison	Turner Ditch	Irrig.	.86	26	34	57	Sioux	Oct.	31	1894	537	
Antelope creek	Seaman, S. R.	Harrison	Ellis Ditch	Irrig.	.29	9	33	57	Sioux	May	17	1896		338
Antelope creek	Gayhart, M. J.	Montrose	Gayhart Ditch	Irrig.	2.43	16	34	55	Sioux	June	18	1904		760
Antelope creek N. Br	Story, S. R.	Story	Story's Ditch	Irrig.	2.	8	34	56	Sioux	Nov.	11	1895		168
Boggy creek	Holly, Thos	Crawford		Irrig.	.11	30	33	54	Sioux	Dec.	31	1888	956	
Boggy creek	Smith, J. W.	Harrison	Smith's Ditch	Irrig.	.20	31	33	54	Sioux	May	1	1892	526	
Boggy creek	Wickersham, H.	Harrison	Witchersham Ditch	Irrig.	3.	31	33	54	Sioux	Feb.	18	1903		701
Boggy ck., Mid Br	Marten, Wm	Harrison	Martin's Ditch	Irrig.	.36	18	32	54	Sioux	May	19	1896		342
Boggy ck., Mid Br	Bannon, J. F	Harrison	Bannon's Ditch	Irrig.	.06	7	32	54	Sioux	July	1	1886	560	
Boggy ck., Mid Br	Wickersham, H.	Harrison		Irrig.	.57	36	33	55	Sioux	April	25	1906		821
Boggy ck., Mid Br	Wickersham, H.	Harrison	Beaver Dam	Irrig.	.86	7	32	54	Sioux	May	7	1906		822
Boggy ck., Mid Br	Wickersham, H.	Harrison	West Branch Canal	Irrig.	2.14	7	32	54	Sioux	May	7	1906		823
Boggy ck., Mid Br	Hill, Albert F.	Harrison	Hill Irrigation Ditch	Irrig.	.86	11	32	55	Sioux	Jan.	20	1908		886
Cedar creek	Schiltz, O. E.	Harrison	Sshilt's O. Creek Ditch	Irrig.	.57	35	33	56	Sioux	May	15	1885	507	
Cedar creek	Valdez, M.	Harrison	Valdez Ditch	Irrig.	.50	10	32	56	Sioux	April	5	1886	976	
Cedar creek	Plunkett, John	Harrison		Irrig.	.28	4	32	56	Sioux				985	*
Cherry creek	Ruffing, M.	Harrison	Cherry Creek Ditch	Irrig.	.03	29	33	54	Sioux	May	1	1893	549	
Hat creek	Brewster, B. E.	Harrison	W. Hat Creek Ditch	Irrig.	.43	16	32	55	Sioux	June	1	1880	553	
Hat creek	Coffe, Chas. F.	Harrison	C. F. Coffe Ditch	Irrig.	4.29	26	33	55	Sioux	Sept.	1	1881	512	
Hat creek	Brewster, B. E.	Harrison	W. Hat Creek Ditch	Irrig.	.57	16	32	55	Sioux	May	31	1886	553	
Hat creek	Miller, Wm	Harrison	Miller Ditch	Irrig.	.37	23	33	55	Sioux	May	19	1896		341
Hat creek	Haas, Catharine	Harrison	Haas Ditch	Irrig.	.09	2	33	55	Sioux	May	8	1899		510
Hat creek	Antrim, Z. F.	Harrison	Antrim's Ditch	Irrig.	.57	3	32	55	Sioux	Dec.	24	1900		594

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-E—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Hat creek	Antrim, Z. F.	Harrison	Antrim Dam	Irrig.	.57	3	32	55	Sioux	Aug.	20	1906		834
Canon trib. to Hat creek	Konrath, Jos.	Montrose	Konrath Ditch	Irrig.	1.43	17	34	54	Sioux	Dec.	28	1905		808
Draw trib. to Indian creek	Meier, Aug.	Andmore, S. Dakota	Meier Dam	Irrig.	2.	24	35	55	Sioux	Nov.	5	1900		585
Draw trib. to Indian creek	Hibbeln, Jno.	Ardmore, S. Dakota	Hibbeln Ditch	Irrig.	2.	24	35	56	Sioux	Oct.	4	1907		872
Jim creek	Daut, L.	Harrison	Daut Bros. Ditch	Irrig.	.86	7	33	56	Sioux	May	10	1889	981	
Jim creek	Anderson, Nels	Harrison	Jim Creek Ditch	Irrig.	.43	8	33	56	Sioux	Dec.	15	1890	502	
Jim creek	Slattery, Wm.	Harrison	Slattery Ditch	Irrig.	.29	13	33	57	Sioux	May	31	1891	543	
Jim O. E. Fork	Wassenberger, J.	Montrose	Wassenberger Ditch	Irrig.	2.29	29	34	54	Sioux	Oct.	13	1900		581
Little Red ck	Zerbst, R.	Harrison	Zerbst Ditch	Irrig.	.14	25	33	56	Sioux	May	1	1893	551	
Lickett creek	Coffee, S. B.	Chadron	Lickett Ditch	Irrig.	1.43	27	33	54	Sioux	March	21	1900		549
Lickett creek	Coffee, S. B.	Chadron	Lickett Ditch	Irrig.		27	33	54	Sioux				*1005	
Long Branch	Borky, S.	Ardmore, S. Dakota	Borky Dam	Irrig.	.64	23	35	54	Sioux	April	19	1900		557
Long Branch	O'Connel, Dennis	Ardmore, S. Dakota	O'Connel Ditch	Irrig.	.20	22	35	54	Sioux	Nov.	10	1900		587
Long Branch	Ebert, L. J.	Ardmore, S. Dakota	Ebert Ditch	Irrig.	.14	19	35	53	Sioux	Aug.	22	1901		635
Monroe creek	Wilcox, E. J.	Harrison	Big Monroe creek Ditch	Irrig.	1.43	33	33	56	Sioux	May	1	1888	506	

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-E—(Continued).

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Monroe creek	Schilt, C. E.	Harrison	Schilt's Monroe Creek	Irrig.	.60	27	33	56	Sioux	July	2	1888	509	
Monroe creek	Noreisch, Wm.	Harrison	Noreisch's Ditch	Irrig.	.04	33	33	56	Sioux	July	19	1895		83
Monroe creek	Jordan, O.	Harrison	Nell Jordan Ditch	Irrig.	2.29	13	33	56	Sioux	Nov.	12	1906		841
Prairie Dog Ck	Schilt, C. E.	Harrison	Schilt's P. Dg. Ditch	Irrig.	1.14	35	33	56	Sioux	May	31	1886	508	
Plum creek	Ruffing, M.	Harrison	Plum Creek Ditch	Irrig.	.14	33	33	54	Sioux	March	11	1905		784
Sow Belly ck	Schaefer, P.	Harrison	Old Sow Belly Ditch	Irrig.	3.	7	32	55	Sioux	June	1	1887	533	
Sow Belly ck	Montgomery, S.	Harrison	Montgomery Ditch	Irrig.	1.	21	33	55	Sioux	Dec.	1	1890	559	
Sow Belly ck	Jordan, S.	Harrison	Jordan Ditch	Irrig.	.43	21	33	55	Sioux	June	1	1895	556	
Sow Belly ck	Jordan, S.	Harrison	Jordan Ditch	Irrig.	.50	21	33	55	Sioux	May	11	1896		424
Sow Belly ck	Nutto, F.	Harrison	Nuttos Ditch	Irrig.	.43	24	32	56	Sioux	Sept.	4	1897		404
Sow Belly ck	Carrol, M. J.	Harrison	Carrol Ditch	Irrig.	.14	7	32	55	Sioux	July	12	1899		516
Sow Belly ck	Zimmerman, W. H.	Harrison	Zimmerman Ditch	Irrig.	.71	34	33	55	Sioux	Jan.	11	1900		532
Sow Belly ck	Jordan, S.	Harrison	Jordan Ditch	Irrig.	.14	34	33	55	Siouox	May	26	1902		668
Sow Belly creek	Barnes, Paul T.	Harrison	Barnes Reservoir	Stor.	.50	19	32	55	Sioux	June	18	1912		1204
Spg. ck. trib. to Sow Belly ck	Hall, W. S. and F. M.	Harrison	Hall's Spring Creek Ditch	Irrig.	.57	6	32	55	Sioux	March	26	1889	550	
Spg. ck. trib. to Sow Belly	Schaefer, P.	Harrison	Spring Creek Ditch	Irrig.	.29	7	32	55	Sioux	June	1	1893	532	
Sp. Br. trib to S. W'rbon'et C	Biehle, C.	Harrison	Biehle Ditch	Irrig.	.23	32	33	56	Sioux	April	1	1891	538	
Sp. Br. trib to S. W'rbon'et C	Garton, O. A.	Harrison	Garton Ditch	Irrig.	1.43	31	33	56	Sioux	Oct.	16	1893	503	

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-E—(Continued).

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Sp. Br. trib to N. W'rbonet' C	Kay, J. L.	Harrison	Kay's Ditch	Irrig.	.14	26	33	57	Sioux	May	1	1887	958	
Sp. Br. trib to W'rbon'et C	Nolan, Jas.	Harrison	Nolan Ditch No. 1	Irrig.	.01	23	33	57	Sioux	March	15	1887	957	
Sp. Br. trib. to Wr'bon'et C	Nolan, Jas	Harrison	Nolan Ditch No. 2	Irrig.	.29	23	33	57	Sioux	May	1	1888	959	
Squaw creek	Dunn, Thos.	Harrison	Dunns Ditch	Irrig.	.36	15	33	57	Sioux	June	1	1890	552	
Squaw creek	Hamlin, N. D.	Harrison	Hamlin's Ditch	Irrig.	.01	10	33	57	Sioux	April	1	1891	555	
Squaw creek	Dunn, Thos.	Harrison	Thos. Dunn's Ditch	Irrig.	.57	10	33	57	Sioux	Aug.	5	1895		100
Squaw creek	Dunn, D. P	Harrison	Phillip Dunn's Ditch	Irrig.	.19	3	33	57	Sioux	Jan.	22	1897		376
Squaw ck., W. Br	Thomas, S. M.	Harrison	Thomas Ditch	Irrig.	.50	10	33	57	Sioux	July	23	1901		627
Str., no name	Coffee, S. D.	Harrison	Homestead Ditch	Irrig.	.22	22	33	54	Sioux	May	31	1890	984	
Str., no name	Hunter, H. C.	Adelia	Hunter Ditch	Irrig.	.03	26	33	54	Sioux	May	12	1898		451
Warbonnet ck	Brewster, B. E.	Harrison	Warbonnet Ditch	Irrig.	3.63	21	33	56	Sioux	July	31	1880	548	
Warbonnet ck	Anderson, T. A.	Harrison	Warbonnet Ditch No. 2	Irrig.	1.48	20	33	56	Sioux	March	11	1908		892
Warbonnet ck., N. Br. of S. B.	Anderson, J.	Harrison		Irrig.	.71	30	33	56	Sioux	May	31	1889	539a	
Warbonnet ck., N. Br. of S. B.	Anderson, J.	Harrison		Irrig.	.29	30	33	56	Sioux	Dec.	31	1891	539b	
Whitehead ck	Harrison, R.	Adelia	Harison Ditch	Irrig.	.06	13	33	54	Sioux	May	30	1888	547	

*Pending.

CLAIMS AND APPLICATIONS BY STREAMS IN DIVISION 2-F

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Bazile creek	Packard, J. L.	Creighton	Creighton Mill Race	P'wer		21	29	5	Knox				*1002	
Bazile creek	Creighton Mill Co.	Battle Creek	Creighton Mills	P'wer	30.	21	29	5	Knox	Sept.	24	1908		914
Mud creek	Horan, T. W.	Fort Crook	Horan Canal	Irrig.	.37	34	14	13	Sarpy	Aug.	12	1909		958
Tekamah creek	Glasson, Joseph	Tekamah	Tekamah Roll Mills	P'wer	10.	19	21	11	Burt	Sept.	17	1906		839
Tekamah creek	Glasson, Joseph	Tekamah	Tekamah Roll Mills	Ice	1.	19	21	11	Burt	Jan.	21	1908		887

APPLICATIONS APPROVED NOV. 30, 1911 TO SEPT. 1, 1912

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Red Willow creek	Helm, John F.	Red Willow	Helm Ditch	Irrig.	10.	8	3	28	Red Willow	Dec.	5	1910		1042
Frenchman river	Krotter, F. C.	Palisade	F. C. Krotter No. 2	Irrig.	3.	35	5	34	Hayes	Dec.	15	1910		1046
Frenchman river	Krotter, F. C.	Palisade	F. C. Krotter No. 3	Irrig.	2.42	35	5	34	Hayes	Dec.	15	1910		1047
Republican river	Rogers, W. N.	McCook	Shadeland Park Ditch	I. & P	38.	26	3	29	Red Willow	Jan.	3	1911		1049
Cedar creek	Major, John	Paxton	Cedar Creek Ditch	Irrig.	1.57	17	14	35	Keith	Jan.	3	1911		1051
Pumpkinseed ck.	Seeley, W. J.	Dunlap, Iowa	Seeley Irr. Ditch	Irrig.	.57		19	52	Morrill	Jan.	19	1911		1052
White Clay ck.	Townsend, C. H.	White Clay	Townsend Ditch	Irrig.	.80	25	35	45	Sheridan	Jan.	21	1911		1054
Republican river	McConnell, M. C. & E. F.	Trenton	McConnell Bros. Irr. Canal	Irrig.	180.	10	2	34	Hitchcock	Jan.	23	1911		1055
Niobrara river	Beiser, J. H.	Harrison	Beiser Ditch	Irrig.	.78	4	29	56	Sioux	Jan.	23	1911		1056
Niobrara river	Beiser, J. H.	Harrison	Ex. Wm. Bourrett Ditch	Irrig.	1.21	33	30	56	Sioux	Jan.	23	1911		1057
Beaver river	St. Edward Elec Co.	St. Edward	St. Edward Elec. Co.	P'wer	314.	27	19	5	Boone	Feb.	11	1911		1058
Dry Draw	Earnest, Geo. A.	Chadron	G. Earnest Ditch	Irrig.	3.71	22	35	49	Dawes	Feb.	20	1911		1061
Spg. from Glen Cove creek	Bakewell, Geo. C.	Wood Lake	Glen Cove Ditch	Irrig.	.85	26	33	24	Brown	Mar.	1	1911		1067
Republican	Hurst, J. C., Day, H. J.	Trenton	H. D. Irr. Canal	Irrig.	7.	28	2	35-36	Hitchcock	Mar.	7	1911		1068
Clear Lake	Lyons Drain Dist.	Lyons	Main Ditch No. 1	Drain		14	23	8e	Burt	Mar.	9	1911		1069
Indian creek	Stoneberg, Sanford	Max	Stoneberg Ditch	Irrig.	1.	2	2	37	Dundy	Mar.	13	1911		1070
Big Blue	Fall, C. P.	Beatrice	Beatrice & Big Blue Pow. Co.	P'wer	500.	13	4	5e	Gage	Mar.	16	1911		1071
Spotted Tail ck.	Brown, E. W.	Mitchell	Brown Ditch	Irrig.	2.28	2	23	56	Scotts Bluff	Mar.	17	1911		1072
Otter creek	Howell, R. B.	Omaha	Cascade Canal	Irrig.	20.	9& 5	15	40	Keith	Mar.	17	1911		1073
White Clay creek	Brooks, J. N.	Rushville	Brooks Ditch	Irrig.	.71	36	35	45	Sheridan	Mar.	22	1911		1076
North Loup River	Burwell Elec. Co.	Burwell	Burwell Elec. Pow. Plant	P'wer	1000.	10	21	16	Garfield	Mar.	24	1911		1077
Niobrara river	Iodence, W. M.	Dunlap	Lichte Irr. Ditch	Irrig.	3.	27	29	48	Dawes	April	7	1911		1086

APPLICATIONS APPROVED NOV. 30, 1911 TO SEPT. 1, 1912—(Continued)

Stream	Name of Ditch	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Niobrara river	Dieriex, Camille	Rushville	Camille Ditch	Irrig.	1.53	19	30	43	Sheridan	April	10	1911		1087
Niobrara river	Montague, Jas.	Dunlap	Lichte Ditch	Irrig.	.71	27	29	48	Dawes	April	19	1911		1088
Lodge Pole creek	Kucera, V.	Sidney		Irrig.	2.28	36	14	48	Cheyenne	April	22	1911		1089
Rock creek	Rock Cr. P. & L. Co.	Benkelman	Rock Cr. P. & L. Co.	P'wer	16.				Dundy	April	26	1911		1090
Flood Water from hills	Fifield, C. M.	Kimball	Fifield Ditch	Irrig.	1.	22	15	56	Kimball	April	27	1911		1091
Republican river	Cappel, Geo.	McCook	G. Cappel Ditch	Irrig.	1.57	19	3	30	Red Willow	May	1	1911		1093
Frenchman river	Hoke, Jas. A.	Champion	Hokes Pump & Pow. Pl.	Irrig.	2.28	21	6	39	Chase	May	1	1911		1094
Big Blue	Holmesville M. & P Co.	Holmesville	Holmesville M. & P. Pl.	P'wer	500.	20	3	7	Gage	May	3	1911		1095
East Saw Log	Van Treech, P. H.	Crawford	Van Treech Canal & Ponds	Irrig.	.37	4	30	51	Dawes	May	8	1911		1098
Willow Creek	McFadden, Frank	Paxton	Willow Creek Canal	Irrig.	4.14	25	14	35	Keith	May	13	1911		1099
Lawrence Fork	Randall Bros.	Redington	Randall Bros. Ditch	Irrig.	4.57	21	18	52	Morrill	May	15	1911		1100
Niobrara river	Niobrara Irr. Co.	Alliance	Niobrara Reservoir	Stor.	234.	12	28	53	Sioux	May	24	1911		1101
Pumpkinseed ck	Reddish, F. R.	Bridgeport	Reddish Irr. Canal	Irrig.	2.28	30	19	50	Morrill	May	29	1911		1102
Snake creek	Kilpatrick Bros.	Beatrice	Kilpatrick Reservoir	Irrig.	200.	1	24	52	Box Butte	June	7	1911		1104
Frenchman river	Kilpatrick Bros.	Beatrice	Kilpatrick Reservoir No. 1	Stor.	60.	23	6	40	Chase	June	22	1911		1108
Muddy creek	Hanks, Geo. A.	Stratton	Hanks Ditch	Irrig.	3.	2	2	36	Hitchcock	June	23	1911		1109
White river	Jenson, J. L.	Whitney	J. L. Jenson Irr. Plant	Irrig.	.14	26	33	50	Dawes	June	27	1911		1110
Clear creek	Clear Cr. Irr. Co.	Lewellen	Clear Cr. Canal Ex.	Irrig.	1.14	31	16	41	Garden	July	5	1911		1111
Springs	Schlater, F. E.	Plattsmouth	S. F. Stock Co. Ditch	Irrig.	1.42	24	20	52	Cass	July	27	1911		1112
Cottonwood creek	Lichte, Hugo	Dunlap	Dunlap Ditch	Irrig.	.5	29	29	48	Dawes	July	18	1911		1113
Chadron creek	Mann, Chas.	Chadron	Mann Ditch	Irrig.	.57	19	32	48	Dawes	July	19	1911		1114
Lower Dugout	Hubbard, Henry	Broadwater	Hubbard Reservoir	Stor.	2.	4	19	48	Morrill	July	24	1911		1115
Chadron creek	Mann, Chas.	Chadron	Mann Ditch	Irrig.	.85	25	32	49	Dawes	July	25	1911		1116
Frenchman river	Sheridan, R. B.	McCook	Ex. of Aberdeen Canal	Irrig.	1.57	2	5	38	Chase	July	29	1911		1117

APPLICATIONS APPROVED NOV. 30, 1911 TO SEPT. 1, 1912—(Continued)

Stream	Name of Claimant	Post-Office Address	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No.	App. No.
						S	T	R	County	Month	D	Yr.		
Niobrara river	Wells, H. E.	Gordon	Wells Pumping Sys.	Irrig.	1.64	32 29	32	40	Cherry	Aug.	1	1911		1119
White Clay creek	Brooks, J. N.	Rushville	Brooks Ditch	Irrig.	.42	36	35	45	Sheridan	Aug.	2	1911		1120
Red Willow creek	Masters, Chas.	Indianola	Masters Ditch	Irrig.	1.14	6	3	28	Red Willow	Aug.	7	1911		1121
White river	Pinner, B. G., Denslow, J. H.	Crawford	Pinney & Denslow Res. 1-2-3	I.& S	20.	26	32	52	Dawes	Aug.	10	1911		1122
Republican, S. Fk	Dickson, W. H.	Denver, Colo.	Holmes Reservoir	Stor.	10000.	4	2	39	Kansas	Aug.	24	1911		1124
Niobrara river	Hitshaw, Geo.	Marsland	Hitshaw Canal	Irrig.	.5	5	28	25	Dawes	Sept.	16	1911		1125
Lodge Pole	Maginnis, P.	Kimball	Maginnis Ice Pond	Stor.	.3	26	15	56	Kimball	Sept.	19	1911		1127
White river	Forbes, Wm. T.	Crawford	Forbes Extension	Irrig.	.85	19	32	51	Dawes	Sept.	26	1911		1128
Republican river	Rogers, W. N.	McCook	Shadeland Park Ditch	Irrig.	7.	25	3	29	Red Willow	Sept.	28	1911		1129
Big Blue River,	Clifford, P.	Beatrice	Beatrice & Big Blue P. Plt.	P'wer	325.	13	14	5	Gage	Sept.	30	1911		1131
Squaw creek	McDowell, E. C.	Crawford	Squaw Creek	Stor.	3.	12	31	52	Dawes	Oct.	3	1911		1132
Pumpkinseed ck.	Egleston, T. C.	Harrisburg	Airedale Canal No. 2	Irrig.	1.57	1	19	55	Dawes	Oct.	26	1911		1133
Plum creek spgs.	Eggers, Thos.	Lewellen	Plum Cr. Ditch & Res.	Irrig.	1.14	23	16	42	Garden	Nov.	9	1911		1134
Big Blue	Jacobs, E.	Staplehurst	Jacobs Electric	P'wer	41.	26	12	2	Seward	Nov.	23	1911		1135
Frenchman river	Theobald & Athley	Wauneta	Wauneta Mills & E. L. Plant	P'wer	.75	11	5	36	Chase	Nov.	16	1911		1136
Frenchman river	Brown, Geo. W.	Imperial	Imperial Reservoir	I.& P	125.	3	5	38	Chase	Nov.	21	1911		1137
Muddy cr. & trib.	Rath, August	Stratton	Rath Reservoir	Irrig.	100.	10	2	35	Hitchcock	Nov.	23	1911		1138
Spring creek	Sheffrey, Thos.	Oxford	Sheffrey Ranch Irr. Plant	Irrig.	2.21	22	3	20	Harlan	Nov.	27	1911		1140
Deep creek	Sheffrey, Thos.	Oxford	Sheffrey Ranch Irr. Plant	Irrig.	2.28	22	3	20	Harlan	Nov.	27	1911		1141

APPLICATIONS APPROVED NOV. 30, 1911 TO SEPT. 1, 1912—(Continued)

Stream	Name of Ditch	Address Post-Office	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
Frenchman river	Arterburn, E. E	Lincoln	Arterburn Stor. Res	I.&S.	150.	11-12-13-14	6	41	Chase	Nov.	28	1911		1142
Maurer Springs	C. B. & Q. R. R	Lincoln	Burlington	Irrig.	1.0	23	2	11	Chase	Nov.	28	1911		1143
No name	Gatch, Chas. E	Minatare	Gatch Ditch	Irrig.	1.	25	21	54	Scotts Bluff	Dec.	6	1911		1144
Frenchman river	Bishop, Stephen S	Lincoln	Inman Stor. Res	Stor.	125.	17	6	40	Chase	Dec.	8	1911		1145
Crooked creek	Slawson, E. R	Red Cloud	Slawson Ice Pond	Stor.	.75	1	1	11	Webster	Dec.	15	1911		1146
Republican river	Davenport, H. W	Culbertson	Trites & Davenport Ditch	Irrig.	1.50	19	3	31	Hitchcock	Dec.	15	1911		1147
Springs & Slough	Cundall, Harry	Stratton	Candall Ditch	Irrig.	2.	19	20	51	Morrill	Dec.	15	1911		1148
North Platte	French, John E	Henry	French Ditch	Irrig.	11.	9	23	60	Wyo.	Dec.	21	1911		1149
Niobrara river	Hopkins, Thos. L	Hemingford	Potmesil Bros. Ditch	Irrig.	.28	25	29	48	Box Butte	Jan.	2	1912		1152
Big Blue river	Boyes, Burdette	Seward	Blue River Pow. Plant No. 2	P'wer	100.	32	9	3	Seward	Jan.	3	1912		1153
Blue creek	Eggers, J. E	Lewellen	The Eggers Extension	Irrig.	.42	33	17	42	Garden	Jan.	4	1912		1154
Boardman creek	Bachelor, J. H	Valentine	Boardman Ditch	Irrig.	28.57	33	30	32	Cherry	Jan.	17	1912		1155
Frenchman river	Ough, Wm	Wauneta		Irrig.	.50	12	5	36	Chase	Jan.	27	1912		1161
Red Willow creek	Allen, Joseph	McCook	Allen Ditch	Irrig.	1.42	6	4	29	Red Willow	Jan.	29	1912		1162
Br. Wood river	Jacobson, Carl A	Riverdale	Richeson Res	S.&I.	1.	19	10	16	Buffalo	Jan.	31	1912		1163
North Platte river	Liebhardt Bros	Denver	Liebhardt Lateral	Irrig.	2.82	4	21	54	Morrill	Feb.	1	1912		1165
Wood river	Kimbrough, Cora	Shelton	Kimbrough Canal	Irrig.	4.57	36	10	13	Buffalo	Feb.	3	1912		1166
Muddy creek	Sarver, W. E	Stratton	W. E. Sarver Res	Stor.	50.	5	2	35	Hitchcock	Feb.	3	1912		1167
Frenchman river	Sandburg, John	Denver	Lovella Reservoir	S.&I.	400.	3	5	38	Chase	Feb.	7	1912		1168
Stinking Water ck	Troutman, A. C	Palisade	Troutman Irr. Ditch	Irrig.	.71	30	5	33	Hayes	Feb.	12	1912		1169
Little Blue river	William, Robt. T	Edgar	Blue Bluffs Elec. Co	P'wer	180.	20	4	6	Clay	Feb.	17	1912		1171
Republican river	Anderson, Christine, et al	Benkelman	Cottonwood Ditch	Irrig.	3.35	6	1	36	Dundy	Feb.	19	1912		1172

APPLICATIONS APPROVED NOV. 30, 1911 TO SEPT. 1, 1912—(Continued)

Stream	Name of Ditch	Address Post-Office	Name of Ditch	Use to which applied	Second feet granted	Location of Headgate				Date of Priority			Docket No	App. No.
						S	T	R	County	Month	D	Yr.		
Spring creek	McGinley, George	Keystone	Spring Creek	Irrig.	2.28	19	15	37	Keith	Feb.	20	1912		1173
Republican river	Struve, Carl L	Oxford	The Struve Ditch	Irrig.	1.07	7	3	20	Harlan	Feb.	21	1912		1174
Loup River, Mid	Longwood Irr. Canal Co.	Comstock	Longwood Irr. Canal	Irrig.	12.93	20	19	17	Custer	Feb.	21	1912		1175
Loup River, Mid	Bennett, Edw. D	Arcadia	Custer & Valley P. & L. Co	P'wer	850.	35	18	17	Valley	Feb.	27	1912		1177
North Platte	Dobson, W. A	Northport	Dobson's Lateral	Irrig.	3.14	5	20	52	Morrill	Feb.	28	1912		1181
Mira Creek	McClellan, M. E	North Loup	Mira Reservoir	Stor.	1.14	26	18	13	Valley	Mar.	8	1912		1182
Loup River, Mid.	Muhlback, Fred	Mullen	Mullen Grist & Light Pl.	P'wer	124.	6	24	32	Hooker	Mar.	12	1912		1185
Sand creek	Rasmussen, John J	Whitney	Sydnicate Res	Stor.	28.	32	33	52	Dawes	Mar.	19	1912		1186
Niobrara river	Bourrett, John J	Harrison	John Bourrett Ex. No. 1	Irrig.	.11	29	30	56	Sioux	Mar.	25	1912		1188
Draws & Sand ck.	Rasmussen, John J	Whitney	Kirstian Reservoir	Stor.	10.	32	32	52	Dawes	April	4	1912		1191
Republican river	Rupert Ditch Co	Culbertson	Rupert Ditch	Irrig.	20.	32	3	32	Red Willow	April	19	1912		1192
Niobrara river	Wells, Harry E	Long Pine	Wells Pumping System	Irrig.	1.64	32	32	40	Sheridan	May	2	1912		1193
Frenchman river	Kilpatrick Bros	Beatrice	Kilpatrick Res. No. 2	S.&I.	60.	23	6	40	Chase	May	3	1912		1194
Frenchman river	Kimberling, V. & C	Champion	Kimberling Pump Sta	Irrig.	.57	20	6	40	Chase	May	9	1912		1196
Brush creek	Lofton, Frank S	McCook	Brush Creek Reservior	Stor.	3.5	3	2	29	Red Willow	June	1	1912		1201
Frenchman & Stinking Water	Frenchman Valley Irr. Co.	Culbertson	Frenchman Val. Irr. Dist. Res	Stor.	150.	36	5	34	Hayes	June	18	1912		1203
Sowbelly creek	Barnes, Paul T	Harrison	Barnes Reservior	Stor.	50.	19	32	55	Sioux	June	18	1912		1204
Minnechaduza ck.	City of Valentine	Valentine	Valentine W. & E. L. Plant	P'wer	44.	29	34	27	Cherry	June	24	1912		1205
Red Willow	Masters, Chas	Indianola	Masters Ditch	Irrig.	1.14	6	3	28	Red Willow	July	29	1912		1212

APPLICATIONS DISMISSED NOV. 30, 1910, TO SEPT. 30, 1912

Stream	Name of Applicant	Location of Headgate				App. No.
		S.	T.	R	County	
White River	Forbes, W. T.	19	32	51	Dawes	1017
Niobrara River	Knight, R. E.	12	28	53	Sioux	1036
Horse Creek	Russell, Herbert	4	22	60	Wyoming	1041
Niobrara River	Beiser, J. H.	4	29	56	Sioux	1043
Niobrara River	Beiser, J. H.	33	30	56	Sioux	1044
Frenchman and Stinking Water	Sandburg, John	31	5	33	Hayes	1048
North Platte	Taylor, R. W.	17	16	43	Garden	1053
Platte and Loup River	Carbutt, R. F.	34	17	1e	Platte	1059
Platte and Loup River	Carbutt, R. F.	10	17	4e	Colfax	1060
Big Blue River	Kemmish, N. A., Beardslee, C. O.	28	5	5e	Gage	1062
Big Blue River	Kemmish, N. A., Beardslee, C. O.	12	4	5e	Gage	1063
Big Blue River	Kemmish, N. A., Beardslee, C. O.	1	5	4e	Gage	1064
Big Blue River	Kemmish, N. A., Beardslee, C. O.	11	7	4e	Gage	1065
Blue Lake	B. & M. Irr. Co.	16	20	44	Garden	1066
Spotted Tail	Stewart, H. G.	26	24	56	Sioux	1074
Monroe Creek	Jordan, Richard	22	33	56	Sioux	1079
Big Blue River	Miller, F. W.	19	4	6e	Gage	1080
Platte River	Blackburn, F. L.	15	17	8e	Dodge	1081
Spotted Tail	U. S. of America	10	23	56	Scotts Bluff	1082
Sheep Creek	U. S. of America	17	23	57	Scotts Bluff	1083
Tub Springs	U. S. of America	27	23	55	Scotts Bluff	1084
Winter Creek	U. S. of America	8	22	54	Scotts Bluff	1085
Niobrara River	Hitshew, Geo.	5	28	52	Box Butte	1092

APPLICATIONS DISMISSED NOV. 30, 1910, TO SEPT. 30, 1912—(Continued)

Stream	Name of Applicant	Location of Headgate				App. No.
		S	T	R	County	
Big Blue River	Miller, F. W.	7	3	7	Gage	1096
Springs	Beard, E. A.	3	23	58	Scotts Bluff	1105
Birdwood	Suburban Irr. Dist.	12	14	33	Lincoln	1106
Seepage	Gatch, Charles E.	No head gate				1107
Republican River	Rupert Ditch	32	3	32	Hitchcock	1139
Indian Creek	Seegrist, Isaac	3	31	50	Dawes	1156
Indian Creek	Honnold, J. G. & C. A.	3	31	50	Dawes	1157
Niobrara River	Bourrett, John	32	30	56	Sioux	1184
Seep Water from Gering Irr. Dist.	Huffman, M. J.	11	21	55	Scotts Bluff	1195
	Farmer's Land Co.	27	23	22	Blaine and Loup	1197

APPLICATIONS CANCELLED NOV. 30, 1910, TO SEPT. 30, 1912

Stream	Name of Applicant	Location of Headgate				App. No.
		S.	T.	R	County	
Minnechaduza Creek	Village of Valentine	No	race		Cheney	981
Big Blue River	Fall, C. P	13	4	5e	Gage	1071
Birdwood Creek	Hoagland, W. V	3	15	33	Lincoln	1075
White Clay Creek	Brooks, J. N	36	35	45	Sheridan	1076
Lodge Pole Creek	Kucera, V	36	14	48	Cheyenne	1089
Sand Creek	Rasmussen, J. J	3	32	52	Dawes	1089½
Willow Creek	McFadden, Frank	25	14	35	Keith	1099
Pumpkinseed Creek	Reddish, F. R	30	19	50	Morrill	1102
Muddy Creek	Hanks, Geo. A	2	2	36	Hitchcock	1109
Springs	Schlater, F. E	24	20	52	Cass	1112
Chadron Creek	Mann, Charles	19	32	48	Dawes	1114
Dugout, Lower	Hubbard, Henry	4	19	48	Morrill	1115
Chadron Creek	Mann, Chas	25	32	49	Dawes	1116
Niobrara River	Wells, H. E	29	32	40	Cherry	1119
Red Willow Creek	Masters, Charles	6	3	28	Red Willow	1121
Republican, S. Fork	Dickson, W. H	4	2	39	Kansas	1124
Niobrara River	Hitshew, Geo	5	28	52	Dawes	1125
Big Blue River	Fall, Clifford P	13	4	5e	Gage	1131
Plum Creek Springs	Eggers, Thomas	23	16	42	Garden	1134
Frenchman River	Brown, Geo. W	3	5	38	Chase	1137
Muddy Creek and Trib	Rath, August	10	2	35	Hitchcock	1138
Spring Creek	Sheffrey, Thomas	22	3	20	Harlan	1140
Deep Creek	Sheffrey, Thomas	22	3	20	Harlan	1141
.....	Gatch, Chas. E	25	21	54	Scotts Bluff	1114
Crooked Creek	Slawson, E. R	6	5	15	Webster	1146
Republican River	Davenport, H. W	19	3	31	Hitchcock	1147
Frenchman River	Sandberg, John	3	5	36	Chase	1158
Red Willow Creek	Allen, Joseph	6	4	29	Red Willow	1162

IN THE FOLLOWING APPROPRIATIONS, THE LOCATION OF HEADGATE HAS BEEN CHANGED.

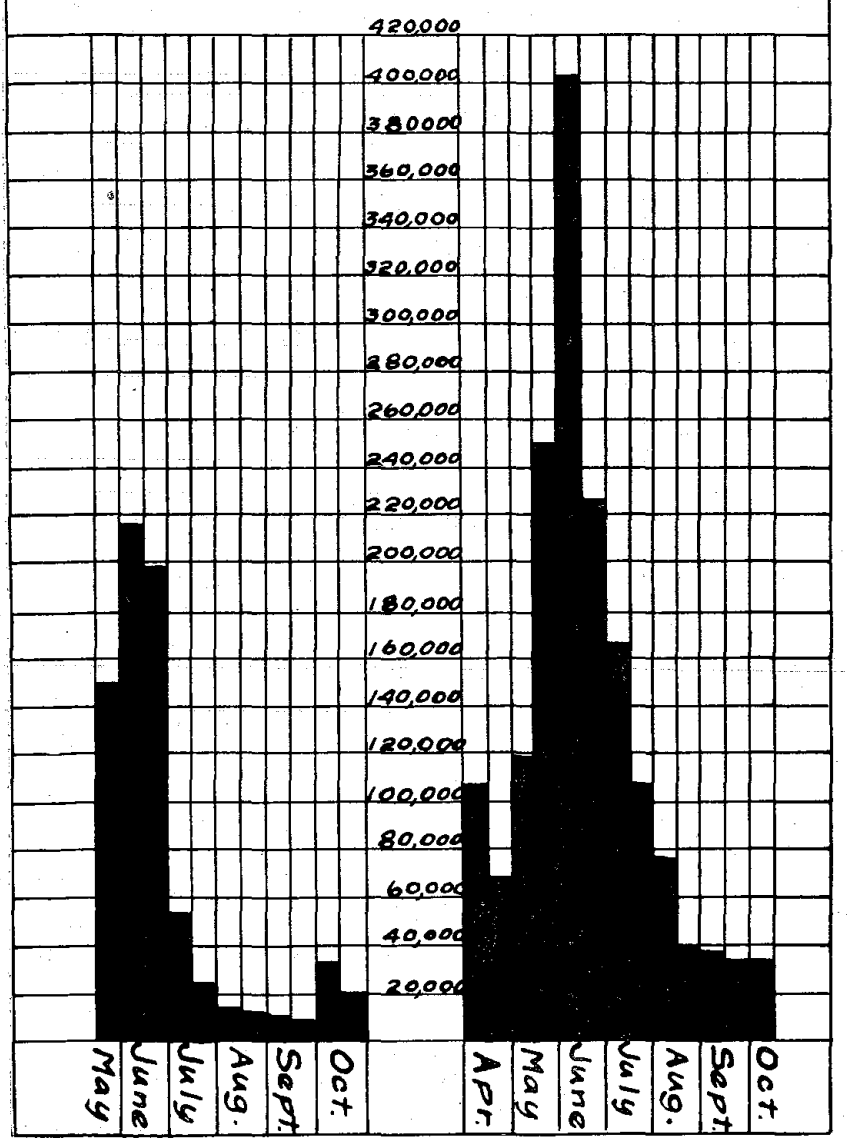
App. No.	Stream	Name of Canal	NEW LOCATION			
			S	T	R	County
A. 734	Spotted Tail Creek	Stewart Reservoir	26	24	56	Sioux
A. 560	Spring Creek	Kusel Ditch No. 2	8	32	57	Dawes
D. 462	Niobrara River	Furman Ditch	29	29	50	Dawes
A. 336	Cottonwood Creek	Cottonwood Ditch	.....	29	48	Dawes
D. 47	Frenchman River	Champion W. P. & I. D.	23	6	40	Gage
D. 697	Lonergan Creek	Soehl's Canal and Hainey Ditch	17	15	39	Keith
A.*110	White River	Trites & Davenport	19	3	31	Hitchcock
D. 3	Republican River	Jas. L. Jensen Irr. Plt	26	33	50	Dawes
A.*129	Loup River	Great Eastern Canal	17	17	1	Platte
A.*219b	Loup River	Great Eastern Canal	17	17	1	Platte
A.*527	Loup River	Great Eastern Canal	17	17	1	Platte
A. 653	Loup River	Great Eastern Canal	17	17	1	Platte
A.*709	Loup River	Great Eastern Canal	17	17	1	Platte
A.*1029	Loup River	Genoa-Columbus Dev	28	17	4	Platte
A.*707	White River	Hebbert Ditch	35	33	50	Dawes
A.*1072	Spotted Tail Creek	Brown Ditch	26	23	56	Scotts Bluff

OFFICE OF STATE ENGINEER

D.D. PRICE, STATE ENGINEER - DRAWN BY GEO. K. LEONARD

PATHFINDER INFLOW

IN ACRE FEET

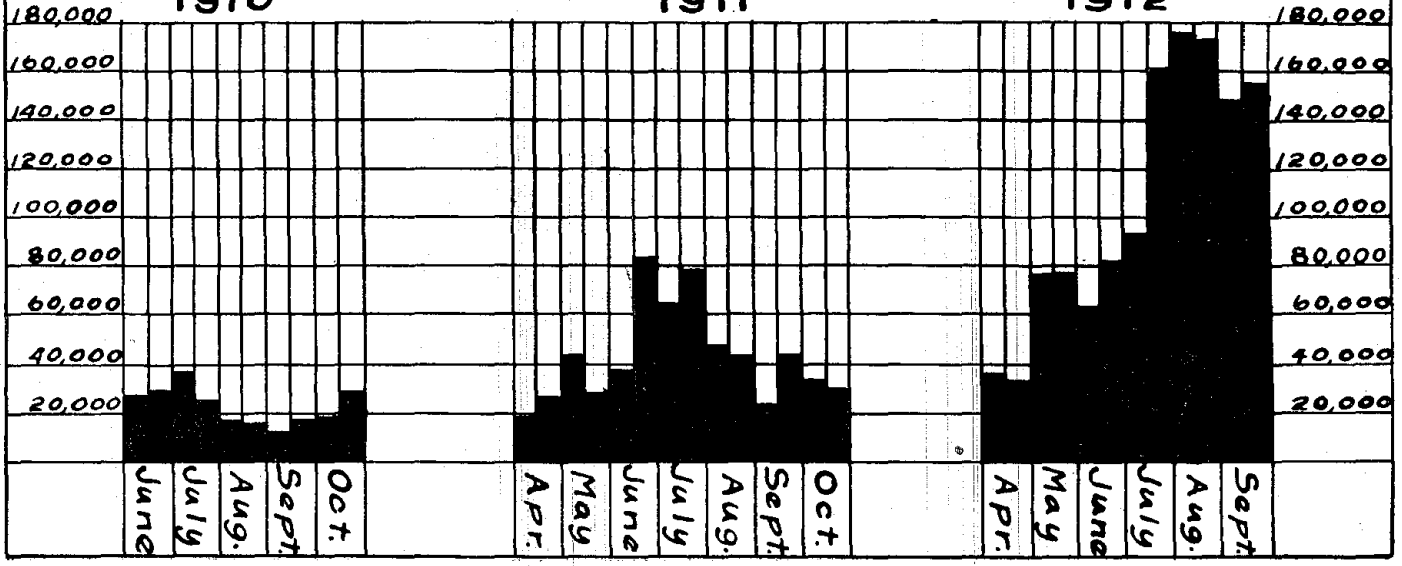


OFFICE OF STATE ENGINEER

D. D. PRICE, STATE ENGINEER. DRAWN BY GEO. K. LEONARD

DISCHARGE OF NORTH PLATTE RIVER AT WHALEN, WYO.

Showing amount of water passing the State line in acre feet,



STREAM MEASUREMENTS.

Number of gaging stations are maintained on the principal streams of the State and the following table gives the discharge of the streams at these stations. This work is done in cooperation with the Hydrographic Department of the U. S. Geological Survey, which Department compiled the following summaries from our measurements.

*ESTIMATED MONTHLY DISCHARGE OF NORTH PLATTE RIVER AT WHALEN, WYOMING.

Month	1909				1910			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					850	590	653	40139
February					669	531	616	34221
March					3114	740	2174	133684
April					3191	1521	2209	131451
May	11580	2608	6053	409121	1409	1044	1213	74636
June	20217	8001	10815	665030	2611	970	2023	120354
July	8199	7177	7699	473399	2296	1628	2019	124187
August	7966	3254	6281	386227	1895	1664	1746	107363
September	3266	2729	3008	179026	1965	1530	1692	100687
October	5556	1128	3460	212749	1865	418	837	51378
November	1320	458	1001	59615	765	700	749	17821
December	1221	125	762	46905				
For the period	20217	125	4972	2432072	3191	418	1493	935926

Period 1909, 245 days. *Including flow of Interstate Canal.

MONTHLY DISCHARGE OF NORTH PLATTEE RIVER AT HENRY, NEBRASKA.

Month	1912 Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April								
May	a5250	1400	3210	133000				
June	3500	1150	2470	147000				
July	7150	2050	4300	264000				
August	7600	5450	6530	402000				
September	b6250	4920	5500	185000				
October								
November								
December								

a 20 days. b 17 days.

ESTIMATED MONTHLY DISCHARGE OF THE NORTH PLATTE RIVER AT MITCHELL, NEBRASKA.

Drainage Area, 21,400 Square Miles.

Month	1901 Discharge in Second Feet			1901 Total in Acre Ft.	1902 Discharge in Second Feet			1902 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					a3229	494	1603	85870
May					6373	2649	4346	267230
June	a12120	4560	7378	321950	6877	2703	4915	292460
July	b4530	1048	2353	93320	3777	598	1308	80380
August	b566	218	366	14520	559	44	206	12720
September	422	210	322	19210	124	30	69	4080
October	520	235	384	23660	455	130	299	14220
November					b776	374	563	24590
December								
For the period					6877	30	1743	781500

a 22 days. b 20 days. a 27 days. b 22 days. Period 1902, 226 days.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	1904 Discharge in Second Feet			1904 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					a1667	340	867	39550
February					b1830	820	1029	24490
March					c2175	1200	1632	84160
April	5070	1600	2862	170290	2981	710	1511	89910
May	a6310	3410	4507	268200	12700	2720	6873	422600
June	10870	3250	7340	436780	12150	7580	10270	611100
July	5310	1000	2632	161830	5330	1092	2875	176800
August	900	165	472	29050	842	400	594	36520
September	1500	165	765	45540	498	225	382	22730
October	1710	1100	1449	89100	625	170	307	18880
November	b2170	1500	1762	55910	512	280	398	23680
December					1200	181	381	18140
For the period	10870	165	2787	1257500	12700	170	2355	1569000

a 30 days. b 16 days. Period 1903, 229 days.

a 23 days. b 12 days. c 26 days. Period 1904, 336 days.

NORTH PLATTE RIVER AT MITCHELL, NEBRASKA—Continued

Month	1905 Discharge in Second Feet			1905 Total in Acre Ft.	1906 Discharge in Second Feet			1906 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	2036	935	1239	76180				
April	9600	1480	3573	212600	a6110	3270	4490	223000
May	14300	7150	10010	615500	15700	4120	6850	421000
June	16800	7700	12760	759800	15700	6110	9260	551000
July	8300	1480	3594	221000	6110	1640	3190	196000
August	2260	520	1296	79690	1920	750	1410	86700
September	670	380	420	24990	960	530	742	44200
October	670	380	460	28280	1820	500	708	43500
November					1750	720	1270	75600
December								
For the period	16800	380	4153	2018000	15700	500	2860	1640000

Period 1905, 245 days. a 25 days. Period 1906, 239 days.

Month	1907 Discharge in Second Feet			1907 Total in Acre Ft.	1908 Discharge in Second Feet			1908 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					1300	610	908	55800
April	5700	3400	4300	256000	3060	610	1270	75400
May	14500	3400	6430	396000	11080	1300	3020	186000
June	16500	11900	13330	793000	22650	5420	8000	476000
July	11900	3400	7570	466000	4600	800	2240	138000
August	3400	1200	1980	122000	1020	610	832	51100
September	1450	750	990	59300	610	30	231	13700
October	1200	750	780	48000	340	40	137	8410
November	750	550	780	43700	1300	390	933	55500
December	a750	550	683	19000				
For the period	16500	550	4304	2203000	22650	30	1940	1060000

a 14 days. Period 1907, 258 days. Period 1908, 275 days.

NORTH PLATTE RIVER AT MITCHELL, —Concluded.

Month	1909 Discharge in Second Feet			1909 Total in Acre Ft.	1910 Discharge in Second Feet			1910 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a1910	760	1330	60700	3310	1360	2380	146000
April	2570	1360	1830	109000	3700	1360	2620	156000
May	13900	2570	7140	439000	1620	440	804	49400
June	23000	11600	15200	904000	1140	215	551	32800
July	15200	8450	12500	769000	1620	135	481	29600
August	8910	2250	6950	427000	580	80	128	7870
September	2230	1620	1990	118000	265	80	158	9400
October	6540	945	3180	196000				
November	3700	600	1210	72000				
December	2570	0	1610	99000				
For the period	23000	0	5330	3190000	3700	80	1016	431070

a 23 days. Period 1909, 298 days.

Month	1911 Discharge in Second Feet			1911 Total in Acre Ft.
	Max.	Min.	Mean	
January				
February				
March				
April				
May	2560	80	769	47300
June	4600	50	1450	86300
July	2200	360	1230	75600
August	1920	440	758	46600
September	1380	340	592	35200
October	1380	730	1010	62100
November	1380	730	978	58200
December	1640	900	1090	67000
For the period	4600	50	985	478000

Period 1911, 245 days.

ESTIMATED MONTHLY DISCHARGE FOR NORTH PLATTE RIVER AT SCOTTS BLUFF, NEBRASKA.

Month	1912							
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April								
May								
June	3800	440	1840	109000				
July	6050	1500	3980	245000				
August	8120	5350	7070	435000				
September	a7220	4700	5440	173000				
October								
November								
December								

a 16 days.

ESTIMATED MONTHLY DISCHARGE OF NORTH PLATTE RIVER AT GERING, NEBRASKA.

Drainage Area, 24,400 Square Miles.

Month	1897 Discharge in Second Feet			1897 Total in Acre Ft.	1898 Discharge in Second Feet			1898 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					6500	1000	3108	185520
May					18500	3400	7326	451490
June					12150	4750	9002	535250
July	4269	1084	2140	131584	5750	500	2048	126150
August	2340	500	1071	65854	350	100	177	10910
September	815	455	587	31954	200	50	100	5940
October	620	455	514	31605	500	100	258	15870
November			*520	30942				
December			*520	31974				
For the period					18500	50	3130	1331130

*Approximate.

Period 1898, 214 days.

Month	1899 Discharge in Second Feet			1899 Total in Acre Ft.	1900 Discharge in Second Feet			1900 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a14080	3155	9448	393510	a11900	4400	6582	169710
May	15290	4991	9611	593270	14800	9480	11672	717640
June	23500	10352	16025	953580	15800	5400	10737	638920
July	18085	4582	10823	665510	5320	1200	2689	165340
August	5197	1454	2964	182250	1157	395	713	43850
September	1316	584	844	50010	400	356	378	22490
October	2275	893	1501	92260	522	399	431	26480
November								
December								
For the period	23500	584	7207	2930390	15800	356	4567	1784430

a 21 days. Period 1899, 205 days.

Period 1900, 197 days.

ESTIMATED MONTHLY DISCHARGE OF NORTH PLATTE RIVER AT CAMP CLARKE, NEBRASKA.

Drainage Area, 24,830 Square Miles.

Month	1896 Discharge in Second Feet			1896 Total in Acre Ft.	1897 Discharge in Second Feet			1897 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					2404	2042	2287	140623
Feruary					2404	1567	2253	125125
March					2223	450	1299	79873
April					8390	1567	3649	217130
May					10540	6885	8688	534208
June					11400	4520	7491	440389
July	a2886	977	1554	95330	4305	930	2147	132015
August	b1316	628	924	56560	2042	580	1066	65546
September	1186	738	989	55870	580	400	492	29276
October	1290	875	1008	62000	580	350	484	29760
November	1338	706	1074	63910			*500	*29752
December							*500	*30744
For the period					11400	350	3076	1854441

a 30 days.
b 29 days.

*Approximate.
Period 1897, 304 days.

Month	1898 Discharge in Second Feet			1898 Total in Acre Ft.	1899 Discharge in Second Feet			1899 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	3400	675	1630	97040	a11030	2648	6659	343400
May	17000	2350	5403	332250	19050	3841	10257	620710
June	10600	4550	7080	418710	b23560	11575	16400	980090
July	4200	780	1617	99450	c20500	3950	12230	749720
August	800	60	266	16360	5335	1189	2834	174250
September	200	60	110	6590	1858	682	1076	64010
October	425	110	245	15090	d1894	1105	1372	57160
November								
December								
For the period	17000	60	2322	985490	23560	682	7535	2989350

Period 1898, 214 days.
Period 1899, 200 days.

a 26 days. c 28 days.
b 28 days. d 21 days.

NORTH PLATTE RIVER AT CAMP CLARKE, NEBRASKA—Concluded.

Month	1900 Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a8400	2910	5328	242720				
May	14000	8195	10379	658110				
June	14275	3960	9771	581320				
July	4000	770	2227	140840				
August	900	230	471	28960				
September	425	180	289	17190				
October	600	200	369	23740				
November								
December								
For the period	14275	180	3850	1580650				

a 23 days. Period 1900, 207 days.

ESTIMATED MONTHLY DISCHARGE OF NORTH PLATTE RIVER AT BRIDGEPORT, NEBRASKA.
Drainage Area, 25,000 Square Miles.

Month	1902 Discharge in Second Feet			1902 Total in Acre Ft.	1903 Discharge in Second Feet			1903 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					6300	1575	3664	218020
May	a6200	2170	4149	205710	7920	3460	5530	339980
June	6200	1580	4267	253900	10500	3780	7664	456080
July	4000	290	1200	73770	6700	825	2837	174420
August	b930	60	244	13080	1365	90	589	36210
September	c680	0	162	8990	420	0	195	11590
October	d680	290	559	33260	675	90	489	29930
November					a1170	675	883	21000
December								
For the period	6200	0	1736	588700	10500	0	2863	1284100

a 25 days. b 27 days. c 28 days. d 30 days. a 12 days. Period 1903, 226 days. Period 1902, 171 days.

Month	1904 Discharge in Second Feet			1904 Total in Acre Ft.	1905 Discharge in Second Feet			1905 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a4400	536	1393	58020	11700	2150	4822	286900
May	11350	2255	6813	388200	14700	9225	11710	720000
June	12190	6648	9630	573000	17700	9225	14480	858600
July	6900	470	2940	180800	11200	765	4536	278900
August	470	50	157	9654	3192	290	1316	80920
September	312	50	108	6426	600	200	370	22020
October	1850	100	464	28530	1405	290	685	42120
November	b1850	360	846	48660				
December								
For the period	12190	50	2786	1293000	17700	200	5410	2289000

a 21 days. b 29 days. Period 1904, 234 days. Period 1905, 214 days.

NORTH PLATTE RIVER AT BRIDGEPORT, NEBRASKA—Concluded.

Month	1906 Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January	.....	.....	.....	.....				
February	.....	.....	.....	.....				
March	.....	.....	.....	.....				
April	a14500	4150	6710	306000				
May	19700	5700	9790	602000				
June	17600	7300	12000	714000				
July	7800	1140	4120	253000				
August	1500	700	1130	69500				
September	900	660	760	45200				
October	850	560	727	44700				
November	b560	400	478	9480				
December	.....	.....	.....	.....				
For the period	19700	400	4741	2050000				

a 23 days. b 10 days. Period 1906, 217 days.

ESTIMATED MONTHLY DISCHARGE OF NORTH PLATTE RIVER AT NORTH PLATTE, NEBRASKA.
Drainage Area, 28,517 Square Miles.

Month	1895 Discharge in Second Feet			1895 Total in Acre Ft.	1896 Discharge in Second Feet			1896 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	10180	455	3016	184770				
April	6544	1551	3470	206980	a3560	1860	2823	117579
May	10635	4878	7033	432450	7888	2680	4558	280262
June	16875	5848	10991	654050	16300	2680	6334	376898
July	5848	842	3137	192780	2680	250	1134	69727
August	963	175	492	30253	1860	460	919	56507
September	455	150	241	14380	1240	550	857	50995
October	1389	200	810	49804	2500	730	1150	70711
November	1905	963	1357	80745	3721	730	2166	128886
December			3405	209370	5860	2731	4348	267350
For the period	16875	150	3394	2055582	16300	250	2690	1418915

Period 1895, 306 days. a 21 days. Period 1896, 266 days.

Month	1897 Discharge in Second Feet			1897 Total in Acre Ft.	1898 Discharge in Second Feet			1898 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January	8650	4876	6932	426296	5848	4864	5178	318383
February	9489	2471	6663	370044	8270	2922	5342	296679
March	9489	1774	3921	241094	3354	1270	2226	136871
April	13486	2471	5110	304125	3785	1557	2540	151140
May	21527	7812	13981	859664	14646	3570	5276	324409
June	23720	6518	13920	828296	12034	4433	6878	409269
July	6197	1090	3688	226768	4433	324	1846	113506
August	4754	743	2876	176839	1413	80	353	21705
September	850	422	609	36238	984	50	352	20945
October	3878	486	1132	69604	697	254	471	28961
November	4112	743	2152	128053	2275	660	1088	64740
December	6037	3174	5116	314634	4433	2275	3472	213486
For the period	23720	422	5509	3981655	14646	50	2919	2100091

NORTH PLATTE RIVER AT NORTH PLATTE, NEBRASKA—Continued.

Month	1899 Discharge in Second Feet			1899 Total in Acre Ft.	1900 Discharge in Second Feet			1900 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January	7437	5757	6263	385097				
February	7437	7437	7437	413030				
March	7997	4637	6814	418979	6900	1320	3082	189520
April	9851	3023	6509	387312	6900	1800	4108	244000
May	13373	4607	9196	565444	14300	7350	9468	582200
June	18305	10961	13845	823835	17700	4700	10858	648100
July	16257	4917	10743	660566	5025	1120	2255	138630
August	6317	1322	3866	237771	2150	100	581	35700
September	2215	850	1148	68311	325	70	111	6620
October	1557	622	964	59274	800	370	533	32780
November	2275	1270	1813	107881	2150	670	1114	66540
December	4433	1700	3274	201310				
For the period	18305	622	5989	4328810	17700	70	3565	1944000

Period 1899, full year. Period 1900, 275 days.

Month	1901 Discharge in Second Feet			1901 Total in Acre Ft.	1902 Discharge in Second Feet			1902 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	9900	1320	3260	200470	a4050	950	2257	71630
April	4700	1560	2408	143300	3440	1320	2443	145350
May	14300	2150	7680	472200	9900	3440	5450	335130
June	12700	4050	9733	579200	6900	2950	5139	305750
July	4050	75	1508	92730	6100	370	2229	137090
August	800	50	346	21300	370	30	102	6300
September	1800	565	1068	63560	1500	100	481	28600
October	1320	670	1121	68900	1120	670	1035	63490
November	1800	1320	1576	93780	1560	800	1094	65180
December								
For the period	14300	50	3182	1735440	9900	30	2247	1158520

Period 1901, 275 days. a 16 days. Period 1902, 260 days.

NORTH PLATTE RIVER AT NORTH PLATTE, NEBRASKA—Continued.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	1904 Discharge in Second Feet			1904 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a14300	2735	6562	221263				
April	5025	2150	3223	191782	3360	1030	1938	115300
May	6100	3440	4866	299199	11370	3768	5644	347000
June	12700	2735	6825	406116	15480	6670	10260	610500
July	8300	670	3348	205861	7264	800	3681	226300
August	1220	370	711	43718	2070	32	399	24530
September	800	325	545	32430	910	20	159	9461
October	1220	875	1087	66837	1794	538	1167	71760
November	b1440	565	1316	46985	1898	1150	1517	90270
December								
For the period	14300	325	3065	1514191	15480	20	3090	1495000

a 17 days. b 18 days. Period 1903, 249 days. Period 1904, 244 days.

Month	1905 Discharge in Second Feet			1905 Total in Acre Ft.	1906 Discharge in Second Feet			1906 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a4995	1390	2727	146000				
April	8248	1390	3743	222700	a7910	4520	6100	254000
May	15736	6635	10270	631500	13200	4850	7530	463000
June	23010	9002	14700	874700	19000	6280	10600	631000
July	15180	2080	5983	367900	7070	2080	4150	255000
August	4330	530	1862	114500	3320	50	1130	69500
September	1000	260	585	34810	2200	780	1470	87500
October	1270	200	616	37880	5300	760	1590	97800
November					3340	750	2150	128000
December								
For the period	23010	200	5084	2430000	19000	50	4260	1990000

a 27 days. Period 1905, 241 days. a 21 days. Period 1906, 235 days.

NORTH PLATTE RIVER AT NORTH PLATTE, NEBRASKA.—Continued.

Month	1907 Discharge in Second Feet			1907 Total in Acre Ft.	1908 Discharge in Second Feet			1908 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					2960	1580	2240	138000
April	a5580	3100	4010	239000	2370	1580	2020	120000
May	13230	2280	4870	299000	12310	2010	5860	360000
June	14950	10110	12980	773000	13990	3400	8920	530000
July	12270	2800	8460	521000	5900	1050	2250	139000
August	3930	1310	1770	109000	1050	150	515	31600
September	1820	970	1240	71500	350	160	218	13000
October	2280	1220	1360	84000	4950	200	917	56400
November	2800	1220	1710	102000	3210	480	1390	83000
December	b1600	1220	1430	39800				
For the period	14950	970	4410	2280000	13990	150	2700	1470000

a 28 days. Period 1907, 256 days. b 14 days. Period 1908, 275 days.

Month	1909 Discharge in Second Feet			1909 Total in Acre Ft.	1911 Discharge in Second Feet			1911 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February					a3550	1650	2510	79600
March	a2900	1530	2210	48200	3250	900	1680	103000
April	3500	1530	2350	140000	850	90	370	22000
May	14400	2350	6630	408000	2650	170	982	60400
June	27100	6900	13500	803000	2150	100	629	37400
July	9100	1900	5820	538000	1650	150	614	37800
August	5000	1230	3600	221000	1950	400	814	50100
September	1900	980	1190	70800	500	200	319	19000
October	5900	980	2750	169000	3000	562	1560	95900
November	2350	780	1470	87500	3080	900	1680	100000
December					2850	1900	2390	147000
For the period	27100	780	4460	2310000	3550	90	1230	752000

a 11 days. Period 1909, 255 days. a 22 days. Period 1911, 322 days.

NORTH PLATTE RIVER AT NORTH PLATTE, NEBRASKA—Concluded.

Month	1912 Discharge in Second Feet			1912 Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	14600	3500	7440	443000				
May	3900	340	2570	158000				
June	1270	230	572	34000				
July	9400	500	3690	227000				
August	10100	8050	9160	563000				
September	8700	3150	5840	348000				
October								
November								
December								
For the period				1770000				

NORTH PLATTE RIVER AT NORTH PLATTE, NEBRASKA.
1910

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			3.3	2.5	2.4						3.0	3.3
2			3.3	2.5	2.4						3.1	3.2
3			3.0	2.5	2.4						3.15	3.2
4			3.2	2.5	2.5						3.15	
5			3.5	2.5	2.5						3.2	3.1
6			2.5	2.5	2.6							3.2
7			2.0	2.5	2.6						3.15	3.3
8			2.0	2.5	2.5						3.1	3.2
9			1.9	2.5	2.5						3.1	3.15
10			1.9	2.5	2.4						3.1	3.1
11			1.9	2.4	2.4						3.1	
12			1.8	2.4	2.4						3.1	3.3
13			2.0	2.5	2.4							3.3
14			2.0	2.5	2.3						3.1	3.4
15			2.0	2.5	2.3						3.1	3.4
16			2.0	2.4	2.3					2.6	3.1	3.5
17			2.1	2.4	2.3					2.6	3.15	3.6
18			2.0	2.4	2.2					2.65	3.2	
19			2.0	2.4	2.2					2.6	3.2	3.7
20			2.0	2.4	2.2					2.6		3.7
21			2.0	2.5	2.2					2.6	3.2	3.6
22			2.0	2.5	2.3					2 .6	3.2	3.6
23			2.0	2.5	2.3					2.6	3.3	3.5
24			2.0	2.5	2.3					2.6	3.3	3.5
25			2.1	2.5	2.3					2.6	3.3	
26			2.1	2.5	2.3					2.6	3.4	3.4
27			2.2	2.4	2.2					2.6		3.4
28			2.3	2.4	2.2					2.65	3.3	3.4
29			2.3	2.4	2.3					2.9	3.25	3.3
30			2.3	2.4	2.3						3.2	Froze
31			2.3		2.3					2.95		Froze

ACTUAL GUAGINGS AT THIS STATION.

No.	Date	Hydrographer	Gage. H. F.	Discharge S. Ft.	Remarks
1	Mar. 25	D. D. Price	3.6	3012	
2	Apr. 26	D. D. Price	3.4	2595	
3	May 26	R. H. Willis	3.0	749	
4	Oct. 15	A. A. Dobson	2.60	229	
5	Nov. 10	A. A. Dobson	3.14	963	
6	Dec. 10	A. A. Dobson	3.45	595	Water flowing in channels between ice banks.

ESTIMATED MONTHLY DISCHARGE OF PLATTE RIVER AT LEXINGTON, NEBR.
Drainage Area, 53,300 Square Miles.

Month	1902 Discharge in Second Feet			1902 Total in Acre Ft.	1903 Discharge in Second Feet			1903 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a2820	1680	2212	74625	9060	2220	3892	231442
May	14672	1950	5492	337598	7510	1950	5200	319710
June	b8748	1842	5135	264829	12190	2520	6471	385070
July	c5692	0	2234	119650	9060	1090	3710	228070
August	565	0	27	1666	2220	275	1009	62070
September	2780	0	302	17971	1260	0	239	14250
October	1896	640	1191	73215	1950	390	1140	70060
November	d1226	465	961	15243	a2220	1090	1499	47580
December								
For the period	14672	0	2204	904797	12190	0	2978	1358430

a 23 days. c 27 days. Period 1902, 207 days. a 16 days.
b 26 days. d 8 days. Period 1903, 230 days.

Month	1904 Discharge in Second Feet			1904 Total in Acre Ft.	1905 Discharge in Second Feet			1905 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					a2900	1650	2180	34600
April	2000	1000	1218	72480	11700	2100	4990	297000
May	10700	1025	4295	264100	24500	10500	15800	972000
June	19500	7700	12570	748000	30000	11800	22100	1320000
July	7700	1350	4071	250300	21600	2100	7770	478000
August	2000	0	760	46730	3900	0	1090	67000
September	1350	0	266	15830	2300	0	1100	65500
October	2700	750	1662	102200				
November	3100	1600	2392	142300				
December								
For the period	19500	0	3404	1642000	30000	0	8540	3230000

Period 1904, 244 days. a 8 days. Period 1905, 191 days.

NORTH PLATTE RIVER AT LEXINGTON, NEBRASKA—Concluded.

Month	1906 Discharge in Second Feet			1906 Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a8500	4400	6420	331000				
May	18000	4000	7770	478000				
June	17000	5300	9970	593000				
July	5400	1900	3010	185000				
August	3000	0	745	45800				
September	1900	100	1060	63100				
October	7600	900	2480	152000				
November	7400	200	4210	251000				
December								
For the period	18000	0	4410	2100000				

a 26 days. Period 1906, 240 days.

ESTIMATED MONTHLY DISCHARGE OF PLATTE RIVER AT COLUMBUS, NEBRASKA.

Drainage Area, 56820 Square Miles.

Month	1895 Discharge in Second Feet			Total in Acre Ft.	1896 Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April								
May								
June	a27200	5170	14027	751210	a14900	4320	7510	402170
July	9315	1380	3684	226540	4490	0	1629	100166
August	1340	96	722	44400	2375	0	423	26020
September					0	0	0	0
October					2500	188	644	39880
November					b3535	620	2169	60240
December								
For the period					14900	0	1932	628470

a 22 days. Period 1896, 164 days. a 27 days. b 14 days.

Month	1897 Discharge in Second Feet			Total in Acre Ft.	1898 Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					a2700	500	1477	41020
May	a21600	6700	11800	655400	10700	1500	5850	359760
June	31100	5500	16910	1006330	24600	5100	11280	671120
July	b8200	2000	3950	133190	b6100	500	1520	30150
August	c4900	1400	3520	140730				
September	*							
October	d1600	1400	1500	11900				
November								
December								
For the period								

a 28 days. b 17 days. c 15 days. d 4 days. *No record. a 14 days. b 20 days.

PLATTE RIVER AT COLUMBUS, NEBRASKA—Continued.

Month	1899 Discharge in Second Feet			1899 Total in Acre Ft.	1900 Discharge in Second Feet			1900 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a23700	3600	8675	464560	a14530	1594	5584	254760
May	25770	4700	10373	637840	29440	7300	19040	1170710
June	25540	5000	13430	798960	25770	6700	14696	874490
July	24850	7400	14551	894740	10500	200	2980	177300
August	10400	0	4928	303000	*			
September					b4600	400	1576	21880
October					c998	610	806	12790
November					d950	200	455	8130
December								
For the period								

a 27 days. a 23 days. b 7 days. c 8 days. d 9 days

Month	1901 Discharge in Second Feet			1901 Total in Acre Ft.	1902 Discharge in Second Feet			1902 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a2436	1799	2060	32690	a5664	995	2316	134090
April	28400	1300	8827	525260	2393	825	1076	64050
May	9200	2088	5303	326090	13800	1212	5464	335820
June	12875	5500	9363	557120	9950	4950	6426	382350
July	b4500	725	2137	46630	11140	995	5267	323840
August	*				1150	198	404	24870
September	*				975	0	337	20020
October	*				5000	690	1798	110550
November	978	500	672	40010	b925	550	797	45830
December								
For the period					13800	0	2709	1441420

a 8 days. b 11 days. *no record. Period 1902, 267 days. a 24 days. b 29 days.

PLATTE RIVER AT COLUMBUS, NEBRASKA—Continued.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	1904 Discharge in Second Feet			1904 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a13550	7050	9652	325460				
April	7800	1980	4339	258180				
May	21600	3300	9160	563150	a8550	1250	4128	196500
June	21600	4000	8483	504780	18190	7760	12880	766400
July	13550	2320	5846	359520	12500	1520	6888	423500
August	6375	1350	3507	215650	2075	0	451	27730
September	4750	190	1174	69900	41	0	3	180
October	1095	190	616	37710	4995	0	1037	63760
November	3100	1095	1926	114590	b1000	1000	1000	51570
December								
For the period	21600	190	4729	2448950	18190	0	3800	1530000

a 17 days. Period 1903, 261 days. Period 1904, 203 days. a 24 days. b 26 days.

Month	1905 Discharge in Second Feet			1905 Total in Acre Ft.	1906 Discharge in Second Feet			1906 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a8080	2280	4914	146200				
April	27400	1758	7800	464100	a13600	3240	6530	298000
May	47200	10420	19360	1190000	23200	3430	8180	503000
June	51100	24050	31180	1855000	15400	4490	9220	549000
July	34700	1730	10770	662200	10100	1020	3480	214000
August	8040	0	3217	197800	4260	10	1580	97200
September	8780	0	2978	177200	2440	8	846	50300
October	3180	0	604	37140	4970	330	1640	101000
November					6080	2290	4080	243000
For the period	51100	0	10415	4730000	23200	8		2060000

a 15 days. Period 1905, 229 days. a 23 days. Period 1906, 237 days.

PLATTE RIVER AT COLUMBUS, NEBRASKA—Continued.

Month	1907 Discharge in Second Feet			1907 Total in Acre Ft.	1908 Discharge in Second Feet			1908 Total in Acre Ft
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					6660	320	1720	99000
April	a7600	1900	4110	244000	1640	520	1030	61000
May	9360	1900	4500	277000	4960	520	2480	152000
June	20800	10350	13360	795000	32800	3400	11750	700000
July	13450	4500	9960	612000	10800	770	3970	252000
August	5900	200	2290	141000	2300	370	832	51100
September	2140	150	720	42800	370	20	99	5890
October	2910	1180	1820	112000	2040	46	402	12900
November	3110	1100	1860	110000	2710	470	1110	66300
December	b6900	2140	2720	75500				
For the period	20800	150	4730	2410000	32800	20	2560	1400000

a 29 days. b 14 days. Period 1907. 257 days. Period 1908, 275 days.

Month	1909				1911			
January								
February								
March	a12300	2500	4930	274000	a1162	665	877	33000
April	5780	2250	3680	219000	b1024	0	447	22160
May	11800	2360	5620	346000	c1200	0	503	26900
June	19300	10300	15300	910000				Dry
July	15700	4350	10600	652000				Dry
August	7300	3320	4560	280000				Dry
September	8180	890	3100	184000				
October	6950	2200	4530	279000	d75	37	61	3650
November	8900	900	3020	180000	e69	52	61	1450
December					f69	55	62	1980
For the period	19800	890	616	3320000	1162	0	223	89140

a 28 days. Period 1909, 272 days.

a 19 days. b 25 days. c 27 days. d 30 days. e 12 days. f 16 days.
Period 1911, 129 days.

PLATTE RIVER AT COLUMBUS, NEBRASKA—Concluded.

Month	1912 Discharge in Second Feet			1912 Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April 21-30	5800	2400	3650	72300				
May	4700	1350	2780	171000				
June	3650	130	1140	67800				
July	5800	20	837	51500				
August	8280	2750	5810	357000				
September	6900	2750	4790	285000				
October								
November								
December								
For the period				1000000				

PLATTE RIVER AT COLUMBUS, NEBR.
1910

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1									1.55	No water	No water	Froz.
2									1.0	No water	No water	Froz.
3									1.0	1.1	No water	Froz.
4									.95	1.15	No water	Froz.
7									.7	1.1	No water	Froz.
6									.6	1.1	No water	Froz.
7									No water		No water	Froz.
8									No water	0.8	No water	Froz.
9									No water	0.4	No water	Froz.
10									No water	No water	No water	Froz.
11									No water	No water	No water	
12									No water	No water	No water	
13									No water	No water	No water	
14								0.9	No water	No water	No water	
15							No	water	No water	No water	No water	
16							No	water	No water	No water	No water	
17							No	water	No water	No water	No water	
18							No	water	No water	No water	No water	
19							No	water	No water	No water	No water	
20							No	water	No water	No water	No water	
21									No water	No water	No water	
22									No water	No water	No water	
23									No water	No water	No water	
24									0.2	No water	No water	
25									0.4	No water	No water	
26									0.9	No water	No water	
27									0.85	No water	1.0	
28								2.4	0.7	No water	Frozen	
29								2.4	0.65	No water	Frozen	
30								2.0	No water	No water	Frozen	
31								1.55	No water	No water	Frozen	

ACTUAL GAGINGS AT THIS STATION
1910

No.	Date	Hydrographer	Gage. H. F.	Discharge S. Ft.	Remarks
1	Oct. 1	A. A. Dobson	.55	10.0	Estimated
2	Nov. 25	A. A. Dobson	.48	28.0	Estimated

ESTIMATED MONTHLY DISCHARGE OF PLATTE RIVER AT LESHARA, NEBRASKA.

Month	1911				1912			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					27400	11200	16500	1010000
April					18600	5900	8960	533000
May	a5450	2450	3770	100000	8800	4800	7070	435000
June	2320	1050	1590	94600	7650	2800	4830	287000
July	7150	820	2100	129000	4100	1500	2330	143000
August	4300	1310	2320	143000	10300	5800	8400	516000
September	5750	1650	2260	134000	10600	5450	7930	472000
October	14300	2700	4530	279000				
November	8850	1740	4300	256000				
December	6850	3150	4740	291000				
For the period	14300	820	3150	1430000	27400	1500	8200	3430000

a 13 days. Period 1911, 227 days.

ESTIMATED MONTHLY DISCHARGE OF MIDDLE LOUP RIVER AT ST. PAUL, NEBRASKA.
Drainage Area, 6,849 Square Miles.

Month	1895 Discharge in Second Feet			1895 Total in Acre Ft.	1896 Discharge in Second Feet			1896 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					2430	900	1364	81150
May	a1666	933	1173	62820	1440	890	1154	70940
June	2987	820	1396	83080	a2250	1215	1542	88690
July	1100	614	861	52940	1770	960	1271	78170
August	1343	614	973	59840	1685	722	975	59920
September	1950	614	877	52200	1190	782	993	59060
October	1220	645	840	51650	1478	880	1041	64020
November	b1066	933	974	11570				
December								
For the period	2987	614	1014	374090	2430	722	1188	501960

a 27 days. b 6 days. Period 1895, 186 days. a 29 days. Period 1896, 213 days.

Month	1897 Discharge in Second Feet			1897 Total in Acre Ft.	1899 Discharge in Second Feet			1899 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a1880	1540	1703	33780	a1372	856	1019	26290
May	1490	1055	1274	78358	1518	706	1032	63490
June	2600	860	1037	61700	14000	547	1026	61060
July	1800	600	865	53200	b1920	333	1007	53960
August	755	605	672	41340	2133	964	1207	74200
September	720	585	681	40530	1074	938	1019	60640
October	2800	705	1169	71860	1193	958	1109	68220
November								
December								
For the period	2800	585	990	380810	14000	517	1065	413870

a 10 days. Period 1897, 194 days. a 13 days. b 30 days. Period 1899, 196 days

MIDDLE LOUP RIVER AT ST. PAUL, NEBRASKA—Concluded.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a3150	1160	1787	51130				
May	15600	1250	3531	217130				
June	4950	1340	1938	115340				
July	12000	1106	2030	124820				
August	11500	1000	3365	206920				
September	1670	1160	1330	79140				
October	1820	1000	1234	75870				
November	b1550	845	1059	44120				
December								
For the period	15600	845	2095	914480				

a 15 days. b 21 days. Period 1903, 220 days.

ESTIMATED MONTHLY DISCHARGE OF NORTH LOUP RIVER AT ST. PAUL, NEBRASKA.
Drainage Area, 4,024 Square Miles.

Month	1895 Discharge in Second Feet			1895 Total in Acre Ft.	1896 Discharge in Second Feet			1896 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					3700	779	1304	77580
May	a1962	842	1189	63690	2327	570	1040	63910
June	1962	987	1531	91120	2825	1139	1488	88530
July	1108	437	865	53150	1460	923	1102	67760
August	1787	593	984	60480	1072	835	904	55600
September	3991	648	1094	65080	1016	835	913	54330
October	1953	842	1146	70440	1220	837	958	58910
November	b1857	566	1015	42280				
December								
For the period	3991	437	1119	446230	3707	570	1099	466620

a 27 days. b 21 days. Period 1895, 201 days. Period 1896, 214 days.

Month	1897				1899			
January								
February								
March								
April	a1400	1130	1242	27090	a2925	1130	1710	44090
May	1250	915	1080	66440	1610	867	1141	70190
June	b2550	720	1032	59350	7500	883	1533	91190
July	1890	610	824	50640	2250	701	1034	63590
August	900	570	673	41340	1500	742	1049	64490
September	1100	600	705	41950	1156	793	888	52810
October	c1320	720	979	58240	987	118	884	54380
November								
December								
For the period	2550	570	897	345040	7500	118	1128	440740

a 11 days. b 29 days. c 30 days. Period 1897, 194 days.
a 13 days. Period 1899, 197 days.

NORTH LOUP RIVER AT ST. PAUL, NEBRASKA—Concluded.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a1980	1070	1272	40380				
May	b1980	890	1276	75930				
June	1700	750	1089	64800				
July	c4500	700	1170	67320				
August	4410	810	1631	74400				
September	1180	610	835	49670				
October	1560	700	1000	61490				
November	2270	400	1316	78310				
December								
For the period	4500	400	1298	512300				

ESTIMATED MONTHLY DISCHARGE OF LOUP RIVER AT COLUMBUS, NEBRASKA.

Drainage Area, 13,542 Square Miles.

Month	1895 Discharge in Second Feet			1895 Total in Acre Ft.	1896 Discharge in Second Feet			1896 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	3675	2303	2754	163850	7018	1970	4078	242660
May	4420	2600	2966	182400	4807	2310	2985	183560
June	7190	2337	3591	213700	a8000	1928	3009	167090
July	2849	1446	2122	130480	3670	2310	2712	166780
August	4104	1525	2289	140720	3811	2106	2629	161680
September	4995	1715	2427	144430	2968	2063	2460	146350
October	2690	1913	2450	150620	3613	2287	2732	167970
November	a3643	2562	3011	137370				
December								
For the period	7190	1446	2688	1263570	8000	1928	2939	1236090

a 23 days. Period 1895, 227 days. a 28 days. Period 1896, 212 days.

Month	1897 Discharge in Second Feet			1897 Total in Acre Ft.	1898 Discharge in Second Feet			1898 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a7125	2675	3596	171210	3520	2130	2794	166230
May	2850	1850	2487	152930	5100	2425	3509	215780
June	9550	1800	2893	172120	6675	2000	4026	239550
July	11825	1600	2616	160860	2530	1620	1946	119630
August	3275	1100	1809	111220	4325	1725	2558	157280
September	1700	1000	1427	84940	2950	1460	2008	119210
October	b10400	1600	3422	203610	2900	2025	2477	152290
November					a2900	2450	2669	63520
December								
For the period	11825	1000	2574	1056890	6675	1460	2752	1233490

* a 24 days. b 30 days. Period 1897, 207 days. a 12 days. Period 1898, 226 days.

LOUP RIVER AT COLUMBUS, NEBRASKA—Continued.

Month	1899 Discharge in Second Feet Max.	Min.	Mean	Total in Acre Ft.	1900 Discharge in Second Feet Max.	Min.	Mean	Total in Acre Ft.
January								
February								
March								
April	a5526	2336	3279	188660	4744	2380	3352	199430
May	b4871	1911	3035	150300	10550	2382	3717	228530
June	c7713	1804	3893	77220	14300	2085	3493	207880
July	d6984	596	2104	104310	5380	1980	3265	200760
August	3258	1278	2357	144960	7475	1610	3461	212830
September	2945	1847	2206	131290	7550	2375	3268	194480
October	2524	1315	1914	117660	3700	2900	3225	198310
November					a2975	2300	2679	90340
December								
For the period	7713	596	2520	914600	14300	1610	3345	1532570

a 29 days. b 25 days. c 10 days.
d 25 days. Period 1899, 183 days.

a 17 days.
Period 1900, 231 days.

Month	1901 Discharge in Second Feet Max.	Min.	Mean	Total in Acre Ft.	1902 Discharge in Second Feet Max.	Min.	Mean	Total in Acre Ft.
January								
February								
March	a3134	2621	2871	45560	a4101	2500	3343	159160
April	4681	2573	3254	193650	3206	1976	2409	143370
May	2743	1847	2346	144280	7443	2203	3226	198370
June	7097	1723	3467	206330	5936	2211	3250	193410
July	3048	795	1600	98970	10895	3394	5669	348560
August	2152	964	1377	84670	7685	2463	4767	293120
September	4776	1763	2853	169740	6909	1693	3218	191500
October	2647	1898	2243	137900	4712	2500	3011	185170
November	3367	1743	2335	138960	b2869	2040	2501	143850
December	b2579	2579	2579	5120				
For the period	7097	795	2441	1225170	10895	1693	3488	1856520

a 8 days. b 1 day.
Period 1901, 253 days.

a 24 days. b 29 days.
Period 1902, 267 days.

LOUP RIVER AT COLUMBUS, NEBRASKA—Continued.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	1904 Discharge in Second Feet			1904 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a8250	4090	5550	209320	a5400	3130	3715	140000
April	4740	3400	4027	239650	4300	2740	3343	198900
May	6500	2870	4085	251150	6500	1930	3031	186400
June	6060	2150	3188	189680	20000	2150	4364	259700
July	15750	2040	3942	242400	11750	2150	4266	262300
August	20000	2260	5372	330350	3890	1660	2380	146300
September	3550	2380	2763	164410	4960	1660	2392	142300
October	3710	2380	2796	171950	9750	1660	2941	180800
November	b5340	2620	3664	203570	b2500	1510	1961	101100
December								
For the period	20000	2040	3368	2002220	20000	1510	3155	1618000

a 19 days. b 28 days. Period 1903, 261 days. a 19 days. b 26 days. Period 1904, 259 days.

Month	1905				1906			
January								
February								
March	a6950	3500	5017	149300				
April	11100	3050	5492	326800	a17300	2760	5570	254000
May	19680	5150	8665	532800	29400	1810	4700	289000
June	20000	3725	8117	483000	3900	1710	2400	143000
July	25800	2900	9067	557500	6550	1610	3090	190000
August	19190	5050	6949	427300	11400	1520	3260	201000
September	14600	2400	5637	335400	7120	1610	2720	162000
October	5600	3180	4082	251000	6040	1930	2870	177000
November	5350	2600	4389	261200	4340	2180	3220	186000
December								
For the period	25800	2400	6471	3324000	29400	1520	3400	1600000

a 15 days. Period 1905, 259 days. a 23 days. Period 1906, 237 days.

LOUP RIVER AT COLUMBUS, NEBRASKA--Continued.

Month	1907 Discharge in Second Feet			1907 Total in Acre Ft.	1908 Discharge in Second Feet			1908 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					4800	2000	3070	189000
April	a3770	2300	2880	165000	3640	1550	2590	154000
May	10900	2410	4170	256000	6600	1850	3420	210000
June	8440	1730	3960	236000	17100	1900	6800	405000
July	11800	1860	3820	235000	5400	1800	2980	183000
August	12220	1400	2800	172000	11400	1700	3340	205000
September	5190	2140	2750	164000	2950	1700	1840	109000
October	5900	1500	2650	163000	3850	1750	2250	138000
November	4160	1610	2590	154000	3200	2010	2660	158000
December	b3570	2140	3030	84300				
For the period	12220	1400	3200	1630000	17100	1700	3220	1750000

a 29 days. b 14 days. Period 1907, 257 days. Period 1908, 275 days.

LOUP RIVER AT COLUMBUS, NEBRASKA—Concluded.
Drainage Area, 13,540 Square Miles.

	1911				1912			
January								
February								
March	a3360	2930	3127	124000				
April	b2640	2390	2470	132600	14400	5410	9470	564000
May	c3480	2490	2670	148300	7760	1900	5190	319000
June	d2310	1925	2045	117800	8220	1200	3790	226000
July	e2360	1353	1635	94000	5180	1300	2020	124000
August	f2582	2030	2380	137000	3930	1250	2230	137000
September	g3920	2073	2770	153500	5100	1200	2780	165000
October	3620	2400	2620	160800				
November								
December								
For the period	3920	1353	2481	1068000	14440	5410	4247	1535000

a 20 days. b 27 days. c 28 days. d 29 days. e 29 days. f 29 days. g 28 days.
Period 1911, 221 days Period 1912, 183 days.

LOUP RIVER AT COLUMBUS, NEBRASKA.

1909

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.6			4.45	4.75	4.8	4.55	5.05	4.5	4.65	4.7	
2	4.5			4.35	4.55	4.85	4.55	4.85	4.75	4.65	4.8	4.75
3	4.45			4.4	4.2	4.7	4.65	5.35	4.8	4.65	4.75	4.4
4	4.55		6.35	4.5	4.3	4.8	4.75	5.3	4.9	4.7	4.7	5.8
5			6.3	4.5	4.45	4.8	4.9	4.95	4.85	4.7	4.55	4.0
6			5.55	4.65	4.45	4.7	6.65	4.85	5.8	4.7	4.65	3.8
7	4.45		5.2		4.6	4.85	5.15	4.7	5.05	4.75	4.75	4.65
8			4.8	4.5	4.55		4.8	4.65	4.9	4.8	4.8	4.55
9			4.65	4.55	4.6	4.85		4.6	4.85	4.5	4.6	4.7
10				4.65	4.6	4.75	5.1	4.6	4.85	5.05	4.55	4.85
11			4.6	4.4	4.65	4.85	5.55	4.75	4.75		4.5	4.9
12			4.75	4.35	4.6	4.9	5.6	4.65	4.75	4.75	4.5	4.9
13			4.6	4.45	4.45	4.8	5.1	4.6	4.85	4.75	4.8	4.95
14			4.7	4.4		4.8	4.7	4.8	4.85	4.5	5.0	5.0
15			4.6	4.35	4.9	4.75	4.65	4.9	4.85	4.5		5.0
16			4.5	4.35	4.75	4.75	4.7	5.05	4.7	4.55	5.0	5.7
17	5.75		4.4	4.5	4.85	4.5	4.6	4.8	4.75	4.5	4.8	5.65
18			4.45	4.5	4.7	4.6	4.6	4.7	4.7	4.5	4.45	5.7
19				4.4	4.7	4.5	4.55	4.65	4.65	4.5	4.4	5.2
20			4.55	4.45	4.65	4.5	4.4	4.7	4.6	4.4	4.55	5.2
21	6.2		4.55	4.45	4.7	4.95	4.4	4.6	4.5	4.4	5.2	5.25
22	6.4		4.5	4.55	4.7	4.6	4.4	4.5	4.65	4.4	5.15	5.2
23	6.7		4.5	4.45	4.7	4.75	4.4	4.5	4.7	4.5	4.85	5.15
24	6.5		4.55	4.45	4.65		4.45	4.45	4.75	4.6	4.8	5.1
25	6.3		4.6	4.45	6.35	4.95	4.6	4.45	4.65	4.5	4.8	5.1
26			4.4	4.45	5.5	4.75	4.7	4.45	4.60	4.5	4.8	5.15
27	6.75		5.5	4.5	4.9	4.65	4.9	4.45	4.60	4.5	4.75	Ice
28			4.35	4.55	4.8	4.55	4.7	4.5	4.60	4.6	4.65	Ice
29			4.45	4.45	4.85	4.65	4.65	4.6	4.60	4.6		Ice
30			4.45	4.9	4.55	4.5	4.65	4.6	4.60	4.6	4.65	Ice
31			4.45		4.9		4.7	4.5		4.7		Ice

ACTUAL GUAGINGS AT THIS STATION.

No.	Date	Hydrographer	Gage. H. F.	Discharge S. Ft.	Remarks
1	Nov. 13	Geo. W. Bates	4.60	3338	
2	Nov. 20	A. A. Dobson	4.55	2795	
3	Apr. 13	A. A. Dobson	4.55	3008	
4	May 8	A. A. Dobson	4.68	2368	
5	July 8	A. A. Dobson	4.79	6643	
6	Aug. 31	A. A. Dobson	4.55	1851	
7	Oct. 22	A. A. Dobson	4.57	2664	
8	Nov. 5	A. A. Dobson	4.77	3294	

LOUP RIVER AT COLUMBUS, NEBRASKA.

1910

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				4.3	4.3	4.5	4.55	4.35	5.55	4.4	4.55	4.2
2				4.3	4.5	4.5	4.55	4.4	4.1	4.3	4.6	4.3
3				4.3	4.9	4.5	4.6	4.4	4.3	4.55	4.5	4.4
4				4.4	4.9	4.5	4.6	4.4	4.3	4.55	4.3	4.3
5				4.5	.....	4.5	4.75	4.45	4.25	4.5	4.1	Froze
6				4.5	.....	4.6	4.55	4.45	4.2	4.5	4.25	Froze
7				4.6	.....	4.75	4.85	4.5	4.2	.....	4.1	Froze
8				.....	.....	4.85	5.0	4.6	4.1	4.45	4.2	Froze
9				.....	.....	5.25	4.6	4.5	4.1	4.0	4.2	Froze
10				4.5	4.5	5.3	4.5	4.5	4.1	4.45	4.25	Froze
11				4.6	4.5	4.95	4.45	4.65	4.1	4.45	4.3	Froze
12			4.6	4.6	4.5	4.8	4.4	4.65	4.1	4.45	4.25	Froze
13			4.4	4.6	4.6	4.7	4.5	4.9	4.15	4.45	4.2	Froze
14			4.3	4.7	4.6	4.5	4.4	5.65	4.2	4.45	4.25	Froze
15			4.3	4.8	4.5	4.3	4.4	5.1	4.2	4.45	4.2	Froze
16			4.4	4.8	4.5	4.3	4.4	5.3	4.3	4.5	4.15	Froze
17			4.3	4.7	4.6	.....	4.4	5.4	4.25	4.55	4.1	Froze
18			4.2	4.6	4.6	4.4	4.35	5.65	4.55	4.6	4.2	Froze
19			4.3	4.4	4.6	4.4	4.35	5.2	4.3	4.6	4.4	.....
20			4.3	4.4	4.5	4.4	4.35	4.75	4.3	4.55	4.4	Froze
21			4.3	4.4	4.6	4.4	4.35	4.4	.....	.....	4.4	Froze
22			4.3	4.4	4.6	4.35	4.3	4.3	4.35	4.5	4.4	Froze
23			4.4	4.4	4.7	4.3	4.4	4.25	4.4	4.3	4.3	Froze
24			4.3	4.4	4.7	4.3	4.45	4.2	4.5	4.3	4.3	Froze
25			4.3	4.4	4.6	4.5	4.5	4.1	4.5	4.3	4.3	Froze
26			4.4	4.4	4.4	5.3	4.45	4.1	4.55	4.4	4.3	Froze
27			4.4	4.4	4.5	5.5	4.4	4.05	4.6	4.5	4.3	Froze
28			4.4	4.5	4.6	4.8	4.35	4.1	4.55	4.55	4.4	Froze
29			4.5	4.5	4.8	4.5	4.25	6.0	4.5	4.7	4.3	Froze
30			4.4	4.5	4.6	4.5	4.25	5.4	4.4	4.6	4.2	Froze
31			4.3	.....	4.5	.....	4.25	5.55	.....	4.6	.....	Froze

ACTUAL GUAGINGS AT THIS STATION.

No.	Date	Hydrographer	Gage. H. F.	Discharge S. Ft.	Remarks
1	Apr. 20	D. D. Price	4.4	2278	
2	May 10	D. D. Price	4.6	3188	
3	May 25	D. D. Price	4.5	2531	
4	June 24	D. D. Price	4.2	1780	
5	July 25	A. A. Dobson	4.54	2164	
6	Aug. 31	D. D. Price	4.4	3592	
7	Oct. 1	A. A. Dobson	4.45	2119	
8	Nov. 19	A. A. Dobson	4.39	2230	
9	Nov. 25	A. A. Dobson	4.28	2418	

NOTE:—The shiftiing of the river channel at this point renders any interpolated discharges from the daily gage heights absolutely worthless as the comparative gage heights and discharges on the above gagings will show.

a 16 days. b 30 days. c 29 days. Period 1903, 199 days.

ESTIMATED MONTHLY DISCHARGE OF ELKHORN RIVER AT NORFOLK, NEBRASKA.

Drainage Area, 2,474 Square Miles.

Month	1896 Discharge in Second Feet			1896 Total in Acre Ft.	1897 Discharge in Second Feet			1897 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April								
May					940	320	533	32800
June					370	255	302	17950
July	a321	172	206	6530	330	180	244	15030
August	570	162	210	12910	275	150	206	12660
September	186	155	173	10300	190	115	158	9410
October	298	182	210	12940	295	140	209	12830
November	b313	298	305	2420				
December								
For the period	570	155	203	45100	940	115	276	100680

a 16 days. b 4 days. Period 1896, 112 days. Period 1897, 184 days.

Month	1898 Discharge in Second Feet			1898 Total in Acre Ft.	1899 Discharge in Second Feet			1899 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	500	405	464	27620	a553	427	503	23930
May	1470	405	704	43260	1750	374	745	45830
June	c1380	475	776	32310	2200	296	550	32700
July	435	200	317	19490	820	246	376	23130
August	440	210	285	17510	334	161	254	15610
September	245	160	196	11660	203	80	168	10000
October	a280	185	236	13560	237	180	217	13320
November	b335	280	303	11420				
December								
For the period	1470	160	402	176830	2200	80	400	164530

a 29 days. b 19 days. c 21 days. Period 1898, 222 days.

a 24 days. Period 1899, 208 days.

ELKHORN RIVER AT NORFOLK, NEBRASKA—Concluded.

Month	1900				1901			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	1570	318	586	34840	933	431	647	38530
May	2400	360	721	44330	767	306	489	30080
June	513	220	316	18800	3438	270	1270	75560
July	294	145	223	13720	2003	215	765	47070
August	310	110	203	12460	231	149	172	10600
September	290	180	220	13110	362	142	266	15810
October	425	195	265	16310	342	308	323	19840
November	a380	337	357	12030	357	319	334	19920
December								
For the period	2400	110	361	165600	3438	142	532	257410

a 17 days. Period 1900, 231 days. Period 1901, 244 days.

Month	1902				1903			
January								
February								
March	a644	544	591	21100	a4500	1570	2707	123510
April	1028	444	650	38710	1500	430	855	50920
May	773	457	616	37900	8000	810	1610	99000
June	840	259	490	29160	3860	720	1998	118870
July	1462	287	710	43640	5000	440	1007	61980
August	729	263	354	21790	1920	940	1177	72430
September	2750	319	642	38220	1010	210	539	32070
October	2597	668	1265	77760	710	180	248	15240
November	b701	362	483	22010	b280	180	217	6890
December								
For the period	2750	259	653	330300	8000	180	1157	580810

a 18 days. Period 1902, 255 days. a 23 days.
b 23 days. Period 1903, 253 days. b 16 days.

ESTIMATED MONTHLY DISCHARGE OF ELKHORN RIVER AT ARLINGTON, NEBRASKA.
Drainage Area, 5,980 Square Miles.

Month	1899 Discharge in Second Feet			1899 Total in Acre Ft.	1900 Discharge in Second Feet			1900 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a804	789	796	4740	1811	484	742	44180
May	b2480	793	1567	37300	2283	662	1166	71680
June	4315	1013	1701	101190	927	390	610	36300
July	1443	538	871	53540	1293	325	562	34530
August	811	384	563	34640	1250	322	627	38580
September	392	288	329	19380	4160	426	1331	79180
October	437	284	361	22220	3656	470	824	50650
November					a2000	590	1038	49440
December								
For the period	4315	284	820	268260	4160	322	857	404540

a 3 days. b 12 days. Period 1899, 165 days. a 24 days. Period 1900, 238 days.

Month	1901 Discharge in Second Feet			1901 Total in Acre Ft.	1902 Discharge in Second Feet			1902 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					a2029	771	1251	52110
April	1335	833	1065	63350	1342	731	974	57990
May	2133	613	1137	69910	1640	718	931	57260
June	4745	541	1869	111210	1280	465	781	46470
July	3825	544	1372	84390	9568	585	3633	223370
August	533	317	422	25960	3114	471	1453	89370
September	745	311	514	30580	1846	530	1001	59550
October	679	544	599	36830	3199	1161	2034	125070
November	726	537	627	37290	1463	804	1051	62540
December								
For the period	4745	311	950	459520	9568	465	1471	778730

Period 1901, 244 days. a 21 days. Period 1902, 265 days.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a4800	3890	4253	59020				
April	3510	1064	1936	115220				
May	b7665	1410	3984	237660				
June	8510	1945	4302	257080				
July	4650	1178	2516	154710				
August	b8670	1290	3567	212230				
September	7565	1380	3025	193400				
October	2515	1320	1884	115850				
November	c1945	613	1399	58270				
December								
For the period	8670	613	2876	1403460				

a 7 days. b 30 days c 21 days. Period 1903, 246 days.

ESTIMATED MONTHLY DISCHARGE OF ELKHORN RIVER AT WATERLOO, NEBRASKA.

Month	1911				1912			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April					a4100	2440	3160	107000
May	a1600	860	1260	32500	2090	860	1430	87900
June	3670	545	1060	63100	2490	790	1210	72000
July	3420	380	908	55800	1030	580	698	42900
August	960	350	533	32800	1890	565	931	57200
September	438	292	344	20500	720	420	588	35000
October	1560	480	935	57500				
November	1360	930	1170	69600				
December	1540	740	1000	61500				
For the period	3670	292	900	393000	4100	420	1336	402000

ESTIMATED MONTHLY DISCHARGE NIOBRARA RIVER, VALENTINE, NEBR.

Drainage Area, 6,070 Square Miles.

Month	1902 Discharge in Second Feet			1902 Total in Acre Ft.	1903 Discharge in Second Feet			1903 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					a1525	505	998	27720
February					1860	525	1357	83470
March	a1630	615	1169	51020	1425	750	979	58260
April	1155	700	896	53330	1075	700	794	48800
May	1240	615	802	49310	805	615	692	41170
June	1740	580	740	44030	7000	550	912	56100
July	4260	510	808	49720	6800	525	843	51820
August	865	525	653	40170	700	580	638	37960
September	800	550	649	38640	750	580	685	42090
October	805	655	746	45900	b865	615	724	33040
November	930	700	807	48010	c1000	525	722	43000
December	b805	505	694	8260				
For the period	4260	505	794	428390	7000	505	846	523410

a 22 days. b 6 days. Period 1902, 272 days.

a 14 days. b 23 days. c 30 days. Period 1903, 312 days.

Month	1904 Discharge in Second Feet			1904 Total in Acre Ft.	1905 Discharge in Second Feet			1905 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February	805	600	640	33550				
March	1000	600	692	42550	a1150	820	945	50610
April	750	615	674	40110	1150	710	883	52540
May	865	655	706	43410	1740	675	890	54720
June	2115	615	835	49690	2300	680	1010	60100
July	1330	615	675	41510	3420	900	1402	86200
August	700	580	644	39600	1375	700	902	55460
September	805	580	627	37310	840	700	760	45220
October	865	615	760	46730	855	705	774	47590
November	865	750	800	47610	1030	575	866	51530
December								
For the period	2115	580	705	422070	3420	575	924	503970

Period 1904, 301 days.

a 27 days. Period 1905, 275 days.

ESTIMATED MONTHLY DISCHARGE OF NIOBRARA RIVER AT VALENTINE, NEBRASKA.

Month	1906 Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January	1750	705	1040	64000				
February	1180	595	898	49900				
March	1950	390	994	61100				
April	1710	900	1070	63700				
May	1300	620	843	51800				
June	815	575	662	39400				
July	820	573	633	38900				
August	915	595	722	44400				
September	910	607	678	40300				
October	1160	573	760	46700				
November	1040	607	859	51100				
December								
For the period	1950	573	834	551000				

Period 1906, 334 days.

ESTIMATED MONTHLY DISCHARGE OF NIOBRARA RIVER AT NIOBRARA, NEBRASKA.

Drainage Area, 6,300 Square Miles.

Month	1911				1912			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	2290	1145	1560	89830	4300	1600	2680	159000
May	2510	1675	2015	123900	2950	980	1900	117000
June	1305	816	1229	75500	2510	1600	1970	117000
July	1225	900	1034	63500	2500	1030	1870	115000
August	1310	1060	1150	70750	3200	1430	2040	125000
September	1355	1015	1184	70500	3210	1630	2270	135000
October	1775	747	1280	78750				
November								
December								
For the period	2510	816	1350	572750				768000

Period 1911, 215 days.

ESTIMATED DISCHARGE OF LITTLE BLUE RIVER AT FAIRBURY, NEBRASKA.
Drainage Area, 2,660 Square Miles.

Month	1908 Discharge in Second Feet			1908 Total in Acre Ft.	1909 Discharge in Second Feet			1909 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					190	150	183	113000
February					330	180	213	11800
March					225	180	197	12100
April					190	170	180	10700
May	a6690	200	1430	25500	2140	160	354	21800
June	21100	412	6560	390000	9550	100	1180	70200
July	8310	425	1870	115000	8200	200	1350	83000
August	13340	230	1460	90000	425	150	204	12500
September	400	185	235	14000	3650	150	656	39000
October	200	180	190	11700	350	170	209	12900
November	189	171	179	10600	2390	170	498	29600
December					2390	255	477	29300
For the period	21100	171	1720	657000	9550	100	479	344000

a 9 days. Period 1908, 192 days. Period 1909, full year.

Month	1910 Discharge in Second Feet			1910 Total in Acre Ft.	1911 Discharge in Second Feet			1911 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					250	125	167	10300
February	580	260	361	20000	195	130	150	8330
March	440	205	267	16400	220	125	144	8850
April	210	150	187	11100	680	125	156	9280
May	5050	160	412	25300	450	115	147	9040
June	6300	160	710	42200	135	70	112	6660
July	440	160	225	13800	2670	80	272	16700
August	2600	150	378	23200	3110	190	643	39500
September	1780	130	264	15700	470	220	262	15600
October					3340	170	347	21300
November					215	150	187	11100
December					230	180	194	11900
For the period	6300	130	351	167700	3340	70	233	169000

Period 1911, 365 days.

LITTLE BLUE RIVER AT FAIRBURY, NEBRASKA—Continued.

1912								
Month	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February 12-29	1980	390	865	30900				
March	5460	325	1930	119000				
April	1920	415	711	42300				
May	1020	325	492	30800				
June	1800	215	416	24800				
July	215	130	159	9780				
August	2100	135	493	30300				
September	580	180	222	13200				
October								
November								
December								
For the period				301000				

ESTIMATED MONTHLY DISCHARGE OF BLUE RIVER AT BEATRICE, NEBRASKA.

Month	1911				1912			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January	450	325	325	20000				
February	780	290	415	23000	a		3760	77600
March	405	290	332	18800	b		11600	437000
April	550	260	316	18800	c		2070	111000
May	550	260	375	23100	1390	340	629	38700
June	500	175	250	14900	920	250	380	22600
July	22400	150	1830	113000	340	95	240	14800
August	990	325	560	34400	4160	230	710	43700
September	1300	290	569	33900	305	95	230	13700
October	3460	230	736	45300				
November	350	230	294	17500				
December	405	230	331	20400				
For the period	22400	150	531	385000	4160	95	2453	759000

Period 1911, 365 days. a 10 days. b 19 days. c 27 days. Period 1912, 209 days.

ESTIMATED MONTHLY DISCHARGE OF SOUTH FORK REPUBLICAN RIVER AT BENKELMAN, NEBRASKA.
Drainage Area, 5,910 Square Miles.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	1904 Discharge in Second Feet			1904 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					102	31	60	3695
April					66	6	21	1256
May	a57	36	48	1142	255	47	92	5682
June	65	7	37	2202	397	47	132	7855
July	36	7	15	922	115	5	39	2416
August	79	7	25	1537	89	11	24	1476
September	b22	7	15	655	47	5	13	774
October	50	22	39	2398	115	31	57	3536
November	c65	50	57	2261	66	47	59	3534
December								
the period	79	7	32	11117	397	5	55	30220

a 12 days. b 22 days. c 20 days. Period 1903, 177 days. Period 1904, 275 days.

Month	1905 Discharge in Second Feet			1905 Total in Acre Ft.	1906 Discharge in Second Feet			1906 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a249	96	159	4730				
April	300	52	141	8390	317	73	129	7680
May	137	52	100	6149	215	52	99.3	6110
June	283	21	68	4046	52	0	9.0	537
July	152	5	35	2152	183	0	10.9	670
August	b96	21	47	1212	0	0	0	0
September					0	0	0	0
October					61	0	21.8	1340
November					61	36	48.0	2860
December								
For the period	300	5	90	26681	317	0	50	19200

a 15 days. b 13 days. Period 1905, 150 days. Period 1906, 244 days.

ESTIMATED MONTHLY DISCHARGE OF THE REPUBLICAN RIVER AT BENKELMAN, NEBRASKA.
Drainage Area, 3,965 Square Miles.

Month	1903 Discharge in Second Feet			1903 Total in Acre Ft.	1904 Discharge in Second Feet			1904 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					111	46	89	5478
April					124	30	64	3862
May	a71	47	58	1380	99	23	53	3314
June	81	43	59	3511	227	46	91	5427
July	112	19	39	2398	211	5	40	2490
August	61	26	32	1968	165	10	29	1802
September	47	19	39	2321	46	0	14	887
October	54	43	49	3013	195	30	61	3709
November	b64	50	56	2222	87	55	64	3844
December								
For the period	112	19	46	16813	227	0	57	30870

a 12 days. b 20 days. Period 1903, 185 days. Period 1904, 275 days.

Month	1905 Discharge in Second Feet			1905 Total in Acre Ft.	1906 Discharge in Second Feet			1906 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	a237	93	151	3890				
April	328	142	183	10900	398	88	135	8030
May	182	97	129	7930	295	59	108	6640
June	118	27	66	3920	263	10	48	2880
July	310	27	74	4540	128	0	25	1520
August	110	3	50	3110	62	2	31	1880
September	105	8	62	3660	108	17	40	2370
October	195	50	87	5340	122	47	83	5120
November					180	117	147	8750
December								
For the period	328	3	96	43300	3987	0	77	37200

a 13 days. Period 1905, 227 days. Period 1906, 244 days.

*ESTIMATED MONTHLY DISCHARGE OF THE REPUBLICAN RIVER AT SUPERIOR AND BOSTWICK, NEBRASKA.

Drainage Area, 22,347 Square Miles.

Month	1896				1897			
	Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					900	555	716	43655
February					1520	420	906	50316
March					650	385	510	31359
April					2870	620	1244	74023
May	1130	180	418	25703	1030	180	420	25825
June	a1052	441	628	13716	a750	180	359	17802
July	b4850	374	1179	70160	4310	119	922	56690
August	1816	228	660	40585	1460	94	259	15924
September	c423	197	279	16050	241	0	71	4225
October	415	191	231	14204				
November	1137	282	449	26720				
December								
For the period	4850	180	538	207138	4310	0	602	319813

a 11 days. b 30 days. c 29 days. Period 1896, 194 days.
a 25 days. Period 1897, 268 days.

Month	1898				1899			
January								
February								
March					a956	601	706	18250
April	a2130	490	755	16490	842	375	578	34393
May	1870	500	1053	64747	1800	292	511	31420
June	2030	560	1235	73487	4036	141	531	31597
July	1345	220	479	29453	1384	209	458	28162
August	380	100	195	11990	868	136	303	18631
September	470	185	289	17197	102	6	50	2975
October	365	145	264	16233	101	24	53	3259
November	b470	320	382	14395				
December								
For the period	2130	100	574	243992	4036	6	375	168687

a 11 days. b 9 days. Period 1898, 214 days. a 13 days. Period 1899, 227 days.
*1896-1902, gagings made at Superior.

*REPUBLICAN RIVER AT SUPERIOR AND BOSTWICK, NEBRASKA—Continued.

Month	1900 Discharge in Second Feet Max.	Min.	Mean	1900 Total in Acre Ft.	1901 Discharge in Second Feet Max.	Min.	Mean	1901 Total in Acre Ft.
January								
February								
March								
April	1671	565	909	54090	1507	637	961	57163
May	2945	320	735	45200	622	146	363	22331
June	674	250	392	23330	480	117	219	13031
July	349	67	159	9779	154	5	42	2618
August	a1278	24	178	5650	856	5	70	4304
September					4941	10	1245	74112
October					1490	285	443	27239
November					1030	312	419	24932
December								
For the period					4941	5	470	225810

a 16 days. Period 1901, 244 days.

Month	1902 Discharge in Second Feet Max.	Min.	Mean	1902 Total in Acre Ft.	1903 Discharge in Second Feet Max.	Min.	Mean	1903 Total in Acre Ft.
January								
February								
March	a920	330	644	29380	a7750	1260	2692	96111
April	740	445	555	33028	1260	705	918	54635
May	3115	335	1269	78035	14100	845	4491	276141
June	3235	320	1339	79680	6455	835	1921	114307
July	b12490	970	3422	183250	7825	465	1948	119778
August	1920	330	674	41490	3285	520	1230	75630
September	10875	155	1175	69920	700	270	389	23147
October	1995	520	937	57620	390	245	326	20045
November	970	460	622	37010	690	130	417	24813
December								
For the period	12490	155	1168	609413	14100	130	1549	804607

a 23 days. b 27 days. Period 1902, 263 days. a 18 days. Period 1903, 262 days.

*1896-1902, gagings made at Superior.

REPUBLICAN RIVER AT SUPERIOR AND BOSTWICK, NEBRASKA—Continued.

Month	1904 Discharge in Second Feet			1904 Total in Acre Ft.	1905 Discharge in Second Feet			1905 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March					a1210	930	1082	21460
April					1870	760	1060	63070
May					7130	975	1927	118500
June	a4630	400	1666	82610	7015	975	2949	175500
July	7480	367	1658	101900	24500	1315	5734	352600
August	1020	245	472	29020	11060	630	3082	189500
September	335	60	181	10770	1090	500	725	43140
October	1115	275	514	31600	595	410	479	29450
November	570	465	523	31120				
December								
For the period	7480	60	813	287000	24500	410	2234	993220

a 25 days. Period 1904, 178 days. a 10 days. Period 1905, 224 days.
*1896-1902, gagings made at Superior.

Month	1906 Discharge in Second Feet			1906 Total in Acre Ft.	1907 Discharge in Second Feet			1907 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March								
April	a1690	480	673	32000	a480	380	429	24700
May	5130	750	1610	99000	1700	260	531	32700
June	750	260	466	27700	2290	380	704	41900
July	b2140	210	736	35000	1330	180	439	27000
August	1500	260	553	34000	200	0	125	7700
September	460	150	253	15100	180	60	98	5350
October	790	170	371	22100	320	85	138	8470
November	630	525	610	36300	380	165	235	1400
December					b380	320	352	9780
For the period	5130	150	660	301000	2290	0	319	172600

a 24 days. Period 1906, 230 days.
b 24 days.

a 29 days. Period 1907, 257 days.
b 14 days.

REPUBLICAN RIVER AT SUPERIOR AND BOSTWICK, NEBRASKA—Concluded.

Month	1908 Discharge in Second Feet			1908 Total in Acre Ft.	1909 Discharge in Second Feet			1909 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February								
March	725	450	520	31900	a930	660	755	37400
April	480	255	360	21400	b640	280	444	23800
May	1310	255	423	26000	2740	270	555	34100
June	7700	280	1760	104500	4300	550	1680	100000
July	4470	400	955	58800	4410	295	1250	76900
August	4570	185	930	57100	940	65	238	14600
September	615	110	233	13900	5480	65	690	41100
October	4320	120	559	34400	270	160	201	12400
November	685	430	512	30500	720	230	358	21300
December					605	500	557	5440
For the period	7700	110	695	378000	5480	65	759	367040

Period 1908, 275 days. a 24 days. b 27 days. Period 1909, 265 days.

Month	1910 Discharge in Second Feet			1910 Total in Acre Ft.	1911 Discharge in Second Feet			1911 Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January					a940	470	300	18400
February					720	290	459	25500
March	680	400	527	22000	1930	240	463	28500
April	400	325	359	21400	550	160	273	16200
May	600	275	388	23900	550	200	285	17500
June	660	125	264	15700	470	70	150	8930
July	325	60	116	7130	4100	25	1080	66400
August	5430	50	1120	68900	17600	550	5850	360000
September	2810	160	496	29500	3900	320	708	42100
October					2210	250	424	26100
November					320	250	299	17800
December					240	280	250	15400
For the period	5430	50	468	188530	17600	25	888	643000

a 28 days. Period 1911, 362 days.

REPUBLICAN RIVER AT BOSTWICK, NEBRASKA—Continued.

Month	1912 Discharge in Second Feet			Total in Acre Ft.	Discharge in Second Feet			Total in Acre Ft.
	Max.	Min.	Mean		Max.	Min.	Mean	
January								
February 18-29	2240	890	1470	35000				
March	8700	2420	5140	316000				
April	4400	790	1620	96400				
May	2340	420	940	57800				
June	2050	35	421	25100				
July	1260	90	271	16700				
August	3950	325	1250	76900				
September	560	240	320	19000				
October								
November								
December								
For the period				643000				

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The following table gives a list of discharge measurements of various streams made at points other than regular gaging stations.

We have endeavored to procure measurements of the flow of streams of the state as far as possible, particularly the streams used for irrigation or power.

A large number of these measurements have been given in former reports, but it is thought best to reproduce them here with the addition of such measurements as have been made since the last published report.

SUMMARY OF ALL STREAM MEASUREMENTS

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Ash Creek, E. Branch	Half mile above mouth	E. T. Youngfelt	June 25, 1896	1.09	Tributary White river
Ash Creek, E. Branch	Head of Tomlin D. 30-32-50	C. B. Channel	May 15, 1899	3.35	Tributary White river
Ash Creek, E. Branch	Head of Sheldon D. 33-32-50	A. B. McCoskey	Aug. 18, 1899	0.33	Tributary White river
Ash Creek, E. Branch	Quarter mile above fork	T. J. O'Keefe	June 22, 1900	0.25	Tributary White river
Ash Creek, E. Branch	Head Tomlin D. 31-32-50	A. B. McCoskey	July 17, 1900	.38	Tributary White river
Ash Creek, E. Branch	Quarter mile above fork	T. J. O'Keefe	Aug. 20, 1900	Dry	Tributary White river
Ash Creek, W. Branch	N. line sec. 25-32-51	E. T. Youngfelt	June 25, 1896	1.73	Tributary White river
Ash Creek, W. Branch	Woodward's 25-32-51	C. B. Channel	May 15, 1899	0.19	Tributary White river
Ash Creek, W. Branch	Head of Mace D. 2-32-51	A. B. McCoskey	Aug. 18, 1896	0.96	Tributary White river
Ash Creek, W. Branch	Quarter mile above fork	T. J. O'Keefe	June 22, 1900	0.14	Tributary White river
Ash Creek, W. Branch	Ab. Broadhurst Dam 35-32-51	A. B. McCoskey	July 17, 1900	0.97	Tributary White river
Ash Creek	Sec. 12-32-51	A. B. McCoskey	Sept. 21, 1898	0.51	Tributary White river
Ash Creek	At Cripps 13-32-51	C. B. Channel	May 15, 1899	0.50	Tributary White river
Ash Creek	At mouth	C. B. Channel	May 15, 1899	.76	
Ash Creek	Sec. 12-32-51	G. W. Bates	June 10, 1908	15.	Flood
Ash Creek	Sec. 12-32-51	G. W. Bates	June 14, 1908	47.8	Tributary White river
Ash Creek	Above Spraggs' Dam 10-31-17	C. B. Channel	June 20, 1898	2.19	Tributary Niobrara river
Antelope Creek	Section 12-32-40	A. B. McCoskey	June 2, 1898	3.1	Tributary Niobrara river
Baker Creek	North line sec. 19-31-13	C. B. Channel	June 19, 1899	0.35	Tributary Niobrara river
Bazile creek	Niobrara	G. W. Bates	May 16, 1908	97.0	Tributary Niobrara river
Bazile creek	Creighton	Arthur Dobson	Sept. 10, 1908	6.3	Tributary Niobrara river
Beaver creek	Genoa	O. V. P. Stout	Sept. 7, 1894	71.	Tributary Loup river

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Beaver creek	Genoa	W. J. McEathron	Aug. 14, 1896	112.2	Tributary Loup river
Beaver creek	Genoa	O. V. P. Stout	June 21, 1898	149.7	Tributary Loup river
Beaver creek	Genoa	O. V. P. Stout	Aug. 8, 1900	50.18	Tributary Loup river
Beaver creek	Albion	O. V. P. Stout	July 21, 1896	47.4	Tributary Loup river
Beaver creek	Albion	Glen E. Smith	April 23, 1898	88.6	Tributary Loup river
Beaver creek	Below division Gt. E. Can	O. V. P. Stout	Aug. 8, 1900	7.21	Tributary Loup river
Beaver creek	Genoa	O. V. P. Stout	July 12, 1901	74.7	Tributary Loup river
Beaver creek	Genoa	O. V. P. Stout	July 30, 1901	85.5	Tributary Loup river
Beaver creek	Albion	B. E. Forbes	Dec. 3, 1901	92.3	Tributary Loup river
Beaver creek	Sec. 20-44-46	C. B. Channel	May 22, 1899	8.97	Tributary White river
Beaver creek	Sec. 4-33-46	G. W. Bates	July 3, 1905	1.65	Tributary White river
Beaver creek	Sec. 34-35-47	G. W. Bates	July 8, 1908	1.45	Tributary White river
Beaver or Mud	Ravenna	J. C. Stevens	Mar. 11, 1903	984.0	
Beaver in Holt	Sec. 19-32-16	G. W. Bates	April 27, 1905	20.0	About twice normal
Birdwood creek		U. S. Geol. Sur		126.	Tributary No. Platte river
Birdwood creek	Below Bratt's Ditch	O. V. P. Stout	Sept. 9, 1896	133.	Bratt's D. diverting
Birdwood creek	Ab. Beauchamp's D. 15-15-33	C. B. Channel	May 7, 1898	123.32	
Birdwood creek	One mile above mouth	H. H. Pickens	May 25, 1899	183.47	
Birdwood creek	Sec. 35-15-33	H. O. Smith	Aug. 29, 1901	183.	
Birdwood creek	Sec. 15-15-33	H. O. Smith	Oct. 30, 1901	170.4	
Birdwood creek	Below E. Birdwood D.	H. O. Smith	Sept. 23, 1903	147.93	
Birdwood creek	East Birdwood Ditch	H. O. Smith	Sept. 23, 1903	14.46	
Blue creek		U. S. Geol. Sur		105.	Tributary No. Platte river
Blue creek	N. E. ¼ of Sec. 30-16-42	Adna Dobson	Mar. 28, 1897	115.	
Blue creek	Sec. 33-17-42	A. B. McCoskey	Aug. 31, 1898	80.6	
Blue creek	S. line Sec. 18-27-42	H. H. Pickens	May 22, 1899	90.12	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Blue creek	Above Graff Dam, 19-16-42	E. D. Johnson	July 26, 1900	27.39	
Blue creek	Sec. 6-16-42	H. O. Smith	July 17, 1902	90.0	
Blue creek	Sec. 19-16-42	H. O. Smith	Aug. 18, 1902	50.0	
Blue creek	S. line Sec. 18-16-42	H. O. Smith	Aug. 31, 1904	26.25	
Blue creek	2nd bridge from mouth	R. H. Willis	Aug. 14, 1910	23.1	
Blue creek	Near mouth	R. H. Willis	Sept. 3, 1910	57.36	
Blue river	Beatrice	O. V. P. Stout	Aug. 21, 1897	203.00	
Blue river	Beatrice	O. V. P. Stout	July 4, 1898	285.	
Blue river	Seward	O. V. P. Stout	July 1, 1898	42.7	Below dam. Mill not running
Blue river	Milford	O. V. P. Stout	July 1, 1898	53.4	Below mill
Blue river	Crete	O. V. P. Stout	July 2, 1898	126.6	Below mill
Blue river	DeWitt	O. V. P. Stout	July 2, 1898	202.	1000 feet below mill
Blue river	DeWitt	O. V. P. Stout	June 7, 1900	235.	
Blue river	Blue Springs	O. V. P. Stout	June 7, 1900	250.	
Blue river	Wilber	O. V. P. Stout	June 7, 1900	189.8	
Blue river	Wymore	O. V. P. Stout	July 12, 1901	235.	
Blue river	Seward	J. C. Stevens	April 5, 1902	50.0	
Blue river	Crete	J. C. Stevens	April 18, 1902	143.0	
Blue river	Crete	J. C. Stevens	April 18, 1902	132.	
Blue river	Wymore	J. C. Stevens	June 4, 1904	664.	
Blue river	Wymore	J. C. Stevens	June 28, 1904	453.	
Blue river	Oak	Jas. A. Green	July 14, 1904	517.1	
Blue river	Beatrice	Arthur Dobson	Jan. 18, 1908	291.9	
Blue river	Beatrice	Arthur Dobson	Feb. 29, 1908	705.	
Blue river	Beatrice	Adna Dobson	April 25, 1908	305.0	
Blue river	Beatrice	Arthur Dobson	May 19, 1908	383.1	
Blue river	Beatrice	Arthur Dobson	June 25, 1908	12220.0	
Blue river	Beatrice	Arthur Dobson	June 23, 1908	3698.4	
Blue river	Beatrice	Arthur Dobson	July 25, 1908	990.0	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Blue river	Beatrice	Arthur Dobson	Sept. 16, 1908	307.0	
Blue river	Beatrice	Arthur Dobson	Oct. 23, 1908	470.0	
Blue river	Wilber	Arthur Dobson	Sept. 16, 1908	288.0	
Blue river	Crete	Arthur Dobson	Sept. 17, 1908	300.	In mill race
Blue river	Beatrice	Arthur Dobson	Nov. 28, 1908	378.	
Blue river	Beatrice	Arthur Dobson	Dec. 30, 1908	376.	
Blue river, big	Beatrice	D. D. Price	July 8, 1910	321.	
Blue river, big	Beatrice	A. A. Dobson	July 13, 1910	359.	
Blue river, big	Beatrice	A. A. Dobson	Aug. 13, 1910	303.	
Blue river, big	Beatrice	A. A. Dobson	Sep. 22, 1910	400.	
Blue river, big	Beatrice	A. A. Dobson	Oct. 29, 1910	328.	
Blue river, big	Beatrice	A. A. Dobson	Nov. 11, 1910	405.	
Blue river, little	Ayr, Neb	O. V. P. Stout	Aug. 23, 1900	1.71	
Blue river, little	W. line 18-5.10	O. V. P. Stout	Aug. 23, 1900	1.58	
Boardman creek	Two miles above mouth		July 24, 1897	Est. 1.	
Boardman creek	Sec. 6-29-33	A. B. McCoskey	May 20, 1898	Est. 40.	
Boardman creek	Beckley's 13-30-31	C. B. Channel	June 3, 1898	16.4	
Boardman creek	Secs. 1 and 2-30-31	J. C. Stevens	Aug. 16, 1904	7.3	
Boggy creek	L. between secs. 17 and 18-32-54	A. B. McCoskey	July 8, 1897	.15	Tributary Hat creek
Boggy creek	N. line sec. 31-33-54	A. B. McCoskey	July 8, 1897	.35	
Boggy creek	N. line sec. 31-33-54	A. B. McCoskey	May 24, 1899	.05	
Bone creek	Ainsworth	C. B. Channel	June 12, 1898	3.72	
Bone creek	At Strenger's 16-31-21	C. B. Channel	June 17, 1899	12.46	
Bordeaux creek, big	Sec. 25-33-48	A. B. McCoskey	Sept. 22, 1898	1.9	
Bordeaux creek, big	Sec. 23-33-48	G. W. Bates	June 25, 1908	5.97	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Bordeaux creek, big	Sec. 11-32-48	G. W. Bates	June 30, 1908	0.19	Docket No. 4.94 using 0.08
Bordeaux creek, big	Sec. 21.34-48	G. W. Bates	July 17, 1908	6.77	
Bordeaux creek, little	Sec. 29-33-47	G. W. Bates	June 26, 1908	2.17	
Brush creek	Sec. 23-33-13	P. T. Francis	Aug. 14, 1902	25.0	
Brush creek	Sec. 26-32-14	G. W. Bates	April 27, 1905	10.1	
Buck creek	Sec. 14-31-41	A. B. McCoskey	Sept. 1, 1898	Est. 4.	
Burton creek	At mouth T. 35, R. 19	C. B. Channel	Sept. 17, 1898	5.57	
Buffalo creek	Sec. 7-1-40	W. A. Channel	Nov. 22, 1900	9.9	
Buffalo creek	Sec. 33-9-18	H. O. Smith	July 5, 1902	6.4	
Buffalo creek	Sec. 30-10-20	H. O. Smith	July 5, 1902	2.0	
Buckhorn slough	N. W. ¼ sec. 8-14-36	H. O. Smith	Oct. 2, 1908	2.0	
Calamus river	Burwell	O. V. P. Stout	July 10, 1896	368.	
Calamus river	Burwell	Glen E. Smith	May 17, 1899	372.	
Calamus river	Sec. 8-24-19	C. B. Channel	Sept. 20, 1899	152.	
Calamus river	Burwell	B. E. Forbes	Mar. 25, 1902	407.	
Cedar river	Fullerton	O. V. P. Stout	Sept. 15, 1894	210.6	
Cedar river	Fullerton	O. V. P. Stout	July 11, 1896	338.	
Cedar river	Fullerton	O. V. P. Stout	July 21, 1898	277.	
Cedar river	Cedar Rapids	O. V. P. Stout	July 21, 1896	212.	
Cedar river	Ericson	W. J. McEathron	Mar. 16, 1895	152.	
Cedar river	Ericson	W. J. McEathron	June 1, 1895	214.	
Cedar river	Ericson	W. J. McEathron	Aug. ..., 1895	112.1	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Cedar river	Ericson above dam	Glen E. Smith	May 17, 1899	107.4	
Cedar river	Ericson below dam	Glen E. Smith		113.	
Cedar river	Fullerton	Adna Dobson	Nov. 21, 1901	291.	
Cedar river	Fullerton	G. W. Bates	April 12, 1905	372.	
Cedar river, branch	At mouth near Ericson	Adna Dobson	May 17, 1899	5.	
Cedar creek	At Bruce's mill 33.34-25	C. B. Channel	July 9, 1909	7.41	
Cedar creek	Sec. 18-14-36	H. O. Smith	June 17, 1903	1.66	
Chadron creek	Above Chadron W. W. 18-32-48	A. B. McCoskey	Sept. 14, 1897	1.59	
Chadron creek	Above Chadron W. W. 18-32-48	C. B. Channel	May 17, 1899	2.24	
Chadron creek	Below Chadron W. W. 18-32-48	A. B. McCoskey	Sept. 14, 1897	0.96	
Chadron creek	Below Chadron W. W. 18-32-48	C. B. Channel	May 17, 1899	2.15	
Chadron creek	Sec. 36-33-49	A. B. McCoskey	Sept. 23, 1898	1.23	
Chadron creek	Sec. 36-33-49	C. B. Channel	May 17, 1899	8.71	
Chadron creek	Sec. 12-32-49	G. W. Bates	June 19, 1908	3.79	
Chimney creek	Sec. 6-32-22	G. W. Bates	May 7, 1905	.78	
Clear creek	Sec. 29-16-41	Adna Dobson	Nov. 23, 1896	12.8	Keith county
Clear creek	700 yards below Barber & Marsh headgate 32-16-41	H. H. Pickens	May 19, 1899	7.84	Keith county
Clear creek	Sec. 29-16-41	H. O. Smith	Aug. 8, 1901	10.07	Lincoln county
Clear creek	Sec. 5-14-34	C. B. Channel	Dec. 16, 1899	3.40	Lincoln county
Cottonwood creek, big	6 miles west of Whitney	E. T. Youngfelt	June 25, 1896	.20	Tributary White river
Cottonwood creek, big	Sec. 21-25-22	C. B. Channel	June 12, 1899	1.20	Tributary White river
Cottonwood creek, little	Sec. 7-32-51	E. T. Youngfelt	June 25, 1896	.10	Tributary White river

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Cottonwood creek, little	West line Twp. 31, R. 51	C. B. Channel	May 15, 1899	.29	Tributary White river
Cottonwood creek, little	Below mouth of Spring Creek	C. B. Channel	May 19, 1898	.78	Tributary White river
Coon creek	Above Winterer's D. 34-15-37	C. B. Channel	May 25, 1898	2.93	
Cold water creek	Sec. 26-18-46	C. B. Channel	June 18, 1898	.76	
Crooked creek	Head Mutz D. S. W. ¼ 20-35-19	C. B. Channel	June 13, 1899	1.23	
Crooked creek	At Mutz 19-34-19	C. B. Channel	May 16, 1899	.35	
Crooked creek	Sec. 1-1-11	B. E. Forbes	July 2, 1902	175.	Flood
Cook creek	Sec. 2-2-18	H. O. Smith	Sept. 24, 1901	.9	
Cook creek	Alma	C. B. Channel	1909	.40	
Center creek	Sec. 36-2-15	G. W. Bates	June 10, 1902	7.6	
Center creek	Sec. 1-1-15	G. W. Bates	June 10, 1902	7.7	
Dead Horse creek	Sec. 31-33-50	A. B. McCoskey	Sept. 21, 1898	Est. 3.3	
Dead Horse creek	Sec. 7-32-49	A. B. McCoskey	Sept. 23, 1898	Est. .6	
Dead Horse creek	North line sec. 31-33-49	G. W. Bates	May 17, 1899	3.46	
Dead Horse creek	At Slattery's D. sec. 32-33-49	G. W. Bates	May 17, 1899	3.98	
Dead Horse creek	Sec. 32-32-49	C. B. Channel	June 15, 1909	2.70	
Dead Man's slough	S. W. ¼ sec. 6-14-36	H. O. Smith	Oct. 2, 1908	1.00	
Deer creek	Sec. 22-30-43	A. B. McCoskey	June 1, 1898	12.	
Deer creek	S. W. ¼ Sec. 5-40-43	J. C. Stevens	Aug. 23, 1904	7.3	
Dismal river	Dunning	O. V. P. Stout	Aug. 23, 1895	293.6	
Dismal river	Dunning	G. H. Lawrence	Aug. 22, 1894	435.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Cubic Feet Per. Sec. Discharge	Remarks
Dismal river	Dunning	Glen E. Smith	April 28, 1898	368.7	
Dismal river	Dunning	Glen E. Smith	Nov. 1, 1898	351.	
Dismal river	Dunning	A. B. McCoskey	April 21, 1899	334.48	
Dismal river	Dunning	R. D. Hubbard	Sept. 15, 1904	394.7	
Deadman creek	Head Phillips D. 19-30-52	T. J. O'Keefe	Oct. 2, 1900	1.8	
Deadman creek	Head P. & R. D. 1-30-53	T. J. O'Keefe	Oct. 2, 1909	1.1	
Eagle creek	Sec. 9-30-13	Geo. W. Bates	April 25, 1905	25.2	
Eagle creek	Sec. 1-32-11	Geo. W. Bates	May 16, 1908	64.3	
Eagle creek, N. fork	Ses. 26-31-13	Geo. W. Bates	April 26, 1905	8.1	
Elkhorn river	Atkinson	Adna Dobson	Oct. 2, 1896	11.1	
Elkhorn river	Atkinson	A. B. McCoskey	May 24, 1898	110.5	
Elkhorn river	Arlington	A. Rosewater	Aug. ..., 1894	214.	
Elkhorn river	Arlington	Glen E. Smith	May 26, 1898	1808.	
Elkhorn river	Arlington	Glen E. Smith	Dec. 15, 1898	422.	
Elkhorn river	Waterloo	O. V. P. Stout	Aug. 15, 1896	280.	
Elkhorn river	Waterloo	O. V. P. Stout	July 17, 1896	495.	
Elkhorn river	O'Neill	O. V. P. Stout	June 23, 1897	20.63	
Elkhorn river	O'Neill	Glen E. Smith	June 10, 1898	288.	
Elkhorn river	O'Neill	C. B. Channel	Aug. 17, 1898	31.3	
Elkhorn river	Ewing	O. V. P. Stout	Sept. 3, 1897	9.77	
Elkhorn river	Ewing	C. B. Channel	Aug. 18, 1898	53.52	
Elkhorn river	Arlington -	J. C. Stevens	May 6, 1904	1284.	
Elkhorn river	Arlington -	J. C. Stevens	May 6, 1904	1343.	
Elkhorn river	Norfolk	Geo. W. Bates	April 17, 1906	1621.	
Elkhorn river, N. fork	Norfolk	O. V. P. Stout	July 16, 1896	70.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Elkhorn river, N. fork	Norfolk	Adna Dobson	Mar. 24, 1897	701.	
Elkhorn river, N. fork	Norfolk	Adna Dobson	May 6, 1897	166.	
Elkhorn river, N. fork	Norfolk	Adna Dobson	May 24, 1897	77.	
Elkhorn river, N. fork	Norfolk	O. V. P. Stout	July 30, 1897	69.8	
Elkhorn river, N. fork	Norfolk	Glen E. Smith	June 20, 1898	162.	
Elkhorn river, N. fork	Norfolk	Glen E. Smith	April 27, 1899	122.	
Elkhorn river, N. fork	Norfolk	Glen E. Smith	May 25, 1899	414.	
Elkhorn river, N. fork	Norfolk	Glen E. Smith	Feb. 20, 1899	119.	
Elkhorn river, N. fork	Norfolk	Glen E. Smith	Aug. 17, 1899	81.30	
Elkhorn river, N. fork	Norfolk	Glen E. Smith	Sept. 25, 1899	85.20	
Elkhorn river, N. fork	Norfolk Junction Bridge	O. V. P. Stout	May 27, 1900	75.9	
Elkhorn river, N. fork	Norfolk	O. V. P. Stout	Aug. 3, 1900	89.	
Elkhorn river, N. fork	Norfolk	C. B. Channel	May 31, 1901	550.	
Elkhorn river, N. fork	Norfolk	O. V. P. Stout	July 31, 1901	150.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	Mar. 21, 1902	118.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	April 13, 1902	150.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	May 12, 1902	116.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	June 16, 1902	137.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	July 26, 1902	168.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	Aug. 22, 1902	170.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	Sept. 29, 1902	242.	
Elkhorn river, N. fork	Norfolk Junction Bridge	J. C. Stevens	Nov. 14, 1902	118.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	May 24, 1903	386.	
Elkhorn river, N. fork	Norfolk	J. C. Stevens	May 25, 1903	498.	
Elkhorn river, N. fork	Norfolk	G. W. Bates	April 27, 1906	523.	
Elkhorn river, N. fork	Norfolk	Arthur Dobson	Sept. 11, 1908	85.	
Elkhorn river, N. fork	Pierce	Arthur Dobson	Sept. 11, 1908	46.5	
Elkhorn river, S. branch	Pierce	O. V. P. Stout	Sept. 3, 1897	18.17	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Flag creek	Sec. 3-2-19, above dam	H. O. Smith	Sept. 24, 1901	1.5	
Flag creek	Sec. 3-2-19, below dam	H. O. Smith	Sept. 24, 1901	.6	
Flag creek	2 miles below dam	H. O. Smith	Sept. 24, 1901	.5	
				26.3	
Frenchman river	Sec. 33-4-32	O. V. P. Stout	June 19, 1896		
Frenchman river	Culbertson	E. T. Youngfelt	June 19, 1896	13.4	
Frenchman river	Culbertson	U. S. Geol. Sur	Nov. 25, 1892	177.	
Frenchman river	Culbertson	O. V. P. Stout	Mar. 22, 1895	120.	
Frenchman river	Culbertson	A. B. McCoskey	Sept. 16, 1899	29.72	
Frenchman river	Culbertson	O. V. P. Stout	Aug. 17, 1900	84.	
Frenchman river	Wauneta	Adna Dobson	April 14, 1897	127.93	
Frenchman river	Wauneta	A. B. McCoskey	Sep. 9, 1899	62.91	
Frenchman river	Wauneta	A. B. McCoskey	July 27, 1900	74.30	
Frenchman river	Palisade	O. V. P. Stout	July 2, 1897	63.23	
Frenchman river	Palisade	O. V. P. Stout	July 19, 1897	73.3	
Frenchman river	Palisade	Glen E. Smith	July 7, 1898	92.	Ab. head Culbertson D.
Frenchman river	Palisade	H. H. Pickens	May 29, 1899	97.32	Ab. head Culbertson D.
Frenchman river	Palisade	A. B. McCoskey	Sept. 16, 1899	65.83	Ab. head Culbertson D.
Frenchman river	Palisade	A. B. McCoskey	July 27, 1900	91.24	Ab. head Culbertson D.
Frenchman river	Maranville	E. D. Johnson	July 8, 1899	19.33	
Frenchman river	Head Maranville D. 12-6-41	A. B. McCoskey	July 26, 1900	3.39	Ditch diverting all water
Frenchman river	Bel. H'd of Inman's D. 17-6-40	E. D. Johnson	July 9, 1899	16.62	
Frenchman river	Head of Inman's D. 17-6-40	A. B. McCoskey	July 26, 1900	7.98	Ditch diverting all water
Frenchman river	Head Inman's D. 17-6-40	E. D. Johnson	Sept. 29, 1900	6.20	
Frenchman river	Below head Wirsig D. 24-6-40	E. D. Johnson	July 10, 1899	20.98	
Frenchman river	Head of Wirsig D. 24-6-40	A. B. McCoskey	July 26, 1900	13.97	Ditch diverting all water
Frenchman river	2 miles above Culbertson	Adna Dobson	June 26, 1900	79.	
Frenchman river	W. line sec. 3-5-38	H. H. Pickens	June 3, 1899	29.54	
Frenchman river	Sec. 24-6-40	H. O. Smith	May 31, 1901	11.6	
Frenchman river	Sec. 17-6-40	H. O. Smith	May 31, 1901	10.6	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Frenchman river	Sec. 24-6-40	H. O. Smith	June 18, 1901	14.8	
Frenchman river	Sec. 17-6-40	H. O. Smith	June 18, 1901	18.0	
Frenchman river	Sec. 21-6-39	H. O. Smith	June 18, 1901	47.3	
Frenchman river	Sec. 5-5-36	H. O. Smith	June 21, 1901	93.0	
Frenchman river	Wauneta	H. O. Smith	June 21, 1901	112.9	
Frenchman river	Palisade	H. O. Smith	June 21, 1901	175.7	
Frenchman river	Culbertson	H. O. Smith	July 23, 1901	62.1	
Frenchman river	Culbertson	F. Dobson	April 25, 1902	92.	
Frenchman river	Enders	H. O. Smith	June 13, 1902	60.0	
Frenchman river	Culbertson	J. C. Stevens	Sept. 18, 1902	65.9	
Frenchman river	Head Krotter Ditch	H. O. Smith	Aug. 5, 1903	66.5	
Frenchman river	Culbertson	H. O. Smith	Aug. 5, 1903	71.3	
Frenchman river	Culbertson	H. O. Smith	Aug. 29, 1903	56.6	
Frenchman river	Sec. 18-6-40	J. A. Green	June 28, 1904	10.0	
Frenchman river	Champion	J. A. Green	June 29, 1904	45.0	
Frenchman river	Palisade	J. A. Green	June 30, 1904	240.0	
Frenchman river	Palisade	H. C. Diesem	Aug. 2, 1905	323.75	Br. over ditch on N. & S. road
Frenchman river	Culbertson	H. C. Diesem	July 31, 1905	911.68	
Frenchman river	Culbertson	H. C. Diesem	Aug. 1, 1905	601.86	
Flowing well	Sec. 13-6-40	H. O. Smith	July 24, 1901	0.5	
Goose creek	Sec. 10-22-27	C. B. Channel	April 27, 1899	30.27	
Goose creek	Sec. 18-25-24	R. D. Hubbard	Sept. 13, 1904	14.4	
Gordon creek	Sec. 15-32-29	O. V. P. Stout	July 23, 1897	3.53	
Golden creek	Sec. 25-15-39	H. O. Smith	Aug. 19, 1902	0.6	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Greenwod creek	Center 15-18-50	R. H. Willis	June 10, 1904	6.0	
Hat creek, east	Sec. 23-32-55	A. B. McCoskey	July 10, 1897	.3	
Hat creek, east	Above mouth 10-32-55	A. B. McCoskey	July 10, 1897	1.05	
Hat creek, west	Above mouth Sec. 10-32-55	A. B. McCoskey	July 10, 1897	.53	
Hat creek, west	Below confluence 10-32-55	A. B. McCoskey	July 10, 1897	1.6	
Hat creek, west	Head of Steel D. 16-32-55	A. B. McCoskey	July 16, 1897	.69	
Hat creek, west	Sec. 23-33-55	A. B. McCoskey	Sept. 30, 1898	1.41	
Hat creek, west	Above Coffee's D. 26-33-55	A. B. McCoskey	May 24, 1899	3.60	
Harney creek	Sec. 31-33-23	C. B. Channel	June 11, 1898	23.49	
Horse creek	Neb.-Wyo. state line	A. B. McCoskey	Oct. 15, 1897	10.5	Scotts Bluff county
Horse creek	Neb.-Wyo. state line	A. B. McCoskey	June 16, 1899	11.1	Scotts Bluff county
Horse creek	B. & M. Ry. crossing	E. T. Youngfelt	June 16, 1896	.22	Dundy county
Horse creek	Sec. 11-1-39	W. A. Channel	Nov. 22, 1900	1.20	Dundy county
Horse creek	Neb.-Wyo. line, sec. 23, R. 58	G. W. Bates	Mar. 24, 1909	56.3	
Horse creek	Aget	U. S. R. S.	Aug. 20, 1910	11.00	
Horse Head creek	Sec. 16-33-24	C. B. Channell	June 9, 1899	1.15	
Holt creek	Head Webster Dit. 19-35-20	C. B. Channell	June 12, 1899	3.58	
Indian creek	Near mouth	E. T. Youngfelt	June 25, 1896	.06	Dundy county
Indian creek	Line bet. secs. 10 and 17-2-37	W. A. Channel	Nov. 14, 1900	1.30	Dundy county
Indian creek	North line sec. 33-32-50	A. B. McCoskey	Aug. 18, 1899	.50	Dawes county
Indian creek	Sec. 28-32-50	G. W. Bates	June 14, 1908	1.46	
Indian creek, W. fork	Sec. 28-32-50	G. W. Bates	June 14, 1908	0.42	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Indian creek, E. fork	Sec. 28-32-50	G. W. Bates	June 14, 1908	1.22	
Jim creek	Ab. Woodruff's dam 14-33-57	Geo. W. Bates	July 22, 1897	.22	
Keya Paha river	Ab. mouth Burton C. T. 35, R. 19	C. B. Channel	June 17, 1898	62.02	
Keya Paha river	Sec. 24-35-20	C. B. Channel	June 13, 1899	38.99	
Keya Paha river	N. W. ¼ sec. 24-34-16	Adna Dobson	Oct. 23, 1903	77.6	
Keya Paha river	Sec. 23-34-16	G. W. Bates	July 15, 1905	136.0	
Laramie river, Wyo		U. S. R. S.	July 16, 1910	17.00	
Lawrence fork	Sec. 36-19-52	R. H. Willis	June 10, 1901	1.7	
Lawrence fork	Sec. 36-19-52	F. Dobson	July 22, 1902	1.4	
Lawrence fork	Sec. 11-18-52	R. H. Willis	July 22, 1902	1.6	
Lawrence fork	Sec. 1-18-52	R. H. Willis	July 29, 1902	2.9	
Lawrence fork	Sec. 15-18-52	R. H. Willis	July 31, 1902	2.2	
Lawrence fork	Criglers	R. H. Willis	Aug. 21, 1903	.70	
Lawrence fork	Redington	R. H. Willis	Aug. 21, 1903	4.3	
Lawrence fork	Niehus	R. H. Willis	Aug. 20, 1903	2.76	
Lawrence fork	Sec. 11-18-52	H. O. Smith	Aug. 21, 1903	1.25	
Lawrence fork	Sec. 1-18-52	H. O. Smith	Aug. 20, 1903	4.00	
Lawrence fork	Above Spring Creek	H. O. Smith	Oct. 25, 1905	5.50	
Lawrence fork	Below Spring Creek	H. O. Smith	Oct. 25, 1905	8.30	
Lawrence fork	At Capron's Ranch	R. H. Willis	Sept. 26, 1910	3.56	
Lower Dugout creek	Point of diversion Cooper Canal	R. H. Willis	July 26, 1910	0.88	
Lower Dugout creek	Cooper's headgate	R. H. Willis	Oct. 10, 1910	1.00	
Lodge Pole creek	Kimball	Adna Dobson	May 26, 1896	4.5	
Lodge Pole creek	3 miles east of Sidney	H. H. Pickens	May 15, 1899	10.95	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Lodge Pole creek	4 miles west of Kimball	E. D. Johnson	Aug. 9, 1899	7.43	
Lodge Pole creek	1 mile west of Kimball	E. D. Johnson	Aug. 9, 1899	2.41	
Lodge Pole creek	¾ mile east of Kimball	E. D. Johnson	Aug. 11, 1899	2.04	
Lodge Pole creek	½ mile above Kinney Ditch	E. D. Johnson	Aug. 10, 1899	6.52	
Lodge Pole creek	Above Young's Ditch	E. D. Johnson	Aug. 10, 1899	15.57	
Lodge Pole creek	Sec. 33-14-49	E. D. Johnson	May 15, 1900	3.86	
Lodge Pole creek	½ mile west Jones dam 34-14-49	E. D. Johnson	May 15, 1900	6.26	
Lodge Pole creek	Sec. 14-14-51	E. D. Johnson	May 17, 1900	2.34	
Lodge Pole creek	Sec. 31-14-47	E. D. Johnson	May 18, 1900	2.60	
Lodge Pole creek	Sec. 3-13-46	E. D. Johnson	May 21, 1900	2.26	
Lodge Pole creek	Sec. 12-12-45	E. D. Johnson	May 22, 1900	1.33	
Lodge Pole creek	Sec. 23-23-15	E. D. Johnson	May 23, 1900	7.33	
Lodge Pole creek	Sec. 36-15-57	E. D. Johnson	May 25, 1900	4.75	
Lodge Pole creek	Sec. 2-14-58	E. D. Johnson	May 26, 1900	9.23	
Lodge Pole creek	Sec. 36-13-45	E. D. Johnson	Aug. 7, 1900	3.12	
Lodge Pole creek	Sec. 3-14-58	E. D. Johnson	Aug. 8, 1900	6.23	
Lodge Pole creek	Sec. 23-15-55	E. D. Johnson	Aug. 9, 1900	6.34	
Lodge Pole creek	Sec. 33-15-57	E. D. Johnson	Aug. 10, 1900	12.34	
Lodge Pole creek	Sec. 3-12-45	E. D. Johnson	Aug. 10, 1900	1.34	
Lodge Pole creek	Sec. 33-14-49	E. D. Johnson	Aug. 14, 1900	6.42	
Lodge Pole creek	Sec. 31-14-47	E. D. Johnson	Aug. 16, 1900	2.50	
Lodge Pole creek	Sec. 14-14-51	E. D. Johnson	Aug. 17, 1900	2.35	
Lodge Pole creek	Sec. 2-13-46	E. D. Johnson	Aug. 22, 1900	2.85	
Lodge Pole creek	Above Polly D. 30-15-55	E. D. Johnson	Sept. 10, 1900	2.44	
Lodge Pole creek	Below Polly D. at bridge	E. D. Johnson	Sept. 10, 1900	1.13	
Lodge Pole creek	1 mile west of Kimball	E. D. Johnson	Sept. 10, 1900	1.29	
Lodge Pole creek	Kimball	E. D. Johnson	Sept. 12, 1900	4.92	
Lodge Pole creek	Kimball	E. D. Johnson	Sept. 15, 1900	1.14	
Lodge Pole creek	Kimball	E. D. Johnson	Sep. 18, 1900	4.30	
Lodge Pole creek	Above Neumann's Dam	E. D. Johnson	Oct. 3, 1900	3.26	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Lodge Pole creek	Lodge Pole station	E. D. Johnson	Oct. 8, 1900	3.12	
Lodge Pole creek	Chappel	E. D. Johnson	Oct. 18, 1900	3.11	
Lodge Pole creek	Sidney	H. O. Smith	July 1, 1901	6.7	
Lodge Pole creek	Sec. 9-14-51	H. O. Smith	July 1, 1901	5.6	
Lodge Pole creek	Sec. 29-14-48	H. O. Smith	July 2, 1901	4.0	
Lodge Pole creek	Sec. 29-14-47	H. O. Smith	July 2, 1901	2.2	
Lodge Pole creek	Sec. 31-14-46	H. O. Smith	July 3, 1901	3.4	
Lodge Pole creek	Sec. 12-14-59	H. O. Smith	July 30, 1901	2.9	
Lodge Pole creek	Sec. 27-15-56	H. O. Smith	July 31, 1901	6.2	
Lodge Pole creek	Sec. 36-14-47	H. O. Smith	April 13, 1902	4.0	
Lodge Pole creek	Sec. 35-15-55	H. O. Smith	April 25, 1902	12.0	
Lodge Pole creek	Kimball	H. O. Smith	June 2, 1902	5.6	
Lodge Pole creek	Sec. 25-15-56	H. O. Smith	July 2, 1902	7.5	
Lodge Pole creek	Sec. 31-15-56	H. O. Smith	July 2, 1902	10.5	
Lodge Pole creek	Sec. 26-15-55	H. O. Smith	April 24, 1903	12.6	Head McIntosh ditch
Lodge Pole creek	Sec. 26-15-56	H. O. Smith	April 25, 1903	16.3	Head Hurly Lilly Polly ditch
Lodge Pole creek	Head Bay State Ditch	H. O. Smith	May 25, 1903	4.4	
Lodge Pole creek	Sec. 35-15-56	H. O. Smith	May 27, 1903	31.5	Head Polly ditch
Lodge Pole creek	Sec. 26-15-56	H. O. Smith	May 29, 1903	31.0	
Lodge Pole creek	Sec. 31-15-56	H. O. Smith	June 1, 1903	12.5	Head Kinney ditch
Lodge Pole creek	Sec. 31-15-57	H. O. Smith	June 1, 1903	15.8	
Lodge Pole creek	Sec. 33-15-57	H. O. Smith	June 2, 1903	12.8	Head Young's ditch
Lodge Pole creek	Sec. 2-14-58	H. O. Smith	June 3, 1903	10 1	Ab. Bushnell ditch
Lodge Pole creek	Sec. 10-14-51	H. O. Smith	June 18, 1903	5 4	Ab. Anderson ditch
Lodge Pole creek	W. line sec. 25-15-56	H. O. Smith	July 23, 1903	7.4	
Lodge Pole creek	Sec. 31-15-56	H. O. Smith	July 23, 1903	.5	Below Kinney's dam
Lodge Pole creek	3 miles below 31-15-56	H. O. Smith	July 23, 1903	7.5	
Lodge Pole creek	W. line 29-15-55	H. O. Smith	July 24, 1903	5.6	
Lodge Pole creek	Sec. 26-15-55	H. O. Smith	July 24, 1903	4.6	
Lodge Pole creek	W. line 30-15-54	H. O. Smith	July 24, 1903	0.0	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Lodge Pole creek	W. line 3-14-52	H. O. Smith	July 25, 1903	5.2	Head Adams ditch
Lodge Pole creek	Center 8-14-51	H. O. Smith	July 25, 1903	3.5	
Lodge Pole creek	Sec. 10-14-51	H. O. Smith	July 25, 1903	3.8	
Lodge Pole creek	Sec. 9-14-51	H. O. Smith	July 25, 1903	3.8	
Lodge Pole creek	Sec. 15-14-51	H. O. Smith	July 25, 1903	2.9	Ab. Pomeroy's
Lodge Pole creek	E. line 14-14-51	H. O. Smith	July 25, 1903	0.0	
Lodge Pole creek	W. line 29-15-55	H. O. Smith	Oct. 30, 1903	15.5	
Lodge Pole creek	W. line 29-15-55	H. O. Smith	Nov. 7, 1903	21.6	
Lodge Pole creek	W. line 29-15-55	H. O. Smith	Nov. 16, 1903	20.4	
Lodge Pole creek	Center 8-14-51	H. O. Smith	April 27, 1904	8.62	
Lodge Pole creek	Center 9-14-51	H. O. Smith	April 27, 1904	6.62	
Lodge Pole creek	Center 10-14-51	H. O. Smith	April 27, 1904	7.25	
Lodge Pole creek	W. line 33-15-56	H. O. Smith	April 28, 1904	14.4	
Lodge Pole creek	W. line 33-15-56	H. O. Smith	April 30, 1904	12.4	
Lodge Pole creek	State line	H. O. Smith	May 2, 1904	4.3	
Lodge Pole creek	1 mile east state line	H. O. Smith	May 2, 1904	4.6	
Lodge Pole creek	Sec. 8-14-53	H. O. Smith	May 3, 1904	34.5	
Lodge Pole creek	W. line 29-15-55	H. O. Smith	May 4, 1904	20.5	
Lodge Pole creek	W. line 33-15-56	H. O. Smith	May 5, 1904	48.2	
Lodge Pole creek	Kimball	H. O. Smith	June 15, 1904	2.1	
Lodge Pole creek	Kimball	H. O. Smith	Sept. 6, 1904	13.4	
Lodge Pole creek	3 miles west Kimball	H. O. Smith	Sept. 8, 1904	8.6	
Lodge Pole creek	E. line 31-14-46	H. O. Smith	Sept. 8, 1904	3.3	
Lodge Pole creek	Sec. 30-15-55	H. O. Smith	Dec. 7, 1904	25.6	
Lodge Pole creek	Sec. 20-14-50	H. O. Smith	Dec. 7, 1904	4.4	
Lonergan creek	Sec. 17-15-39	C. B. Channel	May 22, 1898	6.1	
Lonergan creek	Sec. 19-15-39	H. O. Smith	Aug. 18, 1902	2.5	
Lost creek	Sec. 10-1-15	H. O. Smith	June 10, 1902	0.7	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Long Pine creek	Long Pine	Adna Dobson	Oct. 3, 1896	47.1	
Long Pine creek	Long Pine	C. B. Channel	June 20, 1898	50.41	
Long Pine creek	Long Pine	Glen E. Smith	Aug. 21, 1898	44.3	
Long Pine creek	Long Pine	Glen E. Smith	Sept. 8, 1898	138.	
Long Pine creek	Below Miller's Mills 5-31-20	C. B. Channel	June 15, 1899	5.9	
Long Pine creek	Long Pine	B. E. Forbes	Aug. 9, 1902	49.7	
Long Pine creek	Long Pine	Adna Dobson	Oct. 6, 1903	38.7	
Long Pine creek	Long Pine	Adna Dobson	Oct. 6, 1903	54.9	
Long Pine creek	At Kyner's dam	D. D. Price	Oct. 6, 1910	47.6	
Lodge Pole creek	Long Pine	D. D. Price	Aug. 30, 1910	49.6	
Looking Glass creek	Near mouth	W. J. McEathron	July ...., 1896	15.	
Loup river	Fullerton	O. V. P. Stout	Sept. 16, 1894	170.4	
Loup river	Fullerton	O. V. P. Stout	July 11, 1906	2900.	
Loup river	Sec. 13-7-2	O. V. P. Stout	Aug. 19, 1904	1335.	From notes L. F. Gottschalk
Loup river	Columbus	Geo. W. Bates	Mar. 13, 1909	3338.	
Loup river	Columbus	A. A. Dobson	Mar. 20, 1909	2795.	
Loup river	Columbus	A. A. Dobson	April 13, 1909	3008.4	
Loup river	Columbus	A. A. Dobson	May 8, 1909	2368.2	
Loup river	Columbus	A. A. Dobson	July 8, 1909	6643.4	
Loup river	Columbus	A. A. Dobson	Aug. 31, 1909	1850.8	
Loup river	Columbus	A. A. Dobson	Oct. 22, 1909	2663.6	
Loup river	Columbus	A. A. Dobson	Nov. 5, 1909	2294.3	
Loup river	Columbus	D. D. Price	April 20, 1910	2278.	
Loup river	Columbus	D. D. Price	May 10, 1910	3188.	
Loup river	Columbus	D. D. Price	May 25, 1910	2531.	
Loup river	Columbus	D. D. Price	June 24, 1910	1780.	
Loup river	Columbus	D. D. Price	July 25, 1910	21.64	
Loup river	Columbus	D. D. Price	Aug. 31, 1910	3592.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Loup river	Columbus	A. A. Dobson	Oct. 1, 1910	2119.	
Loup river	Columbus	A. A. Dobson	Nov. 19, 1910	2230.	
Loup river	Columbus	A. A. Dobson	Nov. 25, 1910	2418.	
Loup river, middle	Fork 8¾ miles above Mullen	O. V. P. Stout	Aug. 20, 1895	41.8	
Loup river, middle	Mullen	O. V. P. Stout	Aug. 20, 1895	120.	
Loup river, middle	Seneca	O. V. P. Stout	Aug. 21, 1895	216.2	
Loup river, middle	Seneca	O. V. P. Stout	Aug. 30, 1896	212.3	
Loup river, middle	Seneca	Glen E. Smith	April 28, 1898	221.6	
Loup river, middle	Seneca	Glen E. Smith	Nov. 1, 1898	198.	
Loup river, middle	Seneca	C. B. Channel	May 2, 1899	225.34	
Loup river, middle	Arcadia	A. B. McCoskey	April 18, 1899	809.66	
Loup river, middle	Thedford	O. V. P. Stout	April 22, 1895	284.3	
Loup river, middle	Dunning	O. V. P. Stout	April 23, 1895	321.5	
Loup river, middle	Dunning	Glen E. Smith	April 23, 1898	410.	
Loup river, middle	Dunning	Glen E. Smith	Nov. 1, 1898	433.	
Loup river, middle	Dunning	O. V. P. Stout	Aug. 30, 1896	328.	
Loup river, middle	Dunning	A. B. McCoskey	April 21, 1899	408.23	
Loup river, middle	Gates, Custer county	G. H. Lawrence	Aug. 25, 1894	850.	
Loup river, middle	Loup City	O. V. P. Stout	Aug. 29, 1895	878.6	
Loup river, middle	Boelus	Adna Dobson	May 28, 1897	837.	
Loup river, middle	St. Paul	B. E. Forbes	May 23, 1902	1538.	
Loup river, middle	Senaca	R. D. Hubbard	May 24, 1904	205.0	
Loup river, middle	Thedford	R. D. Hubbard	May 24, 1904	270.0	
Loup river, middle	Arcadia	R. D. Hubbard	June 10, 1904	2137.0	
Loup river, middle	St. Paul	R. D. Hubbard	June 10, 1904	12800.0	
Loup river, middle	Thedford	Jas. A. Green	June 28, 1904	232.0	Sec. 32-19-21
Loup river, middle	Gate Bridge	Adna Dobson	Oct. 11, 1904	677.9	
Loup river, middle	Seneca	G. W. Bates	April 10, 1906	236.0	
Loup river, north	Moulton	G. H. Lawrence	Nov. 2, 1894	460.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Loup river, north	Burwell	O. V. P. Stout	July 9, 1896	625.	River 4 in. above normal
Loup river, north	Burwell	Glen E. Smith	May 16, 1899	984.	
Loup river, north	Below mouth Wanaduza creek	O. V. P. Stout	July 24, 1897	129.8	
Loup river, north	Brownlee	C. B. Channel	May 1, 1899	359.79	
Loup river, north	Brownlee	C. B. Channel	Sept. 23, 1899	195.84	
Loup river, north	Brewster	C. B. Channel	Sept. 21, 1899	361.92	
Loup river, north	Burwell	B. E. Forbes	Mar. 25, 1902	1088.	
Loup river, north	St. Paul	B. E. Forbes	May 23, 1902	1186.	
Loup river, north	St. Paul	R. D. Hubbard	June 10, 1904	2150.	
Loup river, north	Brownlee	R. D. Hubbard	June 20, 1904	147.	
Loup river, north	Cascade	Jas. A. Green	June 21, 1904	223.	
Loup river, north	Brewster	R. D. Hubbard	Sept. 14, 1904	467.3	
Loup river, south	Callaway	O. V. P. Stout	Aug. 28, 1895	48.	
Loup river, south	Callaway	C. B. Channel	Aug. 3, 1898	82.91	
Loup river, south	Arnold	C. B. Channel	Aug. 4, 1898	31.48	
Loup river, south	Georgetown	G. H. Lawrence	Sept. 10, 1896	68.	
Loup river, south	Ravenna	O. V. P. Stout	Aug. 31, 1895	296.	
Loup river, south	Ravenna	O. V. P. Stout	Aug. 29, 1896	142.	
Loup river, south	St. Michaels	Adna Dobson	May 28, 1898	220.	
Loup river, south	Ravenna	J. C. Stevens	Mar. 11, 1903	1723.	
Loup river, south	Ravenna	J. C. Stevens	May 13, 1903	399.	
Loup river, south	Callaway	Jas. A. Green	July 26, 1904	82.0	
Loup river, south	Sec. 27-18-26	Jas. A. Green	July 27, 1904	9.0	
Loup river, south	Sec. 31-17-24	Jas. A. Green	July 28, 1904	56.0	
Loup river, south	Sec. 30-15-21	Jas. A. Green	July 28, 1904	103.0	
Loup river, south	Arnold	Adna Dobson	Dec. 9, 1904	38.3	
Loup river, south	Callaway	Adna Dobson	Dec. 9, 1904	123.8	
Mathew's creek	Sec. 28-15-37	C. B. Channel	May 19, 1898	1.71	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Methodist creek	Sec. 2-1-18	H. O. Smith	Sept. 24, 1901	2.6	
Middle creek, east	Sec. 32-33-23	O. B. Channel	June 10, 1899	.27	
Middle creek, west	Sec. 32-33-23	C. B. Channel	June 10, 1899	1.48	
Minnechaduza	Valentine	O. V. P. Stout	June 24, 1897	21.2	
Minnechaduza	Valentine	Glen E. Smith	May 14, 1898	23.2	
Minnechaduza	Valentine	A. B. McCoskey	May 18, 1898	105.8	
Minnechaduza	Valentine	Glen E. Smith	May 24, 1898	89.5	
Minnechaduza	Valentine	C. B. Channel	June 6, 1898	33.9	
Minnechaduza	Valentine	Glen E. Smith	June 12, 1898	52.5	
Minnechaduza	Valentine	Glen E. Smith	July 27, 1898	15.3	
Minnechaduza	Valentine	Glen E. Smith	Aug. 21, 1898	18.2	
Minnechaduza	Valentine	Glen E. Smith	Sept. 7, 1898	18.8	
Minnechaduza	Valentine	Glen E. Smith	Sept. 27, 1898	22.1	
Minnechaduza	Valentine	Glen E. Smith	Oct. 15, 1898	22.5	
Minnechaduza	Valentine	Glen E. Smith	Oct. 29, 1898	27.	
Minnechaduza	Valentine	Glen E. Smith	Jan. 27, 1899	26.2	
Minnechaduza	Valentine	Glen E. Smith	Feb. 21, 1899	45.	
Minnechaduza	Valentine	Glen E. Smith	Mar. 15, 1899	25.7	
Minnechaduza	Valentine	Glen E. Smith	April 26, 1899	32.6	
Minnechaduza	Valentine	Glen E. Smith	May 11, 1899	35.	
Minnechaduza	Valentine	Glen E. Smith	May 26, 1899	64.7	
Minnechaduza	Valentine	Glen E. Smith	June 26, 1899	23.	
Minnechaduza	Valentine	Glen E. Smith	Aug. 13, 1899	19.	
Minnechaduza	Valentine	Glen E. Smith	Sept. 13, 1899	23.5	
Minnechaduza	Valentine	Glen E. Smith	Sept. 26, 1899	26.5	
Minnechaduza	Valentine	O. V. P. Stout	Aug. 1, 1901	27.3	
Minnechaduza	Valentine	O. V. P. Stout	Nov. 14, 1901	26.6	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Minnechaduza	Valentine	J. C. Stevens	Mar. 22, 1902	38.1	
Minnechaduza	Sec. 29-35-30	J. C. Stevens	April 11, 1902	14.9	
Minnechaduza	Sec. 2-34-29	J. C. Stevens	April 11, 1902	17.3	
Minnechaduza	Sec. 8-34-29	J. C. Stevens	April 11, 1902	26.0	
Minnechaduza	Sec. 30-34-28	J. C. Stevens	April 11, 1902	23.8	
Minnechaduza	Valentine	J. C. Stevens	April 12, 1902	38.3	
Minnechaduza	Valentine	J. C. Stevens	July 4, 1902	27.4	
Minnechaduza	Valentine	J. C. Stevens	July 15, 1902	23.1	
Minnechaduza	Valentine	J. C. Stevens	July 20, 1902	22.7	
Minnechaduza	Valentine	J. C. Stevens	Aug. 20, 1902	23.8	
Minnechaduza	Valentine	J. C. Stevens	April 26, 1903	48.0	
Minnechaduza	Valentine	J. C. Stevens	May 26, 1903	33.0	
Minnechaduza	Valentine	J. C. Stevens	Aug. 24, 1904	21.	
Minnechaduza	Valentine	Geo. W. Bates	May 9, 1905	85.3	
Monroe creek	Head of Schiltz Ditch 27-33-56	A. B. McCoskey	July 20, 1897	.22	
Monroe creek	Head Wilcox Ditch 33-33-56	A. B. McCoskey	July 21, 1897	1.02	
Monroe creek	Head Wilcox Ditch 33-33-56	T. J. O'Keefe	Sept. 24, 1900	.84	
Monroe creek	Sec. 14-33-56	A. B. McCoskey	Sept 30, 1898	Est .3	
Medicine creek	Cambridge	Adna Dobson	June 28, 1900	24.5	
Medicine creek	Cambridge	G. W. Bates	Mar. 29, 1909	48.5	Running through wheel above
Medicine creek	Cambridge	G. W. Bates	Mar. 29, 1909	56.9	back water
Muddy creek	3 miles above Arapahoe	Adna Dobson	June 28, 1900	3.7	
Niobrara river	Dawes county	Prof. L. E. Hicks	May 4, 1887	98.	
Niobrara river	Marsland	E. T. Yungfelt	June 23, 1896	4.	
Niobrara river	Marsland	C. B. Channel	Oct. 31, 1898	23.24	
Niobrara river	Marsland	Glen E. Smith	May 29, 1899	36.16	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Niobrara river	Above Marsland 6-28-51	McCoskey, O'Keefe	July 18, 1900	7.03	
Niobrara river	Gregg's Br. near Marsland	T. J. O'Keefe	Sept. 7, 1900	11.25	
Niobrara river	Niobrara City	O. V. P. Stout	June 22, 1897	759.	
Niobrara river	Valentine	Adna Dobson	Oct. 4, 1896	712.	
Niobrara river	5 miles south of Valentine	Glen E. Smith	Mar. 5, 1899	650.	
Niobrara river	Lavaca P. O.	O. V. P. Stout	June 25, 1897	105.	
Niobrara river	Lavaca P. O.	Glen E. Smith	April 26, 1898	209.9	
Niobrara river	Lavaca P. O.	A. B. McCoskey	June 2, 1898	152.1	
Niobrara river	Lavaca P. O.	Glen E. Smith	Oct. 30, 1898	203.4	
Niobrara river	Nebr.-Wyo. state line	A. B. McCoskey	Oct. 20, 1897	3.56	
Niobrara river	Above Warnecke's D. 27-30-57	A. B. McCoskey	Oct. 20, 1897	5.12	
Niobrara river	Above Bourett's D. 33-30-56	A. B. McCoskey	Oct. 21, 1897	6.36	
Niobrara river	At Bourrett's 32-30-56	C. B. Channel	May 27, 1899	13.65	
Niobrara river	Above Ernest's Dam 9-29-56	A. B. McCoskey	Oct. 21, 1897	7.36	
Niobrara river	At Earnest's Ranch 23-29-56	A. B. McCoskey	Oct. 21, 1897	16.34	
Niobrara river	At McGinley's 31-29-56	A. B. McCoskey	Oct. 22, 1897	9.27	
Niobrara river	At O. Harris' house, T. 28, R. 54	A. B. McCoskey	Oct. 23, 1897	13.44	
Niobrara river	Near Bell P. O. 8-28-53	A. B. McCoskey	Oct. 23, 1897	11.92	
Niobrara river	B. T. Moore's R. 11-28-53	A. B. McCoskey	Oct. 25, 1897	17.1	
Niobrara river	B. T. Moore's R. 11-28-53	T. J. O'Keefe	Sept. 6, 1900	10.80	
Niobrara river	McLaughlin's 10-28-52	A. B. McCoskey	Oct. 25, 1897	16.79	
Niobrara river	H. of proposed Golden D. 13-31-4	Engrs. in employ of	April 26, 1897	190.	
Niobrara river	½ mile below proposed Golden D.	Golden Irr. D.	April 27, 1897	195.	
Niobrara river	Dunlap	A. B. McCoskey	May 20, 1898	75.4	
Niobrara river	Dunlap	A. B. McCoskey	Aug. 7, 1900	14.12	
Niobrara river	Sec. 22-29-48	A. B. McCoskey	May 31, 1898	55.5	
Niobrara river	Bridge N. of Ainsworth	C. B. Channel	June 13, 1898	958.6	
Niobrara river	Fort Niobrara	Glen E. Smith	April 24, 1898	987.	
Niobrara river	Fort Niobrara	Glen E. Smith	May 13, 1898	1588.	
Niobrara river	Fort Niobrara	Glen E. Smith	May 24, 1898	11.56	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Niobrara river	Fort Niobrara	Glen E. Smith	June 12, 1898	876.	
Niobrara river	Fort Niobrara	Glen E. Smith	July 27, 1898	690.	
Niobrara river	Fort Niobrara	Glen E. Smith	Sept. 7, 1898	748.	
Niobrara river	Fort Niobrara	Glen E. Smith	Sept. 26, 1898	840.	
Niobrara river	Fort Niobrara	Glen E. Smith	Oct. 16, 1898	867.	
Niobrara river	Fort Niobrara	Glen E. Smith	Oct. 29, 1898	960.	
Niobrara river	Fort Niobrara	Glen E. Smith	Nov. 17, 1898	960.	
Niobrara river	Mouth of Whistle Creek	C. B. Channel	May 28, 1899	33.04	
Niobrara river	Hd. Hatch and Cross D. 25-29-50	C. B. Channel	May 29, 1898	47.94	
Niobrara river	Cook's Ranch 6-28-55	A. B. McCoskey	Aug. 3, 1899	13.87	
Niobrara river	Cook's Ranch 6-28-55	A. B. McCoskey	Aug. 16, 1899	10.65	
Niobrara river	Head of Mirage Canal 26-29-48	McCoskey & O'Keefe	Aug. 7, 1900	14.50	
Niobrara river	Head of Hay Spr. C. 29-29-47	McCoskey & O'Keefe	Aug. 7, 1900	4.03	
Niobrara river	Niobrara	O. V. P. Stout	April 6, 1901	1591.	
Niobrara river	Niobrara	O. V. P. Stout	April 7, 1901	2115.	
Niobrara river	Valentine	C. B. Channel	May 12, 1901	628.	
Niobrara river	Valentine	O. V. P. Stout	June 26, 1901	724.	
Niobrara river	Valentine	O. V. P. Stout	Aug. 1, 1901	751.	
Niobrara river	Niobrara	O. V. P. Stout	Aug. 27, 1901	990.	
Niobrara river	Valentine	B. E. Forbes	Nov. 14, 1901	821.	
Niobrara river	Niobrara	J. C. Stevens	May 11, 1902	1637.	
Niobrara river	W. line sec. 26-29-46	A. Dobson	June 3, 1902	25.4	
Niobrara river	Niobrara	J. C. Stevens	July 6, 1902	2021.	
Niobrara river	Niobrara	J. C. Stevens	July 25, 1902	1401.	
Niobrara river	Niobrara	J. C. Stevens	Aug. 21, 1902	1106.	
Niobrara river	Niobrara	J. C. Stevens	Sept. 28, 1902	2201.	
Niobrara river	Sec. 31-33-23	J. C. Stevens	Aug. 13, 1904	752.	
Niobrara river	Secs. 26 and 27-34-26	J. C. Stevens	Aug. 14, 1904	679.	
Niobrara river	Sec. 10-33-34	J. C. Stevens	Aug. 18, 1904	221.	
Niobrara river	Secs. 11 and 12-33-36	J. C. Stevens	Aug. 20, 1904	200.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Niobrara river	Sec. 27-33-37	J. C. Stevens	Aug. 20,1904	180.	
Niobrara river	Secs. 34 and 35-33-38	J. C. Stevens	Aug. 21, 1904	117.	
Niobrara river	Sec. 21-34-42	J. C. Stevens	Aug. 22, 1904	54.	
Niobrara river	Sec. 18-30-44	J. C. Stevens	Aug. 23, 1904	27.	
Niobrara river	Spencer	G. W. Bates	May 15, 1908	2832.	
Niobrara river	Spencer	G. W. Bates	May 16, 1908	2834.	
Niobrara river	Spencer	A. A. Dobson	June 11, 1908	2590.	
Niobrara river	Spencer	A. A. Dobson	July 23, 1908	1283.	
Niobrara river	Spencer	A. A. Dobson	Sept. 9, 1908	867.	
Niobrara river	Niobrara	D. D. Price	Aug. 26, 1910	1035.7	
Niobrara river	Niobrara	A. A. Dobson	Oct. 9, 1910	1000.4	
Niobrara river	Niobrara	D. D. Price	Aug. 26, 1910	1035.	
Niobrara river	Niobrara	A. A. Dobson	Oct. 9, 1910	1035.	
Niobrara river	Niobrara	A. A. Dobson	Nov. 26, 1910	1647.	
Newman creek	Head Newman D. 17-33-24	C. B. Channel	June 9, 1899	0.73	
Oak creek	3 miles N. W. of Lincoln	McCoskey & Pekens	May 10, 1899	27.46	
Oak creek	3 miles N. W. of Lincoln	McCoskey & Johnson	July 3, 1899	703.25	Swollen by heavy rains
Oak creek	Dannebrog	Glen E. Smith	May 19, 1899	5.	
Otter creek	Sec. 9-15-40	H. O. Smith	Aug. 18, 1902	18.3	
Platte river	Columbus	O. V. P. Stout	Sept. 17, 1894	Dry	
Platte river	Columbus	O. V. P. Stout	Oct. 6, 1894	Dry	
Platte river	Fremont	O. V. P. Stout	Aug. 14, 1894	1420.	
Platte river	Fremont	A. Rosewater	Late Aug. 1894	1209.	
Platte river	Fremont	O. V. P. Stout	Aug. 13, 1900	2300.	
Platte river	Grand Island	O. V. P. Stout	Sept. 7, 1896	Dry	
Platte river	Grand Island	O. V. P. Stout	Sept. 15, 1898	12.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Platte river	Central City	Glen E. Smith	Sept. 8, 1899	50.	
Platte river	Lexington	H. O. Smith	May 14, 1901	5804.	
Platte river	Lexington	H. O. Smith	May 24, 1901	10167.	
Platte river	Lexington	H. O. Smith	June 5, 1901	9888.	
Platte river	Lexington	H. O. Smith	June 18, 1901	12406.	
Platte river	Lexington	H. O. Smith	July 8, 1901	2501.	
Platte river	Lexington	H. O. Smith	July 20, 1901	Dry	
Platte river	Kearney	H. O. Smith	July 22, 1901	Dry	
Platte river	Fremont	H. O. Smith	Aug. 11, 1901	1152.	
Platte river	Kearney	J. C. Stevens	Sept. 7, 1902	Dry	
Platte river	South Bend	J. C. Stevens	May 5, 1903	13179.0	
Platte river	Ashland	J. C. Stevens	Aug. 31, 1903	41270.0	
Platte river	Grand Island	J. C. Stevens	Oct. 1, 1903	Dry	
Platte river	Valley	J. C. Stevens	May 7, 1904	3976.0	
Platte river	Grand Island	R. D. Hubbard	Aug. 28, 1904	0.0	
Platte river	Sec. 29-12-26	H. O. Smith	Sept. 13, 1904	36.0	Head Gothenburg canal
Platte river	Fremont	G. W. Bates	April 20, 1908	4542.	
Platte river	Columbus	A. A. Dobson	July 25, 1910	river dry	
Platte river	Columbus	A. A. Dobson	Oct. 1, 1910	est. 10.	
Platte river	Columbus	A. A. Dobson	Nov. 19, 1910	river dry	
Platte river	Columbus	A. A. Dobson	Nov. 25, 1910	est. 28.	Water standing in frozen pools
Platte river, north	Douglas, Wyo	State Eng'r Wyo	June 3, 1891	10130.	
Platte river, north	Douglas, Wyo	State Eng'r Wyo	Dec. 4, 1891	807.	
Platte river, north	Douglas, Wyo	State Eng'r Wyo	Nov. 5, 1892	595.	
Platte river, north	Fairbanks, Wyo	State Eng'r Wyo	Oct. 13, 1891	579.	
Platte river, north	North Platte	U. S. Geol. Sur	Sept. 14, 1892	770.	
Platte river, north	North Platte	U. S. Geol. Sur	Nov. 2, 1892	1070.	
Platte river, north	North Platte	U. S. Geol. Sur	Nov. 22, 1892	1370.	
Platte river, north	North Platte	A. B. McCoskey	Sept. 2, 1898	Est. 12.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Platte river, north	Camp Clark	U. S. Geol. Sur	May 29, 1891	8075.	
Platte river, north	Camp Clark	U. S. Geol. Sur	Oct. 8, 1892	335.	
Platte river, north	Lewellen Bridge	A. B. McCoskey	Sept. 1, 1898	Est 5.	
Platte river, north	Lewellen Bridge	H. H. Pickens	May 22, 1899	15901.88	
Platte river, north	Gering Bridge	O. V. P. Stout	June 1, 1901	10360.	
Platte river, north	Camp Clarke	R. H. Willis	June 27, 1901	5800.	
Platte river, north	Camp Clarke	R. H. Willis	July 10, 1901	2900.	
Platte river, north	Bridgeport	R. H. Willis	July 27, 1901	800.	
Platte river, north	Sec. 18-14-33	H. O. Smith	July 28, 1901	394.	
Platte river, north	Sec. 18-14-33	E. F. Seedberger	Aug. 7, 1901	150.	
Platte river, north	Lewellen	H. O. Smith	Aug. 7, 1901	100.	
Platte river, north	Lewellen	H. O. Smith	Aug. 8, 1901	758.	
Platte river, north	Bridgeport	R. H. Willis	Aug. 28, 1901	125.	
Platte river, north	Bridgeport	F. Dobson	June 3, 1902	4501.	
Platte river, north	Bridgeport	F. Dobson	June 14, 1902	5433.	
Platte river, north	Bridgeport	R. H. Willis	July 10, 1902	2084.	
Platte river, north	Bridgeport	F. Dobson	July 19, 1902	835.	
Platte river, north	Bridgeport	F. Dobson	Aug. 9, 1902	190.	
Platte river, north	Sec. 3-23-58	F. Dobson	Aug. 26, 1902	31.5	
Platte river, north	Sec. 3-23-58	R. H. Willis	Aug. 28, 1902	31.	
Platte river, north	Sec. 3-23-58	R. H. Willis	Sept. 8, 1902	8.	
Platte river, north	Sec. 3-23-58	R. H. Willis	Sept. 22, 1902	630.	
Platte river, north	Sutherland	H. O. Smith	Aug. 27, 1904	26.7	Head North Platte D.
Platte river, north	Sec. 3-23-58	H. O. Smith	Aug. 28, 1904	29.6	Head Paxton & Smith D.
Platte river, north	Lewellen	H. O. Smith	Aug. 30, 1904	60.0	
Platte river, north	Whalen, Wyo	U. S. R. S	July 15, 1910	783.00	
Platte river, north	Near Lower P. & F. Headgate, Wyo.	U. S. R. S	July 19, 1910	711.00	
Platte river, north	Henry Bridge	U. S. R. S	July 20, 1910	526.00	
Platte river, north	Morrill Bridge	U. S. R. S	July 21, 1910	325.00	
Platte river, north	Bridgeport Bridge	U. S. R. S	Aug. 10, 1910	Est 30.00	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Platte river, north	Henry wagon bridge	U. S. R. S.	Aug. 19, 1910	365.00	
Platte river, north	Morrill wagon bridge	U. S. R. S.	Aug. 20, 1910	105.00	
Platte river, north	Mitchell wagon bridge	U. S. R. S.	Aug. 22, 1910	72.00	
Platte river, north	Bridge west of Scottsbluff	U. S. R. S.	Aug. 22, 1910	45.00	
Platte river, north	Bayard bridge	U. S. R. S.	Aug. 24, 1910	19.00	
Platte river, north	At Camp Clarke bridge	U. S. R. S.	Aug. 25, 1910	7.00	
Platte river, north	At Bridgeport bridge	U. S. R. S.	Aug. 25, 1910	5.00	
Platte river, north	At Bayard Bridge	R. H. Willis	Aug. 23, 1910	22.29	
Platte river, north	At Keystone bridge	R. H. Willis	Sept. 1, 1910	54.96	
Platte river, north	At Paxton bringe	R. H. Willis	Sept. 2, 1910	55.10	
Platte river, north	At Lewellen bridge	R. H. Willis	Sept. 2, 1910	76.59	
North Platte river	North Platte	A. A. Dobson	Oct. 15, 1910	228.	North Platte practically dry from June 20 to Sept. 5.
North Platte river	North Platte	A. A. Dobson	Nov. 19, 1910	963.	
Platte river, south	Julesburg, Colorado	U. S. Geol. Sur	Oct. ...., 1892	653.	
Platte river, south	North Platte	U. S. Geol. Sur	Early Nov, '92	450.	
Platte river, south	North Platte	U. S. Geol. Sur	Late Nov. '92	645.	
Platte river, south	North Platte	O. V. P. Stout	June 29, 1896	0.0	
Platte river, south	North Platte	Glen E. Smith	April 19, 1899	883.	
Platte river, south	North Platte	Glen E. Smith	May 6, 1899	86.6	
Platte river, south	North Platte	Glen E. Smith	May 22, 1899	88.	
Platte river, south	North Platte	Glen E. Smith	June 6, 1899	Dry	
Platte river, south	North Platte	Glen E. Smith	June 19, 1899	Dry	
Platte river, south	Sutherland	H. H. Pickens	May 23, 1899	50.	
Platte river, south	North Platte	O. V. P. Stout	July 17, 1901	Dry	
Platte river, south	North Platte	H. O. Smith	April 9, 1902	Dry	
Platte river, south	North Platte	H. O. Smith	May 20, 1902	200.	
Platte river, south	Big Springs	J. C. Stevens	Sep. 5, 1902	Dry	
Platte river, south	Big Springs	H. O. Smith	Sep. 23, 1902	173.	
Platte river, south	Julesburg, Colorado	J. C. Stevens	April 1, 1903	1145.0	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Platte river, south	North Platte	J. C. Stevens	April 2, 1903	909.0	
Platte river, south	North Platte	J. C. Stevens	May 8, 1903	50.0	
Platte river, south	Big Springs	J. C. Stevens	May 9, 1903	20.0	
Platte river, south	Julesburg, Colo	J. C. Stevens	May 9, 1903	25.0	
Platte river, south	North Platte	J. C. Stevens	June 29, 1903	0.0	
Platte river, south	Big Springs	J. C. Stevens	July 8, 1903	1.0	
Platte river, south	Big Springs	J. C. Stevens	July 28, 1903	2.0	
Platte river, south	North Platte	J. C. Stevens	Mar. 26,1904	0.0	
Platte river, south	Ogalalla	A. Dobson	April 17, 1904	0.0	
Platte river, south	North Platte	R. D. Hubbard	May 27, 1904	11.2	
Platte river, south	Julesburg, Colo	J. C. Stevens	May 27, 1904	130.0	Estimated
Platte river, south	North Platte	J. C. Stevens	June 3, 1904	2231.0	
Platte river, south	Arnold	A. Dobson	Dec. 9, 1904	38.3	
Platte river, south	North Platte	G. W. Bates	Mar. 31, 1905	382.0	
Platte river, south	North Platte	H. C. Gardner	June 14, 1905	7717.0	
Platte river, south	North Platte	H. C. Gardner	July 13, 1905	170.0	
Platte river, south	Ogalalla	H. O. Smith	Aug. 30, 1905	34.0	
Platte river, south	North Platte	A. Dobson	June 2, 1908	94.8	
Platte river, south	North Platte	Geo. W. Bates	Mar. 23, 1909	814.	
Ponca creek	Lynch	G. W. Bates	May 16, 1908	20.1	
Ponca creek	Lynch	Arthur Dobson	Sept. 9, 1908	10.1	
Ponca creek	Near Spencer	Arthur Dobson	Sept. 9, 1908	6.5	
Prairie creek	Sec. 26-16-5	A. Dobson	Nov. 21, 1901	8.4	
Paxton Springs	Sec. 29-15-27	H. O. Smith	May 7, 1902	0.8	
Pawnee creek	Above Plummer's D. 19-13-27	C. B. Channel	April 25, 1898	4.94	
Pawnee creek	Above Holcomb's D. 12-13-28	C. B. Channel	April 25, 1898	4.73	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Pine creek	Sec. 33-30-44	A. B. McCoskey	June 1, 1898	24.5	
Pine creek	Sec. 22-30-40	J. C. Stevens	Aug. 23, 1904	12.8	
Pine creek	Sec. 22-30-44	J. C. Stevens	Aug. 23, 1904	27.0	
Plum creek	At mouth 13-32-22	C. B. Channel	June 13, 1898	101.13	
Plum creek	Sec. 35-32-23	C. B. Channel	June 10, 1899	81.07	
Plum creek	Hoef's mill, sec. 27-31-24	A. B. McCoskey	Oct. 26, 1900	28.77	
Pole creek	Sec. 28-32-40	A. B. McCoskey	June 1, 1898	Est2.	
Pumpkinseed creek	Sec. 30-19-50	R. H. Willis	May 29, 1903	7.9	Court House Rock D.
Pumpkinseed creek	Lot 1, sec. 7-19-55	R. H. Willis	July 16, 1903	1.3	
Pumpkinseed creek	Sec. 30-19-50	R. H. Willis	July 17, 1903	3.4	
Pumpkinseed creek	Secs. 25 and 30-19-50	R. H. Willis	July 17, 1903	4.4	
Pumpkinseed creek	Sec. 25-19-51	R. H. Willis	July 17, 1903	2.7	
Pumpkinseed creek	Sec. 25-19-51	R. H. Willis	July 17, 1903	0.6	
Pumpkinseed creek	N. E. cor. 33-19-52	H. O. Smith	June 16, 1904	11.43	
Pumpkinseed creek	Round House Rock	H. O. Smith	Oct. 25, 1905	12.0	
Pumpkinseed creek	One mile from mouth	H. O. Smith	Oct. 28, 1905	22.0	
Pumpkinseed creek	Bridgeport	R. H. Willis	June 3, 1907	30.5	
Red Bird creek	Sec. 11-32-10	G. W. Bates	May 16, 1908	44.8	
Republican river	Culbertson	U. S. Geol. Sur	Nov. 25, 1892	209.	
Republican river	Oxford	O. V. P. Stout	June 3, 1895	16000.	
Republican river	Oxford	O. V. P. Stout	Sept. 12, 1895	55.	
Republican river	Culbertson	G. E. Crownover	May 16, 1896	78.4	
Republican river	Oxford	G. E. Crownover	May 17, 1896	255.	
Republican river	Oxford	O. V. P. Stout	June 15, 1896	109.	
Republican river	Sec. 24-1-39	O. W. P. Stout	June 16, 1896	88.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Cubic Feet Per. Sec. Discharge	Remarks
Republican river	Haigler	E. T. Youngfelt	June 16, 1896	6.0	
Republican river	Benkelman	O. V. P. Stout	June 16, 1896	29.0	
Republican river	Haigler	O. V. P. Stout	June 17, 1896	8.2	
Republican river	Haigler	E. T. Youngfelt	June 17, 1896	14.9	
Republican river	Culbertson	O. V. P. Stout	June 19, -896	6.5	
Republican river	Haigler	O. V. P. Stout	July 16, 1896	9.8	
Republican river	Haigler	O. V. P. Stout	Aug. 25, 1896	10.0	
Republican river	Sec. 19-1-39	O. V. P. Stout	Aug. 25, 1896	5.0	
Republican river	Benkelman	O. V. P. Stout	Aug. 25, 1896	5.0	
Republican river	Culbertson	O. V. P. Stout	Sept. 10, 1896	0.0	
Republican river	Haigler	O. V. P. Stout	Sept. 18, 1896	24.5	
Republican river	McCook	Adna Dobson	April 13, 1897	745.	
Republican river	McCook	O. V. P. Stout	July 19, 1897	Dry	
Republican river	Oxford	O. V. P. Stout	June 24, 1898	385.	
Republican river	Culbertson	O. V. P. Stout	June 25, 1898	91.3	
Republican river	Culbertson	O. V. P. Stout	May 29, 1899	Dry	
Republican river	Oxford	Glen E. Smith	Sept. 6, 1899	Dry	
Republican river	Culbertson	A. B. McCoskey	Sept. 19, 1899	Dry	
Republican river	Orleans	A. B. McCoskey	Sept. 6, 1899	0.3	
Republican river	Head of Meeker Canal	E. D. Johnson	Sept. 19, 1899	17.5	
Republican river	McCook	A. B. McCoskey	Sept. 19, 1899	12.3	
Republican river	Cambridge	Adna Dobson	June 28, 1900	7.2	
Republican river	Oxford	E. D. Johnson	July 18, 1900	14.3	
Republican river	Edison	E. D. Johnson	July 18, 1900	16.6	
Republican river	McCook	A. B. McCoskey	July 27, 1900	104.	
Republican river	Benkelman	O. V. P. Stout	Aug. 18, 1900	41.7	
Republican river	Sec. 22-3-31	H. O. Smith	June 22, 1901	Dry	
Republican river	Sec. 22-3-31	O. V. P. Stout	July 20, 1901	Dry	
Republican river	McCook	O. V. P. Stout	July 20, 1901	Pools	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Republican river	Oxford	H. O. Smith	July 22, 1901	Pools	
Republican river	Culbertson	F. Dobson	April 25, 1902	204.	
Republican river	Ives	F. Dobson	April 26, 1902	39.	
Republican river	Stratton	F. Dobson	April 26, 1902	.85	
Republican river	Haigler	F. Dobson	April 26, 1902	52.3	
Republican river	Oxford	F. Dobson	April 27, 1902	255.	
Republican river	McCook	F. Dobson	April 27, 1902	137.	
Republican river	Franklin	H. O. Smith	June 10, 1902	743.	
Republican river	Benkelman	H. O. Smith	June 12, 1902	35.	
Republican river	Oxford	J. C. Stevens	Sept. 17, 1902	37.	
Republican river	McCook	J. C. Stevens	Sept. 17, 1902	29.	
Republican river	Benkelman	J. C. Stevens	Sept. 17, 1902	45.	
Republican river	Culbertson	J. C. Stevens	Sept. 18, 1902	41.	
Republican river	Superior	J. C. Stevens	May 19, 1903	2198.	
Republican river	Superior	J. C. Stevens	May 19, 1903	245.	
Republican river	Oxford	J. C. Stevens	May 19, 1903	556.	
Republican river	Haigler	J. C. Stevens	May 20, 1903	16.	
Republican river	Wray, Colo	J. C. Stevens	May 21, 1903	35.	
Republican river	Superior	J. C. Stevens	June 4, 1903	2896.	
Republican river	Mill Race	J. C. Stevens	June 4, 1903	109.	
Republican river	Warwick, Kan	J. C. Stevens	June 5, 1903	741.	
Republican river	Superior	J. C. Stevens	June 23, 1903	1008.	
Republican river	Superior	J. C. Stevens	July 14, 1903	7670.	
Republican river	Culbertson	H. O. Smith	Aug. 29, 1903	.0	
Republican river	Superior	J. C. Stevens	Sept. 11, 1903	951.	
Republican river	McCook	James A. Green	June 30, 1904	443.	
Republican river	Naponee	James A. Green	July 7, 1904	1290.	
Republican, north fork	Cambridge	G. W. Bates	Mar. 29, 1909	439.	
Republican, north fork	Haigler	O. V. P. Stout	June 7, 1896	6.1	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Republican, north fork	Benkelman	J. C. Stevens	April 3, 1904	112.	
Republican, north fork	Benkelman	Adna Dobson	April 12, 1904	31.78	
Republican, north fork	Bostwick	J. C. Stevens	June 6, 1904	1289.	
Republican, north fork	Bostwick	J. C. Stevens	June 15, 1904	900.00	
Republican, north fork	Benkelman	J. C. Stevens	June 16, 1904	87.	
Republican, north fork	Bostwick	J. C. Stevens	July 29, 1904	2379.	
Republican, south fork	Benkelman	J. C. Stevens	Aug. 18, 1900	3.	
Republican, south fork	State Line	H. O. Smith	June 12, 1902	32.8	
Rock creek	B. & M. Ry. Crossing near Ives	O. V. P. Stout	June 16, 1896	12.16	Dundy county
Rock creek	B. & M. Ry. Crossing near Ives	E. T. Youngfelt	Aug. 25, 1896	12.20	
Rock creek	Sec. 21-1-39	W. A. Channel	Nov. 22, 1900	8.8	Dundy county
Rock creek	Ives	F. Dobson	April 26, 1902	.99	Dundy county
Rock Springs creek	\bove Moore's D. 12-32-22	C. B. Channel	June 14, 1898	2.37	Keya Paha county
Rock creek	Sec. 4-31-18	C. B. Channel	June 20, 1898	2.8	Rock county
Rock creek	Sec. 28-32-18	C. B. Channel	June 20, 1898	4.39	Rock county
Rush creek	Sec. 33-31-42	J. C. Stevens	Aug. 22, 1904	.6	
Salt creek	Lincoln	Adna Dobson	Aug. 17, 1900	5807.	Flood
Salt creek	Lincoln	O. V. P. Stout	May 20, 1901	44.	
Salt creek	Lincoln	Adna Dobson	July 7, 1902	5438.	Flood
Salt creek	Lincoln	Adna Dobson	July 10, 1902	10136.	Flood
Salt creek	Lincoln	B. E. Forbes	Oct. 1, 1902	92.4	
Salt creek	Ashland	J. C. Stevens	Aug. 31, 1903	217.2	
Salt creek	N. W. ¼ sec. 9-14-36	H. O. Smith	Oct. 2, 1908	4.00	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Sandy creek	Sec. 3-31-15	C. B. Channel	June 17, 1899	8.28	
Shobe branch	At Lamb's 32-33-11	C. B. Channel	June 20, 1899	1.66	
Sand creek	Sec. 14-15-40	H. O. Smith	Aug. 19, 1902	1.3	
Sand creek	Sec. 33-15	G. W. Bates	April 27, 1905	60.0	Flood
Sappa creek	Stamford	J. A. Green	July 6, 1904	37.0	
Shell creek	Platte Center	O. V. P. Stout	July 21, 1896	47.4	
Shell creek	Schuyler	O. V. P. Stout	July 24, 1896	26.3	
Schagle creek	Sec. 24-33-28	G. W. Bates	May 9, 1905	22.0	
Silver creek	Memphis	F. S. Dobson	Feb. 28, 1906	8.1	
Snake creek	4 miles east of sec. 2-30-31	Engs. Goldn. I. D.	Mar. 16, 1897	222.0	
Snake creek	Sec. 2-30-31	Engs. Goldn. I. D.	Mar. 22, 1897	250.0	
Snake creek	Sec. 2-30-31	Engs. Goldn. I. D.	April 13, 1897	225.0	
Snake creek	4 mils east sec. 2-30-31	Engs. Goldn. I. D.	April 13, 1897	240.0	
Snake creek	At mouth	O. V. P. Stout	July 23, 1897	280.0	
Snake creek	At mouth of Boardman Creek	O. V. P. Stout	July 24, 1897	215.0	
Snake creek	N. E. ¼ sec. 15-32-30	J. C. Stevens	Aug. 16, 1904	279.0	
Snake creek	N. E. ¼ sec. 10-30-31	J. C. Stevens	Aug. 16, 1904	204.0	
Snake creek	S. E. ¼ sec. 2-30-32	J. C. Stevens	Aug. 17, 1904	194.0	
Snake creek	Sec. 16-31-30	J. C. Stevens	Oct. 31, 1904	245.0	
Soldier creek	5 miles above Ft. Robinson	J. C. Stevens	Aug. 14, 1897	2.28	
Soldier creek	Ft. Robinson	E. T. Youngfelt	June 25, 1896	3.23	
Soldier creek	Ft. Robinson	Glen E. Smith	April 27, 1898	3.67	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
Soldier creek	Ft. Robinson	T. J. O'Keefe	Aug. 22, 1900	1.8	
Soldier creek	Ft. Robinson	T. J. O'Keefe	Sept. 22, 1900	2.5	
Sowbelly creek	Ab. Head of Schaefer D. 7-32-55	A. B. McCoskey	July 16, 1897	1.45	
Sowbelly creek	Bodarc P. O. 5-32-55	A. B. McCoskey	July 14, 1897	1.54	
Sowbelly creek	Bridge S. of Gilcrist	A. B. McCoskey	July 24, 1897	.08	
Sowbelly creek	Sec. 19-33-55	A. B. McCoskey	Sept. 30, 1898	Est1.00	
Sowbelly creek	N. line sec. 19-32-55	A. B. McCoskey	Aug. 1, 1899	1.37	
Sowbelly creek	Head of Nutto's D. 24-32-56	T. J. O'Keefe	Sept. 24, 1900	3.15	
Squaw creek	Patrick Dunn's 15-33-57	A. B. McCoskey	July 22, 1897	.13	Sioux county
Squaw creek	Sec. 1-31-52	E. T. Youngfelt	June 24, 1896	.66	Dawes county
Squaw creek	Duncan's sec. 28-31-51	C. B. Channel	May 11, 1899	1.21	Dawes county
Squaw creek	Stetson's sec. 18-31-51	C. B. Channel	May 11, 1899	.33	Dawes county
Squaw creek	Head Daniels and Stetson D. 19-31-51	C. B. Channel	May 11, 1899	.79	Dawes county
Squaw creek	Head Cooper Ditch 36-32-52	C. B. Channel	May 12, 1899	.72	Dawes county
Skunk creek	A. Miller's D. 1-14-37	C. B. Channel	May 18, 1898	2.2	
Skunk creek	N. W. ¼ sec. 6-14-36	H. O. Smith	Oct. 2, 1908	6.0	
Spring creek	Sec. 28-16-41	H. O. Smith	May 23, 1898	4.5	
Spring creek	Sec. 29-16-41	H. O. Smith	May 23, 1898	6.7	
Spring creek	At Mills P. O. 9-34-18	H. O. Smith	June 16, 1898	7.30	Tributary to Keya Paha
Spring creek	Head Townsend Ditch 35-34-19	H. O. Smith	June 13, 1899	5.18	
Spring creek	Head Opperman Ditch 29-32-20	H. O. Smith	June 15, 1899	.31	Tributary to Niobrara
Spring creek	At mouth	H. O. Smith	May 16, 1899	.29	Trib. to Little Cottonwood
Spring creek	Sec. 25-10-31	H. O. Smith	July 11, 1901	4.4	
Spring creek	Sec. 30-10-21	H. O. Smith	Aug. 18, 1902	1.0	
Spring creek	Sec. 36-14-47	H. O. Smith	April 23, 1902	2.4	
Spring creek	Sec. 29-15-37	C. B. Channel	May 19, 1898	1.1	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
Spring creek	Sec. 30-15-37	H. O. Smith	May 7, 1902	2.5	
Stinking Water creek	Palisade	O. V. P. Stout	June 19, 1896	12.24	Above Palisade mill
Stinking Water creek	Palisade	E. T. Youngfelt	Sept. 17, 1896	20.0	Below Palisade mill
Stinking Water creek	Palisade	Glen E. Smith	July 7, 1898	23.6	
Stinking Water creek	Palisade	James A. Green	June 30, 1904	79.0	
Stinking Water creek	Palisade	James A. Green	June 30, 1904	63.0	
Trunk Butte creek	North line sec. 36-33-50	C. B. Channel	May 17, 1899	1.45	
Trunk Butte creek	North line sec. 36-33-50	A. B. McCoskey	Aug. 18, 1899	0.34	
Turkey creek	Sec. 30-4-21	E. D. Johnson	Sept. 6, 1899	2.26	Furnas county
Turkey creek	Naponee	O. V. P. Stout	Aug. 24, 1900	7.	Franklin county
Turkey creek	Naponee	Jas. A. Green	July 7, 1904	31.3	
Thompson creek	Sec. 4-2-13	E. D. Johnson	Sept. 8, 1899	3.45	
Union creek	Madison	O. V. P. Stout	July 23, 1896	38.3	
Victoria creek	Sec. 1-19-21	Adna Dobson	July 28, 1896	5.2	
Victoria creek	Gates Br.	Adna Dobson	Oct. 11, 1904	2.6	
Verdigre creek	At mouth 6-31-6	O. V. P. Stout	April 7, 1901	105.	
Verdigre creek	Niobrara	G. W. Bates	May 17, 1908	137.5	
Verdigre creek	Verdigris	Arthur Dobson	Sept. 9, 1908	56.0	
Wahoo creek	Ashland	F. S. Dobson	May 16, 1907	63.5	
Wahoo creek	Ashland	F. S. Dobson	May 16, 1907	71.7	
White Horse creek	Above Lamplugh Lk. 5-14-30	C. B. Channel	May 3, 1898	2.33	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Cubic Feet Discharge Per Sec.	Remarks
White Tail creek	Ab. White Tail Can. 22-15-38	C. B. Channel	May 20, 1898	24.67	
White Tail creek	Above Reed Ditch 15-15-38	C. B. Channel	May 20, 1898	24.62	
White Tail creek	Above Holloway Can. 36-15-38	C. B. Channel	May 20, 1898	26.06	
White Tail creek	S. line 36-15-38	H. O. Smith	May 7, 1902	24.07	
White Tail creek	N. line 36-15-38	H. O. Smith	May 7, 1902	36.0	
White Tail creek	N. E. ¼ sec. 26-15-38	H. O. Smith	May 7, 1902	33.0	
White Tail creek	Keystone headgate	R. H. Willis	Aug. 16, 1910	23.61	
White Tail creek	South R. R. bridge	R. H. Willis	Sept. 1, 1910	22.63	
Weeping Water creek	Nehawka	G. W. Bates	Mar. 11, 1908	38.3	
Willow creek	S.W. ¼ 17-14-35	H. O. Smith	Oct. 2, 1908	4.0	
West Middle creek	Above Allen's Ditch 29-33-23	H. O. Smith	June 11, 1898	1.84	
West Middle creek	N. E. of N. W. 29-33-23	H. O. Smith	June 11, 1898	.87	
White Clay creek	At Brook's 2-33-45	H. O. Smith	May 20, 1899	5.27	Sheridan county
White Clay creek	Sec. 32-15-51	C. B. Channel	May 11, 1899	0.72	Dawes county
White Clay creek	Sec. 1-31-52	T. J. O'Keefe	Aug. 23, 1900	1.50	
White Clay creek	Sec. 36-35-45	G. W. Bates	June 19, 1904	11.0	
Wood river	Glenwood	C. B. Channel	Aug. 8, 1898	5.82	
Wood river	Sec. 12-9-16	J. C. Stevens	Sept. 7, 1902	27.3	
Wooden Spring branch	Sec. 25-35-29	C. B. Channel	June 13, 1899	2.14	
White river	Sec. 23-31-53	E. T. Youngfelt	June 24, 1896	23.3	
White river	Crawford	E. T. Youngfelt	June 24, 1896	30.7	
White river	Whitney	E. T. Youngfelt	June 25, 1896	27.2	
White river	Whitney	A. B. McCoskey	Sept. 21, 1898	Est 8.	

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per. Sec.	Remarks
White river	1 mile below mouth Kyle ck	A. B. McCoskey	Aug. 11, 1897	6.6	
White river	R. R. bridge above glen	A. B. McCoskey	Aug. 13. 1897	5.7	
White river	Head of Crawford Ditch	Stout & McCoskey	Aug. 14, 1897	11.9	
White river	Bridge below Crawford	A. B. McCoskey	Aug. 14, 1897	8. (*19.9	
White river	Bridge below Crawford	A. B. McCoskey	Sept. 9, 1897	6.96	
White river	Head of Crawford Ditch	A. B. McCoskey	Sept. 20, 1897	10.44	
White river	Bridge below Crawford	A. B. McCoskey	Sept. 20, 1897	7.53 (*17.97	
White river	Head of Crawford Ditch	A. B. McCoskey	Oct. 18, 1897	15.25	
White river	Bridge below Crawford	A. B. McCoskey	Oct. 18, 1897	10.13 (*25.38	
White river	Head of Crawford Ditch	A. B. McCoskey	Nov. 5, 1897	15.87	
White river	Bridge below Crawford	A. B. McCoskey	Nov. 5, 1897	10.58 (*26.45	
White river	Head of Crawford Ditch	Glen E. Smith	April 27, 1898	18.3	
White river	Bridge below Crawford	Glen E. Smith	April 27, 1898	11.1 (*29.4	
White river	Bridge below Crawford	A. B. McCoskey	Sept. 20, 1898	7.7	
White river	Head of Crawford Ditch	A. B. McCoskey	Sept. 24, 1897	13.65	
White river	Whitney	C. B. Channel	May 15, 1899	10.37	
White river	Below Crawford	A. B. McCoskey	May 17, 1899	18.68	
White river	Force's Ranch 31-31-54	A. B. McCoskey	May 19, 1899	4.41	
White river	Head of Crawford Ditch	A. B. McCoskey	May 19, 1899	16.70	
White river	Bridge below Crawford	A. B. McCoskey	May 19, 1899	18.05 (*35.75	
White river	Bridge below Crawford	A. B. McCoskey	May 22, 1899	45.89	Swollen by heavy rains
White river	Bridge below Crawford	A. B. McCoskey	Aug. 19, 1899	16.20	
White river	At Andrew's Siding	C. B. Channel	May 26, 1899	4.93	
White river	Head of Crawford Ditch	McCoskey & O'Keefe	July 16, 1900	15.48	Ditch not diverting any water
White river	Bridge below Crawford	McCoskey & O'Keefe	July 16, 1900	28.29	
White river	Head of Crawford Dam	T. J. O'Keefe	Aug. 22, 1900	14.00	
White river	Bridge below Crawford	T. J. O'Keefe	Sept. 1, 1900	13.5	
White river	Whitney	T. J. O'Keefe	Sept. 3, 1900	5.	
White river	Crawford	B. E. Forbes	July 11, 1901	11.5	
White river	Sec. 23-31-53	C. Spearman	July 24, 1901	16.3	

*When these measurements were taken the water was all diverted into Crawford ditch. The gaging 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.

SUMMARY OF ALL STREAM MEASUREMENTS—(Continued).

Stream	Locality	Hydrographer	Date	Discharge Cubic Feet Per Sec.	Remarks
White river	Sec. 34-32-52	A. Dobson	June 2, 1902	64.9	
White river	Sec. 25-32-52	B. E. Forbes	Aug. 20, 1902	10.4	
White river	Crawford	J. C. Stevens	April 27, 1903	31.0	
White river	Crawford	J. C. Stevens	May 27, 1903	19.0	
White river	Crawford	Page T. Francis	April 20, 1905	21.5	
White river	Crawford	Page T. Francis	May 4, 1905	51.5	
White river	Crawford	Page T. Francis	May 15, 1905	27.6	
White river	Crawford	Page T. Francis	May 29, 1905	25.2	
White river	Crawford	Page T. Francis	June 3, 1905	34.5	
White river	Crawford	Page T. Francis	June 10, 1905	21.5	
White river	Crawford	Page T. Francis	July 29, 1905	55.0	9 a. m.
White river	Crawford	Page T. Francis	July 29, 1905	96.0	3 p. m.
White river	Crawford	Page T. Francis	July 30, 1905	400.	9 a. m.
White river	Crawford	Page T. Francis	July 30, 1905	120.0	3 p. m.
White river	Crawford	Page T. Francis	July 31, 1905	63.0	
White river	Crawford	Page T. Francis	Aug. 4, 1905	41.2	
White river	Crawford	Page T. Francis	Aug. 7, 1905	35.3	
White river	Crawford	Page T. Francis	Aug. 12, 1905	301.6	
White river	Crawford	Page T. Francis	Aug. 13, 1905	92.0	
White river	Crawford	Page T. Francis	Aug. 20, 1905	36.0	
White river	Sec. 7-34-47	G. W. Bates	July 8, 1908	99.1	
White river	Fort Robinson	Page T. Francis	July 3, 1910	14.7	
White river	Military Reservation	Page T. Francis	July 10, 1910	13.8	
White river	½ mile west of Crawford	Page T. Francis	Aug. 7, 1910	13.2	
White river	½ mile west of Crawford	Page T. Francis	Aug. 14, 1910	15.6	
White river	½ mile west of Crawford	Page T. Francis	Aug. 30, 1910	12.4	
White river	½ mile west of Crawford	Page T. Francis	Oct. 5, 1910	18.5	
White river	½ mile west of Crawford	Page T. Francis	Oct. 23, 1910	21.7	
White river	½ mile west of Crawford	Page T. Francis	Nov. 20, 1910	28.7	

MISCELLANEOUS MEASUREMENTS OF WATER, AND CONVENIENT EQUIVALENTS.

A second foot is water flowing continuously at such a rate that one cubic foot passes a given point in one second of time.

An acre foot is water one foot deep upon one acre of land.

1 acre foot equals 43,560 cubic feet, equals 325,851 U. S. gallons.

1 second-foot will supply 1 acre foot in 12.1 hours.

1 U. S. gallon = 231 cubic inches.

1 cubic foot = 7.48 U. S. gallons.

1 cubic foot of water weighs 1,000 ounces or 62.5 pounds avoirdupois.

1 U. S. gallon of water weighs 8.355 pounds avoirdupois.

1 horsepower is equivalent to raising 33,000 pounds one foot in one minute.

1 second-foot falling 8.8 feet is equivalent to one theoretical horsepower. 20 per cent of the theoretical horsepower is generally allowed for the friction of machinery, etc., leaving 80 per cent for the net horsepower, therefore one second foot falling 11 feet = one available horsepower (80 per cent efficiency). About ten per cent of this is lost when converted into electrical energy.

1 horsepower = 746 Watts = .746 Kilowatts.

1 volt ampere = .0013405 horsepower.

The approximate rate of flow of water in open channels may be found in observing the velocity of a float on the surface of the stream. The velocity is greatest at the surface and least along the bottom and sides, being there retarded by friction.

Careful experiments have shown that the mean velocity is about 84 per cent of the maximum central surface velocity. The mean rate of flow is at six-tenths of the depth measured from the surface.

The most approved formula for determining the flow of water in canals is Kutter's:

$$v = \left\{ \frac{\frac{1.811}{n} + 41.6 + \frac{.00281}{s}}{1 + \left\{ 41.6 + \frac{.00281}{s} \right\} \frac{n}{\sqrt{r}}} \right\} \sqrt{rs}$$

In this formula

v = the mean velocity in feet per second.

r = the hydraulic radius or mean depth in feet = the area of cross section in square feet divided by the wetted perimeter or width along the bottom and sides in feet.

s = the slope; that is the fall of the surface in any distance divided by that distance.

n = a co-efficient of roughness, varying in value from .010 for straight channels with smooth, glazed surfaces, to .035 for canals and rivers in bad order, having stones, detritus and aquatic plants in great quantities. This value has been found to be .025 for ordinary irrigation canals and about one-half this quantity for flumes of unplaned lumber.

The following table gives the velocity in feet per second, based on Kutter's Formula, Co-efficient of Roughness n .025 (F fall in feet per mile, S slope).

r=average depth	F= .528 S=.00010	F= .792 S=.00015	F=1.056 S=.00020	F=1.320 S=.00025	F=1.584 S=.00030	F=1.848 S=.00035	F=2.112 S=.00040	F=2.376 S=.00045	F=2.640 S=.00050	F=2.904 S=.00055	F=3.168 S=.00060	F=3.432 S=.00065	F=3.696 S=.00070	F=3.960 S=.00075
0.2	.13	.17	.20	.22	.25	.27	.29	.31	.33	.35	.36	.38	.39	.41
0.4	.24	.30	.36	.41	.45	.49	.53	.56	.59	.62	.65	.68	.71	.73
0.6	.34	.43	.50	.57	.63	.68	.73	.78	.82	.86	.90	.94	.98	1.01
0.8	.43	.54	.63	.72	.79	.86	.92	.98	1.03	1.08	1.13	1.18	1.23	1.27
1.0	.52	.65	.76	.85	.94	1.02	1.09	1.16	1.23	1.29	1.35	1.40	1.46	1.51
1.2	.60	.75	.87	.98	1.08	1.17	1.26	1.34	1.41	1.48	1.55	1.61	1.68	1.74
1.4	.68	.84	.99	1.11	1.22	1.32	1.41	1.51	1.59	1.66	1.74	1.81	1.88	1.95
1.6	.76	.94	1.09	1.23	1.35	1.46	1.56	1.66	1.76	1.84	1.92	2.00	2.08	2.15
1.8	.83	1.03	1.19	1.34	1.47	1.59	1.70	1.81	1.91	2.00	2.10	2.18	2.27	2.34
2.0	.90	1.11	1.29	1.45	1.59	1.72	1.84	1.96	2.06	2.17	2.26	2.36	2.45	2.53
2.2	.97	1.20	1.39	1.55	1.71	1.84	1.97	2.10	2.21	2.32	2.42	2.52	2.62	2.71
2.4	1.04	1.28	1.48	1.66	1.82	1.96	2.10	2.23	2.35	2.47	2.58	2.68	2.79	2.88
2.6	1.10	1.36	1.57	1.76	1.93	2.08	2.23	2.36	2.49	2.61	2.73	2.84	2.95	3.05
2.8	1.17	1.43	1.66	1.85	2.03	2.19	2.35	2.49	2.63	2.75	2.88	3.00	3.11	3.22
3.0	1.23	1.51	1.74	1.95	2.13	2.31	2.46	2.61	2.76	2.89	3.02	3.14	3.26	3.38
3.2	1.29	1.58	1.82	2.04	2.23	2.41	2.58	2.74	2.88	3.02	3.16	3.29	3.41	3.53
3.4	1.35	1.65	1.90	2.13	2.33	2.55	2.69	2.85	3.01	3.15	3.30	3.43	3.56	3.68
3.6	1.41	1.72	1.98	2.22	2.43	2.62	2.80	2.97	3.13	3.28	3.43	3.57	3.70	3 83
3.8	1.46	1.79	2.06	2.30	2.52	2.72	2.91	3.08	3.25	3.41	3.56	3.70	3.84	3.98
4.0	1.52	1.85	2.14	2.39	2.61	2.82	3.01	3.19	3.37	2.53	3.68	3.83	3.98	4.12
4.2	1.57	1.92	2.21	2.47	2.70	2.92	3.12	3.30	3.48	3.66	3.81	3.96	4.11	4.26
4.4	1.63	1.99	2.29	2.55	2.79	3.01	3.22	3.41	3 59	3.77	3.93	4.09	4.20	4.39
4.6	1.68	2.05	2.36	2.63	2.88	3.10	3.32	3.51	7.70	3.88	4.05	4.22	4.37	4.53
4.8	1.74	2.11	2.43	2.71	2.96	3.19	3.41	3.62	3.81	3.99	4.17	4.34	4.50	4.66
5.0	1.79	2.17	2.50	2.78	3.04	3.28	3.51	3.72	3.92	4.11	4.28	4.46	4.63	4.79

Trapezoidal Weirs.

As a result of experiments made in Italy in 1886 by Cippoletti, he adopted a trapezoidal weir, the sides of which have an inclination of one-fourth horizontal to one vertical. This is based on the theory that the effective length l of a rectangular weir being less than its true length owing to a contraction of the area if the weir be increased in proportion to its depth (since contraction increases in this ratio) and so as to balance the loss due in contraction, the flow through the weir will remain the same as though the weir were rectangular without contraction. The conditions called for in placing a rectangular weir must be nearly fulfilled with a trapezoidal weir, but the distance of the sill of the weir from the bottom of the canal must be at least three times the depth of the weir, and in length must be at least three times the depth of the water flowing over it.

This weir seems to possess some excellent qualities, the chief difficulty in connection with it being the same as arises in using the rectangular weir, namely, that where silt laden water is employed this may fill up above the front board of the weir. This weir may be used as a divisor, and for fairness of measurement is especially adapted to use on irrigation canals.

Depth in Feet	DISCHARGE OVER CIPPOLETTI'S TRAPEZOIDAL WEIRS IN SECOND FEET						
	Length 1 Foot	Length 2 Feet	Length 3 Feet	Length 4 Feet	Length 5 Feet	Length 7 Feet	Length 10 Feet
0.05	.0377	.0754	.1131	.1508	.1885	.2640	.3771
.10	.1064	.2128	.3192	.4256	.5319	.7447	1.0639
.15	.1956	.3912	.5868	.7824	.9780	1.3692	1.9560
.20	.3010	.6020	.9029	1.2039	1.5049	2.1069	3.0098
.25	.4208	.8417	1.2625	1.6833	2.1041	2.9458	4.2083
.30	.5531	.1063	1.6594	2.2126	2.7657	3.8720	5.5314
.35	.6972	1.3945	2.0917	2.7890	3.4862	4.8807	6.9724
.40		1.7035	2.5553	3.4071	4.2588	5.9624	8.5177
.45		2.0328	3.0492	4.0656	5.0820	7.1148	10.1640
.50		2.3805	3.5708	4.7610	5.9512	8.3318	11.9025
.55		2.7465	4.1198	5.4930	6.8663	9.6128	13.7326
.60		3.1293	4.6939	6.2585	7.8231	10.9524	15.6463
.65		3.5283	5.2924	7.0565	8.8206	12.3489	17.6413
.70		3.9437	5.9156	7.8874	9.8593	13.8030	19.7186
.75			6.5599	8.7466	10.9332	15.3065	21.8665
.80			7.2265	9.6354	12.0442	16.8619	24.9885
.85			7.9154	10.5538	13,1923	18.4692	26.3846
.90			8.6234	11.4978	14.3723	20.1212	28.7446
.95			9.3516	12.4688	15.5860	21.8204	31.1720
1.00			10.1000	13.5667	16.8333	23.5667	33.6667
1.05				14.4888	18.1110	25.3554	36.2220
1.10				15.5365	19.4206	27.1888	38.8412
1.15				16.6071	20.7588	29.0624	41.5177
1.20				17.7019	22.1274	30.9784	44.2548
1.25				18.8197	23.5246	32.9344	47.0492
1.30				19.9603	24.9503	34.9305	49.9007
1.35				21.1238	26.4047	36.9666	52.8095
1.40				22.3075	27.8844	39.0382	55.7688
1.45					29.3910	41.1474	58.7820
1.50					30.9245	43.2943	61.8490
1.55					32.4833	45.4766	64.9666
1.60					34.0635	47.6959	68.1370
1.65					35.6782	49.9495	71.3565
1.70					37.3111	52.2355	74.6222
1.75						54.5568	77.9383
1.80						56.9121	81.3030
1.85						59.3008	84.7154
1.90						61.7211	88.1730
1.95						64.1720	91.6743
2.00						66.6560	95.2228

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