

No. 11.5-310 2

Office of State Engineer
DOCUMENT FILE

Dept. Agr. - Settlement Admin.
Princeton Co.

Sec. 38, T. 2 - S. R. 17 E

Priority date: Oct. 25, 1937

35.6 acre ft. appropriated

Ally Alau

Form 24A

CERTIFICATE OF CONSTRUCTION OF WORKS

and

APPROPRIATION

U. S. Water Right No. 310-2

~~Revised Project 225-22~~

Bad River Water District

TO ALL WHOM IT MAY CONCERN:

This is to Certify, that the United States of America, Department of ~~Agriculture~~, ~~Reclamation Administration~~, has complied with the State Laws and has been issued a withdrawal No. ~~101~~ 310 bearing date of ~~October 15, 1937~~ withdrawing from further appropriation 35.5 acre-feet per annum of water for storage; of the waters of a Dry Stream in the County of Dennison, State of South Dakota, at a point S. 72 30'E 1346' from the W. Cor. Sec 28, T.10N., R.17 W. for Stock Water purposes; has fully complied with the provisions of the laws of the State of South Dakota relating to completion of the works set out and described in Section 61.0137, that said works are completed in accordance with information filed in the office of the State Engineer, and 35.5 acre-feet per year is thereby appropriated for the above purposes bearing date of priority of October 25, 1937.

Witness my hand this 13th day of September 1937.

State Engineer.

CERTIFICATE OF CONSTRUCTION OF WORKS
and
APPROPRIATION

U. S. Water Right No. 310-2~~Remo 561 Project 22-22~~Red River Water District

TO ALL WHOM IT MAY CONCERN:

This is to Certify, that the United States of America, Department of ~~Agriculture, Resettlement Administration~~, has complied with the State Laws and has been issued a withdrawal No. 63-310 bearing date of October 25, 1937 withdrawing from further appropriation 35.5 acre-feet per annum of water for storage; of the waters of the Big Sioux in the County of Pennington, State of South Dakota, at a point S. 72 30'E 1849' from the N. Cor. Sec 28, T.23S., R.17 E. for Stock Water purposes; has fully complied with the provisions of the laws of the State of South Dakota relating to completion of the works set out and described in Section 61.0137, that said works are completed in accordance with information filed in the office of the State Engineer, and 35.5 acre-feet per year is thereby appropriated for the above purposes bearing date of priority of October 25, 1937.

Witness my hand this 17th day of September 1937.

State Engineer.

CERTIFICATE OF WITHDRAWAL
OF
WATER FOR APPROPRIATION
to the
UNITED STATES OF AMERICA
DEPARTMENT OF AGRICULTURE
RESEMENT ADMINISTRATION

Withdrawal No. 5. 310LD-32-1 Job No. 22-22

Name of Project

Water Division No. 2

Mad River Water District

Dry Draw

Source of Appropriation-Stream

Pennington

County

The United States of America, Department of Agriculture, Resement
Administration, having filed "Notice of Intention" to
utilize certain heretofore unappropriated public waters of the State of South
Dakota, in accordance with the requirements of the statutes of the State of South
Dakota, such statutes and authority being contained in Section 61.0137 1939
Revised Code of South Dakota, now therefore;

This is to certify that there is hereby reserved, of the heretofore unappro-
priated waters of Mad River District, the annual amount of 36.0 acre-
feet of water to maintain storage in No. 22 reservoir created
by damming said stream at a point described as follows: S. 72° 30' E., 1840
feet distant from the N. Corner of Section 28, Township 28, Range 172. to the North
The purpose of such storage is for Stock Water (end of dam)

This is to certify that there is hereby reserved, of the heretofore unappro-
priated waters of _____ a maximum of _____ cubic feet
per second to be diverted through the _____ ditch, canal
or pipe line at a point located on the _____ bank
_____ feet distant from the _____ Corner of Section _____
Township _____, Range _____ for the purpose of _____
_____ during the months of _____

This certificate and withdrawal shall in no manner prejudice, alter, amend
or affect the rights of any prior appropriator or prior appropriation of water,
nor of any application for appropriation pending on the date of this certificate,
but the rights and privileges of any and all such prior appropriators or appli-
cants for appropriation of water shall remain inviolate and intact, the same as
if the within withdrawal had not been made.

This certificate shall be and is subject to cancellation in accordance with
the provisions of the statutes hereinbefore referred to and under the authority
of which this certificate is issued.

In accordance with the provisions of the statutes hereinbefore referred to,
this certificate is executed at the State Capitol at Pierre, South Dakota, this
25th day of October 193 7.

State Engineer

DESCRIPTION OF EARTH IMPOUNDING DAM
RESERVOIR AND SPILLWAY DAM NO. 226JOB NUMBER 226 - 22Resettlement Administration
Lincoln, Nebraska

Region VII

Project South Dakota LD-SD-1
State NumberA. Location of Dam and Reservoir Tract 1141N 1/2 SW 1/4 of the Sec. 28; Township 2 S; Range 17 E;
of the Black Hills Meridian; County Pennington.B. General Data

1. Area of drainage basin above dam:
- 1.0
- sq. miles.

(Note: For areas greater than 5 sq. miles give size to nearest sq. mi.;
for areas smaller than 5 sq. miles give area to nearest tenth.)

2. Average annual precipitation on water shed in inches:
- 16.0

3. Give amount of rainfall in inches and duration of the heaviest downpour
-
- that can be expected based upon reliable records or information of the
-
- vicinity.

		R =
a. <u>3.05</u>	inches.	c =
b. <u>24 hours</u>	minutes.	S =
c. <u>U. S. Weather Bureau Records</u>		N =

Source of information.

4. Give description of water shed.

- a. The slopes are sod-covered,
- ~~cultivated~~
- ,
- ~~base~~
- .

Clean grass slopes - 15'/100' slopes:(Note: Answer (a) by striking out words not needed. Only a general
description is wanted. If desired, a word or two may be given
in the space that is provided.)

- b. Average length of drainage basin
- 1.0
- miles.

- c. Average width of drainage basin
- 1.0
- miles.

5. Maximum run-off of drainage area at the dam site:
- 125.0
-
- cu. ft. per second.

(over)

C. Description of Dam

1. Height above low point of valley at centerline of dam: 17.4 ft.
 2. Length along centerline at top of dam: 515.0 ft.
 3. Width of top: 10 ft.
 4. Upstream slope: 4 ft. horizontally to 1 ft. vertically.
 5. Downstream slope: 3 ft. horizontally to 1 ft. vertically.
 6. Volume in embankment: 9630 cu. yds.
 7. Distance above high-water line to top of dam: 6 ft.
 8. Distance above water surface to top of dam when spillway is discharging maximum run-off: 2.5 ft.
-
-

D. Description of Spillway

1. Bottom width: 25 ft.
2. Slope of sides: 1 1/2 : 1 (Give ratio horizontal to vertical.)
3. Gradient of spillway ditch: 0.2 ft. per hundred ft.
4. Maximum discharge: 271.05 cu. ft. per second.
5. Depth of water in spillway at time of maximum discharge: 3.5 ft.

(Note: The surface of water in the spillway must be at least 30" below the top of the dam when the spillway is discharging the maximum run-off of the drainage basin.)

E. Description of Reservoir

1. Area when filled to level of spillway: 8.4 acres.
2. Area when half-full: 2.3 acres.
3. Area at depth of two feet: 0.28 acres.
4. Volume when filled to level of spillway: 35.6 acre-ft.
5. Volume when half-full: 4.8 acre-feet.
6. Volume at depth of two feet: 0.28 acre-feet.
7. Average depth when full: 5.7 feet.

(over)

LOCATION NOTICE

KNOW ALL MEN BY THESE PRESENTS:

That Oscar Hermstad, Project Manager, Bad Lands - Fall River Land Adjustment Project, Resettlement Administration, U. S. Department of Agriculture, whose post office is Rapid City, South Dakota, a citizen of the United States, above the age of 21 years, being in possession of the following described land in the name of the United States, to wit:

Tract 1141 NE 1/4
 _____, Section 28, Township 2 S,
 Range 17 E, B. H. M., in Pennington County, South Dakota.
 Availing him self of the right granted him under the provisions of Chapter 2, Article 1, Paragraph 3259 of the Revised Code of 1919, has located and claims the right to construct a certain dam across a dry draw situated in the NE 1/4 of the SW 1/4 of section 28, township 2 S, range 17 E, B.H.M., for Live Stock Purposes.

Said locator claims for the above purpose 1550736 cubic feet of water plus losses due to annual evaporation during the following described annual periods January 1st to December 31st, inclusive, each year.

Said location was made on the 2nd day of April, 1936.

Witness my hand and seal this 30th day of June, 1937.

Oscar Hermstad

Locator, Project Manager
 Resettlement Administration,
 U. S. Department of Agriculture

STATE OF SOUTH DAKOTA)
) ss
 County of Pennington)

On the 30th day of June, 1937, before me _____

K. E. Damon a Notary Public in and
 for the County and State aforesaid, personally appeared Oscar Hermstad, Project
Manager to me personally known to be the person who executed the
 foregoing instrument and acknowledged that he executed the same for the use and
 purposes therein set forth.

Witness my hand and official seal the day and date above written.

K. E. Damon
 Notary Public

My Commission Expires:
 July 10, 1939

RECEIVED

OCT 25 1937

OFFICE OF STATE ENGINEER
PIERRE, S. DAK.

PETITION

TO DEAN W. LOUCKES
STATE ENGINEER
STATE OF SOUTH DAKOTA
PIERRE, SOUTH DAKOTA

Comes now Oscar Hermstad, Project Manager, Bad Lands - Fall River Land Adjustment Project, Resettlement Administration, U.S. Department of Agriculture, whose post office is Rapid City, South Dakota, a citizen of the United States, above the age of 21 years, being in possession of the following described land in the name of the United States, being desirous of obtaining a certificate from the State Engineer in accordance with Sec. 8239, Revised Code of the State of South Dakota, so petitions the State Engineer to wit:

In support of said petition, your affiant deposes and says:

(1) That notice of appropriation, copy of which is hereto annexed and made a part of this petition was posted under date of July 15, 1937, and recorded under date of September 8, 1937.

(2) That the dam referred to in said notice was completed under date of July 7, 1936.

(3) That said dam is 315.0 feet in length and 17.4 feet in height.

(4) That said dam is located upon the land described as follows:

NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 28, Twp 2 South, Rge 17 East,
Blm, Pennington County, South Dakota.

(5) That said land is to be used for Stock Water purposes.

Wherefore your affiant respectfully requests that a certificate be issued to him in accordance with the law in such case made and provided.

FOR HENRY A. WALLACE

SECRETARY USDA

Subscribed and sworn to before me this 23rd day of Sept., 1937.

J. H. Hanning
Notary Public

My commission expires: July 10, 1939.

OCT 25 1937

OFFICE OF STATE ENGINEER
PIERRE, S. DAK.

RECEIVED: 1989/05/09

145017 6. 2463700 35° 27' 3.60" 100 11 2431

(b) Inverse of $\mathbf{A}$ is $\mathbf{A}^{-1} = \frac{1}{|\mathbf{A}|} \text{adj}(\mathbf{A})$.
 where $\text{adj}(\mathbf{A}) = \text{adjoint of } \mathbf{A}$.

(S) [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[illegible]

10-12-78

(c) [REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

THE UNIVERSITY OF CHICAGO

ATTN: JAMES H. WILSON, JR., 10000 W. 10TH AVE., SUITE 100, DENVER, CO 80231

CONFIDENTIAL - SECURITY INFORMATION - UNCLASSIFIED

THE ACTIVATION OF THE Ca^{2+} CHANNEL BY Ca^{2+} IS NOT A NECESSARY CONDITION FOR THE

of the 1960s, the 1970s, and the 1980s. The 1960s were characterized by a strong emphasis on the environment, while the 1970s saw a shift towards economic growth and development. The 1980s, on the other hand, were marked by a focus on technological innovation and globalization.

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