

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	(office use only) No. <u>2751-2</u> Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Custer County Chronicle</u> <u>(Wia) 605 673-2271</u> <u>Rapid City Journal 605 394-8300</u>

RECEIVED
APR 21 2016
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Municipal | <input type="checkbox"/> Water Distribution System | <input checked="" type="checkbox"/> Recreational | <input type="checkbox"/> Institutional |
| <input type="checkbox"/> Rural Water System | <input type="checkbox"/> Commercial | <input checked="" type="checkbox"/> Fish & Wildlife | <input type="checkbox"/> Geothermal |
| <input type="checkbox"/> Domestic (over 18 gpm) | <input type="checkbox"/> Industrial | <input checked="" type="checkbox"/> Other <u>Grassland and Forest Fire Suppress</u> | |

Type of Application:
(check one)

- New Vested Right (Use predates Mar 2, 1955) Future Use Reservation
 Place to Beneficial Use Water Reserved by Future Use Permit No. _____
 Amendment/Correction to Permit No. #298-2

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

This application is a request to amend/update the City's current water right permit # 298-2. Although the volume is increased, both the original and future purposes are consistent with item #7 below.

1. Name to Appear on Water Permit City of Custer

Mailing Address 622 Crook Street Custer SD 57730
(Address) (City) (State) (Zip Code)

Phone 605-673-4824 Mobile _____ Email Mayor (mayor@cityofcuster.com)

2. Amount of water claimed _____ *CFS or 48 (47.5 additional storage) **GPM and 77.5 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use)

3. Source of water supply Little French Creek Drainage

4. Location of point of diversion NE 1/4 SE 1/4 Section 27 Twp. 3S Rg. 4E B.H. Meridian County Custer
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? Yes No
If "Yes," where will water be used? _____
(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Custer County

6. Annual period during which water is to be used Year Round

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Expansion of and continued City use of the historical dam impoundment area to develop and maintain a habitat capable of supporting water fowl and fish species, with sufficient storage to develop the potential for other recreational (non-motorized) uses. Historically, the water impounded has been used for emergency fire fighting purposes and used both by emergency pumper truck(s) and aerial helicopters for wildfire suppression. New construction of entire dam, spillway and outlet works is proposed to comply with State Standards. Preliminary Design Report and Plans are attached.

I, DAVID A. LA FRANCE PROJECT ENGINEER, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) Drilling new well(s) Using existing well(s)

a) If new wells, how many ___ Have test holes been drilled Yes No Drilled by _____
 (if yes, please provide copies of logs)

b) If existing wells, how many ___ Provide copy of log(s), if available. Drilled by _____

For either Existing or Proposed Wells:

c) Well Depth (**required**) _____ Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____

d) Distance to nearest domestic well on applicant's property _____ Property owned by others _____

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

BANNER Associates, Inc.
 2201 Jackson Blvd., Ste. 200
 Rapid City, SD 57702

b) Freeboard 2 feet

c) Crest Width 12 x 2 ft. (Wier)

Crest Length 8 x 2 ft. (Wier)

d) Height 13 ~~10~~ feet *TL*

e) Primary Outlet Capacity 330 cfs

If pipe, diameter 8 x 5 ft. box

f) Secondary Spillway Capacity 3850 cfs

Spillway Width 200 ft.

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

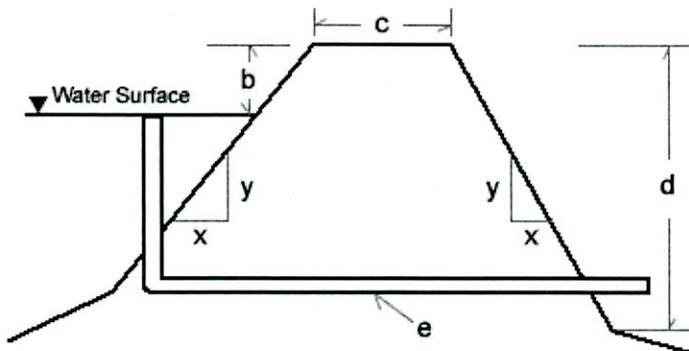
Upstream 3 to 1

Downstream 3 to 1

h) Surface Area of Impoundment 7.3 acres

i) Storage 77.5 Acre Feet

j) Drainage Area Above Dam 23,280.0 Acres



CONSTRUCTION PLANS FOR CUSTER WEST DAM RECONSTRUCTION

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PROGRAM

AGENCY REVIEW
SUBMITTAL
APRIL 19, 2016

INDEX OF SHEETS



North
PROJECT VICINITY MAP

COVER SHEET

GENERAL

- 1.1 GENERAL NOTES
- 1.2 EXISTING CONDITIONS
- 1.3 SURVEY CONTROL
- 1.4 TABLES AND RATINGS CURVES

EARTHWORK

- 2.1 EXCAVATION PLAN
- 2.2 FINISHED CONTOURS PLAN
- 2.3 ENLARGED DAM AREA PLAN
- 2.4 PROFILE AT DAM ALIGNMENT

AUXILIARY SPILLWAY

- 3.1 STRUCTURAL NOTES AND DETAILS
- 3.2 GENERAL DETAILS
- 3.3 SPILLWAY AREA PLAN AND STILLING BASIN DETAIL
- 3.4 SHEET RESERVED
- 3.5 CROSS SECTIONS
- 3.6 SPILLWAY SECTIONS
- 3.7 STILLING BASIN DETAILS
- 3.8 RIPRAP PLAN AND SECTIONS

PRIMARY SPILLWAY

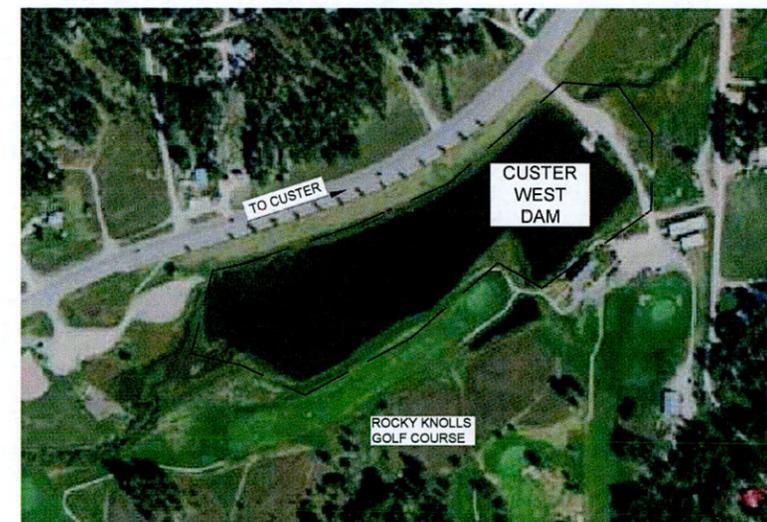
- 4.1 PRIMARY SPILLWAY PLAN AND PROFILE

EMBANKMENT ARMORING

- 5.1 ARMORING PLAN
- 5.2 ARTICULATED CONCRETE MATTRESS (ACM) SECTIONS AND DETAILS

LAKE EDGE & BOTTOM

- 6.1 LAKE EDGE PLAN AND SECTION



North
PROJECT LOCATION MAP

CUSTER, SOUTH DAKOTA
APRIL 2016



BANNER
Engineering | Architecture | Surveying
2201 Jackson Blvd., Suite 200
Rapid City, South Dakota 57702
1-855-323-6342
www.bannerassociates.com
Designing Projects. Building Trust

CONSULTANTS:

FOR
REVIEW ONLY
NOT FOR
CONSTRUCTION

PROJECT TITLE:

**CUSTER
WEST DAM
RECONSTRUCTION**

PROJECT LOCATION:

CUSTER
SOUTH DAKOTA

REV.	DATE	DESCRIPTION

DRAWN BY: CKM
DESIGNED BY: DAL
CHECKED BY: DAL
JOB NO.: 22136.00
DATE: DAL

SHEET TITLE:

**TITLE AND
INDEX OF
SHEETS**

SHEET NO.:

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