

Considered: _____

WATER PERMIT NO. 1333-1

MAP No. Same

Name of Applicant USDA- Forest Service

Post Office Address Box 390 Lemmon

Amount of Water Claimed 141 acre Feet Total Acres N.A.

Source of Water Supply Dry Draw

Water to be used for Wildlife enhancement County Perkins

About _____ miles _____ of _____.

PROOF OF PUBLICATION: Received 1st 7-10-85 Not Received _____

APPLICATION: Approved July 10, 1985 Subject to _____

F.F. & C.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY _____ Date Received May 20, 1985 Fee \$225.00 Remarks _____

May 20, 1985

Corrected Application Received _____ Period of Annual Use Jan. 1 to Dec. 31

WATER QUALITY APPROVAL RECEIVED N.A. APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS _____

Diversion Point SW⁴ SW⁴ sec. 33 T20N-R13E

Land to be Irrigated N.A.

	33				
⊗					

Well Log: Driller _____ Licensed YES _____ NO _____

Depth of Well _____ REMARKS _____

Type of Map Plat PREPARED BY Curtis W. Glasoe Reviewed and the Number

assigned on May 21, 1985 By Kevin C. Larson

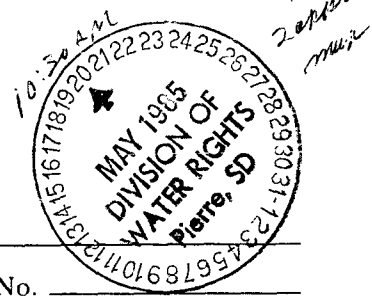
No. <u>1333-1</u>	Hydrologic Unit <u>10130302</u>
Map No. <u>same</u>	Basin <u>Grand River</u>
Newspaper <u>Lemmon Leader Box 180 (Wed)</u>	

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

Check use of water: Industrial ☐ Commercial ☐ Municipal ☐ Other Common Distribution System ☐
 Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
 Domestic ☐ (above 18gpm) Other ☒

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐
☐ Amend Permit No. _____ with old priority date retained
 Change diversion point(s) ☐ Add diversion point(s) ☐ Other ☐ _____
☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____
☐ Construction to use water reserved by Future Use Permit No. _____



- Name of Applicant USDA, Forest Service Phone No. 374-3592
 Post Office Address Box 390, Lemmon State SD 57638
(Street, RR or Box) Zip Code
- Amount of water claimed (c.f.s) 141 Ac Ft
- Source of water supply Dry Draw
- Location of point of diversion (See attached map) SW 1/4 SW 4 sec. 33 T20N-R13E

 _____ County Perkins
- Counties where water will be used Perkins
- Annual period during which water is to be used Yearlong
- Give a brief description of proposed 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)

The dam being proposed will be designed and constructed by Ducks Unlimited.
 Its purpose will be to provide habitat for waterfowl as well as serve
 as a public fishery and provide water for livestock.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map
 (see instruction)

STATE OF SOUTH DAKOTA)
 County of Perkins)^{ss}

I, Tom Heintz, USDA, Forest Service the applicant, certify that I have read
 the foregoing application, have examined the attached map and that the matters therein stated are true and that I intend, and
 am able to complete the necessary construction.

Signed Tom Heintz

Subscribed and sworn to before me this 12th day of May 1985

Jaime Sustman
 Notary Public (or other qualified officer)

My Comm. Exp. 06-27-88

WATER PERMIT

The Water Management Board hereby approves Water Permit Application No. 1333-1

USDA-Forest Service
(Applicant)

Box 390

Lemmon
(Post Office Address)

South Dakota
(State)

57638
(Zip Code)

With the following qualifications.

Low flows as needed for downstream domestic use, including livestock watering, and prior water rights must be by-passed.

Approval of this Permit authorizes storage of 141 acre feet of water annually.

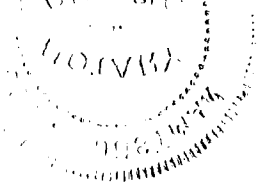
Date of first receipt of application May 20, 1985.

Date of return to applicant for correction, amendments or changes required —, 19—.

Date of receipt of corrected application —, 19—. Approved July 10, 1985.

The Water Management Board hereby approves this Water Permit No. 1333-1 authorizing the construction of the water use system and the placing of water to beneficial use as stated in the Application and as qualified in the Water Permit approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is May 20, 1985.
2. The equivalent of at least one-fifth of the specified work is to be completed on or before December 10, 1987.
3. The whole of said work is to be completed on or before July 10, 1990.
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is July 10, 1994.
5. The water appropriated shall be used for the purpose of Wildlife enhancement
6. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be unlawfully impaired by this appropriation.
7. The amount of the appropriation herein granted shall not exceed 141 acre feet annually ~~cubic feet per second~~; neither shall it exceed the capacity of the above described water supply system nor shall it exceed the amount of water needed for beneficial uses served and to which water is actually and beneficially applied for Wildlife enhancement on or before July 10, 1985; said water to be used during the following described annual period: January 1 to December 31



WATER MANAGEMENT BOARD

By: John Hatch
Chief Engineer JOHN HATCH
Division of Water Rights
Dept. of Water and Natural Resources

AUG 9 1985

, 19—

Supplemental Information

(type or print in ink)

1. Well Information - Proposed construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack Thickness _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth of Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property _____ On property owned by others _____

2. Dugout Information Estimates

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

Ducks Unlimited
6115 E. Main Avenue
Bismarck, ND 58501

- b) Freeboard _____ 5'
- c) Crest Width _____ 12'
- Crest Length _____ 650'

- d) Height _____ 24'

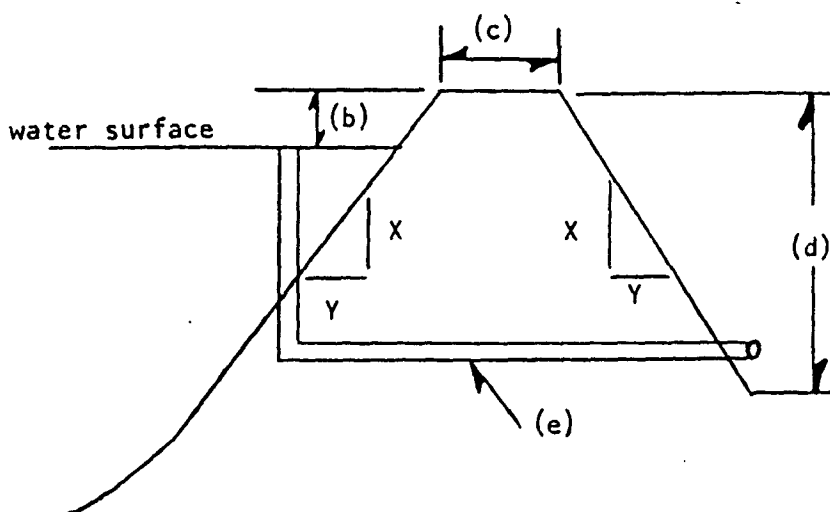
- e) Outlet Dimensions:
Pipe diameter _____ 66" *Barrel. 48" dia; 12" dia draw down*
Asphalt Coated Pipe. Riser Pipe shut off.
Spillway width _____ 160'

- f) X & Y Slope
Upstream _____ 3:1
Downstream _____ 3:1

Surface Area of Impoundment _____ 21.8

Storage _____ 140.7 _____ acre feet

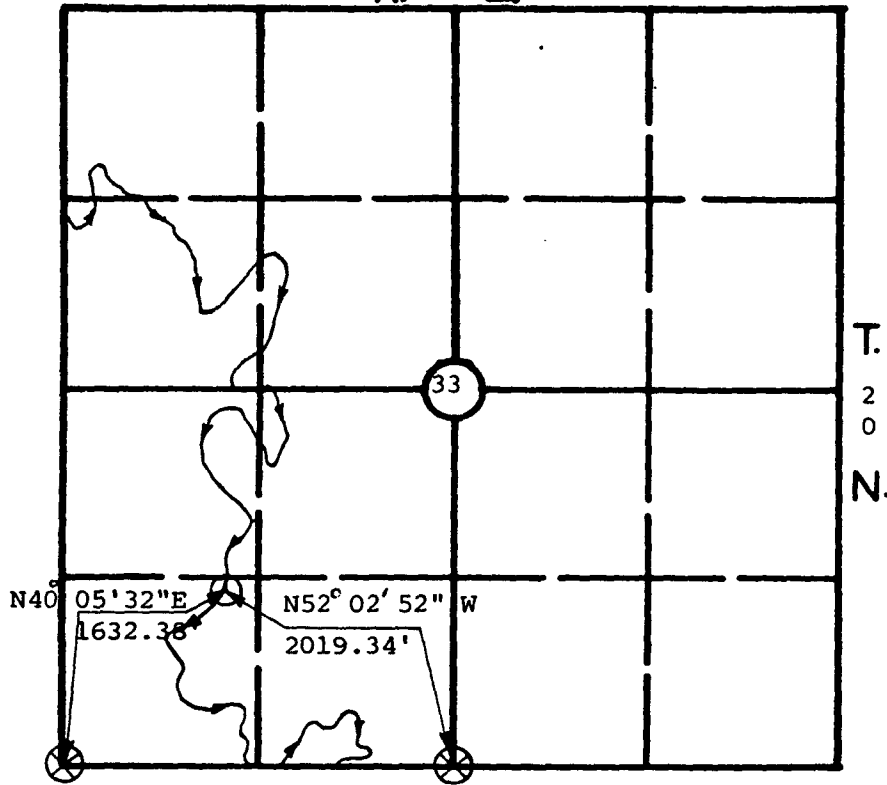
Drainage area above dam _____ 4800 Ac.



Signature of Applicant _____

PASTURE 6E PROJECT
GRAND RIVER-CEDAR RIVER RANGER DISTRICT
CUSTER NATIONAL FOREST
BILLINGS, MONTANA

R. 13 E.



- PROPOSED SITE
- ⊙ BRASS CAP
- ⊗ STONE

STATE OF SOUTH DAKOTA)
COUNTY OF PERKINS) SS

Scale: 1 inch=1320 feet

I, Curtis W. Glasoe of Dickinson, ND do hereby certify that this map was made from Information taken from field survey by me, (or, made under my direction by Steve Volesky for whose work I stand personally responsible), the 7 day of May, 1985, and that it correctly represents the recreation/wildlife habitat works described in the accompanying application, together with a meander of streams and shows accurately the location and area of the lands proposed to be developed in each subdivision.

Curtis W. Glasoe ILS # 4120
Surveyor

Map to accompany

Approved: _____
State Engineer

Application No. 1333-1

RECEIPT

Division of Water Rights

No 4 10080

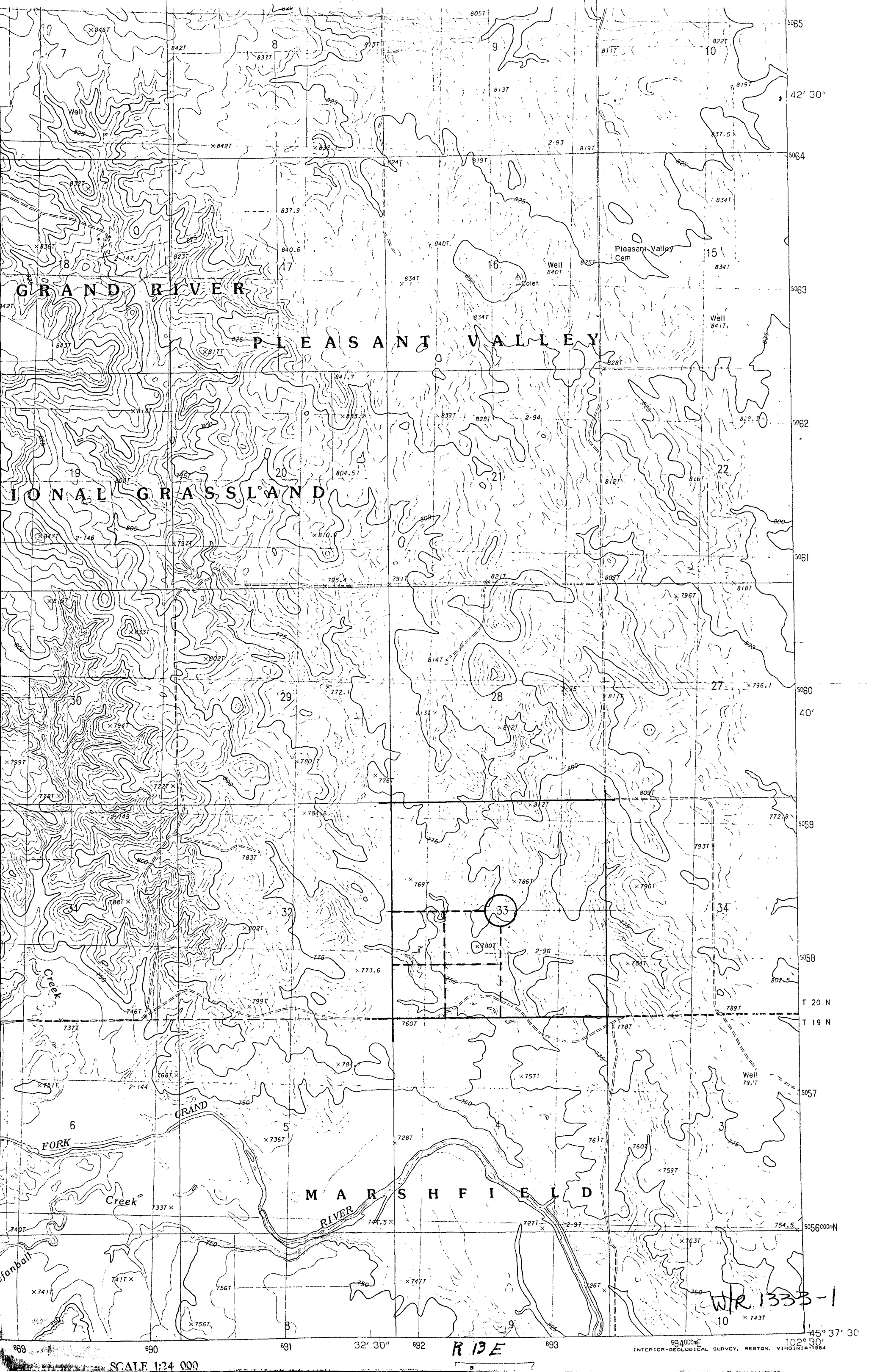
South Dakota Department of Water and Natural Resources

Pierre, June 19, 1985, 19

RECEIVED OF USDA Custer National Forest, Grand River Dist., Box 390, Lemmon, SD 57638
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>1333-1</u> to Appropriate Water, to construct works and to put water to beneficial use	225	00
Fee for Application for Permit No. _____ to Appropriate Water for Future Use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form		
Fee for Filing Extension Request		
Fee for Certified Copy of		
Fee for Print Copy of Map		
Fee for Certifying		
Fee for _____ (Any Other Work Provided by Law)		
Total	225	00

By John Hatch
Chief Engineer JOHN HATCH/ms



GRAND RIVER

PLEASANT VALLEY

IONAL GRASSLAND

MARSHFIELD

6
FORK

Creek

GRAND

RIVER

WR 1333-1

SCALE 1:24 000

R 13 E

INTERIOR-GEOLOGICAL SURVEY, RESTON, VIRGINIA-1984



United States
Department of
Agriculture

Forest
Service

Grand River
Ranger
District

P.O. Box 390
Lemmon, SD 57638

Reply to: 2610

Date: May 17, 1985

┌
Water Rights Division, DWNR
Joe Foss Building
Pierre, SD 57501

L

Dear Sir:

Enclosed for your review are two applications for water rights concerning projects that Ducks Unlimited and the USDA, Forest Service are cooperatively working on. I understand that the filing fee will be \$225 each, plus a \$50 inspection fee for each project. I have instructed our Supervisor's Office in Billings, Montana, to process payment to you for the above filing fees.

Please call if you have any questions or if you should need additional information.

Sincerely,

Tom Heintz
THOMAS W. HEINTZ
District Ranger
(605) 374-3592



5-20-85

John:

I talked with Tom Heintz about the fees for these apps. He said they are in the works but won't get here until next week. He wondered if we could get this ready for the July mtg. I talked to Jim W. He said there is not any problems with the material submitted except we do not have the fees. I told Mr. Heintz ~~I~~ would check and get back to him.

Kevin

ok, but check for
any documentation ^{to get}
on water rights ~~off~~

5-22-85

Called Tom Heitz about dam
shown on Topo map. He said
the reservoir area is silted in
and the dam will be removed
when new dam is built.

Kevin Larson

REPORT ON WATER PERMIT APPLICATION NO. 1333-1

USDA - FOREST SERVICE

May 22, 1985

Water Permit Application No. 1333-1 proposes to construct a dam to store 141 acre feet per year for wildlife enhancement and livestock water.

There are no water right filings, location notice filings, dry draw filings or water rights on file between the proposed location of this dam and the South Fork of the Grand River. Using the Soil Conservation Service method for estimating runoff volume the stated drainage area of 4800 acres should produce approximately 500 acre feet of runoff from a 5 year - 24 hour rainfall. Even with the number of small dams indicated on the USGS topographic map this should be adequate to maintain this reservoir. Dam shown on USGS topographic map is silted in and will be replaced by a new structure.

Conclusions

1. Soil Conservation Service methods indicate stated drainage area is more than adequate.
2. There are no water right claims on file in the Division of Water Rights between dam and South Fork-Grand River.
3. Downstream domestic rights have priority.



KEVIN C LARSON
Natural Resources Engineer

Bibliography

USDA, SCS South Dakota Engineering Field Manual, USDA Soil Conservation Service, Huron SD.

Division of Water Rights, Water Right Division Files, DWNr, Division of Water Rights, May, 1985.

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT

APPLICATION NO. 1333-1, USDA, Forest Service

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 1333-1, USDA Forest Service, Box 390, Lemmon SD.

The Chief Engineer is recommending APPROVAL of Application No. 1333-1 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) in the public interest with the following qualifications:

1. Low flows as needed for downstream domestic use, including livestock watering, and prior water rights must be by-passed.
2. Approval of this Permit authorizes storage of 141 acre feet of water annually.

See the attached report for additional information.

A handwritten signature in black ink, appearing to read "John Hatch", with a stylized, cursive script.

JOHN HATCH, Chief Engineer
Water Rights Division
May 23, 1985

No. ~~1333-1~~

Instruction to Newspaper - Publish first publication of the following Notice on or before May 29, 1985 with 2nd publication 1 week later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 1333-1 to Appropriate Water
and/or to Amend Water Permit or Water Rights No. _____

Notice is hereby given that ~~USDA Forest Service~~ whose mailing address is
~~Box 390, Laramie,~~ South Dakota has made an application for a permit

to construct a dry draw dam to store 141 acre feet of water for wildlife enhancement purposes. The dam will be located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 33 T20N-R13E

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends

~~APPROVAL~~ of Application No. 1333-1 because 1) unappropriated water is available, 2) will be no unlawful impairment of existing rights, 3) is beneficial use of water and 4) is in the public interest.

This application will be considered by the Water Management Board at ~~Civil Defense~~
~~Room, basement of Capitol Building, Pierre, SD, July 10~~ 19 85 at 10:00 am.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to make a determination on this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the Applicant and the Chief Engineer by June 28, 1985. The petition may be informal, but it must include a statement describing the petitioner's interest in the application, the reason for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

This application is made pursuant to the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17, 46-5-1 thru 46-5-16, 46-5-24, 46-5-25, 46-5-30.2, 46-5-31; 46-2A-1 thru 46-2A-10, 46-2A-12; ~~(ground) 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; (future use) 46-5-38 thru 46-5-40; (transfer lands) 46-5-30.4, 46-5-33 thru 46-5-35; (10,000 AFA) 46-5-20.1, 46-5-8.1; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; (future use) 74:02:01:24 thru 74:02:01:25; (10,000 AFA) 74:02:01:15.02 thru 74:02:01:15.05.~~

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWNR, Joe Foss Bldg, Pierre SD (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by June 28, 1985.

**NOTICE OF HEARING
On Application No. 1333-1
To Appropriate Water**

No. _____ Notice is hereby given that USDA Forest Service whose mailing address is Box 390, Lemmon, South Dakota has made an application for a permit to construct a dry draw dam to store 141 acre feet of water for wildlife enhancement purposes. The dam will be located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 33 T20N-R13E

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Hughes) ss.

I, Kevin C. Larson hereby

certify that the annexed printed copy of Notice of Intent to Appropriate

Water was taken from the Lemmon Leader

A newspaper which during the whole time of publication of said notice herein after stated, has been and is printed and published in the _____

City of Lemmon

County of Perkins and State of South Dakota;
that the said notice was published in said newspaper on the following two dates:

May 29, 1985

June 5, 1985

Kevin C. Larson
(Signature)

Nat. Resources Engineer
(Title)

July 10, 1985
(Date Signed)

Cost of Printing: _____

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 1333-1 because 1) unappropriated water is available, 2) will be no unlawful impairment of existing rights, 3) is beneficial use of water and 4) is in the public interest.

This application will be considered by the Water Management Board at Civil Defense Room, basement of Capitol Building, Pierre, SD, July 10, 1985 at 10:00 a.m.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to make a determination on this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26; must file a written petition with BOTH the Applicant and the Chief Engineer by June 28, 1985. The petition may be informal, but it must include a statement describing the petitioners interest in the application, the reason for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

This application is made pursuant to the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17, 46-5-1 thru 46-5-16, 46-5-24, 46-5-25, 46-5-30.2, 46-5-31; 46-2A-1 thru 46-2A-10, 46-2A-12; 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWNR, Joe Foss Bldg, Pierre SD (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by June 28, 1985.

(Pub. May 29, June 5, 1985)



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

Water Rights Division
605 773-3352

1333-1

USDA Forest Service
Box 390
Lemmon, South Dakota 57638

Dear Sir:

Enclosed herewith is your Water Permit No. 1333-1 as approved by the Water Management Board authorizing you to construct your water diversion system and the water to beneficial use, not exceeding the limits as specified in said Water Permit No. 1333-1.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that your Water License may be issued to you, thus completing your acquisition of a Water Right.

Very truly yours,

A handwritten signature in black ink, appearing to read "John Hatch".

JOHN HATCH, Chief Engineer
Water Rights Division

JH:ms

enclosure

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period-i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.

NOTICE OF COMPLETION OF WORKS AND/OR
APPLICATION OF WATER TO BENEFICIAL USE

Post Office Lemmon, SD

Date November 18, 1985

TO: Water Rights
Joe Foss Building
Pierre, South Dakota 57501

Dear Sirs:

This is to inform you that I have completed the construction of the water diversion system and/or that I have put the water to beneficial use to maximum extent it is going to be used, not exceeding the amounts as specified in Water Right No. 1333-1.

Water Right Permit No. 1333-1 states that the diversion system is to be constructed by July 10, 1990, and that the water is put to beneficial use by July 10, 1994.

The diversion system was completed on November 19, 1985. Applying the water to beneficial use was completed on Spring 1986.

You may schedule an inspection so that the Certificate of Construction and/or the Water License may be issued, thus completing my acquisition of a water right.

Thomas W. Heintz
(Signature)





Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

Division of Water Rights
605 773-3352

No. 1332-1

May 12, 1986

USDA Forest Service
c/o Tom Heintz
Box 390
Lemmon, South Dakota 57638

Dear Sir:

The inspection of your water use system and inspection of the extent of the application of water to beneficial use, as developed under your Water Right No. 1332-1 has been completed. Your final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 fee for the inspection and issuing of the Water License. Upon receipt of the \$50.00 fee from you, your Water License will be sent to you.

South Dakota Water Law 46-5-30.1 requires that a permit holder may not divert water until this \$50.00 license fee has been paid. Please contact us if you have any questions.

Sincerely,

Maxine Stirling
Staff Assistant

ms/
Enc.

NOTE: On form of payment, please include the number of the water permit. This insures proper handling of the fee.

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

410491

Pierre, _____, July 15, 19 85

RECEIVED OF USDA Forest Service, Box 390, Lemmon, SD 57638

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct works and to put water to beneficial use _____		
Fee for Application for Permit No. _____ to Appropriate Water for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>1333-1</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	50 00

By John Hatch
Chief Engineer

JOHN HATCH (ms)

Permit No. 1333-1Grand River Water District 10130302**Report Of Examination Of Works And/Or Application Of Water To Beneficial Use**

TO: Chief Engineer, Division of Water Rights, DWNR, Foss Bldg., Pierre, SD 57501

I have this day made a thorough examination of the water use system constructed by U.S.D.A.Forest Service of Box 390, Lemon, S.D. 57638 holder ofPermit No. 1333-1, bearing the priority of May 20 19 85 authorizingthe diversion of 141 ^{Ac.} ~~cu.~~ ^{Annually} ft. ~~per second~~ of the waters of Dry Drawfor Wildlife Enhancement purposes, in Perkins County.

I have to report on the conditions of the same as follows:

- A. Works used to divert the water: Dam To Store 141 A.F. of Water
The dam was constructed to the same specifications as shown on Form 2 A. All CMP was asphalt coated. Draw down pipe 12" dia. with shut-off Valve.

- B. Works used to transport water to place of use:

Not applicable

- C. Works used to apply water to beneficial use:

The system is in the following condition ExcellentThe point of diversion is located N 40° 52' 32" E 1632.8' from the SW
corner of section 33, T20N R13E

The works are capable of diverting and conveying to the place of use _____

cu. ft. per second of water which is to be used for Wildlife Enhancement

Water has been put to beneficial use to the maximum extent as follows: _____

comprising a total of _____ acres of land and the license should be issued for 141 ~~cu.~~ ^{Ac.} ^{Annually}Applicable permit qualifications have been complied with X Yes _____ NoExceptions to compliance are: _____ Date May 6, 1986LeRoy J Mernaugh
(signature)

USDA Forest Service Dam
 Water Right Application No 1333-1
 Primary Spillway

12/16/86

From SCS Eng. Manual

$$Q = A \sqrt{\frac{2.48 H}{1 + K_m + K_p L}}$$

$$D/a = 48" \quad A = 12.56 H^2$$

$$n = 0.029$$

$$K_m = 1.0$$

$$K_p = 0.0168$$

$$L = 100'$$

$$H = 24'$$

$$Q = 12.56 \sqrt{\frac{2(32.2)(24)}{1 + 1 + (0.0168)(100)}}$$

$$Q = \underline{\underline{257 \text{ cfs}}}$$

Secondary Spillway

$$\text{width} = 160'$$

$$\text{freeboard} = 5'$$

$$\text{side slopes} = 1 \text{ on } 2$$

$$n = 0.035$$

$$\text{channel slope} = 0.004$$

} Assumed

Depth	A	wp	R	Q	V	$V^2/2g$	Pool
4	672	177.88	3.78	4390	6.53	0.66	4.66

$$\begin{aligned} \text{Total } Q &= 4390 + 257 \\ &= \underline{\underline{4647 \text{ cfs}}} \end{aligned}$$

From USGS "Techniques for estimating Flood Peaks,
Volumes, and Hydrographs on Small
Streams in South Dakota"

$$SI = 3.16$$

$$DA = 7.5 \text{ mi}^2$$

$$\text{slope} = 40' / \text{mile}$$

$$50 \text{ year flood} \approx 900 \text{ cfs}$$

$$100 \text{ year flood} \approx 1100 \text{ cfs}$$

This dam can easily pass the 50 or 100 year
floods

Timi Schaaf



No. 1333-1

Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

WATER RIGHTS DIVISION
Phone (605) 773-3352

AUG 5 1988

USDA Forest Service
Box 390
Lemmon, South Dakota 57638

Dear Sir:

Enclosed herewith is, Water License No. 1333-1. This is the final water right document completing your process of obtaining a water right.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH: ms

Enclosures

State of South Dakota
Water License No. 1333-1

(1) USDA Forest Service
of Box 390, Lemmon, South Dakota 57638
made Application No. 1333-1, May 20, 1985 for a water permit to ~~appropriate~~ ^{store}
141 acre ^{feet} ~~cubic feet per second~~ of water from annually in a dam on a dry draw,
Perkins County, South Dakota for Wildlife enhancement purposes.
Permit No. 1333-1, with a priority date of May 20, 1985
was approved July 10, 1985 and issued to applicant(s) for diversion of water with construction of the described
water supply system to be completed on or before July 10, 1990 and for the application to beneficial use of said
water on or before July 10, 1994.

and

(2) It is certified that the application has complied with the provisions of South Dakota State Law relating to completion of
^{store}
the construction of the water supply system and is entitled to ~~divert~~ ^{store} 141 acre ~~cubic feet per second~~ of water
^{annually}
for beneficial use. The location of the diversion point(s) is N40° 52' 32" E 1632.8' from the SW
corner of Section 33, T20N, R13E (SW¼SW¼)

and

(3) The applicant has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to the following extent, water is stored in place.

(4) Pursuant to §46-5-30.1 USDA Forest Service

of Box 390, Lemmon, South Dakota 57638

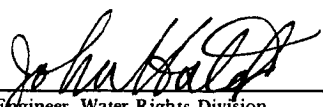
the holder(s) and/or owner(s) of Water Permit No. 1333-1 is issued a license to appropriate water, the right to ~~use~~ ^{store}

141 acre ~~cubic feet per second~~ of water ~~from~~ ⁱⁿ a dam located on a dry draw with a priority date

of May 20, 1985 from the location specified in (2) of this license. The water to be

conducted to and upon lands specified in (3) of this license for the purpose of wildlife enhancement

This license is subject to any limitations or qualifications listed in Water Permit No. 1333-1 and subject to South Dakota State Law.

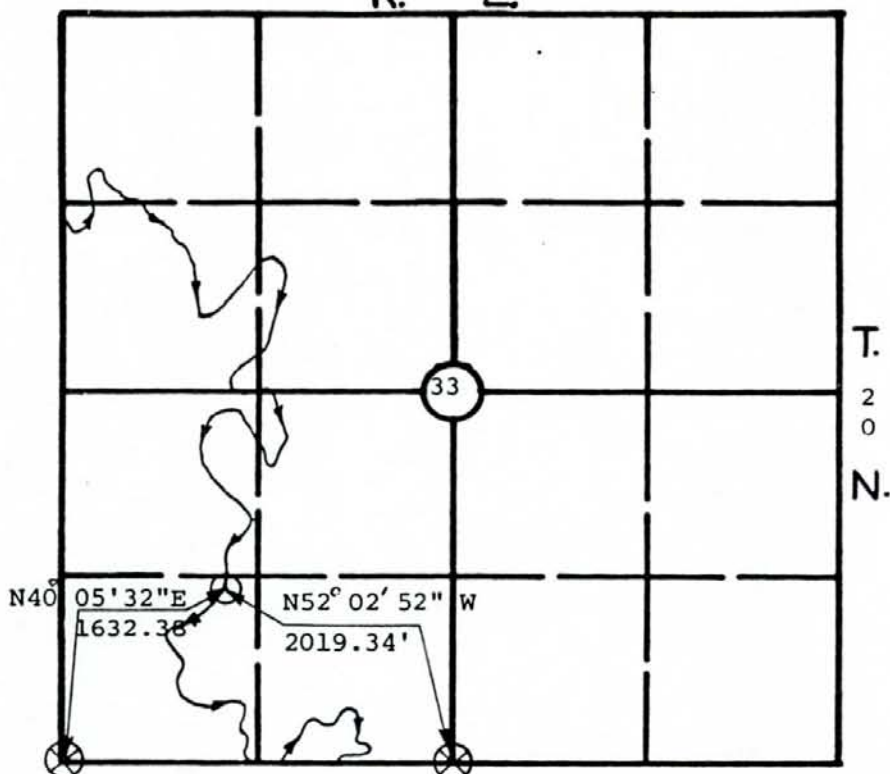

Chief Engineer, Water Rights Division
Department of Water and Natural Resources

JOHN HATCH

AUG 5 1988

PASTURE 6E PROJECT
GRAND RIVER-CEDAR RIVER RANGER DISTRICT
CUSTER NATIONAL FOREST
BILLINGS, MONTANA

R. 13 E.



○ PROPOSED SITE

⊙ BRASS CAP

⊗ STONE

STATE OF SOUTH DAKOTA)

) SS

Scale: 1 inch = 1320 feet

COUNTY OF PERKINS)

I, Curtis W. Glasoe of Dickinson, ND do hereby certify that this map was made from Information taken from field survey by me, (or, made under my direction by Steve Volesky for whose work I stand personally responsible), the 7 day of May, 1985, and that it correctly represents the recreation/wildlife habitat works described in the accompanying application, together with a meander of streams and shows accurately the location and area of the lands proposed to be developed in each subdivision.

Curtis W. Glasoe

ILLS # 4120

Surveyor

Map to accompany

Approved: _____

State Engineer

Application No. _____

Permit # 1333-1