Considered: _____ WATER PERMIT NO. 2248-2

Phone: 348-5555

Name of Applicant: James R. Forsyth

Post Office Address: 2218 Jackson Blvd, Suite 9, Rapid City SD 57702

Amount of Water Claimed: 4 cfs Total Acres: 280

Source of Water Supply: Rapid Creek

Water to be used for: irrigation County: Pennington

About 20 miles southeast of Rapid City

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

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

PRIORITY Date Received: 8-18-92 Fee: $300 Remarks _____

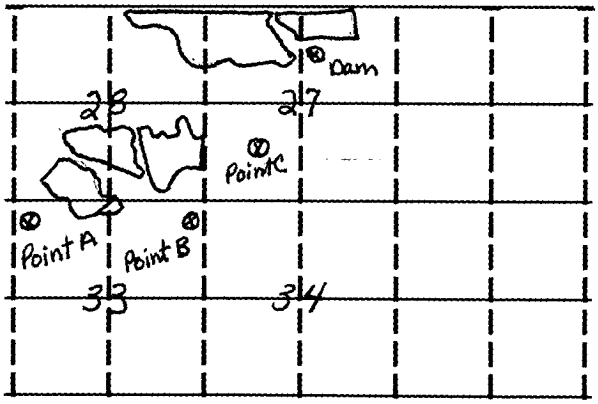
Corrected Application Received 9-3-92 Period of Annual Use April 1 - Oct 31

WATER QUALITY APPROVAL RECEIVED 9-24-92 APPROVED/CONDITIONAL (Circle one)

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

Diversion Point: Point A-NW 1/4 NW 1/4 Sec 33; Point B-NE 1/4 NE 1/4 Sec 33; Point C-NE 1/4 SW 1/4 Sec 27 and dam-W 1/2 NE 1/4 Sec 27; all in T1S-R11E

Land to be Irrigated: E 1/2, NE 1/4 SW 1/4, S 1/2 SW 1/4 Sec 28; NE 1/4 NW 1/4, NW 1/4 NE 1/4 Sec 33; NW 1/4, NW 1/4 NE 1/4 Sec 27; all in T1S-R11E



Well Log: Driller: _____ Licensed YES ____ NO ____

Depth of Well: _____ REMARKS _____

Type of Map: aerial PREPARED BY: Jane Jensen Reviewed and the Number Assigned on 9-28-92 By Karen Schlaak

FORM 2: Application for irrigation (type or print) in South Dakota

(See instructions)

No. 2248-2 Hydrologic Unit 10120110
Basin Upper Cheyenne
Newspaper Rapid City Journal, PO Box 450

Mail to: Water Rights Div.
523 E. Capitol
Pierre, SD 57501
(605) 773-3352

Application For Soil/Water Compatibility Permit and Permit To Appropriate Water

Type of Application: ☒ New ☐ Vested Right ☐ Amend Permit No. _____
☐ Change Acreage ☐ Change diversion point(s) ☐ Add diversion point(s)
☐ Add Acreage ☐ Increase diversion rate ☐ Other _____

SEP 1992 DIVISION OF WATER RIGHTS Pierre, SD

1. Name of Applicant James R. Forsyth Phone No. 348-5555
   Post Office Address 2218 Jackson Blvd., Suite 9 (Street, RR or Box) Rapid City (City) State SD Zip Code 57702
2. Amount of water claimed (c.f.s) ~~3.97~~ 4.0 Total acres irrigated ~~278.10~~ 280
3. Source of Water supply Rapid Creek
4. Location of point of diversion ~~Section 33 (N½, NW¼) TN1, NE¼) 15 R11E BHM between points A and B as shown on map. The dam would be pumped from point C, which is shown on the map. This is in Section 27~~ Point A - NW¼ NW¼ Sec 33, Point B - NE¼ NE¼ Sec 33, Point C - NE¼ SW¼ Sec 27 and Dam - W½ NE¼ Sec 27; all in T1S - R11E County Pennington
5. Counties where water will be used Pennington
6. Annual period during which water is to be used April 1 to October 1
7. List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.
~~N½, NW¼, Sec. 33; S½, SW¼ Sec28~~	~~61 Acres~~		
~~SE¼, Sec. 28~~	~~54.5 Ac.~~		
~~N½, SW ¼, Sec. 28~~	~~39.8 Ac.~~		
~~All NW ¼, Sec. 27~~	~~122.8 Ac.~~		

See attached sheet

Attach sheet if more space is needed

8. Type of Irrigation: Gravity: _____ Towline: _____ Center Pivot: _____ Gun: _____ Other: Side-Roll (Specify)
9. Crops to be Irrigated: Alfalfa, Small Grain, row crops
10. Give a description of proposed project. (Attach sheet if more space is needed)
    The acres listed are maximum possible acres to be irrigated. They will be irrigated using a side-roll irrigation system. We propose to pump into the existing dam which is located in Section 27 during the "off" season and then irrigate out of that. During irrigation season we will have to refill the dam as required.

AUG 1992 DIVISION OF WATER RIGHTS Pierre, SD

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach maps, soil information and any other technical information.

STATE OF SOUTH DAKOTA)
County of Pennington)ss

I, James R. Forsyth, the applicant, certify that I have read this application and examined the attached maps, that the water sample, if needed, has been taken by the required procedures and has not been adulterated or tampered with and is truly representative of the water to be used, and that the matters stated in this application are true and correct.

Signed _____

Subscribed and sworn to before me this 17th day of August 19 92

_____ Notary Public
My Commission Expires 6-1-94

4-87

James R. Forsyth

Lands to be irrigated:

		Acres
Section 28-T1S-R11E	NW 1/4 NE 1/4	5
	NE 1/4 NE 1/4	34
	SE 1/4 NE 1/4	1
	NE 1/4 SW 1/4	19
	SW 1/4 SW 1/4	10
	SE 1/4 SW 1/4	35
	NW 1/4 SE 1/4	19
	NE 1/4 SE 1/4	10
	SW 1/4 SE 1/4	15
	SE 1/4 SE 1/4	28
Section 33-T1S-R11E	NE 1/4 NW 1/4	12
	NW 1/4 NE 1/4	2
Section 27-T1S-R11E	NW 1/4 NW 1/4	35
	NE 1/4 NW 1/4	25
	SW 1/4 NW 1/4	7
	SE 1/4 NW 1/4	8
	NW 1/4 NE 1/4	15
	Total	280 acres

SOUTH DAKOTA
WATER PERMIT NO. 2248-2

Date of first receipt of application August 18, 1992.
Date Soil/Water Compatibility Permit received September 24, 1992.
Date of return to applicant for corrections, amendments or changes August 24, 1992.
Date of receipt of corrected application September 3, 1992.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2248-2 to James R. Forsyth, 2218 Jackson Blvd, Suite 9, Rapid City SD 57702 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2248-2 appropriates 4.0 cubic feet of water per second from the natural flow of Rapid Creek and runoff into a storage dam to irrigate 280 acres. The diversion point from the storage dam (6.54 acre-feet) is to be located on a dry draw in the W 1/2 NE 1/4 of Section 27-T1S-R11E. The diversion from Rapid Creek will be from a point located in the NE 1/4 SW 1/4 of Section 27 to be pumped into the storage dam and between points on the creek located in the NW 1/4 NW 1/4 and the NE 1/4 NE 1/4 of Section 33; all in T1S-R11E. The lands to be irrigated are located in the NW 1/4 NE 1/4, E 1/2 NE 1/4, SW 1/4 SW 1/4, E 1/2 SW 1/4, SE 1/4 of Section 28; NE 1/4 NW 1/4, NW 1/4 NE 1/4 of Section 33; and NW 1/4, NW 1/4 NE 1/4 of Section 27; all in T1S-R11E.

2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 - October 1.

3. The date from which applicant may claim right is August 18, 1992.

4. The date of approval of Permit No. 2248-2 is December 16, 1992.

5. One-fifth of the construction is to be completed on or before June 16, 1995.

6. All construction is to be completed on or before December 16, 1997.

7. Water is to be put to beneficial use on or before December 16, 2001.

8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed. This permit does not authorize diversion of water from Rapid creek unless at least 15 cfs are flowing past the Farmingdale stream gage.

2. Approval of Water Permit No. 2248-2 authorizes storage of up to 6.5 acre-feet of water annually.

(continued)

3. This permit is for natural flow water and not for stored water obtained through contract with the Rapid Valley Water Conservancy District.

WATER MANAGEMENT BOARD

By: _____ JAN 2 0 1993

John Hatch, Chief Engineer, Water Rights Division — date
Department of Environment and Natural Resources

Form 24

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 to 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) _____

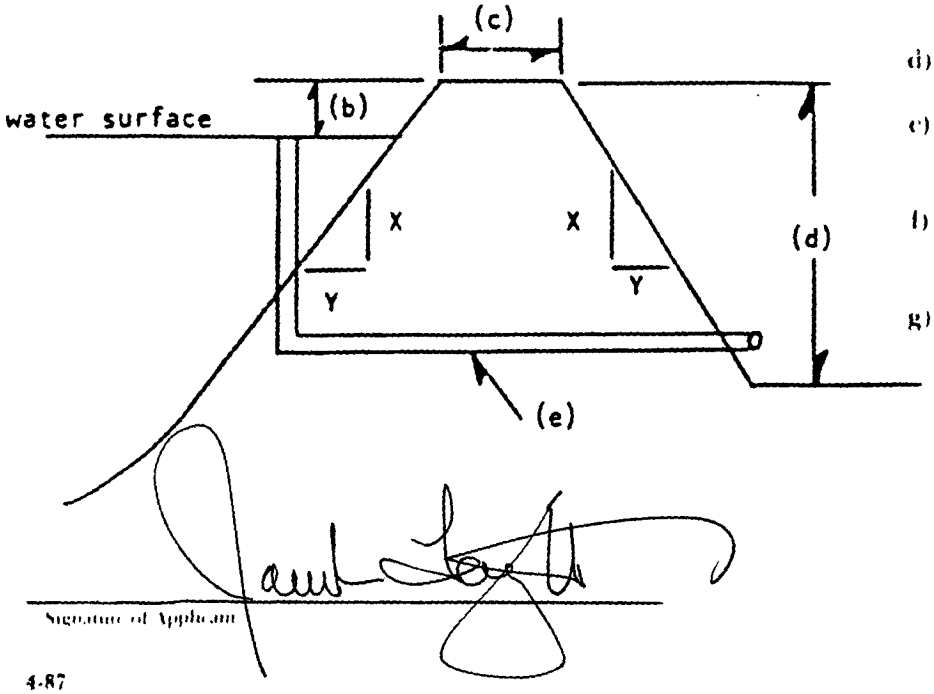
3. Water Storage Dams

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

_____

_____



   b) Freeboard 20'

   c) Crest Width 14'

   Crest Length 180'

   d) Height 65'

   e) Primary Outlet Capacity _____

   If Pipe, diameter _____

   f) Secondary Spillway Capacity _____

   Spillway width _____

   g) X & Y Slope

   Upstream 65'

   Downstream 100'

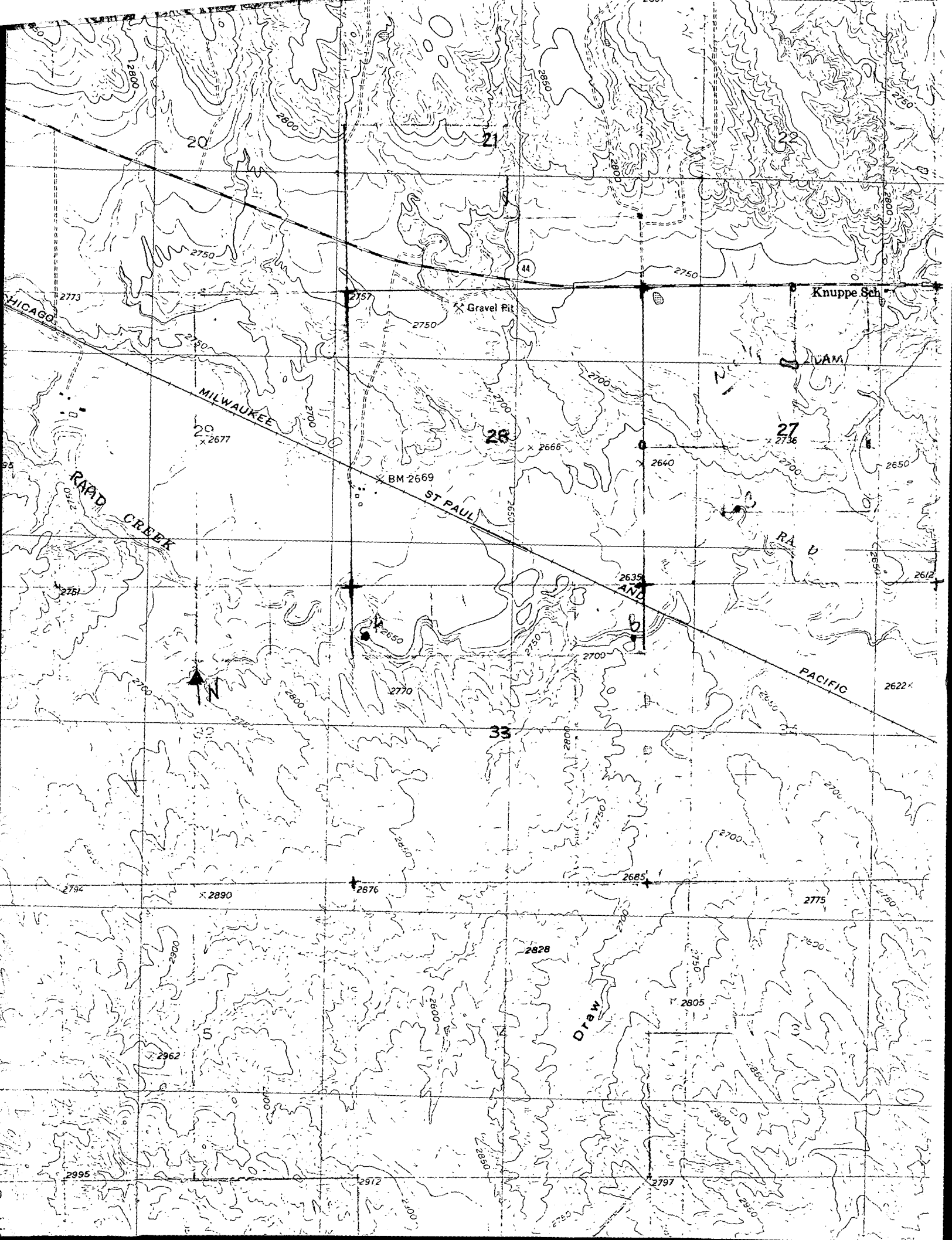
Surface Area of Impoundment 21,000 Sq. Ft.

Storage 6.54 acre feet

Drainage area above dam _____

Signature of Applicant

4-87


20
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Knuppe Sch
Gravel Pit
MILWAUKEE
ST PAUL
PACIFIC
RAPID CREEK
BM 2669
Draw
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2773
2677
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2736
2635
2612
2650
2770
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2805
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2995
2912
2797
2792
2761
2751

FORSYTH FARMS water.ltr

2218 JACKSON BLVD., SUITE 9 • RAPID CITY, SD 57702 • (605) 348-5555 • FAX (605) 348-4387

August 17, 1992

Mr. Mark D. Rath
Natural Resources Engineer
Division of Water Rights
Department of Environment & Natural Resources
523 East Capitol
Pierre, SD 57501-3181

Mr. Rath:

Enclosed please find our application for a water permit for irrigation of our crop land. We have included 2 copies of Form 2, two maps showing the diversion points, the location of Rapid Creek, and the location of our dam. We have outlined the fields in red, and our map has been signed by Ms. Jane Jensen from the ASCS office. A soils map is also included with the soil definitions. We have included a copy of a water sampling taken from Rapid Creek and tested by the State Health Laboratory. Finally, we have included our check for $300.00.

Mark, thank you so much for all of your assistance. We really do appreciate your help. If there are items that we have not completed, or additional information that you need please call us.

Sincerely,

Vivian L. Pappel

South Dakota

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

GREAT FACES. GREAT PLACES.

August 24, 1992

James R. Forsyth
2218 Jackson Blvd.
Suite 9
Rapid City SD 57702

Dear Mr. Forsyth:

In regard to your water permit application received on August 18, 1992, the following information needs to be submitted and clarified in order to process your application.

On Item No. 4 of the application, please list the location of point c and the location of the dam in Section 27. It would appear that point A is located in the NW 1/4 NW 1/4 Section 33; point B is located in the NE 1/4 NE 1/4 Section 33; point c is located in the NE 1/4 SW 1/4 Section 27 and the dam is located in the W 1/2 NE 1/4 Section 27; all in T1S-R11E. Do you concur?

Item No. 7 of the application states the number of acres should be in forty acre subdivisions. From the map submitted with the application, it would appear that the lands and number of acres irrigated are as shown on the attachment. Do you concur with this breakdown? The total number of acres would be 280 acres.

On the Supplemental Information form, please complete Item No. 3, g) regarding the storage capacity of the dam and surface area of impoundment. Is this an existing dam? Do plans and specifications exist for this dam?

The application is being returned because the signature has not been notarized.

The water permit application can not be considered until the application is complete and a soil/water permit is obtained from the Department of Agriculture. Upon receipt of the above, further processing of your application will continue. If you have any questions, please contact this office.

Sincerely,

Karen Schlaak

Karen Schlaak
Natural Resources Analyst
605 773-3352

enclosure

FORSYTH FARMS

2218 JACKSON BLVD., SUITE 9 • RAPID CITY, SD 57702 • (605) 348-5555 • FAX (605) 348-4387

August 26, 1992

Ms. Karen Schlaak
Natural Resources Analyst
DENR
523 E. Capitol
Pierre, SD 57501-3181

Ms. Schlaak:

Thank you for your fast response to our water application. We have tried to clear up the areas you outlined for us.

Item No. 4, point c is located in the NE 1/4 of the SW 1/4 of Section 27. The dam is located in the W 1/2 of the NE 1/4 and the E 1/2 of the NW 1/4 of Section 27. The descriptions you list for point a and b appear correct.

Item No. 7, we do concur with the breakdown that you provided.

Item no. 3, g), we have supplied the answers to these questions on Form 2A. This is an existing dam that has some water in it, however it is not full. As far as we know, plans and specifications do not exist for this dam.

Mr. Forsyth's signature has been notarized.

Thank you for your help with our permit. Please call if you need additional information.

Sincerely,

James Forsyth

James R. Forsyth

RECEIPT

413385

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, August 21, 19 92

RECEIVED OF Forsyth Farms, 2218 Jackson Blvd, Ste 9, Rapid City SD 57702

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

Fee for Application for Permit No. 2248-2 to Appropriate Water, to construct and to put water to beneficial use	300	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		
(Any Other Work Provided by Law) **Total**	300	00

By John Hatch (KS)
Chief Engineer JOHN HATCH

Department of Agriculture
WI#1
5/87

SOIL/WATER COMPATIBILITY PERMIT

Division of Conservation

Office Use Only: 4726

WR#:

OWNERS NAME: FORSYTH, JAMES R. OWNERS ADDRESS: 2218 JACKSON BLVD., SUITE 9
RAPID CITY, SD 57702

COUNTY LAND LOCATED IN: PENNINGTON PHONE: 348-5555

LEGAL DESCRIPTION:
1. LOCATION: Point A - NW¼ NW¼ 33-T1S-R11E; Point B - NE¼ NE¼ 33-T1S-R11E; Point C - NE¼ SW¼ 27-T1S-R11E and Dam - W½ NE¼ 27-T1S-R11E
Depth:

☐ Well ☒ Surface Rapid Creek

LEGAL DESCRIPTION:

NW1/4 NE1/4 28-T1S-R11E = 5 ACRES	NE1/4 NE1/4 28-T1S-R11E = 34 ACRES
SE1/4 NE1/4 28-T1S-R11E = 1 ACRE	NE1/4 SW1/4 28-T1S-R11E = 19 ACRES
SW1/4 SW1/4 28-T1S-R11E = 10 ACRES	SE1/4 SW1/4 28-T1S-R11E = 35 ACRES
NW1/4 SE1/4 28-T1S-R11E = 19 ACRES	NE1/4 SE1/4 28-T1S-R11E = 10 ACRES
SW1/4 SE1/4 28-T1S-R11E = 15 ACRES	SE1/4 SE1/4 28-T1S-R11E = 28 ACRES
NE1/4 NW1/4 33-T1S-R11E = 12 ACRES	NW1/4 NE1/4 33-T1S-R11E = 2 ACRES
NW1/4 NW1/4 27-T1S-R11E = 35 ACRES	NE1/4 NW1/4 27-T1S-R11E = 25 ACRES
SW1/4 NW1/4 27-T1S-R11E = 7 ACRES	SE1/4 NW1/4 27-T1S-R11E = 8 ACRES
NW1/4 NE1/4 27-T1S-R11E = 15 ACRES: TOTAL OF 280 ACRES	

2. **TYPE OF IRRIGATION**: GRAVITY:___ TOWLINE:___ CENTER PIVOT:___ GUN:___ OTHER: (Specify) Side-Roll

3. CROPS TO BE IRRIGATED: ALFALFA, SMALL GRAIN, ROW CROPS

WATER QUALITY:

4. WATER SAMPLE NUMBER: Rapid Creek
5. SALINITY (EC X 10^6): 1008
6. SODIUM (SAR): 1.16
7. ADJUSTED (SAR): 2.52
8. PERCENT SODIUM: 26.6

Requirements:

The areas mapped as Nihill gravelly loam (Nde), 9-40% slope; Samsil clay (SbF), 25-40% slope; Samsil-Pierre clays (ScE), 15-25% slope; Zigweid-Nihill Complex (ZnD), 6-15% slope; and Nihill very gravelly loam (NeD), 0-25% slope may have slopes, which have an excessive erosion hazard; these slopes shall be restricted from irrigation.

The areas of Lohmiller silty clay channeled (Lp) and Pierre-Hisle complex (PhB) 0-9% slope have limitations, which make them unsuitable for irrigation; these areas shall be restricted from irrigation.

The natural riparian area adjacent to Rapid Creek shall not be irrigated and will serve as a buffer strip.

Director, Division of Conservation

SEPTEMBER 23, 1992
Date

XXX APPROVED
_____ DISAPPROVED
_____ WAIVER

XXX REQUIREMENTS

Soil/water permits will be recorded by the Department of Agriculture, with the County Register of Deeds.

SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES
Office of Drinking Water
Chemical Analytical Data

Water Supply: Lower Rapid Creek

Date Collection: 5/18/92 Time: 5:20

EPA ID #:

Report to be Returned to:

Source Sampled: Creek Water Depth: 3 ft

LRV HU / Forsyth
601 Centre St.
Rapid City, SD 57701

Date Built:

Type of Sample: Raw X Treated ____ Composite ____

Location of Sampling Tap:

Treatment Processes: None

Comments:

Received by Lab: 5/20/92 Time:

Report Sent by Lab: 6-10-92 MS

AUG 1992
DIVISION OF
WATER RIGHTS
Pierre, SD

	Parameter	Maximum Limit	Results
	Arsenic	50 ug/L	
	Barium	1000 ug/L	
	Cadmium	10 ug/L	
	Chromium	50 ug/L	
	Lead	50 ug/L	
	Mercury	2 ug/L	
X	Nitrate (as N)	10 mg/L	1.1
	Nitrite (as N)	1 mg/L	
	Selenium	10 ug/L	
	Silver	50 ug/L	
X	Fluoride	4.0 mg/L	0.53
	Gross alpha	15 pCi/L	
	Gross beta	pCi/L	
	Gross radium	pCi/L	
	Radium 226	pCi/L	
	Radium 228	pCi/L	
	Uranium	pCi/L	
	Radon	pCi/L	
	VOCs		
	Unregulated organics		
	SOCs		
	THMs		

	Parameter	Suggested Limit	Results
X	Chloride	250 mg/L	56.6
X	Iron	0.3 mg/L	0.56
X	Manganese	0.05 mg/L	0.10
X	Sulfate	250 mg/L	242
X	Tot. Diss. Solids (TDS)	500 mg/L	676
X	Lab pH	6.5-8.5	8.51
X	Alkalinity - M (CaCO3)	mg/L	214
X	Alkalinity - P (CaCO3)	mg/L	—
X	Bicarbonate	mg/L	261
X	Carbonate	mg/L	—
X	Spec Cond @ 25 °C	umhos/cm	1008
X	Calcium	mg/L	105
X	Magnesium	mg/L	36.6
X	Hardness (CaCO3) gpg:	mg/L	413
X	Langlier Index		0.98
X	Sodium	mg/L	54.0
X	Potassium	mg/L	7.5
	Field temperature	°F	°C
	Field pH	6.5-8.5	
X	Boron		
X	SAR		1.16

LAB COMMENTS:

STATE HEALTH LABORATORY
500 E. Capital
PIERRE, SD 57501-5093

Percentage of Error: 1.0 / 3.5

mg/L = milligrams/Liter = parts/million (ppm)
ug/L = micrograms/Liter = parts/billion (ppb)
gpg = grains per gallon
pCi/L = picocuries/Liter

LAB NUMBER:


NuA
NvC
NuB
ZnD
BfA
ArA
PeD
NvA
PhB
NdE
Lp
ScE
KyB
KyA
Lo
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34

TABLE 1 - SOIL INTERPRETIVE GROUPS

Map Symbol	Mapping Unit Name	SIR Number	Slope %	Capability Unit		Range Site	Pasture Group	Windbk. Suit. Group	Wind Erod. Group(1)	Soil Loss Values		Hydro Group
				Dryland	Irrigation					K	Tons	
AaA	Altvan loam	NE0097	0-2	IVs1		Si	D1	6G	5(56)	.28	4	B
AaB	Altvan loam	NE0097	2-6	IVe1		Si	D1	6G	5(56)	.28	4	B
AaC	Altvan loam	NE0097	6-9	VIe2		Si	D1	6G	5(56)	.28	4	B
ArA	Arvada loam	WY0088	0-4	VIs3		TCp	NS	10	5(56)	.32	3	D
BaA	Baca silt loam	CO0004	0-4	IIIe1		Si	F	3	5(56)	.24	5	B
Bb	Badland			VIIIs1		-	-	-	-	-	-	-
BcB	Bankard loamy fine sand	CO0729	0-4	IVe6		Sa	B	1	2(134)	.17	5	A
BfA	Beckton silt loam	SD0403	0-4	IVs2		Cp	C	9	6(48)	.32	3	D
BhA	Beckton-Arvada complex		0-4									
	Beckton part	SD0403		IVs2		Cp	C	9	6(48)	.32	3	D
	Arvada part	WY0088		VIs3		TCp	NS	10	5(56)	.32	3	C
BkA	Blackpipe silty clay loam	SD0085	0-2	IIIc1		Si	F	6R	7(38)	.32	4	C
BkB	Blackpipe silty clay loam	SD0085	1-6	IIIe1		Si	F	6R	7(38)	.32	4	B
BlA	Blackpipe clay loam	SD0085	0-2	IIIc1		Si	F	6R	6(48)	.32	4	C
BlB	Blackpipe clay loam	SD0085	2-6	IIIe1		Si	F	6R	6(48)	.32	4	C
BnC	Blackpipe-Norrest complex		6-12									
	Blackpipe part	SD0085		IVe1		Si	F	6R	6(48)	.28	4	C
	Norrest part	SD0203		VIe3		Cy	F	6R	4L(86)	.37	4	C
BoA	Blackpipe-Wortman complex		0-3									
	Blackpipe part	SD0085		IIIc1		Si	F	6R	7(38)	.32	4	C
	Wortman part	SD0132		IVs2		Cp	C	9	6(48)	.32	3	D
BoB	Blackpipe-Wortman complex		1-6									
	Blackpipe part	SD0085		IIIe1		Si	F	6R	6(48)	.28	4	C
	Wortman part	SD0132		IVs2		Cp	C	9	6(48)	.32	3	D
Bp	Bridgeport silt loam	KS0127	0-2	IIIc1		LT	K	1	6(48)	.32	5	B
Ca	Cactusflat silty clay	SD0362	0-3	IIIs1		Cy	I	4C	4(86)	.32	5	C
Cb	Cactusflat-Weta complex		0-2									
	Cactusflat part	SD0362		IIIs1		Cy	I	4C	4(86)	.32	5	C
	Weta part	SD0363		VIs3		TCp	C	10	6(48)	.32	3	D
CeA	Cedarpass silty clay loam	SD0365	0-3	IVe10		Si	F	8	4L(86)	.32	5	B
CfA	Cedarpass-Denby complex		0-3									
	Cedarpass part	SD0365		IVe10		Si	F	8	4L(86)	.32	5	B
	Denby part	SD0421		IVs6		Cy	I	4C	4(86)	.37	5	C
Ch	Cedarpass-Interior-Badlands complex		0-45	VIIs6								
	Cedarpass part	SD0365				Si	NS	8	4L(86)	.32	5	B
	Interior part	SD0364				BOv	NS	10	4L(86)	.32	5	B
	Badland part			VIIIs1		-	-	-	-	-	-	-
ClF	Colby silt loam	KS0014	9-40	VIIe1		TU	NS	10	4L(86)	.43	5	B

TABLE 1 - SOIL INTERPRETIVE GROUPS

Map Symbol	Mapping Unit Name	SIR Number	Slope %	Capability Unit Dryland	Capability Unit Irrigation	Range Site	Pasture Group	Windbk. Suit. Group	Wind Erod. Group(I)	Soil Loss Values K	Soil Loss Values Tons	Hydro Group
CmC	Colby-Norka silt loams		6-15	VIe3								
	Colby part	KS0024				TU	G	8	4L(86)	.43	5	B
	Norka part	CO0613				Si	F	3	5(56)	.32	5	B
Cn	Colombo loam	CO0939	0-2	IIIc2		LT	F	1	5(56)	.28	5	B
Co	Colombo loam, channeled	CO0939	0-3	VIw1		LOv	F	1	5(56)	.28	5	B
Cp	Colombo-Urban land complex	CO0939	0-2	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
CuD	Conata-Hisle complex		6-25									
	Conata part	SD0237		VIe12		SvC	NS	10	4(86)	.37	2	D
	Hisle part	SD0117		VIs3		TCp	NS	10	6(48)	.37	3	D
CyC	Cushman loam	WY0521	6-9	IVe1		Si	F	6R	5(56)	.32	4	C
CzD	Cushman-Shingle loams		9-15									
	Cushman part	WY0521		VIe1		Si	NS	6R	5(56)	.32	4	C
	Shingle part	WY0090		VIe11		Sv	NS	10	5(56)	.32	2	D
DmA	Denby silty clay	SD0421	0-3	IVs6		Cy	I	4C	4(86)	.37	5	C
Eg	Eqas silty clay loam	SD0026	0-4	VIIs9		SL	NS	10	4(86)	.28	5	D
EmA	Emigrant loam	WY0422	0-2	IIIc1		Si	F	6R	5(56)	.32	4	C
EmB	Emigrant loam	WY0422	2-6	IIIe1		Si	F	6R	5(56)	.32	4	C
EnD	Enning-Minnequa silt loams		9-25									
	Enning part	SD0138		VIs1		Sv	NS	10	4L(86)	.43	2	D
	Minnequa part	CO0034		VIe3		TU	NS	10	4L(86)	.32	4	C
FaE	Fairburn clay loam	SD0307	9-40	VIe11		TU	NS	10	4L(86)	.37	2	D
FgE	Fairburn gravelly clay loam, bouldery	SD0307	15-45	VIIs6		TU	NS	10	8(-)	.24	2	D
FhE	Fairburn-Badland complex		9-40									
	Fairburn part	SD0307		VIe11		TU	NS	10	4L(86)	.37	2	D
	Badland part			VIIIs1		-	-	-	-	-	-	-
FoF	Fairburn-Orella-Badland complex		15-45	VIIe5								
	Fairburn part	SD0307				TU	NS	10	4L(86)	.37	2	D
	Orella part	NE0071				SvC	NS	10	4(86)	.32	2	D
	Badland part			VIIIs1		-	-	-	-	-	-	-
Gb	Glenberg fine sandy loam	CO0058	0-3	IIIe4		LT	H	1	3(86)	.24	5	B
GrE	Grummit-Rock outcrop complex		6-40									
	Grummit part	SD0082		VIIe5		SvC	NS	10	4(86)	.28	2	D
	Rock outcrop part			VIIIs2		-	-	-	-	-	-	-
GsD	Grummit-Urban land complex		9-30	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
Ha	Haverson silt loam	CO0611	0-1	IIIc2		LT	F	1	4L(86)	.28	5	B
Hc	Haverson loam, channeled	CO0611	0-3	VIw1		LOv	F	1	4L(86)	.28	5	B
HpB	Hisle silt loam	SD0117	0-6	VIs3		TCp	NS	10	6(48)	.37	3	D

TABLE 1 - SOIL INTERPRETIVE GROUPS

Map Symbol	Mapping Unit Name	SIR Number	Slope %	Capability Unit Dryland	Capability Unit Irrigation	Range Site	Pasture Group	Windbk. Suit. Group	Wind Erod. Group(1)	Soil Loss Values K	Soil Loss Values Tons	Hydro Group
HrC	Hisle-Rock outcrop complex		2-9									
	Hisle part	SD0117		VIs3		TCp	NS	10	6(48)	.37	3	D
	Rock outcrop part			VIIIs2		-	-	-	-	-	-	-
HsB	Hisle-Slickspots complex		0-6									
	Hisle part	SD0017		VIs3		TCp	NS	10	6(48)	.37	3	D
	Slickspots part			VIIIs3		-	-	-	-	-	-	-
Hv	Hoven silt loam	SD0056	0-1	VIs3		CD	B2	10	6(48)	.37	3	D
Hz	Hoven Variant silty clay, ponded	SD0376	0-1	VIIIw1			-	-	-	.37	3	D
In	Interior loam	SD0360	0-2	VIs7		TU	NS	10	4L(86)	.32	5	B
Io	Interior loam, channeled	SD0364	0-3	VIw1		BOv	NS	10	4L(86)	.32	5	B
IrB	Interior-Cedarpass-Denby complex		0-6	VIs7								
	Interior part	SD0364				BOv	NS	10	4L(86)	.32	5	B
	Cedarpass part	SD0365				Si	F	8	4L(86)	.32	5	B
	Denby part	SD0421				Cy	I	4C	4(86)	.37	5	C
JaA	Jayem fine sandy loam	WY0044	0-3	IIIe4		Sy	H	5	3(86)	.28	5	B
JaC	Jayem fine sandy loam	WY0044	3-9	IVe6		Sy	H	5	3(86)	.28	5	B
KtA	Kyle clay	SD0078	0-1	IVs3		Cy	I	4C	4(86)	.37	5	D
KyA	Kyle clay	SD0078	0-3	IVs3		Cy	I	4C	4(86)	.37	5	D
KyB	Kyle clay	SD0078	3-6	IVe3		Cy	I	4C	4(86)	.37	5	D
KyC	Kyle clay	SD0078	6-9	IVe14		Cy	I	4C	4(86)	.37	5	D
LaB	Larvie clay	SD0223	0-4	IVs3		Cy	I	4C	4(86)	.37	4	D
LaD	Larvie clay	SD0223	6-15	VIe4		Cy	I	4C	4(86)	.37	4	D
LhC	Larvie-Hisle complex		0-9									
	Larvie part	SD0223		IVe14		Cy	I	4C	4(86)	.37	4	D
	Hisle part	SD0117		VIs3		TCp	NS	10	6(48)	.37	3	D
Lo	Lohmiller silty clay	SD0326	0-2	IIIs1		COv	F	4C	4(86)	.32	5	C
Lp	Lohmiller silty clay, channeled	SD0351	0-4	VIw1		COv	F	4C	4(86)	.32	5	C
MaB	Manvel silt loam	CO0179	0-6	IVe10		TU	G	8	4L(86)	.37	5	B
MeC	Manvel-Minnequa silt loams		2-9									
	Manvel part	CO0179		IVe10		TU	G	8	4L(86)	.37	5	B
	Minnequa part	CO0034		VIe3		TU	G	8	4L(86)	.32	4	C
MgC	Manvel soil-Urban land complex		6-15	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
MoE	Midway silty clay loam	CO0612	15-40	VIIe5		SvC	NS	10	4L(86)	.43	2	D
MosE	Midway clay loam, stony	CO0643	15-40	VIIs6		SvC	NS	10	8(-)	.24	2	D
MpD	Midway-Urban land complex	CO0612	9-30	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
MrC	Minnequa-Penrose complex		6-9									
	Minnequa part	CO0034		VIe3		TU	G	8	4L(86)	.32	4	C
	Penrose part	CO0041		VIs1		SW	NS	10	4L(86)	.32	2	D

TABLE 1 - SOIL INTERPRETIVE GROUPS

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NdE	Nihill gravelly loam	WY0431	9-40	VIe3		TU	NS	10	5(56)	.10	5	B
NeD	Nihill very gravelly loam	WY0431	0-25	VIIs6		VSw	NS	10	8(-)	.05	5	A
NgA	Norka silt loam	CO0613	0-2	IIIc1		Si	F	3	5(56)	.32	5	B
NgB	Norka silt loam	CO0613	2-6	IIIe1		Si	F	3	5(56)	.32	5	B
NhA	Norka-Weta silt loams		0-3									
	Norka part	CO0613		IIIc1		Si	F	3	5(56)	.32	5	B
	Weta part	SD0363		VIs3		TCp	C	10	6(48)	.32	3	D
NkD	Norrest silty clay loam	SD0203	6-15	VIe3		Cy	F	6R	4L(86)	.37	4	C
NuA	Nunn loam	CO1078	0-2	IIIc1		Si	F	3	6(48)	.24	5	C
NuB	Nunn loam	CO1078	2-6	IIIe1		Si	F	3	6(48)	.24	5	C
NuC	Nunn loam	CO1078	6-12	IVe1		Si	F	3	6(48)	.24	5	C
NvA	Nunn-Beckton complex		0-3									
	Nunn part	CO1078		IIIc1		Si	F	3	6(48)	.24	5	C
	Beckton part	CO0879		IVs2		Cp	C	9	6(48)	.32	3	D
NvC	Nunn-Beckton complex		3-9									
	Nunn part	CO1078		IVe1		Si	F	3	6(48)	.24	5	C
	Beckton part	CO0879		IVs2		Cp	C	9	6(48)	.32	3	D
NwA	Nunn-Urban land complex	CO1078	0-3	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
ObE	Orella-Badland complex		9-45									
	Orella part	NE0071		VIIe5		SwC	NS	10	4L(86)	.32	2	D
	Badland part			VIIIs1		-	-	-	-	-	-	-
OeE	Orella-Interior-Badlands complex		0-25	VIIe5								
	Orella part	NE0071				SwC	NS	10	4L(86)	.32	2	D
	Interior part	SD0364				BoV	NS	10	4L(86)	.32	5	B
	Badlands part			VIIIs1		-	-	-	-	-	-	-
OtA	Ottumwa clay	SD0248	0-2	IIIs1		Cy	I	4C	4(86)	.37	5	D
OtB	Ottumwa clay	SD0248	2-6	IIIe3		Cy	I	4C	4(86)	.37	5	D
OvC	Ottumwa-Razor complex		6-9	IVe14								
	Ottumwa part	SD0248				Cy	I	4C	4(86)	.37	5	D
	Razor part	CO0981				Cy	I	4C	4L(86)	.28	4	C
Ov	Owanka clay loam	SD0240	0-3	IIIc2		LT	F	3	4(86)	.28	5	C
Ox	Owanka-Beckton complex		0-2									
	Owanka part	SD0240		IIIc2		LT	F	3	4(86)	.28	5	C
	Beckton part	CO0879		IVs2		Cp	C	9	6(48)	.32	3	D
PdF	Penrose-Rock outcrop complex		9-60									
	Penrose part	CO0041		VIIs1		Sv	NS	10	4L(86)	.32	2	D
	Rock outcrop part			VIIIs1		-	-	-	-	-	-	-
PeB	Pierre clay	SD0077	2-6	IVe3		Cy	I	4C	4(86)	.37	4	D
PeC	Pierre clay	SD0077	6-9	IVe14		Cy	I	4C	4(86)	.37	4	D

TABLE 1 - SOIL INTERPRETIVE GROUPS

Map Symbol	Mapping Unit Name	SIR Number	Slope %	Capability Unit Dryland	Capability Unit Irrigation	Range Site	Pasture Group	Windbk. Suit. Group	Wind Erod. Group(I)	Soil Loss Values K	Soil Loss Values Tons	Hydro Group
PeD	Pierre clay	SD0077	6-15	VIe4		Cy	I	4C	4(86)	.37	4	D
PgD	Pierre-Grummit clays		6-15									
	Pierre part	SD0077		VIe4		Cy	I	4C	4(86)	.37	4	D
	Grummit part	SD0082		VIe12		SwC	NS	10	4(86)	.28	2	D
PhB	Pierre-Hisle complex		0-9									
	Pierre part	SD0077		IVe3		Cy	I	4C	4(86)	.37	4	D
	Hisle part	SD0117		VIs3		TCp	NS	10	6(48)	.37	3	D
PkC	Pierre-Urban land complex	SD0077	6-15	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
Ps	Pits, gravel		-	VIIIs2		-	-	-	-	-	-	A
RaB	Razor silty clay	CO0981	2-6	IVe3		Cy	I	4C	4L(86)	.28	4	C
RaC	Razor silty clay	CO0981	6-9	IVe14		Cy	I	4C	4L(86)	.28	4	C
RbD	Razor-Midway complex		6-15									
	Razor part	CO0981		VIe4		Cy	I	4C	4L(86)	.28	4	C
	Midway part	CO0612		VIe12		SwC	NS	10	4L(86)	.43	2	D
Rv	Riverwash		0-2	VIIIe1					1(250)		-	-
SbF	Samsil clay	SD0109	25-40	VIIe5		SwC	NS	10	4(86)	.37	2	D
ScE	Samsil-Pierre clays		15-25									
	Samsil part	SD0109		VIe12		SwC	NS	10	4(86)	.37	2	D
	Pierre part	SD0077		VIe4		Cy	NS	10	4(86)	.37	4	D
SdF	Samsil-Rock outcrop complex		25-75									
	Samsil part	SD0109		VIIe5		SwC	NS	10	4(86)	.37	2	D
	Rock outcrop part			VIIIs2		-	-	-	-	-	-	-
SeA	Satanta loam	KS0102	0-2	IIIc1		Si	F	3	6(48)	.28	5	B
SeB	Satanta loam	KS0102	2-6	IIIe1		Si	F	3	6(48)	.28	5	B
SeC	Satanta loam	KS0102	6-9	IVe1		Si	F	3	6(48)	.28	5	B
SgA	Satanta-Beckton complex		0-3									
	Satanta part	KS0102		IIIc1		Si	F	3	6(48)	.28	5	B
	Beckton part	CO0879		IVs2		Cp	C	9	6(48)	.32	3	D
SkA	Satanta-Urban land complex	KS0102	0-2	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
SkB	Satanta-Urban land complex	KS0102	2-6	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
SmA	Savo silt loam	SD0084	0-2	IIIc1		Si	F	3	6(48)	.32	5	C
SmB	Savo silt loam	SD0084	2-6	IIIe1		Si	F	3	6(48)	.32	5	C
SmC	Savo silt loam	SD0084	6-9	IVe1		Si	F	3	6(48)	.32	5	C
SoB	Savo-Urban land complex	SD0084	0-9	NO AGRICULTURAL INTERPRETATION MADE FOR URBAN LAND COMPLEXES								
StE	Schamber-Samsil complex		15-40									
	Schamber part	SD0075		VIIs7		VSw	NS	10	6(48)	.17	2	A
	Samsil part	SD0109		VIIe5		SwC	NS	10	4(86)	.37	2	D
SuE	Shingle loam	WY0090	15-25	VIIe4		Sw	NS	10	5(56)	.32	2	D

TABLE 1 - SOIL INTERPRETIVE GROUPS

Map Symbol	Mapping Unit Name	SIR Number	Slope %	Capability Unit		Range Site	Pasture Group	Windbk. Suit. Group	Wind Erod. Group(1)	Soil Loss Values		Hydro Group
				Dryland	Irrigation					K	Tons	
SvF	Shingle-Rock outcrop complex		25-60									
	Shingle part	WY0090		VIIs4		Sw	NS	10	5(56)	.32	2	D
	Rock outcrop part			VIIIs2		-	-	-	-	-	-	-
SrB	Svanboy clay	SD0066	0-6	VIs6		DC	NS	10	4(86)	.37	5	D
TfA	Tilford silt loam	SD0012	0-2	IIIc1		Si	F	3	6(48)	.32	5	B
VbD	Valent loamy fine sand	C00050	6-25	VIe7		Sa	NS	10	2(134)	.10	5	A
VbvB	Valent-Wortman loamy fine sands		2-6									
	Valent part	C00050		VIe7		Sa	NS	7	2(134)	.10	5	A
	Wortman part	SD0402		IVs2		Cp	C	9	2(134)	.17	3	A
WaA	Wanblee silt loam	SD0112	0-4	VIs3		TCp	NS	10	6(48)	.32	3	D
WbB	Wanblee-Wortman silt loams		0-4									
	Wanblee part	SD0112		VIs3		TCp	NS	10	6(48)	.32	3	D
	Wortman part	SD0132		IVs5		Cp	C	9	6(48)	.32	3	D
WeA	Weta silt loam	SD0363	0-3	VIs3		TCp	NS	10	6(48)	.32	3	D
Wh	Whitelake fine sandy loam	SD0120	0-2	IVs2		Sy	H	5	3(86)	.24	3	B
WkA	Whitewater clay	SD0383	0-3	VIs6		DC	NS	10	4(86)	.37	4	D
WoB	Whitewater-Orella clays		3-9									
	Whitewater part	SD0383		VIs6		DC	NS	10	4(86)	.37	4	D
	Orella part	NE0071		VIe12		SwC	NS	10	4(86)	.32	2	D
WwB	Wortman silt loam	SD0132	0-6	IVs5		Cp	C	9	6(48)	.32	3	D
ZnD	Zigweid-Nihill complex		6-15									
	Zigweid part	WY0121		VIe1		Si	NS	3	6(48)	.32	5	B
	Nihill part	WY0431		VIe3		TU	NS	10	5(56)	.10	5	B

Prairie

DESCRIPTIONS OF LAND CAPABILITY UNITS (DRYLAND)

IIIc1 Deep and moderately deep, loamy soils on nearly level (0 to 2%) uplands. The main limitation is inadequate moisture and the main hazard is wind erosion.

IIIc2 Deep, loamy soils on nearly level (0 to 2%) bottom lands and footslopes that sometimes receive beneficial overflow. The main limitation is inadequate moisture and the main hazard is wind erosion.

IIIc3 Deep, loamy, well to moderately well drained soils in nearly level (0 to 2%) upland swales and small draws that receive beneficial run-in. However, the main limitation is still inadequate moisture.

IIIe1 Deep and moderately deep, loamy soils on gently sloping (2 to 6%) uplands. The main limitation is moisture shortage and the main hazards are wind and water erosion.

IIIe2 Deep, loamy soils on gently sloping (2 to 6%) upland swales. The main limitation is moisture shortage and the main hazard is water erosion.

IIIe3 Deep, loamy soils on (2 to 6%) footslopes and upland swales that receive beneficial moisture from run-in water. They have a moderate water erosion hazard.

IIIe4 Deep and moderately deep, moderately sandy soils on (0 to 2%) nearly level uplands and bottom lands. They have a severe wind erosion hazard. The main limitations are the low or moderate available water capacity and inadequate moisture.

IIIe1 Deep and moderately deep, clayey soils on nearly level (0 to 2%) uplands. The main limitations are lack of moisture and an unfavorable rooting zone. The main hazard is wind erosion.

IIIe2 Deep and moderately deep, loamy soils on nearly level (0 to 2%) uplands that have dense clayey subsoils. The main limitations are unfavorable rooting zone in the subsoil and inadequate moisture. The main hazard is wind erosion.

IIIw1 Deep, poorly drained soils with silty surfaces and claypan subsoils in depressions. The main limitation is an unfavorable rooting zone. The main hazard is flooding.

IVe1 Moderately deep and deep, loamy soils on undulating and sloping (6 to 9%) uplands. They have severe water and moderate wind erosion hazards. The main limitation is inadequate moisture.

IVe2 Soils with 20 to 40 inches of loamy material over sand and gravel on gently sloping (2 to 6%) uplands. The main limitations are the low available water capacity and inadequate moisture. The main hazards are wind and water erosion.

IVe3 Deep and moderately deep, clayey soils on gently sloping (2 to 6%) uplands. The main limitations are inadequate moisture and an unfavorable rooting zone. The main hazards are water and wind erosion.

IVe4 Moderately sandy soils on nearly level (0 to 2%) uplands and terraces that are moderately deep over sand and gravel. They have severe wind erosion hazards. The main limitations are low water holding capacity and inadequate moisture.

IVe5 Moderately sandy soils on gently sloping and gently undulating (2 to 6%) uplands that are moderately deep over sand and gravel. They have a severe wind erosion hazard. The main limitations are low available water capacity and inadequate moisture.

IVe6 Deep and moderately deep, moderately sandy soils on gently sloping and gently undulating (2 to 6%) bottom lands, terraces, and uplands. They have severe wind erosion hazards. The main limitations are inadequate moisture and low or moderate available water capacity.

IVe7 Deep and moderately deep, moderately sandy soils on sloping (6 to 9%) uplands and terraces. They have severe wind erosion and moderate water erosion hazards. The main limitations are inadequate moisture and low or moderate available water capacity.

IVe8 Moderately deep, loamy, calcareous soils on gently undulating and gently sloping (2 to 6%) uplands. They have severe wind erosion hazards. The main limitation is inadequate moisture.

DESCRIPTIONS OF LAND CAPABILITY UNITS (DRYLAND) cont'd

IVe9 Deep and moderately deep soils on gently sloping (2 to 6%) uplands with loamy surfaces and dense clayey subsoils. The main limitations are inadequate moisture and unfavorable rooting zone. The main hazards are water and wind erosion.

IVe10 Deep, loamy, calcareous soils on nearly level (0 to 2%) uplands. They have severe wind erosion hazards. The main limitation is inadequate moisture.

IVe11 Soils with loamy surfaces, clayey subsoils, and siltstone substrate at 20 to 40 inches on gently sloping (2 to 6%) uplands. The main limitations are inadequate moisture and unfavorable rooting zone. The main hazards are moderate wind and water erosion.

IVe12 Deep soils with moderately sandy surfaces over dense, slowly permeable subsoils on nearly level to gently undulating (0 to 6%) uplands. They have severe wind erosion hazards. The main limitations are inadequate moisture and restrictive rooting zone.

IVe13 Deep and moderately deep, loamy calcareous soils on sloping (6 to 9%) uplands. They have severe wind erosion and moderate water erosion hazards. They have limited rooting zone and inadequate moisture.

IVe1 Soils with loamy surfaces 20 to 40 inches thick over sand and gravel on nearly level (0 to 2%) terraces. The main limitations are inadequate moisture and low available water capacity. The main hazard is wind erosion.

IVe2 Soils with 4 to 10 inches of loamy surfaces over dense, claypan subsoils that contain salts. These soils occur in nearly level (0 to 2%) upland swales and on uplands. The main limitations are an unfavorable rooting zone and inadequate moisture. The main hazard is wind erosion.

IVe3 Moderately deep, clayey soils on nearly level (0 to 2%) uplands. The main limitations are inadequate moisture and unfavorable rooting zone. The main hazard is wind erosion.

IVe5 Soils with loamy surfaces, clayey subsoils, and siltstone substrate at 20 to 40 inches on nearly level (0 to 2%) uplands. The main limitations are inadequate moisture and unfavorable rooting zone. The main hazard is wind erosion.

Vw1 These are low, very poorly drained soils that are suitable for grazing. The main limitations are poor drainage and ponding.

VIe1 Moderately deep and deep, loamy soils on rolling to hilly (9 to 25%) uplands. These soils have severe water and moderate wind erosion hazards. The main limitations are inadequate rainfall and steep slopes.

VIe2 Soils with 20 to 40 inches of loamy material over sand and gravel on sloping (6 to 9%) uplands. These soils have severe water and moderate wind erosion hazards. The main limitations are inadequate moisture and low available water capacity.

VIe3 Moderately deep and deep, calcareous, loamy soils on undulating to hilly (6 to 25%) uplands. These soils have severe water and moderate wind erosion hazards. The main limitations are inadequate moisture and steep slopes.

VIe4 Moderately deep and deep clayey soils on sloping to steep (6 to 25%) uplands. These soils have severe water and wind erosion hazards. The main limitations are inadequate rainfall and unfavorable rooting zones.

VIe5 Soils with loamy surfaces and compact clayey or claypan subsoils on sloping (6 to 9%) uplands. The main hazard is water erosion. The main limitation is an unfavorable rooting zone.

VIe6 Moderately deep soils on sloping and moderately steep (6 to 15%) uplands with loamy surfaces and claypan subsoils. The main hazard is water erosion. The main limitations are inadequate moisture and unfavorable rooting zone.

VIe7 Moderately deep and deep, moderately sandy soils on strongly sloping or rolling (9 to 15%) uplands. They have severe wind and moderate water erosion hazards. The main limitations are inadequate moisture and low or moderate available water capacity.

DESCRIPTIONS OF LAND CAPABILITY UNITS (DRYLAND) cont'd

VIe8 Deep, sandy soils on bottom lands. They have severe wind erosion hazards. The main limitations are low available water capacity and inadequate moisture.

VIe9 Shallow, sandy soils on gently undulating to moderately steep (2 to 25%) uplands. They have severe wind and moderate water erosion hazards. These soils generally are not suited for cultivation.

VIe10 Deep, sandy and very sandy soils on nearly level to rolling (0 to 15%) uplands. These soils have very severe wind erosion hazards. They generally are not suited for cultivation.

VIe11 Shallow, loamy and silty soils over soft bedrock on nearly level to moderately steep (0 to 25%) uplands. These soils have severe wind and water erosion hazards. They generally are not suited for cultivation.

VIe12 Shallow, clayey soils on nearly level to moderately steep (0 to 25%) uplands. These soils have a severe water erosion hazard and limited rooting depth. These soils generally are not suited for cultivation.

VIe1 Shallow, loamy soils over hard bedrock on nearly level to moderately steep (0 to 25%) uplands. These soils have limited rooting depth and low or very low available water capacity. These soils generally are not suited for cultivation.

VIe3 Soils on nearly level to sloping (0 to 9%) uplands with thin, sandy to clayey surfaces and dense, clayey or claypan subsoils. The main limitation is the unfavorable rooting zone. The main hazards are wind and water erosion on most soils, but flooding is a hazard on some.

VIe4 Very shallow, gravelly soils on nearly level to moderately steep (0 to 25%) uplands. The main limitation is low water holding capacity. The main hazards are water and wind erosion.

VIe5 Soils on gently sloping (2 to 6%) uplands with 4 to 10 inches of loamy surface over compact claypan subsoils. The main limitations are inadequate moisture and unfavorable rooting zone. The main hazards are water and wind erosion.

VIe6 Dense clay soils on nearly level to sloping (0 to 9%) uplands and toe slopes. The main limitations are unfavorable rooting zone and salts. The main hazard is water erosion.

VIw2 Clayey soils on bottom lands that frequently overflow. The main hazards are flooding and water erosion. The main limitation is inadequate moisture.

VIw3 Loamy to moderately sandy soils on bottom lands that are often dissected by channels. The main hazards are flooding and water erosion. The main limitation is inadequate moisture.

VIIe1 Shallow to deep, loamy soils on very steep (25 to 50%) uplands. They have severe water erosion hazards. The main limitation is steep slopes.

VIIe2 Moderately deep, clayey soils on very steep (25 to 40%) uplands. They have severe water erosion hazards. The main limitation is steep slopes.

VIIe3 Shallow to deep, sandy soils on steep (25 to 40%) uplands. They have severe wind and water erosion hazards. The main limitations are low or very low available water capacity and steep slopes.

VIIe4 Shallow, loamy soils over soft bedrock on steep and very steep (25 to 50%) uplands. They have a severe water erosion hazard.

VIIe5 Shallow, clayey soils on steep and very steep (25 to 50%) uplands. They have a severe water erosion hazard.

VIIe1 Shallow, loamy soils over hard bedrock on steep and very steep (25 to 50%) uplands. They have limited rooting depth and low or very low available water capacity.

VIIe3 Very saline and alkaline soils on nearly level to very steep (0 to 40%) uplands. The main limitation is high salinity or alkalinity. The main hazards are water and wind erosion.

DESCRIPTIONS OF LAND CAPABILITY UNITS (DRYLAND) cont'd

VIIs5 Very shallow, loamy soils over indurated but broken limestone on nearly level to gently sloping (0 to 6%) uplands. The main limitations are low available water capacity and shallow rooting zones. The main hazard is wind erosion.

VIIs6 Rough mountainous, rough broken, and very stony areas containing shallow to deep soils on nearly level to very steep slopes. The main limitations are steep, broken slopes and exposed areas of bedrock. The main hazard is water erosion.

VIIs7 Very shallow, gravelly soils and terrace breaks on steep to very steep (25 to 50%) uplands. The main limitations are low available water capacity and unfavorable rooting zone. The main hazard is water erosion.

VIIs8 Dense clay alkaline soils on steep (9 to 25%) uplands. The main limitations are high alkalinity and an unfavorable rooting zone. The main hazard is water erosion.

VIIs9 Very saline and alkaline soils in low wet areas. The main limitation is high salinity or alkalinity.

VIIIe1 Nearly barren, deeply gullied areas. Best suited to wildlife and recreation.

VIIIe2 Barren sandy areas caused by erosion and riverwash. Best suited to wildlife and recreation.

VIIIs1 Rock outcrops and rock land. Best suited to wildlife and recreation.

VIIIs2 Nearly barren shale land, gravel pits, badlands, and pits and dumps. Best suited to wildlife and recreation.

VIIIw1 Marshes having more than 50 percent of the vegetation not suited for grazing. Best suited to wildlife and recreation.

DESCRIPTIONS OF LAND CAPABILITY UNITS (DRYLAND)

Normal precipitation in this part of the state limits maximum yields on all soils except for some with (w) subclass.

IIc1 Deep, loamy, well to moderately well drained soils on bottom lands that sometimes receive beneficial overflow. However, moisture is still inadequate in most years. These soils have moderate wind erosion hazard.

IIc2 Deep, and moderately deep, loamy, well drained soils on nearly level (0 to 2%) uplands. Moisture is inadequate in most years and these soils have slight to moderate wind erosion hazard.

IIc3 Deep, loamy, well to moderately well drained soils in upland swales that receive beneficial moisture. However, moisture is still inadequate in most years.

IIe1 Deep and moderately deep, loamy soils on gently sloping (2 to 6%) uplands. They have moderate wind and water erosion hazards.

IIe2 Deep, loamy soils on gently undulating (2 to 6%) upland slopes. They have moderate wind and water erosion hazards.

IIe3 Deep, loamy soils on (2 to 6%) slopes of upland swales that receive extra moisture. However, moisture is still inadequate. They have a moderate water erosion hazard.

IIe4 Deep, loamy, somewhat poorly drained, very limy soils on nearly level (0 to 2%) uplands. They have moderate to severe wind erosion hazard.

IIs1 Deep, well to moderately well drained soils with loamy to clayey surfaces and clayey or claypay subsoils. Slopes are nearly level (0 to 2%). Clay subsoils limits rooting, water intake, and moisture release to plants. These soils have a moderate wind erosion hazard.

IIw1 Deep, loamy, somewhat poorly to poorly drained soils on flat slopes and in depressions. Choice of crops and time of tillage are sometimes limited by wetness.

IIw2 Deep, loamy, poorly drained, limy, nearly level soils on bottom lands. High water table and occasional flooding influences choice of plants and time of tillage.

IIw3 Deep, loamy, poorly drained, very limy soils on nearly level slopes or in slight depressions. Choice of plants is limited by the high water table and lime.

IIIe1 Deep and moderately deep, loamy soils on sloping (6 to 9%) uplands. They have moderate to severe water and moderate wind erosion hazards.

IIIe2 Deep, loamy soils on undulating (6 to 9%) uplands and eroded soils on gently undulating (2 to 6%) uplands. They have moderate to severe water and moderate wind erosion hazards.

IIIe3 Deep, loamy and clayey soils on gently sloping and gently undulating (2 to 6%) uplands. These soils have clayey or claypan subsoils that restrict root and water penetration. They have moderate to severe water and slight to moderate wind erosion hazards.

IIIe4 Deep and moderately deep, clayey soils on gently sloping (2 to 6%) uplands. The clayey texture retards root growth and water intake. They have moderate to severe wind and water erosion hazards.

IIIe5 Deep, loamy, calcareous soils on nearly level (0 to 2%) uplands. The surface layer is thin and the subsoil is very limy. These soils have a severe wind erosion hazard.

IIIe6 Soils with 20 to 40 inches of loamy material over sand and gravel on gently sloping (2 to 6%) uplands. The porous substrata limits water storage capacity and rooting depths. These soils have moderate wind and water erosion hazards.

IIIe7 Deep and moderately deep, moderately sandy soils on nearly level (0 to 2%) uplands. They have a severe wind erosion hazard.

IIIe8 Deep and moderately deep, moderately sandy soils on gently undulating (2 to 6%) uplands and eroded phases of these soils on nearly level (0 to 2%) uplands. They have a severe wind erosion hazard.

IIIe9 Moderately sandy soils with sand and gravel or sandstone at 20 to 40 inches. These soils are on nearly level (0 to 2%) uplands. They have a severe wind erosion hazard.

IIIe10 Moderately sandy soils with sand and gravel or sandstone at 20 to 40 inches. These soils are on gently sloping (2 to 6%) uplands. They have severe wind and moderate water erosion hazards.

IIIe11 Deep, loamy, moderately well drained, very limy soils on gently undulating (2 to 6%) uplands. These soils have severe wind and moderate water erosion hazards.

IIIe12 Deep and moderately deep, loamy soils with limy subsoils on gently undulating and gently sloping (2 to 6%) uplands. They have moderate to severe wind and water erosion hazards.

IIIe14 Deep, moderately sandy, somewhat poorly drained soils with very sandy, limy subsoils and a seasonal water table. They occur on nearly level (0 to 2%) uplands. They have a severe wind erosion hazard.

IIIs1 Deep, loamy soils on nearly level (0 to 2%) uplands that have claypan subsoils. The clayey subsoils restrict rooting, water penetration, and water release to plants. They have a slight to moderate wind erosion hazard.

IIIs2 Soils with 20 to 40 inches of loamy material over sand and gravel on nearly level (0 to 2%) uplands. The porous substrata limits water storage capacity and rooting depth. These soils have a moderate wind erosion hazard.

IIIs3 Deep and moderately deep, very clayey soils on nearly level (0 to 2%) uplands. Water penetration, rooting, and water uptake by plants is limited by the clayey texture. These soils have moderate to severe wind erosion hazard.

IIIs4 Somewhat poorly drained, limy soils with 20 to 40 inches of loamy material over sand and gravel or soft chalkrock. These soils are on nearly level (0 to 2%) uplands. They have a seasonal water table and moderate to severe wind erosion hazard.

IIIs5 Loamy soils with siltstone substrata at 20 to 40 inches on nearly level (0 to 2%) uplands. Very limy or clayey subsoils or siltstone substrata limits root development. They have a moderate to severe wind erosion hazard.

IIIw2 Deep, clayey, poorly drained soils in depressions that are ponded by runoff water. Land operations are often delayed by wetness and choice of crops may be limited.

IIIw3 Deep, clayey, poorly drained soils on low flood plains of major streams. These soils are frequently flooded and operations are delayed in most years due to wetness.

IIIw4 Deep, somewhat poorly drained soils with silty surfaces and claypan subsoils in depressions. Tillage operations are frequently delayed.

IIIw5 Deep, moderately sandy, somewhat poorly drained soils on flood plains and in slight depressions. These soils have seasonal water tables. Tillage and choice of crops may be affected by wetness. These soils have moderate to severe wind erosion hazard.

IVe1 Deep and moderately deep, loamy soils on rolling (9 to 15%) uplands and eroded soils on undulating (6 to 9%) uplands. These soils have severe water erosion and moderate wind erosion hazards.

IVe2 Deep, loamy soils on gently undulating and gently sloping (2 to 6%) uplands. These soils have thin, limy surfaces. They have severe wind erosion and moderate water erosion hazards.

IVe3 Deep and moderately deep, loamy soils on undulating and sloping (6 to 9%) uplands and eroded soils on gently undulating and gently sloping (2 to 6%) uplands. These soils have thin limy surface layers. They have severe wind and water erosion hazards.

IVe4 Deep and moderately deep, clayey soils on sloping (6 to 9%) uplands. The clayey texture retards root growth and water intake. These soils have severe water and moderate to severe wind erosion hazards.

IVe5 Soils with 20 to 30 inches of loamy material over sand and gravel on sloping (6 to 9%) uplands. The porous substrata limits root growth and water storage capacity. These soils have moderate to severe wind and water erosion hazards.

IVe6 Soils with 10 to 20 inches of loamy material over sand and gravel on gently sloping (2 to 6%) uplands. The porous substrata limits rooting and water storage capacity. These soils have moderate wind and water erosion hazards.

IVe7 Deep, loamy and clayey soils on sloping or undulating (6 to 9%) uplands. These soils have clayey or claypan subsoils that restrict rooting and water penetration. They have moderate wind and severe water erosion hazards.

IVe8 Deep and moderately deep, moderately sandy soils on undulating or sloping (6 to 9%) uplands, and eroded soils on gently undulating or gently sloping (2 to 6%) uplands. These soils have severe wind and moderate water erosion hazards.

IVe9 Deep, sandy soils on nearly level and gently undulating (0 to 6%) uplands. They have very severe wind erosion hazards.

IVe10 Deep, sandy, somewhat poorly drained soils on nearly level and gentle slopes (0 to 6%). They have a seasonally high water table. The wind erosion hazard is very severe.

IVe13 Deep, well to moderately well drained soils with sandy surfaces and firm, compact, loamy subsoils. They occupy nearly level to gently sloping (0 to 6%) uplands and basins. They have very severe wind erosion hazards.

IVs1 Soils with 10 to 20 inches of loamy material over sand and gravel on nearly level (0 to 2%) uplands. The porous substrata limits rooting and water storage capacity. These soils have moderate wind erosion hazards.

IVs2 Moderately well drained soils with 4 to 10 inches of friable, loamy surface layers over dense, very slowly permeable, claypan subsoils that contain salts. They occur in nearly level (0 to 2%) upland swales and on uplands.

IVs3 Moderately well drained soils with 4 to 10 inches of friable, loamy surface over dense, very slowly permeable, claypan subsoils that contain salts. They occupy gently sloping and gently undulating (2 to 6%) uplands. They have a severe water erosion hazard.

IVw1 Deep, loamy, poorly drained, soils on bottom lands and in depressions. An intermittent water table, occasional flooding, or salinity severely limits use.

IVw2 Deep, sandy, poorly drained, soils in nearly level swales and depressions in sandy uplands. The seasonal water table, within 10 to 20 inches of the surface, limits use. These soils have a severe wind erosion hazard.

Vw1 Very poorly drained loamy soils in low bottoms and depressions. The water table is at or near the surface during most of the growing season. These soils are too wet for crops but may be used for tame grasses.

Vw3 Very poorly and poorly drained sandy soils in depressions and on bottoms with water tables at or near the surface during much of the growing season. These soils are too wet for crops but may be suited to tame grasses.

Vw4 Very poorly drained and poorly drained loamy and clayey soils in depressions. These soils are ponded or have water tables at or near the surface. More than 50 percent of the vegetation is suitable for grazing.

VIe1 Deep and moderately deep, loamy soils on hilly (15 to 25%) uplands and eroded soils on rolling (9 to 15%) uplands. Severe water erosion hazard and excessive runoff make these soils unsuited for cultivation.

VIe2 Deep and moderately deep, loamy soils on very steep (25 to 40%) uplands. Excessive runoff and severe water erosion hazards make these soils unsuited for cultivation.

VIe3 Deep and moderately deep, loamy soils on rolling to hilly (9 to 25%) uplands and eroded soils on rolling (6 to 15%) uplands. These soils have thin surface layers and severe wind and water erosion hazards. They are not suited for cultivated crops.

VIe4 Deep and moderately deep, clayey soils on rolling to hilly (9 to 25%) uplands. Excess runoff and severe water erosion hazards make these soils unsuited for cultivation.

VIe5 Moderately deep and shallow soils with 10 to 30 inches of loamy material over sand and gravel on sloping to hilly (6 to 25%) uplands. The porous substrata limits rooting and moisture storage capacity. These soils have severe water and wind erosion hazards. They are not suited for cultivation.

VIe6 Deep and moderately deep, moderately sandy soils on rolling to hilly (9 to 25%) uplands and eroded soils on undulating (6 to 9%) uplands. These soils have severe wind and water erosion hazards. They are not suited for cultivation.

VIe7 Deep, sandy and very sandy soils on gently undulating to rolling (2 to 15%) uplands. These soils have very severe wind erosion hazards. They are not suited for cultivation.

VIe8 Deep, sandy soils on nearly level (0 to 2%) bottom lands. These soils have severe wind erosion hazards. They are not suited for cultivation.

VIe9 Moderately well drained soils with 4 to 10 inches of friable, loamy surface over dense, very slowly permeable claypan on sloping (6 to 9%) uplands. They have severe water erosion hazards These soils are not suited for cultivation.

VIe10 Shallow, sandy soils on nearly level to moderately steep (0 to 25%) uplands. These soils have severe wind and water erosion hazards. They are not suited for cultivation.

VIe11 Shallow, silty and loamy soils over soft bedrock on nearly level to moderately steep (0 to 25%) uplands. These soils have a severe water erosion hazard and limited rooting depth. They are not suited for cultivation.

VIe12 Shallow, clayey soils on gently sloping to moderately steep (3 to 25%) uplands. These soils have a severe water erosion hazard and limited rooting depth. These soils are not suited for cultivation.

VIe13 Deep and moderately deep, loamy soils on moderately sloping to moderately steep (6 to 25%) mountain uplands. These soils have a severe water erosion hazard. They are not suited for cultivation.

VIs1 Moderately well to poorly drained soils on nearly level to sloping (0 to 9%) uplands or in depressions. Dense, compact subsoils near the surface, salts, or ponding, or a combination of these limitations make these soils generally unsuited for cultivation.

VIs2 Shallow, loamy soils over hard bedrock on nearly level to moderately steep (0 to 25%) uplands. Rooting depth and water penetration is limited. These soils are not suited for cultivation.

VIs4 Soils with 6 to 20 inches of loamy material over sand and gravel on nearly level to hilly (0 to 25%) slopes. The porous substrata limits rooting and water storage capacity. These soils are not suited for cultivation.

VIs5 Dense clay soils containing masses of salts in the subsoil on nearly level to sloping (0 to 9%) uplands and footslopes. These soils are strongly alkaline. They are not suited for cultivation.

VIw1 Deep, loamy to clayey soils on bottom lands dissected by meandering channels. These soils overflow frequently and are not easily accessible for cultivation.

VIw2 Clayey soils on bottom lands that frequently overflow. These soils are not suited for cultivation.

VIw3 Loamy and sandy soils on bottom lands that frequently overflow. These soils are not suited for cultivation.

VIw4 Poorly drained soils with 1 to 4 inches of loamy material over compact claypan subsoil on nearly level (0 to 2%) low-lying plains. These soils have salts in the subsoil and a fluctuating water table. They are not suited for cultivated crops.

VIIe1 Deep, very sandy soils on rolling to very hilly (9 to 50%) uplands. These soils have a very severe wind erosion hazard.

VIIe2 Moderately deep, clayey soils on very hilly and very steep (25 to 40%) uplands. These soils have severe water erosion hazard.

VIIe3 Moderately deep and deep, loamy soils on very hilly (25 to 50%) uplands. These soils have thin surface layers and severe water erosion hazard.

DESCRIPTIONS OF LAND CAPABILITY UNITS (DRYLAND) cont'd

VIIe4 Shallow, sandy soils on steep or very steep (25 to 40%) uplands. These soils have severe wind and water erosion hazards.

VIIe7 Shallow, silty and loamy soils on steep to very steep (25 to 50%) uplands. They have a severe water erosion hazard.

VIIe8 Shallow, clayey soils on steep to very steep (25 to 50%) uplands. These soils have a severe water erosion hazard.

VIIe9 Deep and moderately deep, loamy soils on hilly to very steep (25 to 60%) mountain uplands. These soils have a very severe water erosion hazard.

VIIs1 Shallow, loamy soils over hard bedrock on steep to very steep (25 to 50%) uplands. These soils have limited rooting depth and low or very low available water capacity.

VIIs3 Clayey soils with masses of salts in the upper part of the soil. They are on nearly level to very steep (0 to 50%) slopes and have a severe water erosion hazard.

VIIs4 Soils with less than 20 inches of loamy material over sand and gravel on steep to very steep (25 to 50%) uplands. The porous substrata limits rooting depth and available water capacity.

VIIs5 Deep, very saline and alkaline soils on nearly level (0 to 2%) lowlands. High alkalinity, salinity, and water table restrict use on these soils.

VIIs6 Rough mountainous, rough broken and very stony areas containing shallow to deep soils on nearly level to very steep slopes.

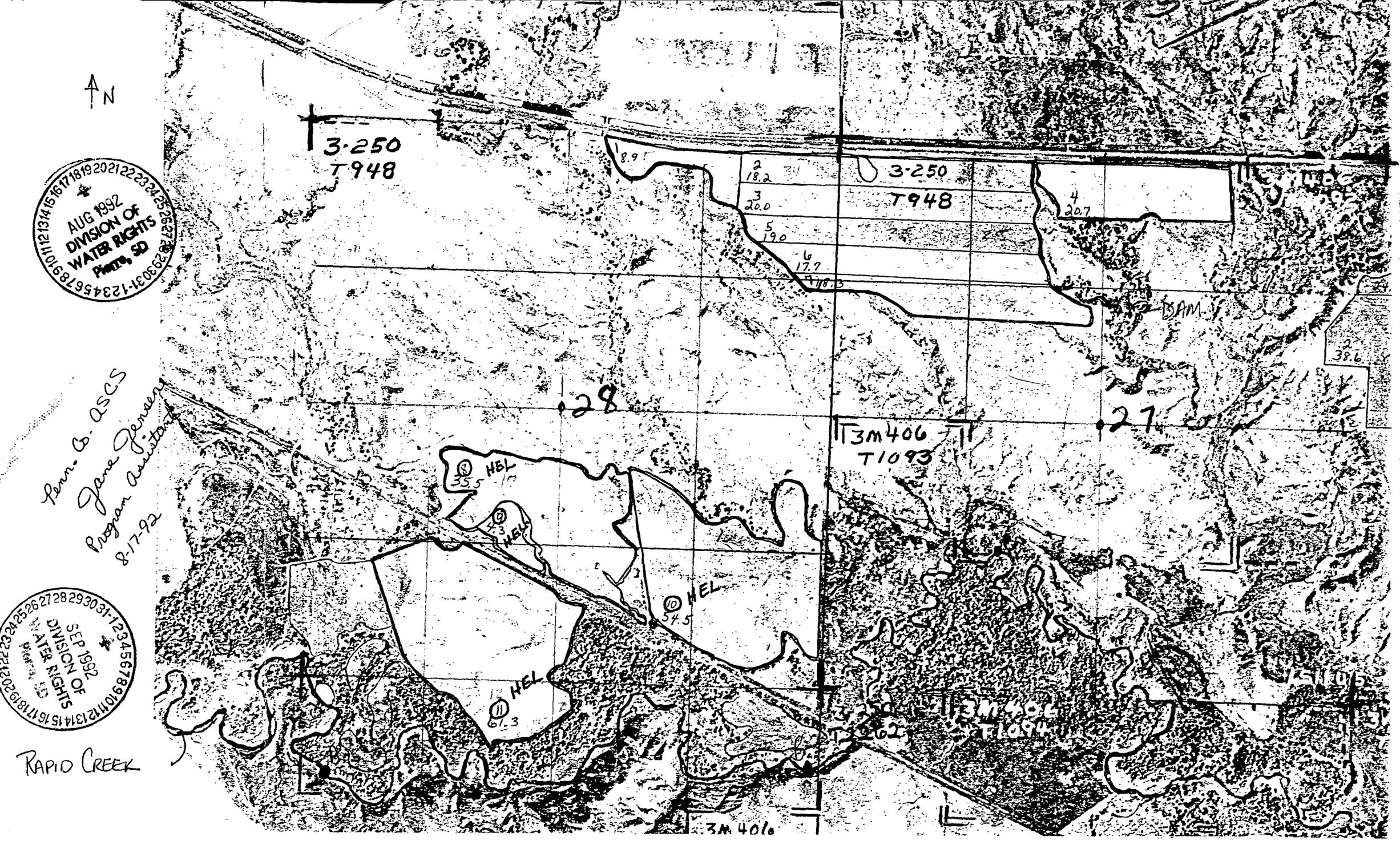
VIIs7 Dense clay soils on steep (9 to 25%) slopes. They are strongly alkaline and contain salts.

VIIIe1 Barren sandy areas caused by erosion. Includes blowout land and riverwash. Protection and management may be needed to protect nearby soils. Best suited to wildlife or recreation.

VIIIs1 Rock outcrops and rock land. Best suited for wildlife and recreation.

VIIIs2 Nearly barren shale land, gravel pits, badlands, and pits and dumps. Best suited for wildlife and recreation.

VIIIw1 Marshes having more than 50 percent vegetation not suited for grazing. Best suited for wildlife and recreation.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Penn. Co. ASCS
Jane Jensen
Program Assistant
8-17-92
RAPID CREEK

Report on Water Permit Application No. 2248-2
James R. Forsyth
November 3, 1992

Application No. 2248-2, James R. Forsyth, proposes to appropriate 4.0 cubic feet of water per second (cfs) from Rapid Creek and from runoff into a storage dam with a 6.54 acre-foot of water (ac-ft) capacity to irrigate 280 acres. The applicant is also proposing to be able to fill the small storage dam from Rapid Creek during both the irrigation and non-irrigation seasons. The diversion point from the storage dam on a dry draw is located in the W1/2 NE1/4 of Sec 27 T1S-R11E. The diversion from Rapid Creek to be pumped into the storage dam will be from a point located in the NE1/4 SW1/4 of Section 27. Diversion directly to the land will be from Rapid Creek between points located in the NW1/4 NW1/4 and the NE1/4 NE1/4 of Section 33 all in T1S-R11E. The lands to be irrigated are located in the NW1/4 NE1/4, E1/2 NE1/4, SW1/4 SW1/4, E1/2 SW1/4, SE1/4 of Section 28; NE1/4 NW1/4, NW1/4 NE1/4 of Section 33; and NW1/4, NW1/4 NE1/4 of Section 27 all in T1S-R11E. The proposed project is located approximately 20 miles SE of Rapid City in Pennington County.

Water Source

The source of water for the proposed project is from the natural flow in Rapid Creek and not from the purchase of stored water. The project will be located in the Rapid Valley downstream from the City of Rapid City and the Rapid Valley Water Conservancy District. The project will rely on return flow for the natural flow from both Rapid City's waste water treatment plant and from irrigation within the District. If this application is approved it will not require the City nor the District to maintain return flows in Rapid Creek. Return flows could decrease through improved water use efficiencies or management practices.

Review of Existing Water Rights

The proposed irrigation project will be located on Rapid Creek. There are 66 existing water rights/permits located on Rapid Creek between Pactola Reservoir and the Cheyenne River. This project is located downstream of all the existing water rights.

The U.S. Geological Survey (USGS) maintains stream gaging stations on both Rapid Creek and the Cheyenne River for monitoring instream flow. The USGS gaging station near Farmingdale is located approximately 3 miles upstream of this proposed project. Figure 1, is the flow duration hydrograph of this gaging station.

Based on the flow duration hydrograph, there is a 70 percent probability of at least 21 cfs being available in the creek during the irrigation season of April through September. There is one existing water right, authorized to appropriate 2.20 cfs,

located on Rapid Creek between the gaging station and this proposed project. If this application is approved, it should contain a qualification requiring a 15 cfs bypass, as measured at the Farmingdale gage, to assure that water is available for domestic use on the lower Rapid Creek.

Rapid Creek is a tributary to the Upper Cheyenne River. There are 24 existing water rights/permits, authorized to appropriate 92.09 cfs, located on the Upper Cheyenne River between Rapid Creek and the Belle Fourche River. The USGS gaging station on the Cheyenne River near Wasta is located approximately 30 miles downstream from the confluence with Rapid Creek and approximately 35 miles upstream from the confluence with the Belle Fourche River. Figure 2 is the flow duration hydrograph for this gaging station. This flow duration hydrograph indicates that during the irrigation season there is a 90 percent probability that at least 43 cfs is available in the Cheyenne River at the Wasta gage.

The water permits/rights on this river section include 23 for irrigation and 1 for commercial use. There are 5 irrigation permits/rights and the commercial use right, authorized to appropriate 13.4 cfs, located upstream of the Wasta gage. The remaining 18 irrigation permits/rights are located downstream of the gage and are authorized to appropriate 78.62 cfs. Table 1 lists the actual irrigation use as reported on the Irrigation Questionnaires for the water rights/permits required to submit a questionnaire:

Table 1 - Annual reported irrigation use in acre-feet.

Year	Reported Use	Reported Use Above Wasta	Reported Use Below Wasta
1986	1956	52	1904
1987	1872	29	1843
1988	4030	72	3958
1989	3317	125	3192
1990	3294	144	3150
1991	1871	87	1784

Based on the Division of Water Rights records this river reach has not been subject to shutoff orders.

Conclusion

1. Application No. 2248-2 proposes to appropriate 4.0 cfs from runoff into a 6.54 ac-ft storage dam and from the natural flows of Rapid Creek. The water is to be used to irrigate 280 acres.

2. The project is located on Rapid Creek below any existing water permit/right.

3. Rapid Creek is a tributary to the Cheyenne River. Because this proposed project will rely only on natural flow, the applicant should be required to bypass 15 cfs, as measured

at the Farmingdale gage, for downstream domestic use from Rapid Creek. The applicant would also be subject to senior water rights and domestic use from the Cheyenne River below the Rapid Creek confluence.

4. There is a reasonable probability that water is available for this proposed project.

Mark D. Rath
Natural Resources Engineer II

Approved by,

Delvin D. Brosz, P.E.
Natural Resources Engineer IV

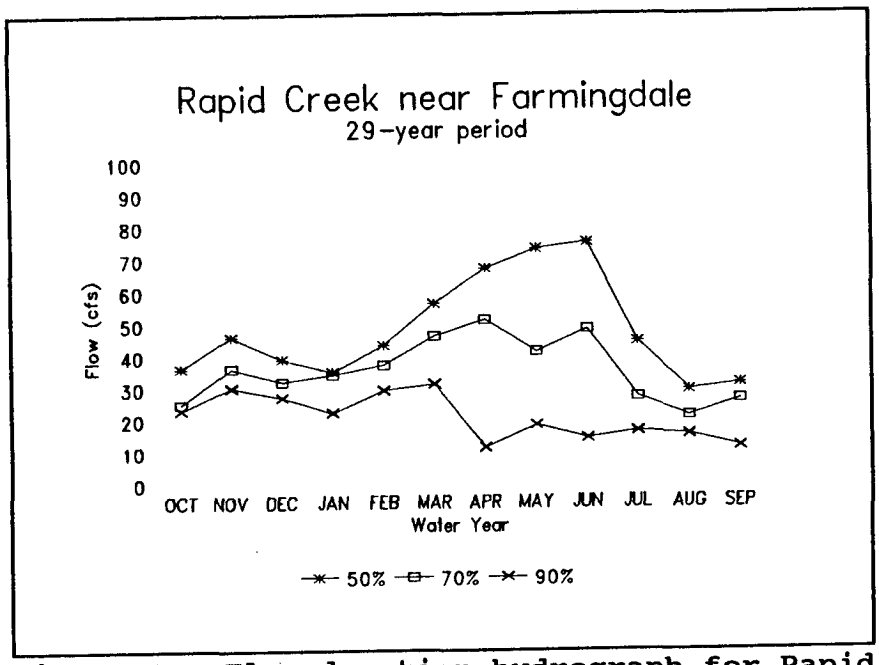

Figure 1 - Flow duration hydrograph for Rapid Creek near Farmingdale, period beginning 1960.

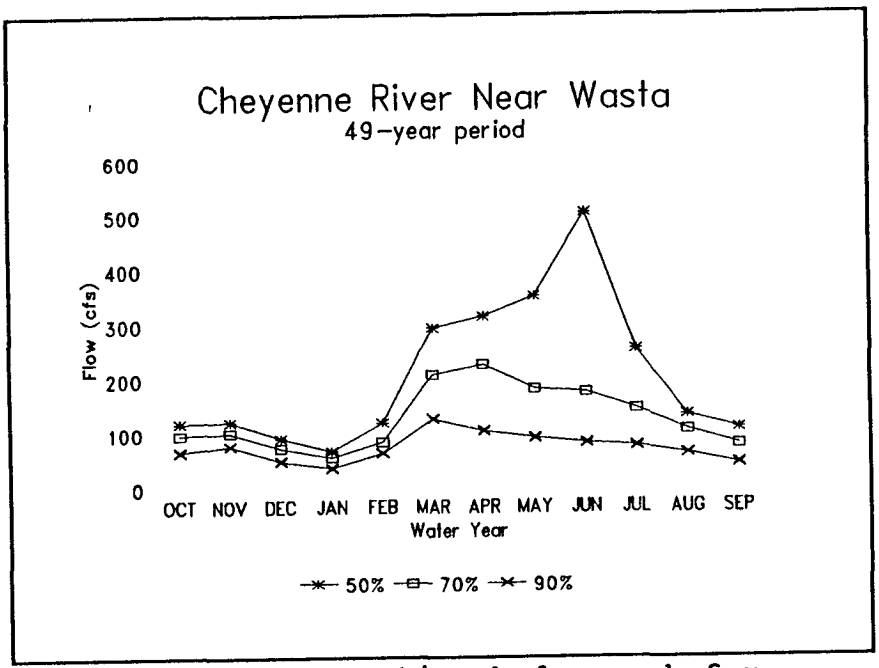

Figure 2 - Flow duration hydrograph for Cheyenne River near Wasta, period beginning 1940.

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2248-2, James R. Forsyth

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 2248-2, James Forsyth, 2218 Jackson Blvd., Suite 9, Rapid City, SD 57702.

The Chief Engineer is recommending APPROVAL of Application No. 2248-2 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) it is in the public interest with the following qualifications:

1. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed. This Permit does not authorize diversion of water from Rapid Creek unless at least 15 cfs are flowing past the Farmingdale stream gage.

2. Approval of Water Permit No. 2248-2 authorizes storage of up to 6.5 acre-feet of water annually.

3. This Permit is for natural flow water and not for stored water obtained through contract with the Rapid Valley Water Conservancy District.

See report on application for additional information.

Dale N Selkurs

for JOHN HATCH, Chief Engineer
November 10, 1992

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

NOTE: TO BE SURE OF PUBLICATION ON THE CORRECT DATES, CONTACT THE NEWSPAPER RIGHT AWAY.

November 12, 1992

James R. Forsyth
2218 Jackson Blvd Ste 9
Rapid City, SD 57702

Dear Mr. Forsyth:

Water Permit Application No. 2248-2 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Rapid City Journal printed at Rapid City, SD (Ph # 394-8300). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

November 12, 1992

Rapid City Journal
PO Box 450
Rapid City, SD 57709-0450

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 2248-2 to be published twice. Please publish the first notice on November 18, 1992, with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is James R. Forsyth, 2218 Jackson Blvd., Suite 9, Rapid City, SD 57702 (Ph # 348-5555).

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

----------CUT HERE----------

FIRST TRANSMITTAL NOTICE

No._____

Date_____

TO: Eric Gronlund
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

We are in receipt of your letter of _____ enclosing Notice of Hearing to Appropriate Water by Application No._____ which was first published in our issue of_____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

_____ Name

_____ Newspaper

Instruction to Newspaper - Publish first Notice on November 18, 1992, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 2248-2 to Appropriate Water

Notice is given that James R. Forsyth, 2218 Jackson Blvd, Suite 9, Rapid City, SD 57702 has filed an application for a water permit to appropriate 4.0 cubic feet of water per second from the natural flow of Rapid Creek and runoff into a storage dam to irrigate 280 acres. The diversion point from the storage dam (6.54 acre-feet) is to be located on a dry draw in the W 1/2 NE 1/4 of Sec 27-T1S-R11E. The diversion from Rapid Creek will be from a point location in the NE 1/4 SW 1/4 of Section 27 to be pumped into the storage dam and between points on the creek located in the NW 1/4 NW 1/4 and the NE 1/4 NE 1/4 of Section 33 all in T1S-R11E. The lands to be irrigated are located in the NW 1/4 NE 1/4, E 1/2 NE 1/4, SW 1/4 SW 1/4, E 1/2 SW 1/4, SE 1/4 of Section 28; NE 1/4 NW 1/4, NW 1/4 NE 1/4 of Section 33; and NW 1/4, NW 1/4 NE 1/4 of Section 27 all in T1S-R11E.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2248-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. Unless a petition is filed opposing the application or the applicant files a petition contesting the chief engineer's recommendation, the Water Management Board will NOT CONDUCT a HEARING to consider this application and the chief engineer will issue the permit as recommended. Petitions filed in support of the application will NOT require the Board to hear the application.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by December 7, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application No. 2248-2 and 2) the chief engineer's recommendation, a meeting at the Division of Water Rights office to hear this application is scheduled for December 16, 1992, at 9:00 am in Room 413, Joe Foss Building, 523 E Capitol, Pierre SD. If this application is opposed or the recommendation is contested, the December 16, 1992, hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The December 16, 1992, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by December 7, 1992.

If a hearing is held, the Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by December 7, 1992, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

Form 8 - Proof of Publication

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) ss.
County Pennington)

I, Helena M. Bauer

certify that the attached printed Notice was taken from the Rapid City Journal

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 Rapid City

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

November 19, 1992

November 25, 1992

Helena M. Bauer
(Signature)

Bookkeeper
(Title)

11/25/92
(Date Signed)

Cost of Printing: 13.00 inches @ 4.90 per inch X

total cost $127.40

5-88

Nov. 19, 25 L2300

NOTICE OF HEARING ON APPLICATION NO. 2248-2 TO APPROPRIATE WATER

Notice is given that James R. Forsyth, 2218 Jackson Blvd., Suite 9, Rapid City, SD 57702 has filed an application for a water permit to appropriate 4.0 cubic feet of water per second from the natural flow of Rapid Creek and runoff into a storage dam to irrigate 280 acres. The diversion point from the storage dam (6.54 acre-feet) is to be located on a dry draw in the W½ NE¼ of Sec. 27-T1S-R11E. The diversion from Rapid Creek will be from a point location in the NE¼ SW¼ of Section 27 to be pumped into the storage dam and between points on the creek located in the NW¼ NW¼ and the NE¼ NE¼ of Section 33 all in T1S-R11E. The lands to be irrigated are located in the NW¼ NE¼, E½ NE¼, SW¼ SW¼, E½ SW¼, SE¼ of Section 28; NE¼ NW¼, NW¼ NE¼ of Section 33; and NW¼, NW¼ NE¼ of Section 27 all in T1S-R11E.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2248-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. Unless a petition is filed opposing the application or the applicant files a petition contesting the chief engineer's recommendation, the Water Management Board will NOT CONDUCT a HEARING to consider this application and the chief engineer will issue the permit as recommended. Petitions filed in support of the application will NOT require the Board to hear the application.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E. Capitol, Pierre, SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by December 7, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application No. 2248-2 and 2) the chief engineer's recommendation, a meeting at the Division of Water Rights office to hear this application is scheduled for December 16, 1992, at 9:00 a.m. in Room 413, Joe Foss Building, 523 E. Capitol, Pierre, S.D. If this application is opposed or the recommendation is contested, the December 16, 1992, hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The December 16, 1992, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by December 7, 1992.

If a hearing is held, the Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by December 7, 1992, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1; 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

Robert E. Roberts
Secretary
Department of Environment and Natural Resources

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

JAN 2 0 1993

James R. Forsyth
2218 Jackson Blvd, Ste 9
Rapid City, SD 57702

Dear Mr. Forsyth:

Enclosed is Water Permit No. 2248-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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 the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

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.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

February 7, 1995

JAMES R FORSYTH
2218 JACKSON BL
RAPID CITY SD 57702

NOTICE

RE: Violation of Requirement to Submit 1994 Irrigation Questionnaire

Our records indicate that the 1994 Irrigation Questionnaire has not been submitted for Permit No 2248-2. The request for the Questionnaire was dated November 3, 1994. The Water Management Board has directed that owners of water permits who have not submitted the 1994 Irrigation Questionnaire be given notice of hearing to determine if any Board action is to be taken concerning the violation.

The hearing will be held at 9:30 am, March 8, 1995, in the Crown Room, 3rd Floor, Kings Inn Best Western Convention Center, 220 S Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to SDCL 1-26. Following the hearing, the Water Management Board can:

1. Amend Permit No 2248-2 to require the Irrigation Water Use Questionnaire to be submitted each year;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner 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.

If the questionnaire is received in this office on/or before March 3, 1995 your name will be deleted from the Board agenda.

Very truly yours,

Ron Duvall, Natural Resources Engineer IV
Water Rights Division
605 773-3352

DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

CERTIFIED
P 837 692 702
MAIL

U.S.POSTAGE
$2.52

RETURN TO SENDER
UNCLAIMED
RAPID CITY SD 57701

JAMES R FORSYTH
2218 JACKSON BL
RAPID CITY SD 57702

NOTICE OF TRANSFER OF OWNERSHIP No. 2248-2

TO: Chief Engineer
Water Rights Division, DWNR
523 East Capitol
Pierre, SD 57501-3181

Date: July 19, 1995

I/We request that Water Permit/Right No. 2248-2

formerly owned by: James Forsyth

be transferred to: (name & address) Dale A Jensen
5440 Plains Vista Ct
Rapid City, S.D. 57701 (telephone No.) 605-399-9559

Title to the following described land(s)/property has been transferred as described above:

The land was leased to Jim Forsyth and the ownership of the land was with Dale Jensen

I/We understand that the validity of Water Permit/Right No. 2248-2 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file at the Division of Water Rights, as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents ($2.50) is attached to cover the filing fees as required under SDCL 46-2-13.

JUL 1995 WATER RIGHTS PROGRAM Pierre, SD

STATE OF SOUTH DAKOTA)
)
County of Pennington)

I/We _____ being first duly sworn on my oath depose and say that my relation to the above described undertaking is that of Owner, that I have read the above foregoing statement, and that I know of my own personal knowledge that the information herein stated is true.

Dale A Jensen
(Signed)

Subscribed and sworn to before me this 19 day of July, 1995.

Sue Waite
(Notary Public)
comm expires 5-4-97

NOTE: Water permits may be cancelled for nonconstruction within the five year construction period. Once a water permit is developed and the water used, the permit becomes a water right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

414560

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, July 21, 19 95

RECEIVED OF Dale Jensen, 5440 Plains Vista Court, Rapid City, SD 57701

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct 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. _____		
Fee for Filing Transfer Form Water Permit No. 2248-2	2	50
Fee for Filing Extension Request _____		
Fee for _____		
(Any Other Work Provided by Law) **Total**	2	50

By John Hatch (jmk)
Chief Engineer

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

July 27, 1995

No. 2248-2

Dale A. Jensen
5440 Plains Vista Ct.
Rapid City, SD 57701

Dear Mr. Jensen:

Enclosed is a receipt in the amount of $2.50 which you paid for the transfer of Water Permit No. 2248-2.

Our records now show you as the owner of Water Permit No. 2248-2.

Sincerely,

Cheryl F. Frost

Cheryl F. Frost
Secretary
Water Rights Program
(605) 773-3352

enclosure

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

April 22, 2005

2248-2

Dale A Jensen
5440 Plains Vista Ct
Rapid City SD 57701

Dear Mr. Jensen:

Thank you for calling concerning the ownership change needed for Water Permit No. 2248-2.

Enclosed is a partially completed Notice of Transfer of Ownership form for filing an ownership change. The new owner will need to complete the portion titled "to be transferred to...." and then sign and return the form to us with a required filing fee of $2.50. The check or money order for the fee can be made payable to the Water Rights Program.

I have included a copy of the permit for you to give to the new owner. If I can answer any questions for you, please contact me.

Sincerely,

Genny McMath

Genny McMath
Environmental Scientist
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosures

2248-2

RECEIVED
MAY - 5 2005
WATER RIGHTS PROGRAM

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

No. **2248-2**

Date: 5/2/05

I/We request that Water Permit No. **2248-2**

formerly owned by: **Dale Jensen**

be transferred to: (name & address) ROGER CROELL
4747 OLD Hwy 14
SUNDANCE, WY 82729 Telephone No. 307-283-2588

Title to the following described land(s)/property has been transferred as described above:

280 acres – N ½ NE ¼, SE ¼ NE ¼, NE ¼ SW ¼, S ½ SW ¼, SE ¼ Section 28; NE ¼ NW ¼, NW ¼ NE ¼ Section 33; NW ¼ and NW ¼ NE ¼ Section 27, all in T1S, R11E

I/We understand that the validity of Water Permit No. **2248-2** has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents ($2.50) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We ROGER CROELL, the new owner, certify that the above information is true and correct.

Roger Croell
(Signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date May 5, 20 05

RECEIVED OF Roger Croell, 4747 Old Hwy 14, Sundance Wy 82729

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct 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. _____	
Fee for Filing Transfer Form 2246-2	2 50
Fee for _____	
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____	
Fee for Renewal of Well Driller's License No _____ for C.Y. _____	
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____	
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____	
(Any Other Work Provided by Law) TOTAL	2.50

No. 01107

By _____
Chief Engineer

Reported Water Use

05/05/2005

Permit No	Year	Name	Not Irrig	Not Constr
2248-2	1993	JAMES RFORSYTH	X	
2248-2	1994	DALE AJENSEN	X	X
2248-2	1995	DALE AJENSEN	X	X
2248-2	1996	DALE AJENSEN	X	X
2248-2	1997	DALE AJENSEN	X	X
2248-2	1998	DALE AJENSEN	X	X
2248-2	1999	DALE AJENSEN	X	X
2248-2	2000	DALE AJENSEN	X	X
2248-2	2001	DALE AJENSEN	X	X
2248-2	2002	DALE AJENSEN	X	X
2248-2	2003	DALE AJENSEN	X	X
2248-2	2004	DALE AJENSEN	X	X

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

May 20, 2005

MEMO

To: **File**

From: Donald E. Stroup, DENR Natural Resources Project Engineer

Subject: Permit # 2248-2

Water Permit # 2248-2 construction was to be completed on or before 12/16/1997 and water put to beneficial use on or before 12/16/2001. The permit was not inspected for licensing as of 2005 and the land was sold to Roger Croell who applied for a transfer of the Water Permit.

On 5/16/05 I completed an on-site examination of the property permitted under # 2248-2 and found no irrigation system or equipment in place nor evidence that any irrigation had ever taken place. It also appears that ¼ of a quarter section may have been sold previously and is now owned by Brett Hamm of Rapid City, SD.

On 5/20/05 I contacted Roger Croell and explained that SD law requires a system be in place and able to be in use by the date specified in the permit or the permit may be considered as forfeited. Roger Croell stated that he understood and that he really wasn't interested in irrigation on the property.

I explained to Roger Croell that Water Permit # 2248-2 would be scheduled for cancellation and that he would receive a notice of such action.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

May 20, 2005

MEMO

To: **File** Donald E. Stroup

From: Donald E. Stroup, DENR Natural Resources Project Engineer

Subject: Permit # 2248-2

Water Permit # 2248-2 construction was to be completed on or before 12/16/1997 and water put to beneficial use on or before 12/16/2001. The permit was not inspected for licensing as of 2005 and the land was sold to Roger Croell who applied for a transfer of the Water Permit.

On 5/16/05 I completed an on-site examination of the property permitted under # 2248-2 and found no irrigation system or equipment in place nor evidence that any irrigation had ever taken place. It also appears that ¼ of a quarter section may have been sold previously and is now owned by Brett Hamm of Rapid City, SD.

On 5/20/05 I contacted Brett Hamm and explained that SD law requires a system be in place and able to be in use by the date specified in the permit or the permit may be considered as forfeited. Brett Hamm stated that he understood and that he would like to apply for a water right for a small dam for wildlife propagation plus some irrigation. I explained how to get to the web site for forms and information on applying for a water right.

I explained to Brett Hamm that Water Permit # 2248-2 would be scheduled for cancellation and that he would receive a notice of such action.

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

May 25, 2005

NOTICE OF CANCELLATION

TO: Roger Croell, 4747 Old Hwy 14, Sundance WY 82729
Bret Hamm, 22890 Forest Rd, Rapid City SD 57702

FROM: Ron Duvall, Natural Resources Engineer
for Garland Erbele, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 2248-2

Water Permit No. 2248-2 authorizes diversion of 4.0 cubic feet of water per second from the natural flow of Rapid Creek and from runoff to irrigate 280 acres in portions of Sections 27, 28 and 33, T1S, R11E. The project was to have been constructed by December 1997 and water placed to beneficial use by December, 2001. On May 16, 2005, a staff engineer conducted an investigation and found no evidence that an irrigation system had been constructed or water placed to beneficial use. Based on this information, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 2248-2 due to non-construction.

The Water Management Board will consider cancellation of Water Permit No. 2248-2 at 10:00 a.m., July 6, 2005, in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD.

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 2248-2 based upon facts presented at the public hearing. Our records show you to be the owners of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by June 24, 2005. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-7; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing may be an adversarial proceeding. Any party 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 State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by June 24, 2005.

Prior to June 24, 2005, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

Please note:

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by June 24, 2005.

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 2248-2, DALE JENSEN

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 2248-2, now owned by Roger Croell and Bret Hamm.

The Chief Engineer is recommending cancellation of the above water permit due to non-construction of the irrigation system. An investigation of the area on March 16, 2005, found no evidence of an irrigation system. The project was to have been completed by December 16, 1997 and water placed to beneficial use by December 16, 2001.

RON DUVALL, Natural Resources Engineer
for Garland Erbele, Chief Engineer
May 25, 2005

Note:

Cancellation of the water permit/right does not prohibit a new application for this project in the future.

2248-2

CERTIFICATION

I hereby certify that on May 25, 2005 , I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated May 25, 2005 regarding Notice of Cancellation for Water Right Nos. 2073-3, 3100-3, 1151-3, 841-3,5660-3 & 841-3, Water Permit Nos. 2248-2, 897C-1 & 1457-1, and Future Use Permit No. 969-1 addressed as stated below:

969-1
Art Jones Director of Facility Services
Black Hills State University
1200 University St Unit 9513
Spearfish SD 57783

897C-1 & 1457-1
Bernard & Kathryn Kling
20265 116th St
Keldron SD 57634

2248-2
Roger Croell
4747 Old Hwy 14
Sundance WY 82729

2248-2
Bret Hamm
22890 Forest Rd
Rapid City SD 57702

841-3 & 5660-3
Jerry Zeimetz, City Administrator
City of Beresford
101 N 3rd St
Beresford SD 57004

1151-3
Mrs. Willard Meyer
1380 Illinois Ave SW
Huron SD 57350

3100-3
Elmer Losing
Box 26
Alpena SD 57312

2073-3
Renae Rohl
RCS Development
2029 Rose Creek Blvd
Fargo ND 58104

Eric Gronlund
Natural Resource Engineer
Water Rights

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 26th day of May, 2005.

Karen Schlaak
Notary Public
My Commission expires April 1, 2007

SEAL KAREN SCHLAAK NOTARY PUBLIC State of South Dakota SEAL

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

July 7, 2005

2248-2

NOTICE

Roger Croell
4747 Old Hwy 14
Sundance WY 82729

Bret Hamm
22890 Forest Rd
Rapid City SD 57702

Dear Sirs:

This will notify you that the Water Management Board cancelled Water Permit No. 2248-2 on July 6, 2005. The permit authorized diversion of water from Rapid Creek and runoff to be used for irrigation purposes.

This action was taken under the conditions outlined in our notice to you dated May 25, 2005. If you have any questions concerning the Board action, please contact Genny McMath, with our program, at (605) 773-3352.

Sincerely,

Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program

CERTIFICATION

2248-2

I hereby certify that on July 7, 2005 , I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated July 7, 2005 regarding Notice of Cancellation of Water Permit Nos. 2248-2, 897C-1, 1457-1, 1104-3, 5494-3 Water Right Nos. 3100-3, 1151-3, 841-3, 5660-3, 2073-3, and Future Use Permit No. 969-1 addressed as stated below:

969-1
Art Jones
Director of Facility Services
Black Hill State University
1200 University St Unit 9513
Spearfish SD 57783

841-3 & 5660-3
Jerry Zeimetz City Administrator
City of Beresford
101 N 3rd St
Beresford SD 57004

3100-3
Elmer Losing
Box 26
Alpena SD 57312

1104-3
James Donnelly
47068 322nd St
Elk Point SD 57025

2248-2
Roger Croell
4747 Old Hwy 14
Sundance WY 82729

2073-3
Renae Rohl
RCS Development
2029 Rose Creek Blvd
Fargo ND 58104

1151-3
Mrs. Willard Meyer
1380 Illinois Ave SW
Huron SD 57350

5494-3
Lance Carson
Lance's Interstate Amoco
1610 S Burr St
Mitchell SD 57301

897C-1 & 1457-1
Bernard & Kathryn Kling
20265 166th St
Keldron SD 57634

2248-2
Bret Hamm
22890 Forest Rd
Rapid City SD 57702

Genny McMath

Genny McMath
Environmental Scientist
Water Rights

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 7th day of July, 2005.

Karen Schlaak

Karen Schlaak
Notary Public
My Commission expires April 1, 2007

SEAL KAREN SCHLAAK NOTARY PUBLIC State of South Dakota SEAL