

WATER PERMIT NO. 7040-3

Name of Applicant: **James Shaeffer**

Address: **PO Box 11, Montrose SD 57048**

Phone: **605 363-3283**

Amount of Water Claimed: **76.08 AF**

Total Acres: **NA**

Source of Water Supply: **runoff**

Water to be used for: **fish & wildlife propagation and recreation**

County: **McCook**

Type of Waste Disposal System:

Location: **7 miles east of Canistota**

PRIORITY

Date Received: **6-12-08**

Application/License Fee: **\$200**

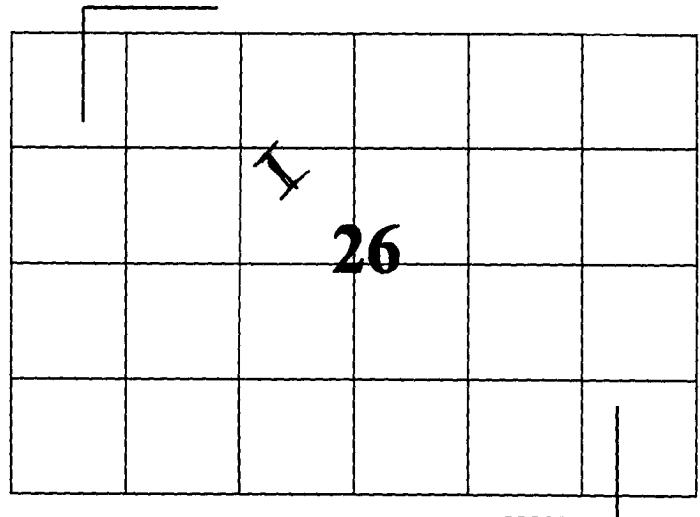
Corrected Application Received:

Period of Annual Use: **January 1 – December 31**

Remarks:

Diversion Point: **SE ¼ NW ¼ Section 26-T102N-
R53W**

Water Impounded: **E ½ NW ¼ Section 26-T102N-
R53W**



Depth of Well: **NA**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by: **Daniel Mehlhaf, NRCS**

Reviewed and the Number Assigned on: **XX**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

RECEIVED
JUN 12 2008
WATER RIGHTS
PROGRAM

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>7040-3</u> (office use only)	Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>	
	Newspaper <u>Salem Special PO Box 220</u>	
	<u>605-425-2361 (Wed)</u> <u>57058</u>	

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____
(Use predates Mar 2, 1955)

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

1. Name of Applicant James Shaeffer Phone 605-363-3283
(check one) ☐ Owner ☐ Tenant/lessee
Mailing Address PO Box 11 Montrose State SD 57048
(Street, RR, or Box and City) (Zip Code)

2. Amount of water claimed _____ *CFS or _____ **GPM 34 ***AF 76.08 Total Acreage 76.08
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Run Off4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County McCook

From NE corner of 26-102-53 1150 feet west 390 feet
South, in section 26-102-53 (SE 1/4 NW 1/4 water impoundment, E 1/2 NW 1/4

5. County or counties where water will be used McCook6. Annual period during which water is to be used Year round Jan 1 - Dec 31

7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres

8. Give a description of the project. (Attach sheet if more space is needed)

Dam for fishing, hunting, other recreational uses.

STATE OF SOUTH DAKOTA) SS
County of McCook

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

I, James C. Shaeffer, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature James C. ShaefferSubscribed and sworn to before me this 16 day of April 20 08Notary Public signature Joan Matthei

My comm expires 7/15/2013

**SOUTH DAKOTA
WATER PERMIT NO. 7040-3**

Date of first receipt of application June 12, 2008.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7040-3 to James Shaeffer, PO Box 11, Montrose SD 57048 authorizing the construction of the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7040-3 authorizes impoundment of 34 acre-feet of water from runoff by constructing a dam located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 26 with water impounded in the E $\frac{1}{2}$ NW $\frac{1}{4}$ Section 26; all in T102N-R53W.
2. The water appropriated shall be used for the purpose of fish and wildlife propagation, recreational use and livestock water and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 7040-3 is August 10, 2008.
5. The date from which applicant may claim right is June 12, 2008.
6. One-fifth of the construction is to be completed on or before February 10, 2011.
7. All construction is to be completed on or before August 10, 2013.
8. Water is to be put to beneficial use on or before August 10, 2017.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 7040-3 authorizes a dam with a storage capacity of 34.0 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

By: Garland Erbele
Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

AUG 19 2008
date



(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 _____ 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. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

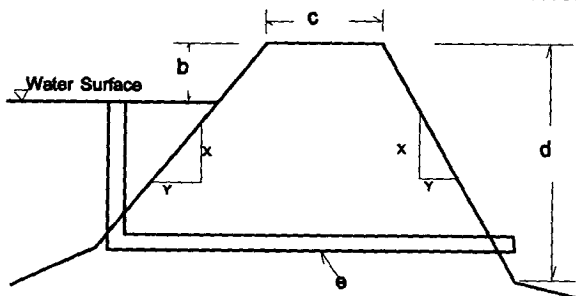
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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

USDA NRCS
Pete Anderson, PE



- b) Freeboard 5 ft, 4 in.
- c) Crest Width 14 ft.
Crest Length 297 ft.
- d) Height 30 ft.
- e) Primary Outlet Capacity _____
If pipe, diameter 15 in.
- f) Secondary Spillway Capacity 96 cu.ft./sec
Spillway Width 106 ft. 60
- g) X & Y Slope _____
Upstream 3:1
Downstream 2.5:1
- h) Surface Area of Impoundment 4.87 ac
- i) Storage 38.43 Acre Feet
- j) Drainage Area Above Dam 238 Acres

Water Permit Application No 7040-3

James Shaeffer

Top of Dam Elev. - 44.4
 2nd Spillway Elev. - 41.8
 P. Spillway Elev. - 39
 Dis. Top Elev. - 14.4

Cat. 3 - Low Hazard Dam

Ht. = 30 ft

Normal Storage Capacity - 34 Ac-Ft
 Int. Storage Capacity - 42.5
 Max Storage Capacity - 58

Int Capacity x Eff Ht. = $42.5 \times 23.3 = 990 < 3000 \therefore 25 \text{ yr}$
 Minimum Spillway Design

From USGS WRI 98-4055 "Tech. for Est. Flood Peaks ... in 50"
 Region B $P_{II} = 1.1$ $OA = 238 \text{ Ac} = 0.37 \text{ mi}^2$

$$Q_{100} = 148 CA^{.584} P_{II}^{.730}$$

$$= 148 (0.37)^{.584} (1.1)^{.730}$$

$$= 148 (0.5595) (1.074)$$

$$= \underline{90 \text{ cfs}}$$

$$Q_{100} = 275 CA^{.625} P_{II}^{.742}$$

$$= 275 (0.37)^{.625} (1.1)^{.742}$$

$$= 275 (0.5312) (1.0733)$$

$$= \underline{160 \text{ cfs}}$$

Secondary Spillway Capacity

$$Q = CLH^{3/2}$$

$$C = 2.6$$

$$L = 60$$

$$H = 2.6$$

$$= (2.6)(60)(2.6)^{1.5}$$

$$= \underline{655 \text{ cfs}}$$

NRCS Annual Yield

$$OA = 238 \text{ Ac} \quad ISO = 3 \quad CN = 72$$

$$80\% \text{ chance} = 0.15$$

$$0.15 \times 238^{1/2} = \underline{3 \text{ Ac-Ft}}$$

$$50\% \text{ chance} = 0.42$$

$$0.42 \times 238^{1/2} = \underline{8.5 \text{ Ac-Ft}}$$

$$10\% \text{ chance} = 3.0$$

$$3.0 \times 238^{1/2} = \underline{60 \text{ Ac-Ft}}$$

Section 74:02:08:09

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Dam Max X-Sec. - OK
4. Area Capacity - OK
5. Outlet Details - OK
6. Spillway Rating - OK
7. Spillway Details - OK
8. Specs - std NRCS - OK
9. LPP - N/A Cat. 3 - OK

Shaeffer dam site

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JUN 12 2008

Field Office: Salem FO

Agency: USDA NRCS

Water Rights Program
Date: 4-15-2008

Legal Desc: See center of map



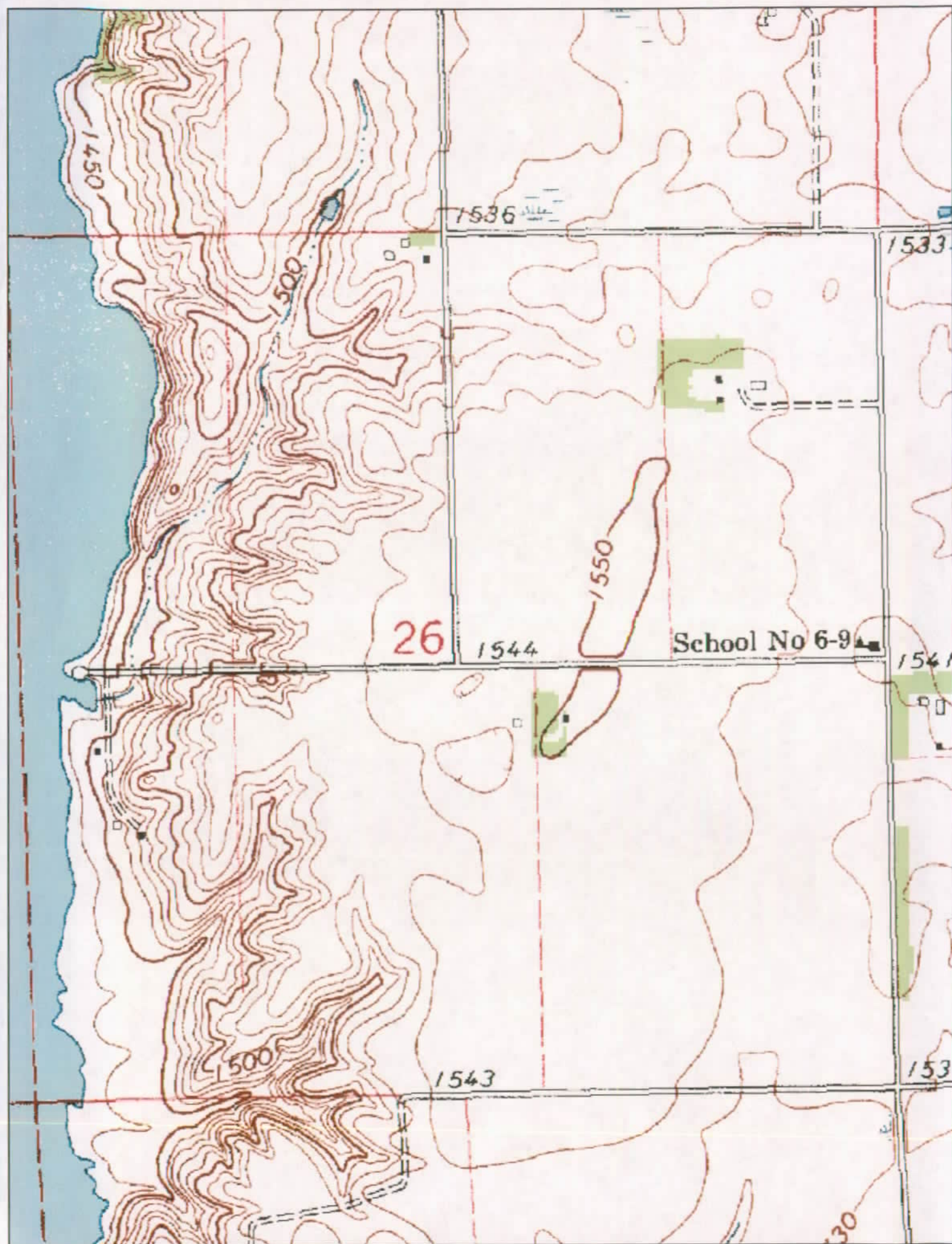
Located in Section
24-102-53

Daniel Mehlich &
David Mehlich
USDA-NRCS DC
4-16-08

0 230 460 920 1,380 1,840 2,300 2,760 Feet

W	Wetland
FW	Farmed Wetland Drained or modified & cropped prior to 12-23-1985, but still meets wetland criteria
PC	Prior Converted
NW	Non Wetland
NI	Not Inventoried Potential Waters of the US
See NRCS CPA-O26E for definitions and additional info.	







=====

POND DESIGN

=====

WinPond 1.5.2405.11111

Project ---- : dam

Description :

State ----- : South Dakota

County ----- : Mccook

Landowner -- : Jim Scheafer

Township --- : 102

Range ----- : 53

Section ---- : 23 26

Tract ----- :

Field ----- :

Designed By : Pete Anderson

Date designed: 3/6/2008

Date printed : 3/6/2008

Approved By : _____

Date : _____

File Name : C:\Documents and Settings\...\Scheafer2PVC_08.prj

PLANNED IN COOPERATION WITH USDA-NRCS

Office Name
Address1
Address2
City

PS. 39.0
EA 40.8 + 1 = 41.8
+ 1.6 hp + 1
= 44.4 = Top

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JUN 18 2008

WATER RIGHTS
PROGRAM

*Note: I did not review this site
after reviewing the D.A. #23840. 2/8
3/8/05*

Project --- : dam
Prepared for: Jim Scheafer
Prepared by : Pete Anderson
Checked by : _____

TWP : 102
SEC : 23
Date: _____

RNG : 53
FLD : _____

***** JOB APPROVAL CLASS *****

Hazard Class	Low	A
Effective Height	Feet	23.3
Effective Storage	AC-Ft	42.5
Overall Height	Feet	26.9
Total Storage	AC-Ft	57.7
Storage X Effective Height	AC-Ft Ft	990
Contributing Drainage Area	Acres	270 <i>238</i>
Contributing Drainage Area	Square Miles	0.42
Pipe Conduit Capacity	CFS	9.7
Open Channel Spillway Design Flow	CFS	96.0
Peak Inflow Aux Spillway Design Storm	CFS	247.2
Conduit - Inside Diameter	Inches	12
Conduit Material		SDR
Inlet Type		Hood
Job Approval Class		
INVENTORY SIZE DAM		

***** ELEVATION-STORAGE INPUT DATA *****

ELEV (ft)	POOL AREA (acres)	INT. STORAGE (ac. ft.)	ACCUM. STORAGE (ac. ft.)
18.5	0.00	0.04	0.00
20.0	0.05	2.58	0.04
26.0	0.81	4.72	2.62
30.0	1.55	14.67	7.34
36.0	3.34	16.42	22.01
40.0	4.87	37.65	38.43
46.0	7.68		76.08

***** STORAGE VOLUMES *****

	ELEVATION (ft)	AREA (acres)	STORAGE (ac. ft.)
Inlet (Princ. spillway)	39.0	4.49	33.75
Aux. spillway	40.8	5.24	42.47
Max. water	42.4	5.99	51.46
Settled top of fill	43.4	6.46	57.69
Sediment - above inlet			0.00
- below inlet			0.00
Inlet to Aux.			8.72
Aux. to max. water			8.99

Project --- : dam
 Prepared for: Jim Scheafer
 Prepared by : Pete Anderson
 Checked by : _____

TWP : 102 RNG : 53
 SEC : 23 FLD :
 Date: _____

RUNOFF CURVE NUMBER DETERMINATION

Acres & (curve numbers) for
 Hydrologic Soil Group

COVER DESCRIPTION

A B C D

ACCUMULATED: 270.00 Acres

WEIGHTED CURVE NUMBER: 72.0

***** HYDROLOGIC DATA *****

Rainfall distr. type ----- :	II		
Drainage area, acres ----- :	270.0	Watershed slope, % :	5.0
Runoff curve number ----- :	72	Flow length, ft. - :	4900
Time of concentration, hrs :	1.07		
(min.: 64.03)			

	----- Spillway -----	
	Principal	Auxiliary
Design frequency, yrs.:	2	25
24 hr. Rainfall, in. :	2.6	4.6
Runoff, in. ----- :	0.6	1.9
Peak inflow, cfs ---- :	63.77	247.21
Peak outflow, cfs --- :	9.69	96.02 A.S.
		13.90 P.S.

***** PRINCIPAL SPILLWAY TRIALS *****

Inlet type: Hood

Inlet Elevation: 39.0

	TRIAL 1	TRIAL 2	TRIAL 3
CONDUIT: Type -----	SDR	HCMP	
Diameter, in. --	12.00	18.00	
Height, in. ----			
Width, in. -----			
Manning's n ----	0.011	0.021	
Inlet ext., ft. -	1.0	2.0	
Length, ft. -----	105.0	107.0	
Entrance Coefficient, Ke	1.000	1.000	
Auxiliary elevation -----	40.8	41.7	
STORAGE (ac.ft.):			
Temporary (PS-AS) ----	8.72	13.63	
Total at Auxiliary ---	42.47	47.38	
Effective height, ft. ---	23.3	24.2	
Height x storage -----	990	1147	
Drawdown time, days-hrs.	2-15.8	1-22.2	
Trial used -----	1		

CONDUIT TYPES ----- : SDR-26 - PVC SDR-26 Pipe

Project --- : dam
 Prepared for: Jim Scheafer
 Prepared by : Pete Anderson
 Checked by : _____

TWP : 102 RNG : 53
 SEC : 23 FLD :
 Date: _____

***** AUXILIARY SPILLWAY DETAILS *****
 Discharge determination: Qe values from ASFILE

Auxiliary elev. :	40.8	Retardance ----- :	B
Bottom width, ft. :	59	Level sect. length, ft.:	100
Flow depth, ft. - :	1.60	Side slope ratio, n:1 :	2.50
EXIT CHANNEL -			
Max. Vel., fps - :	6.0	Retardance ----- :	B

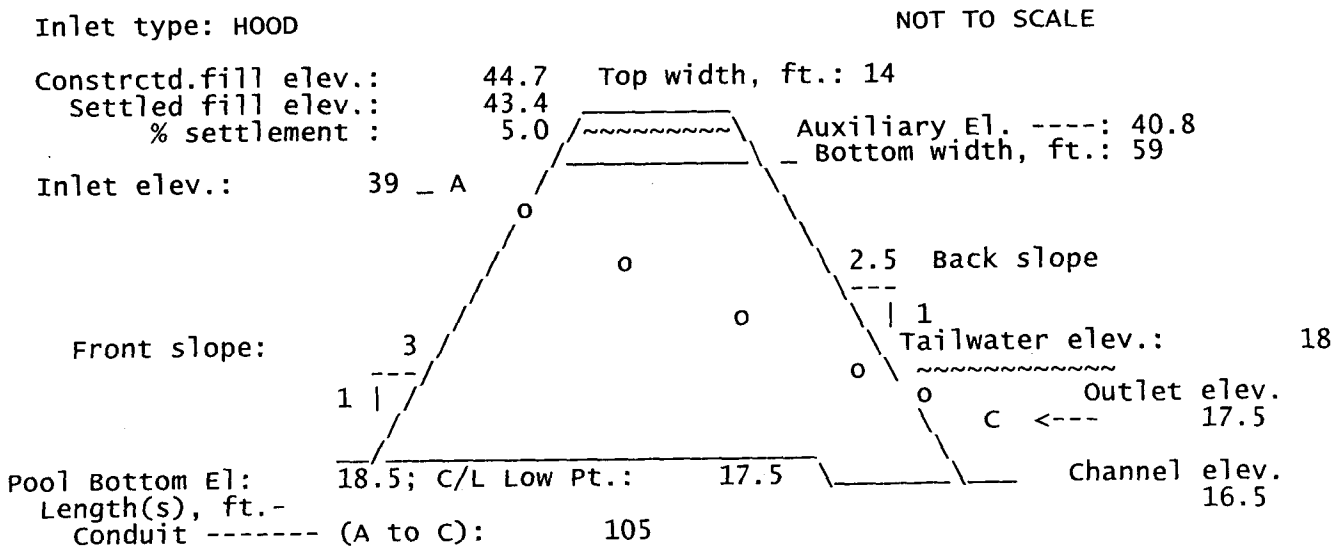
Flow, cfs ----- :	96.02	Exit slope, % --- Min.:	4
		Max.:	30
Settled fill elev.:	43.4	Drawdown time, days-hrs:	3-0.2
Channel elev. --- :	16.5	Overall height, ft. -- :	26.9
(downstream toe)			

***** CONDUIT DETAIL *****

Inlet Type -----	HOOD
Conduit Type -----	SDR-26 - PVC SDR-26 Pipe
Diameter, in. -----	12.00
Inlet extension, ft --	1.0
Length, lin. ft. -----	105.0 Extends 2.0 ft. beyond dnstr.toe
Length, lin. ft. -----	105.0 Pipe length used in routing
Slope, % -----	21.3
Max. fill over pipe, ft.	11.5
Hood Length -----	9
Baffle size -----	18 square or diameter

Horizontal Distances (ft.)	
Upstrm: edge of top width to inlet end of pipe :	18.6
Dnstrm: edge of top width to toe ----- :	67.3

***** DESIGN ELEVATIONS (at principal spillway) *****



Project --- : dam
 Prepared for: Jim Scheafer
 Prepared by : Pete Anderson
 checked by : _____

TWP : 102 RNG : 53
 SEC : 23 FLD :
 Date: _____

***** SUMMARY *****

Inlet type: HOOD Inlet Elevation: 39

CONDUIT: Type -----	SDR-26 - PVC SDR-26 Pipe
Diameter, in. ---	12
Length, lin. ft. -	105 Extends 2 ft. beyond dnstr.toe
AUX. : Elevation -----	40.8
Bottom width, ft. -	59
Hp, flow depth, ft. -	1.6
Exit slope, % min. -	4
max. -	30
Effective height, ft. ----	23.3 = AS elev. - low pt. on C/L
Height x storage -----	990
Overall height, ft. ----	26.9 = stld. fill elev - chan. elev
NOTE -----	***** INVENTORY SIZE DAM

***** PROJECT DEFAULTS *****

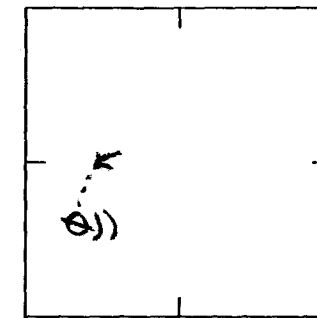
Design based on -----	Settled slopes
Berms settled -----	False
Auxiliary spillway to Top of Dam: -----	2.0 (ft)
Freeboard -----	1.0 (ft)
Minimum bottom width -----	10.0 (ft)
Maximum bottom width -----	150 (ft)
Feet above inlet (Drawdown) -----	0.0 (ft)
Percent or storage drained (Drawdown) -----	85.0 (ft)
Minimum flow (Drawdown) -----	0.1 (cfs)
Orifice Coefficient -----	0.71 (ft)
Full Pipe Flow Required? -----	Yes
Stage required above Prin. Spwy. Crest: -----	0.5 (ft)
Max. drainage area for required stage: -----	20.0 (acres)

STRUCTURE DATA

DRAINAGE AREA ACRES	ANNUAL YIELD @ 80% AC.FT.	PEAK RUNOFF 25 YR. CFS. (25 or 50 yr)	EMERG. SPWY. 25 YR. CFS.	WATER DEPTH @ P.S. FT.	SURFACE AREA @ P.S. ACRES	SEDIMENT STORAGE AC.FT.	STORAGE		
							@ P.S. AC.FT.	@ E.S. AC.FT.	@ TOP OF DAM AC.FT.
238	3.1	247	76	19.0	4.5	2.8	33.8	48.1	64.8

CONSTRUCTION & DESIGN NOTES

- S.D. LAW STATES: "NO EXCAVATOR MAY BEGIN ANY EXCAVATION WITHOUT FIRST NOTIFYING THE ONE-CALL NOTIFICATION CENTER AT THE NUMBER 1-800-781-7474."
- LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND MAINTAINING THIS DAM IN ACCORDANCE WITH S.D. OPERATION & MAINTENANCE GUIDELINES.
- THIS PROJECT IS X IS NOT CLASSIFIED AS A "DAM" BY S.D. LAW. ACCORDING TO S.D. LAW, A STRUCTURE IS CLASSIFIED AS A DAM IF IT IS > THAN 25 FT HIGH (TOP TO D.S. TOE) AND IMPOUNDS > THAN 15 AC FT OR IF IT IS > THAN 6 FT HIGH AND IMPOUNDS > THAN 50 AC FT.
- IF CULTURAL RESOURCES ARE DISCOVERED, DISCONTINUE CONSTRUCTION AND NOTIFY THE LOCAL NRCS OFFICE.
- SEED ABOVE HWL, THE TOP AND BACKSLOPE OF DAM, THE E.S., ALL DIKES, AND ALL DISTURBED AREAS DESIGNATED BY THE ENGINEER. SEEDING SHALL BE PERFORMED BY THE OWNER.
- SCARIFYING, STRIPPING, & EXCAVATION OF THE CORE TRENCH, SHALL BE INSPECTED AND APPROVED BY AUTHORIZED PERSONNEL PRIOR TO BACKFILL. EXCAVATE CORE TRENCH 1 FT INTO IMPERMEABLE MATERIAL. MINIMUM CORE TRENCH IN UN-DISTURBED GROUND IS 2 FT. CONSTRUCT THE FULL DEPTH OF THE CORE TRENCH TO HWL. ELEV. (see Profile of Embankment).



NW SEC 26 T102 R53
LOCATION MAP
Approx. 3 E & 3 N
to Humboldt

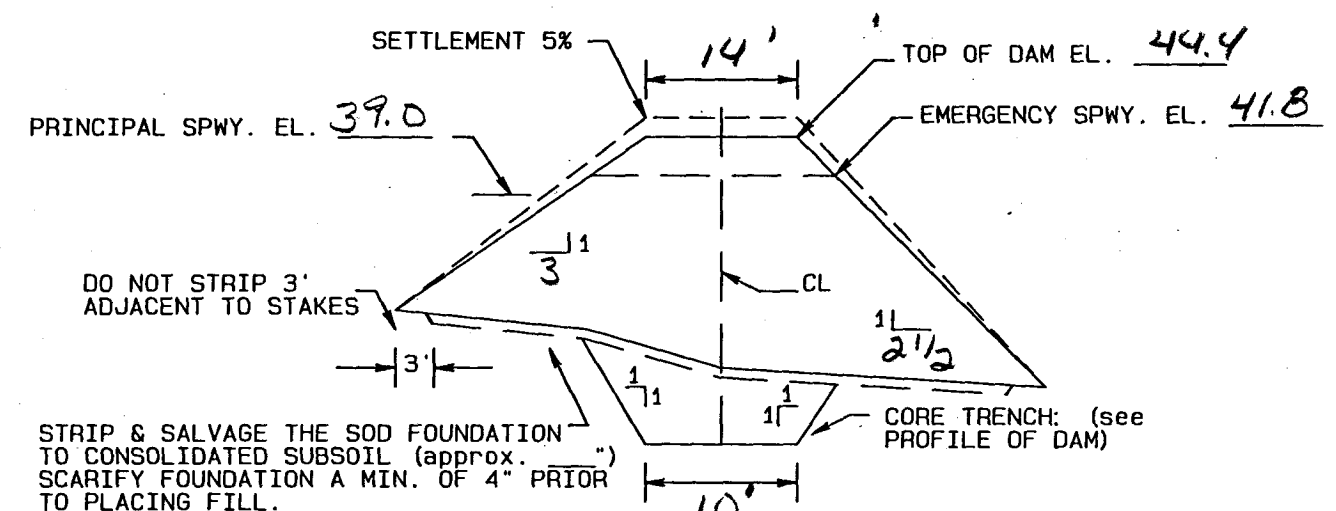
TABLE OF QUANTITIES

ITEM	UNIT	QUANT.	AS BUILT
EXCAVATION	CU. YD.	1,278	
core trench @ 742 cy., stripping @ 536 cy.)			
EXCAVATION (E.S.)	CU. YD.	4,001	
EARTH FILL	CU. YD.	14,052	
(embankment @ 12,744 cy., stripping @ 536 cy., core @ 742)			
SEEDING	ACRES	1.1	
PRINCIPAL SPWY.	EACH	1	
See sheet # 4 for details of P.S.			

NOTE: Above quantities may be estimated.
Payment will be on surveyed/staked quantities.

Still need soil borings

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TYPICAL CROSS SECTION OF DAM

S. D. CONSTR. & MATERIAL SPECS.

- SD - 4 STRIPPING
- SD - 5 EXCAVATION
- SD - 75 EARTH FILL CLASS "S"
- SD - 10 SALVAGING & SPREADING TOPSOIL
- SD - 15, 50 C.M.P.
- SD - 16 ~~16" TUBES~~ 55 Plastic Pipe
- SD - 17 METAL FAB. & INSTALLATION
- SD - 20 ~~20" PIPE~~ 55 Plastic Pipe
- SD - 28 SEEDING

SD-95 Geotextile
SD-592 Geotextile

EARTH DAM

<i>Jim Schaeffer</i> <i>McCook Co.</i> <i>NW 1/4, S26, T102, R53</i>			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE			
Designed	Date	Approved by:	
<i>Jim Schaeffer</i>	<i>3/08</i>		
Drawn	Title:		
Checked	Sheet	of	File Name:
<i>Jim Schaeffer</i>	1	6	<i>EarthDam11a17</i>

PLAN VIEW OF DAM & POOL AREA

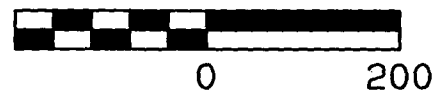
approximate scale 1" = ____ ft.

ATTACHMENTS:
SD - 378 O & M GUIDELINES
PARTICIPANT RESPONSE (OWNER COPY)

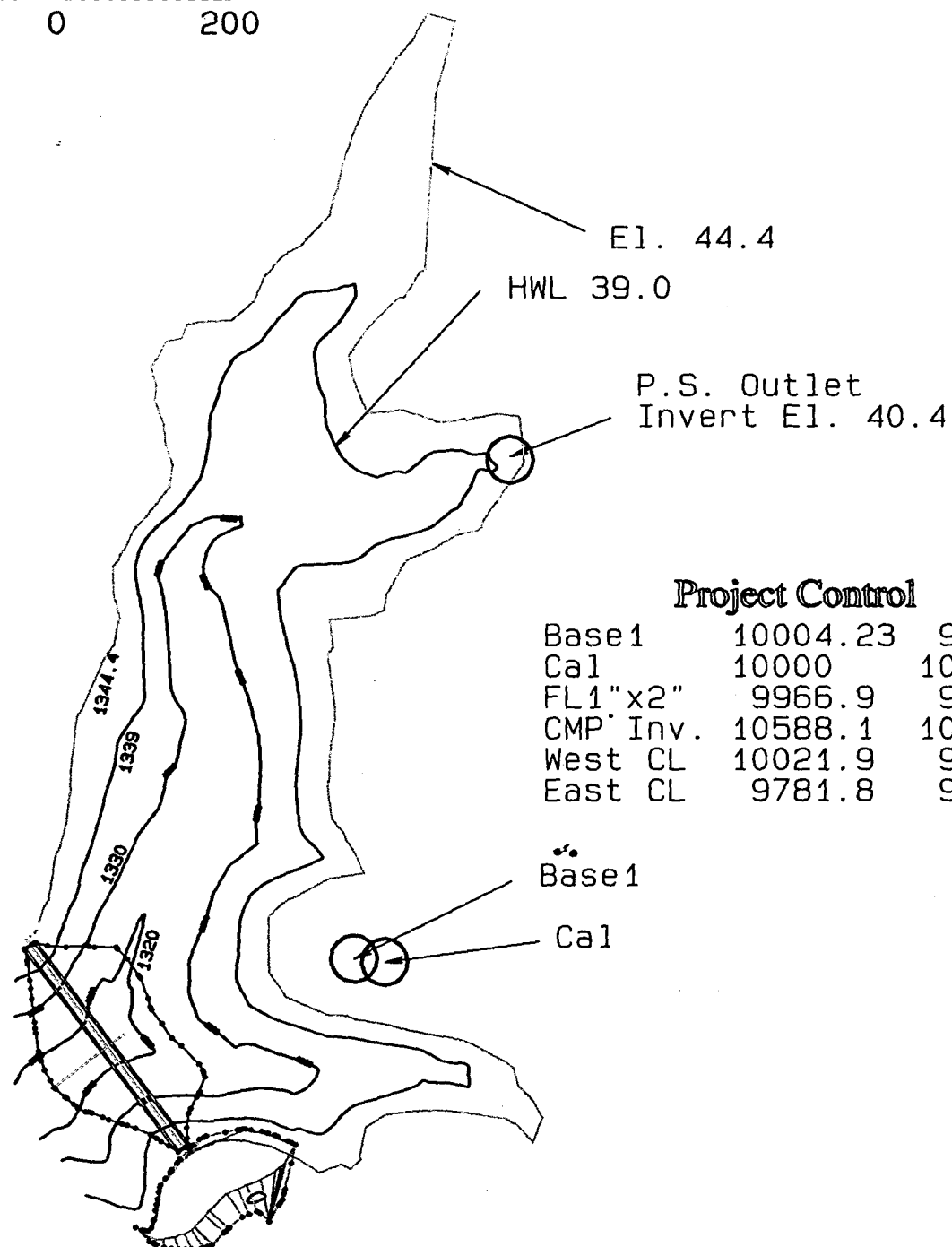
4: 16PM 9/22/2006 JOB PLAN 1.1B Rev. 9/22/06

PLAN VIEW

GRAPHIC SCALE 1"=200'

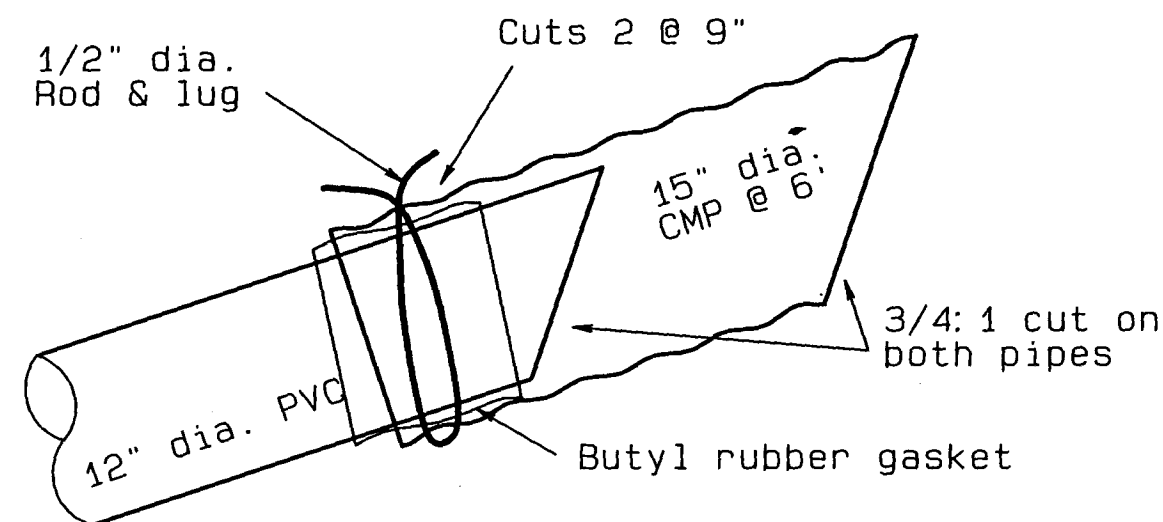


Property Line



Project Control

Base1	10004.23	9964.57	64.94
Cal	10000	10000	64.48
FL1"x2"	9966.9	9571.0	36.89
CMP Inv.	10588.1	10145.6	40.42
West CL	10021.9	9587.6	45.0
East CL	9781.8	9768.8	45.0



NOTE:

- 1.) Cut top of CMP 9 inches long in 2 places. Cuts shall be located at the 11:00 & 1:00 positions of a clock.
- 2.) Place butyl rubber between pipes and tighten with rod & lug. Remove 'gathers' in the rubber prior to tightening. Obtain a water tight joint without over tightening rod. Damage to PVC may result from over tightening.
- 3.) Insert PVC pipe a minimum of 2 ft. inside CMP (i.e. 2 ft. overlap).
- 4.) Repeat procedure for joint at pipe outlet.
- 5.) PVC invert shall be 2 ft. downstream of CMP inlet invert.

CMP - PVC JOINT
no scale

Approved by: _____
Title: _____

Date: _____
Designed & Drafted by: *Pete Anderson*
March 08
Checked by: _____

NRCS NATURAL RESOURCES
CONSERVATION SERVICE

BROOKINGS FIELD SUPPORT OFFICE
520 THIRD AVENUE P.O. BOX 626
BROOKINGS, SOUTH DAKOTA 57006-0626

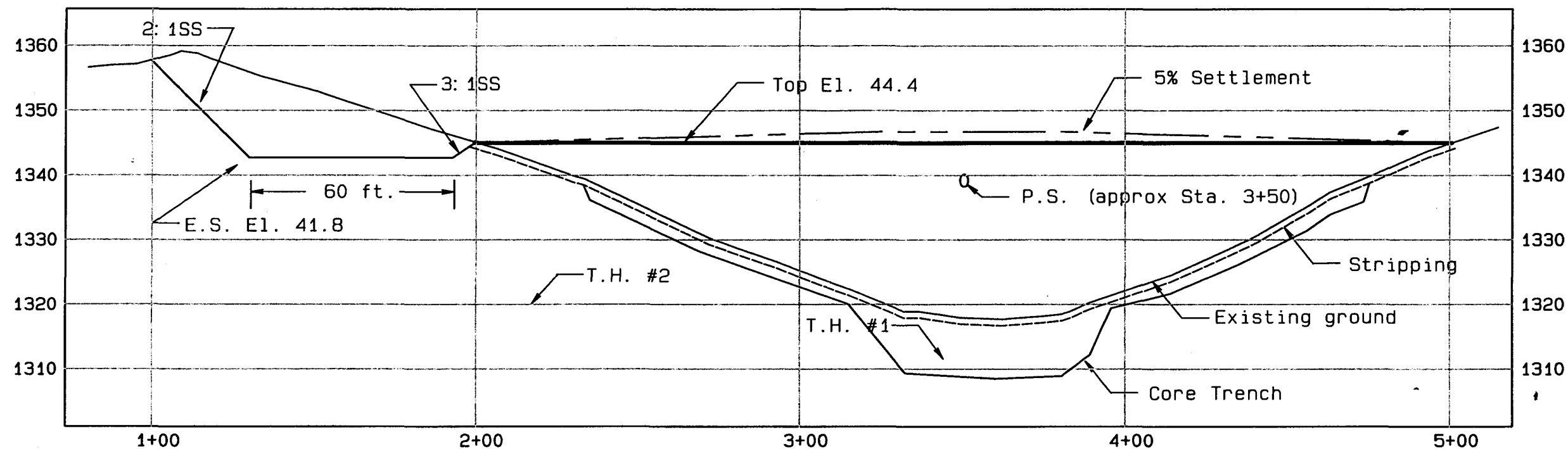
Schaeffer Dam

NW1/4 Section 26 T.102 N. R.53 W.
McCook County, South Dakota

3/26/2008
0:48PM

fn: SchaefferScalePVC

Sheet No. 2 of 6



PROFILE of DAM & EMERGENCY SPWY.

TABLE OF QUANTITIES for P.S.

ITEM DESCRIPTION	UNIT	QUANTITY	AS BUILT
15" dia. CMP (1 @ 8' @ outlet, & 1 @ 6' long w/ 3/4: 1 cut @ inlet)	Lin.Ft.	14	
12" PVC SDR 26 160 psi (4 @ 20' & 1 @ 20' w/ 3/4: 1 cut)	Lin.Ft.	100	
Baffle (22.5" x 22.5")	Each	1	
Butyl Rubber gasket (w/1/2" dia. rod & lug)	Each	2	
Filter Material (gradation #1) (drain @ 4.7, & diaphragm @ 4.3)	Cu.Yd.	9	
Rock (drain @ 4.1, & outlet @ 3.3)	Cu. Yd.	7.4	
Filter Fabric (drain @ 12 sy, & outlet @ 9 sy)	Sq.Yd.	21	

(NOTE: Total sloped laying length of pipes based on backtoe elevation 16.5 and inlet of 39.0 with a top 44.4 is 104.1 ft.)

NOTE:

- 1.) Scarifying & stripping shall be inspected by qualified personnel prior to earthfill.
- 2.) Place female end of PVC pipe up stream.
- 3.) Earth fill around plastic pipe shall be well compacted from bottom invert of pipe to spring line of pipe.

Approved by: _____
Title: _____

Date: _____
Designed & Drafted by: *Pete Anderson*
March 2 008
Checked by: _____

NRCS NATURAL RESOURCES
CONSERVATION SERVICE

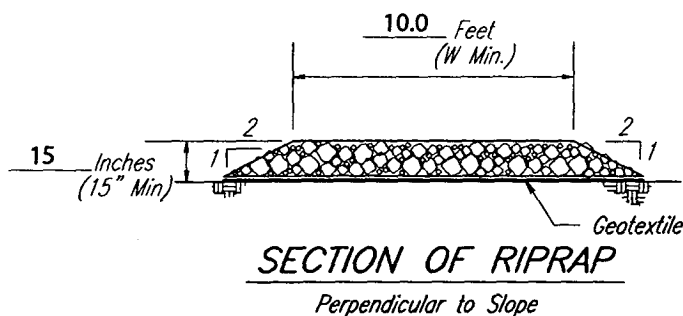
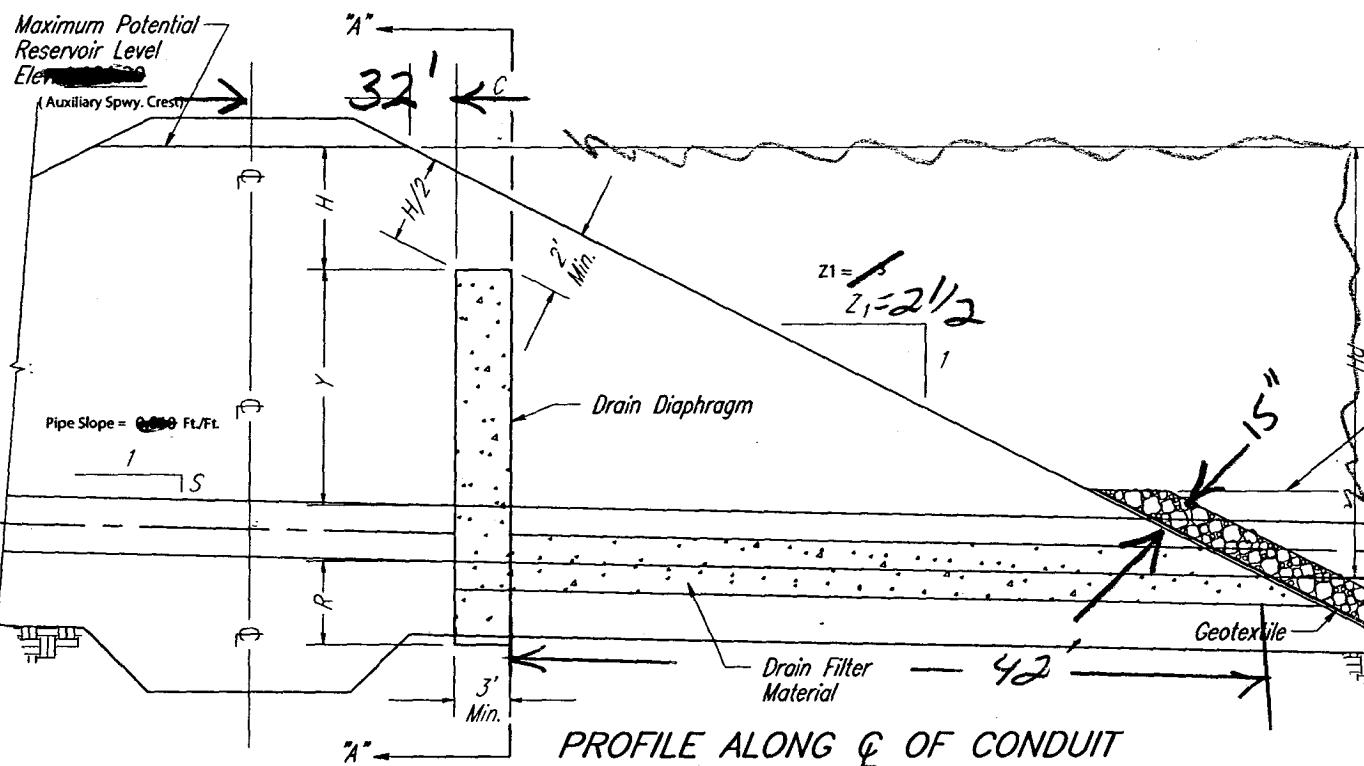
BROOKINGS FIELD SUPPORT OFFICE
520 THIRD AVENUE P.O. BOX 626
BROOKINGS, SOUTH DAKOTA 57006-0626

Schaeffer Dam

Nw1/4 Section 26 T.102 N. R. 53 W.
McCook County, South Dakota

3/26/2008
1:06PM

Sht No. 4 of 6



SUMMARY OF DESIGN AND DIMENSIONS

DESIGN DATA	
H = 5 Feet	Hd = 25 Feet
X = 4.2 Feet	D = 2.1 Feet
R = 4 Feet	Y = 3 Feet
C = 27.8 Feet	Configuration Type Vertical
	Aggregate Gradation #1
DIMENSIONS	
W = 40.5 Feet	(Total Width of Drain Diaphragm)
T = 40.5 Feet	(Total Height of Drain Diaphragm)
t = 3 Feet	(Thickness of Single Filter)

ESTIMATED QUANTITIES

Drain Filter Material	0.0	Cubic Yards
Geotextile	0.0	Square Feet
Rock Riprap	0.0	Cubic Yards

DRAIN FILTER MATERIAL GRADATION #1

SIEVE SIZE	PERCENT PASSING
3/8	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

ASTM C-33
FINE CONCRETE
AGGREGATE GRADATION

DRAIN FILTER MATERIAL GRADATION #2

SIEVE SIZE	PERCENT PASSING
#4	100
#8	95-100
#16	70-100
#30	40-75
#50	10-35
#100	2-15
#200	0-5

ASTM C-144
MASONRY MORTAR
AGGREGATE GRADATION

ROCK RIPRAP GRADATION

PERCENT SMALLER	WEIGHT RANGE (LBS.)	AVERAGE CUBIC DIMENSION
100	50 lb.	10"
50-80	30 lb.	7"
15-50	10 lb.	5"
0-15	3 lb.	3"

CONSTRUCTION NOTES

- 1.) No compaction of the Drain Filter Material extending from the Diaphragm to the D.S. embankment face is required beyond that resulting from the placing and spreading operations.
- 2.) The Drainage Diaphragm shall be installed by placing Drain Filter Material in 15 inch thick lifts prior to compaction. Each lift shall be saturated uniformly with a minimum of 1.2 gallons of water per cubic foot of loose Drain Filter Material prior to compaction. Each lift shall be compacted by a minimum of two passes of a hand-directed vibratory compactor over the entire lift surface.
- 3.) The maximum height of drop of the Riprap onto the Geotextile in the pipe outlet area shall be 3 feet.

MATERIAL NOTES

- 1.) The Geotextile shall conform to the Class I requirements specified in Table 2 for Nonwoven Geotextiles in Material Specification SD-592.
- 2.) ~~Select Drain Filter Material Gradation #1 for base soils classified as CL and Gradation #2 for base soils classified as CH under the Unified Soil Classification System.~~

"STATEMENT OF COMPLIANCE"

Construction (was) (was not) completed in accordance with approved construction plans and specifications.

JAA

Date

DRAFT

DRAIN DIAPHRAGM DETAILS

JOB PLAN 3.8 (12/2007)

REVISIONS		
DATE	APPROVED	TITLE
12/07/2007	Jay B. Cole	State Conservation Engineer

12/12/2007 8:32AM

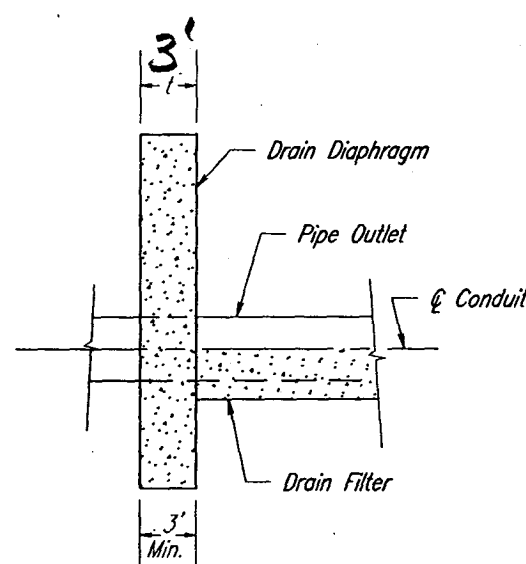
Sheet 1 of 1

DEFINITIONS

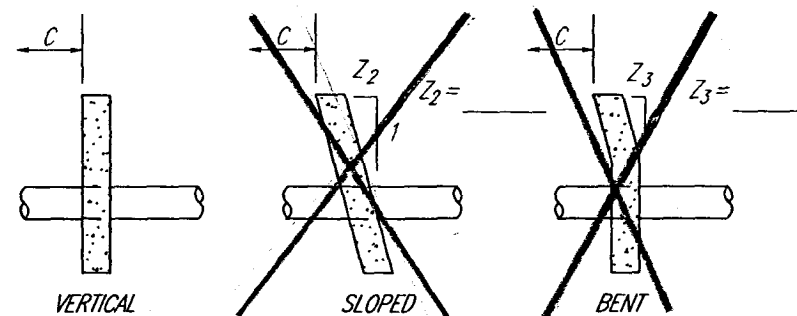
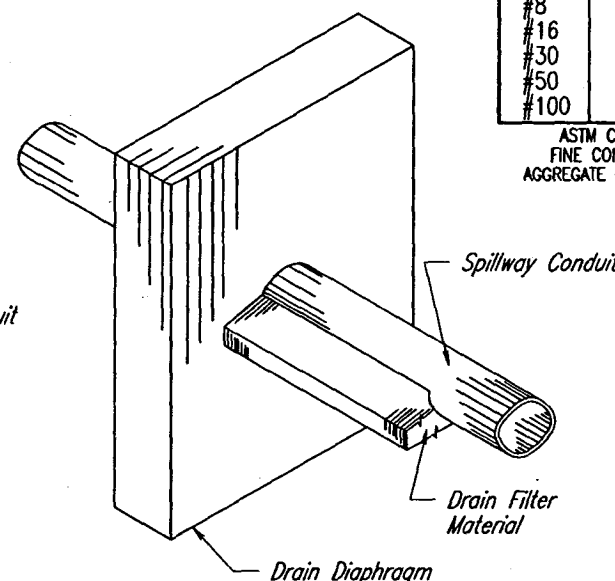
D = Outside diameter of circular conduit.
H = Vertical distance between the Top of Diaphragm and the Maximum Potential Reservoir Level.
X = Use the smaller of 2 X D or 5 feet beyond any excavation made to install conduit.
Y = Vertical distance from Top of Conduit to Top of Diaphragm
Y = 2 X D or no higher than Maximum Potential Reservoir Level
C = Horizontal distance from D.S. face of Embankment at Maximum Potential Reservoir Level to H.S. face of Diaphragm.
R = 2 X D or not to extend beyond a bedrock surface.
Hd = Vertical distance from Maximum Potential Reservoir Level to Conduit Invert at D.S. face of Embankment Slope.
S = Slope of Conduit in feet of fall per horizontal foot.

$$C = Hd \times Z_1 - \frac{((15 \times D) + (Hd / 2))}{(1 / Z_1) + (S / 2)} > 0 \text{ (Maximum)}$$

SECTION B-B



PARTIAL ISOMETRIC



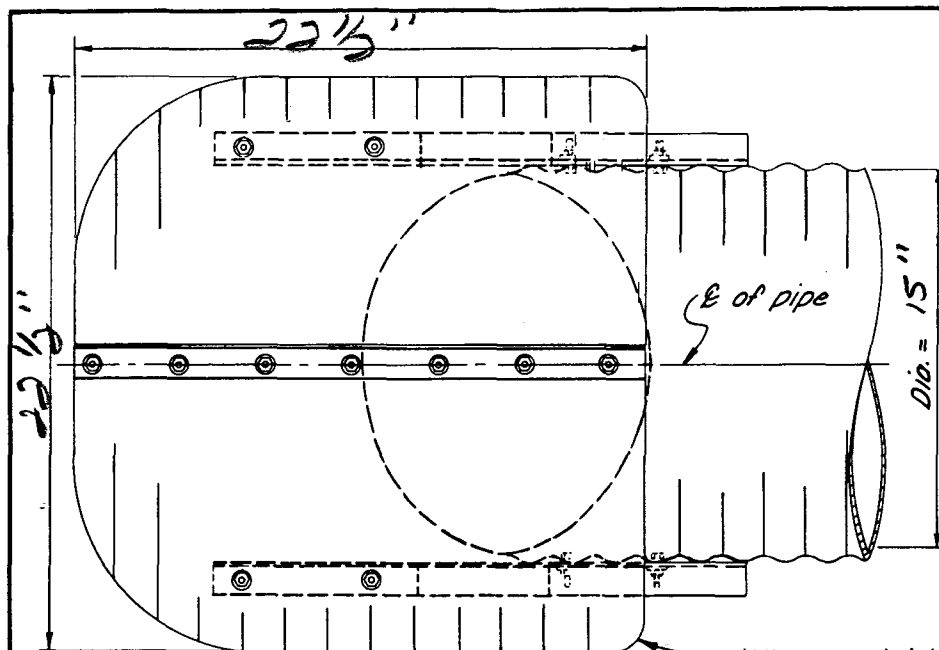
DRAIN DIAPHRAGM CONFIGURATIONS

USDA - NRCS
State Office Engineering Staff
200 Fourth Street SW
Huron, South Dakota 57350

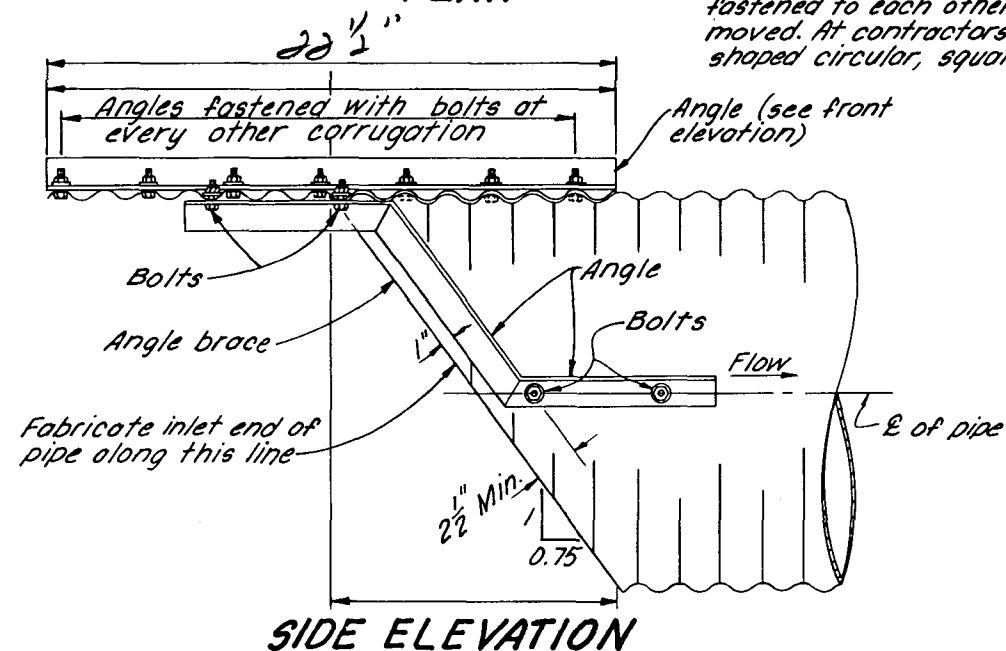
NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File Name:
Subplan_Diaphragm_11.07.pn
Drawing No.

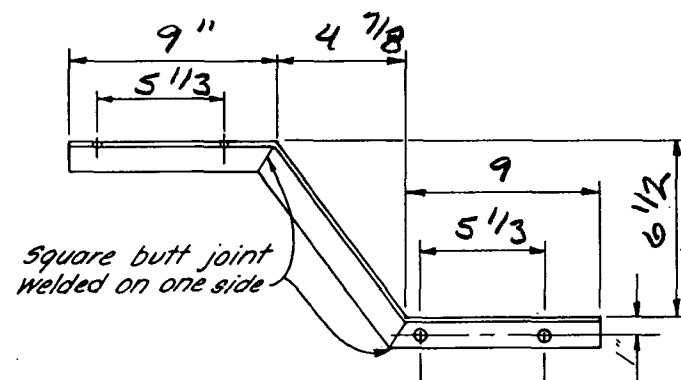
5 6



PLAN



SIDE ELEVATION



ANGLE BRACE DETAIL
(1 left and 1 right required)

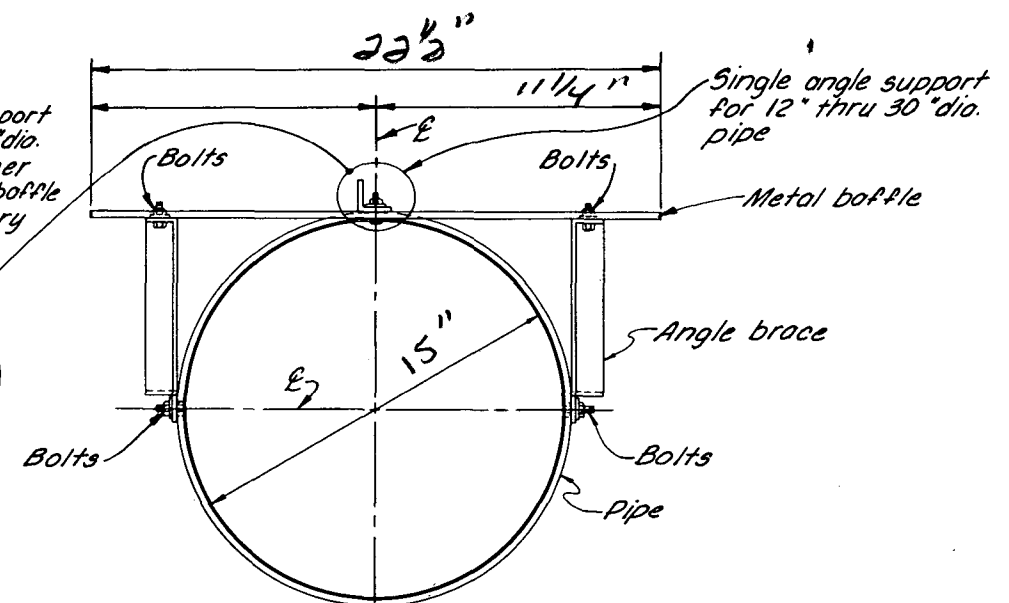
REFERENCE: GUIDE PLAN NO. 6.1

DIMENSIONS

PIPE DIA. INCHES	THICKNESS IN INCHES OF BAFFLE	ANGLE BRACE DIMENSIONS, INCHES					BOLT SIZE INCHES	HOLE SIZE INCHES	ANGLE IRON SIZE INCHES	WEIGHT OF ANGLE IRON LB.
		a	b	c	d	e				
15	.064	9	4 7/8	9	6 1/2	5 1/3	3/8 x 1 1/2	7/16	1 1/2 x 1 1/2 x 1/4	15

Where metal baffle is fabricated of more than one piece of metal, the separate pieces shall be securely fastened to each other. Sharp corners shall be removed. At contractor's option, metal baffle may be shaped circular, square or as shown.

Two angles back to back for support of metal baffle for 36" to 48" dia. pipe. Bolt angles to each other with 3 bolts. Bolt angles to baffle with bolts staggered at every other corrugation.



FRONT ELEVATION

NOTES:

1. ALL BOLTS SHALL HAVE NUT AND SPLIT WASHERS.
2. ALL NUTS, BOLTS, AND WASHERS SHALL BE GALVANIZED, CADMIUM PLATED, OR STAINLESS STEEL.
3. ALL CUTS SHALL BE SAW OR SHEAR CUTS.
4. HOLES IN THE ANGLE BRACE SHALL BE SPACED AND LOCATED TO MATCH CORRUGATIONS IN PIPE AND BAFFLE.
5. ALL GALVANIZING DAMAGED BY CUTTING, DRILLING OR WELDING SHALL BE REPAIRED BY PAINTING WITH TWO COATS OF ZINC DUST-ZINC OXIDE PRIMER.

HOODED INLET AND BAFFLE

OPERATOR: <u>Jim Scheeler</u>	
CONSERVATION DISTRICT: <u>McCook</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed _____	Date _____
Drawn _____	Approved by _____
Traced _____	Title _____
Checked _____	Title _____
Sheet No. <u>6</u>	Drawing No. _____
of <u>6</u>	

JOB PLAN NO. 6.1

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 6/12, 20 08

RECEIVED OF James C Shaeffer PO Box 652 Saline MI 48176

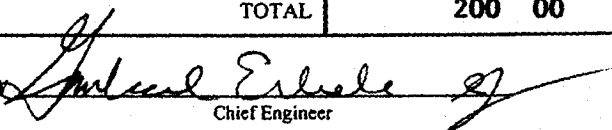
The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>7040-3</u> to Appropriate Water, to construct and to put water to beneficial use	150	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. <u>7040-3</u>	50	00
Fee for Filing Transfer Form _____		
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	200 00

No.

03078

By


Chief Engineer



**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 16, 2008

James Schaeffer
PO Box 11
Montrose, SD 57048

Dear Mr. Schaeffer:

We have reviewed the plans and specifications for your dam project located in the SE ¼ NW ¼ of Sec. 26-T102N-R53, in McCook County. The plans and specifications for your dam are approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release you, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The Schaffer Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 30 feet and a normal storage capacity of 34 acre-feet and a maximum storage capacity of 58 acre-feet.

If you have any questions, please feel free to contact us.

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Pete Anderson, NRCS, Brookings
Daniel Mehlhaf, NRCS, Salem



**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
APPLICATION NO. 7040-3, James Shaeffer**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 7040-3, James Shaeffer, PO Box 11, Montrose SD 57048.

The Chief Engineer is recommending APPROVAL of Application No. 7040-3 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. Water Permit No. 7040-3 authorizes a dam with a storage capacity of 34.0 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
July 15, 2008

REPORT ON
WATER PERMIT APPLICATION NO. 7040-3
James Schaeffer
July 2, 2008

Water Permit Application No. 7040-3 has been filed by James Schaeffer to impound 34 acre-feet of water from runoff by constructing a dam located in the SE ¼ NW ¼ of Section 26-T102N-R53W, in McCook County. The application also requests impoundment of sufficient water to maintain water to the outlet elevation. The water will be used for fish and wildlife production and livestock water purposes.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The dam has been designed by Natural Resources Conservation Service (NRCS). The plans and specifications have been reviewed and will be approved; however, reconstruction of the dam can not begin until Water Permit Application No. 7040-3 is approved.

The dam will be 30 feet high with a normal storage capacity of 34 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 58 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

The dam has a drainage area of 238 acres or 0.37 square miles. The dam is designed to have a 12 inch diameter PVC pipe with a 15 inch diameter inlet and outlet section and 5.4 feet of freeboard as the primary spillway, and a 60 foot wide earthcut secondary spillway with 2.6 feet of freeboard. A 25 year frequency event produces a peak runoff of approximately 90 cfs and a 100 year frequency event produces a peak runoff of approximately 160 cfs. The earthcut spillway will have a capacity of approximately 655 cfs.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 3.5 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 8.5 acre-feet and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 60 acre-feet.

The Schaeffer Dam will be located in the SE ¼ NW ¼ of Section 26-T102N-R53W on an unnamed tributary to the East Fork of the Vermillion River and East Vermillion Dam, about one-half mile upstream of the confluence of the unnamed tributary and Lake Vermillion. The Department of Game, Fish and Parks holds Water Right No. 145-3 for storage of 7040 acre-feet of water in Lake Vermillion. Approval of Water Permit Application No. 7040-3 should not have any adverse effect on Lake Vermillion. There are no existing Water Permits/Rights filed on the unnamed tributary between the proposed dam and Lake Vermillion.

Conclusions:

1. Water Permit Application No. 7040-3 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for domestic use should be a qualification on Water Permit Application No. 7040-3.



Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist

Water Rights Program - File Documentation

NAME: James Schaeffer

ADDRESS: Montrose SD

DATE: 7-29-08 **COUNTY:** MC **TELEPHONE:**

RE: Publication notice

COMMENTS:

On 7-29-08, I received a fax from Anderson Publication for a notice to run in the Montrose Herald on July 31st for James Schaeffer.

A review of the file indicated we had received a fax from the Salem Special on 7-24-08 indicating they ran the notice on July 24 and would run it again on July 31.

Eric remembered talking to Mr. Schaeffer previously. Eric told Mr. Schaeffer at that time that he needed to contact the paper to authorize publication. Mr. Schaeffer indicated he was leaving on a trip and would have his father take care of it.

I'm assuming Mr. Schaeffer's father took the notice to the Montrose Herald (which would explain how the Montrose Herald got a copy of the notice) instead of the Salem Special.

I called Jenny with the Montrose Herald and told her not to publish the notice in the Montrose Herald since it was being published in the Salem paper.



Karen Schlaak
Environmental Scientist

RECEIVED

AUG - 4 2008

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of McCook) SS

I, Troy Schwans

certify that the attached printed Notice was taken

from the Salem Special

printed and published in Salem

County of McCook and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

July 24, 2008

July 31, 2008

Cost of Printing \$ 45.47

Troy Schwans
(Signature)

Orner
(Title)

7/31/08
(Date Signed)

Public Notice

**NOTICE OF APPLICATION NO.
7040-3 to Appropriate Water**

Notice is given that James Shaeffer, PO Box 11, Montrose, SD 57048 has filed an application for a water permit to impound 34 acre-feet of water from runoff by constructing a dam located in the SE 1/4 NW 1/4 Section 26 with water impounded in the E 1/2 NW 1/4 Section 26; all in T102N-R53W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation, recreational and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7040-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will

consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, 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 August 10, 2008.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

7/24,31c



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 16, 2008

Salem Special
PO Box 220
Salem SD 57058

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7040-3 to Appropriate Water to be published twice. Please publish the first notice on July 24, 2008 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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 Shaeffer, PO Box 11, Montrose SD 57048 (Ph # 605-363-3283).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 7040-3

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

Date _____

We are in receipt of your letter of July 16, 2008 enclosing Notice to Appropriate Water by Application No. 7040-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

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

July 16, 2008

James Shaeffer
Po Box 11
Mostrose SD 57048

Dear Mr. Shaeffer:

Water Permit Application No. 7040-3 for fish & wildlife propagation, recreation and livestock water use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Salem Special printed at Salem SD (Ph # 605-425-2361). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and 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 and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also 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.

Instruction to Newspaper - Publish first Notice on July 24, 2008 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 7040-3 to Appropriate Water

Notice is given that James Shaeffer, PO Box 11, Montrose SD 57048 has filed an application for a water permit to impound 34 acre-feet of water from runoff by constructing a dam located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 26 with water impounded in the E $\frac{1}{2}$ NW $\frac{1}{4}$ Section 26; all in T102N-R53W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation, recreational and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7040-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, 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 August 10, 2008.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

AUG 19 2008

James Shaeffer
PO Box 11
Montrose SD 57048

Dear Mr. Shaeffer:

Enclosed is Water Permit No. 7040-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

7040-3
RECEIVEDNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 10-28-08TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM:

Jim Shaeffer

(name)

Po Box 11

(address)

MONTRORSE SD 57048

(city, state, zip)

605-553-3755

(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 7040-3 states that the water use system is to be constructed by 8-10-13, and water is to be put to beneficial use by 8-10-17.

(date)

(date)

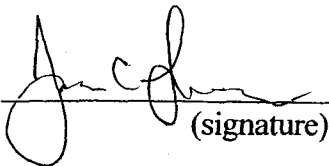
The water use system was completed on 10-12-08.

(date)

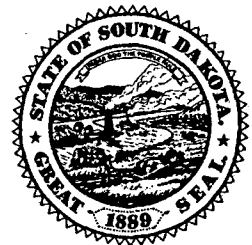
Applying the water to beneficial use was completed on 10-25-08.

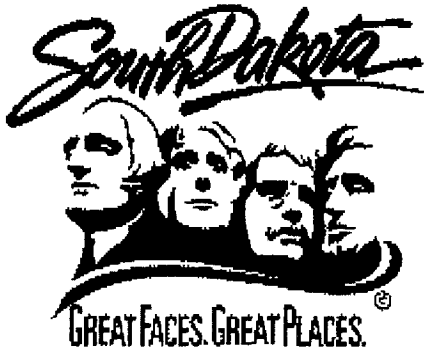
(date)

You may schedule an investigation so that the water license may be issued.



(signature)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

November 5, 2008

7040-3

Jim Shaeffer
PO Box 11
Montrose SD 57048

Dear Mr. Shaeffer:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with the project authorized by Water Permit No. 7040-3.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

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

Permit No. 7040-3
Vermillion River - Water District

Report Of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, **December 2, 2008**, made a thorough examination of the water use system constructed by **James Shaeffer** of **PO Box 11, Montrose, SD 57048** holder of Permit No. **7040-3**, bearing the priority of **June 12, 2008** authorizing the storage of **34** acre-feet of the waters of **runoff** for **fish & wildlife propagation and recreational** purposes, in **McCook** County.

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

A. Works used to divert the water:

A 30 ft. high earthen dam with a normal storage capacity of 34 acre-feet of water

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

N/A

C. Works used to apply water to beneficial use:

A 30 ft. high earthen dam with a normal storage capacity of 34 acre-feet of water

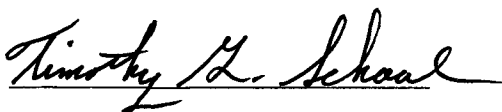
The system is in the following condition **good**. The point of diversion is located **1250 ft. north & 1250 west of the Center of Sec. 26-T102N-R53W (SE ¼ NW ¼), (Lat. 43.611827 & Long. -97.16374)**. The works are capable of storing **34** acre-feet of water which is to be used for **fish & wildlife propagation and recreational use**. Water has been put to beneficial use to the maximum extent as follows:

A 30 ft. high earthen dam with a normal storage capacity of 34 acre-feet of water

and the license should be issued for **34** acre-feet of storage.

Applicable permit qualifications have been complied with: Yes **X**

Exceptions to compliance are: **none** Date Report Completed: **February 6, 2009**



Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 7040-3

DATE OF INSPECTION: December 2, 2008

NAME & ADDRESS OF INSPECTION CONTACT/ "Doc" Shaeffer

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: father

NAME & ADDRESS OF PERMIT HOLDER: James Shaeffer, PO Box 11, Montrose, SD 57048

DIVERSION POINT LEGAL LOCATION: 1250 ft. north & 1250 west of the Center of Sec. 26-T102N-R53W (SE ¼ NW ¼), (Lat. 43.611827 & Long. -97.16374).

DAM INFORMATION:

- 1) Height to crest 30 feet
- 2) Height to primary spillway 24.6 feet
- 3) Height to secondary spillway 27.3 feet
- 4) Crest width 14 feet
- 5) Crest length 297 feet
- 6) Spillway length XXX feet
- 7) Spillway width 60 feet
- 8) Approx. storage (Normal) 34 acre-feet
- 9) Approx. storage (Maximum) 58 acre-feet
- 10) Date constructed: 2008

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit N/A
- 2) Special qualifications to permit being abided by yes
- 3) All structures, wells and lands on map yes
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A

Water Permit Application No. 7040-3



Timothy G. Schaal 2/6/09
Timothy G. Schaal, P. E.
Natural Resources Engineering Specialist
DENR, Water Rights Program



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

FEB 18 2000

7040-3

James Shaeffer
PO Box 11
Montrose SD 57048-0011

Dear Mr. Shaeffer:

Enclosed is your Water License No. 7040-3. Included with the license is a map prepared by the staff engineer who conducted the inspection. Water License No. 7040-3 is the final document which completes the process of obtaining a water right.

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

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7040-3

(1) James Shaeffer, PO Box 11, Montrose SD 57048-0011 made Application No. 7040-3, June 12, 2008 for a water permit to impound 34 acre feet of water from runoff, McCook County, South Dakota for fish and wildlife propagation, recreational use and domestic livestock watering purposes. Permit No. 7040-3, with a priority date of June 12, 2008 was approved August 10, 2008 and issued to the applicant for diversion of water with construction of the storage dam to be completed on or before August 10, 2013 and for the application to beneficial use of said water on or before August 10, 2017.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on October 31, 2008. The "*Notice*" stated the water use system (storage dam) was completed on October 12, 2008 and the water placed to beneficial use on October 25, 2008.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the project and is entitled to impound 34 acre feet of water for beneficial use. The location of the storage dam (spillway) is:

- 1,250 feet north and 1,250 feet west of the center of Section 26, T102N, R53W (SE $\frac{1}{4}$ NW $\frac{1}{4}$)
Water is impounded in the E $\frac{1}{2}$ NW $\frac{1}{4}$ Section 26, T102N, R53W

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 James Shaeffer, PO Box 11, Montrose SD 57048-0011 the holder and/or owner of Water Right No. 7040-3 is issued a license to appropriate water, the right to impound 34 acre feet of runoff water with a priority date of June 12, 2008 from the location specified in (2) of this license for fish and wildlife propagation, recreational use and domestic livestock watering purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7040-3 and subject to the following qualifications:

- Water Right No. 7040-3 authorizes a dam with a storage capacity of 34 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be bypassed.



Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

FEB 13 2009

date

