

WATER PERMIT NO. 6056-3

Name of Applicant: **Lynn Brandenburger**

Address: **PO Box 161, New Effington SD**

Phone: **605 637-5463**

Amount of Water Claimed: **50**
43 acre-feet

Total Acres: **NA**

Source of Water Supply: **runoff**

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

County: **Roberts**

Type of Waste Disposal System: **NA**

Location: **2 1/2 miles south of New Effington**

PRIORITY Date Received: **8-22-1997**

Fee: **\$150.00**

Corrected Application Received: **3-10-1998**

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

Remarks:

Diversion Point: **SE 1/4 NW 1/4, NE 1/4 SW 1/4**
Sec 3-T127N-R50W

Water Impounded: **S 1/2 NW 1/4 and N 1/2**
SW 1/4, Sec 3-T127N-R50W

Depth of Well:

Well Driller:

Remarks:

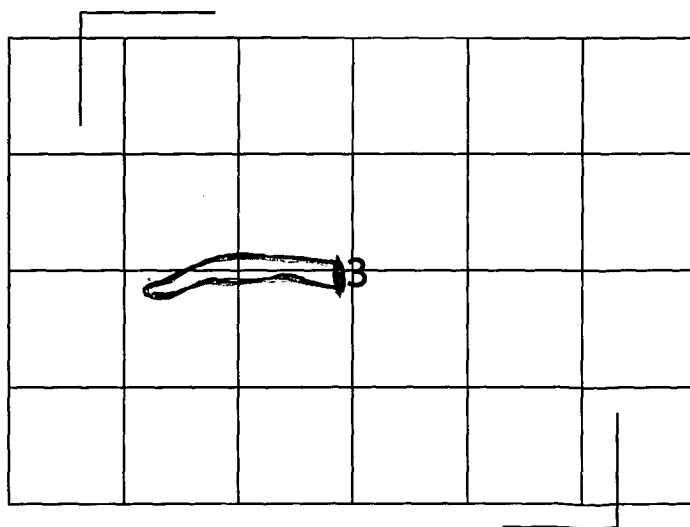
Type of Map: **aerial**

Prepared by: **Kent L. Duerre, SCS**

Reviewed and the Number Assigned on: **3-13-1998**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



FORM 2: Application for uses other than irrigation
(type or print)

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>6056-3</u>	(office use only) Hydrologic Unit <u>09020101</u>
	Basin <u>Red Rainy</u>	
	Newspaper <u>The Rusholt Review, Rusholt, SD</u>	



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

Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☒ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☒ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☐ Industrial	☒ Other <u>flood water retention</u>	

Type of Application: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

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

- Name of Applicant LYNN BRANDENBURGER Phone 605-631-5463
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address P.O. BOX 161 NEW EFFINGTON State SD 57255
(Street, RR, or Box) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 43 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply surface water runoff
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) T-10579, located in the
extreme SE 1/4 of sec 3, T-127-, R-50 (SE 1/4 NW 1/4 & NE 1/4 SW 1/4) water
Impounded: S 1/2 NW 1/4, N 1/2 SW 1/4 County ROBERTS
- County or counties where water will be used ROBERTS
- Annual period during which water is to be used 4/1 - 11/1 Jan 1 - Dec 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
Approximately 12,000 cu. yds. of fill will be placed in a draw
(intermittent stream) to create a multi-purpose dam

STATE OF SOUTH DAKOTA) SS
County of Roberts)

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, Lynn Brandenburg, 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.

Signed Lynn Brandenburg

Subscribed and sworn to before me this 21st day of August 19 97

Grace Robinson

Notary Public

SOUTH DAKOTA
WATER PERMIT NO. 6056-3

Date of first receipt of application August 22, 1997.

Date of return to applicant for corrections, amendments or changes September 3, 1997.

Date of receipt of corrected application March 10, 1998.

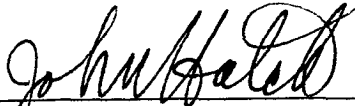
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6056-3 to Lynn Brandenburger, PO Box 161, New Effington SD 57255 authorizing the construction of a dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 6056-3 authorizes impoundment of 50 acre-feet of water annually in a dam located in the SE ¼ NW ¼ and the NE ¼ SW ¼ Section 3 with water impounded in portions of the S ½ NW ¼, N ½ SW ¼ Section 3; all in T127N-R50W.
2. The water appropriated shall be used for the purpose of providing habitat for fish and wildlife propagation and recreational use and may not exceed the amount of water needed for beneficial use for this purposes.
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. 6056-3 is May 4, 1998.
5. The date from which applicant may claim right is March 10, 1998.
6. One-fifth of the construction is to be completed on or before November 4, 2000.
7. All construction is to be completed on or before May 4, 2003.
8. Water is to be put to beneficial use on or before May 4, 2007.
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. 6056-3 authorizes a dam with a storage capacity of 50 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: 
John Hatch, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUN 26 1998

date



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. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ c) Year Constructed _____
- d) 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:

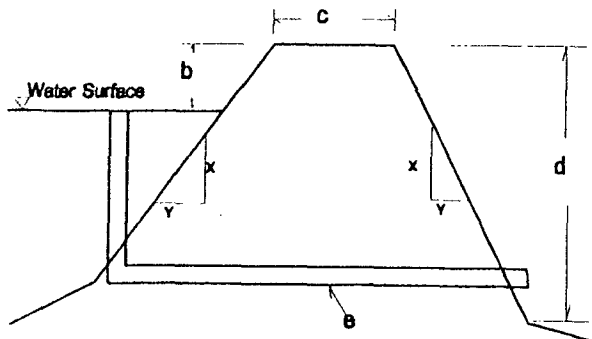
NRCB, 205 E. Oak
Sisseton, SD 57262

- b) Freeboard 6.8' ~~4.0'~~
- c) Crest Width 10' ~~20'~~
Crest Length 500'
- d) Height 18' ~~11.0'~~

- e) Primary Outlet Capacity _____
If pipe, diameter 30"
- f) Secondary Spillway Capacity 2', 8 CFS
Spillway Width 128' ~~170'~~

- g) X & Y Slope
Upstream 2:1
Downstream 3:1

- h) Surface Area of Impoundment 12.0 Ac.
- i) Storage 50 ~~125~~ Acre Feet
- j) Drainage Area Above Dam 1843 ~~910~~ Acres



RECEIPT

415444

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ August 22 _____, 19 97

Lynn Brandenburger, PO Box 161, New Effington, SD 57255

RECEIVED OF _____

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

Fee for Application for Permit No. <u>6656-3</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. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	150 00

By

Chief Engineer

John Hatch

JOHN HATCH

(Signature)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

September 3, 1997

Lynn Brandenburger
PO Box 161
New Effington SD 57255

Dear Mr. Brandenburger:

Thank you for submitting your *Application for a Permit to Appropriate Water* for a storage dam.

A review of the application has determined that a written preliminary risk assessment of the downstream hazard potential needs to be provided to aid in determining the hazard classification for the proposed dam (see enclosed Safety of Dams Rules Sections 74:02:08:05 and 74:02:08:05.01). The hazard classification for the dam (Category 1, 2 or 3) needs to be known in order to determine what provisions of the Safety of Dams Rules will apply to your dam.

An assessment of the downstream hazard potential is to consist of a list of properties downstream from the dam (homes, roads, dams and other structures) with the potential affects of a dam failure to these properties. The legal descriptions of these downstream properties and the elevation above the waterway need to be included in the assessment. The risk assessment needs to be prepared by an engineer as defined in the Safety of Dams rules. Plans and specifications for the dam will also be needed pursuant to Safety of Dams Rules Chapter 74:02:08. Kent Duerre, with the Soil Conservation Service has been made aware of these requirements and may be able to assist in their preparation.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352

enclosure

c: Kent Duerre

NOT TO SCALE

T-10578

T-1352

H18

Lynn Brandenburger

Port J. Owens

District Conservationist

NRCS

8/21/97

1-139.8 NHGL

T-10679

Nathan
Lynn Brandenburger

T-10680

1-19.1 NHGL

1-60.5 NHGL

Neil Long

CRP
88-97

Nathan
Lynn Brandenburger

127-50

CRP
88-97

2-122.3 NHGL

3-5.1 NHGL

CRP 89-98

4-13.3 NHGL

1-117.3 NHGL

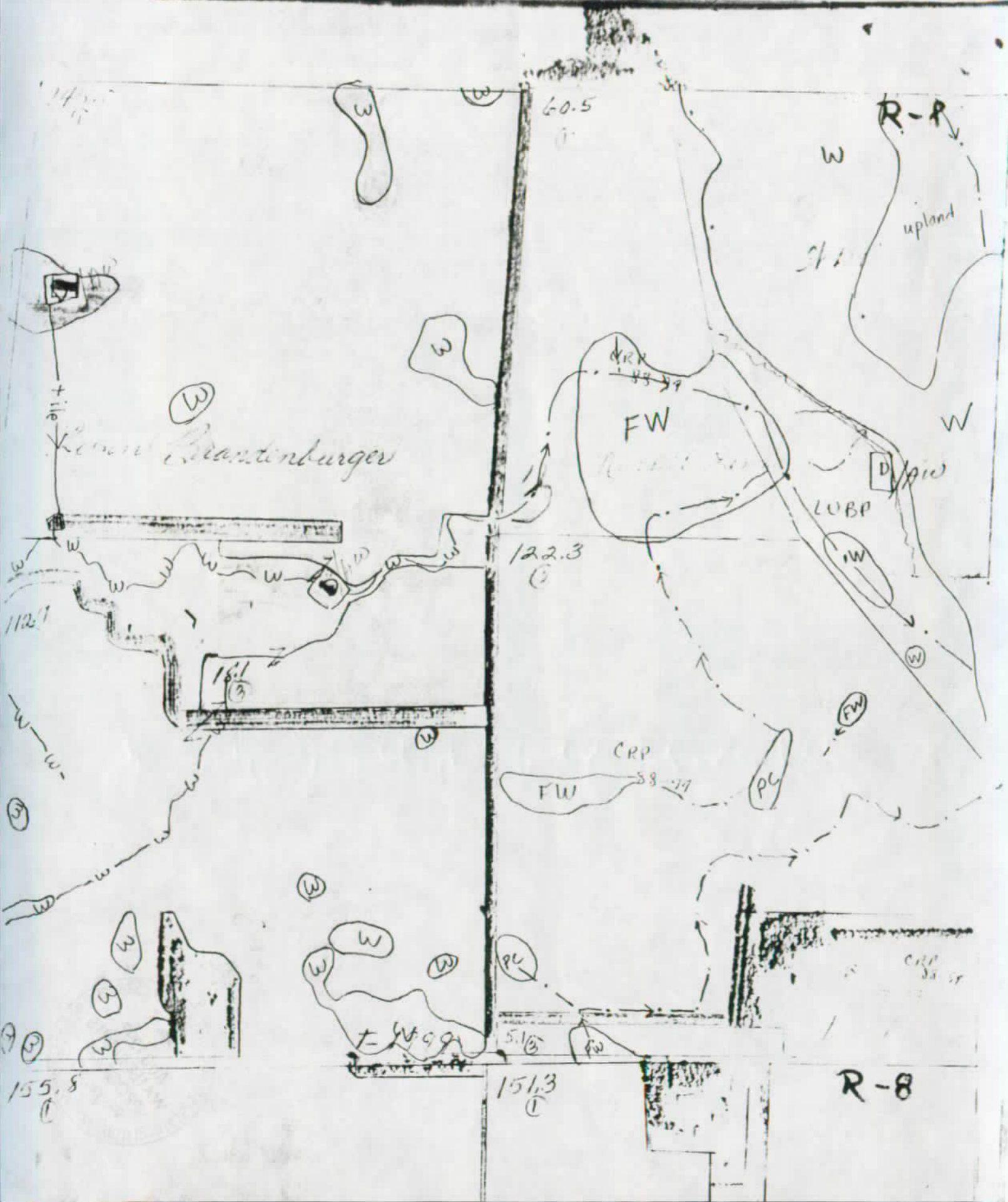
T-1346

H-18

6056-3

NOT TO SCALE

1



SITES XEQ 11/18/97 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
VER 96.1 (USER MANUAL - DATED MAY 1996)
TIME 09:27:12

***** 80-80 LIST OF INPUT DATA *****

SITES 03/01/96 Brandenburger Pond - 378 DESIGN W/CU YD
STRUCTURE

93.4 11.5
97.00 20.0
107 41.5

ENDTABLE

WSDATA 2A101 AC 80 1845 4.49
PDIRECT 2.4 5.0
POOLDATA ELEV 93.4 93.4 84 83
PSHOOD 80 10 83.2 83 .6 .6
PSDATA 1 100 30 .009 84.3
ASCREST ELEV
ASDATA 1 100 .04 3 .04 10
BTMWIDTH FEET 128
CLPROFILE -0.5 Bronson survey no HI (pete's best guess)
900 102 1000 99.1 1079 96.1
1159 92.8 1259 87.7 1339 87
1438 82.1 1517 87.1 1575 92.5
1611 96.1 1668 99.1 1768 102

ENDTABLE

TEMPLATE 3 2.5
CROWN 0
MINDEPTH 1.0 3.0 1.0 2.0
PSFULL

*

* PRINCIPAL SPILLWAY STORM IS A TYPE II, 2 YR 24 HR @ 2.4".
* This routing uses 1 30" CPE as a hooded inlet for the P.S.
* EMERGENCY SPILLWAY STORM IS 50 YR. 24 HR TYPE II STORM @ 5.0".
* This program will set it's own E.S. crest elevation.
* The yardage computations are my best guess because there is no HI.
* I lowered all elevations 1' (except ends) as software doesn't add
* freeboard. DA is taken as east of Old Effington Cemetery.
* There is more drainage area west of Old Effington Cemetery
* except that the flow is restricted by two 12" CMP culverts.
* The culverts will contribute 6 cfs apiece for a total of
* 12 cfs. I neglected the twelve cfs as the P.S. storm is 254
* cfs., and thus represent only 5% of total. There are hundreds
* of depressional acres which will not contribute to runoff in
* normal years. These non-contributing acres are east of the
* cemetery road.

GO, DESIGN NEL TYPE2 24 TYPE2378 24
ENDJOB

***** MESSAGE - ALTERNATE STRUCTURE ID (S 1) BEING USED
SINCE USER DID NOT INPUT AN ID.

***** MESSAGE - DRAINAGE AREA FROM WSDATA CONTROL BEING CONVERTED FROM
ACRES TO SQUARE MILES FOR COMPUTATION PURPOSES.

1SITES XEQ 11/18/97 ----- COMMENT PAGE -----
VER 96.1 Brandenburger Pond - 378 DESIGN W/CU WSID = branhood



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cemetery road.

1SITES -----
XEQ 11/18/97 Brandenburger Pond - 378 DESIGN W/CU WSID= branhood
VER 96.1 SUBW= 01
TIME 09:27:12 SITE = S 1 PASS= 1 PAGE= 1

***** BASIC DATA *****
HUMID- SUBHUMID CLIMATE AREA DESIGN CLASS A1 = LT 3000.

STORM DISTRIBUTION-PSH 24 HOUR TYPE II RAINFALL DISTRIBUTION

STORM DISTRIBUTION AUX. -24 HOUR TYPE II RAINFALL DISTRIBUTION

PRECIP. - P-PS,1-DAY	P-PS,10-DAY	P-SD	P-FB	
2.40	.00	5.00	.00	
WSDATA - CN	DA-SM	TC/L	-/H	QRF
80.00	2.88	4.49	.00	.00
SITEDATA- PERM POOL	CREST PS	FP SED	VALLEY FL	378?
93.40	93.40	84.00	.00	YES
BASEFLOW	INITIAL EL	EXTRA VOL	SITE TYPE	
.00	.00	.00	DESIGN	

PSDATA -	NO. COND	COND L	DIA/W	-/H
	1.00	100.00	30.00	.00
	PS N	KE	WEIR L	TW EL
	.009	.00	.00	84.30
	2ND STG	ORF H	ORF L	START AUX.
	.00	.00	.00	.00
PSHOOD -	OUTLET ELEV.	MITER ELEV.	LENGTH INLET TO MITER (FT)	LENGTH MITER TO OUTLET (FT)
	83.00	83.20	80.0	10.0
ASCRESTS -	AUX.1	AUX.2	AUX.3	AUX.4
	.00	.00	.00	.00
AUX.DATA -	REF.NO.	RETARD. Ci	TIE STATION	INLET LENGTH
	1	.00	.00	100
AUX.DATA -	INLET N	SIDE SLOPE	EXIT N	EXIT SLOPE
	.040	3.00	.040	.100
				ACTUAL AUX?
				NO
BTM WIDTH -	BW1	BW2	BW3	BW4
ft	128.00	.00	.00	.00
				BW5
				.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
 XEQ 11/18/97 Brandenburger Pond - 378 DESIGN W/CU WSID= branhood
 VER 96.1 SUBW= 01
 TIME 09:27:12 SITE = S 1 PASS= 1 PAGE= 2

PERM POOL	93.40 FT	.0 ACFT	11.50 AC	.0 CFS
CREST PS	93.40 FT	.0 ACFT	11.50 AC	.0 CFS
SED ACCUM	93.40 FT	.0 ACFT	11.50 AC	.0 CFS
START ELEV	93.40 FT	.0 ACFT	11.50 AC	.0 CFS
NRCS-PSH	D= 24.00 HR	P= 2.40 IN	Q= .82 IN	DA= 2.88 SM
	TC= 4.49 HR	CN= 80.00	VOL= 126.1 ACFT	
PEAK =	253.9 CFS, AT 15.0 HRS.			

ROUTED RESULT -	HYD TYPE	EMAX	VOL-MAX	AMAX	QMAX
	NRCS-PSH	97.19 FT	60.6 ACFT	20.42 AC	99.4 CFS

PS STORAGE 60.6 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST	93.40 FT	.0 ACFT	.00 CFS
CONTROL IS	.000 DETENTION STORAGE		

TIME = 8.98 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

 RATING TABLE DEVELOPED, SITE = S 1:
 BY PROGRAM FOR PS AND AUX. SPILLWAYS
 AUX. RATING USED WSPVRT METHOD.

RATING TABLE NUMBER 1						
	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	93.40	.00	.00	.00	.00	11.50
2	94.32	3.67	3.67	.00	11.64	13.68
3	95.25	13.74	13.74	.00	25.29	15.86
4	96.17	23.52	23.52	.00	40.97	18.05
5	96.33	47.90	47.90	.00	43.79	18.41
6	96.48	72.39	72.39	.00	46.67	18.78
7	96.64	97.31	97.31	.00	49.61	19.14
FULL CONDUIT FLOW, ELEV = 96.64 FT						
8	97.43	100.41	100.41	.00	65.60	20.93
9	98.23	103.41	103.41	.00	82.97	22.65
10	99.03	106.33	106.33	.00	101.71	24.36
11	99.83	109.17	109.17	.00	121.81	26.08
12	100.62	111.93	111.93	.00	143.28	27.79
13	101.42	114.63	114.63	.00	166.11	29.50

***** MESSAGE - PSFULL CONTROL ENTERED BUT NOT USED IN THE NEXT RATING:
 BECAUSE EITHER THE PS OR AUX. SPILLWAY RATINGS ARE GIVEN,
 OR THE AUX. CREST ELEVATION 97.19 IS HIGHER THAN THE
 FULL PIPE FLOW ELEVATION 96.64.

1SITES -----
 XEQ 11/18/97 Brandenburger Pond - 378 DESIGN W/CU WSID= branhood
 VER 96.1 SUBW= 01
 TIME 09:27:12 SITE = S 1 PASS= 1 PAGE= 3

AUX. CREST 97.19 FT 60.6 ACFT 20.42 AC 99.4 CFS
 PS STORAGE 60.6 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.
 START ELEV 93.41 FT .1 ACFT 11.53 AC .0 CFS
 EFFECTIVE HEIGHT(H)= 15.6 FEET, PRODUCT= 945. (H * STORAGE AT CREST AUX.).
 INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.
 NRCS-SDH D= 24.00 HR P= 5.00 IN Q= 2.89 IN DA= 2.88 SM
 TC= 4.49 HR CN= 80.00 VOL= 444.7 ACFT
 PEAK = 962.5 CFS, AT 14.7 HRS.

 RATING TABLE DEVELOPED, SITE = S 1:
 BY PROGRAM FOR PS AND AUX. SPILLWAYS
 AUX. RATING USED WSPVRT METHOD.

RATING TABLE NUMBER 2

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	93.40	.00	.00	.00	.00	11.50
2	94.32	3.67	3.67	.00	11.64	13.68
3	95.25	13.74	13.74	.00	25.29	15.86
4	96.17	23.52	23.52	.00	40.97	18.05
5	96.33	47.90	47.90	.00	43.79	18.41
6	96.48	72.39	72.39	.00	46.67	18.78
7	96.64	97.31	97.31	.00	49.61	19.14
FULL CONDUIT FLOW, ELEV = 96.64 FT						
8	96.73	97.68	97.68	.00	51.40	19.36
9	96.82	98.04	98.04	.00	53.20	19.58
10	96.92	98.41	98.41	.00	55.03	19.80
11	97.01	98.77	98.77	.00	56.88	20.02
12	97.10	99.13	99.13	.00	58.74	20.22
13	97.19	99.48	99.48	.00	60.63	20.42
14	97.68	150.42	101.36	49.07	70.90	21.47
15	98.17	289.02	103.20	185.82	81.68	22.53
16	99.06	751.58	106.43	645.15	102.40	24.42
17	100.14	1598.33	110.25	1488.08	129.99	26.74
18	102.10	3919.66	116.88	3802.78	186.57	30.96
19	104.55	7738.22	124.67	7613.56	268.93	36.23
20	107.00	12600.64	132.00	12468.64	364.20	41.50

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
NRCS-SDH	128.0	99.24	106.9	24.8	2.05	46.3

PEAK - CFS DISCHARGE =	Q-PS	Q-AUX.	Q-TOT.
	107.1	783.1	890.2

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-Sc FT/FT	25% OF Q Sc FT/FT
AUXILIARY SPILLWAY ---	1.04	5.73	.023	.031

AUXILIARY SPILLWAY DURATION FLOW = 13.5 HOURS

***** MESSAGE - NHCP378 CRITERIA USED BUT AUXILIARY SPILLWAY RATING NOT BASED ON ASFILE RATINGS.

EXIT CHANNEL FLOW SUPERCRITICAL: MAX VELOCITY= 8.9 FT/SEC
EXIT SLOPE = .100 FT/FT
FLOW DEPTH = .7 FT

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 93.40 FT.

DRAWDOWN (DDT) TEST 93.40 FT .0 ACFT .00 CFS
CONTROL IS .000 DETENTION STORAGE

TIME = .00 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

***** MESSAGE - NO RUNOFF TO ROUTE NRCS-FBH WITH AUX. SPILLWAY CREST ELEVATION AT 97.19 AND BOTTOM WIDTH = 128.0 FEET.

PASS NUMBER 1, STOPPED.

EMBANKMENT QUANTITIES

VOLUME FILL= 9886. CY, MAX. HEIGHT = 17.6 FT

TOP WIDTH = 10.0 FT, TOP LENGTH = 712.2 FT
 AREA OF DAM= .94 AC, AREA TO SEED= .75 AC (PROJECTED HORZ. AREA)

1SITES....JOB NO. 1 COMPLETE.

branhood Brandenburger Pond - 378 DESIGN W/CU

0 SUBWATERSHED(S) ANALYZED.

1 STRUCTURE(S) ANALYZED.

3 HYDROGRAPHS ROUTED AT LOWEST SITE.

0 TRIALS TO OBTAIN BOTTOM WIDTH FOR SPECIFIED STRESS OR VELOCITY.

SITES.....COMPUTATIONS COMPLETE

1

SUMMARY TABLE 1

SITES VERSION 96.1

DATED 03/01/96

WATERSHED ID	RUN DATE	RUN TIME
branhood	11/18/97	09:27:12

>>>	SITE ID	SUBWS ID	SUBWS DA (SQ MI)	CURVE NO.	TC (HRS)	TOTAL DA (SQ MI)	TYPE DESIGN	STRUC CLASS	<<<
	S 1	01	2.88	80.	4.49	2.88	378CR	A1	

PASS NO.	DIA./ WIDTH (IN/FT)	AUX.CREST ELEV (FT)	BTM. WIDTH (FT)	MAX. HP (FT)	MAX. ELEV (FT)	EMB. VOL. (CY)	INTEGR.* DIST. (FT)	EXIT* VEL. (FT/SEC)	TYPE HYD
1	30.0	97.2	128.0	2.0	99.2	9886.	0.	8.9	NRCS-SDH

* INTEGRITY DIST. AND EXIT VEL. VALUES ARE BASED ON THE ROUTED HYDROGRAPH SHOWN UNDER TYPE HYD.

SITES.....SUMMARY TABLE 1 COMPLETED.

NRCS SITES VERSION 96.1 ,03/01/96
 branhood FILES

INPUT = branhood

Water Permit Application No. 6056-3 Lynn Brandenburger

Top of Dam Elev. - 100.2
P. Spillway Elev. - 93.4
2nd. Spillway Elev. - 97.2
D/S Toe Elev. - 82

Cat. 3 - Low Hazard Dam

Height = 18 ft.

Normal Storage Capacity - 50 Ac-Ft.
Int. Storage Capacity - 61 + 50 = 111
Maximum Storage Capacity - 106 + 50 = 156

Int. Height x Int. Capacity = $15 \times 111 = 1665 < 3000 \therefore$ 25 year flood
Minimum Spillway Design

From USGS WRI 80-80 "Tech. for Est. Flood Peaks ... in South Dakota"

DA = 1843 Ac = 2.88 mi.² Slope = 25 ft/mile S_i = 3.33

$$Q_{25} = 83.4 A^{.60} S^{.44} S_i^{-.72}$$

$$= 83.4 (2.88)^{.60} (25)^{.44} (3.33)^{-.72}$$

$$= 83.4 (1.89) (4.12) (0.42)$$

$$= \underline{275 \text{ cfs}}$$

$$Q_{100} = 132 A^{.65} S^{.46} S_i^{-.67}$$

$$= 132 (2.88)^{.65} (25)^{.46} (3.33)^{-.67}$$

$$= 132 (1.99) (4.40) (0.45)$$

$$= \underline{520 \text{ cfs}}$$

Spillway Flow

Primary

$$Q = \sqrt{\frac{2.5 H}{1 + K_u + K_p L}}$$

$$Q = \sqrt{\frac{2(32.2)(16.75)}{1 + 1 + (1.005 + 6)(80)}}$$

$$= \underline{105 \text{ cfs}}$$

D = 30" HDPE

K_u = 1
K_p = 0.00546
L = 80'
H = 16.75'

Secondary Q = C L H^{3/2} L = 128

$$Q = (2.6)(128)(3)^{1.5}$$

$$= \underline{1730 \text{ cfs}}$$

Section 74:02:08:09

NRCS Annual Yield

DA = 1843
ISO = 2 1/2

1) Topo Map - OK

2) Dam X-Section - OK

3) Dam X-Section - OK

4) Area/Capacity Data - OK

5) Outlet Detail - OK

6) Spillway Rating - OK

7) Spillway Details - OK

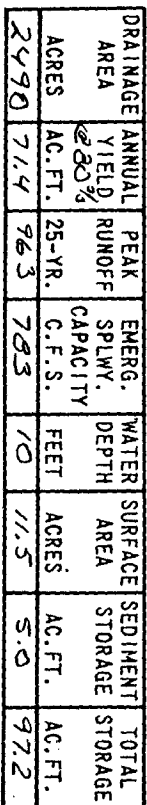
8) Specs - std NRCS - OK

9) EPP - Cat. 3 N/A - OK

$$80\% = 0.34 \times 1843/12 = 52 \text{ Ac-Ft.}$$

$$50\% = 0.80 \times 1843/12 = 123 \text{ Ac-Ft.}$$

$$10\% = 3.10 \times 1843/12 = 476 \text{ Ac-Ft.}$$



W356c.3 T. 127 R. 50
ROBERTSCOUNTY

100 FT. LEVEL SECTION

128'

E.S. CL. 97.2
128' WIDE

10' 73' W. 10TH

3:1

2.5'

E.S. EL. 97.2
128' W10E

Principal spillway
El. 93.5

Emergency spillway, El. 92.2

10'

3:1

5' of dam

Allowance for settlement 5'

2 1/2:1

1:1

1:1

6'

Strip sod and brush from dam foundation to minimum depth of cutoff trench

Cutoff trench, (approx depths shown on profile along E of dam)

10'

Profile Along E of Dam

EARTH DAM

THE UNIVERSITY OF CHICAGO

SP5 EXERCATION

SO-75 EARTH FIL. CLASS "S"

SD-8 Rock Riprap

50-10 SALVAGE & SPREADING

SD-1550 C.M.D. 70P531

SD-16 TIME RAB. & INSTALL.

SD-17 METAL FAB. & INSTALL-

SO-283 EVIDENCE

SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" = 200

REFERENCE: GUIDE PLAN NO. 1.0

JOB PLAN NO. 1.0

93DA-8CS-LINCOLN. NEW 1972

10018-72) 5-11-30 772 121

PROFILE OF PRINCIPAL SPILLWAY NO SCALE

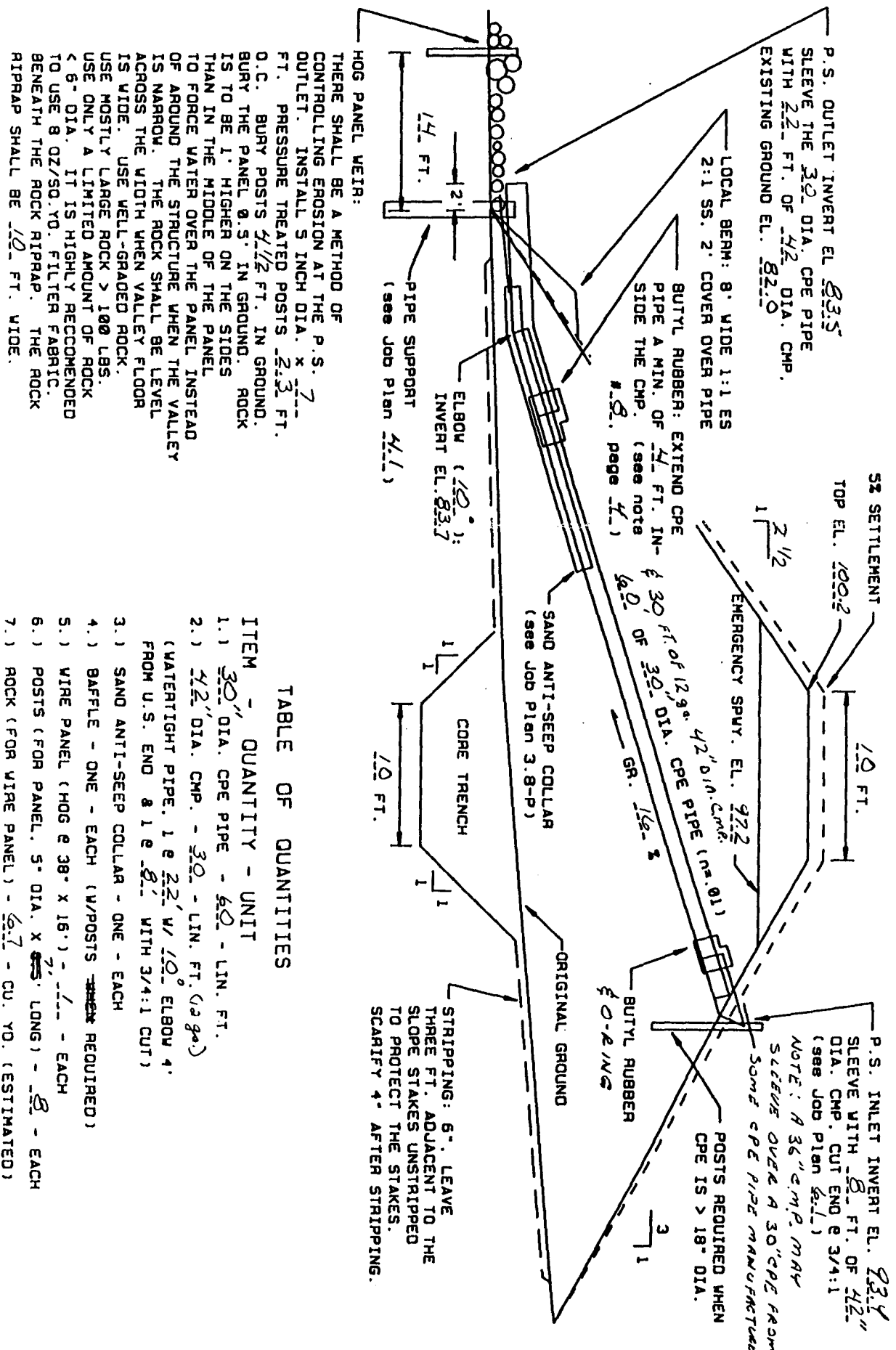


TABLE OF QUANTITIES

ITEM	QUANTITY	UNIT
1.) 30" DIA. CPE PIPE	60	- LIN. FT.
2.) 42" DIA. CMP. - 30' - LIN. FT. (280')		
(WATERTIGHT PIPE. 1 @ 22' W/ 10' ELBOW 4' FROM U.S. END @ 1 @ 8' WITH 3/4:1 CUT)		
3.) SAND ANTI-SEEP COLLAR	ONE	- EACH
4.) BAFFLE - ONE	- EACH	(W/POSTS AND REQUIRED)
5.) WIRE PANEL (HOG & 38" X 16")	- 1	- EACH
6.) POSTS (FOR PANEL. 5" DIA. X 8' LONG)	- 8	- EACH
7.) ROCK (FOR WIRE PANEL) - 60' - CU. YD. (ESTIMATED)		

fn: pepipe4

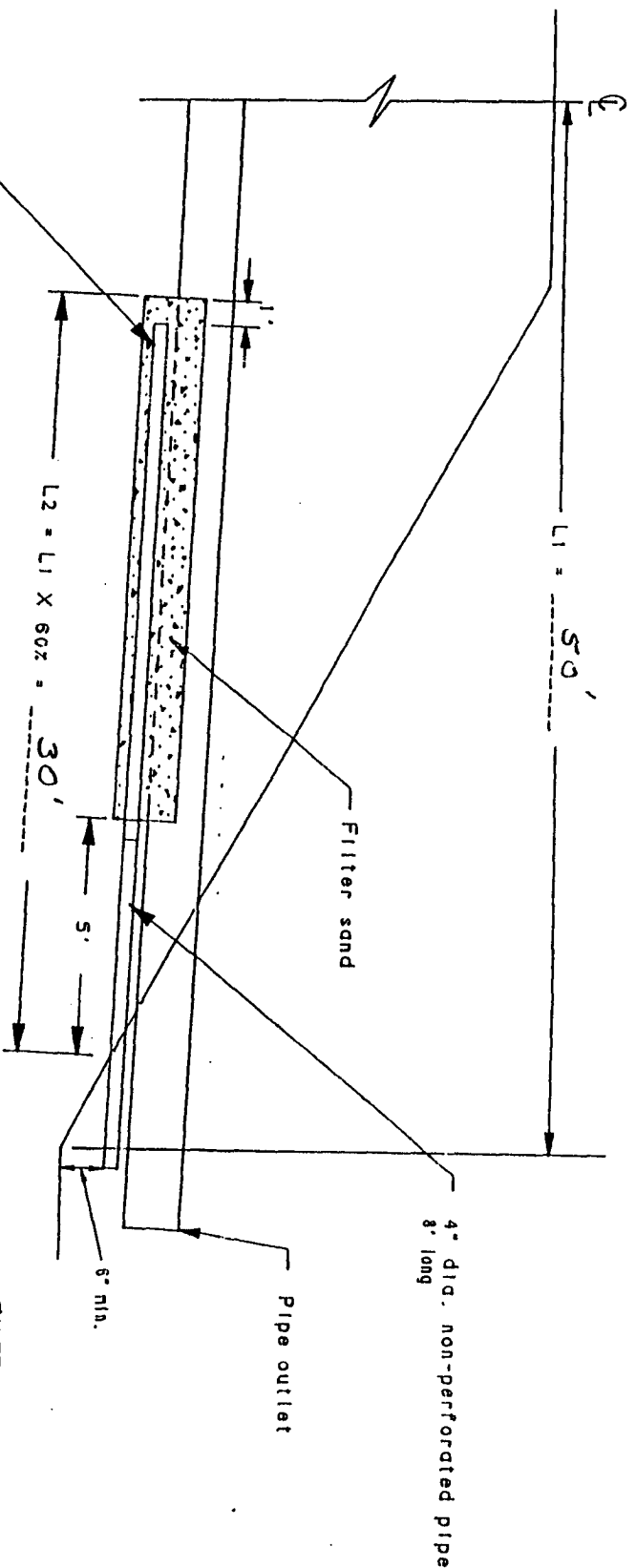
LYNN BRANDENBURGER FARM POND
SW 4. SEC 3. T127 N. R50W ROBERTS CO. SD
NATURAL RESOURCES CONSRV. SVC. U. S. DEP. OF AGRICULTURE

Designed: Anderson 11/18/97
Drawn:
Checked: M. Burke 11/18/97

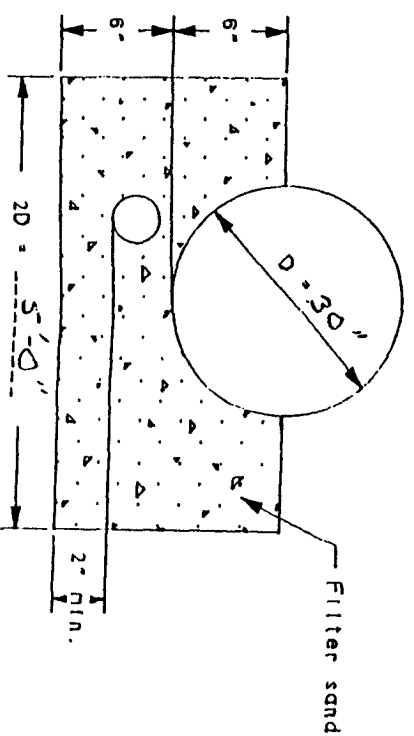
Approved by:
Title:

CONSTRUCTION NOTES:

- 1.) Ground where earth fill is to be placed shall be striped and then scarified to a depth of 6 inches. Salvage and spread topsoil.
- 2.) Seed above HML., the top and backslope of dam, the E. S., all dikes, and all disturbed areas designated by the engineer. Seeding is to be performed by owner.
- 3.) According to NEM. 210-520.21 this is a class "A" hazard structure located in a rural agriculture area. This structure is to be maintained in accordance with Operation and Maintenance Guidelines.
- 4.) 30" diameter CPE pipe shall conform to AASHTO M-294 Type S and the material compound shall conform to ASTM D-3350. The CPE pipe shall have annular corrugations. The CPE pipe shall be smooth on the inside and corrugated on the outside and have an "n" value of 0.010. CPE pipe shall be Hancor "Sure-Lok" 10.8 or equal.
- 5.) Concrete cradle is optional but recommended as this keeps the pipe from crushing. Concrete is 1,600-2,000 psi concrete, and 8 inches thick minimum, and placed from the springline to the invert of the pipe. The cradle may be installed along the entire length from the sand anti-seep collar to the inlet and thus the difficult compaction under the pipe is eliminated.
- 6.) The core trench shall be inspected and approved by the authorized personnel prior to backfill. Construct the full depth of the core trench to P.S. elevation.
- 7.) CPE pipe joints shall be watertight. Pipe joint couplers shall be Hancor Hi-Q Sure-Lok 10.8 or equal.
- 8.) The two joints between the CPE and CMP (US @ inlet & DS @ outlet) shall be essentially watertight. Essential watertightness may be obtained by using O-ring's supplied by the manufacturer. Make an eight inch cut on the top of the CMP pipe and clamp the CMP securely to the O-rings on the CPE using a 0.5" dia. rod and lug. File the edges of the cut smooth and seal the cut with butyl-rubber. An alternate method is to wrap the joint with an industrial grade tape and then wrap with butyl-rubber. Overlap the butyl-rubber at least 1/2 of the pipe circumference, and extend the butyl-rubber 8" to 12" on each pipe. Securely attach the butyl-rubber to the pipe to obtain essential watertightness and exclude soil particles.
- 9.) When a concrete cradle is not used, the critical compaction of earth fill around the pipe occurs from the midpoint of the pipe to the bottom of the pipe. Care is to be taken to assure proper compaction in this zone. There shall be full time inspection when the P. S. is installed.
- 10.) In order to stop erosion at the pipe outlet, three choices are available. Choice #1: - Hog panel as shown, choice #2 - excavate stilling basin 8' wide x 12' long x 2' deep and fill with large non-rounded rock (size varies 10-600lb, mostly large rock), choice #3 - place two "U" gabion basket 6'x12'x9". Place gabion 0.3' in ground with 8 oz./sq.yd. filter fabric beneath basket. May substitute 2 layers of weed control netting for filter fabric (note: 8 oz./sq.yd. filter fabric is recommended over the weed control netting).



SIDE VIEW



UPSTREAM VIEW

$$\frac{1' \times 5' \times 25'}{27} = 4.6 \text{ c.y.}$$

4" dia. perforated pipe
30' long

4" dia. non-perforated pipe
50' long

Filter sand

Pipe outlet

Filter GRADATION

SIZE	PERCENT PASSING
3/8"	100
4	85-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

- NOTE:
1. THE 4" DIA. PIPE SHALL BE SDR 35 PVC, OR STRONGER
 2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL A 3/8" DIA., 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).
 3. FILTER SAND WILL BE CLEAN PEA AGGREGATE OR CONCRETE SAND.

SAND ANTISEEP DRAIN

OPERATOR LEVIN BEANDENBORDER

CONSERVATION DISTRICT BOBBETS

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

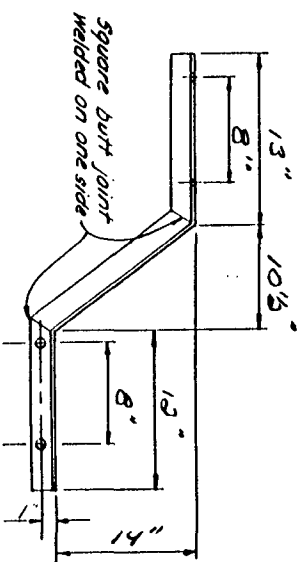
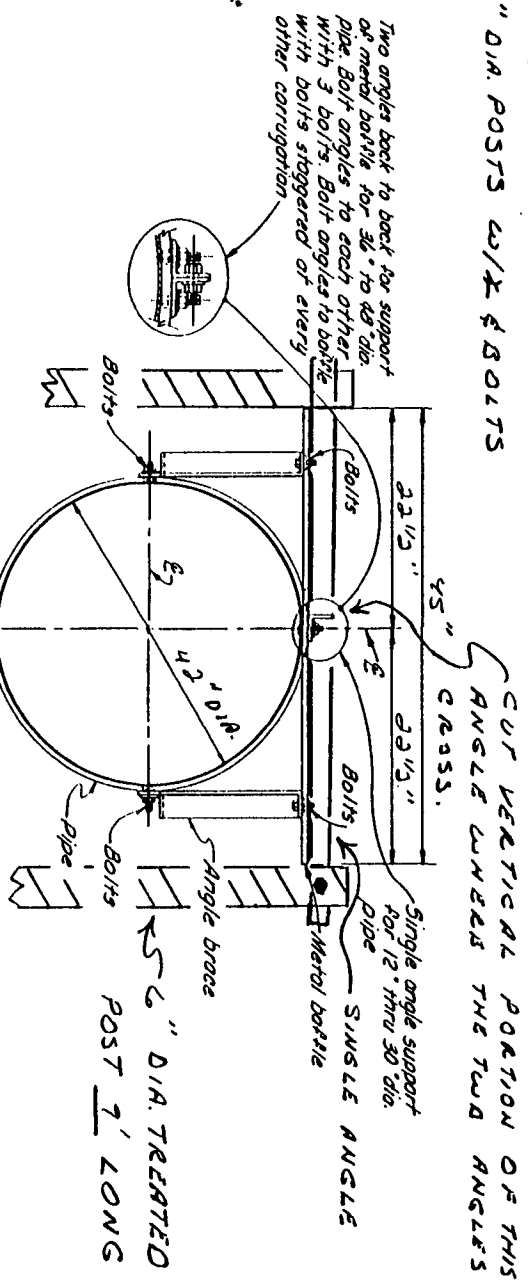
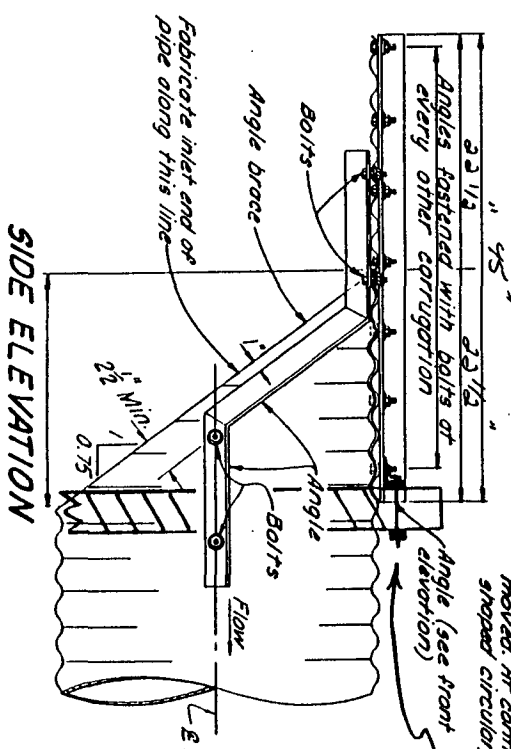
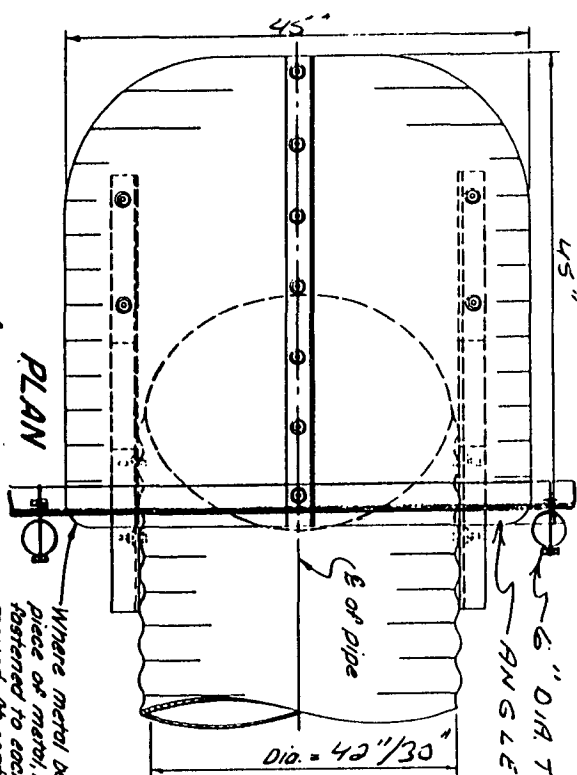
Rev. 3/96
JOB PLAN NO. 3.8-P

Designed <u>Levin</u>	Date <u>12/97</u>	Approved by _____
Drawn _____	Title _____	
Traced _____	Sheet <u>5</u>	Dwg. No. _____
Checked <u>By</u>	11/3/97	1/7/97

4.5" DIA. TREATED POST W/ 2" DIA. NUT & WASHERS
ANGLE IRON
DIMENSIONS

PIPE DIA. 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				
4.5" DIA.	0.079	1/3	10 1/2	12	14	8	1/2 x 1 1/2	2" x 2" x 1/4"	35

PLUS ADDITIONAL ANGLE 2" x 2" x 1/4" @ 5' 8" LONG
PLUS 2 POSTS @ 6" DIA. X 9' LONG.



FRONT ELEVATION

HOODED INLET AND BAFFLE

- 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.

ANGLE BRACE DETAIL

(1 left and 1 right required)

REFERENCE: GUIDE PLAN NO. 6.1

JOB PLAN NO. 6.1

Operator: <u>LENN BEAN DEUGLESE</u>	Conservation District: <u>ROBERTS</u>
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed: <u>Anderson 11/18/58</u>	Drawn: <u>11/18/58</u>
Checked: <u>11/18/58</u>	Issued: <u>11/18/58</u>

TABLE OF QUANTITIES

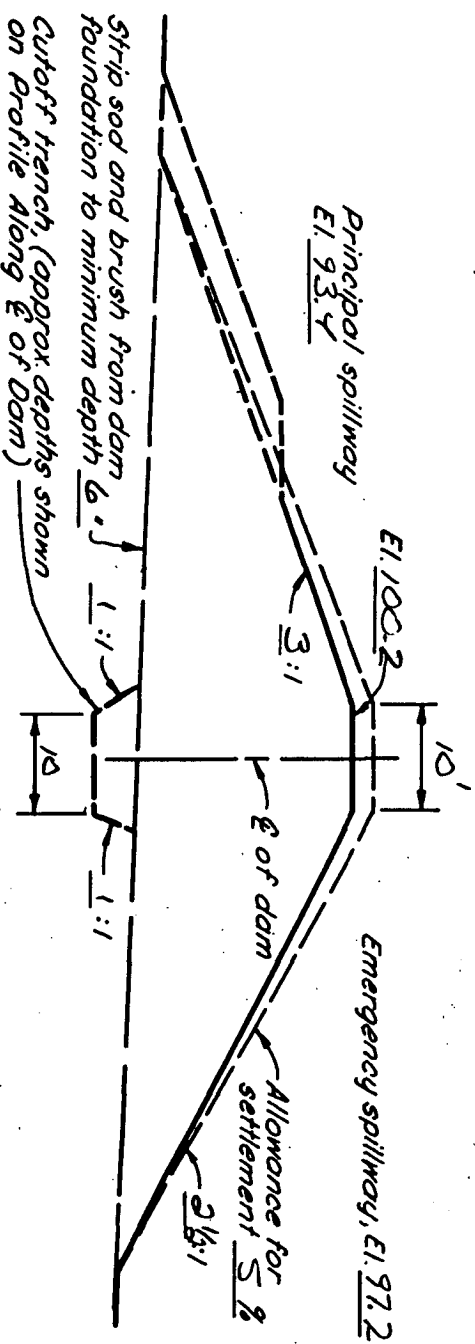
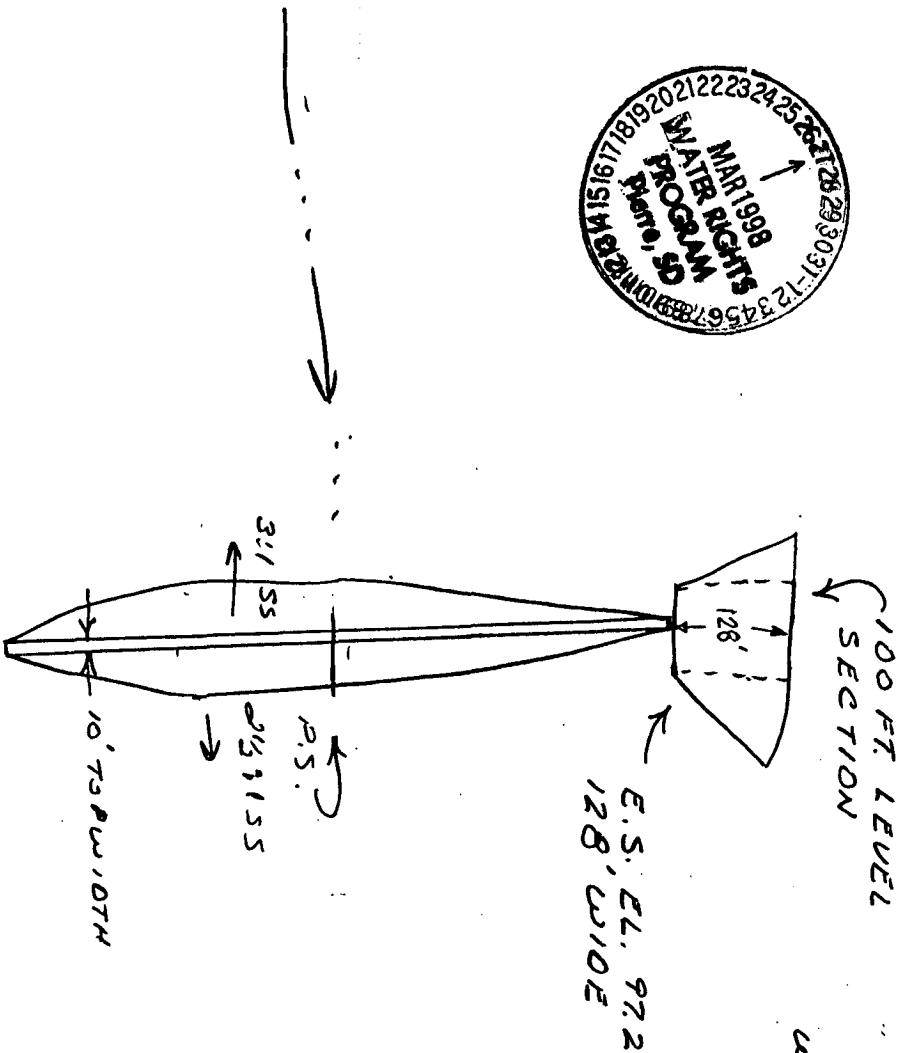
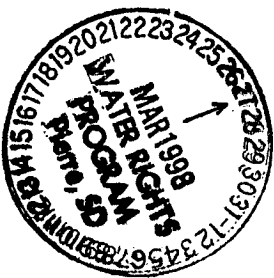
100 FT. LEVEL
SECTION

W/3sec. J. T. 127 R. 50
ROBERTS County

LOCATION

[illegible]

(NOTE: ABOVE QUANTITIES ARE ESTIMATED.)



TYPICAL CROSS SECTION OF DAM

EARTH DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

SD-4 EARTH FILL
SD-5 EXCAVATION
SD-7S EARTH FILL CLASS "S"
SD-8 ROCK RIPRAP
SD-10 SALVAGING & SPREADING
SD-15 SO C.M.P. TOPSOIL
SD-16 TIMBER PILES & INSTALL.
SD-17 METAL PILES & INSTALL.
SD-28 SEEDING

OPERATOR: LYNN BARNHORN BOEGE
CONSERVATION DISTRICT: ROBERTS

**U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE**

11/18/87 Approved by Michelle Ruffe
The Ms. E. J. LINTNER
designated Carol Evans

DATE OF BIRTH

[illegible]

REFERENCE: GUIDE PLAN NO. 1.0

JOB PLAN NO. 1.0

SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" = 200'

USDA-SCS-LINCOLN, NEBR. 1973

(Rev. 4-73) 5, N-29, 073.10(1,

March 9, 1998

Mr Tim Shaol,
Water Rights Div.
DWMR, Foss Bldg.
Pierre, SD 57501



Dear Tim,

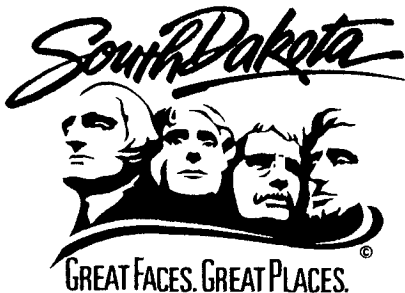
I'm writing in regard to the Lynn Brandenburger dam and our previous conversation. In checking on information with our engineers, I have come up with the following.

The dam has been designed as a class A structure and there is no downstream risk. All design information prior to the 11/18/97 plan that I recently sent you should be discarded. This is the plan that will be used for construction. There will be a 30" tube installed instead of a 24" one. On your question pertaining to 0 or 43 elevation, the only thing that we can come up with is that the bottom of the tube and the bottom of the emergency spillway are 46 inches different. Could this be what you are referring to? If you have any questions, please let me know. Thank You!

Sincerely yours,

Lorne Aadland

Roberts Conservation District



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

April 8, 1998

Lynn Brandenburger
P.O. Box 161
New Effington, SD 57255

Dear Mr. Brandenburger:

We have reviewed the plans and specifications for your proposed dam to be located in the W ½ of Section 3-T127N-R50W, in Roberts County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the project. Construction of the project may not begin until Water Permit Application No. 6056-3 is 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 Lynn Brandenburger Dam will be classified as a small size Category 3 dam with an embankment height of 18 feet, a normal storage capacity of 50 acre-feet and a maximum storage capacity of 156 acre-feet.

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

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Program
(605) 773-3352

c: Lorne Aadland

REPORT ON
WATER PERMIT APPLICATION No. 6056-3
Lynn Brandenburger
March 30, 1998

Water Permit Application No. 6056-3 has been filed by Lynn Brandenburger to appropriate 50 acre-feet of water annually from local runoff by constructing a dam located in the SE ¼ NW ¼ and the NE ¼ SW ¼ of Section 3-T127N-R50W, in Roberts County. The water will be used to provide habitat for fish and wildlife production and recreation.

Discussion:

The Lynn Brandenburger Dam has been designed by the Natural Resources Conversation Service (NRCS) and the plans and specifications have been reviewed and will be approved; however, construction of the project can not begin until Water Permit Application No. 6056-3 is approved. The dam will be classified as a small size Category 3, Low Hazard dam with an embankment height of 18 feet, a normal storage capacity of 50 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 156 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.

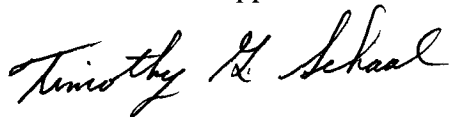
The dam is designed to have a 30 inch diameter HDPE pipe with a 42 inch diameter CMP inlet and outlet as the primary spillway and a 128 foot wide earthcut channel as the secondary spillway. The dam will have a drainage area of 1843 acres (2.88 square miles). A 25-year frequency event for this drainage area produces a peak runoff of 275 cfs, a 100-year event produces a peak runoff of 520 cfs. The 128 foot wide earthcut spillway with 3 feet of head has a spillway capacity of approximately 1700 cfs.

The annual yield for the drainage area above the dam with a 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 52 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 123 acre-feet, and the annual yield with a 10 percent chance of occurrence, or 1 out of 10 years, is expected to be 476 acre-feet.

The Lynn Brandenburger Dam will be located in the W ½ of Section 3-T127N-R50W on an unnamed tributary to Jim Creek about 12 miles upstream of Lake Traverse. There are no existing Water Rights/Permits located on Jim Creek between the proposed dam and Lake Traverse.

Conclusions:

1. Water Permit Application No. 6056-3 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 downstream domestic use should be a qualification on Water Permit Application No. 6056-3.



Timothy G. Schaal, P.E.
Natural Resources Engineer III

Approved by:



Gale N. Selken, P.E.
Natural Resources Engineer IV

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6056-3, Lynn Brandenburger

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. 6056-3, Lynn Brandenburger, P.O. Box 161, New Effington, SD 57255.

The Chief Engineer is recommending APPROVAL of Application No. 2403-2 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. Water Permit No. 6056-3 authorizes a dam with a storage capacity of 50 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.

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

JOHN HATCH, Chief Engineer
April 8, 1998



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

April 8, 1998

The Rosholt Review
Box 136
Rosholt, SD 57260-0136

ATTENTION: Legal Department

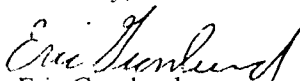
Enclosed is a Notice of Hearing on Application No. 6056-3 to Appropriate Water to be published twice. Please publish the first notice on April 15, 1998, with the second publication 7 days later.

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 Lynn Brandenburger, P.O. Box 161, New Effington, SD 57255 (Ph # (605) 637-5463).

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. 6056-3

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

Date _____

We are in receipt of your letter of April 8, 1998, enclosing Notice of Hearing to Appropriate Water by Application No. 6056-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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.

April 8, 1998

Lynn Brandenburger
P.O. Box 161
New Effington, SD 57255

Dear Mr. Brandenburger:

Water Permit Application No. 6056-3 for recreation use and fish & wildlife propagation 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 Rosholt Review printed at Rosholt, SD (Ph # (605) 537-4276). 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.

Instruction to Newspaper - Publish first Notice on April 15, 1998, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 6056-3 to Appropriate Water

Notice is given that Lynn Brandenburger, PO Box 161, New Effington SD 57255 has filed an application for a water permit to appropriate 50 acre-feet of runoff water annually by constructing a dam located in the SE 1/4 NW 1/4 and the NE 1/4 SW 1/4 Section 3 with water impounded in portions of the S 1/2 NW 1/4, N 1/2 SW 1/4 Section 3; all in T127N-R50W. This application requests impoundment of water sufficient to maintain the water level at the outlet elevation. Water will be used for fish and wildlife propagation and recreational use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6056-3 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 the 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 the 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 May 4, 1998.

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. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

Form 8



PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Roberts)

I, Barbara Johnson

certify that the attached printed Notice was taken
from the Rosholt Review

printed and published in Rosholt, S.D.

County of Roberts and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

April 15, 1998

April 22, 1998

Cost of Printing \$36.14

Barbara Johnson
(Signature)

Office Manager
(Title)

April 22, 1998
(Date Signed)

NOTICE OF APPLICATION NO. 6056-3

to Appropriate Water

Notice is given that Lynn Brandenburger, PO Box 161, New Effington SD 57255 has filed an application for a water permit to appropriate 50 acre-feet of runoff water annually by constructing a dam located in the SE 1/4 NW 1/4 and the NE 1/4 SW 1/4 Section 3 with water impounded in portions of the S 1/2 NW 1/4, N 1/2 SW 1/4 Section 3; all in T127N-R50W. This application requests impoundment of water sufficient to maintain the water level at the outlet elevation. Water will be used for fish and wildlife propagation and recreational use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6056-3 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 the 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 the 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 May 4, 1998.

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. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

(April 15, April 22, 1998)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

JUN 26 1998

Lynn Brandenburger
P.O. Box 161
New Effington, SD 57255

Dear Ms. Brandenburger:

Enclosed is Water Permit No. 6056-3 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 Program
(605) 773-3352

enclosures

PLEASE NOTE: Certain changes may be made to your water permit usually without affecting the priority date. The location of a point of diversion may be changed or additional points of diversion may be approved if the water source remains unchanged; no additional water is appropriated; and, if irrigating, no additional land is irrigated. The change may be allowed without application or publication, if the Water Rights Program is contacted and the chief engineer makes a finding that the change does not increase the potential for interference with existing diversions.

A new water permit application is required to change water sources, increase the permitted diversion rate, or increase the irrigated acreage. If the application is approved, the water permit will receive a new priority date.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

January 21, 2005

6056-3

Lynn Brandenburger
PO Box 161
New Effington SD 57255

Dear Mr. Brandenburger:

On October 26, 2004 the investigation of your water use system, including the extent of application of water to beneficial use, as developed under Water Permit No. 6056-3, was completed by Tim Schaal, a staff engineer with our program. Your final water right document, the water license, can now be issued.

State law requires that we charge a \$50.00 fee for the investigation and issuance of the water license. Upon receipt of the \$50.00 fee from you, we will complete processing your water license. The check or money order for the fee should be made payable to the "Water Rights Program".

Your licensed water right will be similar to a property right that can not be lost as long as the water use continues and you abide by the permit requirements.

If you have any questions regarding the water permit, investigation of your water use system or payment of the fee, please contact Tim Schaal or me.

Sincerely,

Karen Schlaak
Water Rights Program
(605) 773-3352
karen.schlaak@state.sd.us

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date February 1, 20 05

RECEIVED OF Lynn Brandenburger, 10820 464th Avenue, New Effington SD 57255

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. <u>6056--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	50.00

No.

001710

By

Darland Ertel

Chief Engineer

gm

REPORT ON INSPECTION OF PERMIT NO. 6056-3

DATE OF INSPECTION: October 26, 2004

NAME & ADDRESS OF INSPECTION CONTACT/ Lynn Brandenburger

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: owner

NAME & ADDRESS OF PERMIT HOLDER: Lynn Brandenburger, 10820 464th Ave. New Effington,
SD 57255

DIVERSION POINT LEGAL LOCATION: 2500 ft. south & 2400 ft. east of the NW corner of Sec. 3-
T127N-R50W (SE ¼ NW ¼) (Lat. 45.812988, Long. -96.907792).

DAM INFORMATION:

- 1) Height to crest 18 feet
- 2) Height to primary spillway 11 feet
- 3) Height to secondary spillway 15 feet
- 4) Crest width 10 feet
- 5) Crest length 500 feet
- 6) Spillway length XXX feet
- 7) Spillway width 128 feet
- 8) Approx. storage (Normal) 50 acre-feet
- 9) Approx. storage (Maximum) 156 acre-feet
- 10) Date constructed: 1998

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

Permit No. 6056-3
Red Rainy 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, **October 26, 2004**, made a thorough examination of the water use system constructed by **Lynn Brandenburger** of **10820 464th Ave. New Effington, SD 57255** holder of Permit No. **6056-3**, bearing the priority of **March 10, 1998** authorizing the storage of **50** acre-feet of the waters of **runoff** for **fish & wildlife production and recreational use** purposes, in **Roberts** County.

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

A. Works used to divert the water:

An 18 ft. high earthen dam with a 50 acre-foot normal storage capacity

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

N/A

C. Works used to apply water to beneficial use:

An 18 ft. high earthen dam with a 50 acre-foot normal storage capacity

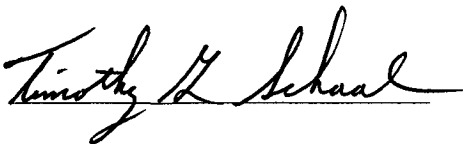
The system is in the following condition **good**. The point of diversion is located **2500 ft. south & 2400 ft. east of the NW corner of Sec. 3-T127N-R50W (SE ¼ NW ¼) (Lat. 45.812988, Long. -96.907792)**. The works are capable of storing **50** acre-feet of water which is to be used for **fish & wildlife production and recreational use**. Water has been put to beneficial use to the maximum extent as follows:

An 18 ft. high earthen dam with a 50 acre-foot normal storage capacity

and the license should be issued for **50** acre-feet of storage.

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

Exceptions to compliance are: **none** Date Report Completed: **January 7, 2005**



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

Water Permit Application No. 6056-3



0 0.25 0.5 1 Miles



South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow ... Today



Timothy G. Schaal

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

11/07/05

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 6056-3

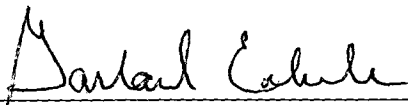
(1) Lynn Brandenburger, 10820 464th Ave, New Effington SD 57255 made Application No. 6056-3, August 22, 1997 for a water permit to impound 50 acre feet of water from runoff, Roberts County, South Dakota for fish and wildlife propagation and recreational use purposes. Permit No. 6056-3, with a priority date of March 10, 1998 was approved May 4, 1998 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 4, 2003 and for the application to beneficial use of water on or before May 4, 2007.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 6056-3 is issued a license, bearing a priority date of March 10, 1998, to impound 50 acre feet of water for fish and wildlife propagation and recreational use purposes.

The location of the storage dam (spillway) is 2,500 feet south and 2,400 feet east of the northwest corner of Section 3-T127N-R50W (SE ¼ NW ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 6056-3, including the following now applicable qualifications:

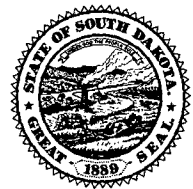
- Water Permit No. 6056-3 authorizes a dam with a storage capacity of 50 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.



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

APR 19 2005

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

APR 19 2005

6056-3

Lynn Brandenburger
10820 464th Ave
New Effington SD 57255

Dear Mr. Brandenburger:

Enclosed is Water License No. 6056-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 001733 in the amount of \$50.00 which you paid for the investigation and issuance of the Water License.

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