

WATER PERMIT NO. 6067-3

Name of Applicant: William Ray Gibbons

Address: 1709 Derald Drive, Brookings SD 57006

Phone: 605 692-8551

Amount of Water Claimed: 94.4 AF

Total Acres: NA

Source of Water Supply: runoff

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

County: Brookings

Type of Waste Disposal System: NA

Location: 10 miles northeast of Brookings

PRIORITY

Date Received: 4-2-98

Fee: \$150

Corrected Application Received:

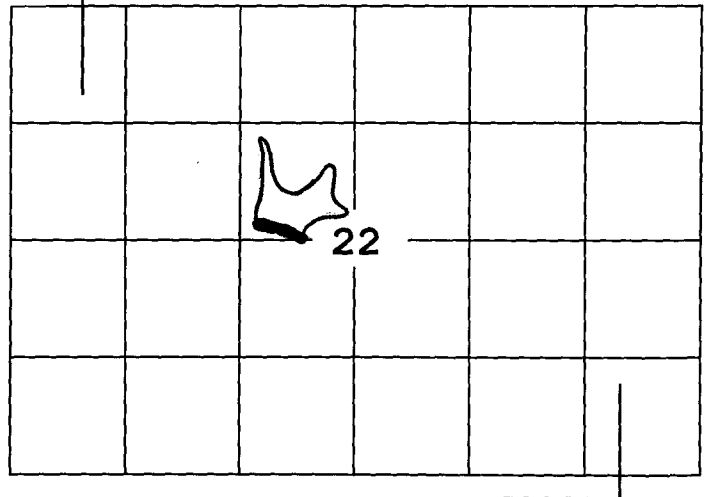
Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SE ¼ SW ¼ Sec 22-T111N-R48W

Water Impounded: SE ¼ SW ¼

Sec 22-T111N-R48W



Depth of Well:

Well Driller:

Remarks:

Type of Map: topo

Prepared by: Peter E Anderson, P.E.

Reviewed and the Number Assigned on: XX

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 6067-3

Date of first receipt of application April 2, 1998.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6067-3 to William Ray Gibbons, 1709 Derdall Drive, Brookings SD 57006 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 6067-3 impounds 94.4 acre-feet of runoff water annually by constructing a dam located in the SE ¼ SW ¼ Section 22 with water impounded in the SE ¼ SW ¼ Section 22; all in T111N-R48W. This permit authorizes impoundment of sufficient water annually to maintain the water level to the outlet elevation.
2. The water appropriated shall be used for the purpose of recreational use and to provide habitat for fish & wildlife propagation 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. 6067-3 is May 11, 1998.
5. The date from which applicant may claim right is April 2, 1998.
6. One-fifth of the construction is to be completed on or before November 11, 2000.
7. All construction is to be completed on or before May 11, 2003.
8. Water is to be put to beneficial use on or before May 11, 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. 6067-3 authorizes a dam with storage capacity of 94.4 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 watering and prior water right must be by-passed.

WATER MANAGEMENT BOARD

By: John Hatch
John Hatch, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAY 21 1998

date



FORM 2: Application for uses other than irrigation

(type or print)

Mail to:
Water Rights Division
Joe Foss Building
523 E Capitol
Pierre SD 57501-3181
605 773-3352

No. 6067-3 Hydrologic Unit 10170202
Basin Sioux River
Newspaper Register, Brookings, SD
(office use only)



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

Check use of water:

☐ Municipal ☐ Suburban Housing ☒ Recreational ☐ Institutional
☐ Rural Water System ☐ Commercial ☒ Fish & Wildlife ☐ Geothermal Heat
☐ Domestic ☐ Industrial ☐ Other _____
(over 18 gpm)

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 William Ray Gibbons Phone 692-8551
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 1709 Dordall Drive Brookings State SD 57006
(Street, RR, or Box) (City) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 94.4 ***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 runoff, natural springs
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) dam in SE 1/4 SW 1/4,
sec 22 T111N R48W Brookings Cnty South Dakota Water Impounded:
SE 1/4 SW 1/4 sec. 22 - T111N - R48W County Brookings
- County or counties where water will be used Brookings
- Annual period during which water is to be used Annual 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)
See Form 2A, Construction of a dam to impound water
over approximately 12 acres

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)

STATE OF SOUTH DAKOTA)

County of Brookings)^{SS}

I, William Gibbons, 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 William Gibbons

Subscribed and sworn to before me this 24th day of March 19 98

Paulette D. Giesch

Notary Public

(type or print in ink)

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 _____

728293091-123456
4211993

a) Surface Dimensions _____ Depth _____

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

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:

Pete Anderson, NRCS Engineer
NRCS Area Office
520 3rd Ave
Brookings, SD 57006

b) Freeboard 4.0 ft

c) Crest Width ~~10.0~~ 12.0 ft

Crest Length 460 ft

d) Height ~~11.8~~ 26.0

e) Primary Outlet Capacity 27 cfs

If pipe, diameter 15 inches, 24 inch riser

f) Secondary Spillway Capacity 180 CFS

Spillway Width 60 ft

g) X & Y Slope

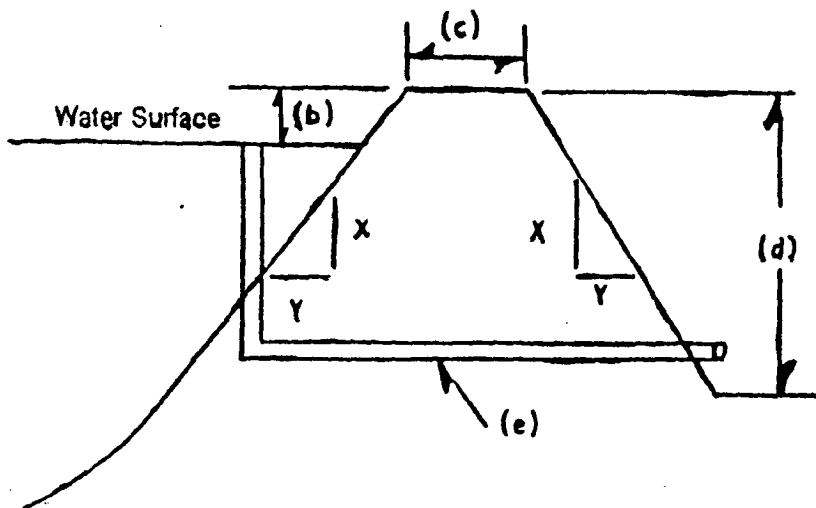
Upstream 3:1

Downstream 2.5:1

h) Surface Area of Impoundment 12

i) Storage 94.4 Acre Feet

j) Drainage Area Above Dam 606 Acres



Water Permit Application No. 6067-3
William Ray Gibbons

Top of Dam Elev. - 97
P. Spillway Elev. - 93
2nd Spillway Elev. - 94.5
D/S Toe Elev. - 71

Cat. 3 - Low Hazard Dam

Height = 26 ft.

Normal Storage Capacity - 94.4 Ac.-Ft.
Int. Storage Capacity - 114 Ac.-Ft.
Max. Storage Capacity - 168 Ac.-Ft.

Int. Storage Capacity x Effective Height = $114 \times 23.5 = 2680 < 3000 \therefore$
25 year flood / Minimum Spillway Design

From USGS WRI 80-80 "Tech. for Est. Flood Peaks ... in SD"
DA = 606 Ac. = 0.95 mi.² Slope = 100 ft/mi. S_i = 3.16 CN = 67

$$\begin{aligned} Q_{25} &= 83.4 A^{.60} S^{.44} S_i^{-.72} \\ &= 83.4 (.95)^{.6} (100)^{.44} (3.16)^{-.72} \\ &= 83.4 (.97) (7.58) (0.44) \\ &= \underline{268 \text{ cfs}} \end{aligned}$$

$$\begin{aligned} Q_{100} &= 132 A^{.65} S^{.46} S_i^{-.67} \\ &= 132 (.95)^{.65} (100)^{.46} (3.16)^{-.67} \\ &= 132 (.97) (8.32) (0.46) \\ &= \underline{493 \text{ cfs}} \end{aligned}$$

2nd Spillway Flow

$$\begin{aligned} Q &= CLH^{3/2} \\ &= (2.6)(60)(2.5)^{1.5} \\ &= \underline{600 \text{ cfs}} \end{aligned}$$

L = 60
H = 2.5
C = 2.6

Section 74:02:08:09

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

NRCS Annual Yield

DA = 606 Ac. CN = 67 (us-70) ?
ISO = 2 1/2

80% = 0.09
= $0.09 \times 60\% = \underline{5 \text{ Ac.-Ft.}}$

50% = 0.28
= $0.28 \times 60\% = \underline{14 \text{ Ac.-Ft.}}$

10% = 1.6
= $1.6 \times 60\% = \underline{80 \text{ Ac.-Ft.}}$

1*****
SITES XEQ 01/05/98 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
VER 96.1 (USER MANUAL - DATED MAY 1996)
TIME 14:17:19

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

SITES 03/01/96 Gibbons Farm Pond - 378 COMPLETE DESIGN W/CU YD
STRUCTURE

Top of Dam - 96.9 73 0
P. Spway - 93 75 .21
2nd Spway - 94.5 80 2.18
85 5.46
90 9.32
95 13.98
100 20.03
105 28
110 35

GOOD DATA



ENDTABLE

WSDATA 2A101 AC 67 CN 606 1.78

PDIRECT 2.6 5.2

POOLDATA ELEV 93 93 73

PSDATA 1 90 15" 6.283 (Weir h.) .01 75

PSINLET ELEV 1 6.283 (Weir h.)

ASCREST ELEV

ASDATA 1 150 .04 3 .04 10

BTMWIDTH FEET 60

CLPROFILE -.05 TOTAL STATION (ends are extrapolated, not surveyed)

0	120	100	100	133	95
209	80	254	75	375	73.1
427	75	458	80	488	85
516	90	553	95	820	100
900	110				

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 @ 2.6".

*

This routing uses 1 15" CPE with a 24" riser for the P.S.

*

EMERGENCY SPILLWAY STORM IS 50 YR. 24 HR TYPE II @ 5.2"

*

THIS PROGRAM WILL ON IT'S OWN SET THE ES CREST AT EL. 94.3.

*

GO, DESIGN NEL TYPE2 24 TYPE2378 24

Top El. 96.7

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 01/05/98 ----- COMMENT PAGE -----
VER 96.1 Gibbons Farm Pond - 378 COMPLETE DESIG WSID = gibbons4

PRINCIPAL SPILLWAY STORM IS A TYPE II, 2 YR 24 HR @ 2.6".

*This routing uses 1 15" CPE with a 24" riser for the P.S.

EMERGENCY SPILLWAY STORM IS 50 YR. 24 HR TYPE II @ 5.2"

THIS PROGRAM WILL ON IT'S OWN SET THE ES CREST AT EL. ____.

1SITES -----
XEQ 01/05/98 Gibbons Farm Pond - 378 COMPLETE DESIG WSID= gibbons4
VER 96.1 SUBW= 01
TIME 14:17:19 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	
2.60	.00	5.20	.00	
WSDATA - CN	DA-SM	TC/L	-/H	QRF
67.00	.95	1.78	.00	.00
SITEDATA- PERM POOL	CREST PS	FP SED	VALLEY FL	378?
93.00	93.00	.00	.00	YES
BASEFLOW	INITIAL EL	EXTRA VOL	SITE TYPE	
.00	.00	.00	DESIGN	
PSDATA - NO. COND	COND L	DIA/W	-/H	
1.00	90.00	15.00	.00	
PS N	KE	WEIR L	TW EL	
.010	1.00	6.28	75.00	
2ND STG	ORF H	ORF L	START AUX.	
.00	.00	.00	.00	
ASCRESTS - AUX.1	AUX.2	AUX.3	AUX.4	AUX.5
.00	.00	.00	.00	.00
AUX.DATA - REF.NO.	RETARD. Ci	TIE STATION	INLET LENGTH	
1	.00	.00	150	
AUX.DATA - INLET N	SIDE SLOPE	EXIT N	EXIT SLOPE	ACTUAL AUX?
.040	3.00	.040	.100	NO
BTM WIDTH - BW1	BW2	BW3	BW4	BW5
ft 60.00	.00	.00	.00	.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
 XEQ 01/05/98 Gibbons Farm Pond - 378 COMPLETE DESIG WSID= gibbons4
 VER 96.1 SUBW= 01
 TIME 14:17:19 SITE = S 1 PASS= 1 PAGE= 2

PERM POOL	93.00 FT	94.4 ACFT	12.12 AC	.0 CFS
CREST PS	93.00 FT	94.4 ACFT	12.12 AC	.0 CFS
SED ACCUM	93.00 FT	94.4 ACFT	12.12 AC	.0 CFS
START ELEV	93.00 FT	94.4 ACFT	12.12 AC	.0 CFS

>>>> MINIMUM DEPTH (1.00 FT) USED FOR NHCP378 RUN - CREST PS TO CREST AUX.

NRCS-PSH D= 24.00 HR P= 2.60 IN Q= .40 IN DA= .95 SM
 TC= 1.78 HR CN= 67.00 VOL= 20.1 ACFT

PEAK = 61.2 CFS, AT 13.3 HRS.

ROUTED RESULT - HYD TYPE	EMAX	VOL-MAX	AMAX	QMAX
NRCS-PSH	94.00 FT	107.0 ACFT	13.05 AC	19.6 CFS

PS STORAGE 12.6 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST 93.00 FT 94.4 ACFT .00 CFS
 CONTROL IS .000 DETENTION STORAGE

TIME = 4.25 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.	Q-TOTAL	Q-PS	Q-AUX.	VOLUME	AREA
	FEET	CFS	CFS	CFS	AC-FT	ACRE
1	93.00	.00	.00	.00	94.39	12.12
2	93.29	2.99	2.99	.00	97.90	12.38
3	93.57	8.46	8.46	.00	101.49	12.65
4	93.86	15.54	15.54	.00	105.16	12.92
5	94.15	23.93	23.93	.00	108.90	13.19
FULL CONDUIT FLOW, ELEV = 94.15 FT						
6	96.13	25.15	25.15	.00	137.03	15.35
7	98.11	26.30	26.30	.00	169.82	17.74
8	100.09	27.40	27.40	.00	207.36	20.18
9	102.07	28.47	28.47	.00	250.47	23.34
10	104.06	29.49	29.49	.00	299.84	26.49
11	106.04	30.48	30.48	.00	355.37	29.45
12	108.02	31.44	31.44	.00	416.48	32.23
13	110.00	32.37	32.37	.00	483.09	35.00

***** MESSAGE - CREST OF AUXILIARY SPILLWAY RAISED TO MAKE CONDUIT FLOW FULL.

NEW CREST ELEVATION = 94.25.

1\SITES -----
XEQ 01/05/98 Gibbons Farm Pond - 378 COMPLETE DESIG WSID= gibbons4
VER 96.1 SUBW= 01
TIME 14:17:19 SITE = S 1 PASS= 1 PAGE= 3

AUX. CREST 94.25 FT 110.2 ACFT 13.28 AC 24.0 CFS
PS STORAGE 15.8 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 93.00 FT 94.4 ACFT 12.12 AC .0 CFS

EFFECTIVE HEIGHT(H) = 21.2 FEET, PRODUCT= 2336. (H * STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-SDH D= 24.00 HR P= 5.20 IN Q= 1.94 IN DA= .95 SM
TC= 1.78 HR CN= 67.00 VOL= 98.2 ACFT

PEAK = 399.4 CFS, AT 13.0 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	93.00	.00	.00	.00	94.39	12.12
2	93.29	2.99	2.99	.00	97.90	12.38
3	93.57	8.46	8.46	.00	101.49	12.65
4	93.86	15.54	15.54	.00	105.16	12.92
5	94.15	23.93	23.93	.00	108.90	13.19
FULL CONDUIT FLOW, ELEV = 94.15 FT						
6	94.16	23.95	23.95	.00	109.06	13.20
7	94.17	23.95	23.95	.00	109.23	13.21
8	94.18	23.96	23.96	.00	109.39	13.22
9	94.20	23.97	23.97	.00	109.56	13.23
10	94.21	23.98	23.98	.00	109.72	13.24
11	94.22	23.99	23.99	.00	109.89	13.25
12	94.23	23.99	23.99	.00	110.06	13.27
13	94.25	24.00	24.00	.00	110.22	13.28
14	95.03	76.30	24.49	51.82	120.97	14.02
15	95.82	220.59	24.96	195.62	132.39	14.97
16	97.24	711.51	25.80	685.71	154.84	16.69
17	98.97	1640.55	26.79	1613.77	185.58	18.79
18	102.12	4396.12	28.49	4367.63	251.64	23.41
19	106.06	9284.24	30.49	9253.75	356.10	29.49
20	110.00	16026.39	32.37	15994.03	483.08	35.00

Elev. Vol.
94.5 114
97 168

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
NRCS-SDH	60.0	95.71	130.7	14.8	1.46	20.5

PEAK - CFS Q-PS Q-AUX. Q-TOT.
DISCHARGE = 24.9 174.1 199.0

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-Sc	25% OF Q Sc
AUXILIARY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY ---	.63	4.45	.028	.037

AUXILIARY SPILLWAY DURATION FLOW = 13.3 HOURS

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

EXIT CHANNEL FLOW SUPERCRITICAL: MAX VELOCITY= 6.6 FT/SEC
EXIT SLOPE = .100 FT/FT
FLOW DEPTH = .4 FT

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 93.00 FT.

DRAWDOWN (DDT) TEST 93.00 FT 94.4 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 94.25 AND BOTTOM WIDTH = 60.0 FEET.

PASS NUMBER 1, STOPPED.

EMBANKMENT QUANTITIES

VOLUME FILL=	15650. CY,	MAX. HEIGHT =	22.7 FT
TOP WIDTH =	12.0 FT,	TOP LENGTH =	465.5 FT
AREA OF DAM=	.95 AC,	AREA TO SEED=	.58 AC (PROJECTED HORZ. AREA)

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

gibbons4 Gibbons Farm Pond - 378 COMPLETE DESIG

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

DATED 03/01/96

WATERSHED ID	RUN DATE	RUN TIME
gibbons4	01/05/98	14:17:19

>>>	SITE ID	SUBWS ID	SUBWS DA (SQ MI)	CURVE NO.	TC (HRS)	TOTAL DA (SQ MI)	TYPE DESIGN	STRUC CLASS	<<<
	S 1	01	.95	67.	1.78	.95	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	15.0	94.3	60.0	1.5	95.7	15650.	0.	6.6	NRCS-SDH

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

SITES.....SUMMARY TABLE 1 COMPLETED.

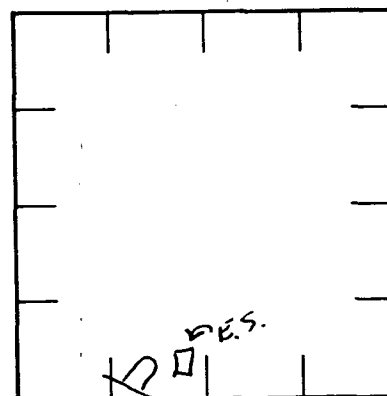
NRCS SITES VERSION 96.1 ,03/01/96
gibbons4 FILES

INPUT = gibbons4
OUTPUT = gibbons4.OUT

DATED 01/05/98 14:17:19

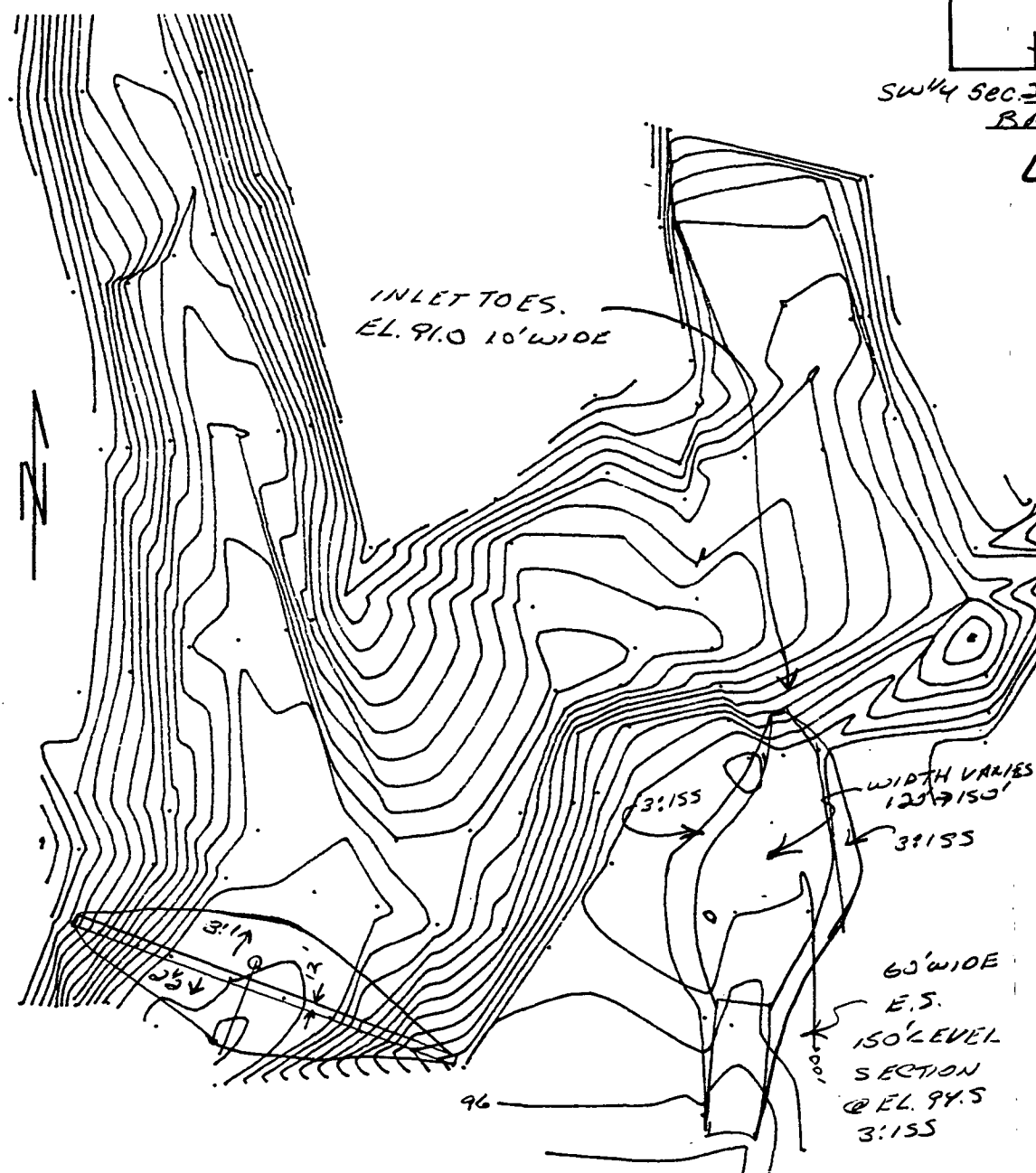
STRUCTURE DATA

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE TO P.S.
ACRES	AC. FT.	25-YR.	C. F. S.	FEET	ACRES	AC. FT.	AC. FT.
606	3.5	399	~180	20	12.1	2.1	94.4



SW^{1/4} Sec. 22T. 111 R. 54
Brookings County

LOCATION



SKETCH PLAN OF DAM AND RESERVOIR AREA

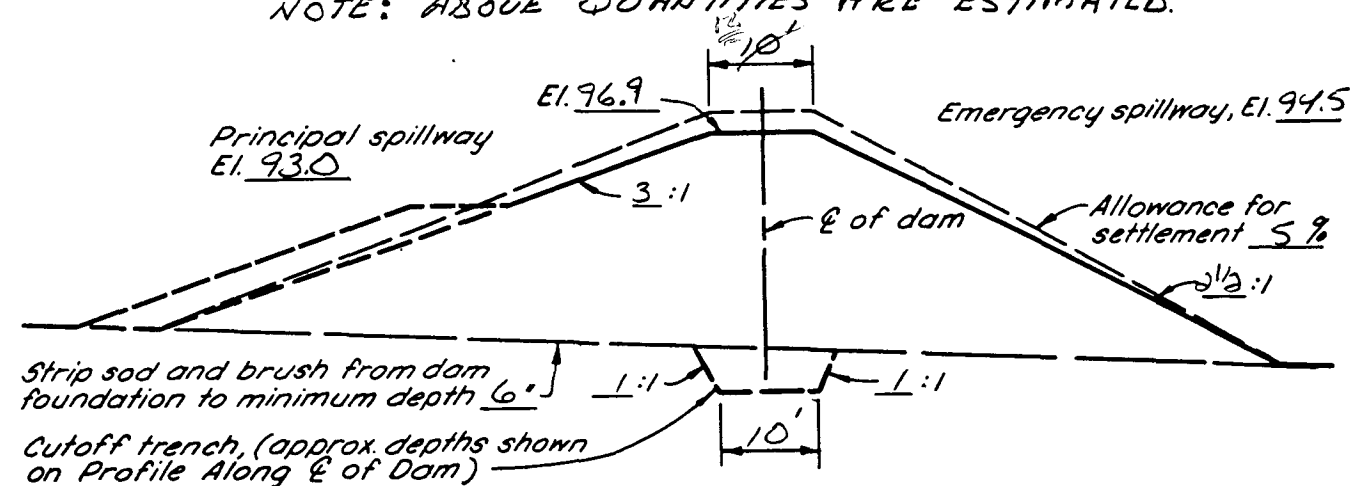
Approximate scale 1" = 200'

REFERENCE: GUIDE PLAN NO. 1.0

TABLE OF QUANTITIES

[illegible]

NOTE: ABOVE QUANTITIES ARE ESTIMATED.



TYPICAL CROSS SECTION OF DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

SD-4 STRIPPING
SD-5 EXCAVATION
SD-7S EARTH FILL
SD-8 ROCK RIPRAP
SD-10 TOPSOIL
SD-15SO C.M.P.
SD-16 TIMBER
SD-28 SEEDING
SD-55 PLASTIC PIPE
NEH 95 592 GEOTEXTILE BOB PLAN NO. 1.C

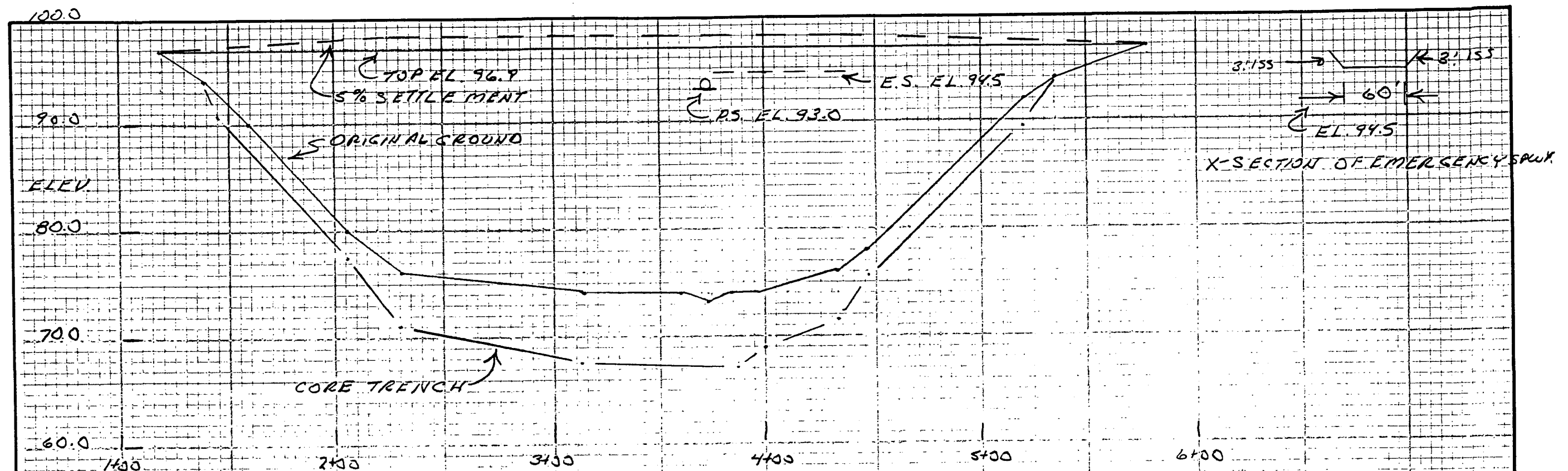
EARTH DAM

OPERATOR: BILL GIBBONS #4

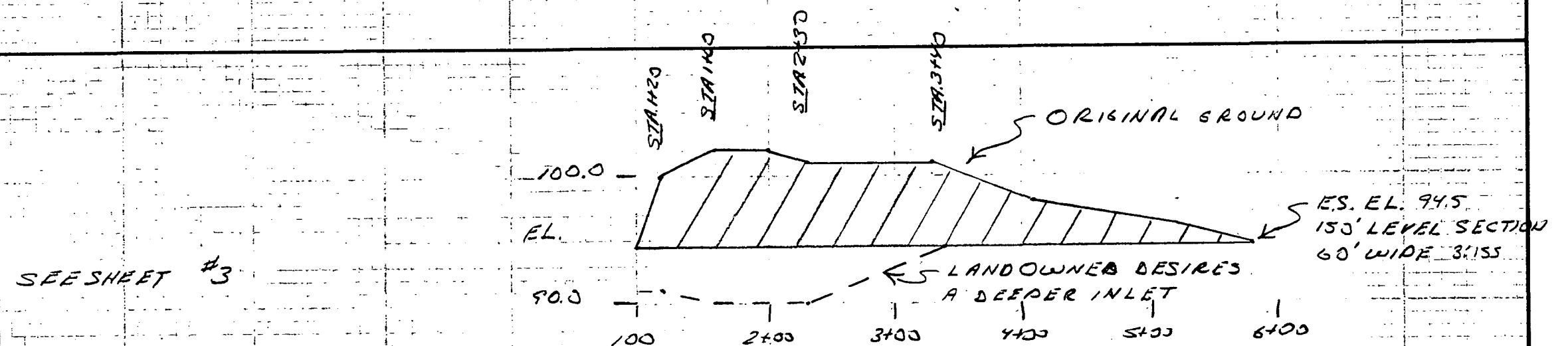
CONSERVATION DISTRICT: BROOKINGS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Date <u>1/7/58</u>		Approved by _____
Designed <u>Anderson</u>	Title _____	
Drawn _____	Title _____	
Traced _____	Sheet _____	Drawing No. _____
Checked _____	No. <u>1</u>	
	of <u>5</u>	



CROSS SECTION AT CREST OF EMERGENCY SPILLWAY AND PROFILE ALONG C OF DAM

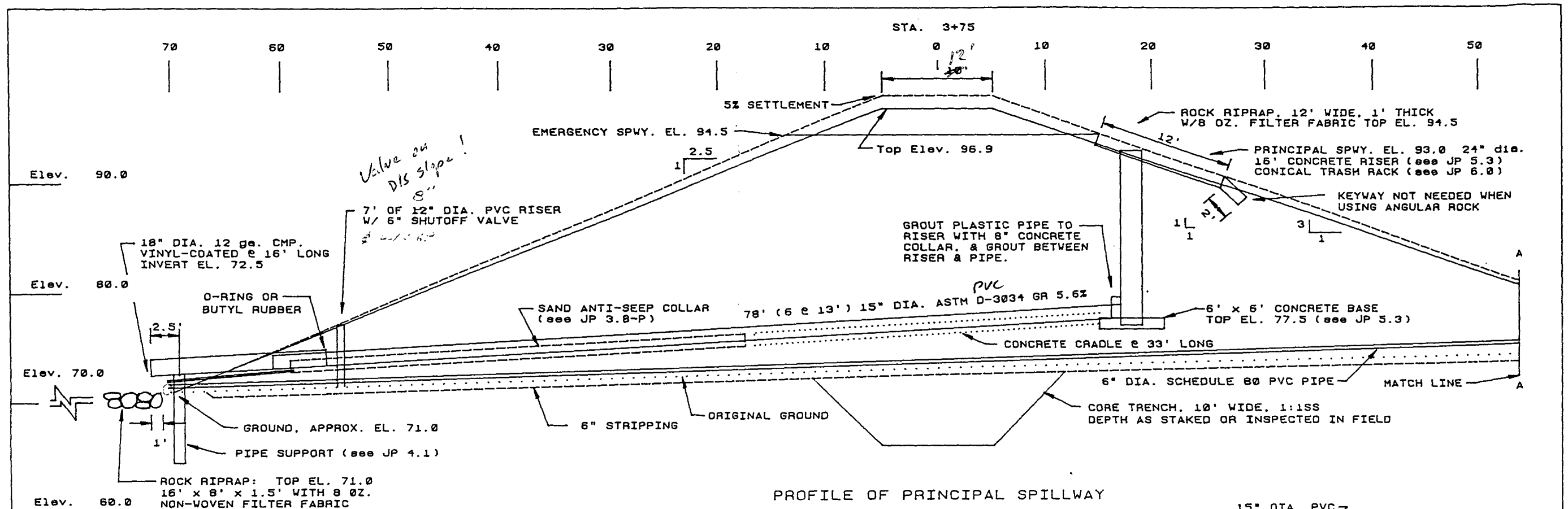


PROFILE ALONG C OF EMERGENCY SPILLWAY

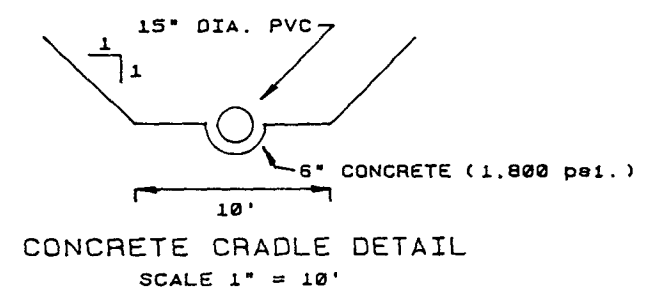
SEDIMENT YIELD SHEET 2 OF 8

MAXIMUM CROSS SECTION OF DAM

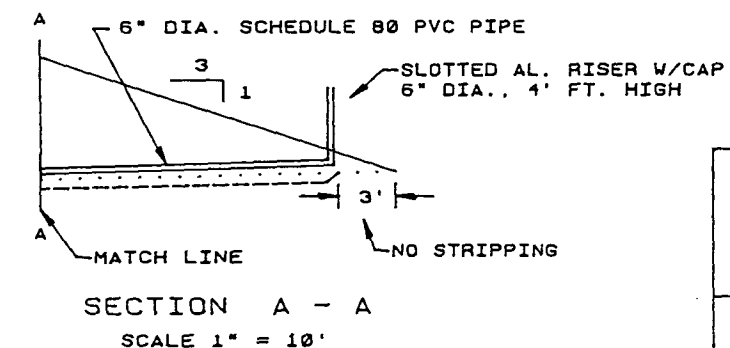
ERODIBILITY AREA ACRES	GROSS RATE A.F./AC./YR.	DRAINAGE AREA ACRES	DELIVERY RATE %	DESIGN PERIOD YEARS	REQ'D. SEDIMENT VOLUME AC.FT.
500	.0012	606	14	25	2.1



PROFILE OF PRINCIPAL SPILLWAY



CONCRETE CRADLE DETAIL
SCALE 1" = 10'



SECTION A - A
SCALE 1" = 10'

TABLE OF QUANTITIES FOR PRINCIPAL SPWY.

ITEM	UNIT	QUANT. AS BUILT
18" DIA. CMP. 12ga. (vinly-coated) LIN.FT.		16
PIPE SUPPORT	EACH	1
ANTI-SEEP COLLAR (@2.9 CY)	EACH	1
0-RING/BUTYL RUBBER	EACH	1
15" DIA. PVC. PIPE (ASTM D-3034)	LIN.FT.	78
24" DIA. CONCRETE RISER (16')	EACH	1
CONCRETE CRADLE (1.7 CY.)	EACH	1
8" DIA. PLASTIC RISER	LIN.FT.	7
FILTER CLOTH	SQ.YD.	605.3
6" DIA. PLASTIC PIPE	LIN.FT.	136
6" DIA. ALUMINUM SLOTTED RISER	EACH	1
6" SHUT-OFF VALVE	EACH	1
ROCK RIPRAP (OUTLET @ 5.3 US FACE @ 197)	CU.YD.	202.3

GIBBONS SITE #4			
MUTI-PURPOSE DAM BROOKINGS Co. SD.			
SE 4, SW 4, S 22, T 111, R 48			
U. S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SVC.			
Date Designd ANDERSON 1/98		Approved by: ANDERSON	
Drawn		Title: AG. ENG.	
Checked	Sheet 3	OF 3	Drawing No.

CONSTRUCTION NOTES:

- 1.) Ground where earth fill is to be placed shall be stripped and then scarified to a depth of 6 inches. Salvage and spread topsoil.
- 2.) Seed above HWL., 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.) 15" diameter PVC pipe shall conform to ASTM D-3034. This pipe is available from different manufacturers at different laying lengths. If a length other than 13' is choosen, the 18 inch dia. ~~CMP~~ ^{The length of the} will need to be reevaluated.
- 5.) Concrete cradle keeps the pipe from crushing. The cradle is to be installed along the entire length of the principle spillway 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.) The joint between the PVC and CMP (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 PVC using a 0.5" dia. rod and lug. File the edges of the cut smooth and seal the cut with butly-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.
- 8.) In order to stop erosion at the pipe outlet, three choices are available. Choice #1: - excavate stilling basin (as shown) 8' wide x 16' long x 1.5' deep and fill with large non-rounded rock (size varies 10-600 lb, mostly large rock), choice #2 Hog panel (ask design engineer for details), choice #3 - place two "U" gabion basket 6'x12'x9". Place gabion 0.4' in ground with 8 oz./sq.yd. filter fabric beneath basket. May substitute 2 layers of weed control netting for filter fabric (weed control is not recommended).

INSTALL 5" DIA 6' LONG TRAPED POST ON DOWNSTREAM SIDE OF
BASIN TO PREVENT THROWN ROCKS WHEN NON-ANGULAR ROCK
IS USED.

Bill Gibbons
FARM POND
Brookings CO. SD

sheet 4 of 8

SOUTH DAKOTA CONSTRUCTION AND MATERIAL SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS



Keywords: *Self-esteem, self-esteem threat, self-esteem threat effects, self-esteem threat effects on self-esteem, self-esteem threat effects on self-esteem, self-esteem threat effects on self-esteem*

CONSTRUCTION SPECIFICATIONS



Check Column	Specification No. SD-	Title
	20	Pipeline-Plastic (Irrigation) 6/82
7	20A ¹	Pipeline-Plastic (Stockwater and/or Domestic) 6/82
	21	Steel Pipelines 6/82
	22	Concrete Pipelines 6/82
	23	Asbestos Cement Pipelines 8/71
	24	Land Leveling 11/77
	25	Diversion 6/82
	26	Terraces 6/82
	27	Waterway Improvement 8/71
X	28	Seeding (Requires Specific Site Recommendations) 8/71
	29	Sodding (Requires Specific Site Recommendations) 8/71
	30	Fencing 6/82
	31	Cathodic Protection 11/79
	32	Well 8/86
	33	Mulch Blankets and Nets 10/86
		MATERIAL SPECIFICATIONS
X	50	Zinc-Coated Iron or Steel Corrugated Pipe 8/71
	51	Aluminum Corrugated Pipe 8/71
	52	Steel Pipe and Fittings 8/71
	53	Concrete Irrigation Pipe, Drainage Pipe, and Drain Tile 10/75
	54	Asbestos-Cement Pipe 6/82
	55	Plastic Pipe 6/82

PRELIMINARY RISK ASSESSMENT -- DOWNSTREAM HAZARD POTENTIAL

William Gibbons Dam, Brookings County, T-111-N, R-48-W, SW1/4 Sec 22

* see attached map

Property	Distance from Dam	Elevation	Water El.
Restored Wetland A T-111-N, R-48-W NW 1/4, sec 27	0.4 mi south This wetland has a temporary storage capacity of approx 25 acre-feet	1780	1770
Restored Wetland B T-111-N, R-48-W NW 1/4, sec 27	0.5 mi south This wetland has a temporary storage capacity of approx 10 acre-feet	1770	1760
Dam/Dugout C T-111-N, R-48-W SW 1/4, sec 27	0.75 mi south This structure has a temporary storage capacity of approx 100 acre-feet	1760	1755

*** * All of the above structures are located on Gibbons property. Sufficient temporary storage capacity is available in the above three structures to absorb any catastrophic failure of the proposed dam. Each structure also has over-designed principal and emergency spillway capacities (having been designed with the proposed structure in the overall plan)**

County Road 8 T-111-N, R-48-W SW 1/4, sec 27	1 mi south	1738	1730
--	------------	------	------

*** * The remainder of the downstream area is also in Deer Creek floodplain which continues to widen from 1/4 mile wide to over 2/3 mile wide.**

Leonard Henneman Farm T-111-N, R-48-W SW 1/4, sec 33	3 mi southwest	1693	1675
Township road T-110-N, R-48-W NW 1/4, sec 4	3.25 mi southwest	1685	1675
Township road T-110-N, R-48-W S 1/2, sec 5	4 mi southwest	1674	1667



ANNUAL YIELD PROJECTIONS --- Gibbons Dam, T-111-N, R-48-W, SW 1/4 Sec 22

Water Requirements

1. Proposed dam would require approximately 95 acre feet of water for initial filling. Thereafter, approximately 25 acre feet of water will be required annually to replace evaporative losses.
2. Restored wetland A has an annual water requirement of approx 15 acre feet to replace evaporative losses.
3. Restored wetland B has an annual water requirement of approx 5 acre feet to replace evaporative losses.
4. Dam/dugout C has an annual water requirement of approx 45 acre feet to replace evaporative losses.

Therefore, the annual water requirements are:

$$\text{Year 1} = 95 + 15 + 5 + 45 = 160 \text{ acre feet}$$

$$\text{Remaining Years} = 25 + 15 + 5 + 45 = 90 \text{ acre feet}$$



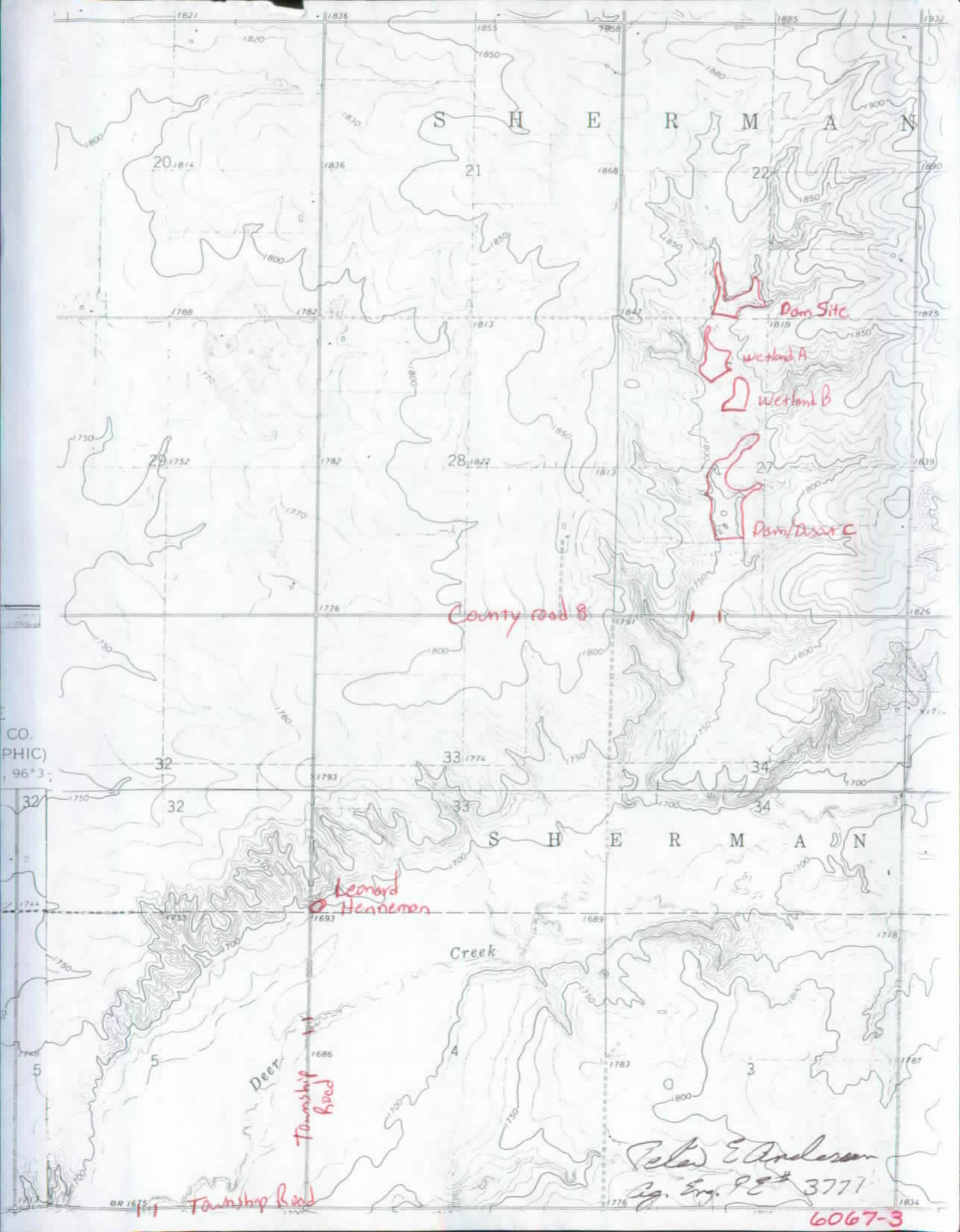
Runoff Projections

1. The above dams/wetlands have a combined drainage area of 1,200 acres.
2. The State Climatologist, Dr. Alan Bender, indicates the Brookings area has an average snowfall of 34 inches per year, with a water equivalent of 2.5 inches. A conservative estimate of water runoff would be 2.0 inches. Taken over 1,200 acres, this 2 inches would yield 200 acre feet per year.
3. The draws in which the above structures are located all have abundant natural springs. Measurements taken during the low flow period (August) indicate that spring flow will annually contribute at least 15 acre feet.
4. Based on annual rainfall in the Brookings area, the drainage area is expected to conservatively contribute between 25-50 acre feet/yr.

Therefore, the annual water runoff projections are: $200 + 15 + 30 = 245$ acre feet

Summary

During the first year of filling, water runoff (245 AF) exceeds requirements (160 AF) by 85 acre feet. Thereafter, water requirements due to evaporation (90 AF) are much lower, leaving a surplus annual yield of 155 acre feet.



CO.
PHIC)
96°3;

BR 1675

Peter E. Anderson
Pg. 9 of 3771

6067-3



RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

42 415719

Pierre, April 2, 19 98

RECEIVED OF William Gibbons, 1709 Derald Drive, Brookings, SD 57006
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>6667-3</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 (J)

Department of Environment
and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501



3/25/98

Dear Sir/Madam:

Enclosed please find a Water Rights Application for a dam proposed by Bill Gibbons and designed according to NRCS specifications. Also enclosed are copies of the plans/specifications and information pertaining to a preliminary risk assessment for this dam proposed by Bill Gibbons.

If further information is needed, please contact either myself or Bill Gibbons.

Sincerely,

Pete Anderson, P.E.

Attached is additional information regarding the proposed dam. Dam plans/specifications were sent separately. Please combine into 1 file.



United States
Department of
Agriculture

Natural Resources
Conservation
Service

520 Third Avenue
P.O. Box 626
Brookings, SD 57006-0626

March 31, 1998

Tim Schaal
Water Rights Program
Department of Environment
and Natural Resources
Joe Foss Building
523 E. Capitol
Pierre, SD 57501



Dear Tim:

Enclosed is a Water Rights Application, copies of the plans/specifications and information pertaining to a preliminary risk assessment for a dam proposed by Bill Gibbons and designed according to NRCS specifications.

If further information is needed, please contact Bill Gibbons or me. Thank you!

Sincerely,

Pete Anderson, PE



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

April 17, 1998

William Gibbons
1709 Derald Drive
Brookings, SD 57006-0626

Dear Mr. Gibbons:

We have reviewed the plans and specifications for the Bill Gibbons Dam No. 4 Project located in the SE ¼ SW ¼ of Section 22-T111N-R48W, in Brookings County. The plans and specifications as submitted are approved, with the following comments. We normally recommend that low level outlets be valved on the upstream slope and usually see this incorporated with the primary spillway riser. A valve on the downstream slope results in a pressurized pipe through the embankment, which could lead to piping and/or seepage problems. Also, it is our understanding that the NRCS Engineering Standards recommend a minimum of 3 feet of freeboard between the secondary spillway and top of dam elevations. Your design only has 2.5 feet and we would recommend using the 3 foot minimum.

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. 6067-3 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 Mr. Gibbons, 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 Gibbons Dam No. 4 will be classified as a small size Category 3 dam with an embankment height of 26 feet, a normal storage capacity of 94.4 acre-feet and a maximum storage capacity of 168 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: Pete Anderson, P.E.

REPORT ON
WATER PERMIT APPLICATION No. 6067-3
William Ray Gibbons
April 9, 1998

Water Permit Application No. 6067-3 has been filed by William Ray Gibbons to appropriate 94.4 acre-feet of water annually from local runoff by constructing a dam located in the SE ¼ SW ¼ of Section 22-T111N-R48W, in Brookings County. The water will be used to provide habitat for fish and wildlife production.

Discussion:

The Bill Gibbons Dam No. 4 has been designed by the Natural Resources Conservation 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. 6067-3 is approved. The dam will be classified as a small size Category 3, Low Hazard dam. It will have an embankment height of 26 feet, a normal storage capacity of 94.4 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 168 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.

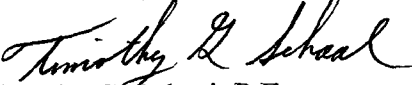
The dam is designed to have a 24 inch RCP riser with a 15 inch PVC barrel as the primary spillway and a 60 foot wide earthcut channel as the secondary spillway. The dam will have a drainage area of 606 acres (0.95 square miles). A 25-year frequency event for this drainage area produces a peak runoff of 268 cfs, a 100-year event produces a peak runoff of 493 cfs. The 60 foot wide earthcut spillway with 2.5 feet of head has a spillway capacity of approximately 600 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 5 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 14 acre-feet, and the annual yield with a 10 percent chance of occurrence, or 1 out of 10 years, is expected to be 80 acre-feet.

The Bill Gibbons Dam No. 4 will be located in the SE ¼ SW ¼ of Section 22-T111N-R48W on an unnamed tributary to Deer Creek about 2 miles upstream of the confluence with Deer Creek, and about 14 miles upstream of the confluence of Deer Creek and the Big Sioux River. Water Permit No. 5874-3 was issued to Mr. Gibbons in September of 1995, for a dam with a storage capacity of 162 acre-feet. This dam is located about one-half mile below the proposed dam. Also, Mr. Gibbons has two smaller dam/wetland projects, authorized under Location Notice Nos. 72881 & 72882, located between the existing dam and the proposed dam. There are no other existing Water Rights/Permits located on the unnamed tributary between the proposed dam and the Big Sioux River.

Conclusions:

1. Water Permit Application No. 6067-3 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. 6067-3.


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. 6067-3, William Ray Gibbons**

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. 6067-3, William Ray Gibbons, 1709 Derdall Drive, Brookings, SD 57006.

The Chief Engineer is recommending APPROVAL of Application No. 6067-3 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. 6067-3 authorizes a dam with storage capacity of 94.4 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.



JOHN HATCH, Chief Engineer
April 9, 1998



**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 17, 1998

William Ray Gibbons
1709 Derald Drive
Brookings, SD 57006

Dear Mr. Gibbons:

Water Permit Application No. 6067-3 for recreational 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 Register printed at Brookings, SD (Ph # (605) 692-6271). 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 /ks

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

April 17, 1998

Register
P.O. Box 177
Brookings, SD 57006-0177

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 6067-3 to Appropriate Water to be published twice. Please publish the first notice on April 24, 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 William Ray Gibbons, 1709 Derdall Drive, Brookings, SD 57006 (Ph # (605) 692-8551).

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 /KS
Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 6067-3

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

Date _____

We are in receipt of your letter of April 17, 1998, enclosing Notice of Hearing to Appropriate Water by Application No. 6067-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on April 24, 1998, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 6067-3 to Appropriate Water

Notice is given that William Ray Gibbons, 1709 Derdall Drive, Brookings SD 57006 has filed an application for a water permit to impound 94.4 acre-feet of runoff water annually by constructing a dam located in the SE ¼ SW ¼ Section 22 with water impounded in the SE ¼ SW ¼ Section 22; all in T111N-R48W. This application requests impoundment of sufficient water annually to maintain the water level to the outlet elevation. Water is to be used for recreational use and to provide habitat for fish & wildlife propagation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. number 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 11, 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)

County of Brookings) SS

I, Nancy Skyberg

certify that the attached printed Notice was taken

from the Brookings Register

printed and published in Brookings

County of Brookings and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

April 24, 1998

May 1, 1998

Cost of Printing thirty-nine dollars
and thirty-one cents \$39.31

Nancy Skyberg
(Signature)

Legal Ad Coordinator
(Title)

5-18-98
(Date Signed)

Legal 279, 2x, 4/24, 5/1 NOTICE OF APPLICATION NO. 6047-3 to Appropriate Water

Notice is given that William Ray Gibbons, 1709 Derald Drive, Brookings SD 57006 has filed an application for a water permit to impound 94.4 acre-feet of runoff water annually by constructing a dam located in the SE 1/4 SW 1/4 Section 22 with water impounded in the SE 1/4 SW 1/4 Section 22, all in T111N-R48W. This application requests impoundment of sufficient water annually to maintain the water level to the outlet elevation. Water is to be used for recreational use and to provide habitat for fish and wildlife propagation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6047-3 because 1) unappropriated water is available; 2) existing rights will not be unlawfully impaired; 3) it is 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 11, 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.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

MAY 21 1998

William Ray Gibbons
1709 Derdall Drive
Brookings, SD 57006

Dear Mr. Gibbons:

Enclosed is Water Permit No. 6067-3 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.



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

Date 10/30/2000

TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: William Gibbons 1709 Derrall Dr.
(name) (address)

Brookings SD 57006 605-692-8551
(city) (state) (zip) (phone)

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 6067-3.

Water Permit No. 6067-3 states that the diversion system is to be constructed by May 11, 2003, and that the water is put to beneficial use by
(date)

May 11, 2007
(date)

The diversion system was completed on Oct 1, 2000
(date)

Applying the water to beneficial use was completed on Oct 1, 2000
(date)

You may schedule an investigation so that the Water License may be issued.

William Gibbons
(signature)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 15, 2002

5874-3 and 6067-3

William Ray Gibbons
1709 Derdall Drive
Brookings SD 57006

Dear Mr. Gibbons:

On May 28, 2002 the investigation of your dams, including the extent of application of water to beneficial use, as developed under Water Permit Nos. 5874-3 and 6067-3, 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 each water license. Upon receipt of the \$100.00 fee from you, we will complete processing your water licenses. The check or money order for the fee should be made payable to the "Water Rights Program".

Your licensed water rights 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 permits, investigation of your dam or payment of the fee, please contact Genny McMath with our program at (605) 773-3352.

Sincerely,

Karen Schlaak
Water Rights Program
(605) 773-3352

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

NE 417241

Pierre, July 24, 20 02

RECEIVED OF Bill Gibbons, 1709 Dardall Dr., Brookings, SD 57006
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. 6067-3 _____	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

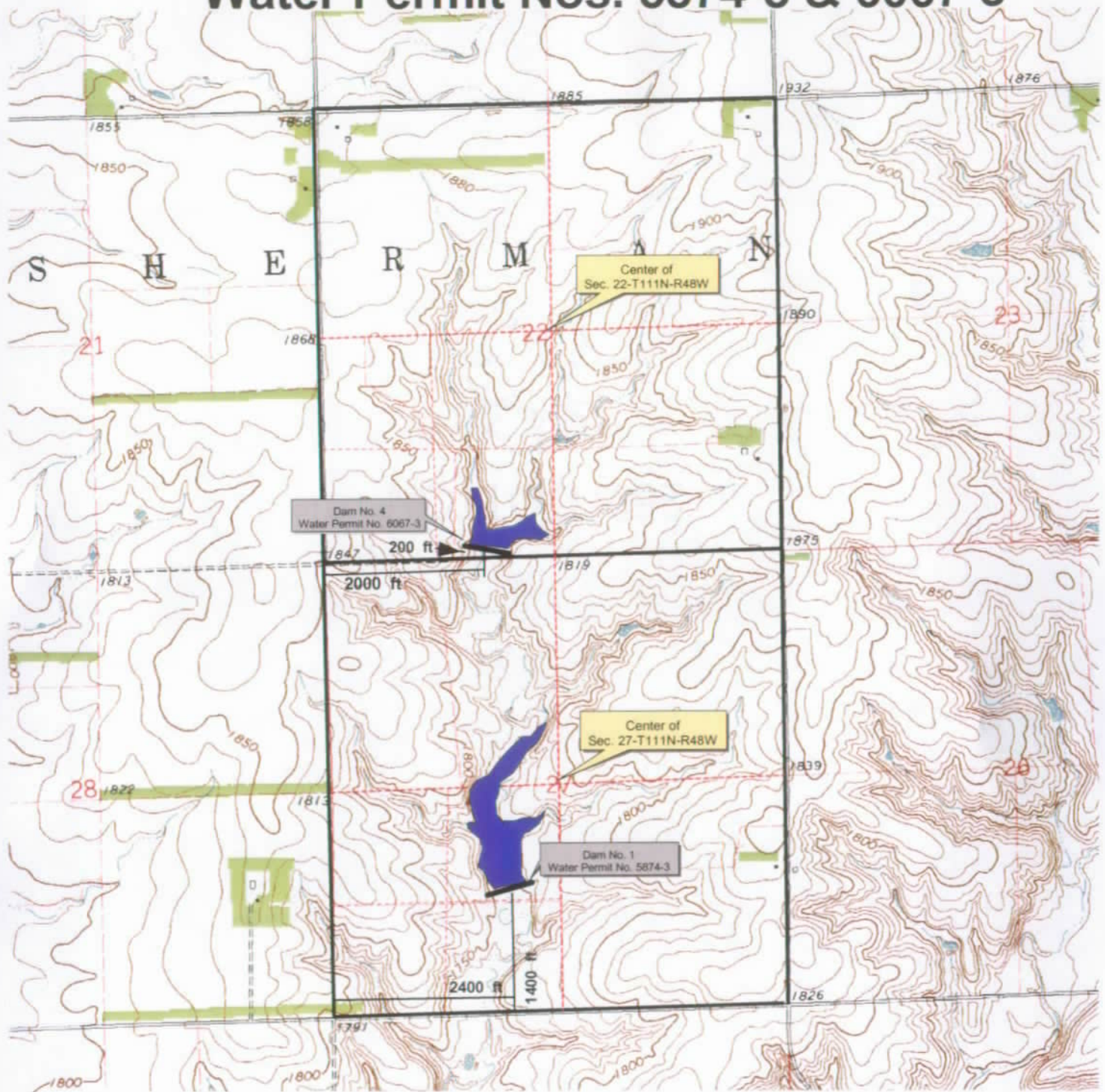
By

Darland Elbe

Chief Engineer

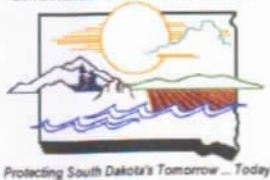
gm

Water Permit Nos. 5874-3 & 6067-3



0.5 0 0.5 1 1.5 Miles

South Dakota Department of
Environment and Natural Resources



Timothy G. Schaal

Timothy G. Schaal, P.E. 7/11/02
Natural Resources Engineer Specialist
Water Rights Program

STATE OF SOUTH DAKOTA

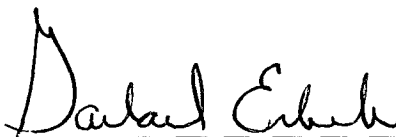
WATER LICENSE NO. 6067-3

(1) William Ray Gibbons, 1709 Derdall Drive, Brookings SD 57006 made Application No. 6067-3, April 2, 1998 for a water permit to impound 94.4 acre-feet of water from runoff, Brookings County, South Dakota for fish & wildlife propagation and recreational use purposes. Permit No. 6067-3, with a priority date of April 2, 1988 was approved May 11, 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 11, 2003 and for the application to beneficial use of said water on or before May 11, 2007.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the storage dam and is entitled to impound 94.4 acre-feet of water for beneficial use with sufficient water annually to maintain the water level to the outlet elevation. The location of the storage dam (spillway) is 200 feet north and 2,000 feet east of the southwest corner of Section 22-T111N-R48W (SE ¼ SW ¼).

(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 William Ray Gibbons, 1709 Derdall Drive, Brookings SD 57006 the holder and/or owner of Water Right No. 6067-3 is issued a license to appropriate water, the right to impound 94.4 acre-feet of water from runoff with sufficient water annually to maintain the water level to the outlet elevation with a priority date of April 2, 1998 from the location specified in (2) of this license for fish & wildlife propagation and recreational use purposes. This license is subject to any limitations or qualifications listed in Water Right No. 6067-3 and subject to South Dakota State Law.



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

SEP 20 2002

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

SEP 20 2002

5874-3
6067-3

William Ray Gibbons
1709 Derdall Drive
Brookings SD 57006

Dear Mr. Gibbons:

Enclosed are Water License Nos. 5874-3 & 6067-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed are Receipt Nos. 417240 and 417241 each in the amount of \$50.00 which you paid for the investigation and issuance of the Water License No. 5874-3 and 6067-3.

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