

WATER PERMIT NO. 7862-3

Name of Applicant: Circle Bar Ranch, Inc.

Address: 466630 146th St, Marvin SD 57251

Phone: 605 880-0770

Amount of Water Claimed: 36 acre-feet

Total Acres: NA

Source of Water Supply: runoff

Water to be used for: FWP, recreation, livestock

County: Grant

Type of Waste Disposal System:

Location: 3 miles northwest of Marvin

PRIORITY Date Received: 7-11-13

Application/License Fee: \$ 700

Corrected Application Received:

Period of Annual Use: Jan 1- Dec 31

Remarks:

Diversion Point: NW 1/4 SE 1/4 Sec 7-T121N-
R50W

Land to be Irrigated: E 1/2 SE 1/4 Sec 7-T121N-
R50W

Depth of Well: NA

Well Driller:

Remarks:

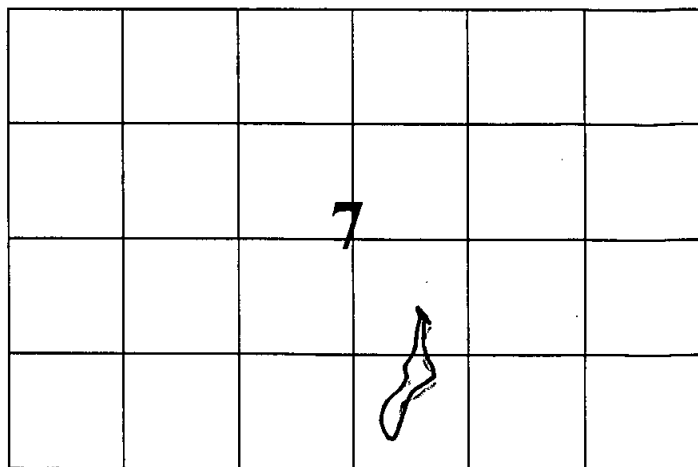
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 7-15-13

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



SD FORM 2 - 1000ED 07
FORM 2: Application for uses other than irrigation
(type or print)

*Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7862-3</u> (office use only) Hydrologic Unit <u>07020001</u>
	Basin <u>Minnesota-Whetstone</u> <u>605-432-4516</u>
	Newspaper <u>Grant Co Review Box 390 Millbank 57252</u> <u>605-886-6901</u>
	<u>Public Opinion Box 10 Watertown 57201</u>

RECEIVED
JUL 11 2013
WATER RIGHTS
PROGRAM

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>Livestock</u> | |

Type of Application:

(check one)

- ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ 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.)

1. Name to Appear on Water Permit Circle Bar Ranch, Inc.

(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent c/o Larry O'Farrell

(name and complete address if different than above name)

Mailing Address 46630 146th ST Marvin SD 57251
(Address) (City) (State) (Zip Code)

Home Phone (605)432-6439 Cell (605)880-0770 Email _____

2. Amount of water claimed _____ *CFS or _____ **GPM 36 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Watershed above embankment CSW 1/4 SE 1/4

4. Location of point of diversion Embankment in SE 1/4 Section 7, T. 121 N., R. 50 W. County Grant
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No

If "Yes," where will water be used? Water impounded: W 1/2 SE 1/4 Sec 7 - T 121 N - R 50 W
(example - NW 1/4 section 12-T104N-R53W)

5. County or counties where water will be used Grant

6. Annual period during which water is to be used Annually Jan 1 - Dec. 31

7. 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 Engineers Plan of Dam and Reservoir Area

I, William O'Farrell, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

SOUTH DAKOTA
WATER PERMIT NO. 7862-3

Date of first receipt of application July 11, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7862-3 to Circle Bar Ranch, Inc., 46630 146th St, Marvin SD 57251 authorizing the construction of the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7862-3 authorizes impoundment of 36 acre-feet of water from runoff by repairing an existing dam located in the SW 1/4 SE 1/4 Section 7 with water impounded in the W 1/2 SE 1/4 Section 7; all in T121N-R50W.
2. The water appropriated shall be used for the purpose of fish and wildlife propagation, recreational use and livestock water and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 7862-3 is August 26, 2013.
5. The date from which applicant may claim right is July 11, 2013.
6. One-fifth of the construction is to be completed on or before February 26, 2016.
7. All construction is to be completed on or before August 26, 2018.
8. Water is to be put to beneficial use on or before August 26, 2022.
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. 7862-3 authorizes an impoundment with a storage capacity of 36 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: *Jeanne Goodman*

Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

SEP 27 2013

date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)

b) If existing wells, how many ____ Provide copy of log(s), if available. Drilled by ____

c) Well Depth ____ Depth to Top of Water Bearing Material ____ Depth to Water from Surface ____

d) Distance to nearest existing domestic well:

On applicant's property ____ On property owned by others ____

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) ____

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

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

4. Water Storage Dams

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

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

b) Freeboard 2 feet

c) Crest Width 12 feet

Crest Length 158 feet

d) Height 21.8

e) Primary Outlet Capacity 35.1 cfs

If pipe, diameter 48" drop w 18" outlet

f) Secondary Spillway Capacity 307

Spillway Width 40 feet

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

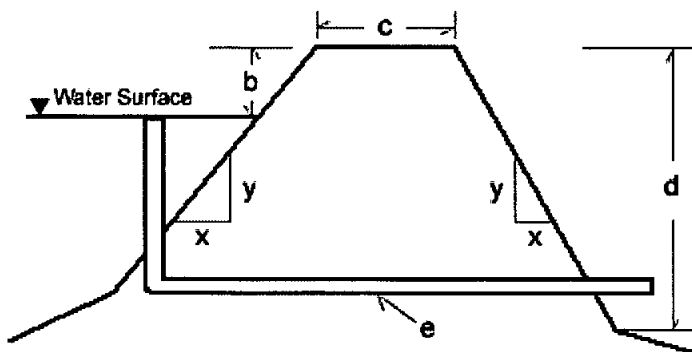
Upstream 3:1

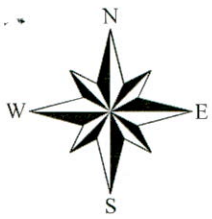
Downstream 3:1

h) Surface Area of Impoundment 4.4

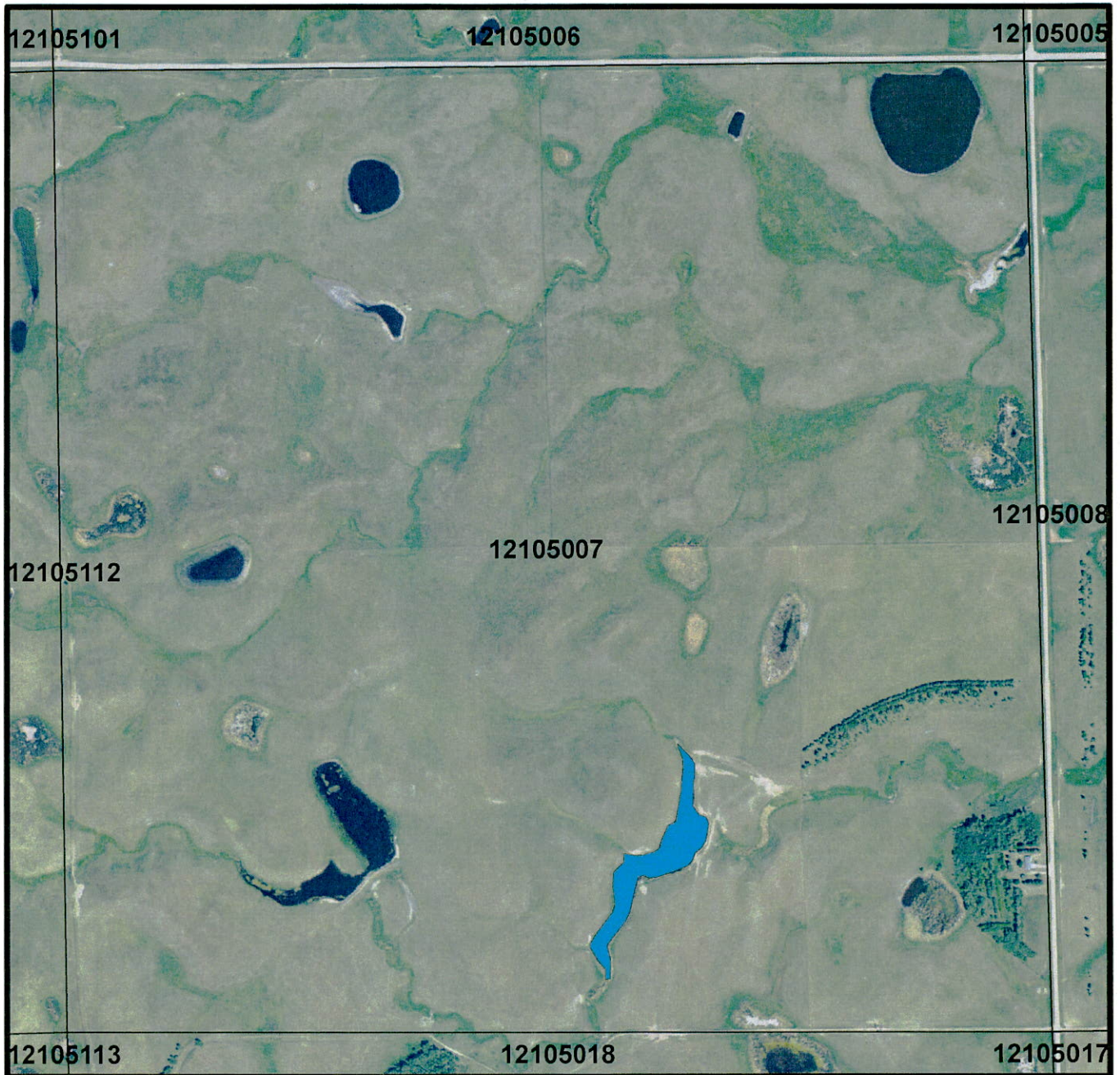
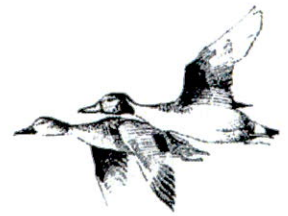
i) Storage 36.0 Acre Feet

j) Drainage Area Above Dam 565.0 Acres





Circle Bar Ranch, Inc. Grant County



0.5 0.25 0 0.5
Miles

Legend

FEATURE

 Wetland Created

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WATER RIGHTS PROGRAM
South Dakota Department of Environment and Natural Resources

Date 7/15, 20 13

RECEIVED OF Circle Bar Ranch Inc W O'Farrell 14379 462nd Ave Marvin SD 57251

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

Fee for Application for Permit No. <u>7862-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7862-3</u>	200	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	700	00

No. **06373**

By Jeanne Hoelmer
Chief Engineer J

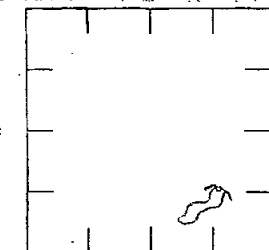
STRUCTURE DATA

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPPLY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	CS 25-YR.	C.F.S.	FEET	ACRES	AC. FT.	AC. FT.
565	12	157	307	16	4.4	—	36

Top of Dam

54 AF

NOTE: Since minimum construction inspection is scheduled, it is necessary to hire a competent contractor.



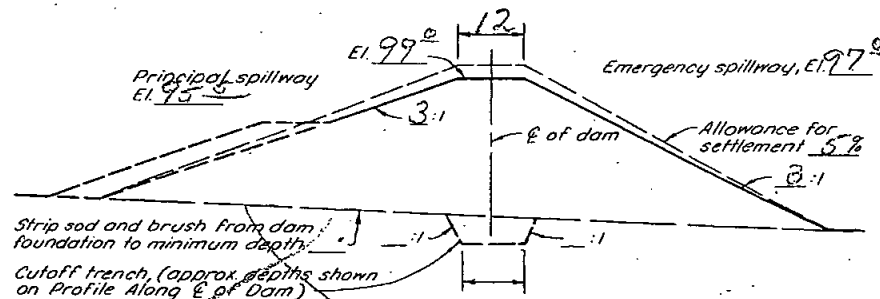
SE cor. T. 12N R. 50W
Grant County

LOCATION

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
Earthwork (to be estimated by technician)		
6 ft - 48" dia concrete riser	ea	1
18" dia SDR-26 PVC	lin ft	92
Concrete	cy	1.3
Sand seep collar	cy	4.4
4" dia pvc drain pipe	lin ft	74
Timber pipe support	ea	1
Metal Anti-Vortex	ea	1

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TYPICAL CROSS SECTION OF DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

- SD-2 Clearing
- SD-7s Earth Fill
- SD-9 Drain Fill
- SD-12B Concrete
- SD-16 Timber Fabrication
- SD-17 Metal Fabrication
- SD-19 PVC Drain

EARTH DAM

OPERATOR: Circle Bar Ranch
CONSERVATION DISTRICT:

Class "A" Hazard

Designed	Approved By
Drawn	Title
Traced	Sheet
Checked	Drawing No.

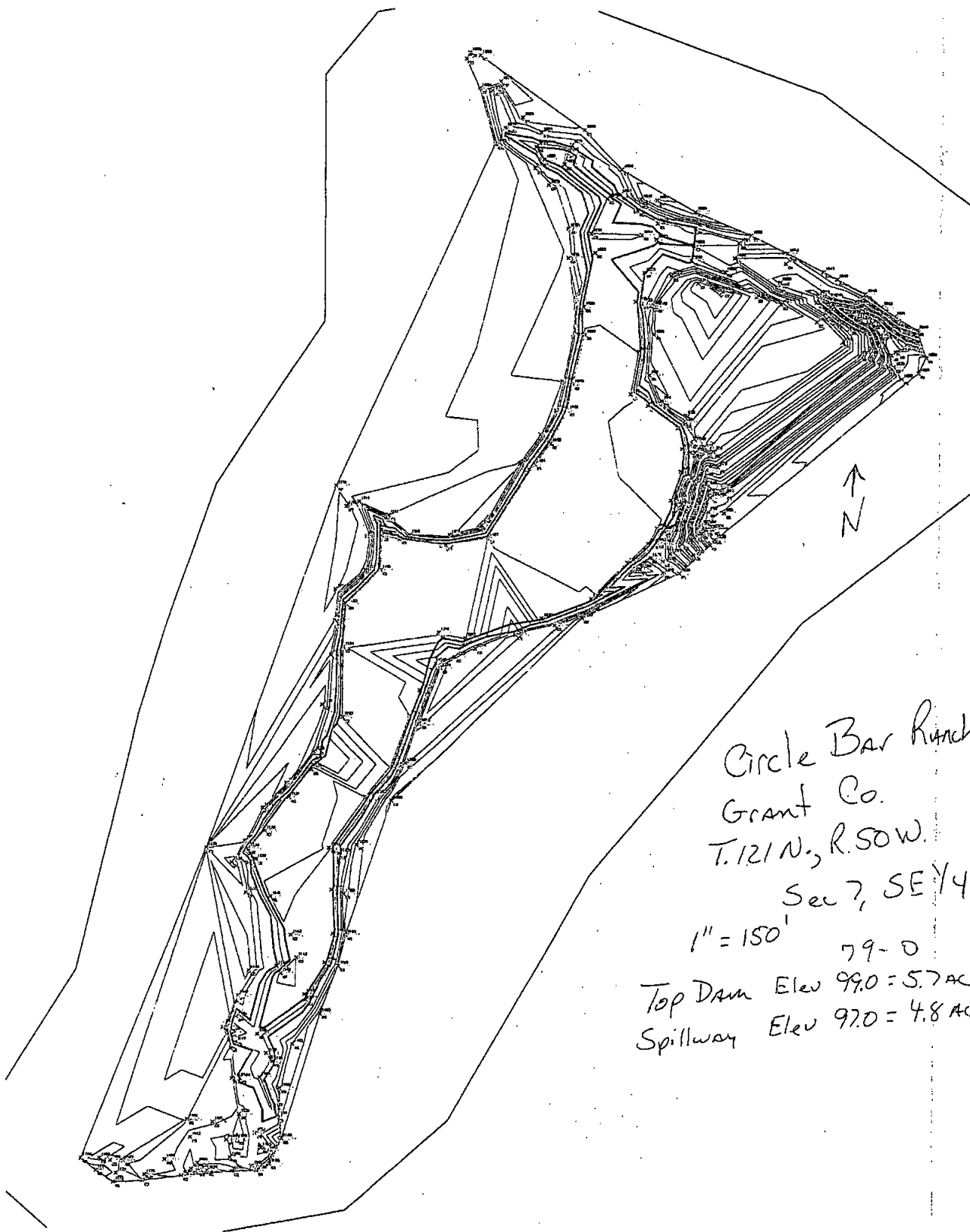
SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" =

REFERENCE: GUIDE PLAN NO. 1.0

JOB PLAN NO. 1.0

(Rev. 4-73) 5, N-29, 073.101

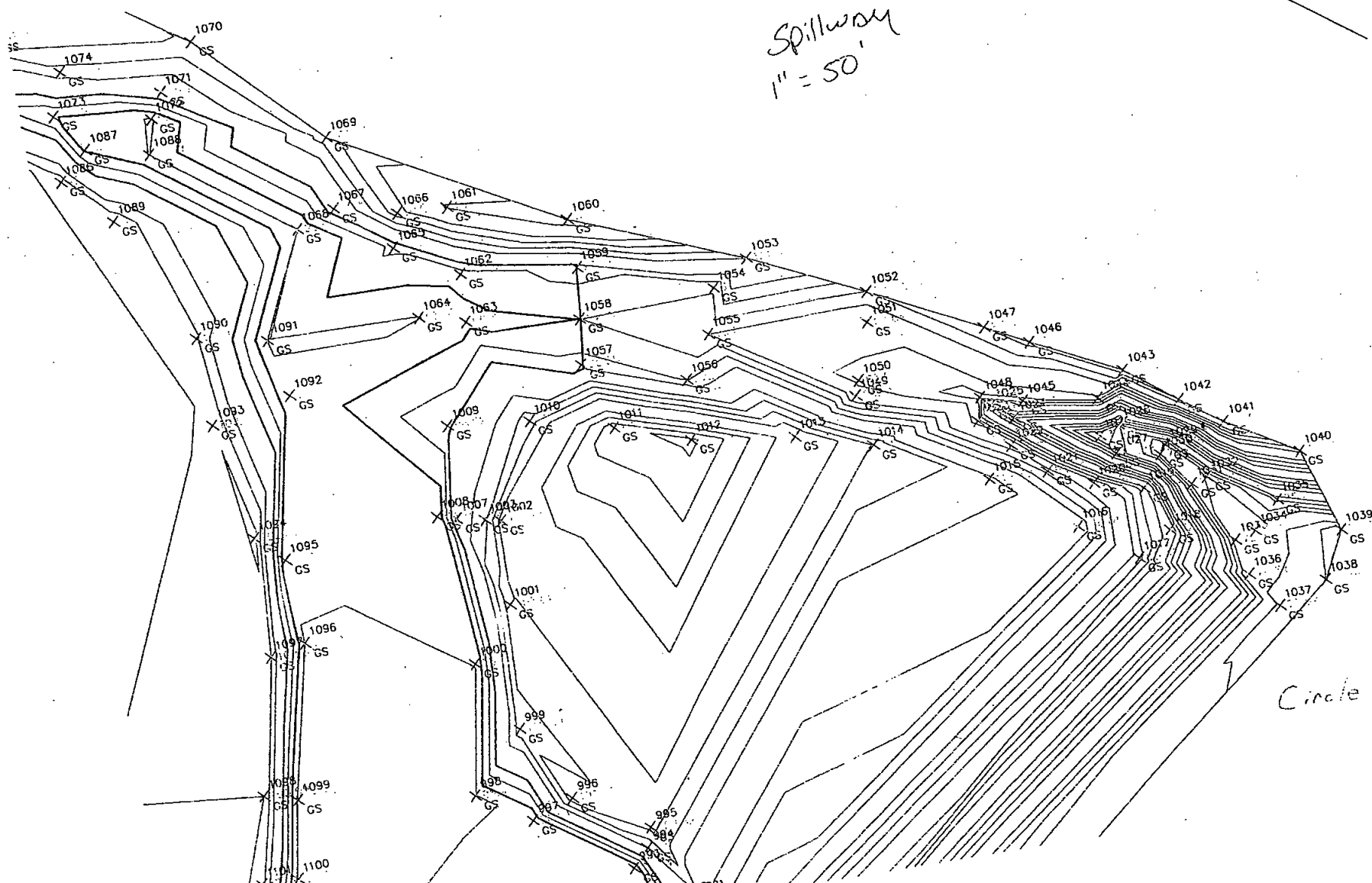


Circle Bar Ranch
Grant Co.
T. 121 N., R. 50 W.
Sec 7, SE 1/4

1" = 150'

79-0

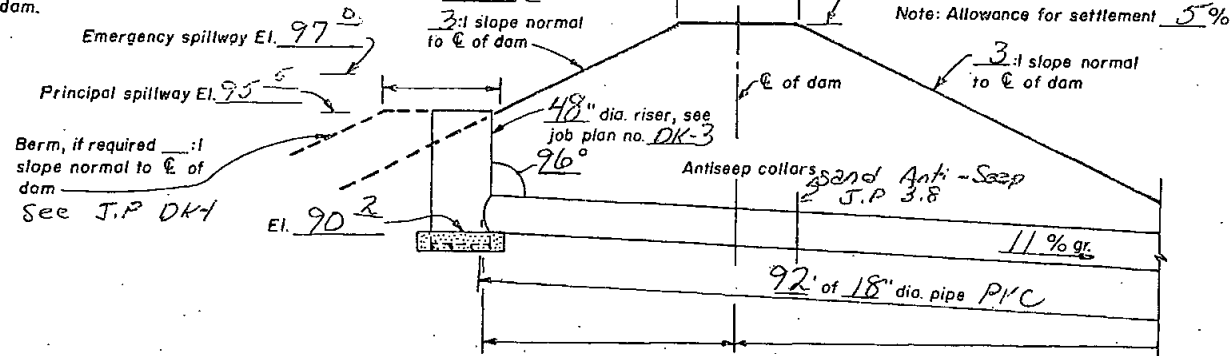
Top Dam Elev 99.0 = 5.7 AC
Spillway Elev 97.0 = 4.8 AC



Spillway
1" = 50'

Circle Bar Ranch

Locate principal spillway pipe 25' directed by Technician
at C of dam sta. 5 + 10, at
an angle of 45° to the C of
the dam. Trash rack and baffle plate
not shown. See job plan
no. DK-2



CROSS SECTION OF DAM ALONG C OF PRINCIPAL SPILLWAY
(Not to scale)

SPECIFICATION NOTES

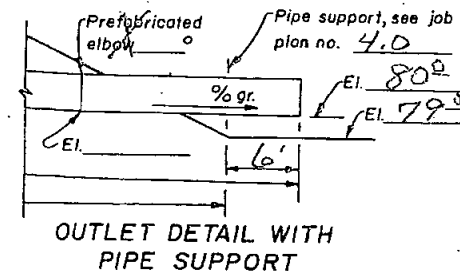
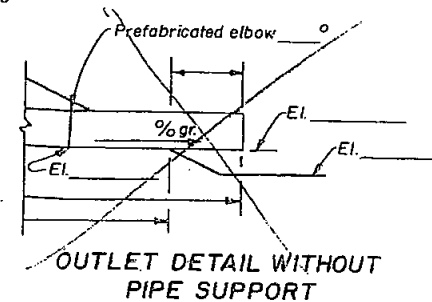
1. ELBOW IF REQUIRED, MAY BE FABRICATED BY CONTINUOUS WELDING SEPERATE PIPE SECTIONS OR BY FABRICATING A CONTINUOUS WELDED JOINT ON THE UPSTREAM END OF LAST SECTION OF PIPE.
2. PIPE WALL THICKNESS SHALL BE _____ GAGE OR _____ INCHES.

PVC to be SDR-26 or
equal

TABLE OF QUANTITIES

[illegible]

APPLICABLE STANDARD S.C.S. SPECIFICATIONS

[illegible]

Sec. _____, T. _____, R. _____
County _____

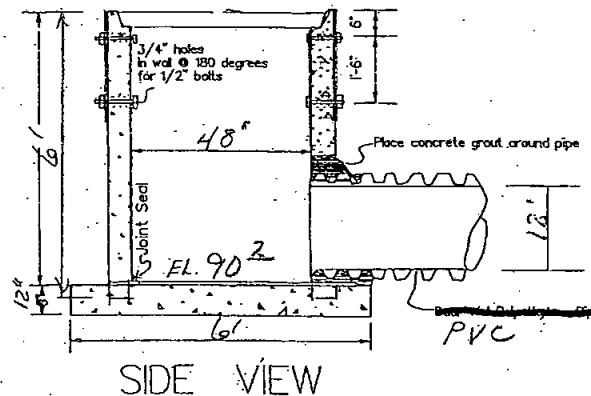
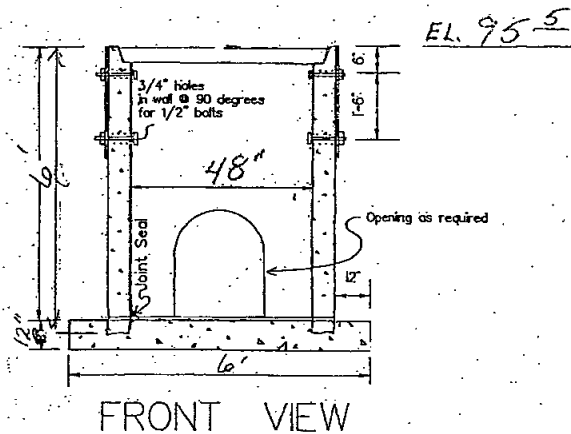
LOCATION

CORRUGATED METAL PIPE
DROP INLET PRINCIPAL SPILLWAY

OPERATOR <u>Circle Bar Ranch</u>	
CONSERVATION DISTRICT _____	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Date _____	Approved By _____
Designed _____	Title _____
Drawn _____	_____
Trace _____	Title _____
Checked _____	Sheet _____
	No _____
	of _____
	Drawing No. _____

REFERENCE: GUIDE PLAN NO. 2.0

Rev. 8/80
JOB PLAN NO. 2.0



CONSTRUCTION NOTES:

- 1- Reinforced concrete pipe shall meet ASTM C-478.
- 2- ~~Reinforced concrete pipe shall be equal to~~ *PVC or SDR-26*
- 3- Provide holes in concrete pipe for lifting lugs.
- 4- Alternative to concrete base is poured in place concrete base

STEEL SCHEDULE

RISER DIA. IN.	BAR SIZE	MARK	TYPE	NO. REQ'D.	LENGTH FT.-IN.	TOTAL LENGTH FT.-IN.	TOTAL WT. LB.	C IN.	L FT.-IN.
48	4	1	STR.	12	5-6	66-0	44	6	6-0

TABLE OF QUANTITIES

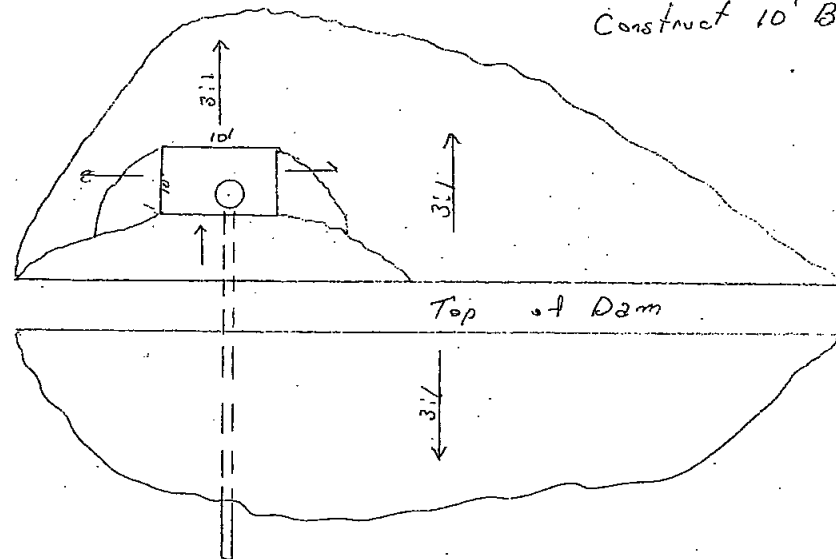
ITEM	UNIT	QUANTITY
CONCRETE	CU. YD.	1.3
REINFORCING STEEL	LB.	44

Circle Bar Ranch

CONCRETE RISER for Reinforced Pipe PVC	
DESIGNED BY CHECKED BY DATE LOC.	APPROVED BY TITLE DATE REV. #

DK-3

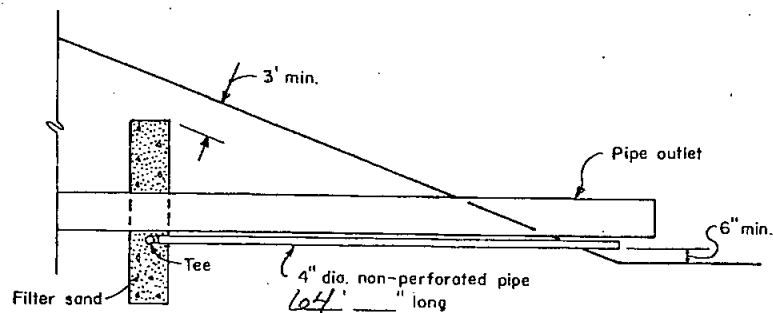
Construct 10' Berm at Riser



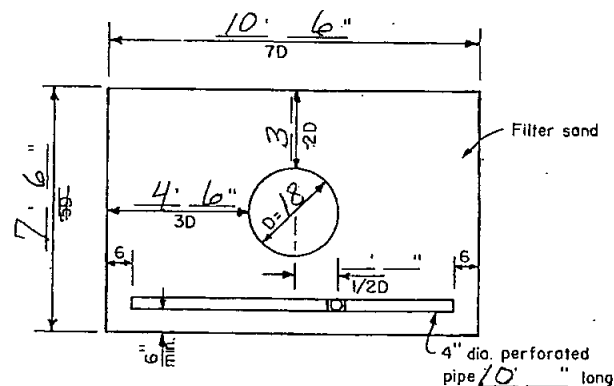
PLAN VIEW

OK-1

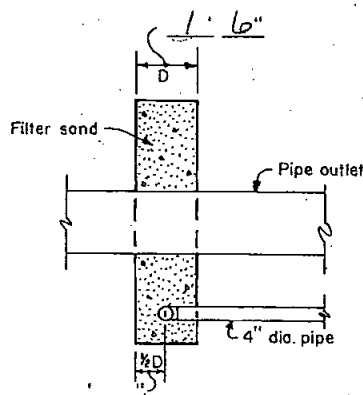
Circle Bar Ranch



OUTLET DETAIL



UPSTREAM VIEW



SIDE VIEW

SIEVE SIZE	PERCENT PASSING
3/8"	100
4	95-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

See spec SD-9

Н.Н. су

Sec. _____, T. _____, R. _____

County _____

LOCATION

SAND ANTISEEP COLLAR

OPERATOR Circle Bar Ranch

CONSERVATION DISTRICT

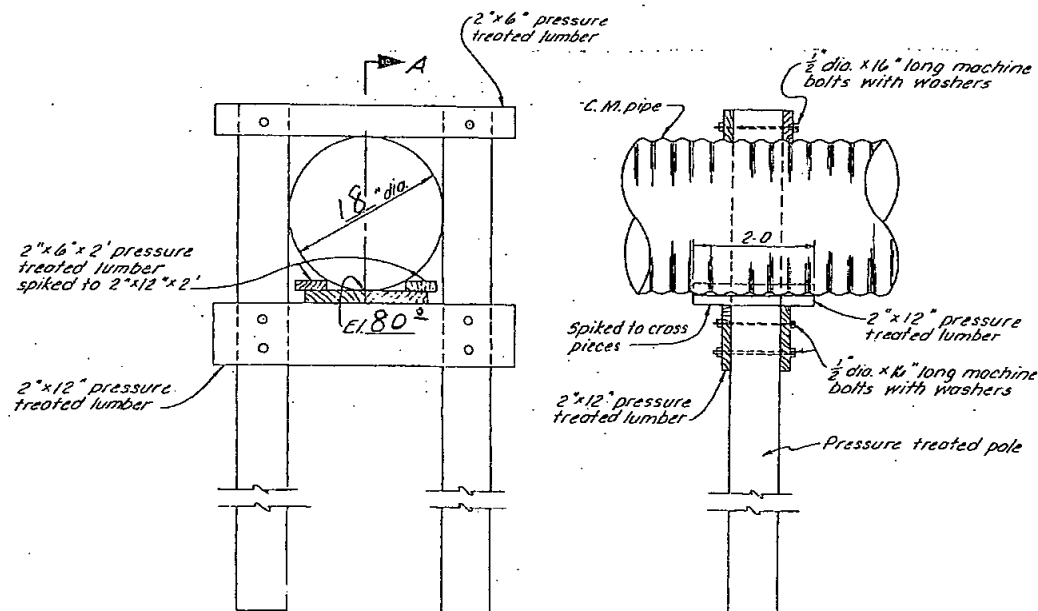
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

		Date		
Designed		Approved by		
		Title		
Drawn				
		Title		
Traced		Sheet	Drawing No.	
		No.		
Checked		at		

NOTE:

1. THE 4" DIA. PIPE SHALL BE ASTM D1785, SCHEDULE 40, PVC.
2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL 2, 1/2" DIA. HOLES, ON 6" FROM END OF PIPE AND PLACE A 3/8" DIA. 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).

JOB PLAN NO. 3.8



ELEVATION **SECTIONAL ELEVATION A-A**

TABLE OF QUANTITIES

ITEM	LENGTH FOR 18" DIA. C.M. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE 10" DIA.	8-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	4-0	EACH	2
2" X 6" PRESSURE TREATED LUMBER	4-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	2-0	EACH	3
2" X 6" PRESSURE TREATED LUMBER	2-0	EACH	2
1/2" DIA. MACHINE BOLTS WITH NUTS	1-4	EACH	10
1/2" DIA. WASHERS		EACH	20

REFERENCE: GUIDE PLAN NO. 4.0

NOTES:

- HAND OR MACHINE TAMP BACKFILL THOROUGHLY AROUND FOOTINGS AND COLUMNS.

TIMBER PIPE SUPPORT

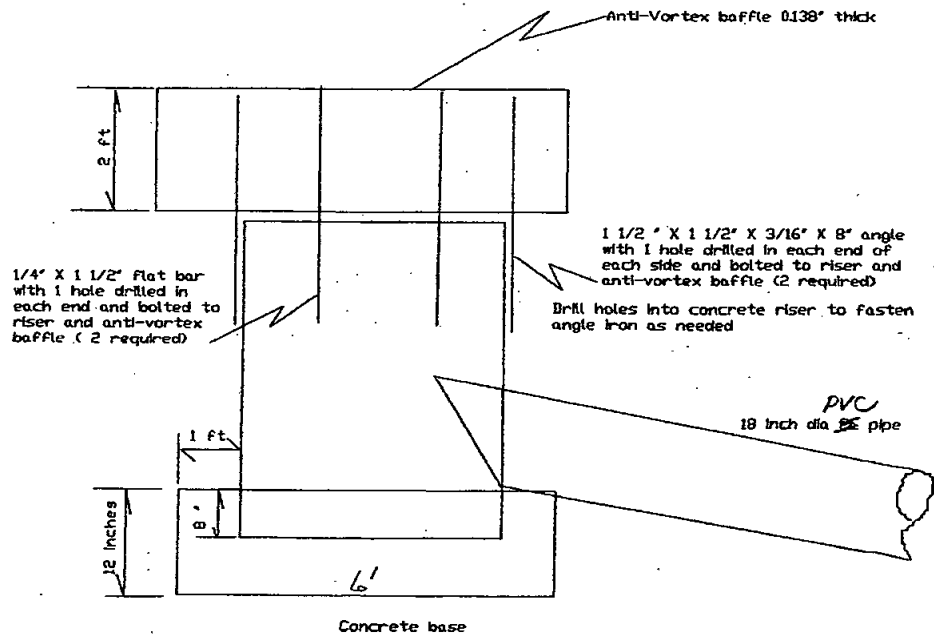
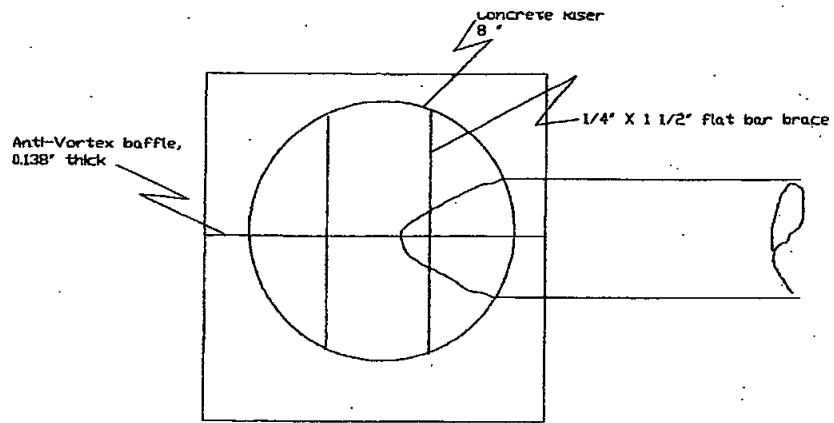
OPERATOR: Circle Bar Ranch

CONSERVATION DISTRICT: _____

Designed _____ Drawn _____ Traced _____ Checked _____	Date _____ Approved By _____ Title _____ Date _____ Sheet _____ of _____ Drawing No. _____
--	---

JOB PLAN NO. 4.0

Anti-Vortex for Concrete Riser



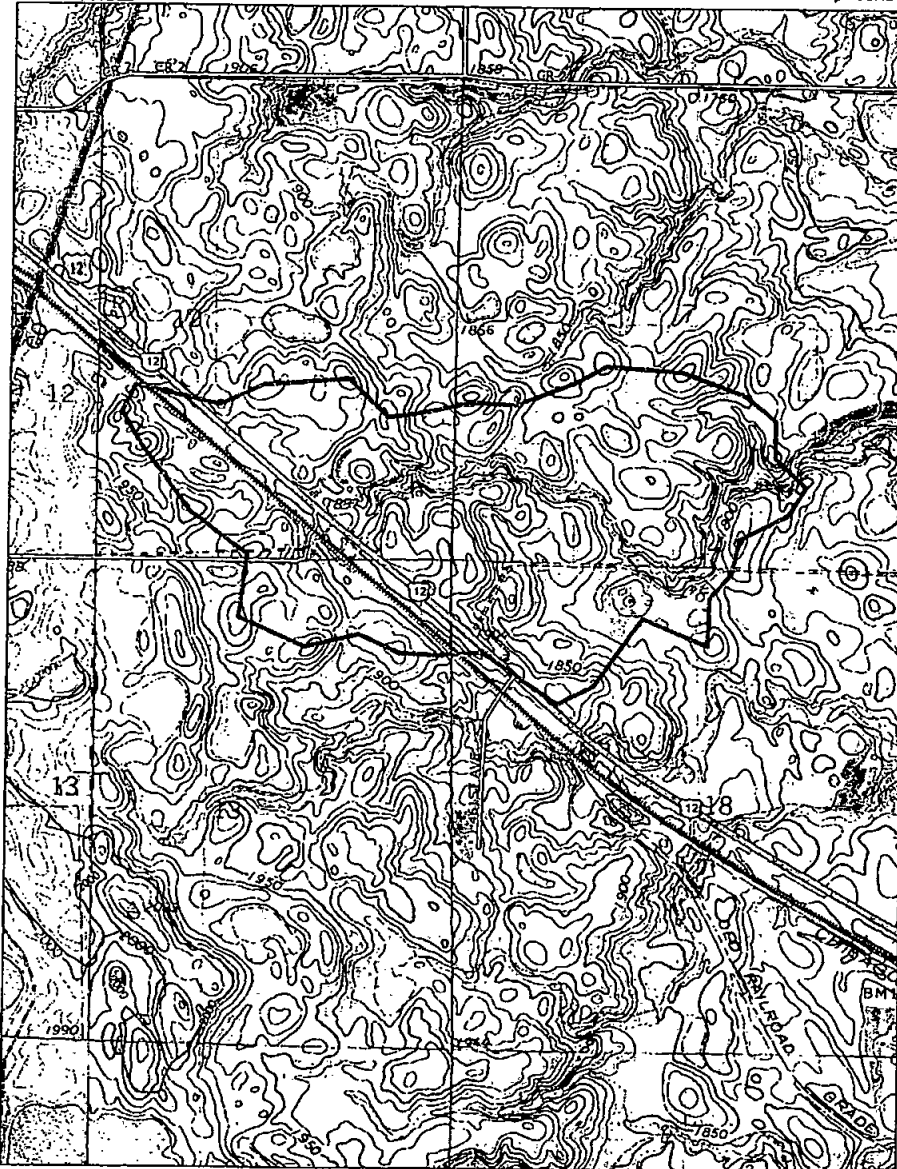
Circle Bar Ranch

DK-2

UNITED STATES DEPARTMENT OF THE INTERIOR

DELOMME

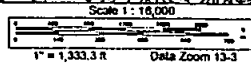
Topo USA® 8



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www.delorme.com



1*****
 SITES XEQ 06/22/2013 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
 VER 2005.1.05 (USER MANUAL - DATED DECEMBER 2005)
 TIME 13:06:02

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

SITES 01/01/2005 Circle Bar Ranch 0.8828125 H5
 SAVMOV 0 101
 SAVMOV 101 1 1
 * SE Sec 7, T121N, R50W
 STRUCTURE
 79 0
 97 4.8
 99 5.7
 ENDTABLE
 WSDATA 5A1 AC 63 565 14407 8.6
 PDIRECT 2.5 4.40
 POOLDATA ELEV 95.5 95.5 79 79 SC
 PSINLET 1 12.56
 PSDATA 1 92 18 .01 80
 ASDATA 41 250 50 2 .1 2
 ASINSURF 41 .035
 ASINLET 41 0.0 80 0.0 3
 180 10
 ENDTABLE
 ASEXSURF 41 .035
 .65 0
 3
 2 0
 .02
 ENDTABLE
 ASEXIT 41 N 150
 BTMWIDTH FEET 40
 GRAPHICS I
 GO, DESIGN HL TYPE2 24 TYPE2378 24
 SAVMOV 2 101 1
 ENDJOB

1SITES XEQ 06/22/2013 ----- COMMENT PAGE -----
 VER 2005.1.05 Circle Bar Ranch WSID =

SE Sec 7, T121N, R50W

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

***** MESSAGE - ALTERNATE SUBWATERSHED ID (A) 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 06/22/2013
VER 2005.1.05
TIME 13:06:02

Circle Bar Ranch
SITE = S 1

PASS= 1
WSID=
SUBW= A
PART= 1

***** BASIC DATA *****
CLIMATE AREA - NOT DEFINED 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	
2.50	0.00	0.00	4.40	
WSDATA - CN	DA-SM	TC/L	-/H	ORF
63.00	0.88	14407.00	8.60	0.00
SITEDATA- PERM POOL	CREST PS	FP SED	VALLEY FL	378?
95.50	95.50	0.00	79.00	YES
BASEFLOW	INITIAL EL	EXTRA VOL	SITE TYPE	
0.00	0.00	0.00	DESIGN	
PSDATA - NO. COND	COND L	DIA/W	-/H	
1.00	92.00	18.00	0.00	
PS N	KE	WEIR L	TW EL	
0.010	1.00	12.56	80.00	
2ND STG	ORF H	ORF L	START AUX.	
0.00	0.00	0.00	0.00	
ASCRESTS - AUX.1	AUX.2	AUX.3	AUX.4	AUX.5
0.00	0.00	0.00	0.00	0.00
AUX.DATA - REF.NO.	RETARD. Ci	TIE STATION	INLET LENGTH	
41	0.00	250.00	50	
AUX.DATA - INLET N	SIDE SLOPE	EXIT N	EXIT SLOPE	ACTUAL AUX?
0.035	2.00	0.035	0.100	NO
BTM WIDTH - BW1	BW2	BW3	BW4	BW5
ft 40.00	0.00	0.00	0.00	0.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
XEQ 06/22/2013 Circle Bar Ranch WSID=
VER 2005.1.05 SUBW= A
TIME 13:06:02 SITE = S 1 PASS= 1 PART= 2

MESSAGE ---- Climatic Index changed from 0.0 to 1.0 for this run.

PERM POOL	95.50 FT	36.3 ACFT	4.40 AC	0.0 CFS
CREST PS	95.50 FT	36.3 ACFT	4.40 AC	0.0 CFS

SED ACCUM 95.50 FT 36.3 ACFT 4.40 AC 0.0 CFS
 START ELEV 95.50 FT 36.3 ACFT 4.40 AC 0.0 CFS

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

NRCS-PSH D= 24.00 HR P= 2.50 IN Q= 0.24 IN DA= 0.88 SM
 TC= 2.45 HR CN= 63.00 VOL= 11.7 ACFT

PEAK = 23.4 CFS, AT 14.0 HRS.

ROUTED RESULT - HYD TYPE EMAX VOL-MAX AMAX QMAX
 NRCS-PSH 96.50 FT 40.8 ACFT 4.67 AC 33.3 CFS

PS STORAGE 4.5 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST 95.50 FT 36.3 ACFT 0.00 CFS
 CONTROL IS 0.000 DETENTION STORAGE

DRAWDOWN TIME = 0.96 DAYS, TO 0.0 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	95.50	0.00	0.00	0.00	36.30	4.40
2	95.72	4.14	4.14	0.00	37.29	4.46
3	95.95	11.71	11.71	0.00	38.30	4.52
4	96.17	21.52	21.52	0.00	39.32	4.58
FULL CONDUIT FLOW, ELEV = 96.40 FT						
5	96.40	33.13	33.13	0.00	40.36	4.64
6	96.72	33.51	33.51	0.00	41.88	4.73
7	97.05	33.84	33.84	0.00	43.43	4.82
8	97.37	34.16	34.16	0.00	45.03	4.97
9	97.70	34.48	34.48	0.00	46.67	5.11
10	98.02	34.79	34.79	0.00	48.35	5.26
11	98.35	35.10	35.10	0.00	50.09	5.41
12	98.67	35.41	35.41	0.00	51.87	5.55
13	99.00	35.72	35.72	0.00	53.70	5.70

1SITES -----
 XEQ 06/22/2013 Circle Bar Ranch WSID=
 VER 2005.1.05 SUBW= A
 TIME 13:06:02 SITE = S 1 PASS= 1 PART= 3

AUX. CREST 96.50 FT 40.8 ACFT 4.67 AC 33.3 CFS

PS STORAGE 4.5 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 95.50 FT 36.3 ACFT 4.40 AC 0.0 CFS

EFFECTIVE HEIGHT(H)= 17.5 FEET, PRODUCT= 715. (H * STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-FBH D= 24.00 HR P= 4.40 IN Q= 1.14 IN DA= 0.88 SM
 TC= 2.45 HR CN= 63.00 VOL= 54.0 ACFT

PEAK = 157.0 CFS, AT 13.5 HRS.

***** WARNING - UPSTREAM END OF CREST 170. IS UPSTREAM OF THE
 FIRST GROUND POINT 200. STATION.

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

RATING TABLE NUMBER 2						
	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	95.50	0.00	0.00	0.00	36.30	4.40
2	95.72	4.14	4.14	0.00	37.29	4.46
3	95.95	11.71	11.71	0.00	38.30	4.52
4	96.17	21.52	21.52	0.00	39.32	4.58
FULL CONDUIT FLOW, ELEV = 96.40 FT						
5	96.40	33.13	33.13	0.00	40.36	4.64
6	96.41	33.20	33.20	0.00	40.42	4.64
7	96.42	33.21	33.21	0.00	40.48	4.65
8	96.44	33.22	33.22	0.00	40.54	4.65
9	96.45	33.24	33.24	0.00	40.60	4.65
10	96.46	33.25	33.25	0.00	40.66	4.66
11	96.47	33.26	33.26	0.00	40.71	4.66
12	96.49	33.27	33.27	0.00	40.77	4.66
13	96.50	33.29	33.29	0.00	40.83	4.67
14	96.62	36.47	33.41	3.05	41.42	4.70
15	96.75	39.58	33.54	6.04	42.01	4.73
16	96.97	49.73	33.76	15.96	43.08	4.79
17	97.25	74.47	34.04	40.43	44.41	4.91
18	97.75	146.93	34.53	112.41	46.93	5.14
19	98.38	270.65	35.13	235.53	50.23	5.42
20	99.00	430.39	35.72	394.67	53.70	5.70

SUMMARY OF AUXILIARY SPILLWAY SURFACE CONDITIONS USED IN COMPUTATIONS BY REACH

REACH	FROM STA (ft)	TO STA (ft)	SLOPE (%)	RETARDANCE CURVE INDEX@	VEGETAL COVER FACTOR	MAINT. CODE	ROOTING DEPTH (ft)	REACH LOCATION *
1	170.	250.	0.0	0.035	**	**	**	CREST
2	250.	400.	10.0	0.035	0.65	3	2.0	EXIT !

@ The program interprets retardance curve index entries of less than 1 as Manning's n values.
 * Upper case indicates a reach of constructed spillway channel.
 ** The program does not use vegetal cover factor, maintenance code, and rooting depth for inlet and crest reaches in computations.
 ! Reach 2 used in computing exit channel velocities.

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 96.50 FT.

DRAWDOWN (DDT) TEST 95.50 FT 36.3 ACFT 0.00 CFS
 CONTROL IS 0.000 DETENTION STORAGE

DRAWDOWN TIME = 0.78 DAYS, TO 0.0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
NRCS-FBH	40.0	97.65	46.4	5.1	1.15	5.6

***** NOTE -- ACTUAL Hp OF 1.15 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS DISCHARGE =	Q-PS 34.4	Q-AUX. 98.3	Q-TOT. 132.8
---------------------------	--------------	----------------	-----------------

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-Sc FT/FT	25% OF Q Sc FT/FT
AUXILIARY SPILLWAY ---	0.57	4.22	0.022	0.030

EROSIONALLY EFFECTIVE STRESS FOR STABILITY ANALYSIS OF AUX. EXIT CHANNEL
 (Refer to Ag. Handbook 667, Chapt. 3, for allowable stresses.)
 Aux. Spillway Discharge = 98. cfs; Bottom Width = 40. ft

REACH NO.	FROM STA	TO STA	SLOPE %	MANNING'S n	VELOCITY ft/s	TOTAL STRESS lb/ft^2	EFFECTIVE STRESS lb/ft^2
2	250.	400.	10.00	0.035	6.70	2.25	1.368

AUXILIARY SPILLWAY DURATION FLOW = 7.1 HOURS
 ATTACK, OE/B = 0.5 ACFT/FT

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

EXIT CHANNEL FLOW SUPERCRITICAL: MAX VELOCITY= 6.7 FT/SEC
 EXIT SLOPE = 0.100 FT/FT
 FLOW DEPTH = 0.4 FT

>>>> NHCP378 RUN - MINIMUM FLOW IN AUX. SPILLWAY FROM TR60
 USING FORMULA WITHOUT 200 CFS MINIMUM LIMIT (223. CFS).

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
MIN. AUX.	40.0	98.31	49.9	5.4	1.81	9.1

2 HYDROGRAPHS ROUTED AT LOWEST SITE.

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

SITES,...COMPUTATIONS COMPLETE

>>>	SITE ID	SUBWS ID	SUBWS DA (SQ MI)	CURVE NO.	TC (HRS)	TOTAL DA (SQ MI)	TYPE DESIGN	STRUC CLASS	<<<
	S 1	A	0.88	63.	2.45	0.88	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	18.0	96.5	40.0	2.2	98.7	0.	0.	6.7	MIN. AUX.

* INTEGRITY DIST. AND EXIT VEL. ARE BASED ON THE ROUTED HYDROGRAPH
AND WILL NOT RELATE TO THE MAX. ELEV. (TOP OF DAM),
WHICH IS SET BY MINIMUM DESIGN CRITERIA.

SITES.....SUMMARY TABLE 1 COMPLETED.

NRCS SITES . VERSION 2005.1.05 ,01/01/2005
FILES

INPUT = C:\circlebar\48-18pvc.D2C
OUTPUT = C:\circlebar\48-18pvc.OUT
DATED 06/22/2013 13:06:02

GRAPHICS FILES GENERATED

OPTION "L" = C:\circlebar\48-18pvc.DRG DATED 06/22/2013 13:06:02

OPTION "P" = C:\circlebar\48-18pvc.DHY DATED 06/22/2013 13:06:02

OPTION "E" = C:\circlebar\48-18pvc.DEM DATED 06/22/2013 13:06:02

Water Permit Application No. 7862-3
Circle Bar Ranch, Inc.

Top of Dam Elev. - 99
2nd Spillway Elev. - 97
P. Spillway Elev. - 95.5
Dis Emb Toe Elev. - 77.2

Ht. = 21.8 ft.

Cat. 3 - Low Hazard Dam

Normal Storage Capacity - 36 Ac.-Ft
Int. Storage Capacity - 43
Max. Storage Capacity - 54

Int. Capacity x Eff Ht. = $43 \times 17.5 = 753 < 3000$ $\therefore$ 25 yr
Minimum Spillway Design

From USGS NRI 98-4055 "Tech. for Est. Peak Flows ... in SD"
DA = 565 Ac = 0.88 mi² Region A P_{II} = 1.0

$$\begin{aligned} Q_5 &= 218 CA^{.513} P_{II}^{.480} \\ &= 218 (0.88)^{.513} (1)^{.480} \\ &= 218 (.9365) (1) \\ &= \underline{204 \text{ cfs}} \end{aligned}$$

$$\begin{aligned} Q_{100} &= 362 CA^{.521} P_{II}^{.447} \\ &= 362 (0.88)^{.521} (1)^{.447} \\ &= 362 (.9356) (1) \\ &= \underline{340 \text{ cfs}} \end{aligned}$$

2nd Spillway Capacity

$$\begin{aligned} Q &= CLH^{3/2} \quad C = 2.6 \\ &= 2.6 (40)^{1.5} \quad L = 40 \\ &= 295 \text{ cfs} \quad H = 2 \end{aligned}$$

Section 74:02:08:09

NRCS Annual Yield

DA = 565 CN = 63 ISO = 2 1/2

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

$$\begin{aligned} 80\% \text{ chance} &= 0.09 \\ 0.09 \times 565^{1/2} &= \underline{4.5 \text{ Ac.-Ft}} \end{aligned}$$

$$\begin{aligned} 50\% \text{ chance} &= 0.26 \\ 0.26 \times 565^{1/2} &= \underline{12 \text{ Ac.-Ft}} \end{aligned}$$

$$\begin{aligned} 10\% \text{ chance} &= 1.5 \\ 1.5 \times 565^{1/2} &= \underline{80 \text{ Ac.-Ft.}} \end{aligned}$$



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

August 6, 2013

Circle Bar Ranch, Inc.
c/o William O'Farrell
46630 146st St.
Marvin, SD 57251

Dear Mr. O'Farrell:

We have reviewed the plans and specifications for your dam repair project located in the SW ¼ SE ¼ of Section 7-T121N-R50W, in Grant County. The plans and specifications for the project are approved. Approval of the plans and specifications does not authorize repair of the dam. The repair of the dam may not begin until Water Permit No. 7862-3 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 Circle Bar Ranch Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 21.8 feet and a normal storage capacity of 36 acre-feet and a maximum storage capacity of 54 acre-feet.

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

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineer IV
for Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

c: Thomas Wickstrom, USFWS



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7862-3, Circle Bar Ranch Inc.**

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. 7862-3, Circle Bar Ranch Inc., c/o William O'Farrell, 46630 146th Street, Marvin SD 57251.

The Chief Engineer is recommending APPROVAL of Application No. 7862-3 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. 7862-3 authorizes an impoundment with a storage capacity of 36 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.

Jeanne Goodman, Chief Engineer
August 6, 2013

REPORT ON
WATER PERMIT APPLICATION No. 7862-3
Circle Bar Ranch Inc.
c/o William O'Farrell
July 23, 2013

Water Permit Application No. 7862-3 has been filed by Circle Bar Ranch, Inc., c/o William O'Farrell to appropriate 36 acre-feet of water from runoff by repairing an existing dam located in the SW ¼ SE ¼ of Section 7-T121N-R50W, in Grant County. This application also requests impoundment of sufficient water to maintain water to the outlet elevation. The water will be used for fish and wildlife propagation purposes, recreational use and livestock water purposes.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The dam has been designed by Konechne Engineering. The plans and specifications have been reviewed and will be approved; however, repair of the dam cannot begin until Water Permit Application No. 7862-3 is approved.

The dam will be 21.8 feet high with a normal storage capacity of 36 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 54 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

The dam has a drainage area of 565 acres or 0.88 square miles. The dam is designed to have a 48 inch diameter concrete riser with an 18 inch diameter PVC barrel with 3.5 feet of freeboard as the primary spillway and a 40 foot wide earthcut secondary spillway with 2.0 feet of freeboard. A 25 year frequency event produces a peak runoff of approximately 200 cfs and a 100 year frequency event produces a peak runoff of approximately 340 cfs. The 40 foot wide earthcut secondary spillway will have a capacity of approximately 300 cfs.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is 4.5 acre-feet; a 50 percent chance of occurrence, or 1 out of 2 years, is 12 acre-feet; and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 80 acre-feet.

The Circle Bar Ranch Dam will be located in the SE ¼ of Section 7-T121N-R50W on an unnamed tributary of the North Fork of the Whetstone River, about 12 miles upstream of the confluence of the unnamed tributary and the Whetstone River. There are two existing Water Permits for dams located on the unnamed tributary within one mile of the proposed repair project. Both permits were issued to Marie O'Farrell. Water Permit No. 6635-3 is for a dam with a normal storage capacity of 34.6 acre-feet, and Water Permit No. 6723-3 is for a dam with a normal storage capacity of 32 acre-feet. The two downstream dams have additional drainage area, and all three dams have existed together for a number of years. Approval of Water Permit Application No. 7862-3 should not have any adverse effect on the downstream dams.

Conclusions:

1. Water Permit Application No. 7862-3 should be approved since unappropriated water is available, and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for domestic use should be a qualification on Water Permit Application No. 7862-3.



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

RECEIVED

} SS.

WATER RIGHTS PROGRAM

**NOTICE OF APPLICATION
NO. 7862-3 to Appropriate Water**

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7862-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E. Capitol, Pierre, SD, 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 26, 2013.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published once at an approximate cost of \$24.23.

stated in this affidavit; that the advertisement headed Notice of
Application No. 7862-3 to Appropriate
Water

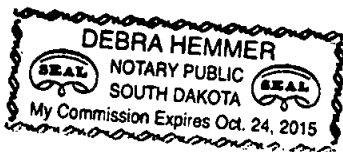
August 14 2013	20
20	20
20	20

Ann Buchscherer

Subscribed and sworn to before me this 15th day of August 2013

Debra Hemmick

Notary Public, Grant County, South Dakota



Publication Fee	\$ <u>24.23</u>
Notarial Fee	\$ <u> </u>
Total	\$ <u>24.23</u>

RECEIVED

AUG 22 2013

Form 8

WATER RIGHTS
PROGRAM

DEPARTMENT
OF ENVIRON-
MENT AND
NATURAL
RESOURCES

NOTICE OF APPLICATION
NO. 7862-3 to Appropriate
Water

Notice is given that Circle Bar Ranch, Inc., c/o William O'Farrell, 46630 146th St, Marvin SD 57251 has filed an application for a water permit to impound 36 acre-feet of water from runoff by repairing an existing dam located in the SW 1/4 SE 1/4 Section 7 with water impounded in the W 1/2 SE 1/4 Section 7; all in T121N-R50W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation, recreational use and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7862-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the approximate cost of \$55.25. (August 14, 2013)

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Codington) SS

I, Monica K. Saathoff

certify that the attached printed Notice was taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was published

in the newspaper on the following date:

August 14th, 2013

Cost of Printing 60.19

Monica K Saathoff
(Signature)

Bookkeeper

(Title)

August 14th, 2013

(Date Signed)



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

August 6, 2013

Grant County Review
PO Box 390
Milbank SD 57252

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7862-3 to Appropriate Water. Please publish the notice once on August 14, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Circle Bar Ranch Inc, c/o William O'Farrell, 46630 146th St, Marvin SD 57251 (Ph # 605-432-6439).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

August 6, 2013

Public Opinion
PO Box 10
Watertown SD 57201

ATTENTION: Legal Public Notice

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

August 6, 2013

Circle Bar Ranch Inc
William O'Farrell
46630 146th St
Marvin SD 57251

Dear Mr. O'Farrell:

Water Permit Application No. 7862-3 for fish, wildlife, recreational and livestock watering use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Grant County Review printed at Milbank SD (Ph # 605-432-4516) and the Public Opinion printed at Watertown SD (Ph # 605-886-6901). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
enclosures

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

Instruction to Newspaper - Publish the Notice on August 14, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7862-3 to Appropriate Water

Notice is given that Circle Bar Ranch, Inc., c/o William O'Farrell, 46630 146th St, Marvin SD 57251 has filed an application for a water permit to impound 36 acre-feet of water from runoff by repairing an existing dam located in the SW 1/4 SE 1/4 Section 7 with water impounded in the W 1/2 SE 1/4 Section 7; all in T121N-R50W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation, recreational use and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7862-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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Published once at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

SEP 27 2013

Circle Bar Ranch Inc
William O'Farrell
46630 146th St
Marvin SD 57251

Dear Mr. O'Farrell:

Enclosed is Water Permit No. 7862-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Permit No. 7862-3
Minnesota - Whetstone - 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, **November 19, 2013**, made a thorough examination of the water use system constructed by **Circle Bar Ranch, Inc., c/o William O'Farrell of 46630 146th St., Marvin, SD 57251** holder of Permit No. **7862-3**, bearing the priority of **July 11, 2013** authorizing the storage of **36** acre-feet of the waters of **runoff** for **fish and wildlife propagation, recreation and livestock water** purposes, in **Grant** County.

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

A. Works used to divert the water:

A 21.8 foot high earthen dam with a normal storage capacity of 36 acre-feet of water.

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

N/A

C. Works used to apply water to beneficial use:

A 21.8 foot high earthen dam with a normal storage capacity of 36 acre-feet of water.

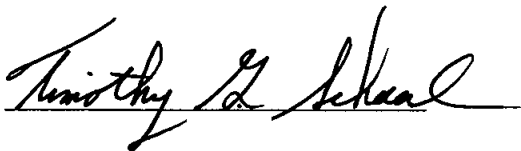
The system is in the following condition **good**. The point of diversion is located : **1000 ft. north and 1800 ft. west of the SE corner of Sec. 7-T121N-R50W, SW ¼ SE ¼, (Lat. 45.30068, Long. -96.971836)**. The works are capable of storing **36** acre-feet of water which is to be used for **fish and wildlife propagation, recreation and livestock water**. Water has been put to beneficial use to the maximum extent as follows:

A 21.8 foot high earthen dam with a normal storage capacity of 36 acre-feet of water.

and the license should be issued for **36** acre-feet of storage.

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

Exceptions to compliance are: **none** Date Report Completed: **January 8, 2014**



Timothy G. Schaal, P.E.
Engineer IV
SD DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT No. 7862-3

DATE OF INSPECTION: November 19, 2013

**NAME & ADDRESS OF PERMIT HOLDER: Circle Bar Ranch, Inc., c/o William O'Farrell,
466630 146th St. Marvin, SD 57251**

**DIVERSION POINT LEGAL LOCATION: 1000 ft. north and 1800 ft. west of the
SE corner of Sec. 7-T121N-R50W, SW ¼ SE ¼, (Lat. 45.30068, Long. -96.971836)**

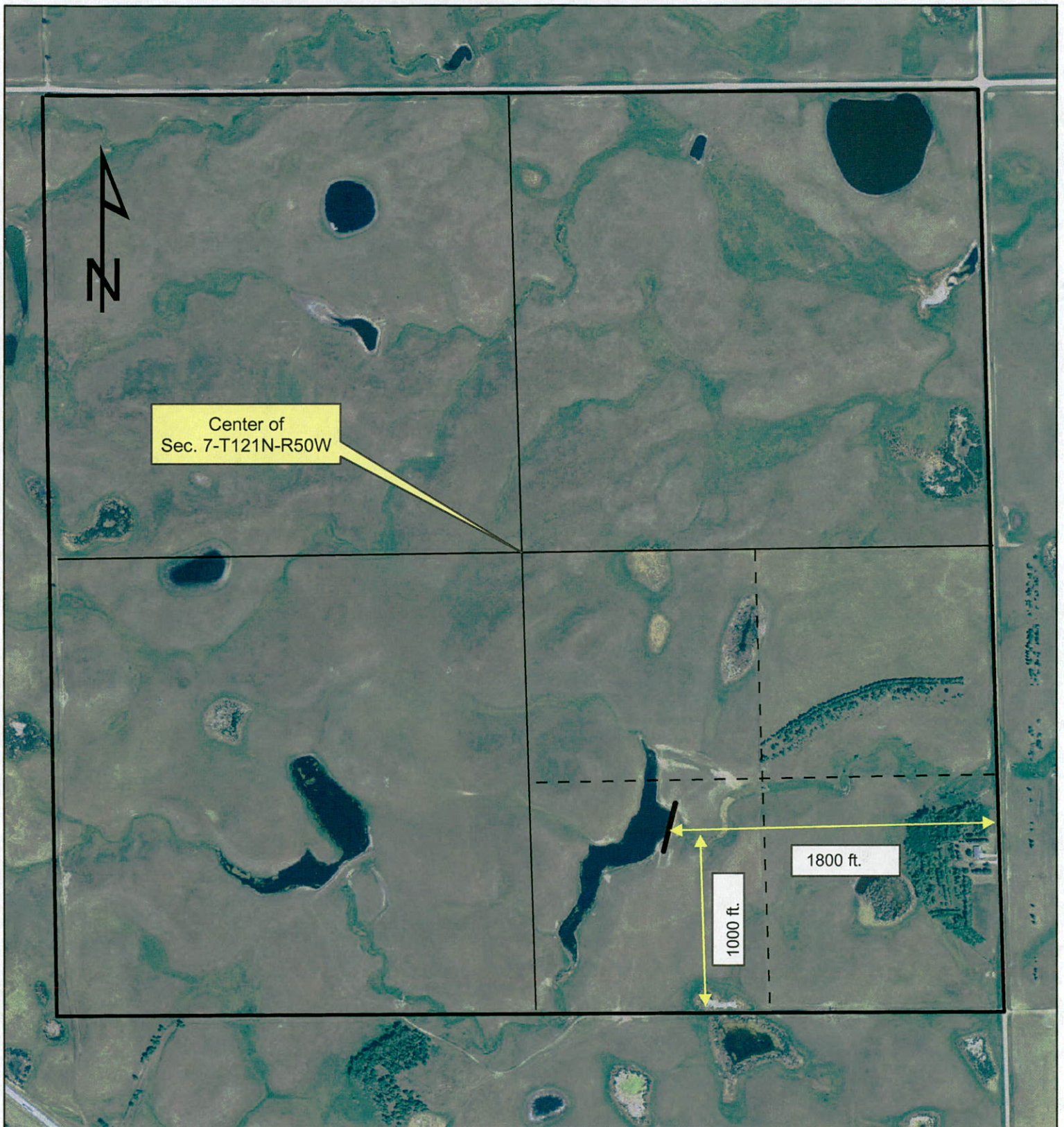
DAM INFORMATION:

- 1) Height to crest 21.8 feet
- 2) Height to primary spillway 18.3 feet
- 3) Height to secondary spillway 19.8 feet
- 4) Crest width 12 feet
- 5) Crest length 158 feet
- 6) Spillway length XXX feet
- 7) Spillway width 40 feet
- 8) Approx. storage (Normal) 36 acre-feet
- 9) Approx. storage (Maximum) 54 acre-feet
- 10) Date constructed: 2013

PERMIT QUALIFICATIONS AND REGULATIONS:

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

Water Permit Application No. 7862-3



0 0.25 0.5 1 Miles



Timothy G. Schaal

Timothy G. Schaal, P.E.
Engineer IV
SD DENR, Water Rights Program

1/8/14



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



JAN 29 2014

7862-3

William O'Farrell
Circle Bar Ranch Inc
46630 146th St
Marvin SD 57251

Dear Mr. O'Farrell:

Enclosed is Water License No. 7862-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7862-3

(1) Circle Bar Ranch, Inc., 46630 146th St, Marvin SD 57251 made Application No. 7862-3, July 11, 2013 for a water permit to impound 36 acre feet of water from runoff in a dam located in Grant County, South Dakota and used for fish & wildlife propagation, recreation and domestic livestock water purposes. Permit No. 7862-3, with a priority date of July 11, 2013 was approved August 26, 2013 and issued to the applicant for impoundment of water with construction of the storage dam to be completed on or before August 26, 2018 and the application to beneficial use of water on or before August 26, 2022.

(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 36 acre feet of water beneficial use with sufficient water annually to maintain the water level to the outlet elevation.

The location of the storage dam (spillway) is 1,000 feet north and 1,800 feet west of the SE corner of Section 7, T121N, R50W (SW ¼ SE ¼). Water is impounded in the W ½ SE ¼ Section 7.

(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 Circle Bar Ranch, Inc., 46630 146th St, Marvin SD 57251 the holder and/or owner of Water Right No. 7862-3 is issued a license to impound 36 acre feet water from runoff in a storage dam with a priority date of July 11, 2013 from the location specified in (2) of this license. The water is used for fish and wildlife propagation, recreation and domestic livestock watering.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7862-3 and subject to the following qualifications:

- Water Right No. 7862-3 authorizes a dam with storage capacity of 36 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be bypassed.



Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JAN 29 2014

date

