

WATER PERMIT NO. 7270-3

Name of Applicant: Mike Kjellsen

Address: 20993 455th Ave, Arlington SD 57121

Phone: 605 695-7164

Amount of Water Claimed: ~~338~~ AF 241 Total Acres: na

Source of Water Supply: runoff

Water to be used for: fish & wildlife propagation

County: Brookings

Type of Waste Disposal System: na

Location: ½ mile southeast of Arlington

PRIORITY Date Received: 9-15-11

Application/License Fee: \$1050

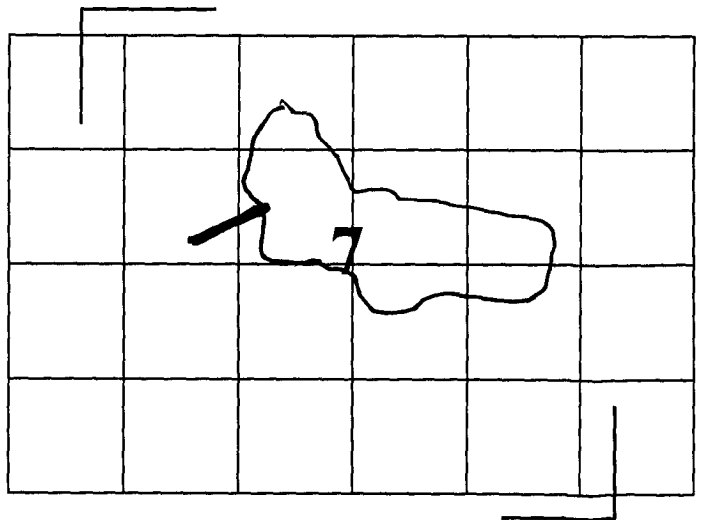
Corrected Application Received: _

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: S ½ NW ¼ Sec 7-T110N-R52W

Water Impounded: E ½ NW ¼, S ½ NE ¼, N ½
SE ¼ Sec 7-T110N-R52W



Depth of Well: NA

Well Driller:

Remarks:

Type of Map: aerial

Prepared by: Boyd Schultz, PE

Reviewed and the Number Assigned on: XX

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

SD 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>7270-3</u>	(office use only) Hydrologic Unit <u>10170201</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Brookings Register PO Box 177</u>	
	<u>605-692-6271</u>	<u>57006</u>

RECEIVED
SEP 15 2011
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	

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.)

- Name of Applicant Mike Kjellsen Phone 605-695-7164
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 20993 455th Ave Arlington SD 57212
(Address) (City) (State) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 241 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Runoff from watershed
- Location of point of diversion (example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W) County Brookings
Brookings County, Section 7, T110N, R52W (S 1/2 NW 1/4) water impaired E 1/2 NW 1/4
S 1/2 NE 1/4 N 1/2 SE 1/4 S 7 T110N
R52W
- County or counties where water will be used Brookings
- Annual period during which water is to be used year round 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)
This project is a wetland restoration for a CRP contract. The restoration will be done using a rock gabian structure or rock rip rap (see attached plans).

STATE OF SOUTH DAKOTA)
County of Brookings) SS

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

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

Applicant's signature Michael Kjellsen

Subscribed and sworn to before me this 14th day of September 20 11

My commission expires
August 17, 2015

[Signature]
Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 7270-3**

Date of first receipt of application September 15, 2011.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7270-3 to Mike Kjellsen, 20993 455th Ave, Arlington SD 57212 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. 7270-3 authorizes impoundment of 241 acre-feet of water from runoff by constructing a ditch plug located in the S 1/2 NW 1/4 Section 7 with water impounded in the E 1/2 NW 1/4, S 1/2 NE 1/4, N 1/2 SE 1/4 Section 7; all in T110N-R52W.
2. The water appropriated shall be used for the purpose of fish and 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. 7270-3 is November 21, 2011.
5. The date from which applicant may claim right is September 15, 2011.
6. One-fifth of the construction is to be completed on or before May 21, 2013.
7. All construction is to be completed on or before November 21, 2016.
8. Water is to be put to beneficial use on or before November 21, 2020.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

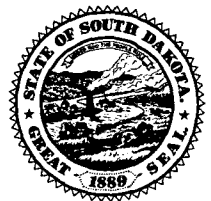
1. Water Permit No. 7270-3 authorizes a dam with a storage capacity of 241 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

By: Garland Erbele

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

DEC 01 2011
date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ 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 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:

Dave Konechne
104 Capitol Hill Drive
Pierre, SD 57501-2304

b) Freeboard N/A

c) Crest Width 317

Crest Length 12

d) Height 6

e) Primary Outlet Capacity 137 cfs

If pipe, diameter _____

f) Secondary Spillway Capacity N/A

Spillway Width N/A

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

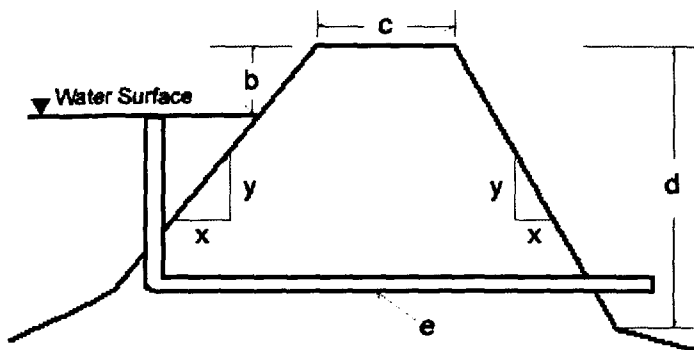
Upstream 3:1

Downstream 3:1

h) Surface Area of Impoundment 100.7

i) Storage 338.0 Acre Feet

j) Drainage Area Above Dam 369.0 Acres



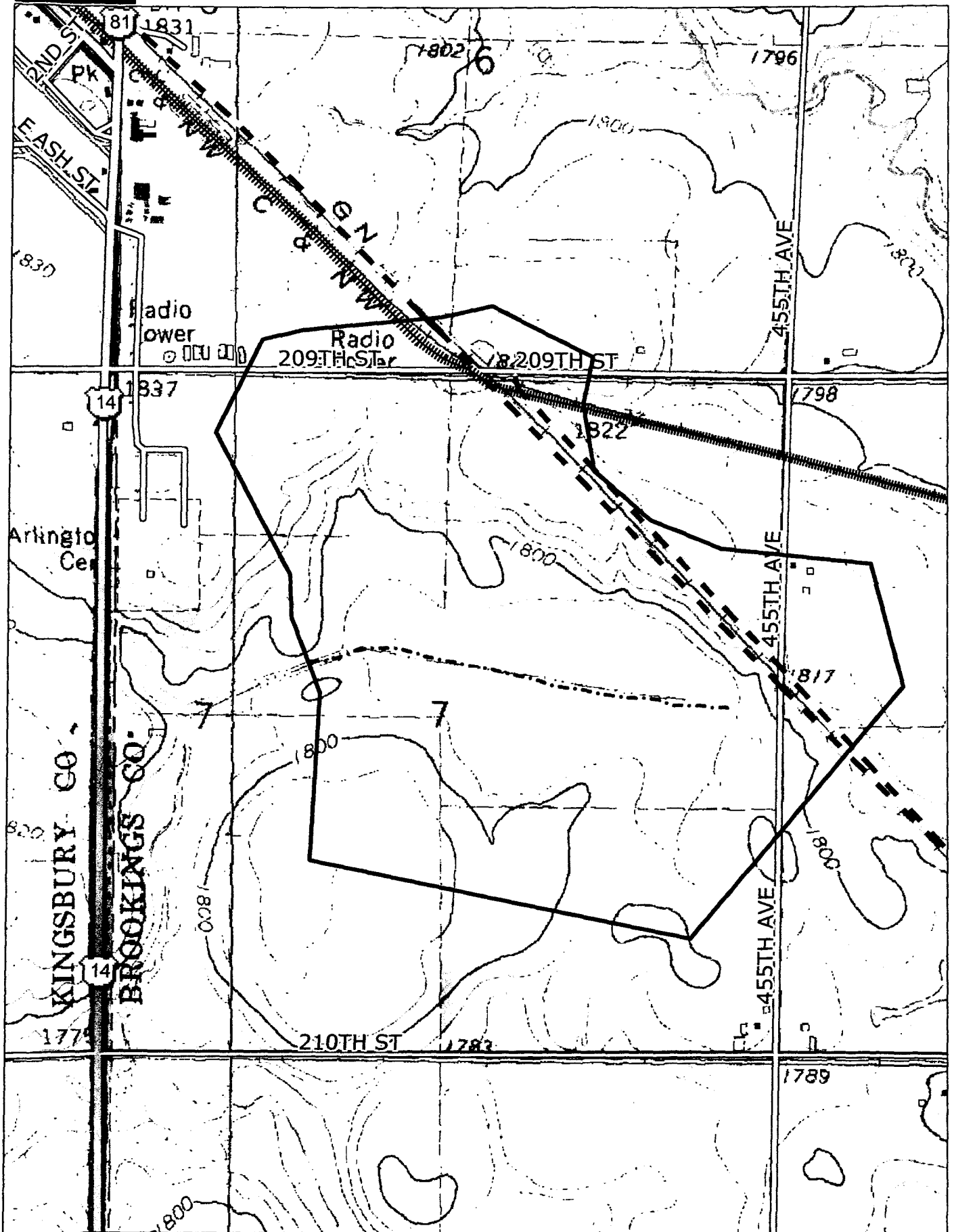
Mike Kjellsen property

T110 R52 Sec 7

Ditch Plug

Chris Bessler property

Map Prepared
By
Bob Smith
for
Bob Smith



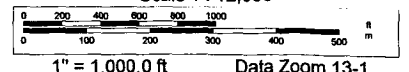
Data use subject to license.

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Scale 1 : 12,000



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/15, 2011

RECEIVED OF Michael I Kjellser 21089 460th Ave Volga SD 57017

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

Fee for Application for Permit No. <u>7270-3</u> to Appropriate Water, to construct and to put water to beneficial use	850	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>7270-3</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	1050 00

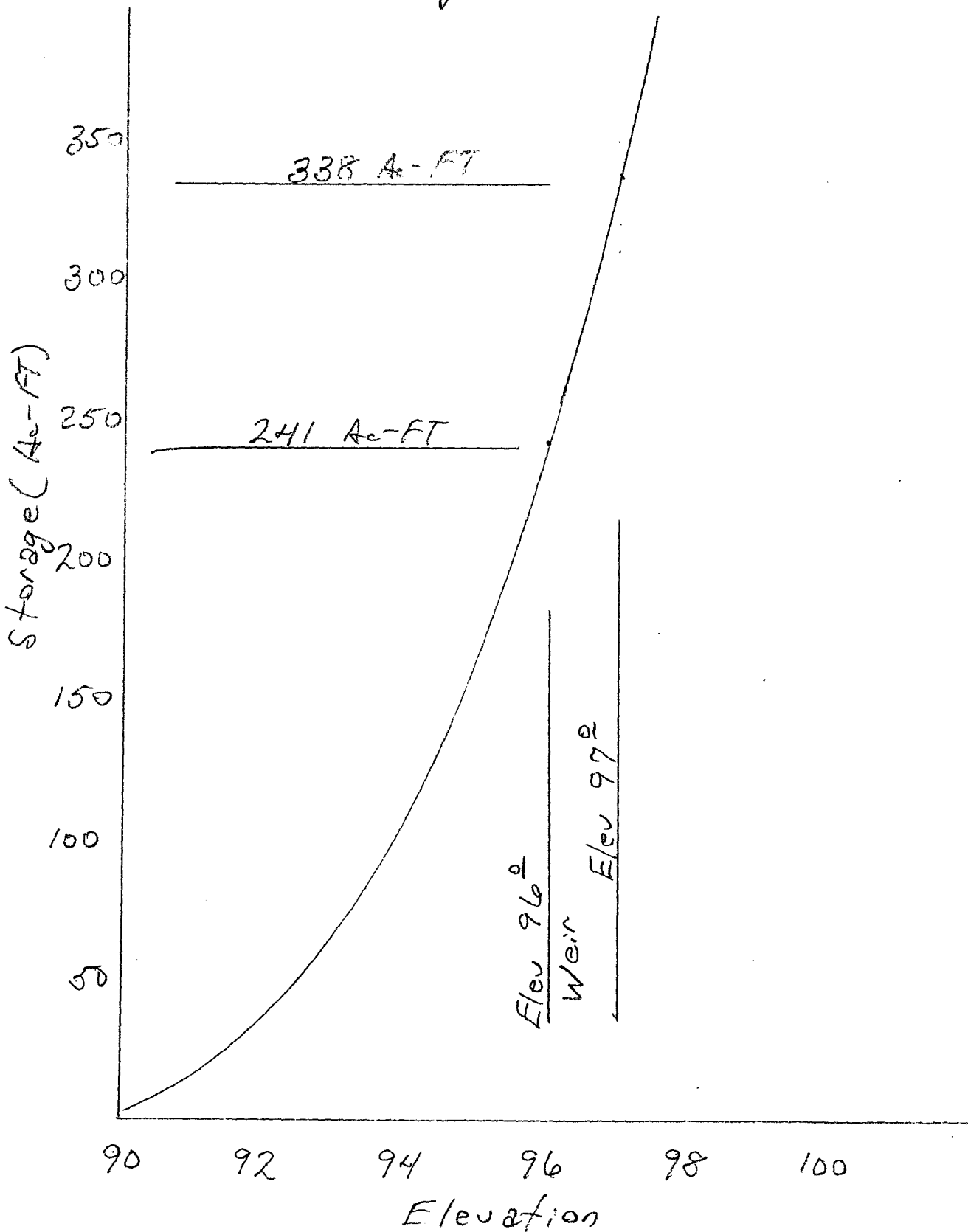
No. **05031**

By

Charles J. Erdle
Chief Engineer

COMPUTATION SHEET

BY	DATE	PROJECT	SHEET ____ OF ____
CHKD BY	DATE	FEATURE <i>Mike Kjellsen</i>	
DETAILS <i>Stage - Storage</i>			



```

1*****
SITES XEQ 09/05/2011    WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
VER 2005.1.04          (USER MANUAL - DATED DECEMBER 2005)
TIME 17:21:11

```

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

```

SITES      01/01/2005      Mike Kjellsen sec7, T110N, R520.5765625 H5
SAVMOV     0      101
SAVMOV     101    1
STRUCTURE

```

```

          92      0
          94      72.7
          95      85.3
          96      94
          97     100.7

```

```

ENDTABLE
WSDATA     5A1      AC 75      369      3487      2.1
PDIRECT      4.6      5.20
POOLDATA    ELEV      96      96      90      90      SR
PSINLET      1      12.56
PSDATA      1      20      10      1      .035      90
ASDATA      41 50      20      2      .05      2
ASINSURF     41      .035
ASINLET      41      0.0      0.0      20      0.0      3
          80      5

```

```

ENDTABLE
ASEXSURF    41      .035
          .86      0
          3
          2      0
          .3

```

```

ENDTABLE
ASEXIT      41      N      50
BTMWIDTH     FEET      10
GRAPHICS     I
GO,DESIGN    HL      TYPE2      24      TYPE2378  24
SAVMOV      2      101    1
ENDJOB

```

```

***** 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 09/05/2011      Mike Kjellsen sec7, T110N, R52      WSID=
VER 2005.1.04      SUBW=  A
TIME 17:21:11      SITE = S  1      PASS=  1      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	
4.60	0.00	0.00	5.20	
WSDATA - CN	DA-SM	TC/L	-/H	QRF
75.00	0.58	3487.00	2.10	0.00
SITEDATA- PERM POOL	CREST PS	FP SED	VALLEY FL	378?
96.00	96.00	0.00	90.00	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	20.00	10.00	1.00	
PS N	KE	WEIR L	TW EL	
0.035	1.00	12.56	90.00	
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	50.00	20	
AUX.DATA - INLET N	SIDE SLOPE	EXIT N	EXIT SLOPE	ACTUAL AUX?
0.035	2.00	0.035	0.050	NO
BTM WIDTH - BW1	BW2	BW3	BW4	BW5
ft 10.00	0.00	0.00	0.00	0.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
 XEQ 09/05/2011 Mike Kjellsen sec7, T110N, R52 WSID=
 VER 2005.1.04 SUBW= A
 TIME 17:21:11 SITE = S 1 PASS= 1 PART= 2

PERM POOL	96.00 FT	241.4 ACFT	94.00 AC	0.0 CFS
CREST PS	96.00 FT	241.4 ACFT	94.00 AC	0.0 CFS
SED ACCUM	96.00 FT	241.4 ACFT	94.00 AC	0.0 CFS
START ELEV	96.00 FT	241.4 ACFT	94.00 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= 4.60 IN Q= 2.13 IN DA= 0.58 SM
TC= 1.15 HR CN= 75.00 VOL= 65.4 ACFT

PEAK = 385.3 CFS, AT 12.7 HRS.

ROUTED RESULT - HYD TYPE EMAX VOL-MAX AMAX QMAX
NRCS-PSH 97.00 FT 338.7 ACFT 100.70 AC 38.9 CFS

PS STORAGE 97.4 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST 96.00 FT 241.4 ACFT 0.00 CFS
CONTROL IS 0.000 DETENTION STORAGE

TIME LIMIT REACHED = 10.00 DAYS. FLOW WAS 0.49 CFS, ELEV = 96.04

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	96.00	0.00	0.00	0.00	241.35	94.00
2	96.11	1.44	1.44	0.00	251.84	94.74
3	96.22	4.08	4.08	0.00	262.40	95.49
4	96.33	7.49	7.49	0.00	273.06	96.23
5	96.44	11.54	11.54	0.00	283.79	96.98
6	96.56	16.12	16.12	0.00	294.61	97.72
7	96.67	21.20	21.20	0.00	305.51	98.47
8	96.78	26.71	26.71	0.00	316.49	99.21
9	96.89	32.63	32.63	0.00	327.56	99.96
10	97.00	38.94	38.94	0.00	338.70	100.70

FULL CONDUIT FLOW, ELEV = 97.96 FT

1SITES

XEQ 09/05/2011 Mike Kjellsen sec7, T110N, R52 WSID=
VER 2005.1.04 SUBW= A
TIME 17:21:11 SITE = S 1 PASS= 1 PART= 3

AUX. CREST 97.00 FT 338.7 ACFT 100.70 AC 38.9 CFS

PS STORAGE 97.4 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 96.04 FT 244.9 ACFT 94.25 AC 0.5 CFS

EFFECTIVE HEIGHT(H)= 7.0 FEET, PRODUCT= 2371. (H * STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-FBH D= 24.00 HR P= 5.20 IN Q= 2.61 IN DA= 0.58 SM

TC= 1.15 HR CN= 75.00 VOL= 80.3 ACFT

PEAK = 477.1 CFS, AT 12.7 HRS.

***** WARNING - MAXIMUM HEAD ENTERED IS NEGLIGIBLE. NO BACKWATER COMPUTED.

***** WARNING - ELEVATION OF FULL PIPE FLOW (97.96) EQUALS OR EXCEEDS
MAXIMUM INPUT ELEVATION (97.00), PASS STOPPED.

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	96.00	0.00	0.00	0.00	241.35	94.00
2	96.11	1.44	1.44	0.00	251.84	94.74
3	96.22	4.08	4.08	0.00	262.40	95.49
4	96.33	7.49	7.49	0.00	273.06	96.23
5	96.44	11.54	11.54	0.00	283.79	96.98
6	96.56	16.12	16.12	0.00	294.61	97.72
7	96.67	21.20	21.20	0.00	305.51	98.47
8	96.78	26.71	26.71	0.00	316.49	99.21
9	96.89	32.63	32.63	0.00	327.56	99.96
10	97.00	38.94	38.94	0.00	338.70	100.70
11	97.00	38.94	38.94	0.00	338.70	100.70
12	97.00	38.94	38.94	0.00	338.70	100.70
13	97.00	38.94	38.94	0.00	338.70	100.70

FULL CONDUIT FLOW, ELEV = 97.96 FT

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	30.	50.	0.0	0.035	**	**	**	CREST
2	50.	100.	5.0	0.035	0.86	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 96.67 FT.

DRAWDOWN (DDT) TEST 96.00 FT 241.4 ACFT 0.00 CFS
CONTROL IS 0.000 DETENTION STORAGE

TIME LIMIT REACHED = 10.00 DAYS. FLOW WAS 0.32 CFS, ELEV = 96.02

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
NRCS-FBH	10.0	96.67	305.9	98.5	0.00	0.0

^^^^ NOTE -- ACTUAL Hp OF 0.00 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS DISCHARGE =	Q-PS 21.4	Q-AUX. 0.0	Q-TOT. 21.4
---------------------------	--------------	---------------	----------------

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-Sc FT/FT	25% OF Q Sc FT/FT
AUXILIARY SPILLWAY ---	0.00	0.00	0.000	0.000

***** MESSAGE - MAX. DISCHARGE OF 0. CFS IS BELOW CREST AUXILIARY SPILLWAY. NO STABILITY STRESS COMPUTED.

AUXILIARY SPILLWAY DURATION FLOW =	0.0 HOURS
ATTACK, OE/B =	0.0 ACFT/FT

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

>>>> NHCP378 RUN - MINIMUM FLOW IN AUX. SPILLWAY FROM TR60
USING FORMULA WITHOUT 200 CFS MINIMUM LIMIT (181. CFS).

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
----------------	-----------------	----------------	-----------------	----------------	---------------	------------------

***** WARNING - INTERPOLATION ERROR - VALUES WERE THE SAME IN DENOMINATOR.
CHECK INPUT, THE VALUES USED WERE 38.93600 AND 38.93600.

***** WARNING - INTERPOLATION ERROR - VALUES WERE THE SAME IN DENOMINATOR.
CHECK INPUT, THE VALUES USED WERE 38.93600 AND 38.93600.

MIN. AUX.	10.0	92.00	0.0	0.0	-5.00	-338.7
-----------	------	-------	-----	-----	-------	--------

^^^^ NOTE -- ACTUAL Hp OF -5.00 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS DISCHARGE =	Q-PS 0.0	Q-AUX. 234.3	Q-TOT. 234.3
---------------------------	-------------	-----------------	-----------------

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-Sc FT/FT	25% OF Q Sc FT/FT
AUXILIARY SPILLWAY ---	2.21	7.37	0.016	0.020

>>>> NHCP378 RUN - MINIMUM DEPTH, CREST AUX. TO TOP OF DAM IS 2.00 FT.
NEW TOP OF DAM ELEVATION = 99.00.

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.HP FT	VOL-AUX. ACFT
----------------	-----------------	----------------	-----------------	----------------	--------------	------------------

***** WARNING - INTERPOLATION ERROR - VALUES WERE THE SAME IN DENOMINATOR.
 CHECK INPUT, THE VALUES USED WERE 97.00000 AND 97.00000.
 MINIMUM AUX. 10.0 99.00 241.4 94.0 2.00 0.0

^^^^ NOTE -- ACTUAL Hp OF 0.00 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS	Q-PS	Q-AUX.	Q-TOT.
DISCHARGES =	0.0	0.0	0.0

	CRITICAL	CRITICAL	CRITICAL	25% OF Q
	DEPTH	VELOCITY	SLOPE-Sc	Sc
AUXILIARY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY ---	0.00	0.00	0.000	0.000

>>>> NHCP378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM; 1.00 FT REQUIRED
 FOR THIS PASS. NEW TOP OF DAM ELEVATION = 97.67.

ROUTED	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	AUX.HP	VOL-AUX.
RESULTS	FT	FT	ACFT	AC	FT	ACFT

***** WARNING - INTERPOLATION ERROR - VALUES WERE THE SAME IN DENOMINATOR.
 CHECK INPUT, THE VALUES USED WERE 97.00000 AND 97.00000.
 MINIMUM AUX. 10.0 97.67 241.4 94.0 2.00 0.0

^^^^ NOTE -- ACTUAL Hp OF 0.00 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS	Q-PS	Q-AUX.	Q-TOT.
DISCHARGES =	0.0	0.0	0.0

	CRITICAL	CRITICAL	CRITICAL	25% OF Q
	DEPTH	VELOCITY	SLOPE-Sc	Sc
AUXILIARY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY ---	0.00	0.00	0.000	0.000

 Inflow Hyd 1 PSH-Peak = 15.39 CFS at 24.19 hrs., Location Point

Inflow Hyd 1 FBH-Peak = 21.38 CFS at 20.83 hrs., Location Point
 HYDOUT 1

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

Mike Kjellsen sec7, T110N, R52

0 SUBWATERSHED(S) ANALYZED.

1 STRUCTURE(S) ANALYZED.

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	0.58	75.	1.15	0.58	378NR	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	10.0	97.0	10.0	0.7	97.7	0.	0.	0.0	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 2005.1.04 ,01/01/2005
FILES

INPUT = C:\kjellsen\10ft weir.D2C
OUTPUT = C:\kjellsen\10ft weir.OUT
DATED 09/05/2011 17:21:11

GRAPHICS FILES GENERATED

OPTION "L" = C:\kjellsen\10ft weir.DRG DATED 09/05/2011 17:21:11
OPTION "P" = C:\kjellsen\10ft weir.DHY DATED 09/05/2011 17:21:11
OPTION "E" = C:\kjellsen\10ft weir.DEM DATED 09/05/2011 17:21:11

MIKE KJELSEN - BROOKINGS CO.

CODE	AMOUNT	LENGTH	WIDTH	DEPTH	CUBIC YARDS
A	2	6' - 0"	3' - 0"	3' - 0"	2
C	13	12' - 0"	3' - 0"	3' - 0"	4
G	2	6' - 0"	3' - 0"	1' 0"	0.67
I	1	12' - 0"	3' - 0"	1' - 0"	1.3
II	3	12' - 0"	6' - 0"	1' - 0"	2.7

TOTAL CUBIC YARDS = 66.7

TOTAL TONS = 104

REQUIRED ROCK GABION

Smallest dimension in inches Gabion Rock			percent of rocks smaller than size shown	
8			100	
6			50-70	
4			35-50	
3			2-10	

CONSTRUCTION SPECIFICATION

SD-18 WIRE MESH GABION BASKETS AND MATTRESSES

1. Scope

The work consists of furnishing, assembling, and installing rock filled wire mesh gabion baskets and mattresses.

2. Types

Gabions shall consist of rectangular wire mesh formed containers filled with rock. Gabions will conform to the following types.

Woven mesh - Nonraveling, double twisted, hexagonal wire mesh consisting of 2 wires twisted together in 2 180-degree turns.

Welded mesh - Welded wire mesh with a uniform rectangular pattern and a resistance weld at each intersection. Welded wire connections shall conform to ASTM A185, including wire smaller than W1.2 (0.124 inch), except that weld connections shall have a minimum shear strength of 60 percent of the wire minimum ultimate tensile strength.

Gabions - Gabions shall be furnished as manufactured baskets or mattresses as shown on the drawings, and shall be fabricated within a dimensional tolerance of plus or minus five percent. Gabion top, bottom, sides, and diaphragm edges shall be connected with strength equal to the strength of the mesh.

3. Material

Wire shall be hot-dipped galvanized, shall have a minimum tensile strength of 60,000 pounds per square inch and meet ASTM A641, Class 3, Soft Temper.

For gabion baskets 12 to 36 inches in height, selvedge galvanized wire shall be at least 0.13 inch in diameter. Lacing and connecting galvanized wire shall be at least 0.08 inch in diameter. All other galvanized wire shall be at least 0.1 inch in diameter. Maximum woven mesh size shall be 4.5 inches. Maximum welded mesh size shall be three inches.

For gabion mattresses 12 inches or less in diameter, selvedge and spiral binder galvanized wire shall be at least 0.1 inch in diameter. All other galvanized wire shall be at least 0.08 inch in diameter. Maximum woven mesh size shall be 3.25 inches. Maximum welded mesh size shall be three inches.

Where polyvinyl chloride (PVC) coated wire is specified, the galvanized wire shall have a minimum 0.02 inch thick ultraviolet light resistant PVC coat.

4. Assembly

Except as otherwise specified, the manufacturer's recommendations shall be followed. All joints, ties and connections shall be made using wire recommended by the manufacturer. Adjoining gabions shall be joined with strength equal to the wire mesh. Tie wires used to connect adjoining gabions shall be separate from tie wires used to assemble individual gabions.

Except as otherwise specified, all gabions shall be installed with lid hinges on the upstream or higher side of the gabion when installed. All gabions shall be stretched on line and grade, to the design dimensions before filling.

GEOTEXTILE (SD-592)

MATERIAL SPECIFICATION

1. Scope

This specification covers the quality of geotextile.

2. General Requirements

Geotextiles shall be a minimum of 85 percent by weight polypropylenes, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidenechlorides. They shall be formed into a stable network of filaments or yarns retaining dimensional stability relative to each other. The geotextile shall be defect free and conform to Table 1 or 2 requirements as applicable to the material specified. The geotextile shall be free of chemical treatments or coatings that reduce its porosity. Geotextiles shall have enhanced resistance to ultraviolet light.

Thread used for sewing shall be high strength polypropylene, polyester, or polyamide, and shall be at least as resistant to ultraviolet light as the geotextile.

3. Classification

Woven - Fabrics formed by interweaving monofilament yarn, creating distinct and measurable openings. The edges of woven fabric shall be selvaged or otherwise finished to prevent the outer yarn from unraveling.

Nonwoven - Fabrics formed by random placement of threads in a mat and bonded by needle punching.

4. Shipping and Storage

Geotextile shall be shipped in rolls wrapped with a cover. Each roll shall be labeled to clearly identify the brand, class, and production run following ASTM D4873.

Table 1. Requirements for Woven Geotextile

Property	Test Method	Class I	Class II&III	Class IV
Tensile strength, lb. ^{1/}	ASTM D4632	200 min.	120 min.	180 min.
Elongation at failure, % ^{1/}	ASTM D4632	<50	<50	<50
Puncture, lb. ^{1/}	ASTM D4833	90 min.	60 min.	60 min.
Ultraviolet light, 150-hr. exposure	ASTM D4355	70 min.	70 min.	70 min.
% residual tensile strength	150-hr. exposure			
Apparent opening size (AOS)	ASTM D4751	As specified, but >.212mm (#70 ^{2/})	As specified, but >.212 mm (#70)	As specified, but >.212mm (#70)
Percent open area (%)	CWO-02215-86 ^{3/}	4.0 min.	4.0 min	1.0 min.
Permeability, permittivity Sec. ⁻¹	ASTM D4491	0.10 min.	0.10 min.	0.10 min.

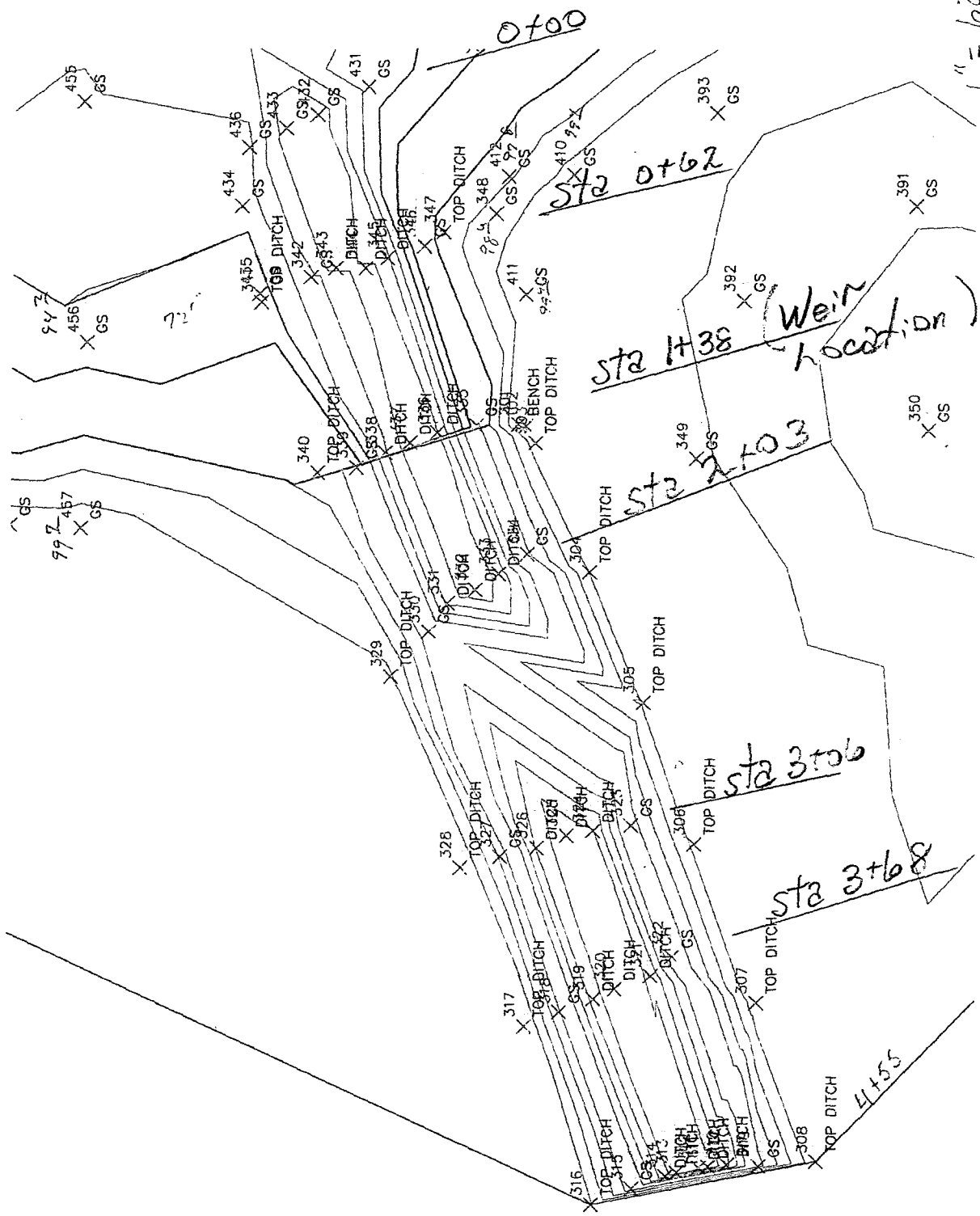
Table 2. Requirements for Needle-Punched Nonwoven Geotextile

Property	Test Method	Class I	Class II	Class III	Class IV
Tensile Strength, lb. ^{1/}	ASTM D4632	180 min.	120 min.	90 min.	115 min.
Elongation at failure, % ^{1/}	ASTM D4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture, lb.	ASTM D4833	80 min.	60 min.	40 min.	40 min.
Ultraviolet light, 150-hr. exposure	ASTM D4355	70 min.	70 min.	70 min.	70 min.
% residual tensile strength	150-hr. exposure				
Apparent Opening Size (AOS)	ASTM D4751	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}
Permeability permittivity sec ⁻¹	ASTM D4491	0.70 min.	0.70 min.	0.70 min.	0.70 min.

^{1/} Minimum average roll value (weakest principal direction).

^{2/} US standard sieve size.

^{3/} CWO is a US Army Corps of Engineers reference.



Mike Kjellson

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF AC.FT	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	25-YR.	C.F.S.	FEET	ACRES	AC. FT.	AC. FT.
369	12.3	80	137	6	94	—	341

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF AC.FT	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	25-YR.	C.F.S.	FEET	ACRES	AC. FT.	AC. FT.
369	12.3	80	137	6	94	—	341

Filler material to be used between
gabion baskets & earth.

A 4x4 grid with a small dot in the bottom-right cell.

LOCATION

[illegible]

SD-2 Clearing
SD-7s Earth Fill
SD-18 Gabion Baskets
SD-592 Geotextile

OPERATOR: Mike Kjellsen
 CONSERVATION DISTRICT: _____
 Class "A" Hazard

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

Approximate scale 1" = _____

JOB PLAN NO. 1.0

Michael Kjellsen
Wetland Restoration
Section 7, T. 110 N., R. 52 W.
1" = 250'



Nebraska Standard Drawing
NE900-10-002a New 2/03

0+0 0+10 0+20 0+30 0+40 0+50 0+60 0+70 0+80 0+90 1+00 1+10 1+20 1+30 1+40

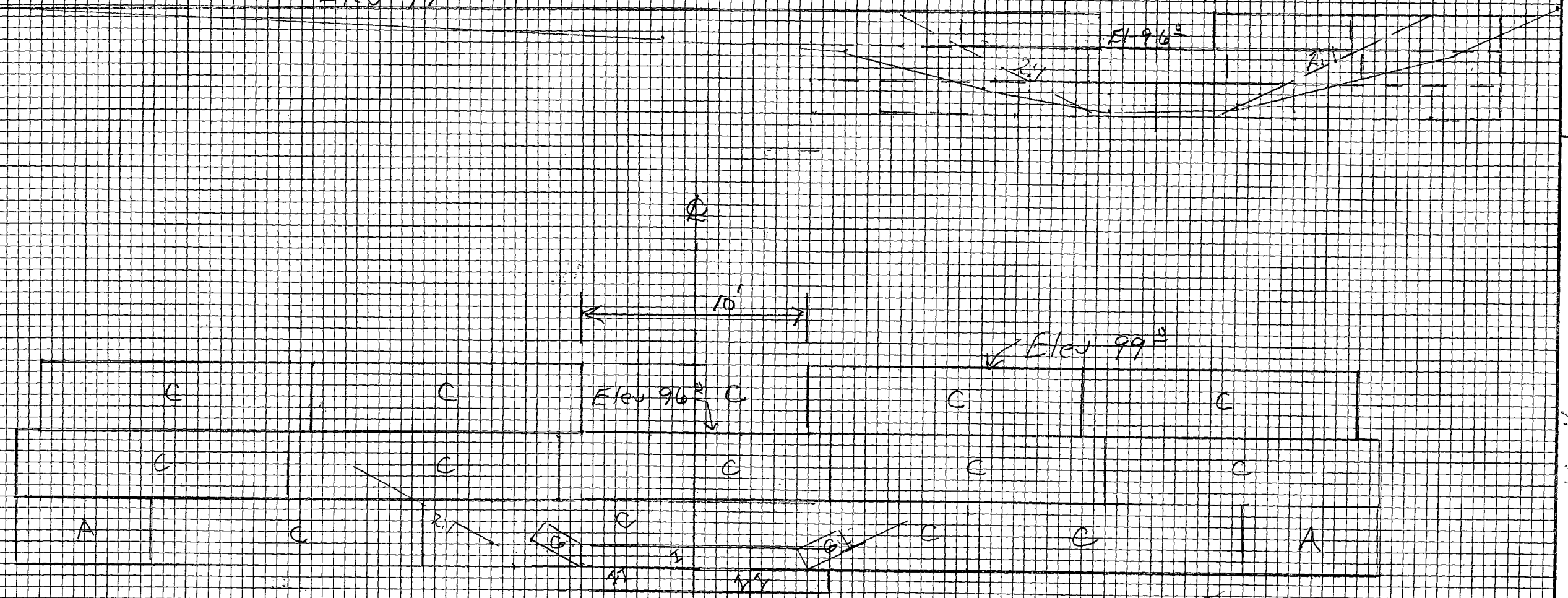
STA. 1+38

Elev 99⁰

Elev 96⁰

Elev 99⁰

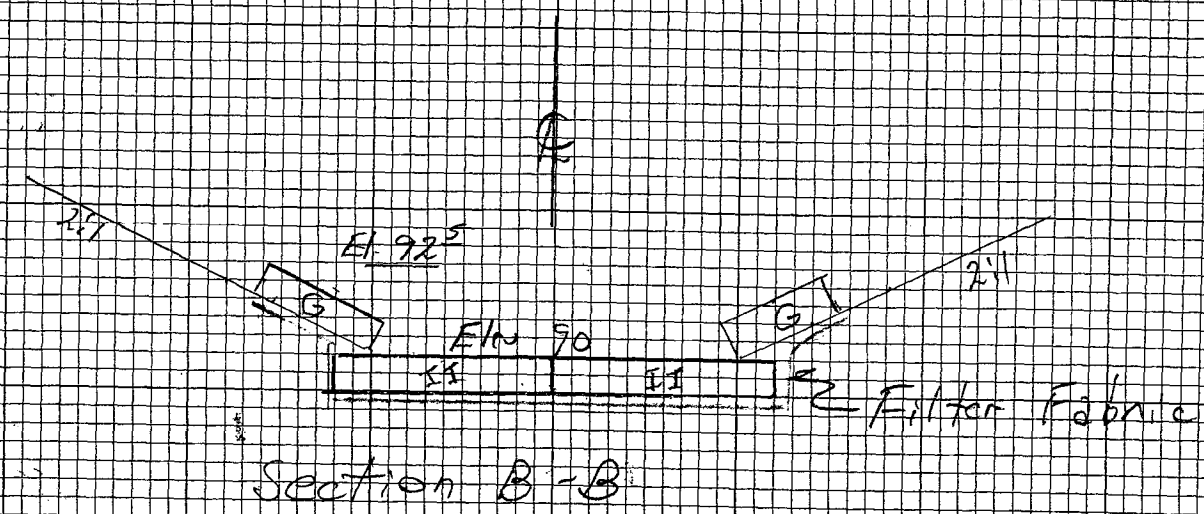
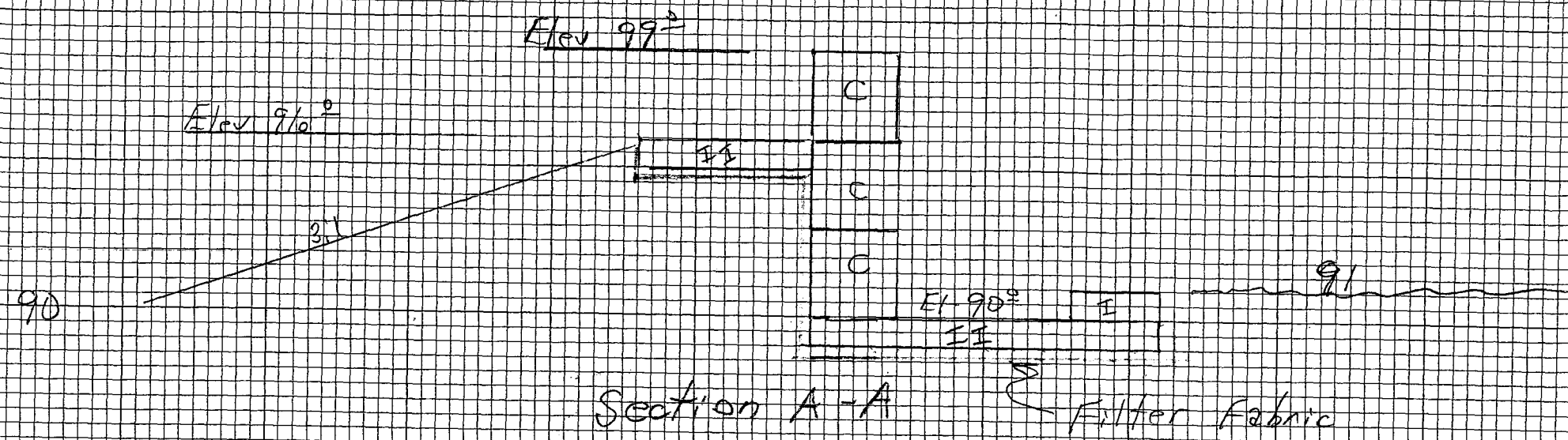
Elev 96⁰



Date _____
Designed _____
Drawn _____
Checked _____
Approved _____

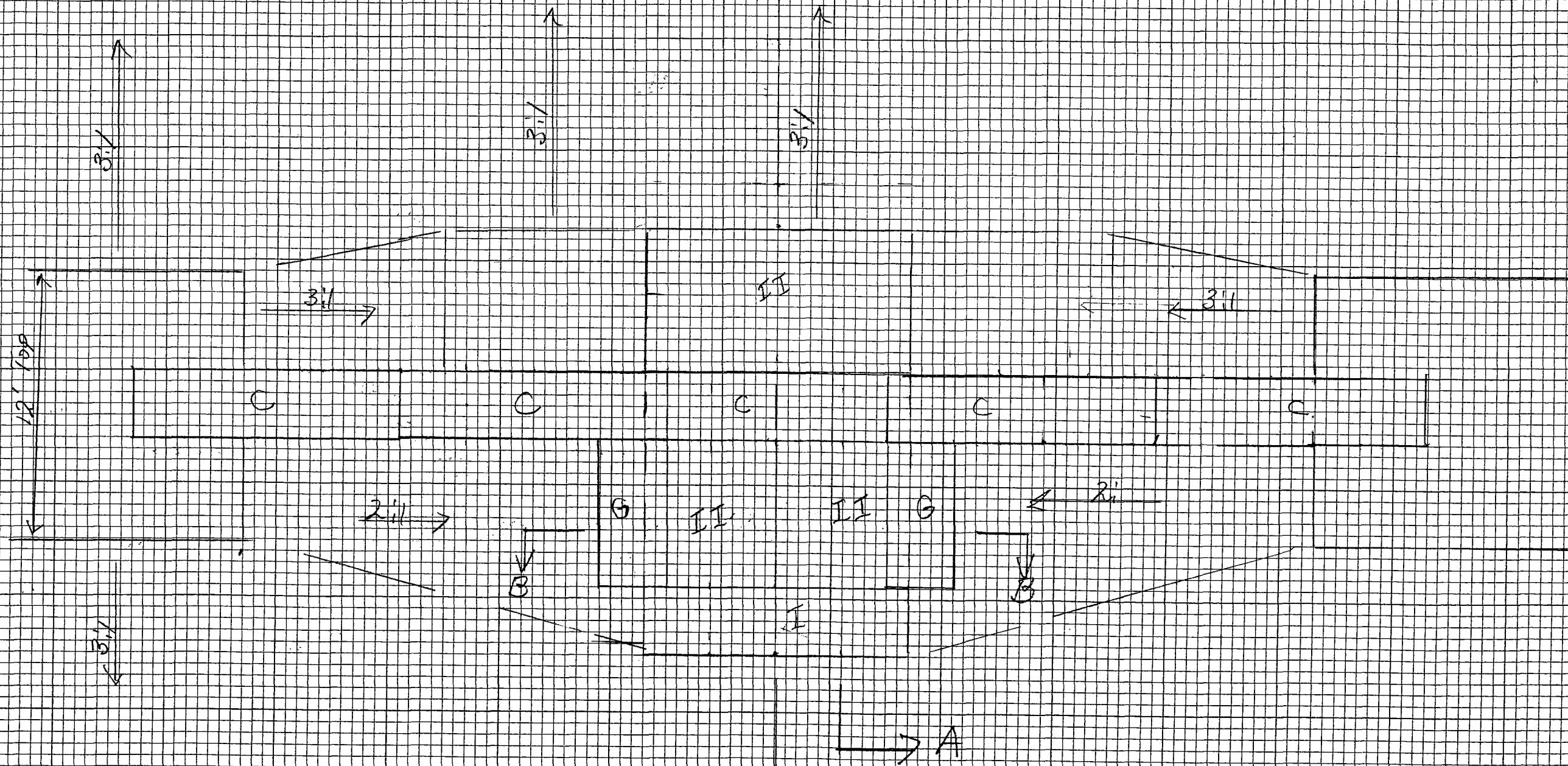
Mike Kjellner

CAD file:
NE900-10-002a.dwg
Drawing No. _____
Sheet _____ of _____



Date _____
Designed _____
Drawn _____
Checked _____
Approved _____

Mike Kjellson



Mike Kjellsen

Water Permit Application No. 7270-3
Mike Kjellsen

This is a "Ditch Plug" project with a rock gabion weir.

Top of Dam Elev - 99
P. Spillway Elev - 96
Dis Emb. Toe Elev - 90 } Hk = 9 ft Cont. 3-Low Hazard Dam

Normal Storage Capacity - 241 Ac-Ft
Max. Storage Capacity - 338

Max. Capacity x Eff Hk = $338 \times 9 = 3042 \div 3000 \therefore \underline{50 \text{ yr}}$
Minimum Spillway Design

From USGS WRI 98-4055 "Tech for Est. Peak Flows ... in SD"
Region A DA = 369 Ac = 0.58 mi² P_{II} = 1

$$\begin{aligned} Q_{50} &= 287 CA^{.517} P_{II}^{4.62} \\ &= 287 (0.58)^{.517} (1)^{4.62} \\ &= 287 (.7546) \\ &= \underline{216 \text{ cfs}} \end{aligned}$$

$$\begin{aligned} Q_{100} &= 362 CA^{.521} P_{II}^{4.47} \\ &= 362 (.58)^{.521} (1)^{4.47} \\ &= 362 (.7529) \\ &= \underline{272 \text{ cfs}} \end{aligned}$$

Primary Spillway Capacity

$$\begin{aligned} Q &= CLH^{3/2} \quad C=3 \quad L=10 \quad H=3 \\ &= 3(10)(3)^{1.5} \\ &= \underline{156 \text{ cfs}} \end{aligned}$$

OK: Gabion Weir designed to overtop

Section 74:02:08:09

NRCS Annual Yield

DA = 369 Ac. CN = 75 ISO = 242

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

$$\begin{aligned} 80\% \text{ chance} &= 0.17 \\ 0.17 \times 369/2 &= \underline{5 \text{ Ac-Ft}} \end{aligned}$$

$$\begin{aligned} 50\% \text{ chance} &= 0.46 \\ 0.46 \times 369/2 &= \underline{14 \text{ Ac-Ft}} \end{aligned}$$

$$\begin{aligned} 10\% \text{ chance} &= 2.2 \\ 2.2 \times 369/2 &= \underline{68 \text{ Ac-Ft}} \end{aligned}$$



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

October 24, 2011

Mike Kjellsen
20993 455th Ave.
Arlington, SD 57212

Dear Mr. Kjellsen:

We have reviewed the plans and specifications for your wetland restoration (ditch plug) project located in the S ½ NW ¼ of Section 7-T110N-R52W, in Brookings County. The plans and specifications for the project are approved. Approval of the plans and specifications does not authorize construction of the ditch plug. The construction of the ditch plug may not begin until Water Permit No. 7270-3 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 Kjellsen ditch plug will be classified as a small size Category 3, Low Hazard dam with a dam height of 9 feet and a normal storage capacity of 241 acre-feet and a maximum storage capacity of 338 acre-feet.

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

Sincerely,

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

c: Dave Konechne, Pierre



**DEPARTMENT of ENVIRONMENT
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**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7270-3, Mike Kjellsen**

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. 7270-3, Mike Kjellsen, 20993 455th Avenue, Arlington SD 57212.

The Chief Engineer is recommending APPROVAL of Application No. 7270-3 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. 7270-3 authorizes a dam with a storage capacity of 241 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 21, 2011

REPORT ON
WATER PERMIT APPLICATION NO. 7270-3
Mike Kjellsen
October 4, 2011

Water Permit Application No. 7270-3 has been filed by Mike Kjellsen to impound 241 acre-feet of water from runoff by restoring a drained wetland area. The ditch plug will be located in the S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 7-T110N-R52W, in Brookings County. The application also requests impoundment of sufficient water to maintain water to the outlet elevation. The water will be used for fish and wildlife production.

Discussion:

The proposed ditch plug will be a rock gabion weir structure. The dam (ditch plug) 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, construction of the dam cannot begin until Water Permit Application No. 7270-3 is approved.

The dam (ditch plug) will be 9 feet high with a normal storage capacity of 241 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 338 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 50-year frequency event. A 50 year frequency event produces a peak runoff of approximately 216 cfs and a 100 year frequency event produces a peak runoff of approximately 272 cfs.

The dam has a drainage area of 369 acres or 0.58 square miles. The rock gabion structure has a 10 ft. wide spillway section with 3 feet of freeboard as the primary spillway. The spillway will have a capacity of approximately 156 cfs, which is less than the 50 year event; however, the entire rock gabion structure functions as a spillway and is designed to overtop.

The annual yield for this drainage area with an 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, or 1 out of 10 years, is expected to be 68 acre-feet.

The wetland restoration project will be located in the S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 7-T110N-R52W on an unnamed tributary to Brush Lake, about 1.5 miles upstream of Brush Lake. The Department of Game, Fish and Parks holds Vested Water Right No. 899-3 for storage of 900 acre-feet of water in the Brush Lake. Approval of Water Permit No. 7270-3 should not have an adverse effect on Vested Water Right No. 899-3.

Conclusion:

1. Water Permit Application No. 7270-3 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. 7270-3.



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

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NOV 09 2011

WATER RIGHTS
PROGRAM
State of South Dakota

Affidavit of Publication

SS

County of Brookings

Danielle Gilbertson of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

Leg#797 Notice of Application

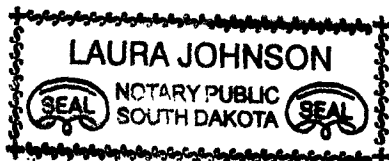
same was published, is hereto attached marked Exhibit
said newspaper for _____ 2 times, to-wit:

October 28, 2011

November 4, 2011

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

Forty two dollars and fifty three cents \$42.53



Subscribed and sworn to before me this

November

7th day of

2011

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires July 14, 2015

Legal 797, 2x, 10/28,

11/4

NOTICE OF APPLICATION NO. 7270-3 to Appropriate Water Notice is given that Mike Kjellsen, 20993 455th Ave. Arlington SD 57212 has filed an application for a water permit to impound 241 acre-feet of water from runoff by constructing a ditch plug located in the S 1/2 NW 1/4 Section 7 with water impounded in the E 1/2 NW 1/4, S 1/2 NE 1/4, N 1/2 SE 1/4 Section 7; all in T110N-R52W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7270-3 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 November 21, 2011.

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 twice at the total approximate cost of \$42.53.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 25, 2011

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7270-3 to Appropriate Water to be published twice. Please publish the first notice on November 2, 2011 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Mike Kjellsen, 20993 455th Ave., Arlington SD 57212 (Ph # 605-695-7164).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 7270-3

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

Date _____

We are in receipt of your letter of October 25, 2011 enclosing Notice to Appropriate Water by Application No. 7270-3 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

October 25, 2011

Mike Kjellsen
20993 455th Ave
Arlington SD 57006

Dear Mr. Kjellsen:

Water Permit Application No. 7270-3 for fish & wildlife use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
eric.gronlund@state.sd.us

enclosures

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

Instruction to Newspaper - Publish first Notice on November 2, 2011 with the second publication 7 days later. 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. 7270-3 to Appropriate Water

Notice is given that Mike Kjellsen, 20993 455th Ave, Arlington SD 57212 has filed an application for a water permit to impound 241 acre-feet of water from runoff by constructing a ditch plug located in the S $\frac{1}{2}$ NW $\frac{1}{4}$ Section 7 with water impounded in the E $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ Section 7; all in T110N-R52W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7270-3 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 November 21, 2011.

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 twice at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

DEC 01 2011

Mike Kjellsen
20993 455th Ave
Arlington SD 57212

Dear Mr. Kjellsen:

Enclosed is Water Permit No. 7270-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

7270-3

RECEIVED

DEC 27 2011

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 12-22-11

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

FROM:

Michael Kjellsen
(name)20993 455th Ave
(address)Arlington, SD 57212
(city, state, zip)605-695-7164
(phone)

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

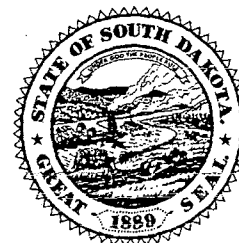
Water Permit No. 7270-3 states that the water use system is to be constructed by Nov 21, 2016, and water is to be put to beneficial use by Nov 21, 2020.
(date) (date)

The water use system was completed on December 8, 2011.
(date)

Applying the water to beneficial use was completed on December 8, 2011.
(date)

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

Michael Kjellsen
(signature)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

December 27, 2011

7270-3

Michael Kjellsen
20993 455th Ave
Arlington SD 57212

Dear Mr. Kjellsen:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with the storage dam authorized under Water Permit No. 7270-3.

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

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

Sincerely,

A handwritten signature in black ink that reads "Genny McMath".

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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7270-3

I have this day, May 26, 2021, made a thorough examination of the water use system constructed by Mike Kjellsen, 20993 455th Ave, Arlington, SD 57212 of Permit No. 7270-3, bearing the priority of September 15, 2011 authorizing the storage of 241 acre-feet of runoff water for fish & wildlife propagation purposes, in Brookings County.

A Dam Information:

- 1) Height to crest 6 feet
- 2) Height to primary spillway NA feet
- 3) Height to secondary spillway NA ft
- 4) Crest width 317 feet
- 5) Crest length 12 feet
- 6) Spillway length NA feet
- 7) Spillway width NA feet
- 8) Approx. storage 241 ac-ft
- 9) Approx. storage to crest NA ac-ft
- 10) Date constructed: NA

B. Compliance with Permit Requirements: Exceptions to compliance are: None

C. Condition and Location:

1. The system is in good condition with the point(s) of ditch plug located as follows: From the NW corner of Sec 7 T110N-R52W 2165 ft S & 1830 ft E Lat 44.34900 Long -97.12212 (SE ¼ NW ¼ Sec 7)
2. All structures, wells and lands on map Y

D. Comments or other permit(s) associated with the project:

The plug is in good condition and holding water in the wetland.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: May 27, 2021



0 0.1 0.2 0.4 0.6 0.8 Miles



Darrell DeBoer
Water Right Inspector
DANR-Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

7270-3

JUN 11 2021

Mike Kjellsen
20993 455th Ave
Arlington SD 57212

Dear Mr. Kjellsen:

Enclosed is Water License No. 7270-3. 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,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7270-3

(1) Mike Kjellsen, 20993 455th Ave., Arlington SD 57212 made Application No. 7270-3, September 15, 2011 for a water permit to impound 241 acre feet of water from runoff, located in Brookings County, South Dakota by constructing a ditch plug with water to be used for fish and wildlife propagation purposes. Permit No. 7270-3, with a priority date of September 21, 2011 was approved November 21, 2011 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 21, 2016 and for the application to beneficial use of water on or before November 21, 2020.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to impound 241 acre feet of water annually for beneficial use. The ditch plug is located as follows:

- 2,165'S and 1,830'E of the NW corner of Section 7, T110N, R52W (SE ¼ NW ¼ Section 7)
Latitude 44.34900, Longitude -97.12212

Water is impounded in the SE ¼ NW ¼, S ½ NE ¼ and N ½ SE ¼ Section 7, T110N, R52W

(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 Mike Kjellsen, 20993 455th Ave., Arlington SD 57212 the holder and/or owner of Water Right No. 7270-3 is issued a license to appropriate water, the right to impound 241 acre feet of water from runoff with a priority date of September 15, 2011 from the location specified in (2) of this license for fish and wildlife propagation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7270-3 and subject to the following qualifications:

- Water Right No. 7270-3 authorizes a dam with a storage capacity of 241 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.


Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

JUN 11 2021

date

