

WATER PERMIT NO. 6273-3

Name of Applicant: **Todd Bushong**

Address: **37295 185th St, Tulare SD 57476**

Phone: **605 472-3798**

Amount of Water Claimed: **86 acre-feet**

Total Acres: **NA**

Source of Water Supply: **runoff**

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

County: **Hand**

Type of Waste Disposal System:

Location: **20 miles northeast of Miller**

PRIORITY Date Received: **7-24-2001**

Fee: **\$150**

Corrected Application Received:: **8-1-2001**

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

Remarks:

Diversion Point: **near center of**

SE ¼ Sec 11-T114N-R66W

Water Impounded: **SE ¼ Sec 11-T114N-R66W**

Depth of Well: **NA**

Well Driller: :

Remarks:

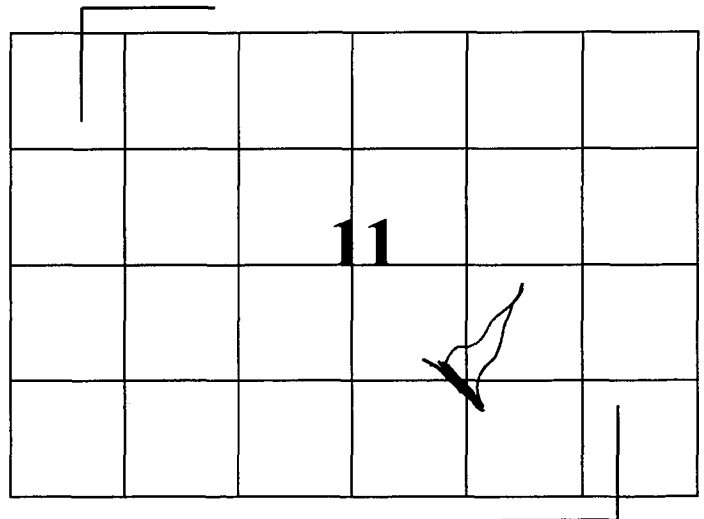
Type of Map: **county highway**

Prepared by: **Dave F Konechne, PE**

Reviewed and the Number Assigned on: **8-2-2001**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



FORM 2: Application for uses other than irrigation

(type or print)

Mail to:

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

No. 6273-3 Hydrologic Unit 10160009
Basin James River
Newspaper Miller Press Miller

(office use only)



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

Check use of water:

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

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

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

- Name of Applicant Todd Bushong Phone 605/472-3798
(check one) ☒ Owner ☒ Tenant/lessee
Mailing Address 37295 185th St Tulare State SD 57476
(Street, RR, or Box) (City) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 86 ***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
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
Near Center of SE 1/4, SE 1/4 of section 11 T114N R66W
Water Impounded: SE 1/4 Sec. 11-T114N-R66W County Hand
- County or counties where water will be used Hand
- Annual period during which water is to be used Continuous Jan 1-Dec 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
See Attached Plan

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

STATE OF SOUTH DAKOTA)

County of HAND)^{SS}

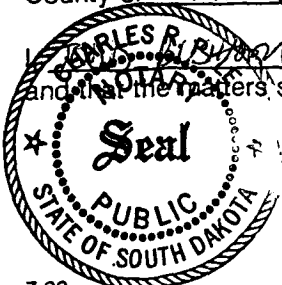
I, Charles R. Bushong, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Signed Todd Bushong

Subscribed and sworn to before me this 18 day of JULY 19 2001

[Signature]
Notary Public

and Mar 24 2005



SOUTH DAKOTA
WATER PERMIT NO. 6273-3

Date of first receipt of application July 24, 2001.

Date of return to applicant for corrections, amendments or changes July 25, 2001.

Date of receipt of corrected application August 1, 2001.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6273-3 to Todd Bushong, 37295 185th St, Tulare SD 57476 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. 6273-3 authorizes impoundment of 86 acre-feet of water from runoff by constructing a dam located near the center of the SE ¼ Section 11 with water impounded in the SE ¼ Section 11; all in T114N-R66W.
2. The water appropriated shall be used for the purpose of supplying water for fish & wildlife propagation and livestock 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. 6273-3 is October 1, 2001.
5. The date from which applicant may claim right is July 24, 2001.
6. One-fifth of the construction is to be completed on or before April 1, 2003.
7. All construction is to be completed on or before October 1, 2006.
8. Water is to be put to beneficial use on or before October 1, 2010.
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. 6273-3 authorizes a dam with a storage capacity of 86 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

NOV 07 2001

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack Thickness _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well: _____
- On applicants property _____ On property owned by others _____

2. Wastewater Disposal System Information

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

3. Dugout Information

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

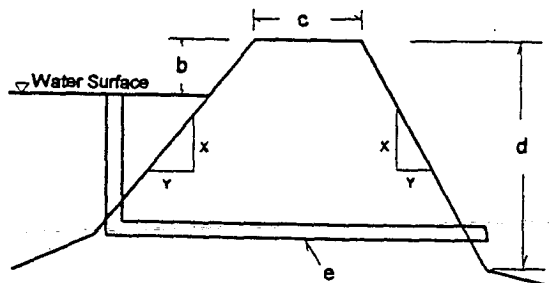
4. Water Storage Dams

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

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

NRCS - Hughes County Office
Dave Konechne, Engineer
Pierre, SD (605) 224-2476

- b) Freeboard 3'
- c) Crest Width 12'
Crest Length 714'
- d) Height Max Height 13.1'



- e) Primary Outlet Capacity _____
If pipe, diameter 48" riser / 30" outlet pipe
- f) Secondary Spillway Capacity 287 C.F.S.
Spillway Width 60' wide bottom
- g) X & Y Slope
Upstream 3:1
Downstream 3:1
- h) Surface Area of Impoundment 18
- i) Storage 86 Acre Feet
- j) Drainage Area Above Dam 2418 Acres

Water Permit Application No. 6273-3
Todd Bushong

Top of Dam Elev. - 100
2nd Spway Elev. - 97
P. Spway Elev. - 95
D/S Toe Elev. - 87

Cat. 3 - Low Hazard Dam

Ht. = 13 ft

Normal Storage Capacity - 86 A.-Ft
Int. Storage Capacity - 140
Max. Storage Capacity - 221

Int. Capacity x Eff. Ht. = $140 \times 10 = 1400 < 3000 \therefore 25\text{yr}$
Minimum Spillway Design

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

DA = 2418 A_c = 3.78 mi²
Slope = 15 ft/mi
SI = 3.33

$$Q_{25} = 83.4 A^{.6} S^{.44} S_i^{-.72}$$

$$= 83.4 (3.78)^{.6} (15)^{.44} (3.33)^{-.72}$$

$$= 83.4 (2.22) (3.29) (0.4206)$$

$$= \underline{257 \text{ cfs}}$$

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

$$= 132 (3.78)^{.65} (15)^{.46} (3.33)^{-.67}$$

$$= 132 (2.37) (3.48) (0.4466)$$

$$= \underline{486 \text{ cfs}}$$

Secondary Spillway Flow

$$Q = C L H^{3/2}$$

$$C = 2.6$$

$$L = 60$$

$$H = 3$$

$$= (2.6) (60) (3)^{1.5}$$

$$= \underline{810 \text{ cfs}}$$

NRCS Annual Yield

Section 74:02:08:09

DA = 2418 A_c - CN = 70, ISO = 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 Rating - OK
7. Spillway Details - OK
8. Specs. - Std NRCS - OK
9. EPP - N/A Cat. 3 - OK

$$80\% \text{ chance} = 0.065$$

$$0.065 \times 2418^{1/2} = \underline{13 \text{ A.-Ft.}}$$

$$50\% \text{ chance} = 0.21$$

$$0.21 \times 2418^{1/2} = \underline{42 \text{ A.-Ft.}}$$

$$10\% \text{ chance} = 1.30$$

$$1.30 \times 2418^{1/2} = \underline{262 \text{ A.-Ft.}}$$

1DAMS2 XEQ 08/24/** STRUCTURE SITE ANALYSIS COMPUTER PROGRAM
REV 01/01/90 SCS TECHNICAL RELEASE 48, (USER MANUAL) DATED JAN. 1990
TIME 11:09:53

***** THIS PROGRAM IS IN TEST STATUS *****

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

DAMS2	01/01/90	Todd Bushong Pond	Hand	Co. SD
STRUCTURE	15mi NE of Miller	8-24-01 A. Roman378Design		
	85			0.0
	90			59.0
	95	97		86.40
	100			221.4 140

ENDTABLE						
WSDATA	1A101	AC	70	2418	13.43	
PDIRECT	1.0		3.1		4.10	
POOLDATA	ELEV			95.0		
PSDATA	1		50	30		85.0
PSINLET	ELEV		1.0	12.57	95.0	
ESCREST	ELEV					
ESDATA	30C050					2
BTMWIDTH	FEET		60	75	100	

ENDTABLE

COMMENT

COMMENT

COMMENT This is routing a 5-yr storm thru the principal spillway
COMMENT and a 25 yr storm thru the emergency spillway

COMMENT

COMMENT

COMMENT

GO, DESIGN

6 TYPE2 378 24

ENDJOB

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

1DAMS2	XEQ 08/24/**					
	REV 01/01/90	ng Pond	Hand	Co. SD	WSID = Todd Bus	

This is routing a 5-yr storm thru the principal spillway
and a 25 yr storm thru the emergency spillway

1DAMS2	-----					
XEQ 08/24/**	ng Pond		Hand	Co. SD	WSID= Todd Bu	
REV 01/01/90	Miller	8-24-01	A. Roman378Design		SUBW= 01	
TIME 11:09:53		SITE = 15mi		PASS= 1	PAGE= 1	

ARID- SEMIARID CLIMATE AREA

BASIC DATA

DESIGN CLASS A1 =LT 3000

STORM DISTRIBUTION-PSH 24 HOUR TYPE II RAINFALL DISTRIBUTION

STORM DISTRIBUTION USED FOR EMERGENCY SPILLWAY IS;
SCS DESIGN STORM RAINFALL DISTRIBUTION. (CHAPTER 21 NEH4 AND SCS TR-60)

PRECIP.-	P-PS1 DAY 3.10	P-PS10 DAY .00	P-ES 4.10	P-FB 4.10
WSDATA-	CN 70.00	DA-SM 3.78	TC/L 13.43	-/H .00
SITEDATA-	PERM POOL .00	CREST PS 95.00	FP SED .00	QRF .00
	BASEFLOW .00	INITIAL EL .00	EXTRA VOL. .00	
PSDATA-	NO. COND. 1.00	COND L 50.00	D/W 30.00	-/H .00
	PS N .010	KE 1.00	WEIR L 12.57	TW EL 85.00
	2ND STG 95.00	ORF H .00	ORF L .00	START ES .00
CRESTS-	ES1 .00	ES2 .00	ES3 .00	ES4 .00
				ES5 .00
EMG DATA-	SIDE SLOPE .00	EXIT N .040	EXIT SLOPE .020	
EMG DATA-	ES TYPE 30	ES LENGTH 0	ES ENTRANCE N .000	
BTM WIDTH-	BW1 60.00	BW2 75.00	BW3 100.00	BW4 .00
				BW5 .00

***** NOTE - THIS IS ONLY A PRELIMINARY EMG RATING CURVE OF DISCHARGE/FT
OF WIDTH AND DOES NOT INCLUDE SIDESLOPE CORRECTION OR
REVISED RATING USING ACTUAL EMG. CONFIGURATION.

EMG ID CODE	30C050	ELEVATION INCREMENT (FT)=	.230
DISCHARGES-Q1	Q2	Q3	Q4
.010	.030	.260	.920
Q5	Q6	Q7	Q8
1.620	2.540	3.690	5.090
Q9	Q10	Q11	Q12
6.760	8.710	10.900	13.500

1DAMS2 -----
 XEQ 08/24/** ng Pond Hand Co. SD WSID= Todd Bu
 REV 01/01/90 Miller 8-24-01 A. Roman378Design SUBW= 01
 TIME 11:09:53 SITE = 15mi PASS= 1 PAGE= 2

CREST PS	95.00 FT	86.4 ACFT	.00 AC	.0 CFS
SED ACCUM	95.00 FT	86.4 ACFT	.00 AC	.0 CFS
2ND STAGE	95.00 FT	86.4 ACFT	.00 AC	.0 CFS
STARTING E	95.00 FT	86.4 ACFT	.00 AC	.0 CFS

SCS-PSH D= 24.00 HR P= 3.10 IN Q= .77 IN DA = 3.78 SM
 TC= 13.43 HR CN= 70.00 VOL= 155.3 ACFT

PEAK = 133.3 CFS, AT 21.9 HRS.

ROUTED RESULTS - HYD TYPE EMAX VOL-MAX AMAX QMAX
 SCS-PSH 96.96 FT 139.3 ACFT .00 AC 90.3 CFS

PS STORAGE 52.9 ACFT BETWEEN ES CREST AND SED ACCUM ELEVATIONS

DRAWDOWN (DDT) TEST 95.00 FT 86.4 ACFT .00 CFS
 CONTROL IS .000 DETENTION STORAGE

TIME = 3.92 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

1DAMS2 -----
 XEQ 08/24/** ng Pond Hand Co. SD WSID= Todd Bu
 REV 01/01/90 Miller 8-24-01 A. Roman378Design SUBW= 01
 TIME 11:09:53 SITE = 15mi PASS= 1 PAGE= 3

ES CREST 96.96 FT 139.3 ACFT .00 AC 90.3 CFS

PS STORAGE 52.9 ACFT BETWEEN ES CREST AND SED ACCUM ELEVATIONS

STARTING E 95.00 FT 86.4 ACFT .00 AC .0 CFS

ELEVATION OF LOW POINT IS ZERO. NO CRITERIA CHECK MADE FOR
 STRUCTURE CLASSIFICATION

SCS-ESH D= 6.00 HR P= 4.10 IN Q= 1.40 IN DA = 3.78 SM
 TC= 13.43 HR CN= 70.00 VOL= 281.5 ACFT

PEAK = 302.9 CFS, AT 11.6 HRS.

***** WARNING - TR-60 REQUIRES AN INCREASE IN RAINFALL AMOUNT COMPATIBLE
 WITH INCREASE IN EMERGENCY STORM DURATION WHEN TC EXCEEDS 6-HRS

SCS-FBH D= 6.00 HR P= 4.10 IN Q= 1.40 IN DA = 3.78 SM
 TC= 13.43 HR CN= 70.00 VOL= 281.5 ACFT

PEAK = 302.9 CFS, AT 11.6 HRS.

***** MESSAGE - EMERGENCY SPILLWAY RATING EXTRAPOLATED ABOVE ELEVATION 99.24

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
SCS-ESH	60.0	98.35	177.0	.0	1.39	37.6

PEAK - CFS DISCHARGE =	Q-PS	Q-ES	Q-TOT
	95.4	165.1	260.5

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-S/C FT/FT	25% OF S/C FT/FT
EMERGENCY SPILLWAY----	.62	4.46	.028	.038

	DURATION FLOW HRS	ATTACK OE/B ACFT/FT	SUMMATION VEL**2 DELTA T (FT/SEC)**2 HRS
EMERGENCY SPILLWAY----	15.8	1.4	68.1

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 3.58 FT/SEC

AT DEPTH = .77 FT
 COMPUTED N = .0485
 RETARDANCE = C
 EXIT SLOPE = .0200

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 96.96 FT.

DRAWDOWN (DDT) TEST 95.00 FT 86.4 ACFT .00 CFS
 CONTROL IS .000 DETENTION STORAGE

TIME = 3.95 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
SCS-FBH	60.0	98.35	177.0	.0	1.39	37.6

PEAK - CFS Q-PS Q-ES Q-TOT
 DISCHARGE = 95.4 165.1 260.5

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-S/C FT/FT	25% OF S/C FT/FT
EMERGENCY SPILLWAY----	.62	4.46	.028	.038

	DURATION FLOW HRS	ATTACK OE/B ACFT/FT	SUMMATION VEL**2 DELTA T (FT/SEC)**2 HRS
EMERGENCY SPILLWAY----	15.8	1.4	68.1

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 3.58 FT/SEC
 AT DEPTH = .77 FT
 COMPUTED N = .0485
 RETARDANCE = C
 EXIT SLOPE = .0200

***** ES378 RUN - MINIMUM FLOW IN EMG. SPILLWAY FROM TR60
 USING FORMULA WITHOUT 200 CFS MINIMUM LIMIT. *****

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
MINIMUM ES	60.0	99.11	197.3	.0	2.15	57.9

PEAK - CFS Q-PS Q-ES Q-TOT
 DISCHARGE = 98.1 456.4 554.5

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-S/C FT/FT	25% OF S/C FT/FT
EMERGENCY SPILLWAY----	1.22	6.26	.023	.030

***** ES378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM, REQUIRED
 FOR THIS PASS. NEW TOP OF DAM ELEVATION = 99.35

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
MINIMUM ES	60.0	99.35	204.0	.0	2.39	64.6

PEAK - CFS Q-PS Q-ES Q-TOT
 DISCHARGES = 98.9 585.2 684.1

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-S/C FT/FT	25% OF S/C FT/FT
EMERGENCY SPILLWAY----	1.44	6.80	.022	.029

***** MESSAGE - EMERGENCY SPILLWAY RATING EXTRAPOLATED ABOVE ELEVATION 99.24

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
SCS-ESH	FT	FT	ACFT	AC	FT	ACFT
	75.0	98.24	173.9	.0	1.28	34.6

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	95.0	174.0	269.1

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY SPILLWAY----	FT	FT/SEC	FT/FT	FT/FT
	.55	4.21	.029	.039

	DURATION FLOW	ATTACK OE/B	SUMMATION VEL**2 DELTA T
EMERGENCY SPILLWAY----	HRS	ACFT/FT	(FT/SEC)**2 HRS
	15.3	1.1	52.6

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 3.22 FT/SEC
 AT DEPTH = .72 FT
 COMPUTED N = .0522
 RETARDANCE = C
 EXIT SLOPE = .0200

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 96.96 FT.

DRAWDOWN (DDT) TEST 95.00 FT 86.4 ACFT .00 CFS
 CONTROL IS .000 DETENTION STORAGE

TIME = 3.73 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
SCS-FBH	FT	FT	ACFT	AC	FT	ACFT
	75.0	98.24	173.9	.0	1.28	34.6

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	95.0	174.0	269.1

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY SPILLWAY----	FT	FT/SEC	FT/FT	FT/FT
	.55	4.21	.029	.039

	DURATION FLOW	ATTACK OE/B	SUMMATION VEL**2 DELTA T
EMERGENCY SPILLWAY----	HRS	ACFT/FT	(FT/SEC)**2 HRS
	15.3	1.1	52.6

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 3.22 FT/SEC
 AT DEPTH = .72 FT
 COMPUTED N = .0522
 RETARDANCE = C
 EXIT SLOPE = .0200

***** ES378 RUN - MINIMUM FLOW IN EMG. SPILLWAY FROM TR60
 USING FORMULA WITHOUT 200 CFS MINIMUM LIMIT. *****

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
MINIMUM ES	FT	FT	ACFT	AC	FT	ACFT
	75.0	98.89	191.4	.0	1.93	52.1

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	97.3	456.4	553.7

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
--	----------------	-------------------	--------------------	------------

EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	1.05	5.81	.024	.032

***** ES378 RUN - MINIMUM DEPTH, CREST EMG TO TOP OF DAM IS 2.00 FT
 NEW TOP OF DAM ELEVATION = 98.96

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
MINIMUM ES	FT	FT	ACFT	AC	FT	ACFT
	75.0	98.96	193.3	.0	2.00	54.0

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGES =	97.6	494.1	591.6

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	1.11	5.96	.023	.031

***** ES378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM, REQUIRED FOR THIS PASS. NEW TOP OF DAM ELEVATION = 99.24

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
MINIMUM ES	FT	FT	ACFT	AC	FT	ACFT
	75.0	99.24	200.9	.0	2.28	61.6

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGES =	98.6	641.7	740.3

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	1.32	6.51	.022	.029

***** MESSAGE - EMERGENCY SPILLWAY RATING EXTRAPOLATED ABOVE ELEVATION 99.24

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
SCS-ESH	FT	FT	ACFT	AC	FT	ACFT
	100.0	98.12	170.5	.0	1.16	31.2

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	94.6	183.5	278.1

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	.47	3.90	.030	.041

	DURATION	ATTACK	SUMMATION
	FLOW	OE/B	VEL**2 DELTA T
EMERGENCY	HRS	ACFT/FT	(FT/SEC)**2 HRS
SPILLWAY----	15.3	.9	36.3

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 2.75 FT/SEC
 AT DEPTH = .67 FT
 COMPUTED N = .0584
 RETARDANCE = C
 EXIT SLOPE = .0200

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 96.96 FT.

DRAWDOWN (DDT) TEST 95.00 FT 86.4 ACFT .00 CFS
 CONTROL IS .000 DETENTION STORAGE

TIME = 4.02 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
SCS-FBH	FT	FT	ACFT	AC	FT	ACFT
	100.0	98.12	170.5	.0	1.16	31.2

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	94.6	183.5	278.1

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY SPILLWAY----	FT	FT/SEC	FT/FT	FT/FT
	.47	3.90	.030	.041

	DURATION	ATTACK	SUMMATION
	FLOW	OE/B	VEL**2 DELTA T
EMERGENCY SPILLWAY----	HRS	ACFT/FT	(FT/SEC)**2 HRS
	15.3	.9	36.3

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 2.75 FT/SEC
 AT DEPTH = .67 FT
 COMPUTED N = .0584
 RETARDANCE = C
 EXIT SLOPE = .0200

***** ES378 RUN - MINIMUM FLOW IN EMG. SPILLWAY FROM TR60
 USING FORMULA WITHOUT 200 CFS MINIMUM LIMIT. *****

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
MINIMUM ES	FT	FT	ACFT	AC	FT	ACFT
	100.0	98.67	185.5	.0	1.71	46.2

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	96.6	456.4	553.0

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY SPILLWAY----	FT	FT/SEC	FT/FT	FT/FT
	.86	5.28	.025	.034

***** ES378 RUN - MINIMUM DEPTH, CREST EMG TO TOP OF DAM IS 2.00 FT
 NEW TOP OF DAM ELEVATION = 98.96

ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
MINIMUM ES	FT	FT	ACFT	AC	FT	ACFT
	100.0	98.96	193.3	.0	2.00	54.0

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGES =	97.6	658.7	756.3

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY SPILLWAY----	FT	FT/SEC	FT/FT	FT/FT
	1.11	5.96	.023	.031

***** ES378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM, REQUIRED
 FOR THIS PASS. NEW TOP OF DAM ELEVATION = 99.12

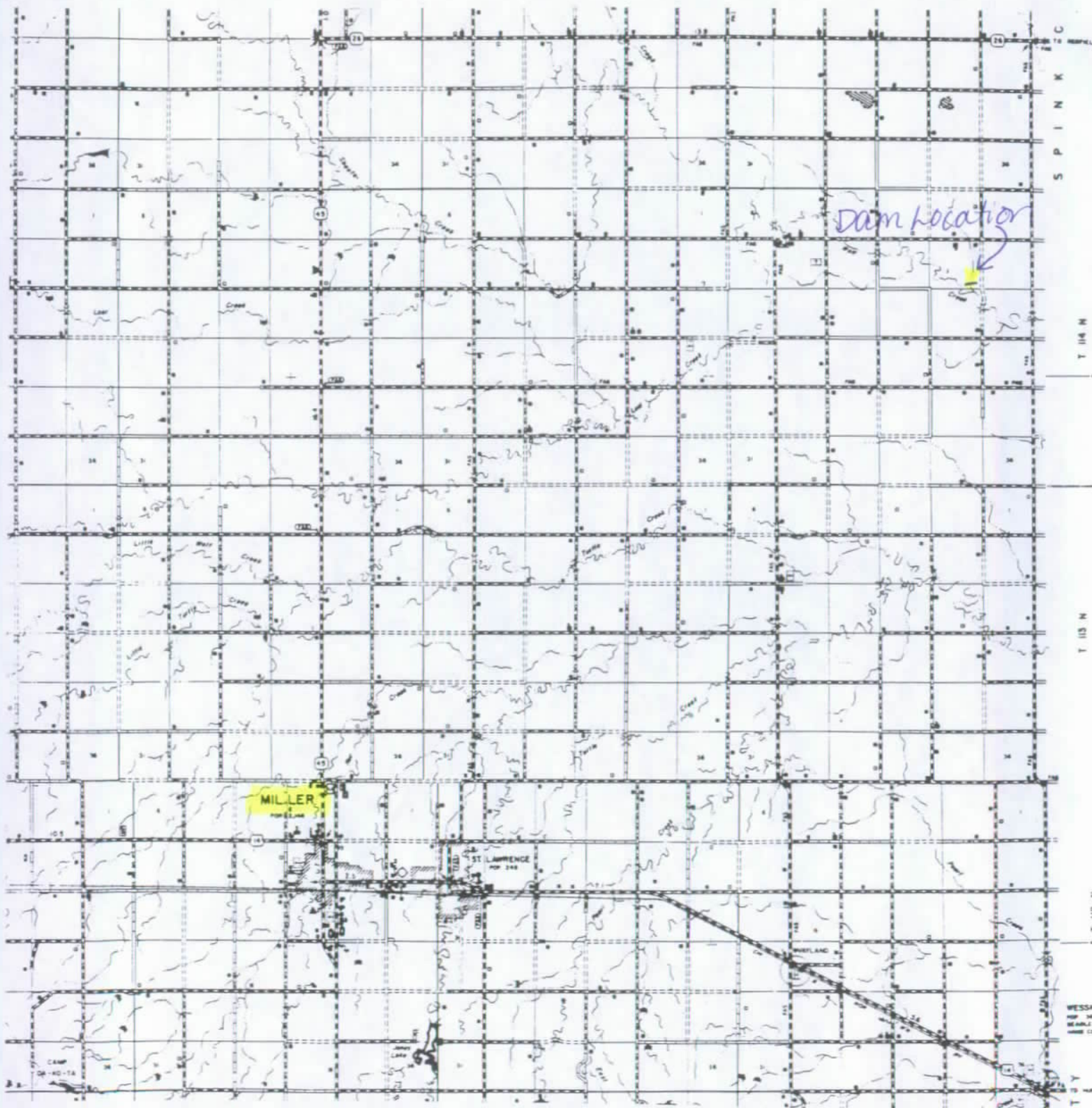
ROUTED RESULTS	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
MINIMUM ES	FT	FT	ACFT	AC	FT	ACFT
	100.0	99.12	197.5	.0	2.16	58.2

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGES =	98.1	767.1	865.2

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
--	----------------	-------------------	--------------------	------------

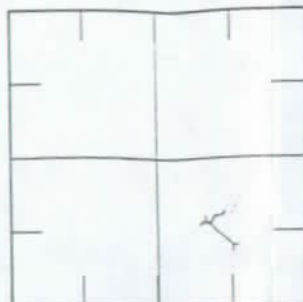
DATED 08/24/** 11:09:53

Location Map
Todd Bushong
Hand County
SE ¼, Section 11, T114N, R66W
NOT TO SCALE



6273-3

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPPLY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	25-YR.	C.F.S.	FEET	ACRES	AC. FT.	AC. FT.
2418	26	287	287	5	18	5	56



Sec. 11 T. 114 R. 66
HARD County

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

- SD-4 STRIPPING
SD-5 EXCAVATION
SD-7S EARTH FILL-CLASS 3
SD-12B CONCRETE FOR MINOR STRUCTURES
SD-13 EARTH REINFORCEMENT
SD-14 TIMBER FABRICATION & INSTALL.
SD-54B CORRUGATED DC TUBING

OPERATOR: TODD BUSHONG

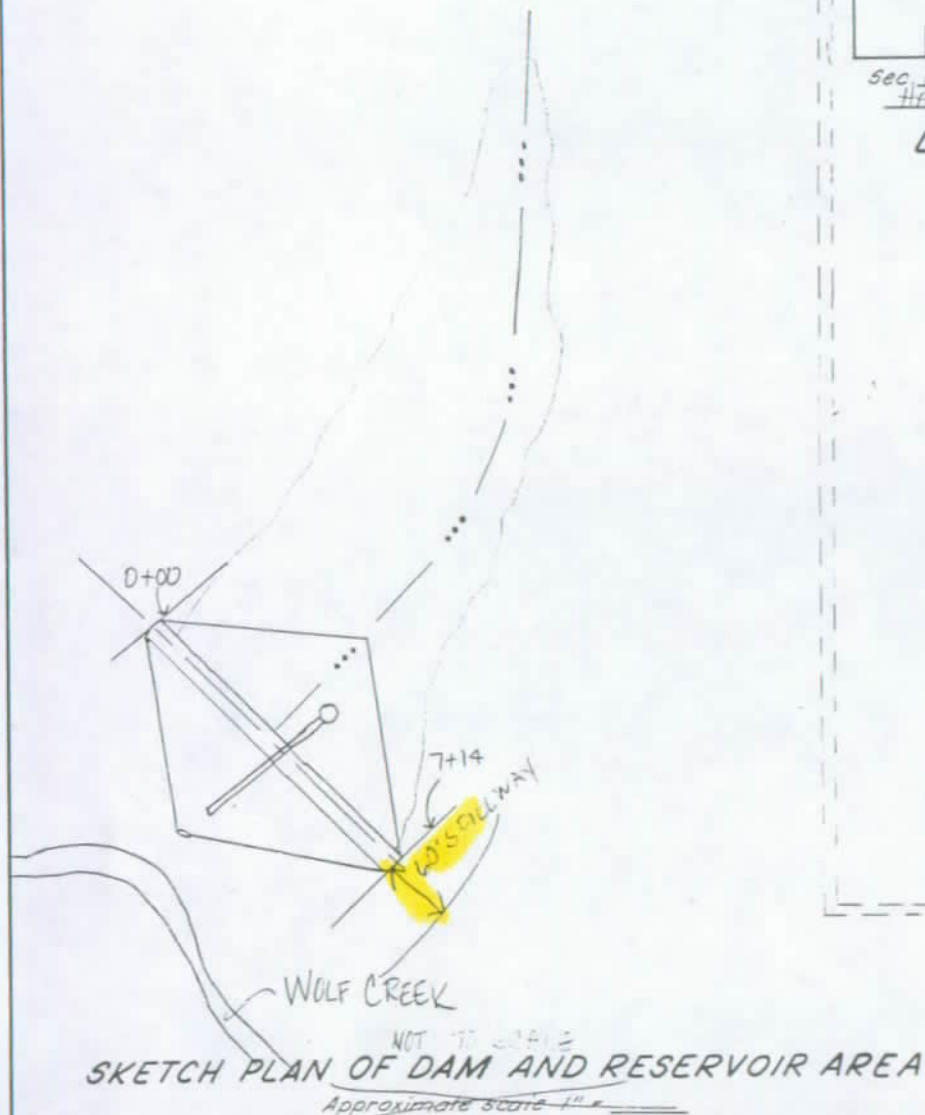
CONSERVATION DISTRICT: HAND

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

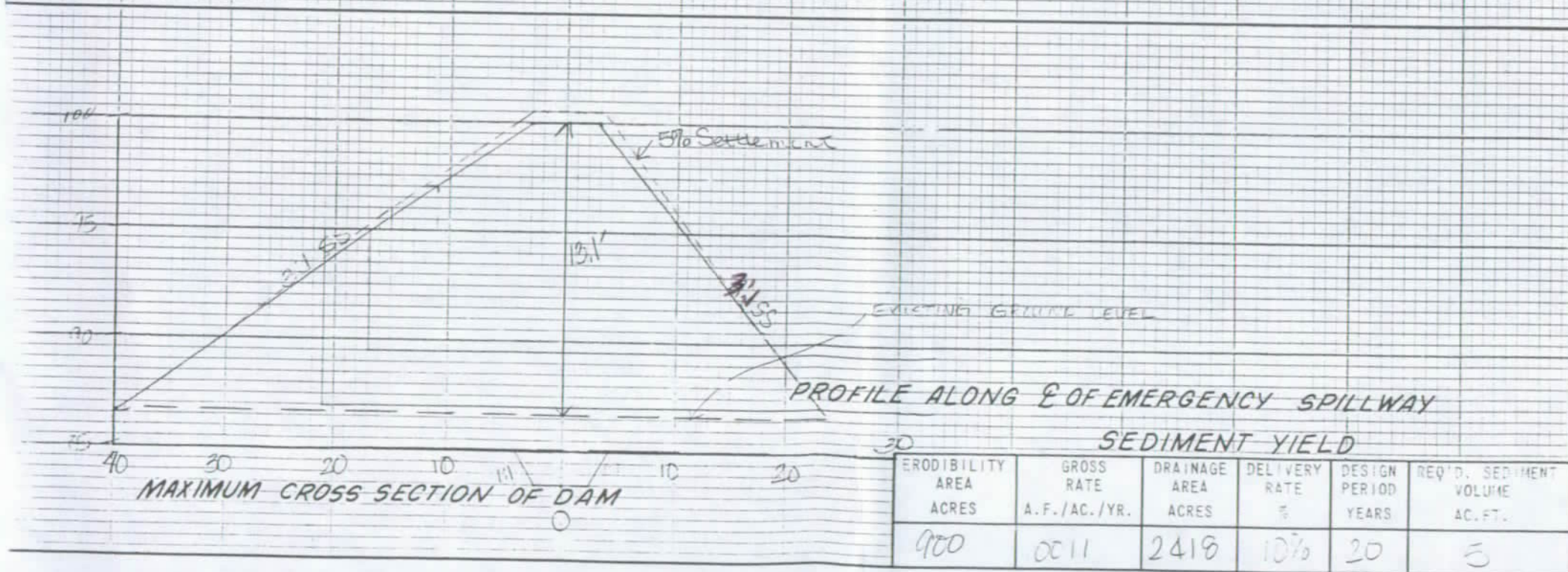
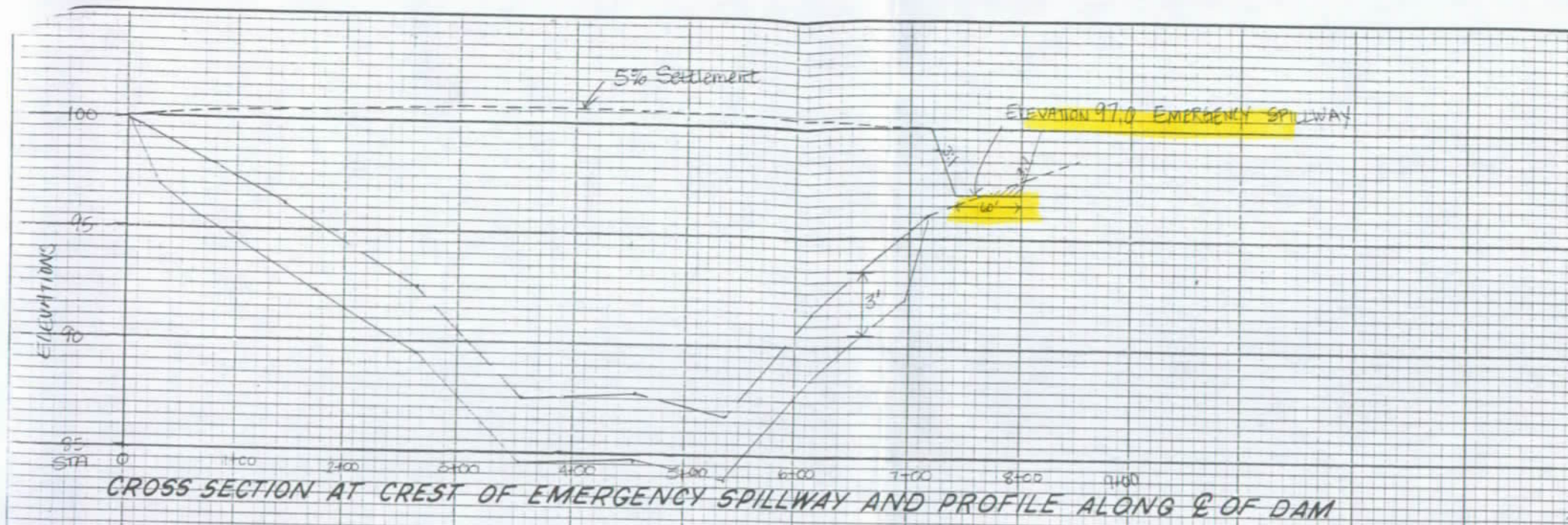
Designed	Date	[Signature]	
		Title	[Signature]
Drawn <u>A. KOWAN</u>	<u>7/61</u>	Title	[Signature]
Traced		Sheet	Drawing No.
Checked		No.	

1/5

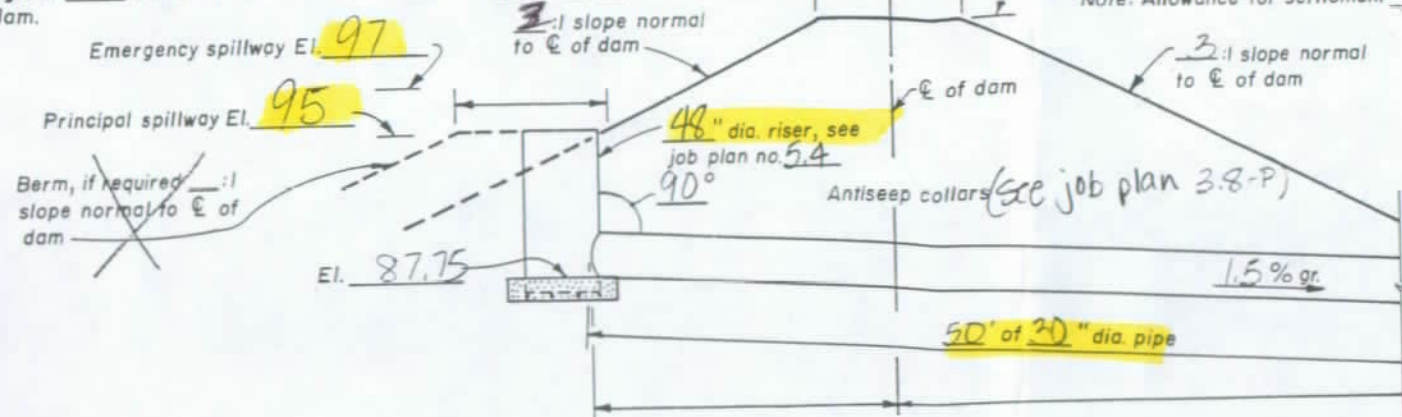
(Rev. 4-73) 5, N-29, 073.1a(1,



REFERENCE: GUIDE PLAN NO. 1.0



Locate principal spillway pipe at $\text{E. of dam sta. } 3+50$, at an angle of ° to the E. of the dam .



CROSS SECTION OF DAM ALONG E. of dam OF PRINCIPAL SPILLWAY
(Not to scale)

SPECIFICATION NOTES

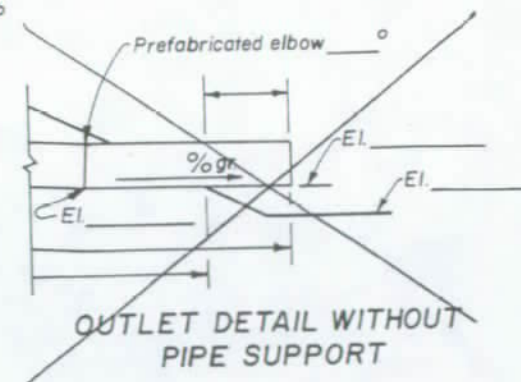
- ELBOW, IF REQUIRED, MAY BE FABRICATED BY CONTINUOUS WELDING SEPARATE PIPE SECTIONS OR BY FABRICATING A CONTINUOUS WELDED JOINT ON THE UPSTREAM END OF LAST SECTION OF PIPE.
- PIPE WALL THICKNESS SHALL BE ° GAGE OR ° INCHES.

Dual Wall PE Pipe 30" Dia

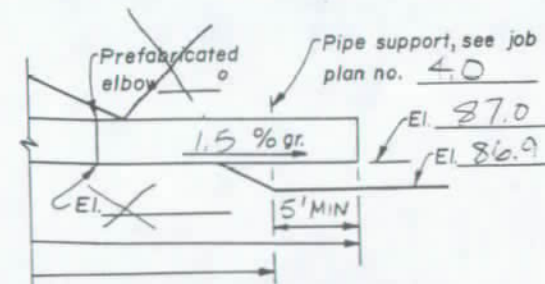
TABLE OF QUANTITIES (See Job Plan 1)

ITEM	UNIT	QUANTITY

APPLICABLE STANDARD S.G.S. SPECIFICATIONS (SEE JOB PLAN 1)



OUTLET DETAIL WITHOUT PIPE SUPPORT



Sec. 11, T. 114, R. 66
Hand County

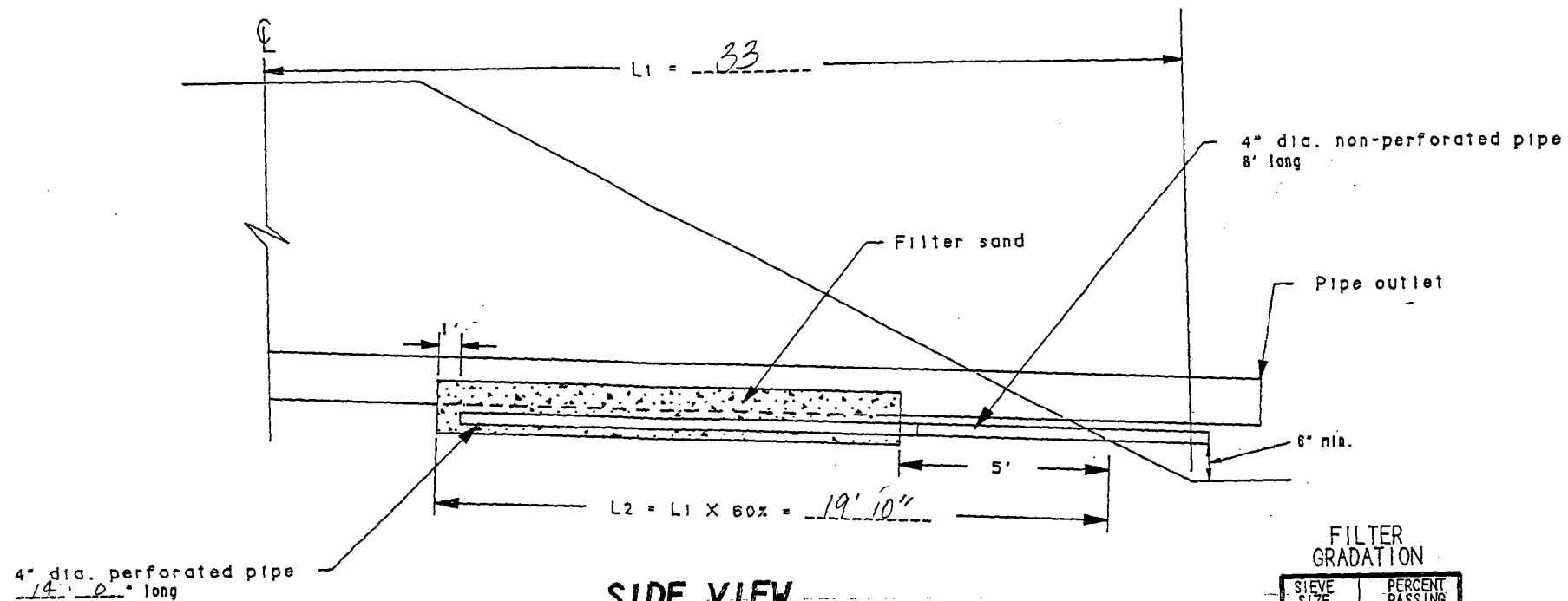
LOCATION

CORRUGATED METAL PIPE
DROP INLET PRINCIPAL SPILLWAY

OPERATOR <u>Todd Buehner</u>	
CONSERVATION DISTRICT <u>Hand</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed <u>T. Buehner</u>	Approved By <u> </u>
Drawn <u>T. Buehner</u>	Title <u> </u>
Traced <u> </u>	Date <u> </u>
Checked <u> </u>	Drawing No. <u>215</u>

Rev. 8/80
JOB PLAN NO. 2.0

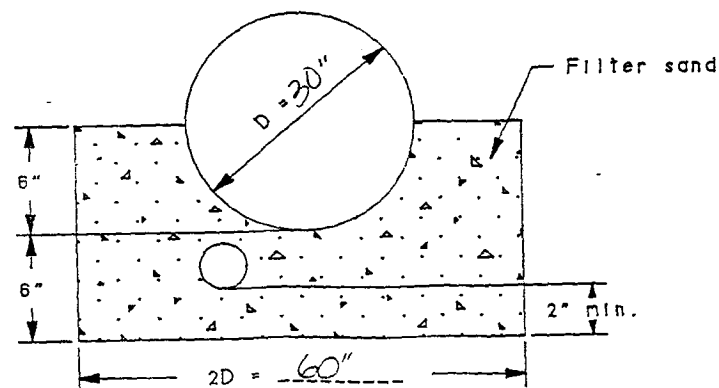
REFERENCE: GUIDE PLAN NO. 2.0



SIDE VIEW

FILTER
GRADATION

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



UPSTREAM VIEW

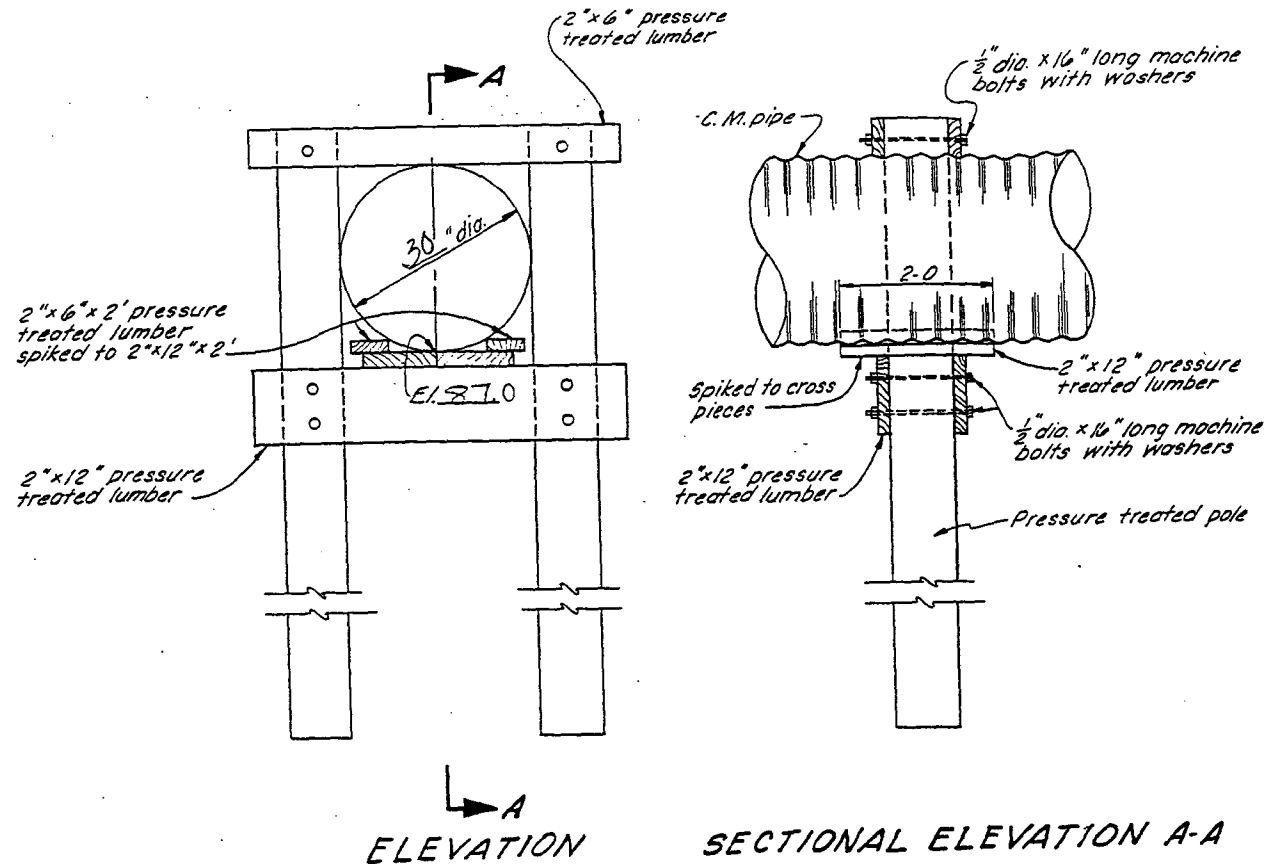
SAND ANTISEEP DRAIN

OPERATOR <u>Todd Bushong</u>	
CONSERVATION DISTRICT <u>Hand</u>	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	
Designed _____	Date _____
Drawn <u>A. Roman</u>	7/01
Traced _____	Approved by _____
Checked _____	Title _____
Sheet _____	Dwg. No. <u>315</u>
of _____	

- NOTE:
1. THE 4" DIA. PIPE SHALL BE SDR 35 PVC, OR STRONGER
 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).
 3. FILTER SAND WILL BE CLEAN PEA AGGREGATE OR CONCRETE SAND.

Rev. 3/96

JOB PLAN NO. 3.8-P



NOTES:

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

TABLE OF QUANTITIES

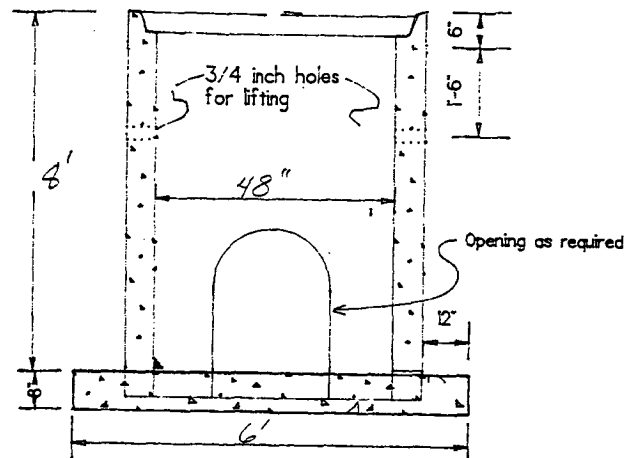
ITEM	LENGTH FOR 30" DIA. C.M. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE 10" DIA.	10'	EACH	2
2" X 12" PRESSURE TREATED LUMBER	5'	EACH	6
2" X 6" PRESSURE TREATED LUMBER	5'	EACH	2
2" X 12" PRESSURE TREATED LUMBER	2'	EACH	3
2" X 6" PRESSURE TREATED LUMBER	2'	EACH	2
1/2" DIA. MACHINE BOLTS WITH NUTS	1' 4"	EACH	10
1/2" DIA. WASHERS		EACH	20

REFERENCE: GUIDE PLAN NO. 4.0

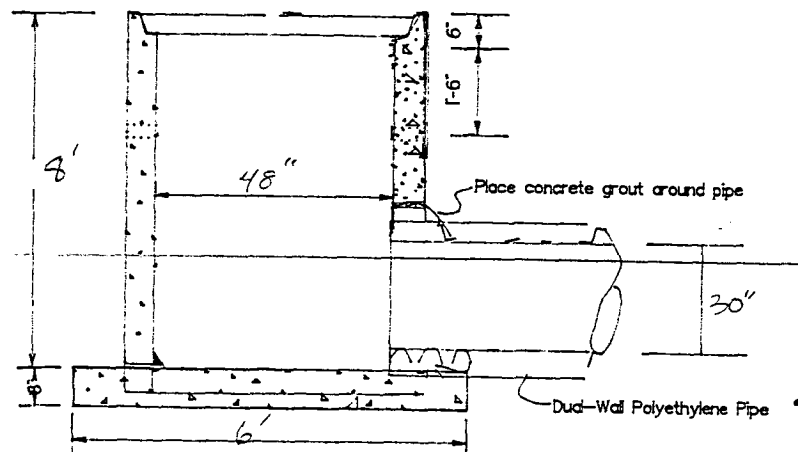
JOB PLAN NO. 4.0

TIMBER PIPE SUPPORT

OPERATOR: <u>Todd Fitcham</u>	
CONSERVATION DISTRICT: <u>Hand</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed: <u>A. Ruman</u>	Date: <u>7/01</u>
Drawn: <u>A. Ruman</u>	Approved by: _____
Traced: _____	Title: _____
Checked: _____	Sheet: <u>4/5</u>
	Drawing No. <u>5, N-29, 073.4a</u>



FRONT VIEW



SIDE VIEW

CONSTRUCTION NOTES:

- 1- Reinforced concrete pipe shall meet ASTM C-478.
- 2- Polyethylene pipe shall be equal to ADS N-12 or equal.
- 3- Provide holes in concrete pipe for lifting lugs.

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.	1.4
REINFORCING STEEL	LB.	44.0

CONCRETE RISER	
USDA U.S. Department of Agriculture Natural Resources Conservation Service	
DESIGNED BY: D. Knecht	APPROVED BY:
DRAFTED BY: D. Knecht	TITLE:
DATE: 7/13	SHEET 5 OF 5 DRAWING NO. 515

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

416869

Pierre, July 24, 20 01

RECEIVED OF Todd or Ann Bushong, 37295-185th St., Tulare, SD 57476
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. 4073-2 to Appropriate Water, to construct
and to put water to beneficial use _____

150 00

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. _____

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

150 00

By

Darland Erbe
Chief Engineer

gm



United States Department of the Interior

Fish and Wildlife Service
Huron Wetland Management District
Room 309, Federal Bldg.
200 4th Street SW
Huron, SD 57350
605/352-5894 Fax: 605/352-6709
Internet: R6RW_HUR@FWS.GOV



July 23, 2001

Water Rights Div., DENR
523 E. Capitol
Pierre, SD 57501

Dear Sir or Madam:

Enclosed you will find an application for a water rights permit for the Todd Bushong project. This project consists of building a new embankment across a small draw adjacent to Wolf Creek. You will find enclosed a copy of the plans for this project as drawn by Dave Konechne, NRCS Engineer, Pierre, SD.

We are hoping to proceed with the construction yet this fall of 2001, weather permitting. Please contact me if any corrections are needed with the application and when the permit is approved.

Thanks for your time.

Sincerely,

Charles Pyle
Private Lands Specialist



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

Field Support Office
314 S. Henry Street, Suite 300
P. O. Box 1258
Pierre, SD 57501-1258
Telephone: (605) 224-2476
Fax: (605) 224-6615

Subject: ENG – Todd Bushong Dam

Date: July 24, 2001

To: Tim Schaal P.E.
Water Rights Division
DENR, Joe Foss Bldg.
Pierre, South Dakota

File Code: 210



The hazard class for the Todd Bushong dam located in Section 11, township 114 North, Range 66 west, is a class "A" hazard dam.

Attached is a location map to be included with the plans.

DAVE F. KONECHNE, P. E.
Agricultural Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 25, 2001

Todd Bushong
37295 185th St
Tulare SD 57476

Dear Mr. Bushong:

Thank you for submitting the *Application for a Permit to Appropriate Water* for 86 acre-feet storage dam to be located in Hand County.

We have received the \$150 application filing fee. In addition to the application filing fee, the Water Rights Program now collects the \$50 licensing fee at the time of filing. Please submit \$50 for the licensing of the water permit.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

100 416874

Pierre, August 1, 2001

RECEIVED OF Todd or Ann Bushong, 37295 185th St., Tulare, SD 57476-5703
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. 6073-3

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

50 00

50 00

By

Darland Ebele
Chief Engineer *gm*

REPORT ON
WATER PERMIT APPLICATION NO. 6273-3
Todd Bushong
August 24, 2001

Water Permit Application No. 6273-3 has been filed by Todd Bushong to impound 86 acre-feet of water from runoff by constructing a dam located in the SE 1/4 of Section 11-T114N-R66W, in Hand County. The application also requests impoundment of sufficient water to maintain water at the outlet elevation. The water will be used for fish and wildlife production and livestock watering.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The Natural Resources Conservation Service (NRCS) has designed the dam. The plans and specifications have been reviewed and will be approved; however, construction of the dam can not begin until Water Permit Application No. 6273-3 is approved.

The Bushong Dam will be 13 feet high with a normal storage capacity of 86 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 221 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 2418 acres or 3.78 square miles. A 25-year frequency event for this drainage area produces a peak runoff of approximately 257 cfs. A 100-year frequency event produces a peak of approximately 486 cfs. The dam is designed to have a 48 inch diameter concrete riser and an 30 corrugated plastic pipe (CPE) barrel with 5.0 feet of available freeboard as the primary spillway, and a 60 foot wide earthcut spillway with 3.0 feet of available freeboard as the secondary spillway. The 60 foot wide spillway will have a capacity of approximately 810 cfs.

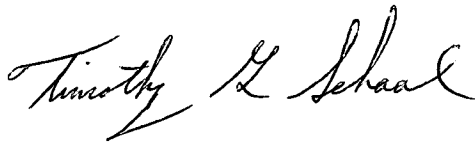
The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 13 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 42 acre-feet and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 262 acre-feet.

The Bushong Dam will be located in the SE 1/4 of Section 11-T114N-R66W on an unnamed tributary to Wolf Creek about one-half mile upstream of the confluence of the unnamed tributary and Wolf Creek and about 3.5 miles upstream of the confluence of Wolf Creek and Turtle Creek. There are no existing Water Permits/Rights located on the unnamed tributary between the proposed dam and Wolf Creek or between the confluence of Wolf Creek and Turtle Creek. Approval of Water Permit Application should not have any adverse effect on existing Water Permits/Rights.

Page 2
Application No. 6273-3
Todd Bushong

Conclusions:

1. Water Permit Application No. 6273-3 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 6273-3.



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

Approved by:



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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6273-3, Todd Bushong**

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. 6273-3, Todd Bushong, 37295 185th Street, Tulare SD 57476.

The Chief Engineer is recommending APPROVAL of Application No. 6273-3 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. 6273-3 authorizes a dam with a storage capacity of 86 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
August 31, 2001



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 31, 2001

Todd Bushong
37295 185th St.
Tulare, SD 57476

Dear Mr. Bushong:

We have reviewed the plans and specifications for your dam project located in the SE 1/4 of Section 11-T114N-R66W, in Hand County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the dam. The construction may not begin until Water Permit Application No. 6273-3 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 Bushong Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 13 feet and a normal storage capacity of 86 acre-feet and a maximum storage capacity of 221 acre-feet.

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

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer Director
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Dave Konechne, NRCS Pierre
Charles Pyle, USFWS Huron



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

August 31, 2001

Miller Press
PO Box 196
Miller, SD 57362-0196

ATTENTION: Legal Public Notice

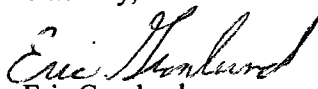
Enclosed is a Notice of Hearing on Application No. 6273-3 to Appropriate Water to be published twice. Please publish the first notice on September 12, 2001 with the second publication 7 days later.

The applicant must verify to you that the notice is to be published, before you make the first publication **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Todd Bushong, 37295 185th St. Tulare, SD 57476 (Ph # 605-472-3798).

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. 6273-3

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

Date _____

We are in receipt of your letter of August 31, 2001 enclosing Notice of Hearing to Appropriate Water by Application No. 6273-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

August 31, 2001

Todd Bushong
37295 185th St.
Tulare, SD 57476

Dear Mr. Bushong:

Water Permit Application No. 6273-3 for livestock watering and fish & wildlife propagation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Miller Press printed at Miller, SD (Ph # 605-853-3575). 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 a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish first Notice on September 12, 2001 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 6273-3 to Appropriate Water

Notice is given that Todd Bushong, 37295 185th St, Tulare SD 57476 has filed an application for a water permit to impound 86 acre-feet of water from runoff by constructing a dam located near the center of the SE ¼ Section 11 with water impounded in the SE ¼ Section 11; all in T114N-R66W. This application requests impoundment of sufficient water to maintain water at the outlet elevation. The water is used to provide habitat for fish and wildlife propagation and livestock watering.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6273-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by October 1, 2001.

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.



NOV 07 2001

Todd Bushong
37295 185th St.
Tulare, SD 57476

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

Dear Mr. Bushong:

Enclosed is Water Permit No. 6273-3 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

Permit No. 6273-3
James River - Water District

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

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

I have this day, **October 31, 2006**, made a thorough examination of the water use system constructed by **Todd Bushong** of **37295 185th St., Tulare, SD 57476** holder of Permit No. **6273-3**, bearing the priority of **July 24, 2001** authorizing the storage of **86** acre-feet of the waters of **runoff** for **fish & wildlife propagation and livestock watering** purposes, in **Hand** County.

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

A. Works used to divert the water:

A 13 foot high dam with a normal storage capacity of 86 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 13 foot high dam with a normal storage capacity of 86 acre-feet of water.

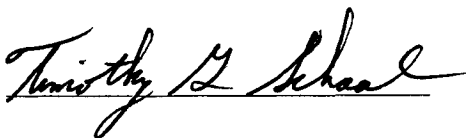
The system is in the following condition **good**. The point of diversion is located **1300 ft. north & 1300 ft. west of the SE corner of Sec. 11-T114N-R66W (SE ¼ SE ¼); Lat. 44.695596 Long. -98.730507.** The works are capable of storing **86** acre-feet of water which is to be used for **fish & wildlife propagation and livestock watering** purposes. Water has been put to beneficial use to the maximum extent as follows:

A 13 foot high dam with a normal storage capacity of 86 acre-feet of water.

and the license should be issued for **86** acre-feet of storage.

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

Exceptions to compliance are: **none** Date Report Completed: **January 19, 2007**



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

REPORT ON INSPECTION OF PERMIT NO. 6273-3

DATE OF INSPECTION: October 31, 2006

NAME & ADDRESS OF INSPECTION CONTACT/ Todd Bushong

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: owner

NAME & ADDRESS OF PERMIT HOLDER: Todd Bushong, 37295 185th St., Tulare, SD 57476

DIVERSION POINT LEGAL LOCATION: 1300 ft. north & 1300 ft. west of the SE corner of
Sec. 11-T114N-R66W (SE ¼ SE ¼); Lat. 44.695596 Long. -98.730507.

DAM INFORMATION:

- 1) Height to crest 13 feet
- 2) Height to primary spillway 8 feet
- 3) Height to secondary spillway 10 feet
- 4) Crest width 12 feet
- 5) Crest length 714 feet
- 6) Spillway length XXX feet
- 7) Spillway width 60 feet
- 8) Approx. storage (Normal) 86 acre-feet
- 9) Approx. storage (Maximum) 221 acre-feet
- 10) Date constructed: 2002

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. 6273-3



0 0.25 0.5 1 Miles



Timothy G. Schaal
1/19/07
Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
DENR Water Rights Program

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 6273-3

(1) Todd Bushong, 37295 185th St, Tulare SD 57476 made Application No. 6273-3, July 24, 2001 for a water permit to impound 86 acre-feet of water from runoff, Hand County, South Dakota for fish and wildlife propagation, recreation and domestic livestock watering purposes. Permit No. 6273-3, with a priority date of July 24, 2001 was approved October 1, 2001 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before October 1, 2006 and for the application to beneficial use of said water on or before October 1, 2010.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to construction of the storage dam and is entitled to impound 86 acre-feet of water for beneficial use with sufficient water annually to maintain the water level to the outlet elevation.

The location of the storage dam (spillway) is: 1,300 feet north and 1,300 feet west of the SE corner of Section 11, T114N, R66W (SE ¼ SE ¼).

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use for fish and wildlife propagation, recreation and domestic livestock watering purposes.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Todd Bushong, 37295 185th St, Tulare SD 57476 the holder and/or owner of Water Right No. 6273-3 is issued a license to appropriate water, the right to impound 86 acre feet of runoff water with sufficient water annually to maintain the water level to the outlet elevation from the location specified in (2) of this license. Water Right No. 6273-3 carries a priority date of July 24, 2001.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 6273-3 and subject to the following qualifications:

- Water Right No. 6273-3 authorizes a dam with a storage capacity of 86 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.



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

APR 30 2007

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

APR 30 2007

6273-3

Todd Bushong
37295 185th St
Tulare SD 57476

Dear Mr. Bushong:

Enclosed is your Water License No. 6273-3. Water License No. 6273-3 is the final document which completes the process of obtaining a water right. Also 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,

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

enclosures