

WATER PERMIT NO. 1729-1

Name of Applicant: Jerry Collins

Address: Box 840, Eagle Butte SD 57625

Phone: 605 964-3241

Amount of Water Claimed: 33.4 acre-feet

Total Acres: NA

Source of Water Supply: runoff

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

County: Ziebach

Type of Waste Disposal System:

Location: 25 miles southwest of Eagle Butte

PRIORITY Date Received: 6-6-2000

Fee: \$150

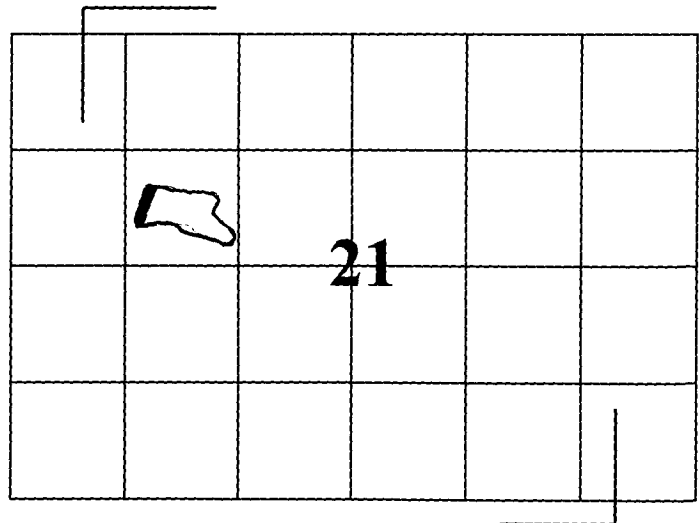
Corrected Application Received: 6-19-2000

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SW ¼ NW ¼ Sec 21-T10N-R22E

Water Impounded: SW ¼ NW ¼ Sec 21-T10N-R22E



Depth of Well: NA

Well Driller: : NA

Remarks:

Type of Map: plat

Prepared by: Thomas D VerHelst, NRCS

Reviewed and the Number Assigned on: 6-19-2000

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 1729-1

Date of first receipt of application June 6, 2000.

Date of return to applicant for corrections, amendments or changes June 6, 2000.

Date of receipt of corrected application June 19, 2000.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1729-1 to Jerry Collins, Box 840, Eagle Butte SD 57625 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. 1729-1 authorizes impoundment of 34 acre-feet of water from runoff by constructing a dam located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 21 with water impounded in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 21; all in T10N-R22E. This permit authorizes impoundment of sufficient water to maintain water at the outlet elevation
2. The water appropriated shall be used for the purpose of supplying water for fish and wildlife propagation and livestock watering purposes 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. 1729-1 is July 24, 2000.
5. The date from which applicant may claim right is June 6, 2000.
6. One-fifth of the construction is to be completed on or before January 24, 2003.
7. All construction is to be completed on or before July 24, 2005.
8. Water is to be put to beneficial use on or before July 24, 2009.
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. 1729-1 authorizes a dam with a storage capacity of 34 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

AUG 02 2000

date



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

No. 1729-1 Hydrologic Unit 10/20/12
Basin Lower Chayenne
Newspaper West River Progress, Dupree, SD
(office use only)



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

Check use of water:

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

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 JERRY COLLINS Phone 605-964-3241
Mailing Address Box 40 Eagle Butte State S.D. 57625
(Street, RR, or Box) (City) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 34 ~~33.25~~ ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (**Acres Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply DRY DRAW
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
SW1/4 NW1/4 S-21 T-10N R-22E Water Impounded:
SW1/4 NW1/4 sec. 21-T10N-R22E County ZIEBACH
- County or counties where water will be used ZIEBACH
- Annual period during which water is to be used year long 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)
14' TOP
3:1 U.S.
3:1 D.S.
15" Principal Sp. Hwy
Depth = 26.9'

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 Dewey ss

I, Jerry Collins, 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

Jerry Collins

Subscribed and sworn to before me this 5th day of June 2000

Shawn L. Payne 4-3-04
Notary Public

(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. Dugout Information

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

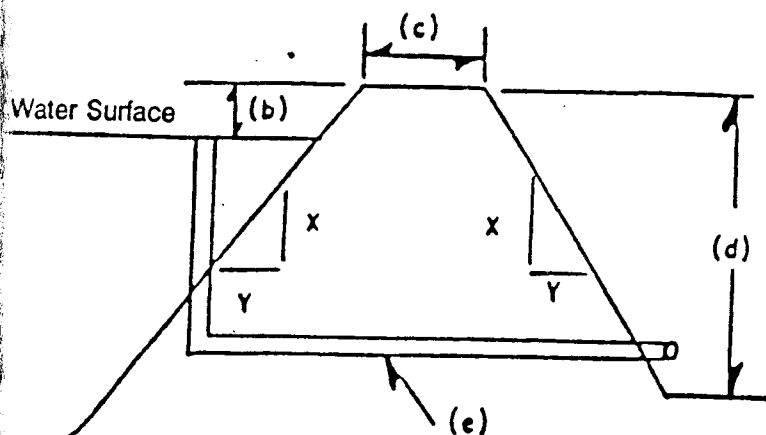
3. Water Storage Dams

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:

NATURAL Resources Conservation Service
P.O. Box 399 FAITH, S.D. 57626
605-967-2561

- b) Freeboard 3'
- c) Crest Width 14'
Crest Length 325'
- d) Height 31.7'
- e) Primary Outlet Capacity 26.2 cfs
If pipe, diameter 15"
- f) Secondary Spillway Capacity 195 cfs
Spillway Width 40'
- g) X & Y Slope
Upstream 3:1
Downstream 3:1
- h) Surface Area of Impoundment 3.0
- i) Storage 33.4 Acre Feet
- j) Drainage Area above Dam 240 Acres



RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

No 416548

Pierre, June 19, 2000

RECEIVED OF Jerry Collins, Box 840, Eagle Butte SD 57625

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

Fee for Application for Permit No. 1729-1 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. 1729-1

50 00

Fee for Filing Transfer Form

Fee for Filing Extension Request

Fee for

(Any Other Work Provided by Law)

Total

200 00

By

Harland Erbeles

Chief Engineer

RS



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

June 6, 2000

Jerry Collins
Box 840
Eagle Butte SD 57625

Dear Mr. Collins:

Thank you for submitting the *Application for a Permit to Appropriate Water* for the dam located in Ziebach County.

The application filing fee will be \$150. In addition to the application filing fee, the Water Rights Program collects the \$50 licensing fee at the time of filing. Please submit a total of \$200 for this application.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352

DENA copy

CONSTRUCTION SPECIFICATIONS

for

POND (378)
JERRY COLLINS
SW⁴, NW⁴, S-21 T-10N R-22E



Prepared by:

USDA-NATURAL RESOURCES CONSERVATION SERVICE

Assisting:

ZEIBACH Conservation District



NRCS personnel must be certified at ASK Level IV (full completion of National Cultural Resources 8 Module Training) to conduct and document cultural resource inventories. Inventories must be conducted with pedestrian transects, spaced maximum of 100 ft.

Field Office: Dupree Cooperator: JERRY COLLINS CR Report #: _____

Conservation Practice#: 378 Name: POND

Inventory Size: 200 acres. Ground Visibility: 80 %. Inventory Date(s): 12-10-99

Personnel: D. ELLEFSON

Surveyed Area: T 10 N/S; R 22 E/W; Section 21; _____; _____; _____; _____; _____

Cultural Resources Located? ☒ No - Circle. Sign below. Do not complete more of form.
Yes - Fill in Site Report Form Below!

Signature(s): D. Ellefson

CR Site Location: T _____ N/S; R _____ E/W; Section _____; 1/4s _____

Owner Name/Address: _____

Phone/Fax: _____ Site Size: _____ ft. N-S; _____ ft. E-W.

Artifacts/Features (Circle all located): "Arrowheads" Beads Bone

Bottle_Glass Bridge Cabin/House Cans CCC/WPA Charcoal

Concrete Dam Dump Earthlodge Fence Flakes Lumber

Fossil Foundation Grave Mine/Quarry Monument Depression

Mound Offering Pottery Railroad Rock Art RockPile/Alignment

Rubber/Tires Stone Circle Wagon_Trail Well Window_Glass

Other Information: _____

Attach USGS map showing practice location APE, access route and cultural sites. Send copy to Cultural Resource Specialist, Huron State Office, and appropriate Field Office file. For cultural resources, attach photos and send copy to appropriate FCRC.

Client : JERRY COLLINS
 County : ZIEBACH
 Practice: POND

State: SD

By: DE
 Checked: TVH

Date: 12-11-99
 Date: 2/15/00

Drainage Area : 240 Acres
 Curve Number : 82
 Watershed Length : 4000 Feet
 Watershed Slope : 7 Percent
 Time of Concentration: .569 Hours
 Rainfall Type : II

Storm Number	1	2	3	4	5	6	7
Frequency (yrs)	1	2	5	10	25	50	100
24-Hr Rainfall (in)	1.7	2	2.8	3.4	3.8	4.4	4.8
Ia/P Ratio	0.26	0.22	0.16	0.13	0.12	0.10	0.09
Used	0.26	0.22	0.16	0.13	0.12	0.10	0.10
Runoff (in)	0.46	0.65	1.22	1.70	2.03	2.55	2.90
Unit Peak Discharge (cfs/acre/in)	0.665	0.691	0.734	0.752	0.761	0.772	0.772
Peak Discharge (cfs)	73	108	215	307	372	472	537

$$W = 315', \quad L = 850', \quad D = 26.9'$$

$$\frac{(315)(850)(.5)}{43560} = 3.07(3.1)(26.9)(.4) = 33.35 \text{ Ac FT}$$

$$Q = .0016 \quad 240 \text{ AC} \quad 15\% \quad 20 \text{ yr} = 1.1 \text{ Ac FT. Sed.}$$

32.25 Ac FT. Usable Storage

EFM-2 ESTIMATING RUNOFF AND PEAK DISCHARGE
Curve Number Computation

VERSION 1.10

Client : JERRY COLINS
County : ZIEBACH
Practice: POND

State: SD

By: D.E.
Checked: TL

Date: 11-19-99
Date: 2/22/00

COVER DESCRIPTION	A	Hydrologic Soil Group		
		B	C	D
		Acres (CN)		

OTHER AGRICULTURAL LANDS

Pasture, grassland or range	fair	-	-	-	100(84)
	good	-	-	-	140(80)

Total Area (by Hydrologic Soil Group) 240
=====

TOTAL DRAINAGE AREA: 240 Acres

WEIGHTED CURVE NUMBER: 82

EFM-2 ESTIMATING RUNOFF AND PEAK DISCHARGE
Curve Number Computation

VERSION 1.10

Client : JERRY COLINS
County : ZIEBACH
Practice: POND

State: SD

By: D.E.
Checked: TVH

Date: 11-19-99
Date: 2/22/00

COVER DESCRIPTION	Hydrologic Soil Group			
	A	B	C	D
	Acres (CN)			

OTHER AGRICULTURAL LANDS

Pasture, grassland or range	fair	-	-	-	100(84)
	good	-	-	-	140(80)

Total Area (by Hydrologic Soil Group) 240
=====

TOTAL DRAINAGE AREA: 240 Acres

WEIGHTED CURVE NUMBER: 82

1DAMS2 XEQ 12/10/99 STRUCTURE SITE ANALYSIS COMPUTER PROGRAM
REV 01/01/90 SCS TECHNICAL RELEASE 48, (USER MANUAL) DATED JAN. 1990
TIME 19:03:25

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

CHECKED BY: TVH 2/22/00

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

DAMS2 01/01/90 COLLINS WILDLIFE POND ZIEBACH CO. S.D.
STRUCTURE COLLINS S-21 T-10N R-22E CLASS-A

67.9	0.0
75.0	15.0
93.2	31.5
95.2	33.7
98.0	40.55
101.0	45.8

ENDTABLE

WSDATA	2A101	AC	82.0	240	1.0	
PDIRECT			2.0		3.8	3.8
POOLDATA	ELEV		93.2	93.2	2.0	2.0
PSDATA	1		100	15	.012	1.0
PSINLET			1.0	16		
ESCREST	ELEV					
ESDATA	01		40	.025	3	.035
BTMWIDTH	FEET		40	50		1.0
COMMENT	PRELIMINARY RUN ON 378 DAM					
COMMENT	378 SPECS. CLASS-A					
COMMENT	10 YR. PRIN. SPWY. STORM					
COMMENT	25 YR. 24HR. EMERGENCY SPILLWAY					
COMMENT	FREEBOARD SAME AS 25YR. STORM					
GO,DESIGN	TYPE2		24	TYPE2	378	24HR
ENDJOB						

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

1DAMS2 XEQ 12/10/99
REV 01/01/90 DLIFE POND ZIEBACH CO. S.D.

WSID = OLLINS W

PRELIMINARY RUN ON 378 DAM

378 SPECS. CLASS-A

10 YR. PRIN. SPWY. STORM

25 YR. 24HR. EMERGENCY SPILLWAY

FREEBOARD SAME AS 25YR. STORM

1DAMS2 -----
XEQ 12/10/99 DLIFE POND ZIEBACH CO. S.D.
REV 01/01/90 21 T-10N R-22E CLASS-A
TIME 19:03:25 SITE = COLLI

WSID= OLLINS
SUBW= 01
PAGE= 1
PASS= 1

HUMID- SUBHUMID CLIMATE AREA

BASIC DATA

DESIGN CLASS A1 =LT 3000

STORM DISTRIBUTION-PSH 24 HOUR TYPE II RAINFALL DISTRIBUTION

STORM DISTRIBUTION ESH...24 HOUR TYPE II RAINFALL DISTRIBUTION

PRECIP.-	P-PS1 DAY 2.00	P-PS10 DAY .00	P-ES 3.80	P-FB 3.80	
WSDATA-	CN 82.00	DA-SM .38	TC/L 1.00	-/H .00	
SITEDATA-	PERM POOL 93.20	CREST PS 93.20	FP SED 2.00	QRF .00	
	BASEFLOW .00	INITIAL EL .00	EXTRA VOL. .00		
PSDATA-	NO. COND. 1.00	COND L 100.00	D/W 15.00	-/H .00	
	PS N .012	KE 1.00	WEIR L 16.00	TW EL 1.00	
	2ND STG .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 3.00	EXIT N .035	EXIT SLOPE .010		
EMG DATA-	ES TYPE 1	ES LENGTH 40	ES ENTRANCE N .025		
BTM WIDTH-	BW1 40.00	BW2 50.00	BW3 .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	01	ELEVATION INCREMENT (FT)= 1.000		
DISCHARGES-Q1	Q2	Q3	Q4	
2.447	7.754	14.794	23.290	
Q5	Q6	Q7	Q8	
32.964	43.705	55.396	67.992	
Q9	Q10	Q11	Q12	
81.428	95.596	110.523	126.175	

1DAMS2 -----
XEQ 12/10/99 DLIFE POND ZIEBACH CO. S.D. WSID= OLLINS
REV 01/01/90 21 T-10N R-22E CLASS-A SUBW= 01
TIME 19:03:25 SITE = COLLI PASS= 1 PAGE= 2

PERM POOL 93.20 FT 31.5 ACFT .00 AC .0 CFS

CREST PS	93.20 FT	31.5 ACFT	.00 AC	.0 CFS
SED ACCUM	93.20 FT	31.5 ACFT	.00 AC	.0 CFS
STARTING E	93.20 FT	31.5 ACFT	.00 AC	.0 CFS
SCS-PSH	D= 24.00 HR TC= 1.00 HR	P= 2.00 IN CN= 82.00	Q= .65 IN VOL= 13.0 ACFT	DA = .38 SM

PEAK = 76.7 CFS, AT 12.5 HRS.

ROUTED RESULTS - HYD TYPE	EMAX	VOL-MAX	AMAX	QMAX
SCS-PSH	95.04 FT	33.5 ACFT	.00 AC	47.9 CFS

PS STORAGE 2.0 ACFT BETWEEN ES CREST AND SED ACCUM ELEVATIONS

DRAWDOWN (DDT) TEST 93.20 FT 31.5 ACFT .00 CFS
CONTROL IS .000 DETENTION STORAGE

TIME = .60 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

1DAMS2

XEQ 12/10/99	DLIFE POND ZIEBACH CO. S.D.	WSID= OLLINS
REV 01/01/90	21 T-10N R-22E CLASS-A	SUBW= 01
TIME 19:03:25	SITE = COLLI	PAGE= 3
	PASS= 1	

ES CREST	95.04 FT	33.5 ACFT	.00 AC	47.9 CFS
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PS STORAGE 2.0 ACFT BETWEEN ES CREST AND SED ACCUM ELEVATIONS

STARTING E	93.20 FT	31.5 ACFT	.00 AC	.0 CFS
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EFFECTIVE HEIGHT(H)= 93.0 FEET, PRODUCT = 3119. (H * STORAGE AT CREST EMG.)

INPUT DESIGN CLASS = A1 =LT 3000

***** MESSAGE - NCPS 378 CRITERIA DOES NOT APPLY WHEN THE EFFECTIVE HEIGHT IS OVER 35 FEET OR THE PRODUCT IS 3000 OR GREATER

SCS-ESH	D= 24.00 HR TC= 1.00 HR	P= 3.80 IN CN= 82.00	Q= 2.03 IN VOL= 40.6 ACFT	DA = .38 SM
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PEAK = 263.2 CFS, AT 12.5 HRS.

SCS-FBH	D= 24.00 HR TC= 1.00 HR	P= 3.80 IN CN= 82.00	Q= 2.03 IN VOL= 40.6 ACFT	DA = .38 SM
---------	----------------------------	-------------------------	------------------------------	-------------

PEAK = 263.2 CFS, AT 12.5 HRS.

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
SCS-ESH	40.0	96.44	36.7	.0	1.40	3.2

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	48.2	195.2	243.4

	CRITICAL	CRITICAL	CRITICAL	25% OF
	DEPTH	VELOCITY	SLOPE-S/C	S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	.88	5.18	.019	.026

	DURATION	ATTACK	SUMMATION
	FLOW	OE/B	VEL**2 DELTA T
EMERGENCY	HRS	ACFT/FT	(FT/SEC)**2 HRS
SPILLWAY----	2.4	.4	20.6

***** MESSAGE - ES378 CRITERIA USED BUT EMERGENCY SPILLWAY NOT BASED ON RETARDANCE.

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 19.63 FT/SEC
EXIT SLOPE = .010 FT/FT

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 95.04 FT.

DRAWDOWN (DDT) TEST 93.20 FT 31.5 ACFT .00 CFS
CONTROL IS .000 DETENTION STORAGE

TIME = .55 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

ROUTED	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
RESULTS	FT	FT	ACFT	AC	FT	ACFT
SCS-FBH	40.0	96.44	36.7	.0	1.40	3.2

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	48.2	195.2	243.4

	CRITICAL	CRITICAL	CRITICAL	25% OF
	DEPTH	VELOCITY	SLOPE-S/C	S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	.88	5.18	.019	.026

	DURATION	ATTACK	SUMMATION
	FLOW	OE/B	VEL**2 DELTA T
EMERGENCY	HRS	ACFT/FT	(FT/SEC)**2 HRS
SPILLWAY----	2.4	.4	20.6

***** MESSAGE - ES378 CRITERIA USED BUT EMERGENCY SPILLWAY NOT BASED ON RETARDANCE.

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 19.63 FT/SEC
EXIT SLOPE = .010 FT/FT

***** ES378 RUN - MINIMUM DEPTH, CREST EMG TO TOP OF DAM IS 2.00 FT
NEW TOP OF DAM ELEVATION = 97.04

ROUTED	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	EMG. HP	VOL-ES
RESULTS	FT	FT	ACFT	AC	FT	ACFT
MINIMUM ES	40.0	97.04	38.2	.0	2.00	4.7

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGES =	48.4	355.1	403.5

CRITICAL CRITICAL CRITICAL 25% OF

EMERGENCY	DEPTH	VELOCITY	SLOPE-S/C	S/C
SPILLWAY----	FT	FT/SEC	FT/FT	FT/FT
	1.30	6.21	.017	.023

***** ES378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM, REQUIRED
FOR THIS PASS. NEW TOP OF DAM ELEVATION = 97.44

ROUTED RESULTS MINIMUM ES	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
	40.0	97.44	39.2	.0	2.40	5.6

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGES =	48.5	482.7	531.2

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	1.59	6.80	.016	.021

ROUTED RESULTS SCS-ESH	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
	50.0	96.28	36.3	.0	1.24	2.8

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	48.2	195.3	243.5

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY----	.77	4.87	.020	.027

	DURATION FLOW	ATTACK OE/B	SUMMATION VEL**2 DELTA T
EMERGENCY	HRS	ACFT/FT	(FT/SEC)**2 HRS
SPILLWAY----	2.4	.3	17.4

***** MESSAGE - ES378 CRITERIA USED BUT EMERGENCY SPILLWAY NOT BASED
ON RETARDANCE.

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 19.64 FT/SEC
EXIT SLOPE = .010 FT/FT

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 95.04 FT.

DRAWDOWN (DDT) TEST	93.20 FT	31.5 ACFT	.00 CFS
CONTROL IS .000 DETENTION STORAGE			

TIME = .55 DAYS, TO .0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS SCS-FBH	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
	50.0	96.28	36.3	.0	1.24	2.8

PEAK - CFS	Q-PS	Q-ES	Q-TOT
DISCHARGE =	48.2	195.3	243.5

	CRITICAL DEPTH	CRITICAL VELOCITY	CRITICAL SLOPE-S/C	25% OF S/C
EMERGENCY	FT	FT/SEC	FT/FT	FT/FT

SPILLWAY---- .77 4.87 .020 .027

	DURATION FLOW HRS	ATTACK OE/B ACFT/FT	SUMMATION VEL**2 DELTA T (FT/SEC)**2 HRS
EMERGENCY SPILLWAY----	2.4	.3	17.4

***** MESSAGE - ES378 CRITERIA USED BUT EMERGENCY SPILLWAY NOT BASED ON RETARDANCE.

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 19.64 FT/SEC
EXIT SLOPE = .010 FT/FT

***** ES378 RUN - MINIMUM DEPTH, CREST EMG TO TOP OF DAM IS 2.00 FT
NEW TOP OF DAM ELEVATION = 97.04

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
MINIMUM ES	50.0	97.04	38.2	.0	2.00	4.7
PEAK - CFS DISCHARGES =		Q-PS 48.4	Q-ES 435.7	Q-TOT 484.0		
	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-S/C FT/FT	25% OF S/C FT/FT		
EMERGENCY SPILLWAY----	1.30	6.24	.017	.023		

***** ES378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM, REQUIRED FOR THIS PASS. NEW TOP OF DAM ELEVATION = 97.28

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	EMG. HP FT	VOL-ES ACFT
MINIMUM ES	50.0	97.28	38.8	.0	2.24	5.3
PEAK - CFS DISCHARGES =		Q-PS 48.4	Q-ES 529.1	Q-TOT 577.5		
	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-S/C FT/FT	25% OF S/C FT/FT		
EMERGENCY SPILLWAY----	1.47	6.62	.016	.022		

1DAMS2.....JOB NO. 1 COMPLETE

OLLINS W DLIFE POND ZIEBACH CO. S.D.

0 SUBWATERSHED(S) ANALYZED

1 STRUCTURE(S) ANALYZED

5 HYDROGRAPHS ROUTED AT LOWEST SITE

0 TRIALS TO OBTAIN BOTTOM WIDTH FOR SPECIFIED VELOCITY(S)

1

DAMS2 VERSION 01/01/90

RUN TIME

19:03:25

<<<

MINIMUM ES
MINIMUM ES

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

SCS DAMS2 VERSION 01/01/90
OLLINS W FILES

DATED 12/10/99 19:03:25

• No -

I have been thinking about you a lot lately. I hope you are well. I have been thinking about you a lot lately. I hope you are well. I have been thinking about you a lot lately. I hope you are well.

US Department of Agriculture
Soil Conservation Service

DESIGN WORKSHEET
for
Hooded Inlet Drop Structure

prepared for

JERRY COLLINS

in

ZIEBACH County, South Dakota

Designer : D.ELLEFSON
Date : 12/10/99

Checker _____
Date _____

#2

Top Width = 14 ft.
Upstream sideslope = 3.0 :1
Downstream sideslope = 2.0 :1

'n' value = 0.012
Discharge = 26.1 cfs.
Pipe diameter = 15 in.
Pipe length = 102 ft.
(including 6 feet
beyond the toe.)

Pipe Controls

Elevation of top = 98.0
Elevation of emergency = 95.0
Elevation of design storm = 95.0
Elevation of inlet = 93.2
Elevation of outlet = 66.0

PRELIMINARY YARDAGE COMPUTATIONS
(Used just a profile survey, no cross-sections)

PROJECT NAME: collins
TYPE OF WORK: c
RUN DATE: 12-10-1999

RUN BY: DE

CHECKED BY: TVH 2/22/00

STATION 1+15

AREA= 0.00 SQ.FT. ECCENTRICITY= 0.00 FT.

STATION 1+20

ENTRY #	ELEVATION	DISTANCE
1	98.20	0.00
2	97.20	7.00
3	96.20	17.60
4	98.00	14.00
5	98.00	7.00
6	98.20	0.00

AREA= 13.34 SQ.FT. ECCENTRICITY= 10.40 FT.

STATION 1+70

ENTRY #	ELEVATION	DISTANCE
1	87.50	0.00
2	86.20	39.40
3	85.20	72.00
4	98.00	46.40
5	98.00	32.40
6	87.50	0.00

AREA= 506.35 SQ.FT. ECCENTRICITY= 37.54 FT.

STATION 2+20

ENTRY #	ELEVATION	DISTANCE
1	72.10	0.00
2	71.10	84.70
3	70.10	147.50
4	98.00	91.70
5	98.00	77.70
6	72.10	0.00

AREA= 2172.18 SQ.FT. ECCENTRICITY= 77.80 FT.

STATION 2+50

ENTRY #	ELEVATION	DISTANCE
1	67.30	0.00
2	66.30	99.10
3	65.30	171.50
4	98.00	106.10
5	98.00	92.10
6	67.30	0.00

AREA= 2940.17 SQ.FT. ECCENTRICITY= 90.60 FT.

PROJECT NAME: collins
TYPE OF WORK: c
RUN DATE: 12-10-1999

RUN BY:

STATION 2+70

ENTRY #	ELEVATION	DISTANCE
1	72.10	0.00
2	71.10	84.70
3	70.10	147.50
4	98.00	91.70
5	98.00	77.70
6	72.10	0.00

AREA= 2172.18 SQ.FT. ECCENTRICITY= 77.80 FT.

STATION 3+20

ENTRY #	ELEVATION	DISTANCE
1	77.70	0.00
2	76.70	67.90
3	75.70	119.50
4	98.00	74.90
5	98.00	60.90
6	77.70	0.00

AREA= 1421.78 SQ.FT. ECCENTRICITY= 62.86 FT.

STATION 3+70

ENTRY #	ELEVATION	DISTANCE
1	87.70	0.00
2	86.70	37.90
3	85.70	69.50
4	98.00	44.90
5	98.00	30.90
6	87.70	0.00

AREA= 471.78 SQ.FT. ECCENTRICITY= 36.18 FT.

STATION 4+20

ENTRY #	ELEVATION	DISTANCE
1	96.20	0.00
2	95.20	15.40
3	94.20	40.00
4	100.00	28.40
5	100.00	14.40
6	95.20	0.00

AREA= 128.40 SQ.FT. ECCENTRICITY= 21.88 FT.

STATION 4+40

AREA= 0.00 SQ.FT. ECCENTRICITY= 0.00 FT.

PROJECT NAME: collins

TYPE OF WORK: c

RUN DATE: 12-10-1999

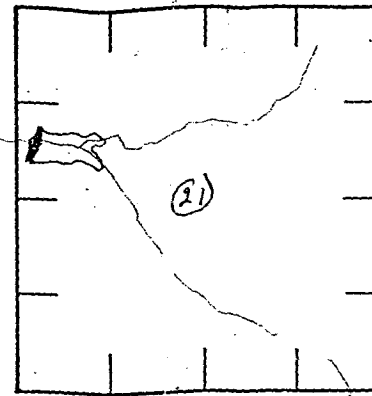
RUN BY:

STATION	AREA	ECCENT.	DISTANCE	VOLUME	CUM. VOLS.
1+15	0.00	0.00			0.00
			5.00	1.24	
1+20	13.34	10.40			1.24
			50.00	481.20	
1+70	506.35	37.54			482.43
			50.00	2480.12	
2+20	2172.18	77.80			2962.56
			30.00	2840.19	
2+50	2940.17	90.60			5802.75
			20.00	1893.46	
2+70	2172.18	77.80			7696.22
			50.00	3327.74	
3+20	1421.78	62.86			11023.96
			50.00	1753.29	
3+70	471.78	36.18			12777.25
			50.00	555.72	
4+20	128.40	21.88			13332.97
			20.00	47.56	
4+40	0.00	0.00			13380.53

TOTAL VOLUME IS 13380.53 CUBIC YARDS

STRUCTURE DATA

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	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.
240	9.2	40.0	140	26.9	3.1	1.15	33.4
		372 EFM-2	195.2 DAMS-2				



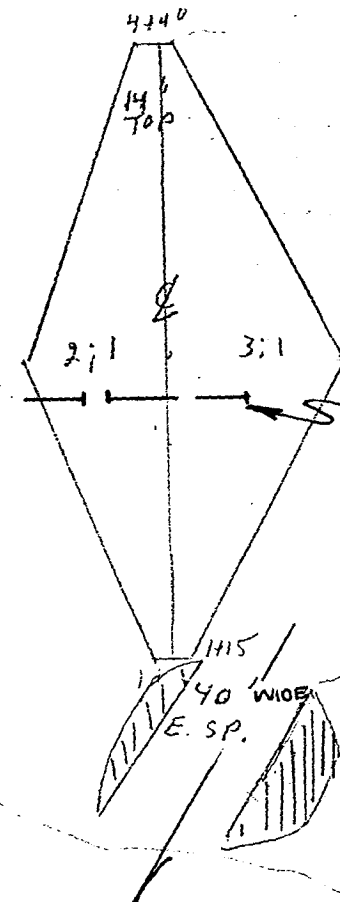
Sec 21 T. 10N R. 22E
ZIEBACH County

LOCATION

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
EARTH FILL / SETTLEMENT	CY	14049
STRIPPING	CY	200
CORE TRENCH	CY	195
TOTAL	CY	14440
PRINCIPAL SPILLWAY		
15" DIA PLASTIC PIPE	L.F.	140
HOODED INLET W/ TRASH RACK (Per Detail)	EA.	1
TIMBER PIPE SUPPORT (Per Detail)	EA.	1
ANTI SEEP DRAIN (Per Detail)	EA.	1

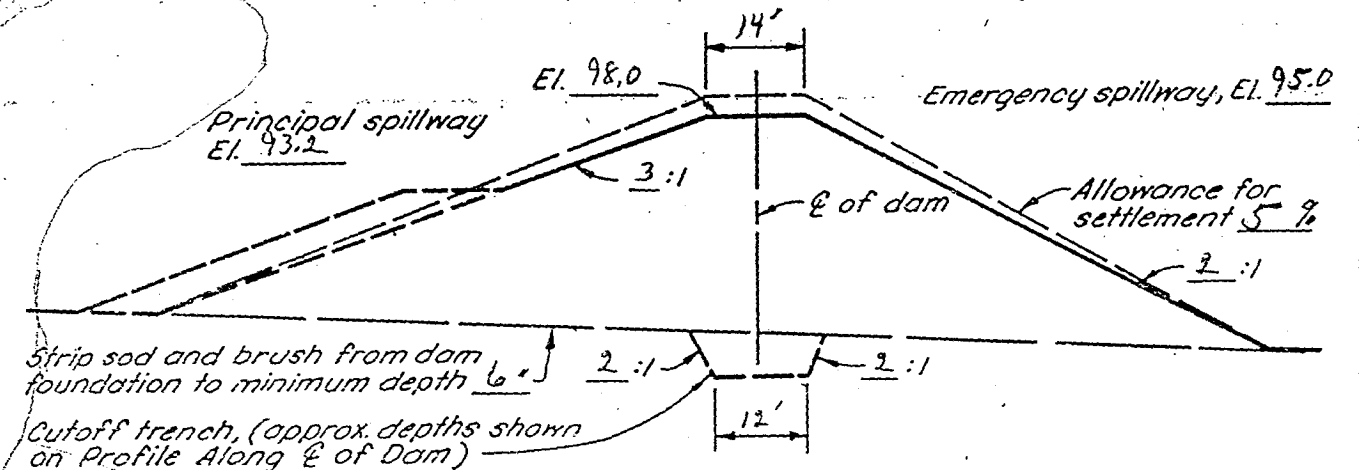
FENCE



SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" = 100'

REFERENCE: GUIDE PLAN NO. 1.0



TYPICAL CROSS SECTION OF DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

EARTH FILL CLASS - A	SD-7A
EARTH FILL CLASS - S	SD-7S
EXCAVATION	SD-5
STRIPPING	SD-4
SALVAGING & SPREADING TOPSOIL	SD-10
PLASTIC PIPE	SD-55
TIMBER FABRICATION & INSTALLATION	SD-1L

EARTH DAM-CLASS A

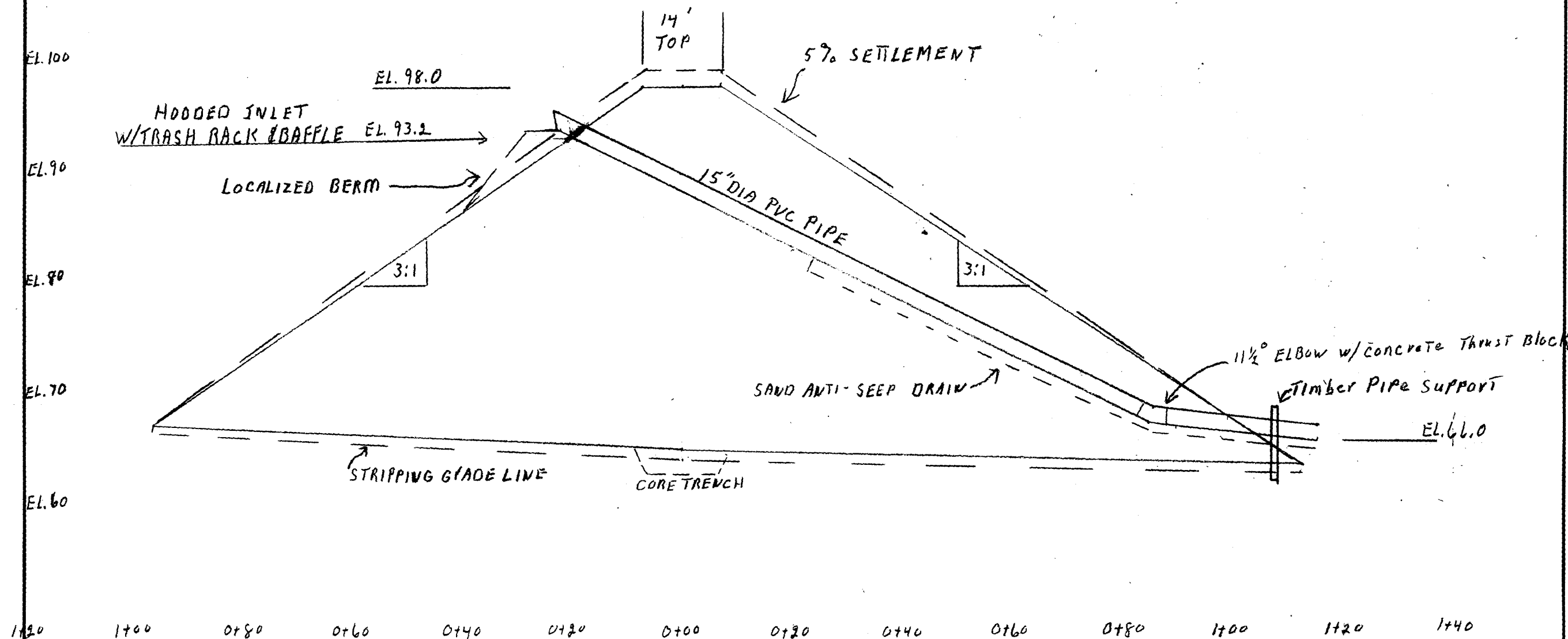
OPERATOR: JERRY COLLINS

CONSERVATION DISTRICT: ZIEBACH

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed: J. S. Collins	Date: 12-10-98	Approved by: Thomas D. H. H.
Drawn: J. S. Collins	Date: 12-10-98	Title: Asst. Engineer
Traced: _____	Sheet: No. 1	Drawing No. _____
Checked: T. VERHEIJST	Date: 2/60	of _____

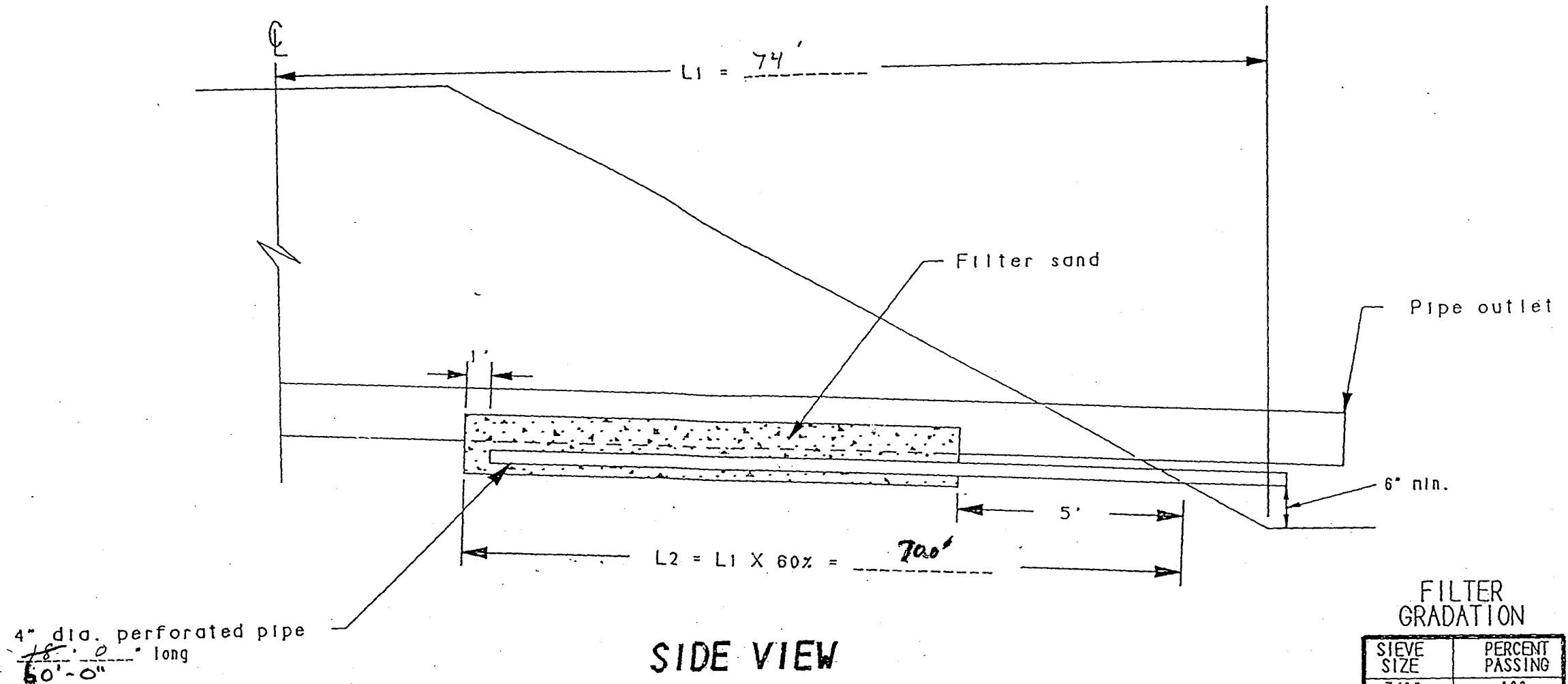
JOB PLAN NO. 1.0



JERRY COLLINS

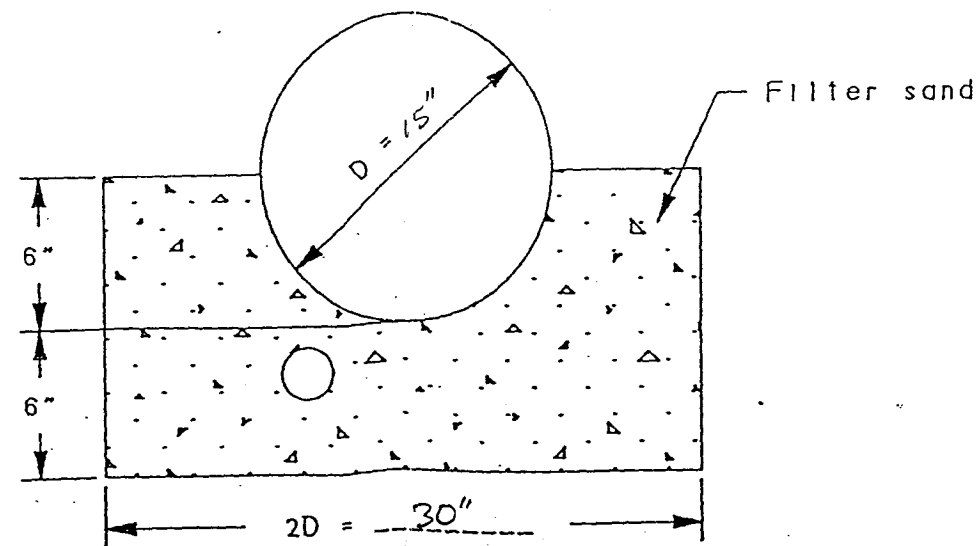
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed <i>J. Collins</i>		Date		Approved by	
Drawn		Title		Title	
Traced		Sheet		Drawing No.	
Checked		No		of	



FILTER GRADATION

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



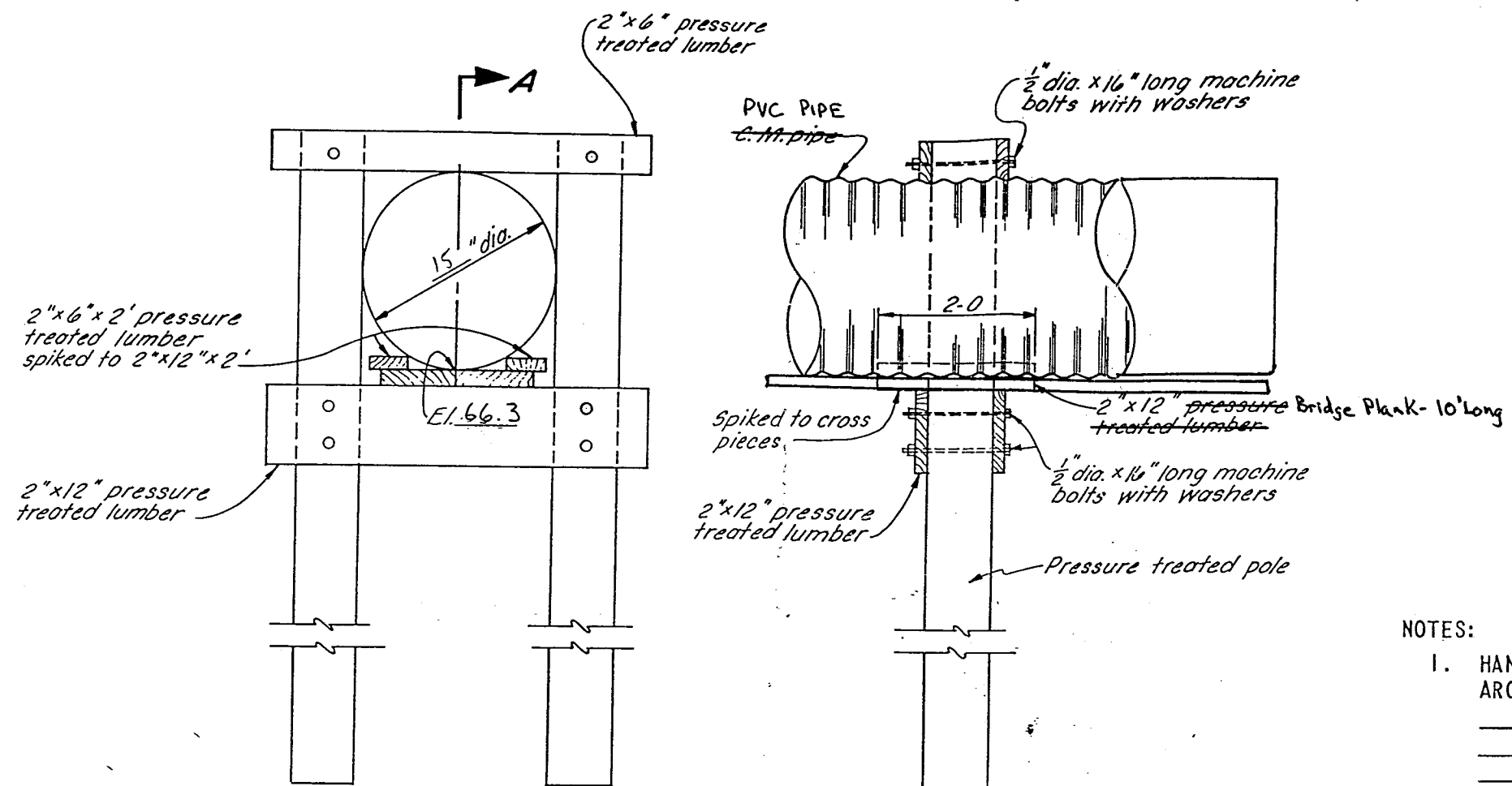
- NOTE:
1. THE 4" DIA. PIPE SHALL BE SDR 35 PVC, OR STRONGER
 2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL 2. 1/2" DIA. HOLES. ON ϕ 6" FROM END OF PIPE AND PLACE A 3/8" DIA., 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).
 3. FILTER SAND WILL BE CLEAN PEA AGGREGATE OR CONCRETE SAND.

SAND ANTISEEP DRAIN

OPERATOR <u>JERRY COLLINS</u>	
CONSERVATION DISTRICT <u>ZIEBACH</u>	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	
Designed <u>P. J. J.</u> Date <u>12-10-99</u>	Approved by <u>Thomas D. Va. Holt</u>
Drawn <u>P. J. J.</u> Date <u>12-10-99</u>	Title <u>As Engineer</u>
Traced _____	Title _____
Checked _____	Sheet No. <u>2</u> of _____
	Dwg. No. _____

Rev. 3/96

JOB PLAN NO. 3.8-P



ELEVATION

SECTIONAL ELEVATION A-A

TABLE OF QUANTITIES

ITEM	LENGTH FOR 15" DIA. PLASTIC C.M. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE 8" DIA.	8' x 8'	EACH	2
2" X 12" PRESSURE TREATED LUMBER	10' x 2" x 12"	EACH	21
2" X 6" PRESSURE TREATED LUMBER	3' x 2" x 6'	EACH	2
2" X 12" PRESSURE TREATED LUMBER	3' x 2" x 12"	EACH	2
2" X 6" PRESSURE TREATED LUMBER	2' x 2" x 6"	EACH	2
1/2" DIA. MACHINE BOLTS WITH NUTS	1/2" DIA. x 16"	EACH	6
1/2" DIA. WASHERS	1/2" DIA.	EACH	12

NOTES:

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

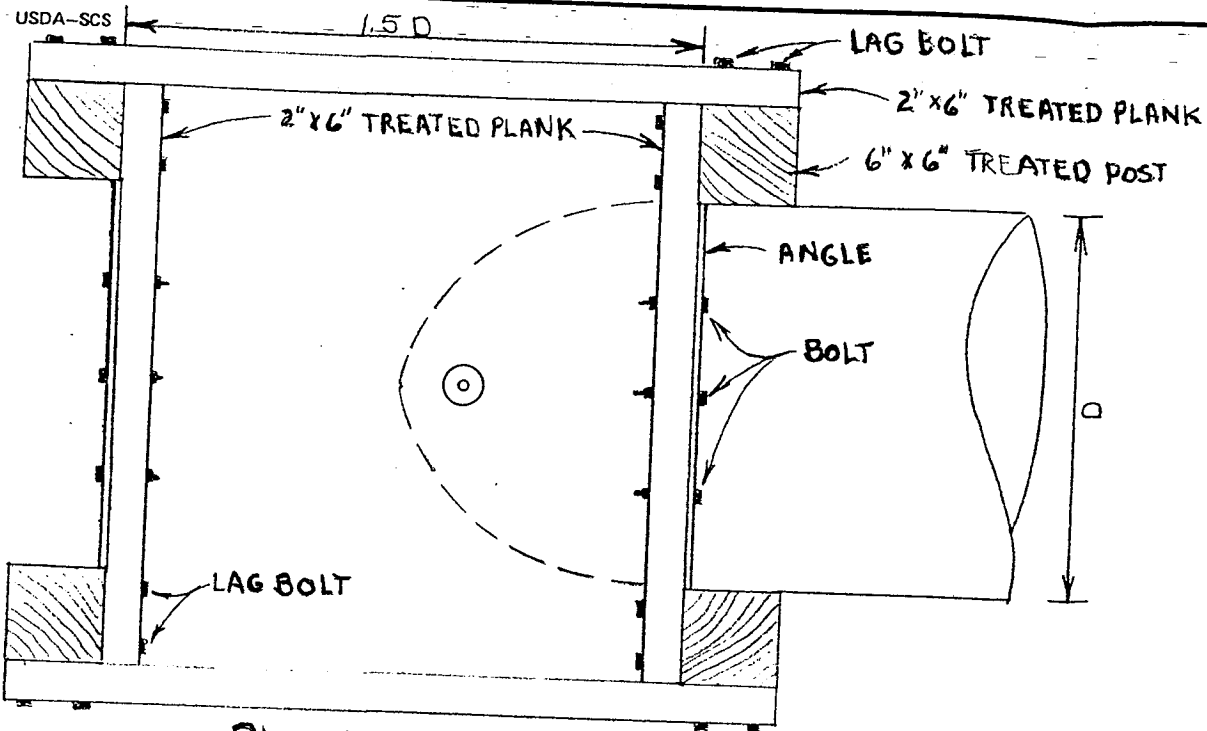
TIMBER PIPE SUPPORT

OPERATOR: JERRY Collins

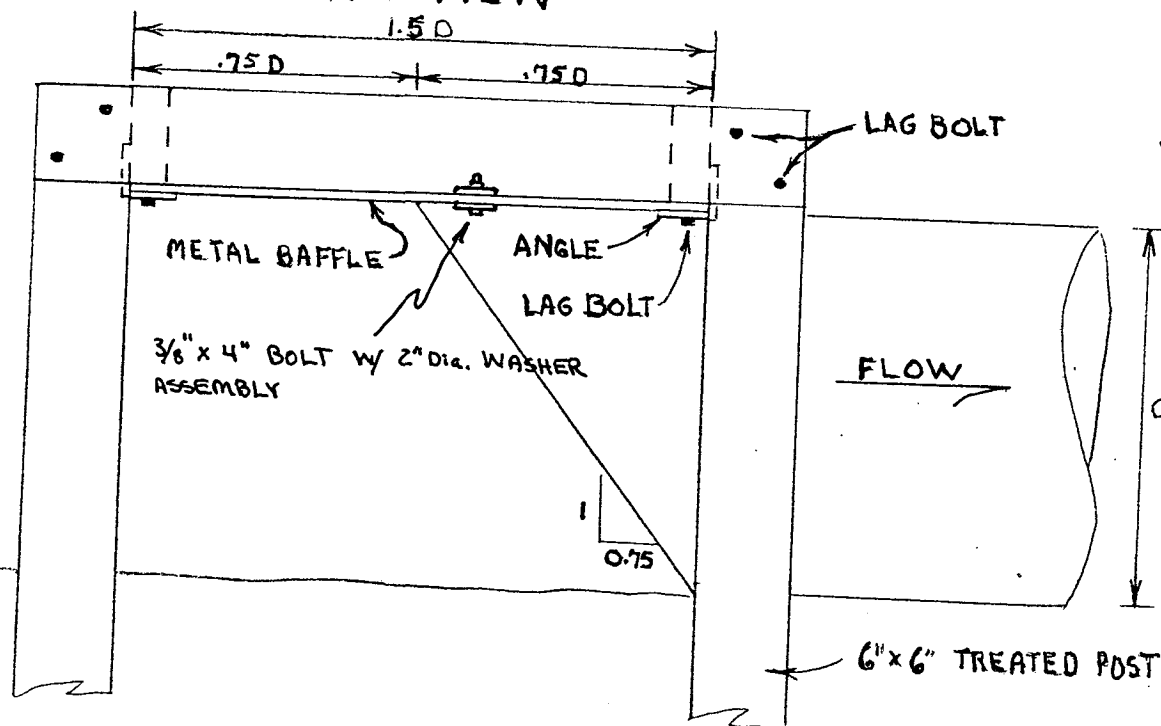
CONSERVATION DISTRICT: ZIEBACH

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

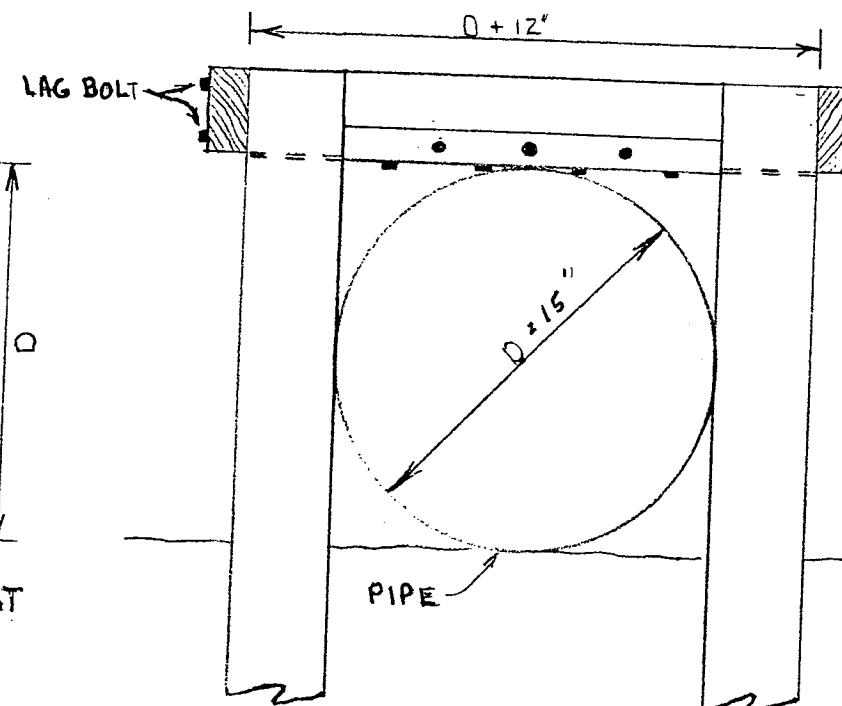
Designed by <u>D. C. Clark</u>	Date <u>12-10-99</u>	Approved by <u>Thomas O. Va. Klotz</u>
Drawn <u>D. C. Clark</u>	Date <u>12-10-99</u>	Title <u>As Engineer</u>
Traced	Sheet No. <u>3</u>	Drawing No.
Checked	of	



PLAN VIEW



SIDE VIEW



END VIEW

HOODED INLET & BAFFLE

DIMENSIONS

PIPE DIA INCHES	BAFFLE THICKNESS INCHES	BAFFLE SIZE INCHES	ANGLE IRON LENGTH INCHES	LAG BOLT SIZE INCHES	BOLT SIZE INCHES	2"x6" PLANK LENGTH INCHES	6"x6" POST LENGTH INCHES
12	0.25	18 x 24	12	1/4 x 3	3/8 x 2 1/2	2 @ 30 & 24	72
15	0.25	21 x 27	15	"	"	2 @ 34 & 27	"
18	0.25	27 x 30	18	"	"	2 @ 39 & 30	"
21	0.25	31.5 x 33	21	"	"	2 @ 43.5 & 33	"
24	0.25	36 x 36	24	"	"	2 @ 48 & 36	"
27	0.25	40.5 x 39	27	"	"	2 @ 52.5 & 39	"

- NOTES: 1) ALL NUTS, BOLTS & WASHERS SHALL BE GALVANIZED.
 2) ALL BOLTS SHALL HAVE NUT & LOCK WASHERS.
 3) ALL LAG BOLTS SHALL HAVE WASHERS.
 4) ALL PLANKS & POSTS SHALL BE PRESSURE TREATED LUMBER.
 5) PAINT METAL BAFFLE w/ 3 COATS OF ZINC DUST-ZINC OXIDE PRIMER.

JERRY COLLINS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed _____	Date _____	Approved by <i>Thorn D. Van Natta</i>
Drawn _____		Title <i>Ag. Engineer</i>
Traced _____		Title _____
Checked _____	Sheet _____	Drawing No. _____
	of _____	

Water Permit Application 1729-1 Jerry Collins

Site: SW 1/4 NW 1/4 Section 21 T10N, R22E

Top of dam elev. -	98.0	} 31.7ft
2 nd Spillway elev.	95.0	
Primary Spillway elev.	93.2	
Downstream Toe elev.	66.3	

Category 3 low hazard

Normal storage capacity = 33.4 ac.ft

Intermediate capacity = 33.7 ac.ft

Max. storage capacity = 40.55 ac.ft

Intermediate capacity (acre-feet crest of emergency) 33.7 ac.ft
74:02:08:07:01

Intermediate capacity x effective height < 3000

$$33.7 \times 28.7 = 967 < 3000$$

therefore use minimum spillway design 25yr./4hr.

From USGS WRI 80-80 "Techniques For estimating Flood Peak
Volumes, And Hydrographs on small Streams"

$$A = 240/640 = 0.38 \text{ mi}^2$$

$$S = 200' \text{ mi} \quad S_i = 2.5$$

$$p. 4 \quad Q_{25} = 83.4 A^{0.6} S^{0.44} S_i^{-0.72}$$

A = area sq. miles; S = slope ft/mi

S_i = soil infiltration index

$$= 83.4 (0.38)^{0.6} (200)^{0.44} (2.5)^{-0.72}$$

$$= 248 \text{ cfs}$$

Secondary Spillway Flow

Primary Spillway

$$Q = CLH^{3/2} \quad C = 2.6 \quad L = \frac{40}{325} \quad H = 3.0 \text{ ft}$$

$$= 2.6 \left(\frac{40}{325} \right) (3)^{3/2}$$

$$= 540 \text{ cfs}$$

$$NRCS = 26 \text{ cfs}$$

74:02:08:09

NRCS Annual Yield

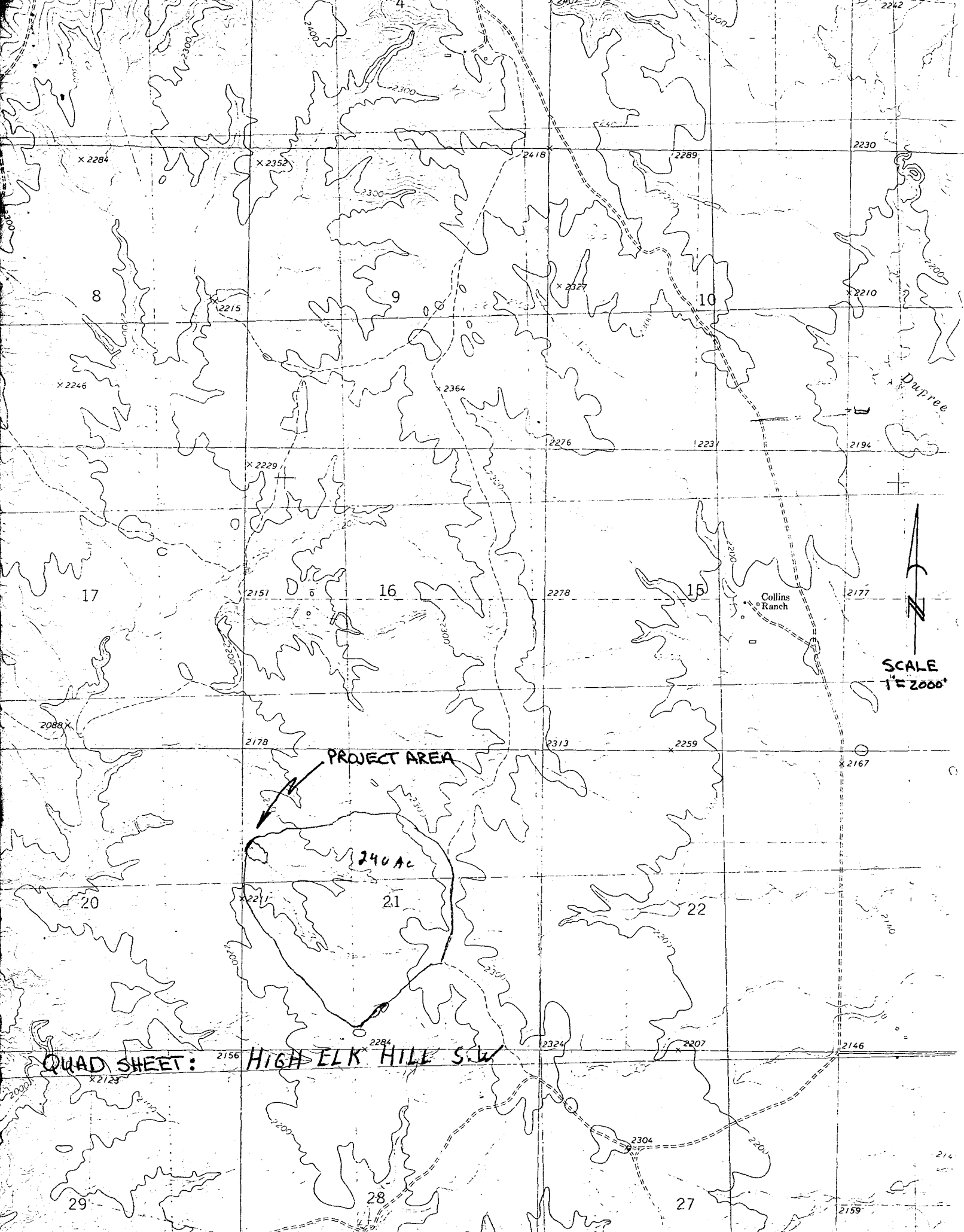
- | | |
|---------------------------|-------------|
| 1. topographic map | yes |
| 2. dam axis profile | yes |
| 3. dam max. cross-section | yes |
| 4. area capacity curve | yes |
| 5. outlet details | yes |
| 6. spillway rating | yes |
| 7. spillway details | yes |
| 8. Specs. | yes |
| 9. EPP | N.A. Cat. 3 |

Drainage area = 240 acres
ISO 2curve number = ~~35~~ 82

$$80\% \quad 0.35 \times 240^{1/2} = 7 \text{ ac.ft}$$

$$50\% \quad 0.78 \times 240^{1/2} = 15.6 \text{ ac.ft}$$

$$10\% \quad 2.9 \times 240^{1/2} = 58 \text{ ac.ft}$$





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

June 27, 2000

Jerry Collins
Box 840
Eagle Butte, SD 57625

Dear Mr. Collins:

We have reviewed the plans and specifications for your project in Ziebach County. The project consists of a dam located in the SW1/4 NW1/4 Section 21, T10N-R22E. 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. 1729-1 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 the owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The Collins dam will be classified as a small size Category 3, Low Hazard dam with a height of 31.7 feet and a normal storage of 33.4 acre-feet and a maximum storage of 40.55 acre-feet.

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

Sincerely,

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

REPORT ON
WATER PERMIT APPLICATION NO. 1729-1

Jerry Collins
June 20, 2000

Water Permit Application No. 1729-1 has been filed by Jerry Collins to impound 34 acre-feet of water from runoff by constructing a dam located in the SW1/4 NW1/4 Section 21, T10N-R22E, in Ziebach County. This application requests impoundment of sufficient water to maintain water at the outlet elevation. The water is be used for fish and wildlife propagation and livestock watering purposes.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. United States Department of Agriculture Natural Resources Conservation Service has designed the dam. The plans and specification have been reviewed and will be approved; however, construction of the dam cannot begin until Water Permit Application No. 1729-1 is approved.

The Collins dam will be 31.7 feet high with a normal storage of 33.4 acre-feet with a reservoir level at the primary spillway elevation. The dam will have a maximum storage of 40.55-acre feet with the reservoir elevation at the top of the dam. A dam of this size and hazard classification is required to have a minimum spillway design to pass a 25 year 24 hour frequency event.

The dam has a drainage area of 240 acres or 0.38 square miles. The dam is designed to have a plastic outlet structure with a 15-inch diameter barrel with 5.8 feet of freeboard at the spillway elevation. In addition, there is a 40-foot wide earthcut spillway with 3 feet of freeboard. The routing of the 25-year frequency storm shows that the primary spillway and the emergency spillway will handle two times the flows produced by the 25-year storm.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is calculated to be 7 acre feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is calculated to be 15.6 acre feet and the annual yield with a 10 percent chance, or 1 out of 10 years is calculated to be 58 acre feet.

The Collins dam site is located in the SW1/4 NW1/4 section 21 T10N R22E on an unnamed tributary of Cottonwood Creek approximately 3 miles upstream from the confluence with Cottonwood Creek. There are no Water Permits/Rights between the proposed dam and Cottonwood Creek nor are there any on Cottonwood Creek.

Conclusions:

1. Water Permit Application No. 1729-1 should be approved since unappropriated water is available and approval should not have may 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 1729-1.



Gale N. Selken P.E.

Natural Resources Engineer IV



**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. 1729-1, Jerry Collins**

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. 1729-1, Jerry Collins, Box 840, Eagle Butte, SD 57625.

The Chief Engineer is recommending APPROVAL of Application No. 1729-1 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. 1729-1 authorizes a dam with a storage capacity of 34 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
June 23, 2000



**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.

June 27, 2000

Jerry Collins
Box 840
Eagle Butte, 57625

Dear Mr. Collins:

Water Permit Application No. 1729-1 for fish and wildlife propagation, and livestock 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 West River Progress printed at Dupree, SD (Ph # (605) 365-5145). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

June 27, 2000

West River Progress
Box 158
Dupree, SD 57623-0158

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 1729-1 to Appropriate Water to be published twice. Please publish the first notice on July 6, 2000, 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 Jerry Collins, Box 840, Eagle Butte, SD 57625 (Ph # (605) 964-3241).

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

-----CU T HERE-----

No. 1729-1

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

Date _____

We are in receipt of your letter of June 27, 2000, enclosing Notice of Hearing to Appropriate Water by Application No. 1729-1 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on July 6, 2000, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 1729-1 to Appropriate Water

Notice is given that Jerry Collins, Box 840, Eagle Butte SD 57625 has filed an application for a water permit to impound 34 acre-feet of water from runoff by constructing a dam located in the SW ¼ NW ¼ Section 21 with water impounded in the SW ¼ NW ¼ Section 21; all in T10N-R22E. This application requests impoundment of sufficient water to maintain water at the outlet elevation. The water is to be used for fish and wildlife propagation and livestock watering purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1729-1 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 July 24, 2000.

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.

Affidavit of Publication

NOTICE OF APPLICATION NO. 1729-1 to Appropriate Water

Notice is given that Jerry Collins, Box 840, Eagle Butte SD 57625 has filed an application for a water permit to impound 34 acre-feet of water from runoff by constructing a dam located in the SW1/4NW1/4 Section 21 with water impounded in the SW1/4NW1/4 Section 21; all in T10N-R22E. This application requests impoundment of sufficient water to maintain water at the outlet elevation. The water is to be used for fish and wildlife propagation and livestock watering purposes.

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(Published in the West River Progress, July 6, and 13, 2000.)

STATE OF SOUTH DAKOTA,
COUNTY OF POTTER, ss.

DAVID B. CLAUSEN being first duly sworn, on oath says, that he is the publisher of the WEST RIVER PROGRESS, a weekly newspaper published in Dupree, County of Ziebach, and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bonafide circulation of at least two hundred copies weekly, and has been published within said county for fifty-two successive weeks next prior to the publication of the notice herein mentioned; that the

Notice of Application
No. 1729-1 to Appropriate
Water

a printed copy of which, taken from the paper in which same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 2 successive weeks, on the day of each week on which said newspaper was regularly published, to-wit:

July 6-13, 2000

that the full amount of the fees for the publication

of the annexed notice is \$ 35.23

David B. Clausen

Subscribed and sworn to before me this 13th

day of July, 2000

Carol D. Clausen

Carol D. Clausen, Notary Public

State of South Dakota

My commission expires Oct. 15, 2004





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

AUG 02 2000

Jerry Collins
Box 840
Eagle Butte, SD 57625

Dear Mr. Collins:

Enclosed is Water Permit No. 1729-1 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

REPORT ON INSPECTION OF PERMIT NO. 1729-1

DATE OF INSPECTION: November 17, 2003

NAME & ADDRESS OF INSPECTION CONTACT/ Jerry Collins

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: owner

NAME & ADDRESS OF PERMIT HOLDER: Jerry Collins, Box 840, Eagle Butte, SD 57625

DIVERSION POINT LEGAL LOCATION: 1800 ft. south & 250 ft. east of the NW corner of Sec. 21-T10N-R22E (SW 1/4 NW 1/4).

DAM INFORMATION:

- 1) Height to crest 32 feet
- 2) Height to primary spillway 27 feet
- 3) Height to secondary spillway 29 feet
- 4) Crest width 14 feet
- 5) Crest length 440 feet
- 6) Spillway length XXX feet
- 7) Spillway width 40 feet
- 8) Approx. storage (Normal) 34 acre-feet
- 9) Approx. storage (Maximum) 41 acre-feet
- 10) Date constructed: Fall 2000

PERMIT QUALIFICATIONS AND REGULATIONS:

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

Permit No. 1729-1
Lower Cheyenne 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, **November 17, 2003**, made a thorough examination of the water use system constructed by **Jerry Collins** of **Box 840, Eagle Butte, SD 57625** holder of Permit No. **1729-1**, bearing the priority of **June 6, 2000** authorizing the storage of **34** acre-feet of the waters of **runoff (dry draw)** for **fish & wildlife propagation and livestock watering** purposes, in **Ziebach** County.

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

A. Works used to divert the water:

A 32 foot high earthen dam with a normal storage capacity of 34 acre-feet.

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

N/A

C. Works used to apply water to beneficial use:

A 32 foot high earthen dam with a normal storage capacity of 34 acre-feet.

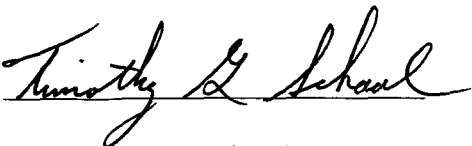
The system is in the following condition **good**. The point of diversion is located **1800 ft. south & 250 ft. east of the NW corner of Sec. 21-T10N-R22E (SW ¼ NW 1/4)**. The works are capable of storing **34** acre-feet of water which is to be used for **fish & wildlife propagation and livestock watering**. Water has been put to beneficial use to the maximum extent as follows:

A 32 foot high earthen dam with a normal storage capacity of 34 acre-feet.

and the license should be issued for **34** acre-feet of storage.

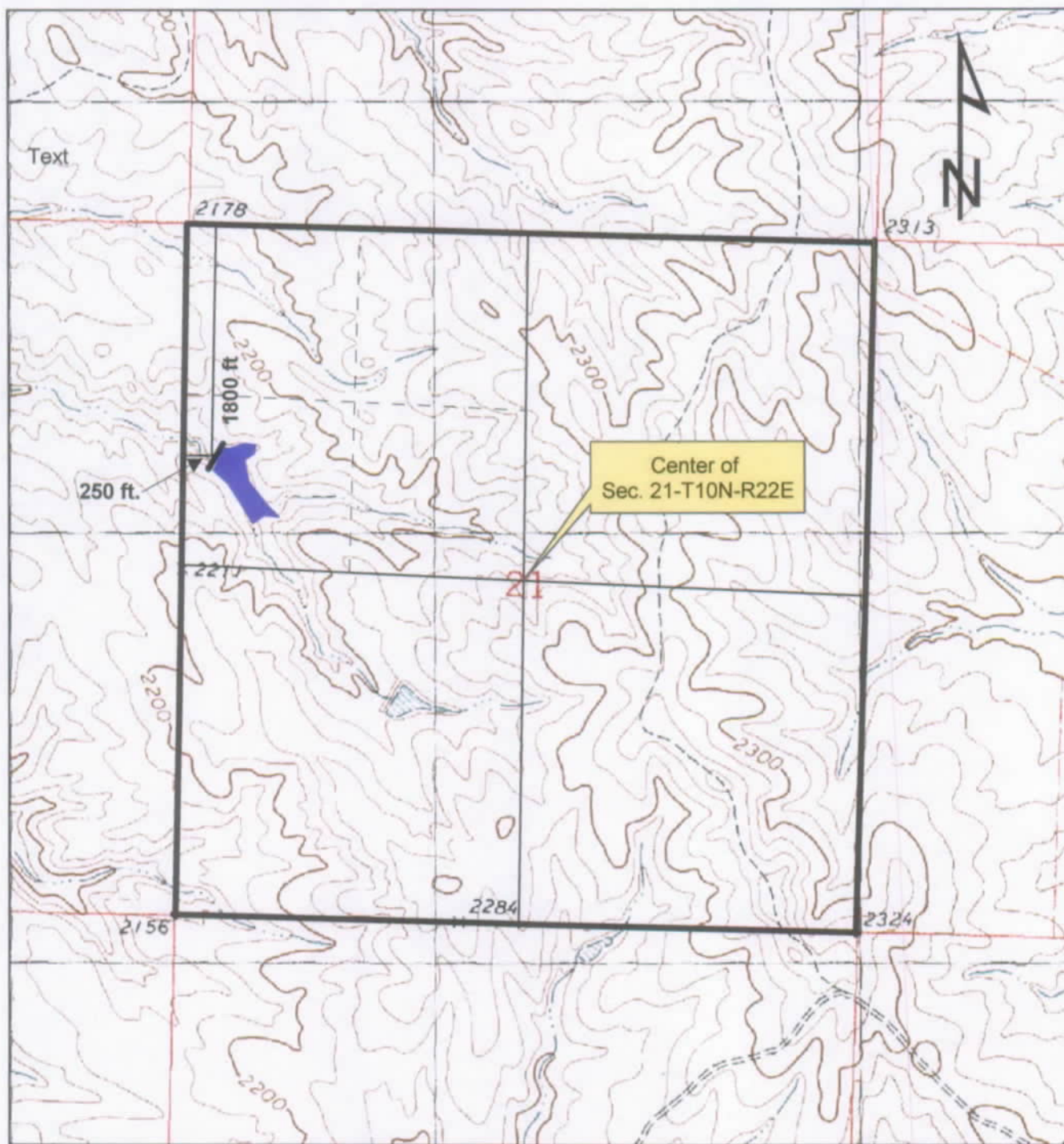
Applicable permit qualifications have been complied with: Yes **X**

Exceptions to compliance are: **none** Date Report Completed: **January 13, 2004**



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

Water Permit Application No. 1729-1



0 0.25 0.5 1 Miles

South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow ... Today



Timothy G. Schaal 1/13/04
Timothy G. Schaal, P.E.
Natural Resources Engineer Specialist
Water Rights Program

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1729-1

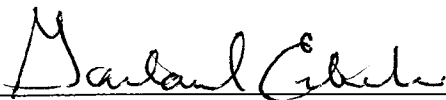
(1) Jerry Collins, Box 840, Eagle Butte SD 57625 made Application No. 1729-1, June 6, 2000 for a water permit to impound 34 acre feet of water from runoff, Ziebach County, South Dakota for fish and wildlife propagation and livestock watering purposes. Permit No. 1729-1, with a priority date of June 6, 2000 was approved July 24, 2000 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 24, 2005 and for the application to beneficial use of water on or before July 24, 2009.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 1729-1 is issued a license, bearing a priority date of June 6, 2000, to impound 34 acre feet of water.

The location of the storage dam (spillway) is 1,800 feet south and 250 feet east of the northwest corner of Section 21-T10N-R22E (SW ¼ NW ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 1729-1, including the following now applicable qualifications:

- Water Permit No. 1729-1 authorizes a dam with a storage capacity of 34 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

FEB 03 2004

date





FEB 03 2004

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

1729-1

Jerry Collins
Box 840
Eagle Butte SD 57625

Dear Mr. Collins:

Enclosed is Water License No. 1729-1. This is the final water right document completing your process of obtaining a Water Right.

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,

A handwritten signature in black ink, which appears to read "Garland Erbele".

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

enclosures