

WATER PERMIT NO. 6213-3

Name of Applicant: SD Dept. of Game, Fish & Parks

Address: Pierre SD Phone: 773-3381

Amount of Water Claimed: 158.5 AF Total Acres: NA

Source of Water Supply: runoff

Water to be used for: recreation and fish & wildlife propagation County: Lake

Type of Waste Disposal System:

Location: 9 miles east of Madison

PRIORITY Date Received: 6-9-2000 Fee: \$NA

Corrected Application Received:: Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: N ½ NE ¼ Sec 13-T106N-R51W

Land to be Irrigated: NA

Depth of Well: NA

Well Driller: : NA

Remarks:

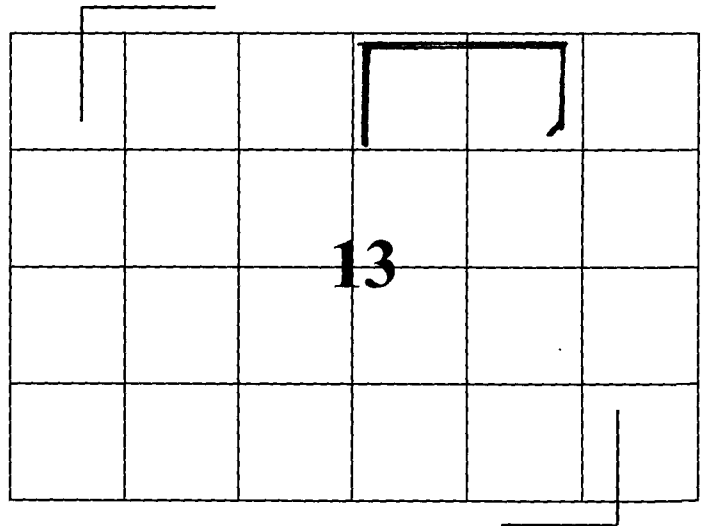
Type of Map: topo

Prepared by: Douglas Lipentzky, PE

Reviewed and the Number Assigned on: 6-9-2000

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA
WATER PERMIT NO. 6213-3

Date of first receipt of application June 9, 2000.

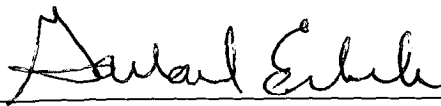
The Water Management Board approved Water Permit Application No. 6213-3 on March 7, 2001 for the South Dakota Department of Game, Fish and Parks, 523 E Capitol Ave, Pierre SD 57501 authorizing the construction of a dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 6213-3 authorizes impoundment of 158.5 acre-feet of water from runoff by constructing a dam located in the N ½ NE ¼ Section 13 with water impounded in the NE ¼ Section 13; all in T106N-R51W.
2. The water appropriated shall be used for the purpose of supplying water for fish & wildlife propagation and recreational use 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 from which applicant may claim right is June 9, 2000.
5. One-fifth of the construction is to be completed on or before September 7, 2003.
6. All construction is to be completed on or before March 7, 2006.
7. Water is to be put to beneficial use on or before March 7, 2010.
8. 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. 6213-3 authorizes a dam with a storage capacity of 158.5 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean sea level.
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, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAY 09 2001

date



FORM 2: Application for uses other than irrigation
(type or print)

Mail to:
Water Rights Program
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181
(605) 773-3352

No. 6213-3 (office use only)
Hydrologic Unit 10170203
Basin Sioux River
Newspaper Madison Daily Leader, Madison



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

Check use(s) of water:

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

Type of Application: ☒ 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.) _____

1. Name of Applicant South Dakota Game, Fish & Parks Phone 605-773-3381
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 523 E. Capitol Ave. - Foss Building, Pierre State SD 57501
(Street, RR. or Box) (Zip Code)

2. Amount of water claimed _____ *CFS or _____ **GPM _____ 158.5 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Surface water runoff

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
N1/2NE1/4 of Section 13 - T. 106 N., R. 51 W. Water Impounded NE 1/4, Sec. 13 -
T106N - R51W County Lake

5. County or counties where water will be used Lake

6. Annual period during which water is to be used 12 month Jan. 1 - Dec. 31

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

The dam is being constructed for recreation, fish & wildlife and livestock water. Please see attached Design Report and project plans for additional information.

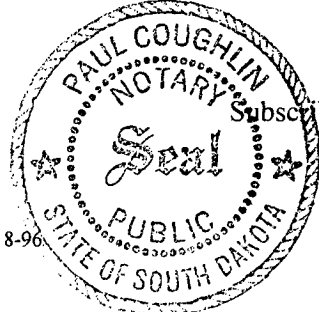
STATE OF SOUTH DAKOTA)

County of Lake)

SS

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)

I, Tim Olson, 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 Tim Olson
Subscribed and sworn to before me this 12th day of APRIL 19 2000
MY COMMISSION EXPIRES AUGUST 24, 2001
Notary Public

Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On 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) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

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

4. Water Storage Dams

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

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

Ducks Unlimited, Inc.
3502 Franklin Avenue
Bismarck, ND 58501

- b) Freeboard 3.0 feet
- c) Crest Width 12.0 feet
 Crest Length 5,539 feet
- d) Height 6.0 feet
- e) Primary Outlet Capacity _____
 If pipe, diameter 36" diameter CMP
- f) Secondary Spillway Capacity _____
 Spillway Width 48" diameter CMP riser
- g) X & Y Slope _____
 Upstream 3:1
 Downstream 3:1
- h) Surface Area of Impoundment 78.1
- i) Storage 158.5 Acre Feet
- j) Drainage Area Above Dam 860 Acres

Water Permit Application # 6213-3

SD Game, Fish & Parks

Top of Dam Elev. - 1645' }
 Spillway Elev. - 1642' } Ht. = 6 ft.
 Dis Toe Elev. - 1639' }

* This embankment is only 6 ft. high and IS NOT considered to be a "Dam" according to 74:02:08:01(07). Therefore P&S Review is not required.

If it was a "Dam"

Cont. 3 - Low Hazard

Normal Storage Capacity - 159 Ac-Ft
 Max. Storage Capacity - 407 Ac-Ft

Max Capacity x Height = 407 x 6 = 2440 < 3000 i.e. 25 year
Min Spillway Design

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

DA = 1.34
 Slope = 30 ft/mi.
 SI = 3.16

$$\begin{aligned} Q_{25} &= 83.4 A^{.65} S^{.46} S_i^{-.67} \\ &= 83.4 (1.34)^{.65} (30)^{.46} (3.16)^{-.67} \\ &= 83.4 (1.19) (4.47) (0.4367) \\ &= \underline{195 \text{ cfs}} \end{aligned}$$

$$\begin{aligned} Q_{100} &= 132 A^{.65} S^{.46} S_i^{-.67} \\ &= 132 (1.34)^{.65} (30)^{.46} (3.16)^{-.67} \\ &= 132 (1.21) (4.78) (0.4620) \\ &= \underline{355 \text{ cfs}} \end{aligned}$$

Ducks Unlimited uses NRCS TR-20 to route a Q_{25} peak of 218 cfs through the Embankment with 1.60 ft of freeboard remaining and a Q_{100} peak of 400 cfs through the Embankment with 1.07 ft of freeboard remaining.

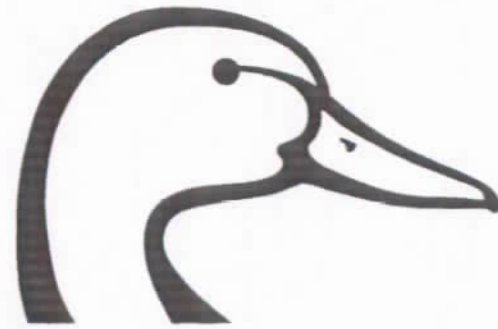
NRCS Annual Yield

DA = 1.34 mi.² = 858 Ac
 CN = 76
 SI = 2 1/2

80% chance = 0.2
 0.2 x 858/12 = 14 Ac-Ft

50% chance = 0.5
 0.5 x 858/12 = 36 Ac-Ft

10% chance = 2.3
 2.3 x 858/12 = 165 Ac-Ft



DUCKS UNLIMITED

SPECIFICATIONS

GENERAL CONDITIONS	101
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QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION	3,965 C.Y.-P
EXCAVATION (INLET & STRUCTURE CHANNELS)	148 C.Y.-S
EMBANKMENT	27,068 C.Y.-S
WATER	27 M-GAL.
WATER CONTROL	
STRUCTURE "INSTALLATION"	
48"Ø FULL-ROUND CMP RISER	1 L.S.
APPURTENANCES	1 INC.
CULVERT "INSTALLATION"	
36"Ø CMP	42 L.F.
18"Ø CMP	10 L.F.
RIPRAP (CLASS II)	24 C.Y.-P
MUSKRAT WIRE	1,410 S.F.-P

STRUCTURE NOTE:
DUCKS UNLIMITED HAS PREVIOUSLY PURCHASED THE WATER CONTROL STRUCTURE & CULVERTS. SUCH MATERIAL IS LOCATED AT WAUBAY NATIONAL WILDLIFE REFUGE HEADQUARTERS NORTH OF WAUBAY, SD. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THE STRUCTURE & CULVERTS FROM WAUBAY NWR TO THE PROJECT SITE. CONTRACTOR'S UNIT BID PRICE FOR "WATER CONTROL STRUCTURE INSTALLATION" & "CULVERT INSTALLATION" SHOULD INCLUDE THE COST OF TRANSPORTING THE STRUCTURE TO THE PROJECT SITE AND THE COST OF INSTALLATION. ANY ADDITIONAL MATERIALS REQUIRED FOR INSTALLATION BUT NOT PROVIDED BY DU WILL BE CONSIDERED EXTRA COSTS & PAID FOR AS SUCH.

PAYMENT NOTE:
THE STAKED QUANTITY (CY-S) LISTED IS AN ESTIMATED QUANTITY FOR DESIGN & BIDDING PURPOSES. THE FINAL AS-STAKED QUANTITY DERIVED FROM THE CONSTRUCTION STAKING DATA WILL ESTABLISH THE QUANTITY FOR FINAL PAYMENT. THE PLAN QUANTITY (CY-P) LISTED IS THE QUANTITY FOR WHICH PAYMENT WILL BE MADE FOR THAT PARTICULAR ITEM.

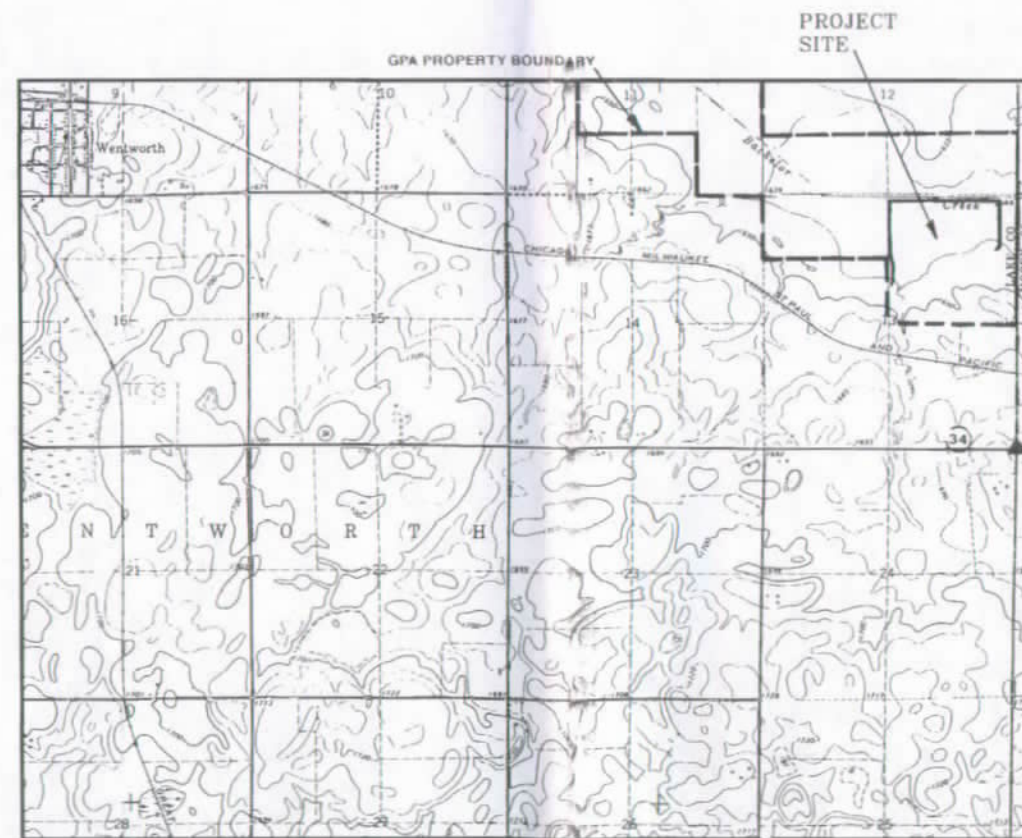
DUCKS UNLIMITED

PROJECT

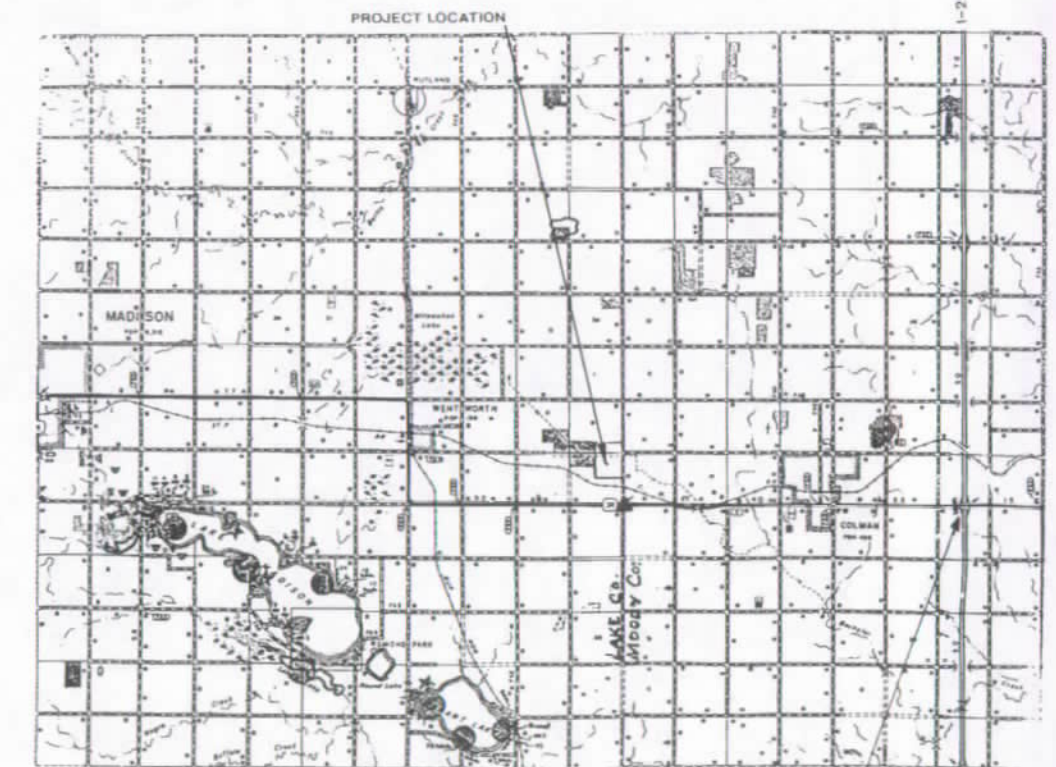
WENTWORTH GPA SECTION 13, T106N, R51W, LAKE COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

SOUTH DAKOTA DEPT. OF
GAME, FISH & PARKS



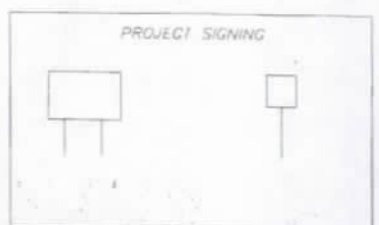
VICINITY MAP



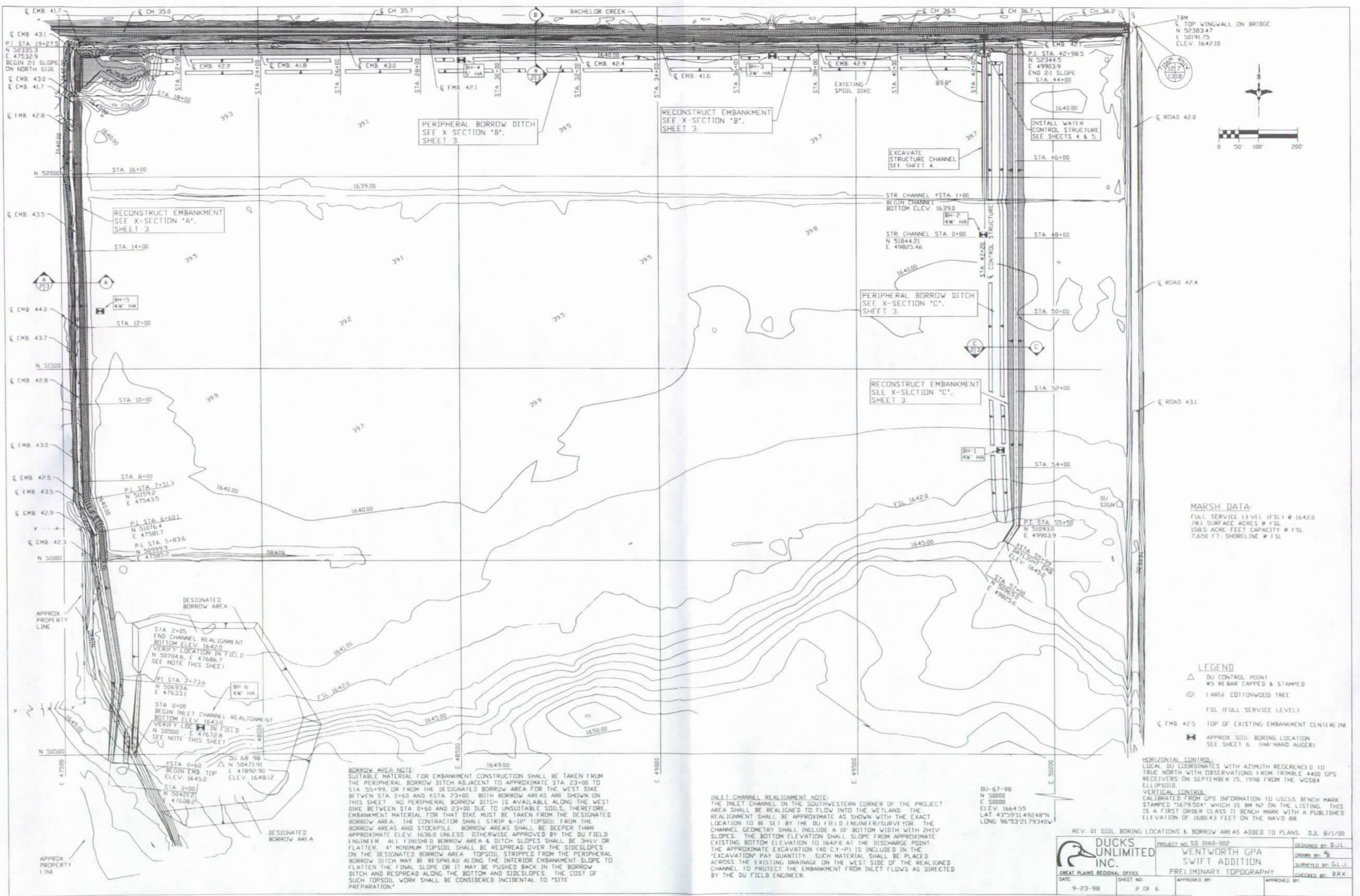
LAKE COUNTY

MAP POINT 1 IS 6.5 MILES WEST ON HWY. 34 OF I-29 EXIT 109

AGENCY CONTACT:
PAUL COUGHLIN
SD GAME, FISH & PARKS
605/773-3658



REV 01 ADDED SOILS INFORMATION & BORROW AREAS DJL 8/1/00		PROJECT NO. SD-0160-002		DESIGNED BY: D.J.L.	
DUCKS UNLIMITED INC.		WENTWORTH GPA		DRAWN BY: J.B.	
GREAT PLAINS REGIONAL OFFICE		VICINITY MAP		SURVEYED BY:	
DATE: 1-25-00	SHEET NO. 1 OF 6	APPROVED BY: [Signature]	CHECKED BY: B.R.N.		



PERIPHERAL BORROW DITCH
SEE X-SECTION 'B',
SHEET 3

RECONSTRUCT EMBANKMENT
SEE X-SECTION 'B',
SHEET 3

EXCAVATE
STRUCTURE CHANNEL
SEE SHEET 4

INSTALL WATER
CONTROL STRUCTURE
SEE SHEETS 4 & 5

RECONSTRUCT EMBANKMENT
SEE X-SECTION 'A',
SHEET 3

PERIPHERAL BORROW DITCH
SEE X-SECTION 'C',
SHEET 3

RECONSTRUCT EMBANKMENT
SEE X-SECTION 'C',
SHEET 3

MARSH DATA
FULL SERVICE LEVEL (FSL) @ 1642.0
/81 SURFACE ACRES @ FSL
158.5 ACRE FEET CAPACITY @ FSL
7,650 FT. SHORELINE @ FSL

- LEGEND**
- △ DI CONTROL POINT
W5 REBAR CAPPED & STAMPED
 - LARGE COTTONWOOD TREE
 - FSL (FULL SERVICE LEVEL)
 - EMB 42.5 TOP OF EXISTING EMBANKMENT CENTERLINE
 - ⊕ APPROX. SOIL BORING LOCATION
SEE SHEET 6. (CH-HAND AUGER)

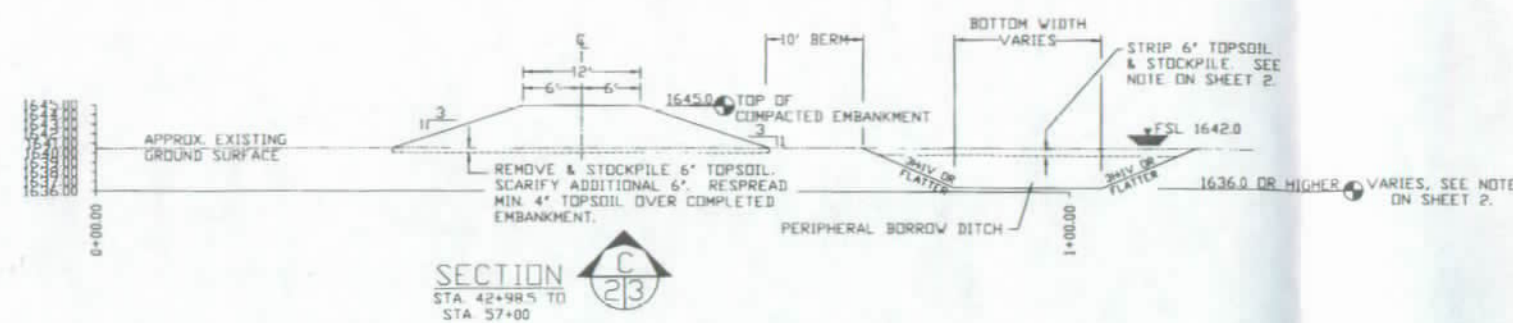
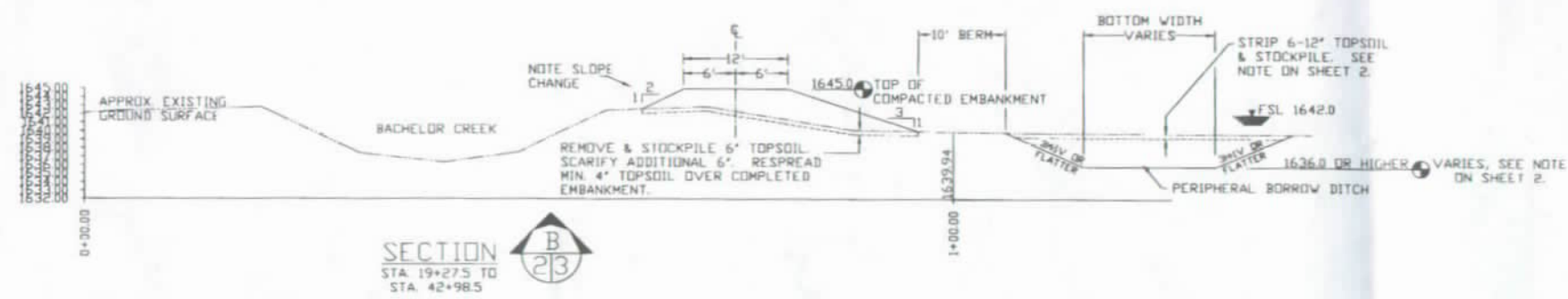
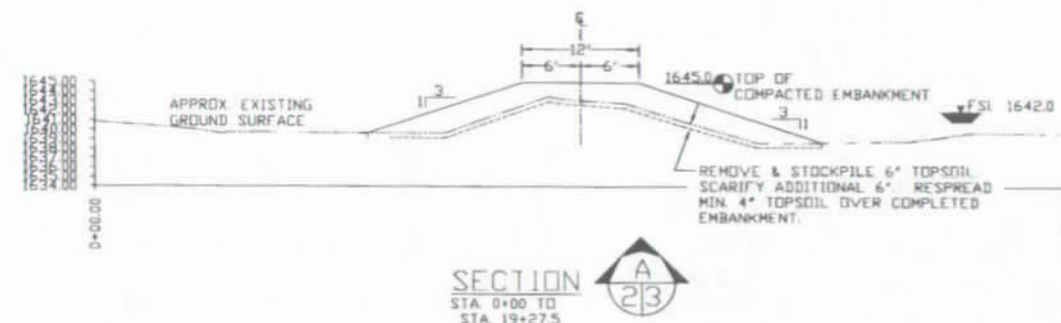
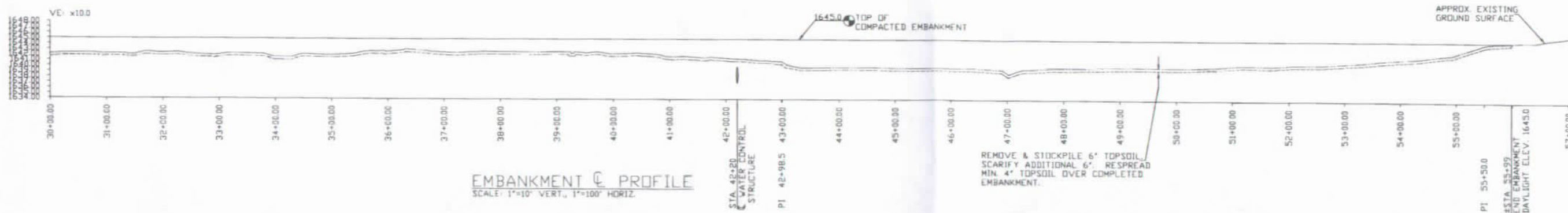
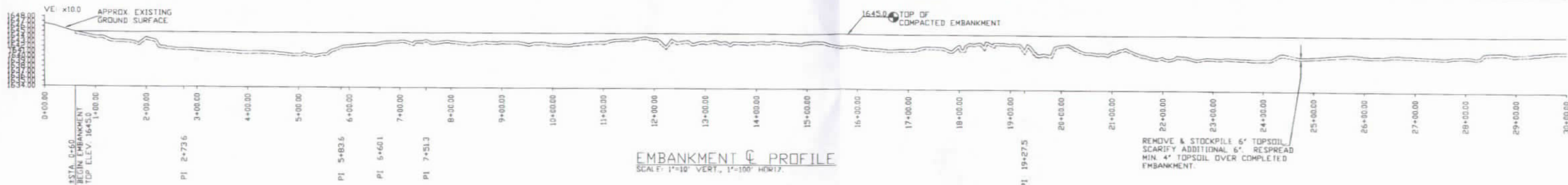
HORIZONTAL CONTROL:
LOCAL DU COORDINATES WITH AZIMUTH REFERENCED TO TRUE NORTH WITH OBSERVATIONS FROM TRIMBLE 4400 GPS RECEIVERS ON SEPTEMBER 15, 1998 FROM THE WGS84 ELLIPSOID.

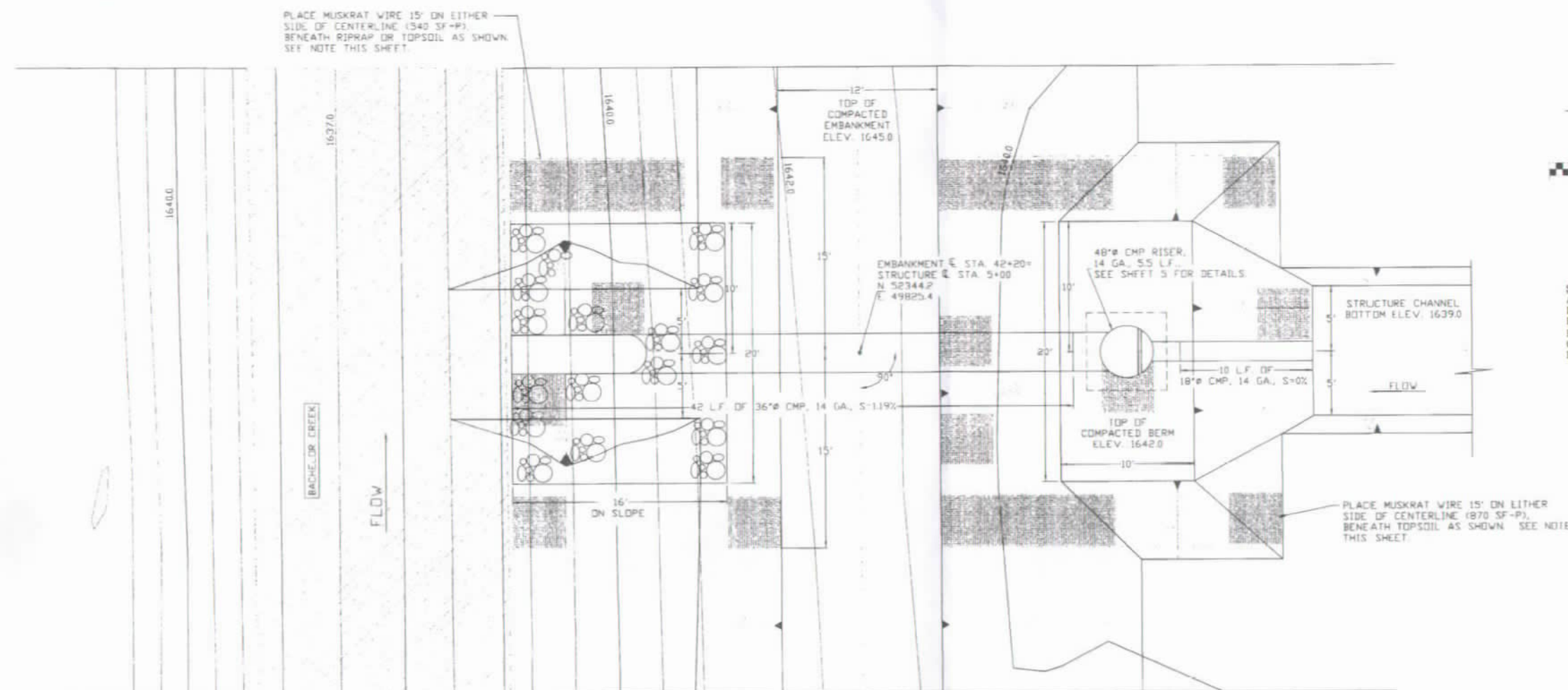
VERTICAL CONTROL:
CALIBRATED FROM GPS INFORMATION TO USCGS BENCH MARK STAMPED '1679504' WHICH IS 8M NP ON THE LISTING. THIS IS A FIRST ORDER CLASS II BENCH MARK WITH A PUBLISHED ELEVATION OF 168043 FEET ON THE NAVD 88.

INLET CHANNEL REALIGNMENT NOTE:
THE INLET CHANNEL IN THE SOUTHWESTERN CORNER OF THE PROJECT AREA SHALL BE REALIGNED TO FLOW INTO THE WETLAND. THE REALIGNMENT SHALL BE APPROXIMATE AS SHOWN WITH THE EXACT LOCATION TO BE SET BY THE DU FIELD ENGINEER/SURVEYOR. THE CHANNEL GEOMETRY SHALL INCLUDE A 10' BOTTOM WIDTH WITH 2:1V SLOPES. THE BOTTOM ELEVATION SHALL SLOPE FROM APPROXIMATE EXISTING BOTTOM ELEVATION TO 1642.0 AT THE DISCHARGE POINT. THE APPROXIMATE EXCAVATION (40 C.Y.-P) IS INCLUDED IN THE 'EXCAVATION' PAY QUANTITY. SUCH MATERIAL SHALL BE PLACED ACROSS THE EXISTING DRAINAGE ON THE WEST SIDE OF THE REALIGNED CHANNEL TO PROTECT THE EMBANKMENT FROM INLET FLOWS AS DIRECTED BY THE DU FIELD ENGINEER.

BORROW AREA NOTE:
SUITABLE MATERIAL FOR EMBANKMENT CONSTRUCTION SHALL BE TAKEN FROM THE PERIPHERAL BORROW DITCH ADJACENT TO APPROXIMATE STA. 23+00 TO STA. 55+99, OR FROM THE DESIGNATED BORROW AREA FOR THE WEST DIKE BETWEEN STA. 0+60 AND STA. 23+00. BOTH BORROW AREAS ARE SHOWN ON THIS SHEET. NO PERIPHERAL BORROW DITCH IS AVAILABLE ALONG THE WEST DIKE BETWEEN STA. 0+60 AND 23+00 DUE TO UNSUITABLE SOILS. THEREFORE, EMBANKMENT MATERIAL FOR THAT DIKE MUST BE TAKEN FROM THE DESIGNATED BORROW AREA. THE CONTRACTOR SHALL STRIP 6-12" TOPSOIL FROM THE BORROW AREAS AND STOCKPILE. BORROW AREAS SHALL BE DEEPER THAN APPROXIMATE ELEV. 1636.0 UNLESS OTHERWISE APPROVED BY THE DU FIELD ENGINEER. ALL FINISHED BORROW AREA & DITCH SLOPES SHALL BE 3:1V OR FLATTER. 4" MINIMUM TOPSOIL SHALL BE RESPREAD OVER THE SIDESLOPES ON THE DESIGNATED BORROW AREA. TOPSOIL STRIPPED FROM THE PERIPHERAL BORROW DITCH MAY BE RESPREAD ALONG THE INTERIOR EMBANKMENT SLOPE TO FLATTEN THE FINAL SLOPE OR IT MAY BE PUSHED BACK IN THE BORROW DITCH AND RESPREAD ALONG THE BOTTOM AND SIDESLOPES. THE COST OF SUCH TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO 'SITE PREPARATION'.

REV. 01 SOIL BORING LOCATIONS & BORROW AREAS ADDED TO PLANS. DJL 8/1/00	
DUCKS UNLIMITED INC.	
PROJECT NO. SD 0160-002	WENTWORTH GPA SWIFT ADDITION
DESIGNED BY: B.J.L.	DRAWN BY: B
CHECKED BY: G.L.J.	APPROVED BY: B.R.K.
DATE: 9-23-98	SHEET NO. 2 OF 6

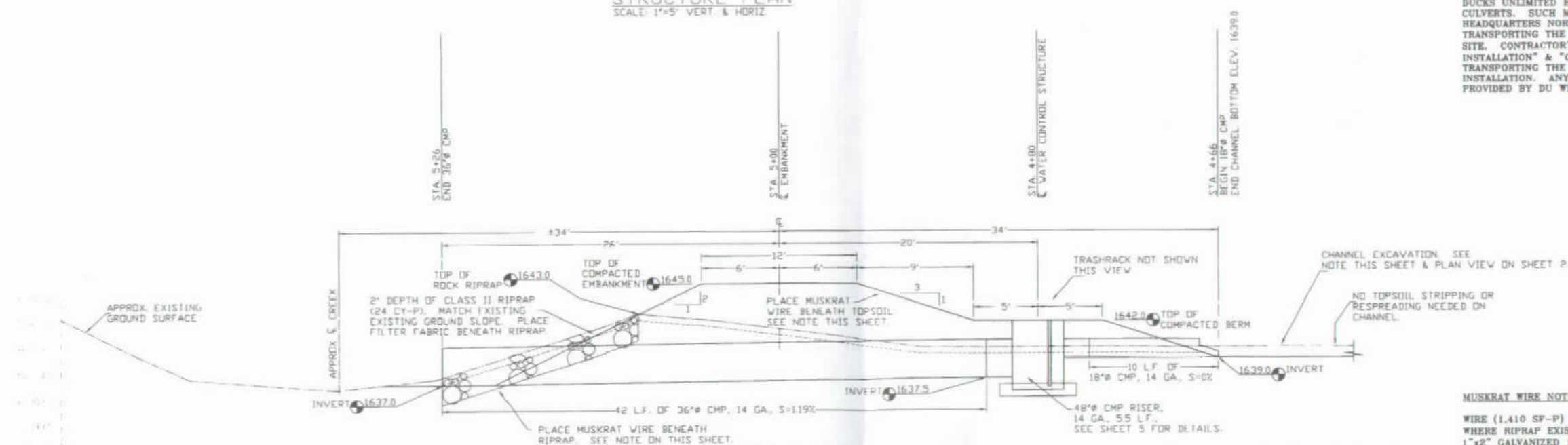




STRUCTURE CHANNEL NOTE:
AS SHOWN ON SHEET 2, A CHANNEL SHALL BE EXCAVATED TO ASSIST IN DEWATERING THE BASIN WHEN REQUIRED. THE CHANNEL BOTTOM ELEVATION SHALL BE 1639.0 WITH SIDESLOPES AT 2H:1V OR FLATTER. THE STRUCTURE CHANNEL EXCAVATION QUANTITY (108 CY-P) IS INCLUDED IN THE TOTAL "EXCAVATION" PAY QUANTITY SHOWN ON SHEET 1. EXCAVATED MATERIAL SHALL BE WASTED ON THE EMBANKMENT TOE AS DIRECTED BY THE DU FIELD ENGINEER.

**WATER CONTROL
STRUCTURE PLAN**
SCALE: 1"=5' VERT. & HORIZ.

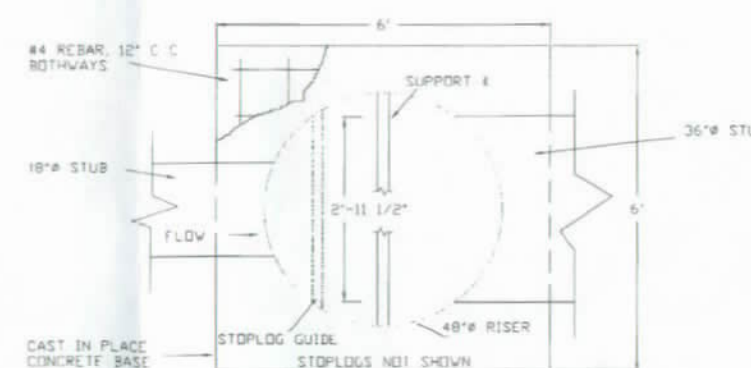
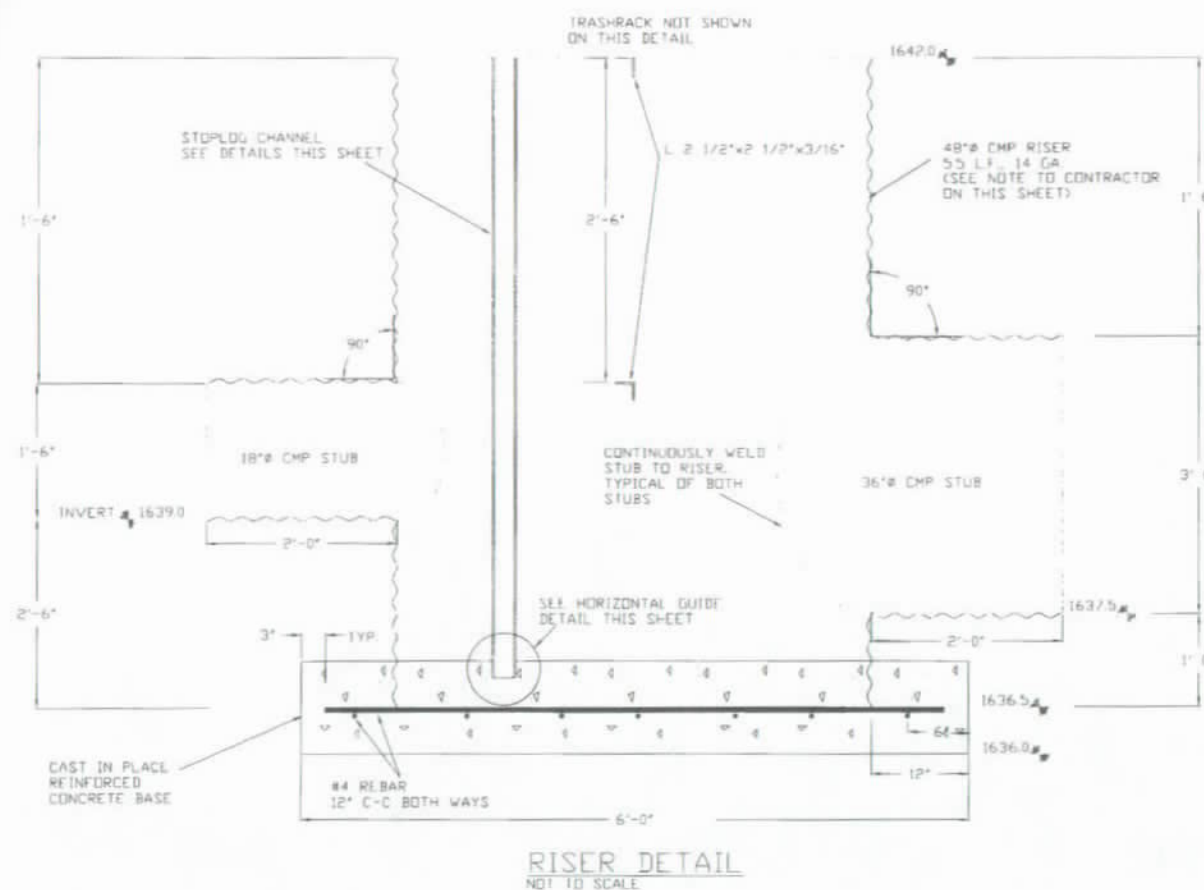
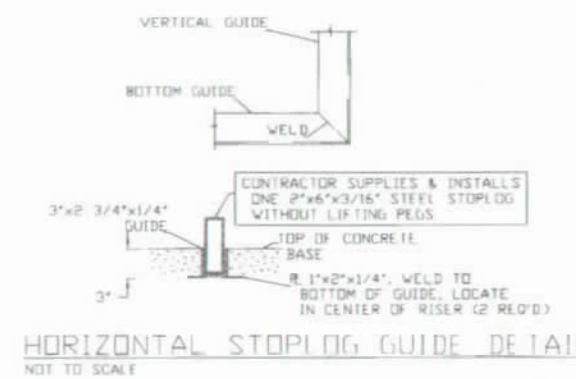
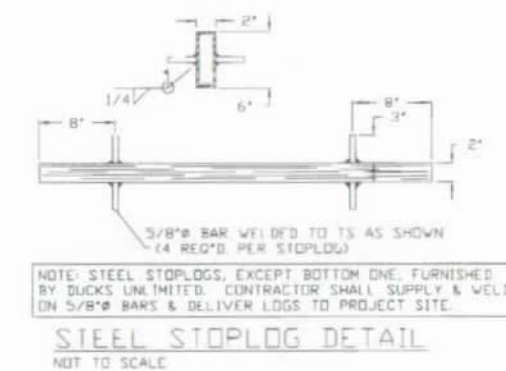
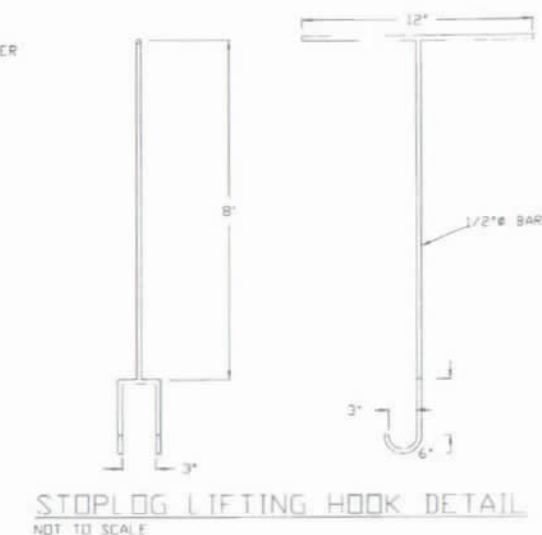
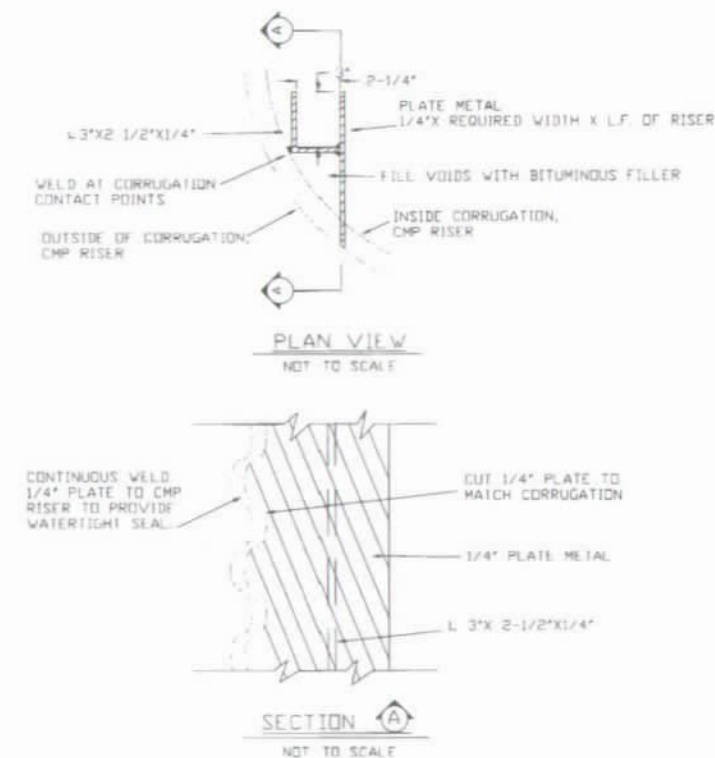
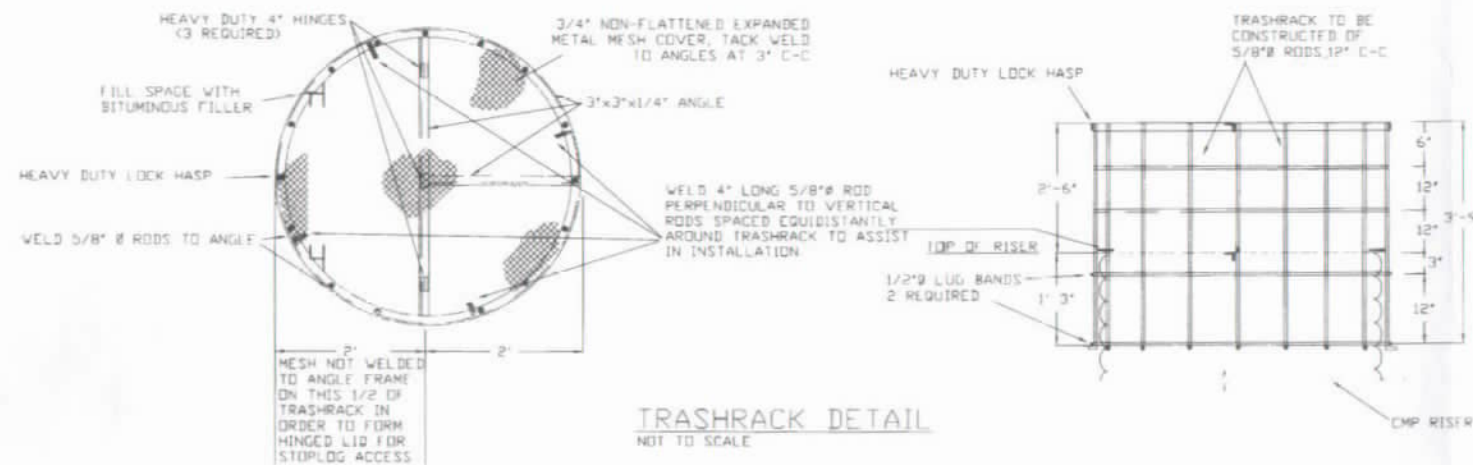
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**WATER CONTROL
STRUCTURE & PROFILE**
SCALE: 1"=5' VERT. & HORIZ.

MUSKRAT WIRE NOTE:
WIRE (1.410 SP-P) SHALL BE PLACED UNDER TOPSOIL (OR UNDER FILTER FABRIC WHERE RIPRAP EXISTS) IN AREAS SPECIFIED. WIRE SHALL BE RED BRAND WELDED 1"x2" GALVANIZED 14 GA., MANUFACTURED BY KEYSTONE STEEL AND WIRE CO. OR APPROVED EQUAL. SECURE WIRE TO GROUND WITH HEAVY DUTY U-STAPLES, 10 GA. 12"x1", OR METAL STAKES WITH WASHERS. OVERLAP SEAMS 2". COST OF MATERIALS AND PLACEMENT SHALL BE INCLUDED IN "MUSKRAT WIRE" BID ITEM.

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE DATE: 1-26-00	PROJECT NO. SD-0168 002	DESIGNED BY: D.J.L.
	WENTWORTH GPA	DRAWN BY: J.S.
	STRUCTURE PLAN & PROFILE	SURVEYED BY:
		CHECKED BY: B.R.K.
	SHEET NO. 4 OF 6	APPROVED BY:



NOTE TO CONTRACTOR:
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MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

REPORT OF TESTS OF SOILS

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522

SAMPLE NUMBER	1	2	3
LOCATION	Test boring 1	Test boring 2	Test boring 3
CLASSIFICATION	SANDY LEAN CLAY	FAT CLAY	FAT CLAY
COLOR	Dark brown	Dark grayish brown	Brown
PARTICLE DISTRIBUTION			
Gravel (%)	0	0	0
Sand (+ #200 sieve) (%)	35	8	8
Fines (- #200 sieve) (%)	65	94	94
ATTERBERG LIMITS			
Liquid Limit	44	80	53
Plastic Limit	15	15	15
LABORATORY MOISTURE DENSITY RELATIONSHIPS (see attached curves)			
Method	Standard Proctor, ASTM D698-91	Standard Proctor, ASTM D698-91	Standard Proctor, ASTM D698-91
Optimum Moisture (%)	17.0	23.4	20.8
Maximum Density (pcf)	106.4	99.7	102.4
MOISTURE CONTENT			
As Received (%)	24.8	30.4	27.7

REMARKS: Samples were submitted to and received here at the laboratory for test on August 1, 2000.

SIGNED: *John J. Smith*

MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

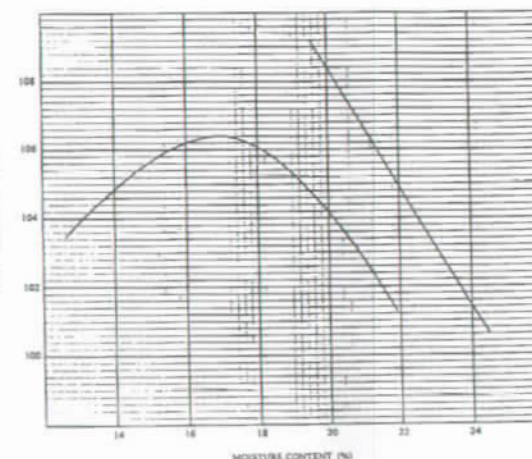
REPORT OF MOISTURE DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522 (Test boring 1)

SAMPLE NUMBER: 1
METHOD: Standard Proctor, ASTM D698-91
SOIL TYPE: SANDY LEAN CLAY-dark brown



MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

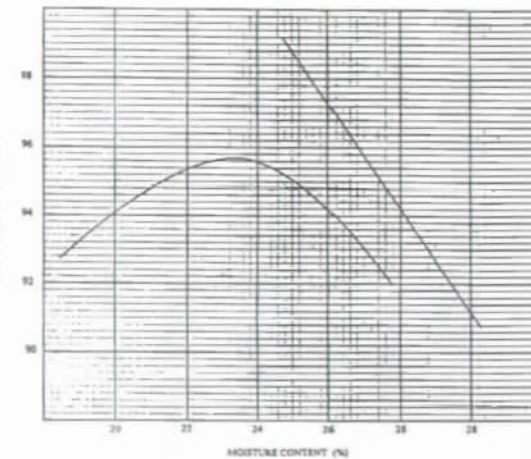
REPORT OF MOISTURE DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522 (Test boring 2)

SAMPLE NUMBER: 2
METHOD: Standard Proctor, ASTM D698-91
SOIL TYPE: FAT CLAY-dark grayish brown



MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

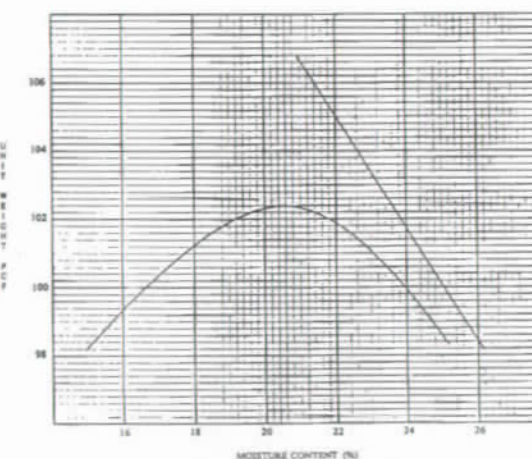
REPORT OF MOISTURE DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522 (Test boring 3)

SAMPLE NUMBER: 3
METHOD: Standard Proctor, ASTM D698-91
SOIL TYPE: FAT CLAY-brown



MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

REPORT OF TESTS OF SOILS

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522

SAMPLE NUMBER	4	5	6
LOCATION	Test boring 4	Test boring 5	Test boring 6
CLASSIFICATION	SANDY LEAN CLAY	FAT CLAY	SANDY LEAN CLAY
COLOR	Grayish brown	Dark grayish brown	Brown
PARTICLE DISTRIBUTION			
Gravel (%)	10	0	1
Sand (+ #200 sieve) (%)	26	4	22
Fines (- #200 sieve) (%)	64	96	77
ATTERBERG LIMITS			
Liquid Limit	40	66	44
Plastic Limit	14	18	16
LABORATORY MOISTURE DENSITY RELATIONSHIPS (see attached curves)			
Method	Standard Proctor, ASTM D698-91	Standard Proctor, ASTM D698-91	Standard Proctor, ASTM D698-91
Optimum Moisture (%)	15.7	29.1	17.7
Maximum Density (pcf)	109.3	88.0	107.9
MOISTURE CONTENT			
As Received (%)	19.2	37.2	18.1

REMARKS: Samples were submitted to and received here at the laboratory for test on August 1, 2000.

SIGNED: *John J. Smith*

MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

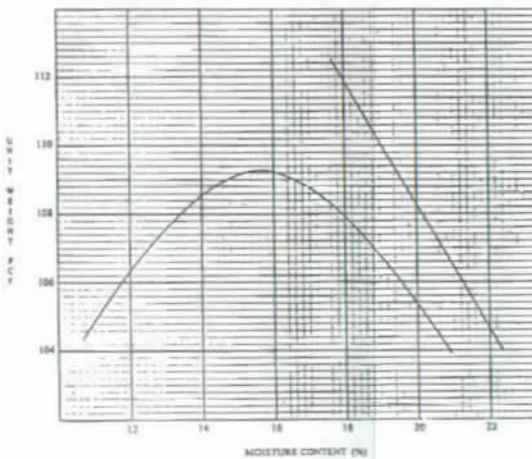
REPORT OF MOISTURE DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522 (Test boring 4)

SAMPLE NUMBER: 4
METHOD: Standard Proctor, ASTM D698-91
SOIL TYPE: SANDY LEAN CLAY grayish brown, a little gravel



MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

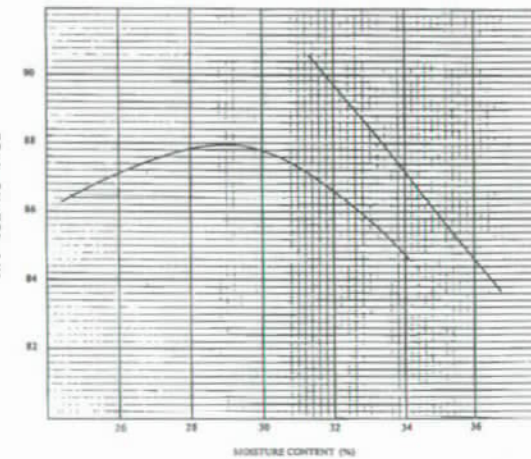
REPORT OF MOISTURE DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522 (Test boring 5)

SAMPLE NUMBER: 5
METHOD: Standard Proctor, ASTM D698-91
SOIL TYPE: FAT CLAY-dark grayish brown



MIDWEST TESTING LABORATORY

1805 Harvard Dr. / P.O. Box 200 / Barnhart, North Dakota 58502
Phone (701) 258-2822 / Fax (701) 258-2827

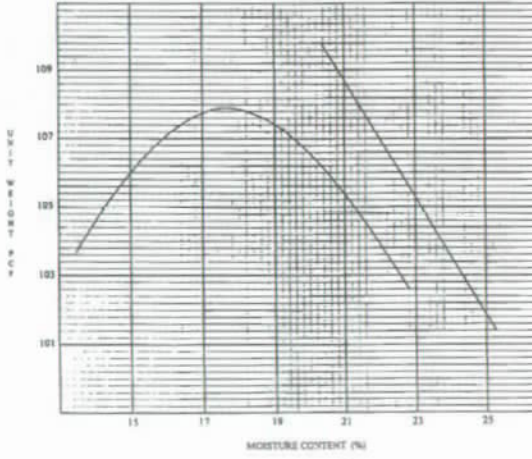
REPORT OF MOISTURE DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA Lake County, South Dakota DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc. Attn: Doug Lipetzky 2525 River Road Barnhart, ND 58503-9011

PROJECT NO.: 85522 (Test boring 6)

SAMPLE NUMBER: 6
METHOD: Standard Proctor, ASTM D698-91
SOIL TYPE: SANDY LEAN CLAY-brown



SEE SHEET 2 FOR BORING LOCATIONS

THE BORINGS DONE ON THIS PROJECT REPRESENT THE SOILS FOUND AT THE LOCATIONS OF THE BORINGS ONLY. SOILS MAY VARY BETWEEN LOCATIONS AND OTHER AREAS OF THE PROJECT SITE NOT DRILLED. A COMPLETE GEOTECHNICAL ENGINEERING REPORT IS AVAILABLE FOR REVIEW AT DUCKS UNLIMITED'S GREAT PLAINS REGIONAL OFFICE. THE CONTRACTOR WARRANTS THAT SITE CONDITIONS HAVE BEEN EXAMINED AS REQUIRED BY SECTION 101.203 EXAMINATION OF SITE CONDITIONS OF THE GENERAL CONDITIONS PRIOR TO BIDDING OR CONSTRUCTING THIS PROJECT. NO ADJUSTMENTS TO THE CONTRACT WILL BE MADE DUE TO CHANGED SITE CONDITIONS.

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-0162-002	DESIGNED BY: D.J.L.
	WENTWORTH GPA	DRAWN BY: J.B.
	SOILS INFORMATION	SURVEYED BY:
	APPROVED BY:	CHECKED BY:
DATE: 1-25-00	SHEET NO. 6 OF 6	APPROVED BY:

DESIGN REPORT

for

WENTWORTH GPA WETLAND

SD-160-2



February 9, 2000

Prepared by:

Ducks Unlimited, Inc.
3502 Franklin Avenue
Bismarck, ND 58501

PROJECT: WENTWORTH GPA WETLAND
SD-160-2

LOCATION: Section 13, T 106 N, R 51 W
10 miles east of Madison
Lake County, South Dakota

MARSH DATA: Full Service Level (FSL) @ 1642.0
78.1 Surface Acres @ FSL
158.5 Acre-Feet Capacity @ FSL

Top of Compacted Embankment @ 1645.0
85.4 Surface Acres @ Top of Embankment
406.6 Acre-Feet Capacity @ Top of Embankment

PROJECT DESCRIPTION:

The project as proposed involves the creation of a large wetland on public land owned by the State of South Dakota and managed by the Department of Game, Fish & Parks. The project will include the construction or reconstruction of a horseshoe-shaped earthen embankment adjacent to Bachelor Creek. Spoil dikes currently exist on the north and west sides of the wetland basin, apparently built to keep water out of the area for farming purposes. The existing dikes will be reconstructed and raised slightly in elevation. A new embankment will be constructed on the east side and a small drainage diverted into the area in the southwest corner of the site.

Other project features will include the installation of a corrugated metal pipe (CMP) water control structure. No emergency spillway is required as the primary spillway will pass all design flows without overtopping the embankment. Approximately 860 acres or 1.34 square miles of watershed contributes surface runoff to the wetland. No other landowners should be affected by the project.

PRELIMINARY RISK ASSESSMENT:

The project site is located in a rural area of Lake County. The embankment and water control structure will control flows that previously discharged directly into Bachelor Creek. Bachelor Creek flows east approximately 12 miles before discharging into the Big Sioux River. Project discharge flows directly enter Bachelor Creek, thus, there are no residences or other buildings located

directly downstream adjacent to the outlet channel.

The proposed embankment, as measured from the existing bottom elevation and structure invert to the top of the embankment, does not exceed six (6) feet in height. Therefore, the embankment would not be considered a "dam" per the definitions in Chapter 74:02:08 "Safety of Dams" of the South Dakota Department of Environment and Natural Resources rules. However, based on information obtained in the field, data present on the U.S.G.S. quadrangular maps, the rural location of the site, downstream land use and the size of the impoundment, the general public should be in no danger in the unlikely event of a dam failure. No loss of life and no economic loss would be expected.

For informational purposes regarding the wetland creation, the product of the maximum storage capacity (406.6 acre-feet at the top of the embankment) times the effective height (6.0 feet from the top of the embankment to the channel bottom) is 2,440 which is less than 3,000. Therefore, if the project were subject to Chapter 74:02:08 and in accordance with 74:02:08:07.01 of the South Dakota rules, the minimum spillway design flood would be to pass a 25-year frequency through the spillway without overtopping the embankment. The project as designed will pass the 100-year frequency design flood without overtopping the embankment.

The storage capacity at full service level (FSL) for the wetland is 158.5 acre-feet. Since the capacity exceeds 25 acre-feet, a water right permit from the Water Management Board is required. Also, if it is determined that Chapter 74:02:08 is not applicable, a Location Notice for the dam should be filed.

DESIGN:

The wetland project has been designed to allow desired water holding capability without affecting upstream or adjacent property owners. The proposed full service level (FSL) is at elevation 1642.0. The primary spillway will consist of a 48" diameter corrugated metal pipe (CMP) drop structure with a 36" diameter outlet barrel. The riser will be equipped with removable stoplogs to provide variable level control and total drawdown capability.

Regression equations provided in *Techniques for Estimating Flood Peaks, Volumes, and Hydrographs on Small Streams in South Dakota*¹ were used to develop flood peaks for design purposes. The Natural

¹Becker, Lawrence D., U.S. Geological Survey, Water Resources Investigations 80-80, September 1980.

Resource Conservation Service (NRCS) TR-20 Hydrology program was then calibrated by adjusting the time of concentration to produce a peak inflow for the various design events similar to those determined using the regression equations. The calibrated TR-20 model was then used to determine the discharge at various reservoir stages with respect to time. The program uses accepted procedures to develop inflow and outflow hydrographs. The primary spillway capacity was calculated using the weir formula and formulas for determining head loss through corrugated metal pipe. A total discharge curve for the proposed dam is attached.

The following is a relationship between peak inflows, corresponding outflows, and reservoir elevations using the previously-mentioned methods of analysis:

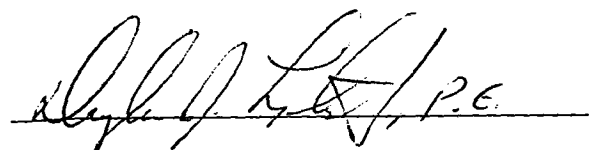
<u>EVENT</u>	<u>PEAK INFLOWS</u>	<u>MAXIMUM WATER SURFACE ELEVATION</u>	<u>FREEBOARD AVAILABLE</u>	<u>TOTAL DISCHARGE</u>
5 YR	80 CFS	1642.82	2.18 FT	29 CFS
10 YR	130 CFS	1643.08	1.92 FT	41 CFS
25 YR	218 CFS	1643.40	1.60 FT	52 CFS
50 YR	299 CFS	1643.71	1.29 FT	61 CFS
100 YR	400 CFS	1643.99	1.01 FT	67 CFS

Primary Spillway Crest Elevation @ 1642.0
Top of Compacted Embankment Elevation. . . . @ 1645.0

As indicated by the previous discussion and results in the table, the project will easily comply with all applicable State dam safety rules. In addition to providing excellent waterfowl and other wildlife habitat, the basin should provide some water quality benefits as well.

Construction plans have been drafted outlining project specifics. A set of standard construction specifications has previously been submitted to the Division of Water Rights.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

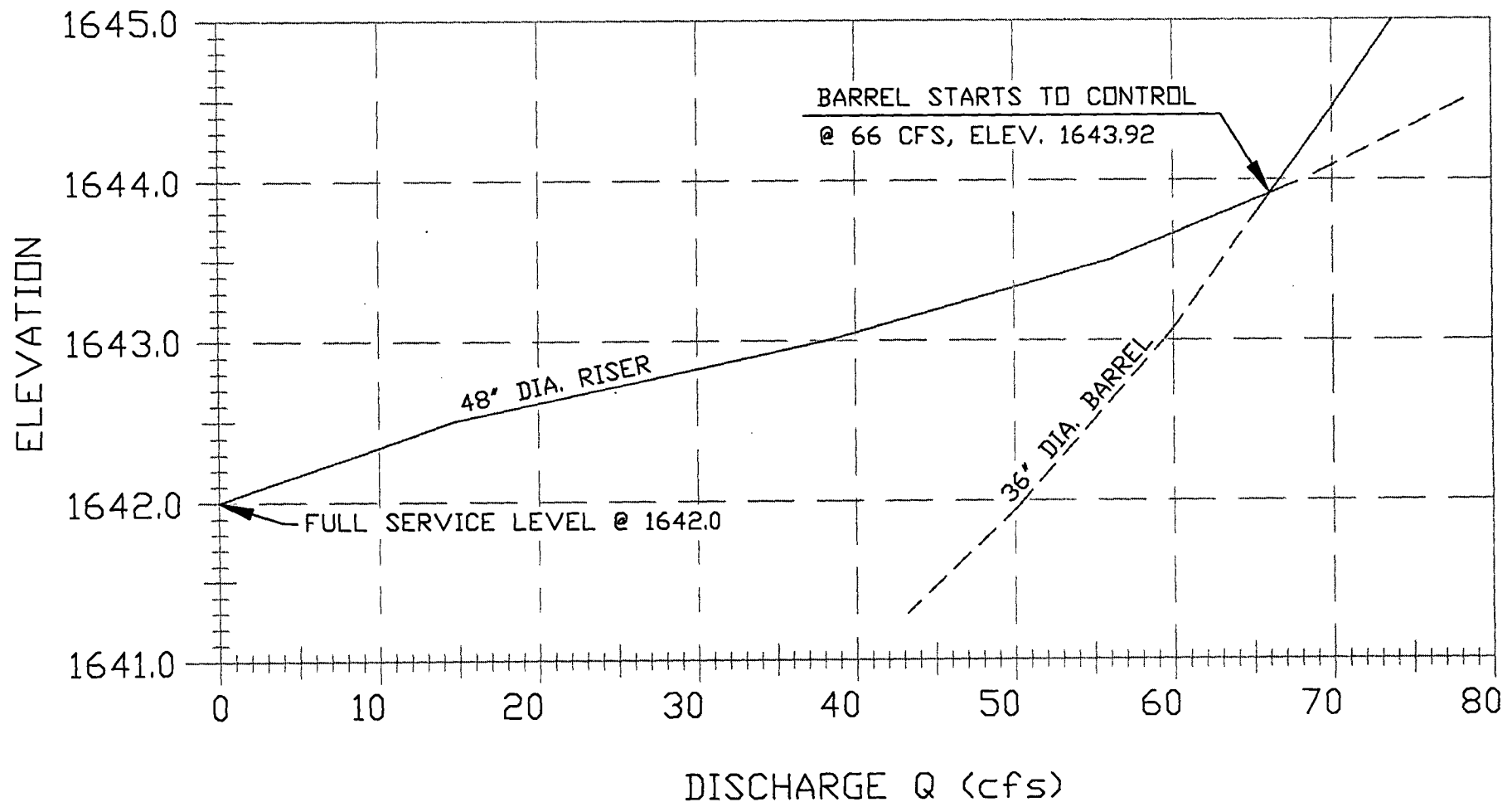


Douglas J. Lipetzky, P.E.
PE-4499

2-9-2000

Date

WENTWORTH GPA WETLAND DISCHARGE CURVE



NOTE:
PRIMARY SPILLWAY INCLUDES A 48" DIA. FULL-ROUND
RISER WITH A 36" DIA. OUTLET BARREL. NO EMERGENCY
SPILLWAY IS REQUIRED.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 20, 2000

Richard Moe
RR 1, Box 84
Colman, SD 57017

Dear Mr. Moe:

Enclosed are copies of the Design Report and plan sheets from Ducks Unlimited for the Wentworth GPA Project associated with the Department of Game, Fish & Parks' Water Permit Application No. 6213-3.

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

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineer III
Water Rights Program
(605) 773-3352

enclosures

REPORT ON
WATER PERMIT APPLICATION NO. 6213-3
SD Game, Fish & Parks
June 26, 2000

Water Permit Application No. 6213-3 has been filed by the South Dakota Department of Game, Fish & Parks to impound 158.5 acre-feet of water from runoff by reconstructing a horseshoe-shaped embankment to create a large wetland located in the NE ¼ of Section 13-T106N-R51W, in Lake County. The applicant also requests impoundment of sufficient water to maintain water at the outlet elevation of 1642.0 feet mean sea level. The water will be used for fish and wildlife production.

Discussion:

The proposed embankment will only be 6 feet high with a normal storage capacity of 158.5 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 407 acre-feet with a reservoir level at the top of dam elevation. Due to the small size of the embankment, it is not considered to be a dam and the design of the structure is not subject to the requirements of the Safety of Dams Rules, Chapter 74:02:08. However, the minimum requirements for a small size, Low Hazard dam would be to have the spillway capacity capable of passing a 25-year frequency event without overtopping the embankment.

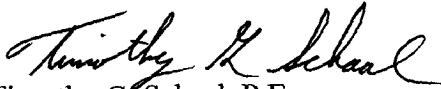
The Wentworth GPA Project has been design by Ducks Unlimited, Inc. It will have an upstream drainage area of 858 acres (1.34 square miles). It is designed to have a 48 inch CMP riser with a 36 inch CMP barrel, with 3.0 feet a available freeboard, as the spillway structure. Ducks Unlimited uses the NRCS TR-20 model to route a 25-year frequency event peak of 218 cfs through the structure with 1.60 feet of freeboard remaining, and a 100-year frequency event peak of 400 cfs through the structure with 1.01 feet of freeboard remaining.

The annual yield for the drainage area above the dam with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 14 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 36 acre-feet, and the annual yield with a 10 percent chance of occurrence, or 1 out of 10 years, is expected to be 165 acre-feet.

The Wentworth GPA Project will be located in the NE ¼ of Section 13-T106N-R51W adjacent to Bachelor Creek about 12 miles upstream of the confluence of Bachelor Creek and the Big Sioux River. There are no existing Water Permits/Rights located on Bachelor Creek between the proposed wetland and the Big Sioux River.

Conclusion:

1. Water Permit Application No. 6213-3 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for domestic use should be a qualification on Water Permit Application No. 6213-3.



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

Approved by:



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. 6213-3, SD Department of Game, Fish and Parks**

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. 6213-3, South Dakota Department of Game, Fish and Parks, c/o John Kirk, 523 E. Capitol Ave., Pierre, SD 57501.

The Chief Engineer is recommending APPROVAL of Application No. 6213-3 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. 6213-3 authorizes a dam with a storage capacity of 158.5 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean sea level.
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
July 5, 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.

July 7, 2000

South Dakota Department of Game, Fish & Parks
%John Kirk
523 East Capitol
Pierre, SD 57501

Dear Mr. Kirk:

Water Permit Application No. 6213-3 for recreation, and fish & wildlife propagation has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Madison Daily Leader printed at Madison, SD (Ph # (605) 256-4555). 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

July 7, 2000

Madison Daily Leader
P.O. Box 348
Madison, SD 57042-0348

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 6213-3 to Appropriate Water to be published twice. Please publish the first notice on July 13, 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 South Dakota Department of Game, Fish and Parks, %John Kirk, 523 East Capitol, Pierre, SD 57501 (Ph # (605) 773-3381).

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-----

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

No. 6213-3

Date _____

We are in receipt of your letter of July 7, 2000, enclosing Notice of Hearing to Appropriate Water by Application No. 6213-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on July 13, 2000, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 6213-3 to Appropriate Water

Notice is given that South Dakota Department of Game, Fish and Parks, %John Kirk, 523 E Capitol, Pierre SD 57501 has filed an application for a water permit to impound 158.5 acre-feet of water from runoff by constructing a dam located in the N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 13 with water impounded in the NE $\frac{1}{4}$ Section 13; all in T106N-R51W. This application requests impoundment of sufficient water to maintain water at the outlet elevation of 1642.0 feet mean sea level and is to be used to provide habitat for fish and wildlife propagation and recreational use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6213-3 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 July 31, 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.

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Lake)

I, Deanna D. Bergheim

certify that the attached printed Notice was
taken

from the Madison Daily Leader

printed and published in City of Madison

County of Lake and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

Thursday, July 13, 2000

Thursday, July 20, 2000

Cost of Printing 41.33

Deanna D. Bergheim
(Signature)

Secretary

(Title)

7-24-2000
(Date Signed)



Thurs., July 13, 20, 2000

NOTICE OF APPLICATION
NO. 6213-3
TO APPROPRIATE WATER

Notice is given that South Dakota Department of Game, Fish and Parks, % John Kirk, 523 E Capitol, Pierre SD 57501 has filed an application for a water permit to impound 158.5 acre-feet of water from runoff by constructing a dam located in the N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 13 with water impounded in the NE $\frac{1}{4}$ Section 13; all in T106N-R51W. This application requests impoundment of sufficient water to maintain water at the outlet elevation of 1642.0 feet mean sea level and is to be used to provide habitat for fish and wildlife propagation and recreational use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6213-3 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 July 31, 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.

July 22, 2000

The Chief Engineer
Water Rights Program
Foss Building
523 E Capitol
Pierre, SD 57501



Project: Wentworth GPA Wetland
SD - 160-2

Location: Section 13, T 106N, R 51W
10 miles east of Madison
Lake County, South Dakota

Project No. 6213-3

Dear Chief Engineer,

I/we intent to protest this Application to
Appropriate water by the Department of
Game, Fish and Parks on N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 13
all in 106N-R51W.

I/we request to be informed of all public
meetings and hearings in regard to this project
by the latter part of July.

Thank-you.

Signed, *Richard Moe*
RR.1 - Box 84
Polman, S. Dak.

Farm Identification
Sec. 18 - 106-50

CERTIFICATION

I hereby certify that on August 2, 2000, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated August 2, 2000, regarding Notice of Hearing on Contested Water Permit Application No. 6213-3, South Dakota Department of Game, Fish and Parks, addressed as stated below:

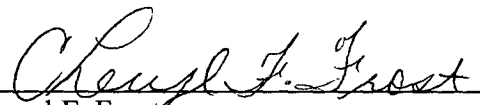
Richard Moe, RR 1, Box 84, Colman, SD 57017-9755.

The above referenced Notice was sent Inter-office to:

John Kirk, Department of Game, Fish and Parks, Joe Foss Building.

A copy of the above reference Notice was sent Inter-office to:

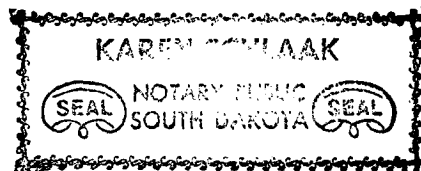
Diane Best, Assistant Attorney General, Capitol Building.


Cheryl F. Frost
Secretary

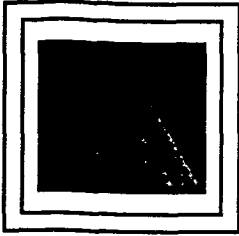
STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 3rd day of August, 2000


Notary Public



KAREN SCHLAACK, Notary Public
My Commission Expires
April 1, 2001



MIDWEST TESTING LABORATORY, INC.

1805 Hancock Drive • P.O. Box 2084 • Bismarck, ND 58502-2084 • 701-258-2833 • Fax 701-258-2857

August 18, 2000

AUG 21 2000

Ducks Unlimited, Inc
2525 River Road
Bismarck, ND 58503-9011

Attn: Doug Lipetzky

RE: Wentworth GPA
Lake County, South Dakota
MTL Project No B5522

Dear Doug:

As requested, we have reviewed soil samples submitted by your office for potential use in embankment construction for the above-referenced project.

The project will consist of constructing an earth embankment for the purpose of impounding water and developing a waterfowl nesting areas. The embankment will have a total length of approximately 5700 feet with maximum heights of five to six feet.

The review consisted of running laboratory tests for the purpose of evaluating the suitability of the proposed borrow for embankment construction. The testing program consisted of the determination of the soil's plasticity characteristics and percent passing the #200 sieve. Additionally, laboratory moisture-density relationships were determined using the standard proctor, ASTM:D698-91. All test results have been tabulated and are included on the attached summary sheets.

Soil conditions within the proposed borrow areas as represented by the samples submitted to us would, in our opinion, be well suited for use in construction of earth embankments. We recommend all embankment fill be compacted to a minimum of 95 percent of the maximum density as determined by the standard proctor, ASTM:D698-91. Moisture contents at the time of compaction should be kept in the range of plus or minus two

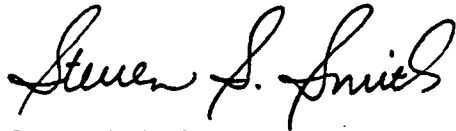
Ducks Unlimited, Inc
Attn: Doug Lipetzky
Page 2 of 2
August 18, 2000

percent of optimum moisture as determined by this same method. With embankment fill placed in this manner, in our opinion, a relatively impervious structure should result. Due to the minimal height of each embankment, we would not anticipate any problems regarding embankment stability.

Should you have any questions or require additional information, please contact us.

Sincerely,

MIDWEST TESTING LABORATORY

A handwritten signature in cursive script that reads "Steven S. Smith".

Steven S. Smith, P.E.

SSS/cb

Attachments: tests of soils (2)
moisture-density relationships (6)



MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax. (701) 258-2857

REPORT OF: TESTS OF SOILS

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO: B5522

<u>SAMPLE NUMBER:</u>	1	2	3
<u>LOCATION:</u>	Test boring 1	Test boring 2	Test boring 3
<u>CLASSIFICATION:</u>	SANDY LEAN CLAY	FAT CLAY	FAT CLAY
<u>COLOR:</u>	Dark brown	Dark grayish brown	Brown
<u>PARTICLE DISTRIBUTIONS:</u>			
Gravel (%)	0	0	0
Sand (+ #200 sieve) (%)	35	6	6
Fines (-#200 sieve) (%)	65	94	94
<u>ATTERBERG LIMITS:</u>			
Liquid Limit	44	60	53
Plastic Limit	15	15	15
<u>LABORATORY MOISTURE-DENSITY RELATIONSHIPS (see attached curves):</u>			
Method	Standard proctor, ASTM:D698-91, Method "A"		
Optimum Moisture (%)	17.0	23.4	20.6
Maximum Density (pcf)	106.4	95.7	102.4
<u>MOISTURE CONTENTS:</u>			
As Received (%)	24.6	30.4	27.7

REMARKS: Samples were submitted to and received here at the laboratory for test on August 1, 2000.

SIGNED



MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax (701) 258-2857

REPORT OF: MOISTURE- DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO.: B5522

(Test boring 1)

SAMPLE NUMBER: 1

METHOD: Standard Proctor, ASTM:D698-91
Method "A"

MAXIMUM DENSITY: 106.4 pcf

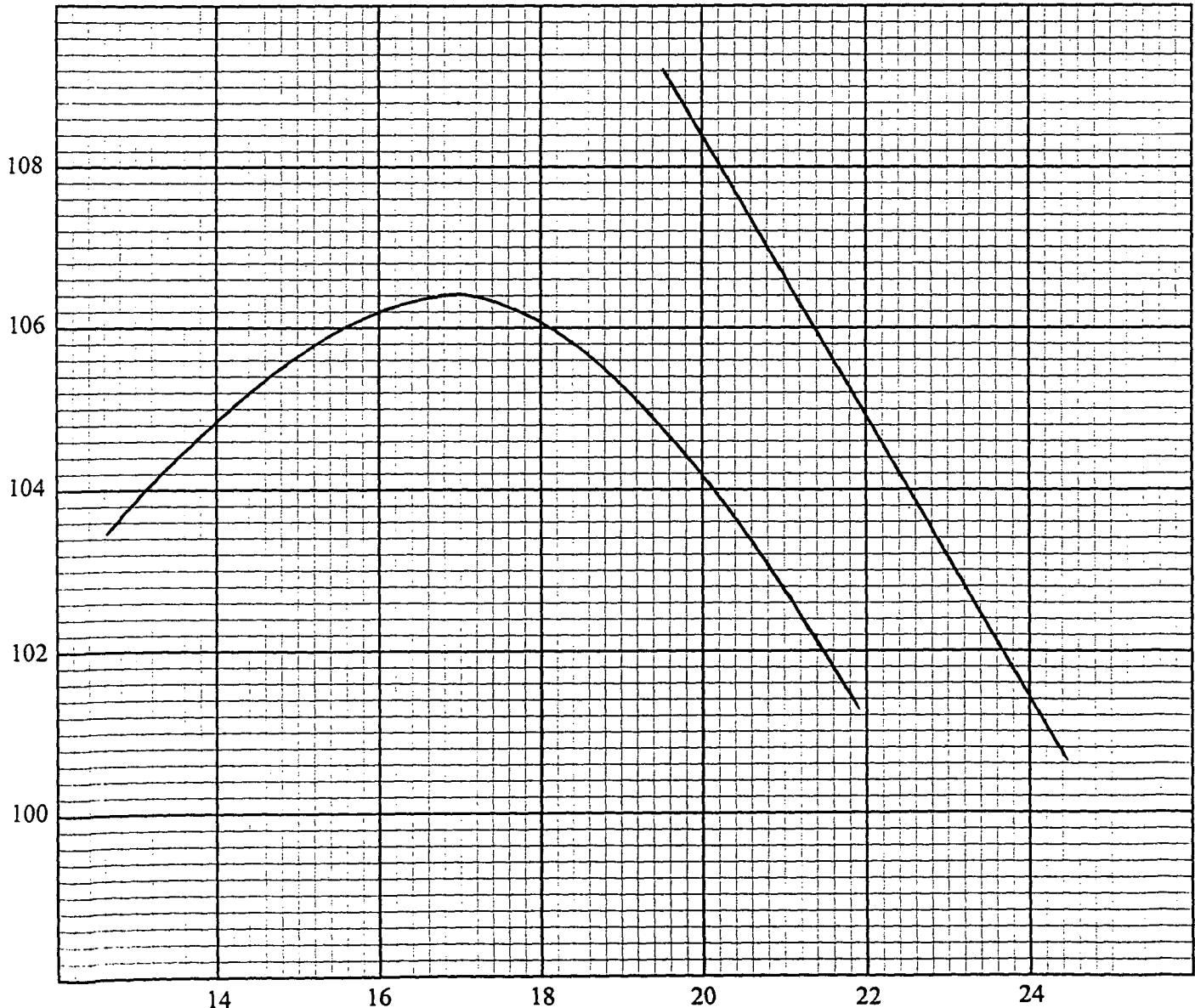
SOIL TYPE: SANDY LEAN CLAY-dark brown

OPTIMUM MOISTURE: 17.0%

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MOISTURE CONTENT (%)



MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax (701) 258-2857

REPORT OF: MOISTURE- DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO.: B5522

(Test boring 2)

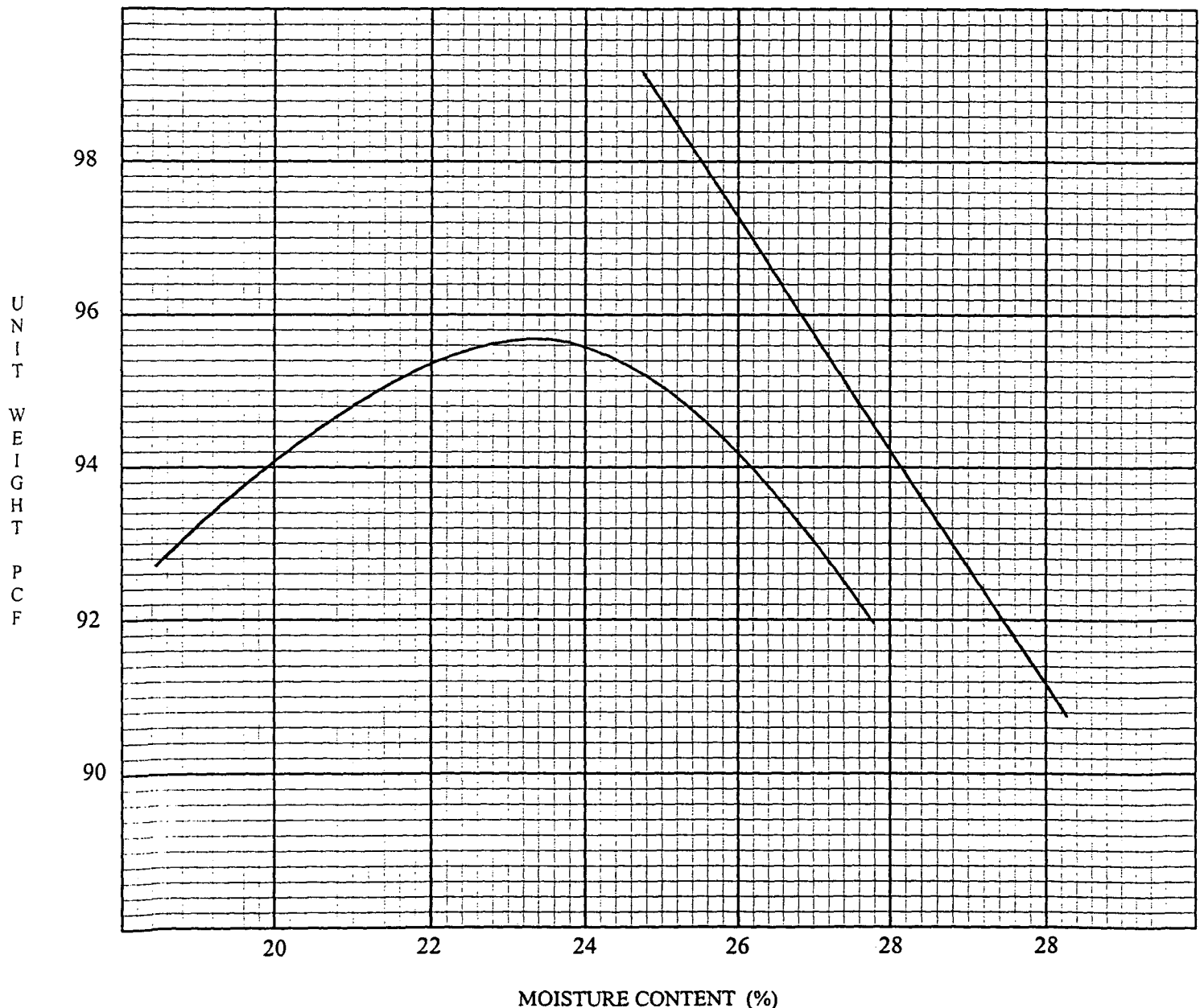
SAMPLE NUMBER: 2

METHOD: Standard Proctor, ASTM:D698-91
Method "A"

MAXIMUM DENSITY: 95.7 pcf

SOIL TYPE: FAT CLAY-dark grayish brown

OPTIMUM MOISTURE: 23.4%





MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax (701) 258-2857

REPORT OF: MOISTURE- DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO.: B5522

(Test boring 3)

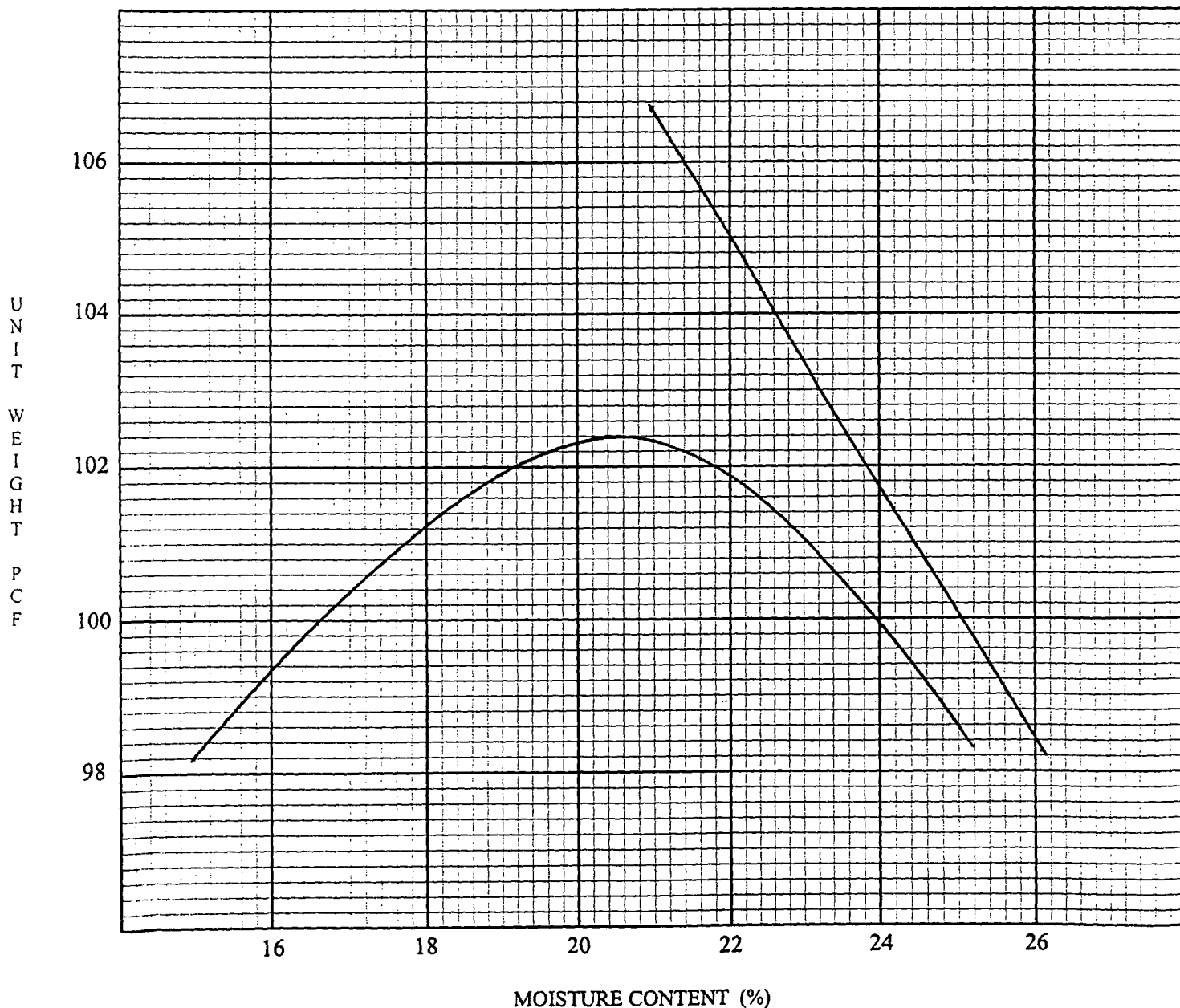
SAMPLE NUMBER: 3

METHOD: Standard Proctor, ASTM:D698-91
Method "A"

MAXIMUM DENSITY: 102.4 pcf

SOIL TYPE: FAT CLAY-brown

OPTIMUM MOISTURE: 20.6%





MIDWEST TESTING LABORATORY

1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax. (701) 258-2857



REPORT OF: TESTS OF SOILS

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO: B5522

<u>SAMPLE NUMBER:</u>	4	5	6
<u>LOCATION:</u>	Test boring 4	Test boring 5	Test boring 6
<u>CLASSIFICATION:</u>	SANDY LEAN CLAY	FAT CLAY	SANDY LEAN CLAY
<u>COLOR:</u>	Grayish brown	Dark grayish brown	Brown
<u>PARTICLE DISTRIBUTIONS:</u>			
Gravel (%)	10	0	1
Sand (+ #200 sieve) (%)	36	4	29
Fines (-#200 sieve) (%)	54	96	70
<u>ATTERBERG LIMITS:</u>			
Liquid Limit	40	66	44
Plastic Limit	14	18	16
<u>LABORATORY MOISTURE-DENSITY RELATIONSHIPS (see attached curves):</u>			
Method	Standard proctor, ASTM:D698-91, Method "A"		
Optimum Moisture (%)	15.7	29.1	17.7
Maximum Density (pcf)	109.3	88.0	107.9
<u>MOISTURE CONTENTS:</u>			
As Received (%)	19.2	37.2	19.1

REMARKS: Samples were submitted to and received here at the laboratory for test on August 1, 2000.

SIGNED



MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax (701) 258-2857

REPORT OF: MOISTURE- DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO.: B5522

(Test boring 4)

SAMPLE NUMBER: 4

METHOD: Standard Proctor, ASTM:D698-91
Method "A"

MAXIMUM DENSITY: 109.3 pcf

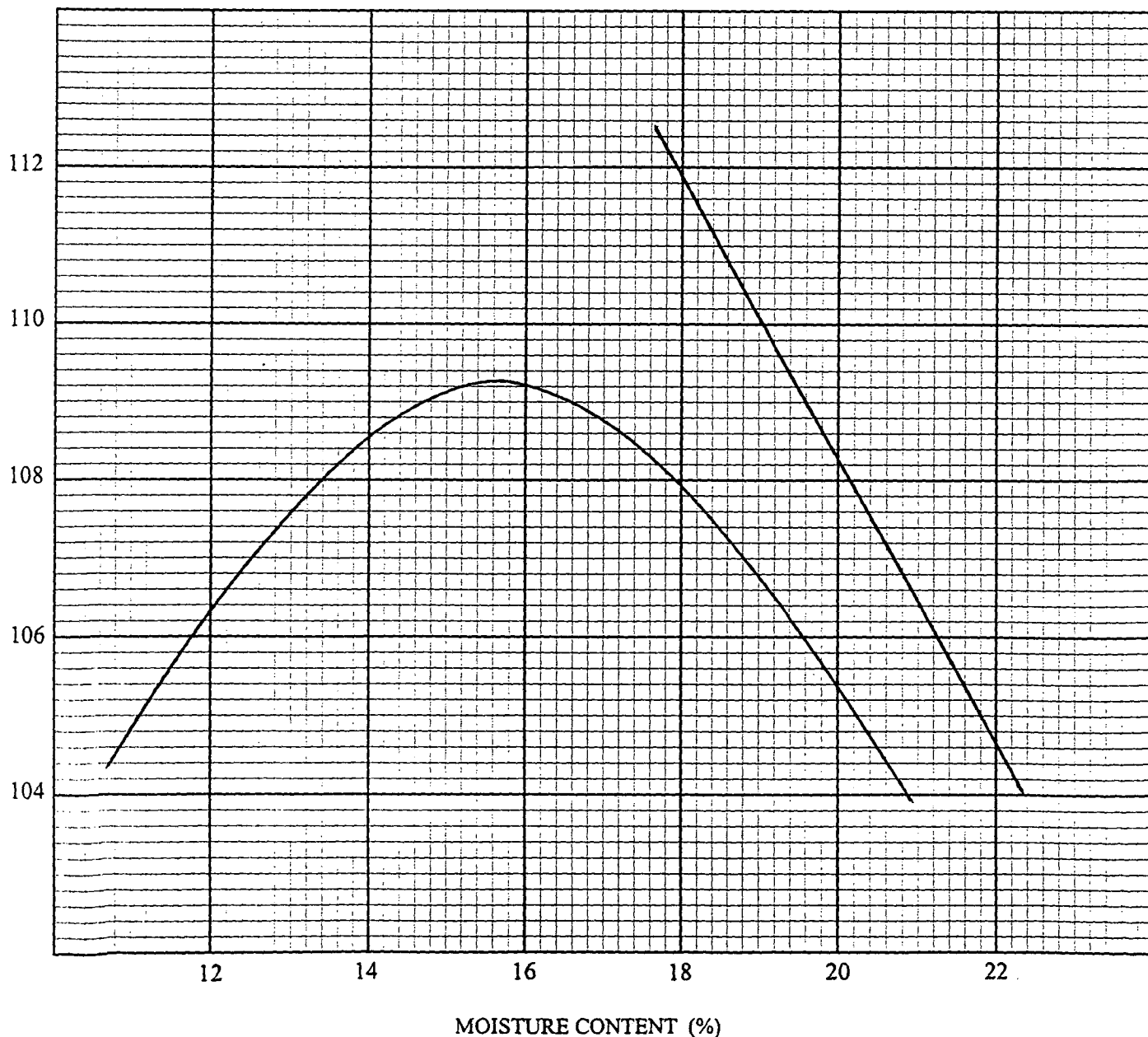
SOIL TYPE: SANDY LEAN CLAY-grayish brown,
a little gravel

OPTIMUM MOISTURE: 15.7%

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MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax (701) 258-2857

REPORT OF: MOISTURE- DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO.: B5522

(Test boring 5)

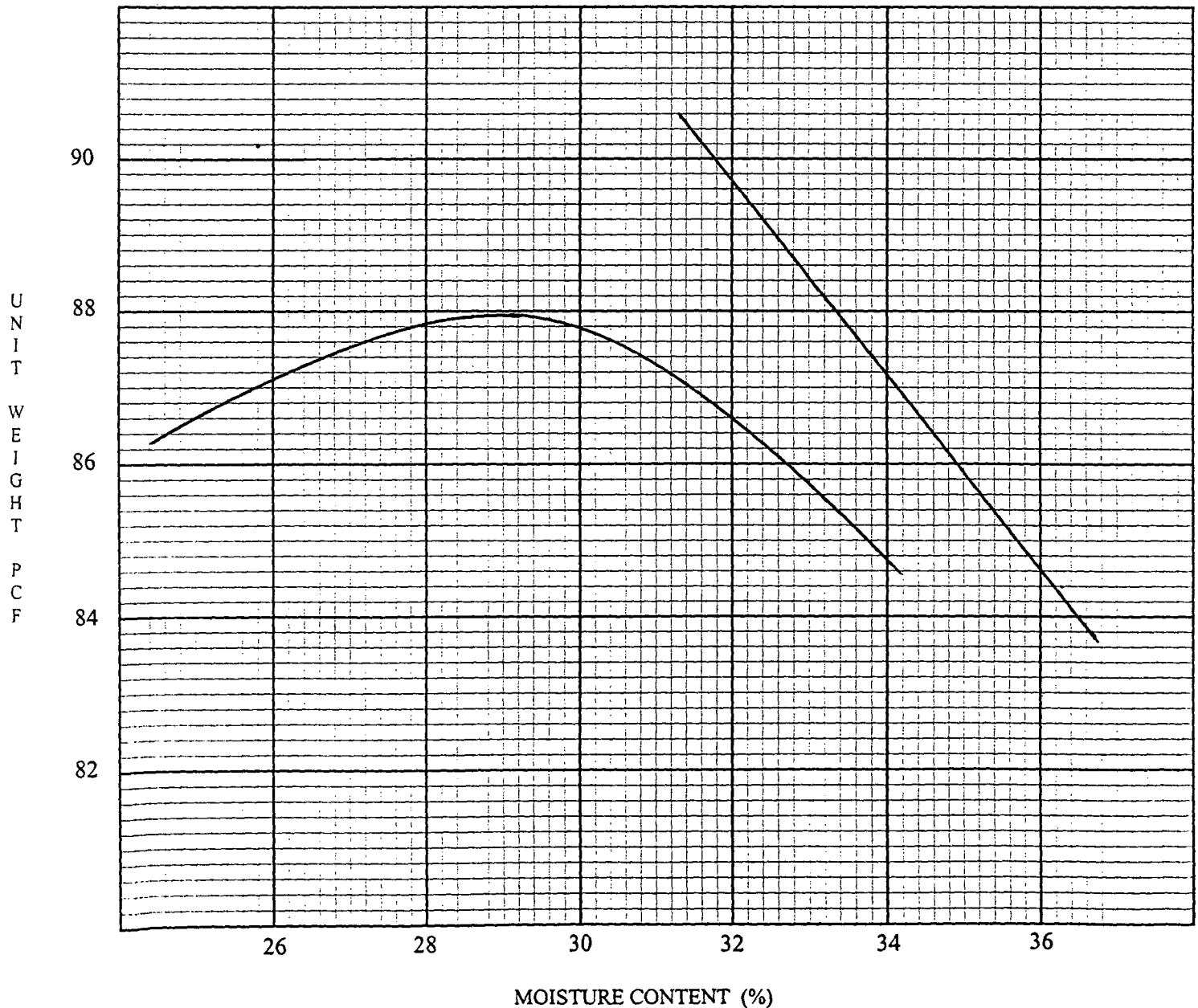
SAMPLE NUMBER: 5

METHOD: Standard Proctor, ASTM:D698-91
Method "A"

MAXIMUM DENSITY: 88.0 pcf

SOIL TYPE: FAT CLAY-dark grayish brown

OPTIMUM MOISTURE: 29.1%





MIDWEST TESTING LABORATORY



1805 Hancock Dr. / P.O. Box 2084 / Bismarck, North Dakota 58502
Phone (701) 258-2833 / Fax (701) 258-2857

REPORT OF: MOISTURE- DENSITY RELATIONS OF SOIL

PROJECT: Wentworth GPA
Lake County, South Dakota

DATE: August 18, 2000

REPORTED TO: Ducks Unlimited, Inc
Attn: Doug Lipetzky
2525 River Road
Bismarck, ND 58503-9011

COPIES:

PROJECT NO.: B5522

(Test boring 6)

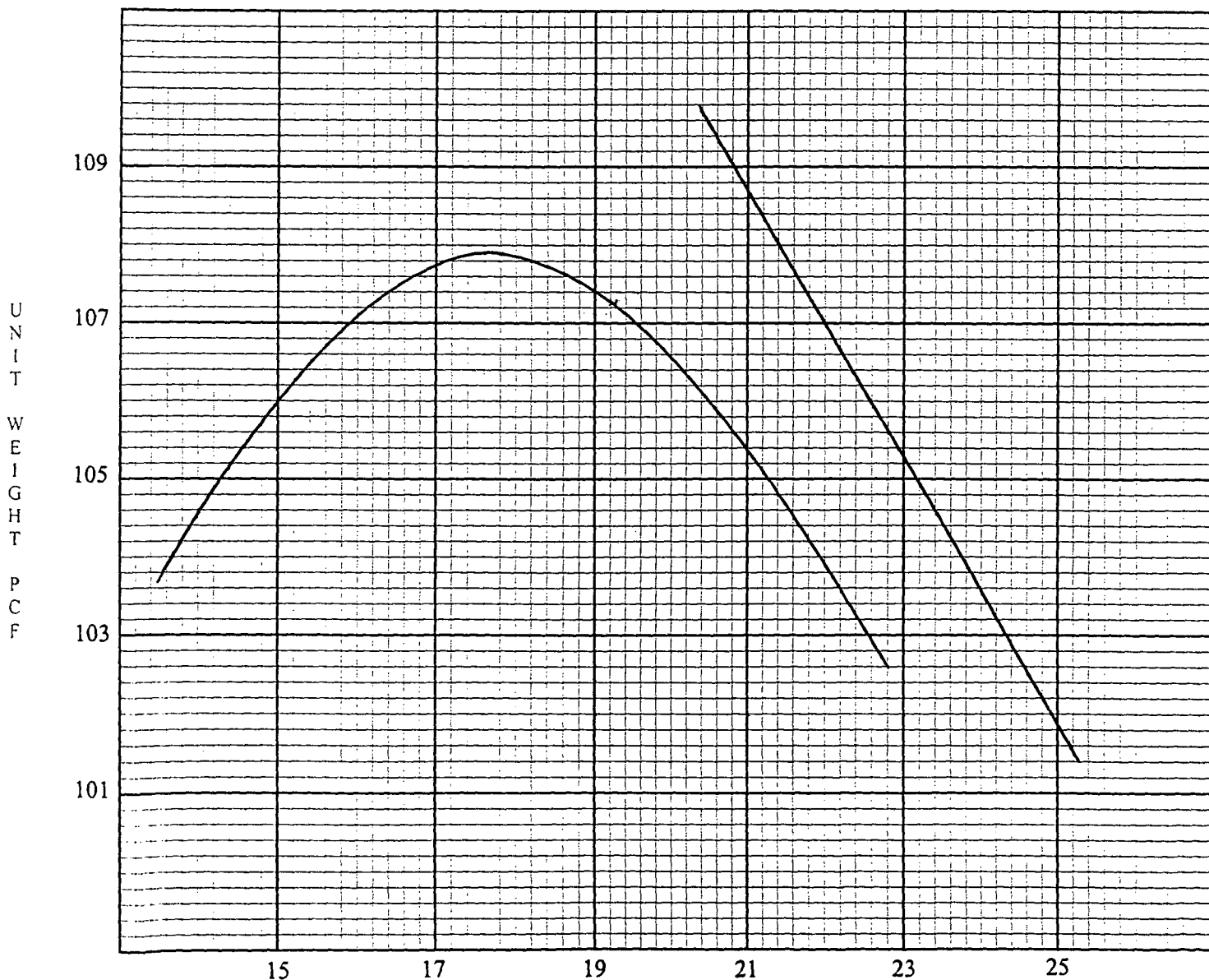
SAMPLE NUMBER: 6

METHOD: Standard Proctor, ASTM:D698-91
Method "A"

MAXIMUM DENSITY: 107.9 pcf

SOIL TYPE: SANDY LEAN CLAY-brown

OPTIMUM MOISTURE: 17.7%



MOISTURE CONTENT (%)



DEPARTMENT OF GAME, FISH AND PARKS

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182



September 14, 2000

Garland Erbele, Chief Engineer
Dept. of Environment and Natural Resources
523 E. Capitol – Foss Building
Pierre, SD 57501

Dear Mr. Erbele:

The South Dakota Department of Game, Fish & Parks would like to request a continuance regarding Water Permit Application No. 6213-3. We are currently working with the adjacent landowner that has petitioned to oppose our application. We hope to address his concerns and resolve any problems he has with the project prior to consideration of the application by the Water Management Board.

Please feel free to contact me if you have any questions.

Sincerely,

John Kirk
Wildlife Program Administrator



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

September 14, 2000

NOTICE

TO: John Kirk
SD Dept. of Game, Fish and Parks
523 E. Capitol Ave.
Pierre, SD 57501-3182

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

FROM: Garland Erbele, Chief Engineer
Water Rights Program *Garland Erbele*

SUBJECT: Automatic Delay of Hearing on Water Permit Application No. 6213-3, South Dakota
Department of Game, Fish and Parks

The SD Department of Game, Fish and Parks has requested a continuance of the September 28, 2000, hearing before the Water Management Board on their Application No. 6213-3. Therefore, the hearing on Application No. 6213-3 is automatically delayed pursuant to SDCL 46-2A-4 and 46-2A-5 and will not be held on September 28, 2000. A copy of the letter requesting a continuance is enclosed to Mr. Moe.

The hearing on this application will be scheduled for the December 6 and 7, 2000 Water Management Board meeting. Future notice of the exact date, time and place of the hearing for Application No. 6213-3 will be provided to all parties of record.

Please contact Eric Gronlund at (605) 773-3352, if you have any questions.

enclosure

c: Diane Best, Assistant Attorney General

CERTIFICATION

I hereby certify that on September 14, 2000, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated September 14, 2000, regarding Automatic Delay of Hearing on Water Permit Application No. 6213-3, SD Dept. of Game, Fish and Parks, addressed as stated below:

Richard Moe, RR 1, Box 84, Colman, SD 57017-9755

A copy of the above described Notice was hand delivered to:

John Kirk, SD Dept. of Game, Fish and Parks, 523 E. Capitol Ave., Pierre, SD 57501

A copy of the above described Notice was sent Inter-office to:

Diane Best, Assistant Attorney General, Capitol Building

E. S. Lund

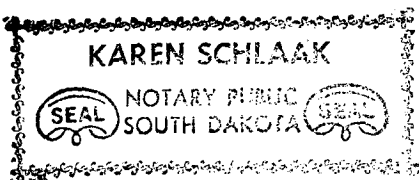
Eric S. Gronlund
Natural Resources Engineer
Water Right Program

[illegible]

Sworn to, before me, this 15th day of September, 2000.

Karen Schack

Karen Schlaak
Notary Public



KAREN SCHLAAK, Notary Public
My Commission Expires
April 1, 2001



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

November 6, 2000

NOTICE

TO: John Kirk
SD Dept. of Game, Fish and Parks
523 E. Capitol Ave.
Pierre, SD 57501-3182

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

FROM: Garland Erbele, Chief Engineer
Water Rights Program *Garland Erbele*

SUBJECT: Scheduling of Hearing on Water Permit Application No. 6213-3, South Dakota
Department of Game, Fish and Parks

Water Permit Application No. 6213-3 proposes to impound 158.5 acre feet of water by construction a dam for fish and wildlife propagation and recreational use. Mr. Moe contested the application and requested an automatic delay of the September 28, 2000, hearing before the Water Management Board.

The Water Management Board will now consider Application No. 6213-3 on December 6, 2000, at 11:00 AM, in the Conference Room, Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre, SD. The agenda time is an estimate and may be delayed due to prior agenda items.

Applicable provisions of the Notice published July 13 and 20, 2000, in the Madison Daily Leader and the Notice of Hearing dated August 2, 2000 will still apply at the December 6th hearing before the Water Management Board. This hearing is an adversary proceeding. Any party of record has the right to be present and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Please contact Eric Gronlund at (605) 773-3352, if you have any questions.

enclosure

c: Diane Best, Assistant Attorney General
Leslie Petersen, G,F&P
Paul Coughlin, G,F&P

CERTIFICATION

I hereby certify that on November 6, 2000, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated November 6, 2000, regarding Automatic Delay of Hearing on Water Permit Application No. 6213-3, SD Dept. of Game, Fish and Parks, addressed as stated below:

Richard Moe, RR 1, Box 84, Colman, SD 57017-9755

A copy of the above described Notice was hand delivered to:

John Kirk, SD Dept. of Game, Fish and Parks, 523 E. Capitol Ave., Pierre, SD 57501
Leslie Petersen, SD Dept. of Game, Fish and Parks, 523 E. Capitol Ave., Pierre, SD 57501
Paul Coughlin, SD Dept. of Game, Fish and Parks, 523 E. Capitol Ave., Pierre, SD 57501

A copy of the above described Notice was sent Inter-office to:

Diane Best, Assistant Attorney General, Capitol Building



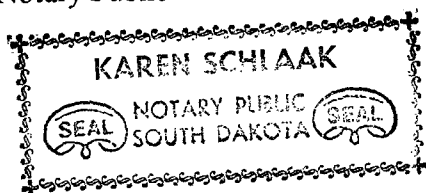
Eric S. Gronlund
Natural Resources Engineer
Water Right Program

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 7th day of November, 2000.



Karen Schlaak
Notary Public



KAREN SCHLAACK, Notary Public
My Commission Expires
April 1, 2001



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

December 15, 2000

Richard Moe
RR 1 Box 84
Colman, SD 57017-9755

Dear Mr. Moe:

I am writing in follow-up to our telephone conversation regarding your inquiry about obtaining a copy of the minutes or the court reporter transcript of the hearing before the Water Management Board on Water Permit Application No. 6213-3 filed by the Dept. of Game, Fish and Parks. I am writing to let you know that the minutes will not be adopted until the Board's next meeting. The next scheduled meeting is March 7-8, 2001. I will be sure that you get a copy of minutes once adopted by the Board.

As for the court report's transcript of the hearing, the Water Rights Program does not routinely order a transcript of the Board meeting. You can contact the court reporter directly to find out the approximate cost of obtaining a transcript and order a transcript if you desire. The court reporter is:

Lynn Ormesher
Capital Reporting Services
PO Box 903
Pierre, SD 57501
Phone # (605) 224-7611

Please let me know if I may be of further assistance.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

December 18, 2000

NOTICE

TO: John Kirk
SD Dept. of Game, Fish and Parks
523 E. Capitol Ave.
Pierre, SD 57501-3182

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

FROM: Garland Erbele, Chief Engineer
Water Rights Program

SUBJECT: Preparation of Findings of Fact, Conclusions of Law and Final Decision

The Water Management Board directed John Guhin, the Board's attorney, to prepare proposed Findings of Fact, Conclusions of Law and a Final Decision in the matter of Water Permit Application No. 6213-3 filed by the South Dakota Department of Game, Fish and Parks. The Board will consider the proposed Findings, Conclusions and Final Decision at 1:00 PM on March 7, 2001 in the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD.

The Board requested that a copy of the proposed Findings, Conclusions and Final Decision be mailed to each Board member and Parties of Record (names listed above) by February 15, 2001. Written objections or comments in support of the proposed Findings, Conclusions and Final Decision, or alternative Findings, Conclusions and Final Decision are to be mailed to each Board member, the Board attorney (mailing list enclosed) and all Parties of Record by February 26, 2001.

Oral arguments by parties filing written comments in opposition or support of the proposed Findings, Conclusions and Final Decision, or alternative Findings, Conclusions and Final Decision may be made on March 7, 2001. The public hearing was completed December 6, 2000. No additional testimony will be received on March 7, 2001.

Enclosure

c: John Guhin, Deputy Attorney General
Diane Best, Assistant Attorney General
Leslie Petersen, G,F&P
Paul Coughlin, G,F&P

CERTIFICATION

I, hereby certify that on December 18, 2000 , I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated December 18, 2000 regarding preparation of findings of Fact, Conclusion of Law and Final Decision in the matter of Water Permit Application No. 6213-3, South Dakota Department of Game, Fish & Parks addressed as stated below:

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

A copy of the above described Notice was sent Inter-office to:

Diane Best, Assistant Attorney General, Capitol Building
John Kirk, Department of Game, Fish & Parks, Foss Building



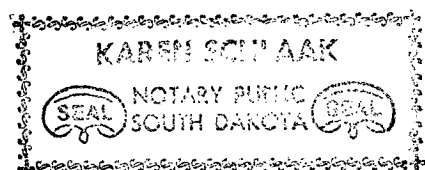
Eric Gronlund
Natural Resources Engineer
Water Right Program

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 19th day of December, 2000.



Notary Public



KAREN SCHLAACK, Notary Public
My Commission Expires
April 1, 2001

STATE OF SOUTH DAKOTA



OFFICE OF ATTORNEY GENERAL

500 East Capitol Avenue
Pierre, South Dakota 57501-5070
Phone (605) 773-3215
FAX (605) 773-4106
www.state.sd.us/atg

MARK BARNETT
ATTORNEY GENERAL

LAWRENCE LONG
CHIEF DEPUTY ATTORNEY GENERAL

February 6, 2001

TO: Members of the Water Management Board and Interested Parties

FROM: John P. Guhin, Deputy Attorney General *John P. Guhin*

RE: Water Permit Application No. 6213-3, South Dakota Game, Fish, and Parks

Pursuant to the direction of the Board, I am herewith enclosing proposed Findings of Fact, Conclusions of Law, and a Final Decision. Please see the December 18, 2000, Notice of the Chief Engineer for further information.

JPG:js
Enclosures

STATE OF SOUTH DAKOTA

BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF THE APPLICATION)	FINDINGS OF FACT,
FOR WATER PERMIT NO. 6213-3,)	CONCLUSIONS OF LAW, AND
SOUTH DAKOTA DEPARTMENT OF)	FINAL DECISION
GAME, FISH AND PARKS)	

FINDINGS OF FACT

1. This is an application by South Dakota Game, Fish, and Parks to authorize a dam with a storage capacity of 158.5 acre feet of water and for sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean sea level. The Department proposes to utilize run-off by reconstructing a horseshoe-shaped embankment to create a large wetland. Water is proposed to be used for fish and wildlife production.

2. This project is known as the Wentworth Game Production Area Project and was designed by Ducks Unlimited Inc. The project is located in Lake County.

3. The proposed embankment will be six feet high with a normal storage capacity of 158.5 acre feet with a reservoir level at the spillway elevation. The maximum storage capacity is 407 acre feet with the reservoir level at the top of the dam elevation. Because of the small size of the embankment it is not considered to be a dam and is not subject to the Safety of Dams rules found at ARSD 74:02:08. Nonetheless, the minimum requirements for a small size, low hazard dam are met.

4. The need for water in the area arises from its physical characteristics. During each spring there is a rush of water which accumulates in multiple areas in the proposed project area.

The accumulation of water causes numerous breeding waterfowl to be attracted. The waterfowl enter the area and initiate nesting. Because of the topography of the area and ditching through the area, the water which accumulates in the area then drains out. This leaves the birds in the ditch area without any water. The proposed project intends to hold water behind the embankment through late summer to allow the birds to fledge.

5. Although the drainage area for the dam is substantial - 858 acres or 1.34 square miles - the expected annual yield is small. The annual yield for the drainage area above the dam with an eighty percent occurrence is only 14 acre feet. The annual yield with a fifty percent chance of occurrence is 36 acre feet. The annual yield with a ten percent chance of occurrence is 165 acre feet. Although the amount of water available to the project is therefore minimal, there is nonetheless a reasonable probability that there is unappropriated water available for the applicant's proposed fish and wildlife uses as described above.

6. The Opponent to the project argues, in effect, that the project should not be approved because it cannot be developed without unlawful impairment of his existing rights and because it is not in the public interest. The Opponent argues, more specifically, that the construction of the project will store additional water and the storage of that water may lead to lateral seepage onto his nearby property.

7. The Board finds that lateral seepage onto Opponent's property is unlikely and the thesis that such would occur is not supported by the facts. First, six soil borings into the area

show three of fat clay and three of sandy lean clay. Fat clay can be characterized as a tight soil which can be packed down so that water will not flow through it. Sandy lean clay is described as soil which is somewhat less dense than fat clay, in that it contains some organic material. However, it is also a fairly tight soil. This factor makes lateral seepage unlikely.

8. Moreover, lateral seepage is unlikely because of the small amounts of water involved in the project. The evidence indicates that, while the maximum surface area of the project would be 78 acres, water will be only from two to three feet deep. There is no evidence in the record that lateral seepage would occur given the soil types described above, and the minimal amount of water at issue.

9. The Opponent to the project also is concerned that Game, Fish, and Parks will utilize or improve existing tiling into the area to increase the amount of water flowing onto to its property. The Board rejects the thesis that tiling found on Game, Fish, and Parks property will have a significant impact. First, there is minimal evidence of tiling on Game, Fish, and Parks property in any event. Second, the Board finds that the tiling in the area surrounding the Game, Fish, and Parks property appears to be inoperative and has to been maintained. Third, the long-term policy of Game, Fish, and Parks has not been to use tiling in any event.

10. The Opponents more general concern regarding flow onto his property through a ditch is likewise not credited. First, the project does not contemplate, in any way, dealing with any

existing ditching system. Second, the Game, Fish, and Parks project does not affect flows that come from the west to the north; all of this water will simply flow right by the project.

11. Finally, the Opponent to the project argues that the project may, somehow, contribute to the deterioration of the property in the area and would create wetlands. Opponent asserts that the area does not historically have wetland characteristics. As noted, the Board finds that the project will not harm Opponent. The Board also finds, however, that in 1917 and 1918, landowners requested the drainage of 1500 to 2000 acres of land. The area apparently had some wetland characteristics at that time. Moreover, the soils in the area are hydrate soils characteristic of drained wetlands. It is also notable that both the NRCS Wetland Mapping and the National Wetland Inventory Mapping show that the area involved thus in fact a wetland.

12. The Board finds that the project will have little, if any, hydrologic impact on the area and will not, in any event, harm the property of the Opponent.

CONCLUSIONS OF LAW

1. The Board has jurisdiction of this matter.
2. The Board concludes that there is a reasonable probability that unappropriated water is available for the proposed fish and wildlife uses.
3. The Board concludes that the proposed division can be developed without unlawful impairment of existing rights. As noted above, the Board rejects the contention that the project is

likely to cause any lateral movement of water or to cause flooding onto the Opponents land.

4. The proposed use is for fish and wildlife purposes is a beneficial use in that it will sustain populations of waterfowl which, in prior years, nested in the area only to have the available water drained from it.

5. The proposal is in the public interest as qualified below.

FINAL DECISION

The Application of Water Permit No. 6213-3, South Dakota Game, Fish, and Parks is granted with the following qualifications:

1. Water Permit No. 6213-3 authorizes a dam with a storage capacity of 158.5 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean seal level.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

Dated this _____ day of February, 2001, at Pierre, South Dakota.

BY THE BOARD:

Chairman

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of proposed Findings of Fact, Conclusions of Law, and Final Decision in the matter of In the Matter of Water Permit Application No. 6213-3, South Dakota Department of Game, Fish, and Parks were served upon each of the following by enclosing the same in envelopes with first class postage, prepaid and affixed thereto, and depositing said envelopes in the United States mail, at Pierre, South Dakota, on this CP day of February, 2001:

Leo Holzbauer
RR 1, Box 170
Wagner, SD 57380-9681

Rodney Freeman, Jr.
P.O. Box 176
Huron, SD 57350-0176

Bernita Loucks
219 42nd Street
Rapid City, SD 57702-0240

Marian Gunderson
811 W. 3rd
Yankton, SD 57078-3702

Dwayne Rollag
320 Lincoln Lane S.
Brookings, SD 57785

Francis E. Brink
1214 S. Wells Street
Aberdeen, SD 57401-7351

James Reed
20780 132nd Avenue
Sturgis, SD 57785

John Bruch
HC 77, Box 36
Sturgis, SD 57785

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

by hand delivery upon:

Diane Best, Assistant Attorney General
Office of Attorney General
Capitol Building
500 East Capitol Avenue
Pierre, SD 57501-5070

and by interoffice mail upon:

Eric Gronlund, Natural Resource Engineer
Department of Environment and
Natural Resources
Foss Building
523 E. Capitol Avenue
Pierre, SD 57501-3182

Garland Erbele
Water Rights Program
Department of Environment and
Natural Resources
523 East Capitol Avenue
Pierre, SD 57501-3182

John Kirk
SD Game, Fish and Parks
523 E. Capitol Avenue
Pierre, SD 57501-3182



John P. Guhin
Deputy Attorney General
500 East Capitol Avenue
Pierre, South Dakota 57501-5070
Telephone: (605) 773-3215



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

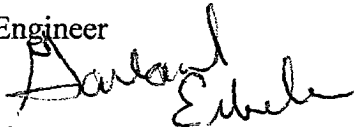
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

March 26, 2001

NOTICE

TO: John Kirk
SD Dept. of Game, Fish and Parks
523 E. Capitol Ave.
Pierre, SD 57501-3182

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

FROM: Garland Erbele, Chief Engineer
Water Rights Program 

SUBJECT: Adoption of Findings of Fact, Conclusions of Law and Final Decision

This is to notify you that the Final Decision, including Findings of Fact and Conclusions of Law, were adopted March 7, 2001, by the Water Management Board approving Water Right Permit Application No. 6213-3 filed by SD Department of Game, Fish and Parks. A copy of the signed Findings of Fact, Conclusions of Law and Final Decision is enclosed.

South Dakota statutes provide that decisions of the Board may be appealed to the Courts. Notice of appeal of the Board's decision must be filed within thirty days of this notice and be in accordance with procedures established in SDCL 1-26-31.

Enclosure

c: John Guhin, Deputy Attorney General
Diane Best, Assistant Attorney General
Leslie Petersen, G,F&P
Paul Coughlin, G,F&P

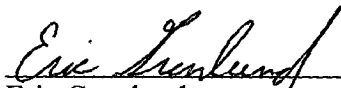
CERTIFICATION

I hereby certify that on March 26, 2001 , I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated March 26, 2001 regarding Notice of Adoption of Findings of Fact, Conclusions of Law and Final Decision addressed as stated below:

Richard Moe
RR 1 Box 84
Colman, SD 57017-9755

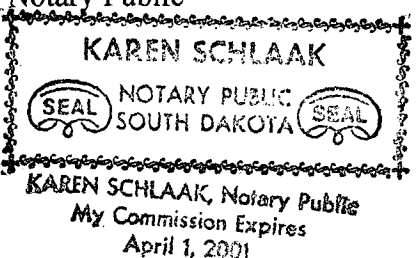
A copy of the above described Notice was sent Inter-office to:

Diane Best, Assistant Attorney General, Capitol Building
John Kirk, Game Fish & Parks, Foss Building
John Guhin, Deputy Attorney General, Capitol Building
Leslie Petersen, Game Fish & Parks, Foss Building
Paul Coughlin, Game Fish & Parks, Foss Building


Eric Gronlund
Natural Resource Engineer
Water Rights

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 27th day of March, 2001.


Karen Schlaak
Notary Public


STATE OF SOUTH DAKOTA

BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF THE APPLICATION)	FINDINGS OF FACT,
FOR WATER PERMIT NO. 6213-3,)	CONCLUSIONS OF LAW, AND
SOUTH DAKOTA DEPARTMENT OF)	FINAL DECISION
GAME, FISH AND PARKS)	

FINDINGS OF FACT

1. This is an application by South Dakota Game, Fish, and Parks to authorize a dam with a storage capacity of 158.5 acre feet of water and for sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean sea level. The Department proposes to utilize run-off by reconstructing a horseshoe-shaped embankment to create a large wetland. Water is proposed to be used for fish and wildlife production.

2. This project is known as the Wentworth Game Production Area Project and was designed by Ducks Unlimited Inc. The project is located in Lake County.

3. The proposed embankment will be six feet high with a normal storage capacity of 158.5 acre feet with a reservoir level at the spillway elevation. The maximum storage capacity is 407 acre feet with the reservoir level at the top of the dam elevation. Because of the small size of the embankment it is not considered to be a dam and is not subject to the Safety of Dams rules found at ARSD 74:02:08. Nonetheless, the minimum requirements for a small size, low hazard dam are met.

4. The need for water in the area arises from its physical characteristics. During each spring there is a rush of water which accumulates in multiple areas in the proposed project area.

The accumulation of water causes numerous breeding waterfowl to be attracted. The waterfowl enter the area and initiate nesting. Because of the topography of the area and ditching through the area, the water which accumulates in the area then drains out. This leaves the birds in the ditch area without any water. The proposed project intends to hold water behind the embankment through late summer to allow the birds to fledge.

5. Although the drainage area for the dam is substantial - 858 acres or 1.34 square miles - the expected annual yield is small. The annual yield for the drainage area above the dam with an eighty percent occurrence is only 14 acre feet. The annual yield with a fifty percent chance of occurrence is 36 acre feet. The annual yield with a ten percent chance of occurrence is 165 acre feet. Although the amount of water available to the project is therefore minimal, there is nonetheless a reasonable probability that there is unappropriated water available for the applicant's proposed fish and wildlife uses as described above.

6. The Opponent to the project argues, in effect, that the project should not be approved because it cannot be developed without unlawful impairment of his existing rights and because it is not in the public interest. The Opponent argues, more specifically, that the construction of the project will store additional water and the storage of that water may lead to lateral seepage onto his nearby property.

7. The Board finds that lateral seepage onto Opponent's property is unlikely and the thesis that such would occur is not supported by the facts. First, six soil borings into the area

show three of fat clay and three of sandy lean clay. Fat clay can be characterized as a tight soil which can be packed down so that water will not flow through it. Sandy lean clay is described as soil which is somewhat less dense than fat clay, in that it contains some organic material. However, it is also a fairly tight soil. This factor makes lateral seepage unlikely.

8. Moreover, lateral seepage is unlikely because of the small amounts of water involved in the project. The evidence indicates that, while the maximum surface area of the project would be 78 acres, water will be only from two to three feet deep. There is no evidence in the record that lateral seepage would occur given the soil types described above, and the minimal amount of water at issue.

9. The Opponent to the project also is concerned that Game, Fish, and Parks will utilize or improve existing tiling into the area to increase the amount of water flowing onto to its property. The Board rejects the thesis that tiling found on Game, Fish, and Parks property will have a significant impact. First, there is minimal evidence of tiling on Game, Fish, and Parks property in any event. Second, the Board finds that the tiling in the area surrounding the Game, Fish, and Parks property appears to be inoperative and has not been maintained. Third, the long-term policy of Game, Fish, and Parks has not been to use tiling in any event.

10. The Opponents more general concern regarding flow onto his property through a ditch is likewise not credited. First, the project does not contemplate, in any way, dealing with any

existing ditching system. Second, the Game, Fish, and Parks project does not affect flows that come from the west to the north; all of this water will simply flow right by the project.

11. Finally, the Opponent to the project argues that the project may, somehow, contribute to the deterioration of the property in the area and would create wetlands. Opponent asserts that the area does not historically have wetland characteristics. As noted, the Board finds that the project will not harm Opponent. The Board also finds, however, that in 1917 and 1918, landowners requested the drainage of 1500 to 2000 acres of land. The area apparently had some wetland characteristics at that time. Moreover, the soils in the area are hydric soils characteristic of drained wetlands. It is also notable that both the NRCS Wetland Mapping and the National Wetland Inventory Mapping show that the area involved is in fact a wetland.

12. The Board finds that the project will have little, if any, hydrologic impact on the area and will not, in any event, harm the property of the Opponent.

CONCLUSIONS OF LAW

1. The Board has jurisdiction of this matter.
2. The Board concludes that there is a reasonable probability that unappropriated water is available for the proposed fish and wildlife uses.
3. The Board concludes that the proposed diversion can be developed without unlawful impairment of existing rights. As noted above, the Board rejects the contention that the project is

likely to cause any lateral movement of water or to cause flooding onto the Opponents land.

4. The proposed use is for fish and wildlife purposes is a beneficial use in that it will sustain populations of waterfowl which, in prior years, nested in the area only to have the available water drained from it.

5. The proposal is in the public interest as qualified below.

FINAL DECISION

The Application of Water Permit No. 6213-3, South Dakota Game, Fish, and Parks is granted with the following qualifications:

1. Water Permit No. 6213-3 authorizes a dam with a storage capacity of 158.5 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean seal level.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

Dated this 20th day of ^{March}~~February~~, 2001, at Pierre, South Dakota.

BY THE BOARD:


Chairman



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

MAY 09 2001

John Kirk
SD Dept. of Game, Fish & Parks
523 E. Capitol Ave.
Pierre, SD 57501

Dear Mr. Kirk:

Enclosed is Water Permit No. 6213-3 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

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

Date 12-11-01

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

FROM: South Dakota Department of Game, Fish & Parks
(name)
523 E. Capitol
(address)
Pierre, SD 57501 (city, state, zip) (605) 773-3381 (phone)

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

Water Permit No. 6213-3 states that the water use system is to be constructed by March 7, 2006 , and water is to be put to beneficial use by March 7, 2010 .
(date) (date)

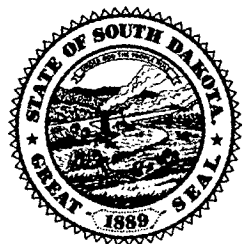
The water use system was completed on October 29, 2001 .
(date)

Applying the water to beneficial use was completed on October 29, 2001 .
(date)

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

[Signature]
(signature)

7-98



Permit No. 6213-3
Sioux 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, **May 28, 2002**, made a thorough examination of the water use system constructed by **SD Department of Game, Fish and Parks** of **523 E. Capitol, Pierre, SD 57501** holder of Permit No. **6213-3**, bearing the priority of **June 9, 2000** authorizing the storage of **158.5** acre-feet of the waters of **runoff** for **recreation and fish & wildlife propagation** purposes, in **Lake** County.

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

A. Works used to divert the water:

A horseshoe-shaped embankment 6 feet high & 5539 feet long with a 48" Riser w/ 36" barrel as the primary spillway that stores 158.5 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 horseshoe-shaped embankment 6 feet high & 5539 feet long with a 48" Riser w/ 36" barrel as the primary spillway that stores 158.5 acre-feet of water.

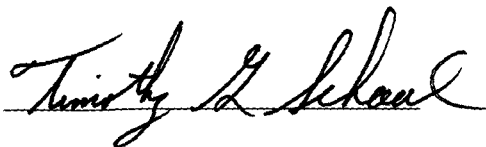
The system is in the following condition **good**. The point of diversion is located **N 1/2 NE 1/4 Sec. 13-T106N-R51W**. The works are capable of storing **158.5** acre-feet of water which is to be used for **recreation and fish & wildlife propagation**. Water has been put to beneficial use to the maximum extent as follows:

A horseshoe-shaped embankment 6 feet high & 5539 feet long with a 48" Riser w/ 36" barrel as the primary spillway that stores 158.5 acre-feet of water.

and the license should be issued for **158.5** acre-feet of storage.

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

Exceptions to compliance are: **none** Date Report Completed: **August 8, 2002**



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

REPORT ON INSPECTION OF PERMIT NO. 6213-3

Other permit(s) associated with the project: XXXX

DATE OF INSPECTION: May 28, 2002

NAME & ADDRESS OF PERMIT HOLDER: South Dakota Department of Game, Fish and Parks,
523 E. Capitol, Pierre, SD 57501.

DIVERSION POINT LEGAL LOCATION: N 1/2 NE 1/4 Sec. 13-T106N-R51W.

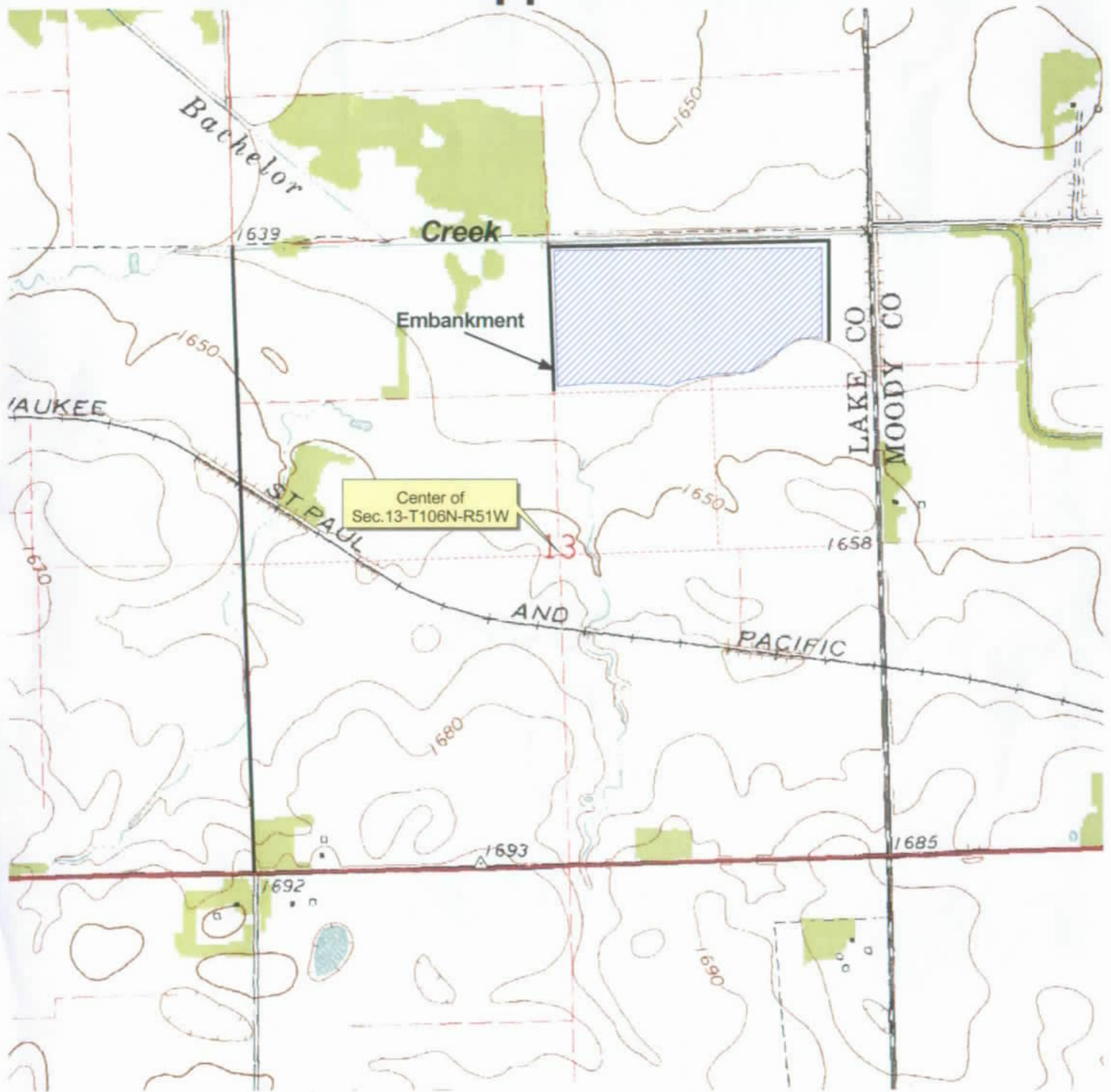
DAM INFORMATION:

- 1) Height to crest 6 feet
- 2) Height to primary spillway 3 feet
- 3) Height to secondary spillway XXX feet
- 4) Crest width 12 feet
- 5) Crest length 5539 feet
- 6) Spillway length XXX feet
- 7) Spillway width 48" Riser w/ 36" barrel
- 8) Approx. storage (Normal) 158.5 acre-feet
- 9) Approx. storage (Maximum) 407 acre-feet
- 10) Date constructed: October 29, 2001

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. 6213-3



0.5 0 0.5 1 Miles

South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow ... Today



Timothy G. Schaal
Timothy G. Schaal, P.E. 8/8/02
Natural Resources Engineer Specialist
Water Rights Program

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 6213-3

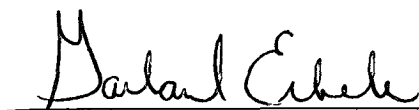
(1) The South Dakota Department of Game, Fish & Parks, 523 E Capitol, Pierre, SD 57501 made Application No. 6213-3, June 9, 2000 for a water permit to impound 158.5 acre feet of water from runoff, Lake County, South Dakota for fish and wildlife propagation and recreational purposes. Permit No. 6213-3, with a priority date of June 9, 2000 was approved March 7, 2001 and issued to the applicant authorizing impoundment of water with construction of the described storage dam to be completed on or before March 7, 2006 and for the application to beneficial use of said water on or before March 7, 2010.

The permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on December 11, 2001. The "*Notice*" indicated the structure was completed and water placed to beneficial use on October 29, 2001.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the storage dam with a storage capacity of 158.5 acre feet of water and is entitled to store sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean sea level for beneficial use. The location of the horseshoe-shaped embankment is in the N ½ NE ¼ Section 13, T106N, R51W.

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial at the Wentworth Game Production Area.

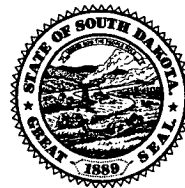
(4) Pursuant to South Dakota Water Law 46-5-30.1 the South Dakota Department of Game, Fish & Parks, 523 E Capitol, Pierre, SD 57501 the holder and/or owner of Water Right No. 6213-3 is issued a license to impound 158.5 acre feet of runoff water with sufficient water annually to maintain the water level to the outlet elevation of 1642.0 feet mean sea level, from the location specified in (2) of this license. The water right carries a priority date of June 9, 2000 and is for the purpose of fish & wildlife propagation and recreational use. This license is subject to any limitations or qualifications listed in Water Right No. 6213-3 and subject to South Dakota State Law.



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

SEP 17 2002

date





SEP 17 2002

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

6213-3

John Kirk
SD Dept of Game, Fish & Parks
523 E Capitol
Pierre, SD 57501

Dear Mr. Kirk:

Enclosed is Water License No. 6213-3. No. 6213-3 pertains to the Wentworth Game Production Area in Lake County. This is the final document which completes the 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,

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

enclosures

Water Rights Division -DENR
Conversation or File Documentation

NAME OF PERSON OR FILE: SD Dept. of Game, Fish & Parks

ADDRESS: XXXXXXXXXXXXXX

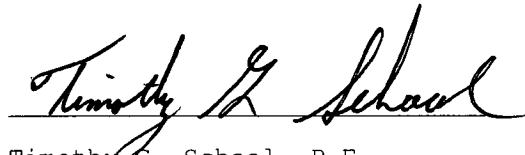
COUNTY: Lake

DATE: October 4, 2002

TELEPHONE: XXXXXXX

RE: Richard Moe complaint

On October 2, 2002, I visited with Mr. Richard Moe who had called in and asked me to stop and look at the project authorized by Water Permit No. 6213-3. I told him I saw the project in May for licensing purposes, but we looked at the project and the drainage ditch in several places. The project looked good and was dry on October 2, 2001. The ditch was plugged in several places with debris and trees and there were at least 3 small beaver dams on the ditch between Mr. Moe's property and where the ditch entered Bachelor Creek. Mr. Moe's main concern was the Bachelor Creek Ditch (or as he called it the Lake-Moody County Ditch) and its general state of disrepair. I told him the ditch was a County Commissioners matter and he should discuss it with them again. I think I got him convinced that the DU/GF&P project was not going to affect him and when he discussed matters with the County to only discuss the drainage ditch.

A handwritten signature in cursive script, reading "Timothy G. Schaal", written over a horizontal line.

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 2, 2000

NOTICE

TO: John Kirk
SD Department of Game, Fish and Parks
523 E. Capitol Ave.
Pierre, SD 57501

Richard Moe
RR 1, Box 84
Colman, SD 57017-9755

FROM: Garland Erbele, Chief Engineer
Water Rights Program *Garland Erbele*

SUBJECT: Notice of Hearing on Contested Water Permit Application No. 6213-3, South Dakota
Department of Game, Fish and Parks

A petition to Application No. 6213-3 has been filed in response to the Notice of Application to appropriate water published July 13 and 20, 2000, in the Madison Daily Leader.

As specified in the publication notice, Application No. 6213-3 proposes to impound 158.5 acre-feet of water from runoff by constructing a dam located in the N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 13 with water impounded in the NE $\frac{1}{4}$ Section 13; all in T106N-R51W. This application requests impoundment of sufficient water to maintain water at the outlet elevation of 1642.0 feet mean sea level and is to be used to provide habitat for fish and wildlife propagation and recreational use.

The Water Management Board will conduct a hearing to consider Application No. 6213-3 at 8:30 am, on September 28, 2000, in the Angostura Room, Radisson Hotel, 445 Mt. Rushmore Road, Rapid City, SD. Pursuant to SDCL 46-2-9, 46-2-11, and 46-2A-23, the Board has legal authority and jurisdiction to conduct this hearing. The agenda time is an estimate and may be delayed due to prior agenda items.

As the Board meeting approaches, changes in agenda times may need to be made. Future notice will be provided to all parties if there is a change in the hearing time.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6213-3 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. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the evidence presented at the public hearing.

The September 28, 2000, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by September 18, 2000.

This hearing is an adversary proceeding. Any party of record and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Notice is further given to persons with disabilities that this hearing is being held in a physically accessible place and that interpreter services will be provided, upon request, during the hearing. Please notify Eric Gronlund at (605) 773-3352 by September 18, 2000, if you have any questions about the hearing process or have special needs for which the department will make arrangements.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-23; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

c: Diane Best, Assistant Attorney General

from the Prairie Pothole Joint Venture



9-13-00

TIM -

HERE IS THE LATEST
SET OF PROTECT PLANS FOR
GFP'S WETLAND DEVELOPMENT
IN LAKE CO.

THIS SET OF PLANS
INCLUDES LOCATIONS OF SOIL
BORINGS AND SOIL TESTING
RESULTS.

LET ME KNOW IF YOU
HAVE ANY QUESTIONS.

PAUL COUGHLIN
3658



DUCKS
UNLIMITED
INC.

**DUCKS UNLIMITED, INC.
GREAT PLAINS REGIONAL OFFICE**

3502 Franklin Avenue
Bismarck, North Dakota 58501-0761
(701) 258-5599
(701) 258-8364 Fax

September 7, 2000

Paul Coughlin
South Dakota Dept. of Game, Fish & Parks
523 East Capitol Avenue - Foss Building
Pierre, SD 57501-3182

Dear Paul,

Enclosed are two copies of the plans for the proposed Wentworth GPA project. The soils information has been added to sheet 6 and the borrow areas are shown on sheet 2. You may want to deliver the second set of plans to DENR.

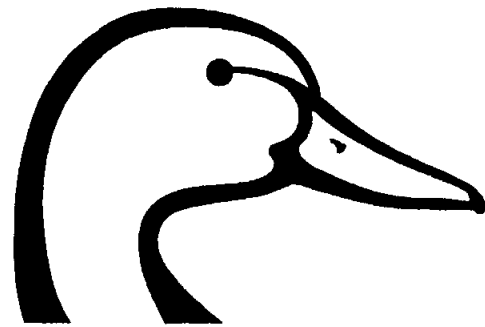
Note the location of the soil borings are shown on sheet 2, identified as BH-1 through BH-6. All borings were hand augers to the depths shown. The material was classified by Midwest Testing Laboratory. Based on the material found and the topography of the basin, it appears any subsurface flow would be in the north-northwest direction toward Bachelor Creek. If necessary, the borrow ditch for the east embankment could be located on the east side of the embankment, which would serve to intercept any seepage paths. However, borings BH-1 and BH-2 did **not** reveal any reason for seepage concerns in that area.

A complete copy of the soils results from Midwest Testing is also enclosed. If you or the DENR engineer have any questions or need additional information, please give me a call. Thanks, Paul.

Sincerely,

Doug Lipetzky, P.E.
Regional Engineer

Encl.



DUCKS UNLIMITED

SPECIFICATIONS

GENERAL CONDITIONS	101
MOBILIZATION	201
SITE PREPARATION	202
EXCAVATION	203
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WATER CONTROL	
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WATER CONTROL STRUCTURE	
& CULVERT APPURTENANCES	206A
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MUSKRAT WIRE PLACEMENT	504

PLAN INDEX

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PROJECT TOPOGRAPHY	2
EMBANKMENT PROFILE & SECTIONS	3
STRUCTURE PLAN & PROFILE	4
STRUCTURE DETAILS	5
SOILS INFORMATION	6

QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION	3,965 C.Y.-P
EXCAVATION (INLET & STRUCTURE CHANNELS)	148 C.Y.-S
EMBANKMENT	27,068 C.Y.-S
WATER	27 M-GAL.
WATER CONTROL	
STRUCTURE "INSTALLATION"	
48"Ø FULL-ROUND CMP RISER	1 L.S.
APPURTENANCES	1 INC.
CULVERT "INSTALLATION"	
36"Ø CMP	42 L.F.
18"Ø CMP	10 L.F.
RIPRAP (CLASS II)	24 C.Y.-P
MUSKRAT WIRE	1,410 S.F.-P

STRUCTURE NOTE:
DUCKS UNLIMITED HAS PREVIOUSLY PURCHASED THE WATER CONTROL STRUCTURE & CULVERTS. SUCH MATERIAL IS LOCATED AT WAUBAY NATIONAL WILDLIFE REFUGE HEADQUARTERS NORTH OF WAUBAY, SD. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THE STRUCTURE & CULVERTS FROM WAUBAY NWR TO THE PROJECT SITE. CONTRACTOR'S UNIT BID PRICE FOR "WATER CONTROL STRUCTURE INSTALLATION" & "CULVERT INSTALLATION" SHOULD INCLUDE THE COST OF TRANSPORTING THE STRUCTURE TO THE PROJECT SITE AND THE COST OF INSTALLATION. ANY ADDITIONAL MATERIALS REQUIRED FOR INSTALLATION BUT NOT PROVIDED BY DU WILL BE CONSIDERED EXTRA COSTS & PAID FOR AS SUCH.

PAYMENT NOTE:
THE STAKED QUANTITY (CY-S) LISTED IS AN ESTIMATED QUANTITY FOR DESIGN & BIDDING PURPOSES. THE FINAL AS-STAKED QUANTITY DERIVED FROM THE CONSTRUCTION STAKING DATA WILL ESTABLISH THE QUANTITY FOR FINAL PAYMENT. THE PLAN QUANTITY (CY-P) LISTED IS THE QUANTITY FOR WHICH PAYMENT WILL BE MADE FOR THAT PARTICULAR ITEM.

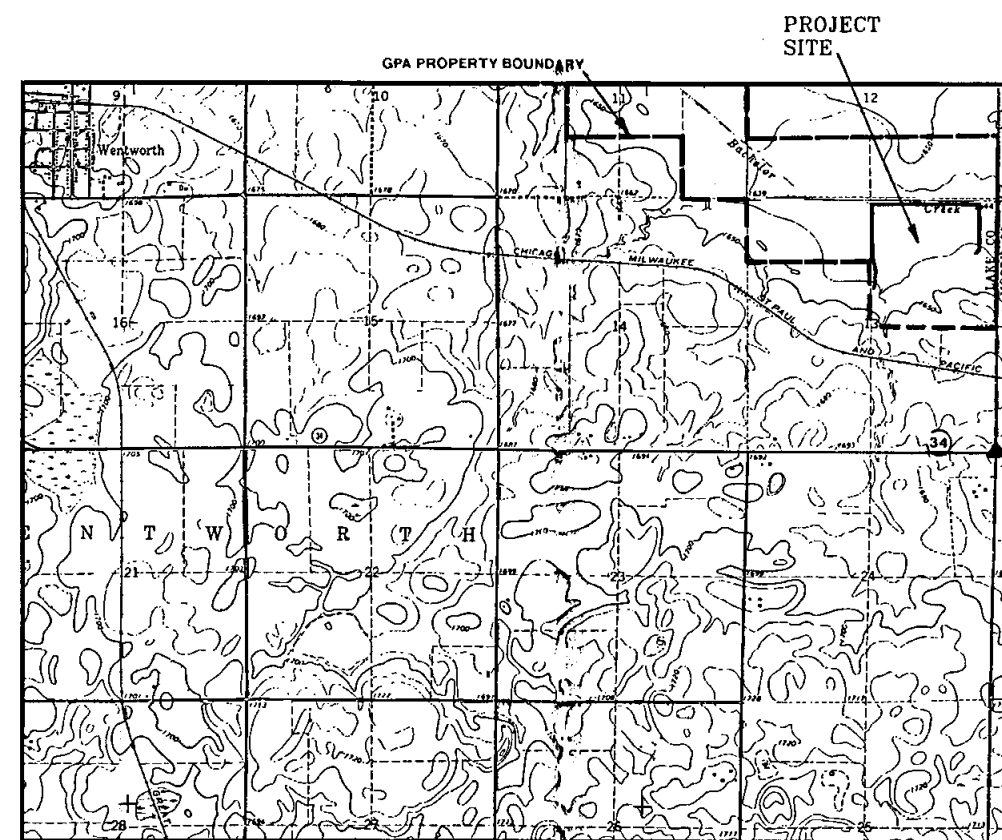
DUCKS UNLIMITED

PROJECT

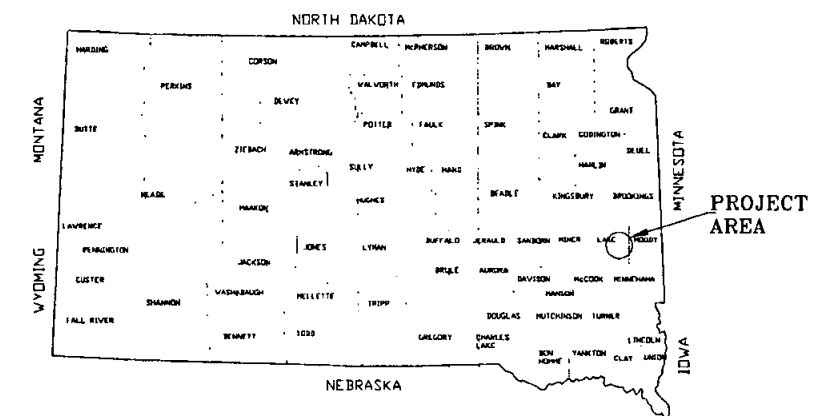
WENTWORTH GPA
SECTION 13, T106N, R51W,
LAKE COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

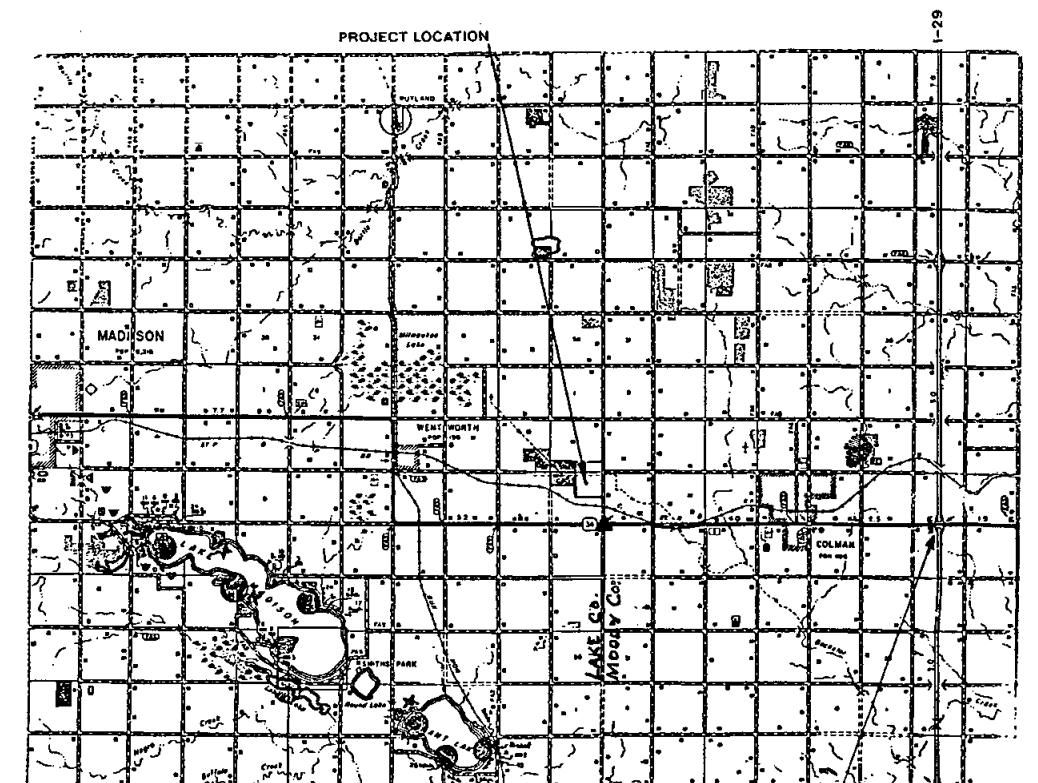
SOUTH DAKOTA DEPT. OF
GAME, FISH & PARKS



VICINITY MAP



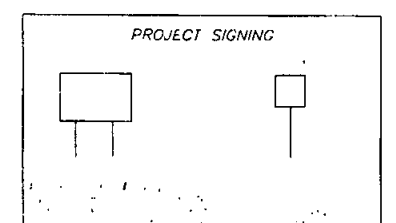
SOUTH DAKOTA



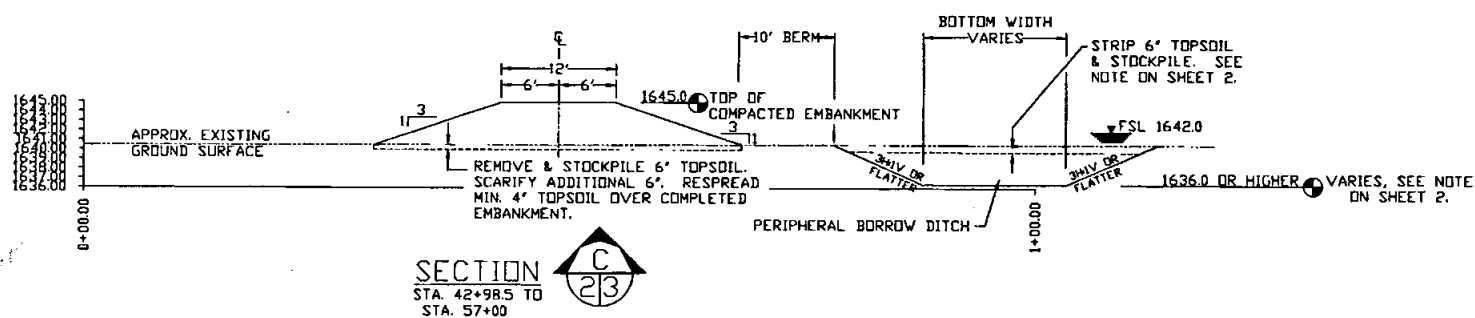
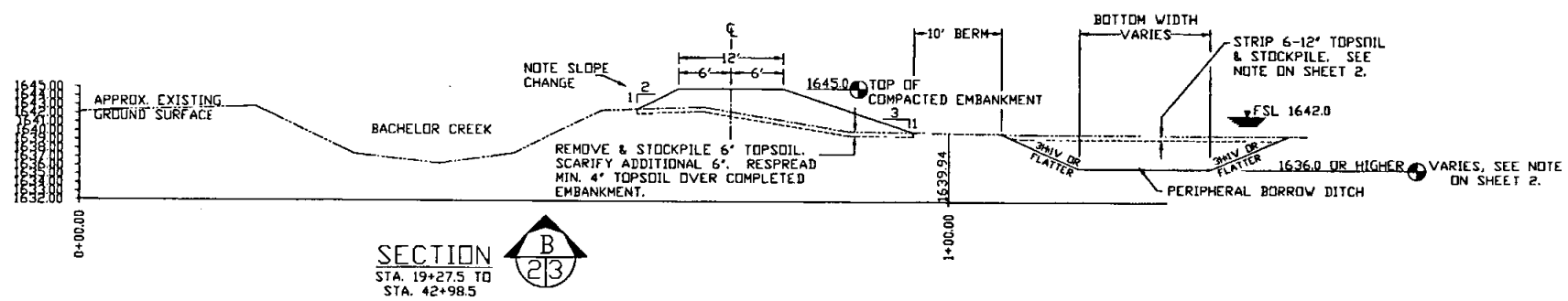
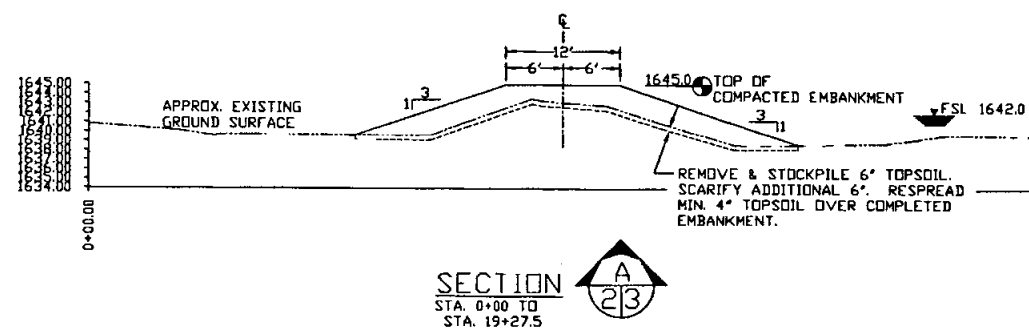
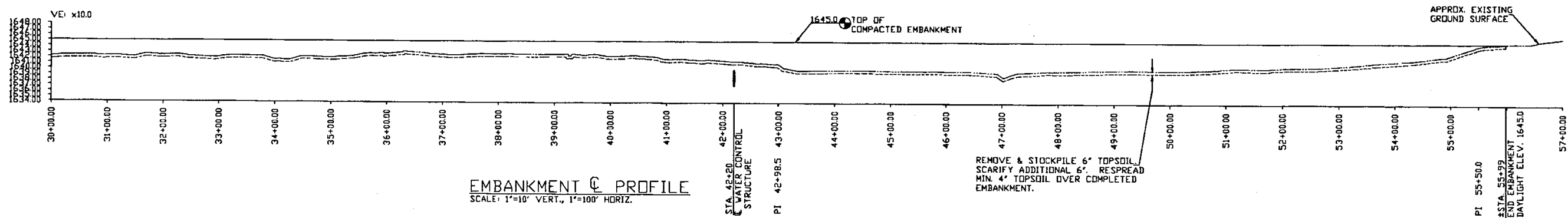
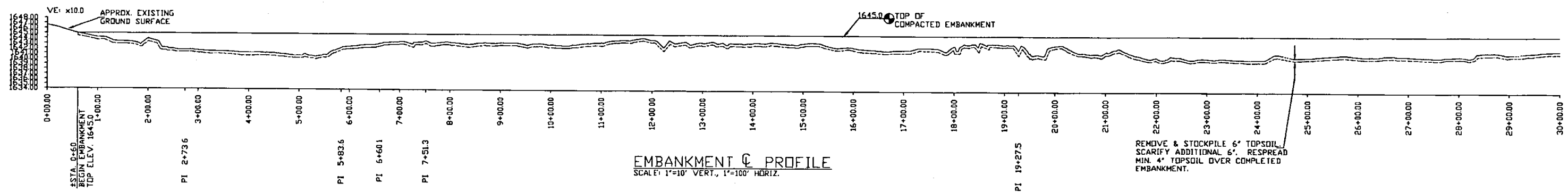
LAKE COUNTY

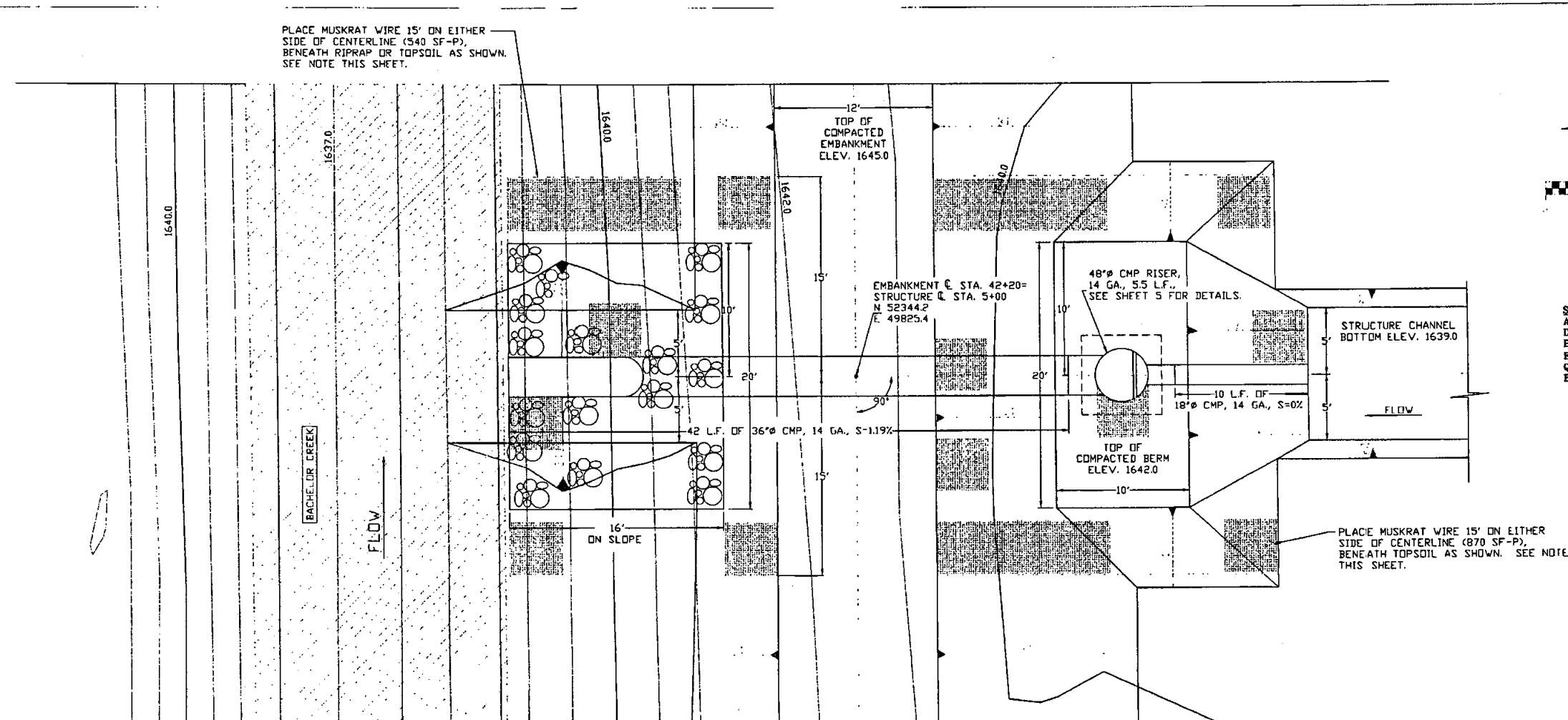
MAP POINT 1 IS 6.5 MILES WEST ON HWY. 34 OF I-29 EXIT 109

AGENCY CONTACT:
PAUL COUGHLIN
SD GAME, FISH & PARKS
605/ 773-3658



REV. 01 ADDED SOILS INFORMATION & BORROW AREAS DJL 8/1/00	
DUCKS UNLIMITED INC.	
PROJECT NO. SD-0160-002	
WENTWORTH GPA	
VICINITY MAP	
DATE: 1-25-00	
SHEET NO. 1 OF 6	
APPROVED BY: [Signature]	
CHECKED BY: B.R.K.	

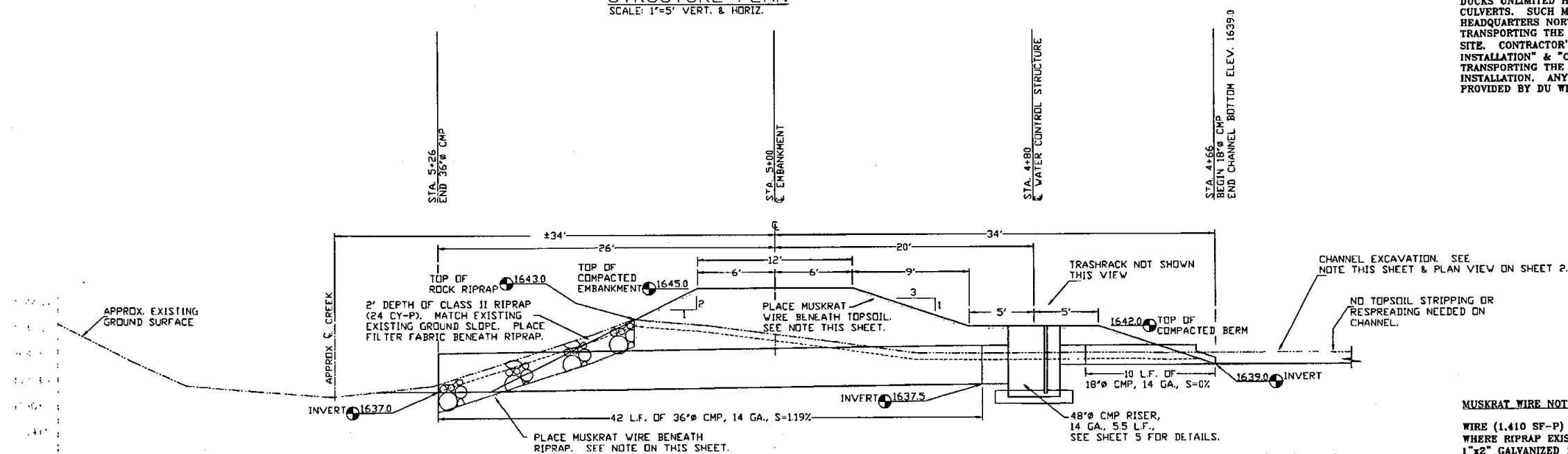




STRUCTURE CHANNEL NOTE:
AS SHOWN ON SHEET 2, A CHANNEL SHALL BE EXCAVATED TO ASSIST IN DEWATERING THE BASIN WHEN REQUIRED. THE CHANNEL BOTTOM ELEVATION SHALL BE 1639.0 WITH SIDESLOPES AT 2H:1V OR FLATTER. THE STRUCTURE CHANNEL EXCAVATION QUANTITY (108 CY-P) IS INCLUDED IN THE TOTAL "EXCAVATION" PAY QUANTITY SHOWN ON SHEET 1. EXCAVATED MATERIAL SHALL BE WASTED ON THE EMBANKMENT TOE AS DIRECTED BY THE DU FIELD ENGINEER.

**WATER CONTROL
STRUCTURE PLAN**
SCALE: 1"=5' VERT. & HORIZ.

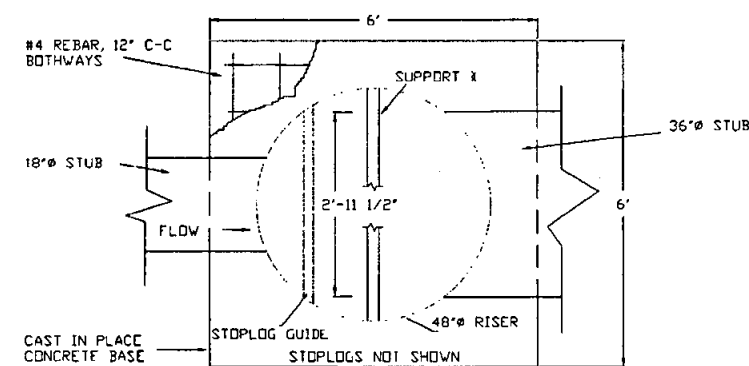
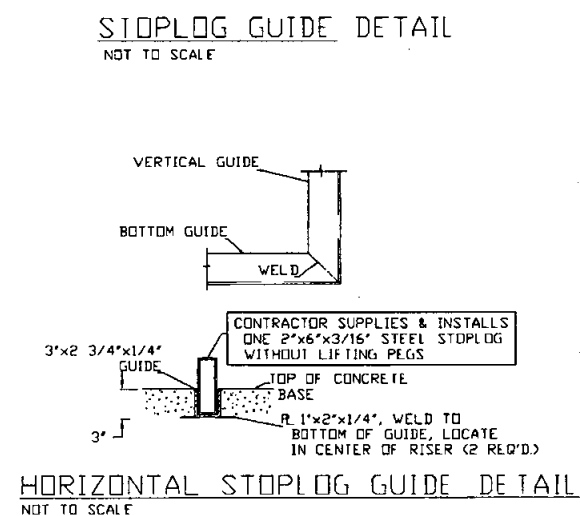
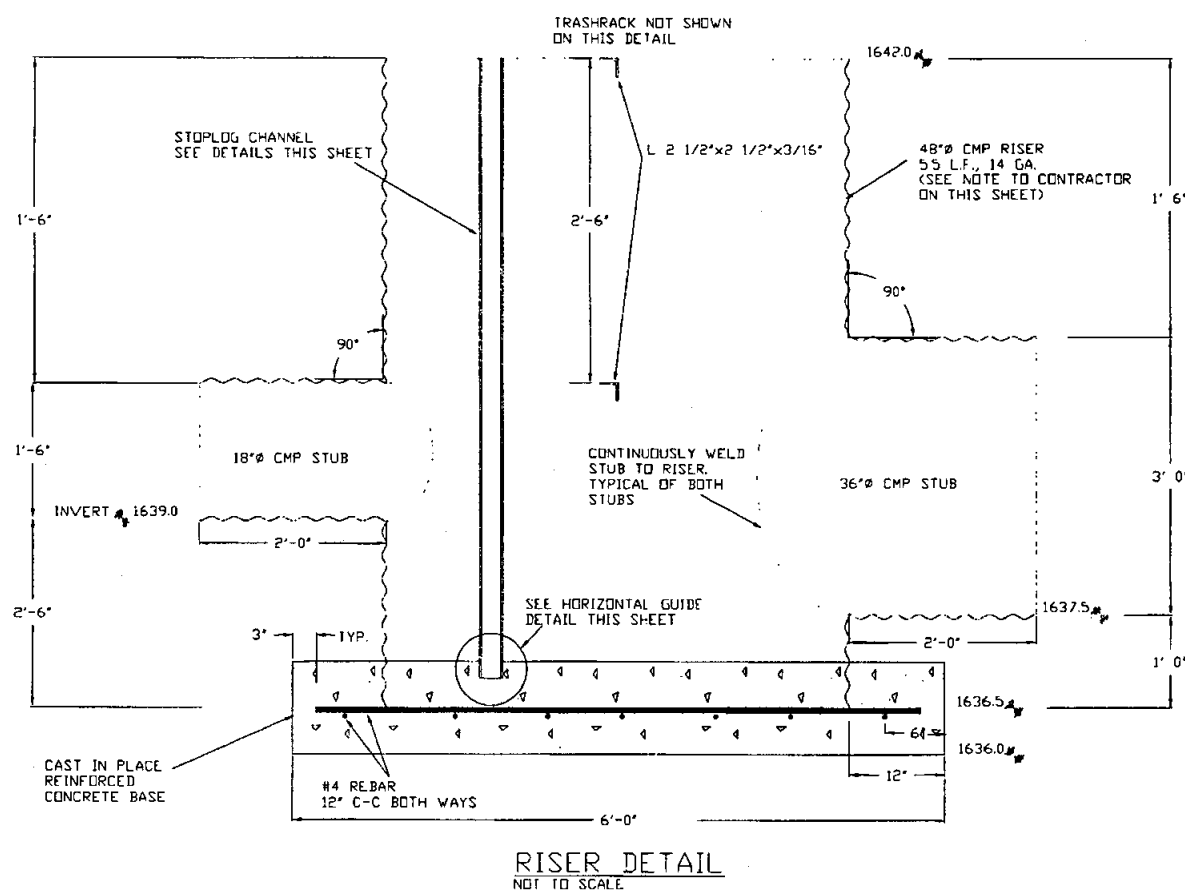
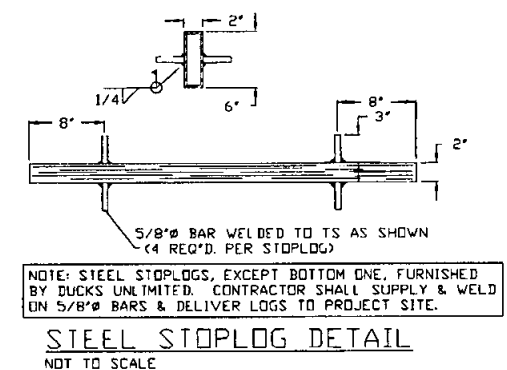
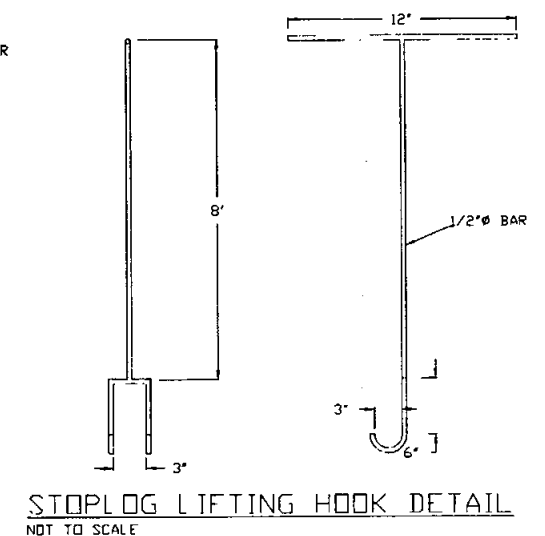
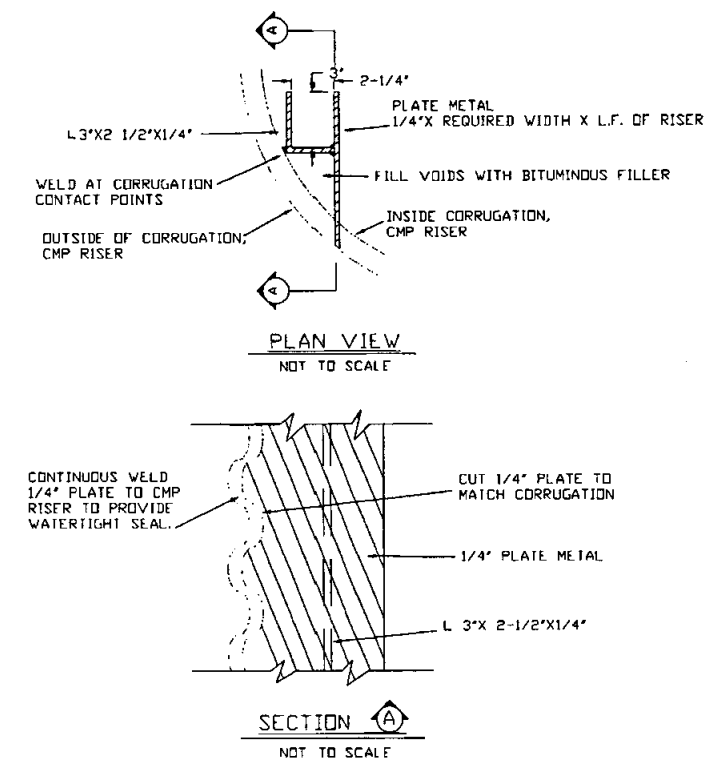
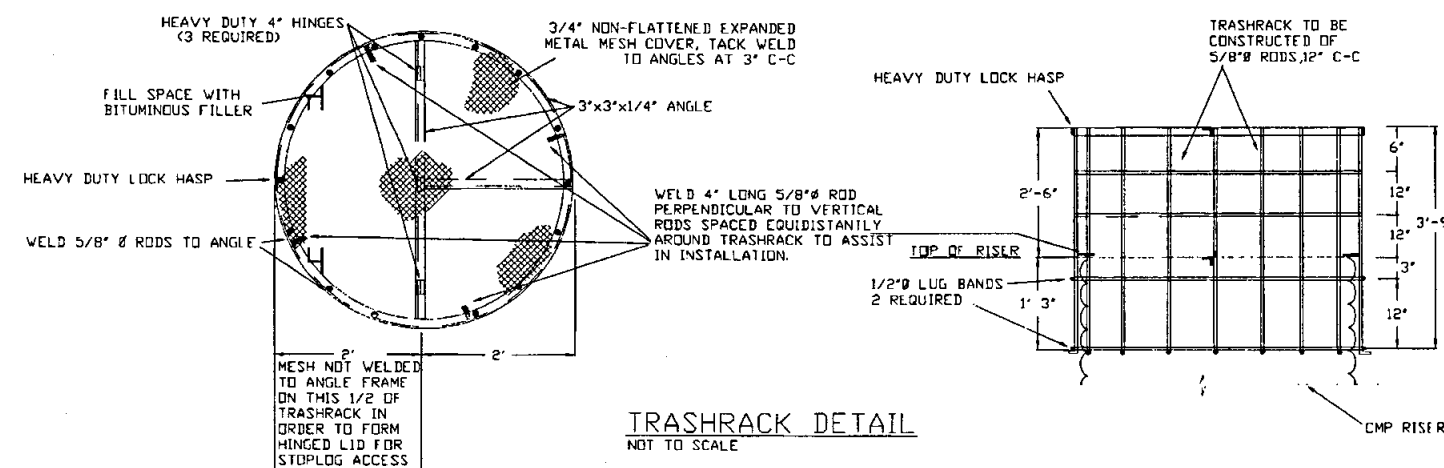
STRUCTURE NOTE:
DUCKS UNLIMITED HAS PREVIOUSLY PURCHASED THE WATER CONTROL STRUCTURE & CULVERTS. SUCH MATERIAL IS LOCATED AT WAUBAY NATIONAL WILDLIFE REFUGE HEADQUARTERS NORTH OF WAUBAY, SD. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THE STRUCTURE & CULVERTS FROM WAUBAY NWR TO THE PROJECT SITE. CONTRACTOR'S UNIT BID PRICE FOR "WATER CONTROL STRUCTURE INSTALLATION" & "CULVERT INSTALLATION" SHOULD INCLUDE THE COST OF TRANSPORTING THE STRUCTURE TO THE PROJECT SITE AND THE COST OF INSTALLATION. ANY ADDITIONAL MATERIALS REQUIRED FOR INSTALLATION BUT NOT PROVIDED BY DU WILL BE CONSIDERED EXTRA COSTS & PAID FOR AS SUCH.



MUSKRAT WIRE NOTE:
WIRE (1,410 SF-P) SHALL BE PLACED UNDER TOPSOIL (OR UNDER FILTER FABRIC WHERE RIPRAP EXISTS) IN AREAS SPECIFIED. WIRE SHALL BE RED BRAND WELDED 1"x2" GALVANIZED 14 GA., MANUFACTURED BY KEYSTONE STEEL AND WIRE CO. OR APPROVED EQUAL. SECURE WIRE TO GROUND WITH HEAVY DUTY U-STAPLES, 10 GA. 12"x1" OR METAL STAKES WITH WASHERS. OVERLAP SEAMS 2". COST OF MATERIALS AND PLACEMENT SHALL BE INCLUDED IN "MUSKRAT WIRE" BID ITEM.

**WATER CONTROL
STRUCTURE & PROFILE**
SCALE: 1"=5' VERT. & HORIZ.

DUCKS UNLIMITED INC.	PROJECT NO. SD-0160 002	DESIGNED BY: D.J.L.
	WENTWORTH GPA	DRAWN BY: K
GREAT PLAINS REGIONAL OFFICE	STRUCTURE PLAN & PROFILE	SURVEYED BY:
DATE: 1-26-00	SHEET NO. 4 OF 6	CHECKED BY: B.R.K.
	APPROVED BY:	APPROVED BY:



NOTE TO CONTRACTOR:
DUCKS UNLIMITED HAS PREVIOUSLY PURCHASED THE WATER CONTROL STRUCTURE & CULVERTS. SUCH MATERIAL IS LOCATED AT WAUBAY NATIONAL WILDLIFE REFUGE HEADQUARTERS NORTH OF WAUBAY, SD. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THE STRUCTURE & CULVERTS FROM WAUBAY NWR TO THE PROJECT SITE. CONTRACTOR'S UNIT BID PRICE FOR "WATER CONTROL STRUCTURE INSTALLATION" & "CULVERT INSTALLATION" SHOULD INCLUDE THE COST OF TRANSPORTING THE STRUCTURE TO THE PROJECT SITE AND THE COST OF INSTALLATION. ANY ADDITIONAL MATERIALS REQUIRED FOR INSTALLATION BUT NOT PROVIDED BY DU WILL BE CONSIDERED EXTRA COSTS & PAID FOR AS SUCH.

6213-3

August 29, 2006

Garland Erbele, Chief Engineer
DENR-Water Rights Program
523 East Capitol Avenue
Pierre, South Dakota 57501-3181

RECEIVED

AUG 31 2006

WATER RIGHTS
PROGRAM

Dear Mr. Erbele:

I am writing in regards to Water Permit Application 6213-3, held by the South Dakota Department of Game, Fish and Parks. The permit was issued for a dam to impound about 160 acre-feet of water in what is known as the Wentworth Game Production Area (WGPA). The WGPA is located adjacent to my property in western Moody County. The permit was issued by the Water Management Board following a hearing on December 6, 2000. At the time, I contested the application, in part because of concern that water impounded by the WGPA would migrate laterally onto my property. The Board concluded at the time that lateral seepage was "unlikely and the thesis that such would occur is not supported by the facts." The dam was built constructed in 2001, and has been operating since that time.

In the years since the WGPA has operated, I have often noticed that water is present both inside and outside impoundment. From what I can tell, the water level is roughly the same. It was my understanding when the dam was built, the structure was intended to hold water that would otherwise have flowed down Bachelor Creek, so the presence of the water outside the structure is troubling.

If my observations are correct, then I believe one of two things is happening. Perhaps local drainage is insufficient to carry away the water that is entering the Bachelor Creek drainage. While this does not necessarily relate directly to the WGPA, it points to other problems in the area. The alternative is that a significant amount of water is seeping through the berms surrounding the WGPA, as had been my original concern. In either case, it would appear that the WGPA may not be functioning in the manner intended and permitted.

I am with this letter requesting that the conditions described above be investigated by your office. The WGPA is operated under a permit granted and held by the State. It therefore seems reasonable for the State to investigate potential problems related to the permit.

If you have any questions about my comments or request, please let me know. Otherwise, I look forward to your response.

Sincerely,



Richard Moe
23446 466th Avenue
Colman, South Dakota 57017
(605) 534-3163



Richard Moe
23446 466th Ave.
Colman, SD 57017

October 17, 2006

6213-3
**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

Dear Mr. Moe:

I am writing in response to your August 29, 2006 letter to Garland Erbele, Chief Engineer, regarding Water Permit Application No. 6213-3, held by the South Dakota Department of Game Fish and Parks for the impoundment at the Wentworth Game Production Area (WGPA); and as a follow up to my site inspection and visit with you on September 18, 2006.

As we discussed during my visit, I do not believe that the WGPA is the cause for your concerns. I tend to agree with the project engineers in their statement that lateral seepage from the WGPA should not be an issue due to the soil conditions at the site and the low head pressures involved. The project will only hold water at a depth of two or three feet.

It seemed to me that your biggest concern was with Bachelor Creek (Lake/Moody County drainage ditch) and its current state of disrepair and mismanagement. On that day water from the drainage ditch was backed up into the west road ditch between the WGPA and your property. We visited several upstream sites where you indicated that additional drainage was being diverted into the ditch and several downstream sites where the flow or drainage of water was being impaired or restricted. We discussed the County drainage laws and how they may or may not apply to this project. On September 26, 2006, Diane Best, with the Attorney General's Office, and I called William Ellingson, the Moody County States Attorney, and discussed your situation. His suggestion would be for you to work at organizing the drainage board or association and work through them at getting the drain operable.

I know this is not really what you wanted to hear, but it seems like the best approach. Remember that there was testimony at the Water Management Board meeting that your land in question was in fact a drained wetland and appears on both the NRCS Wetland Mapping and National Wetland Inventory as such.

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
DENR, Water Rights Program
(605) 773-3352

c: Diane Best, Attorney General's Office
Tim Olson, GF&P

Water Rights Division -DENR
Conversation or File Documentation

NAME OF PERSON OR FILE: Dept. of GF&P

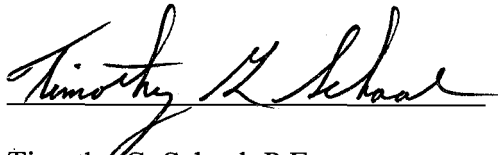
ADDRESS: XXXXXXXXXXXXXX COUNTY: Lake

DATE: November 6, 2006 TELEPHONE: XXXXXXX

RE: Richard Moe letter (Oct. 30, 2006)

I called and talked to Richard Moe this morning (543-3163) about his letter, dated October 30, 2006, concerning the Department of Game, Fish and Parks Water Permit No. 6213-3 for the Wentworth GPA project. Mr. Moe is still concerned about this project and believes that it is causing flooding on his property across the road (NW ¼ Sec. 18-T106N-R50W) due to lateral seepage. He indicated the project was not working correctly since the ponded water was not up to the top of the berm; therefore, some water must be seeping out. I tried to explain to him the project was working as designed with water up to or near the spillway level and would only temporarily be at the top of the berms with a very large runoff event. I talked to him for quite awhile and referenced my letter to him, dated October 17, 2006, where I told him then I did not think the GF&P project was causing him any harm. We ended the conversation with me saying I would talk to GF&P and maybe someone with them would get back to him. I also explained to him that he could bring this matter to the Water Management Board through a Declaratory Ruling request, but he did to sound too eager to do this.

I then talked to Tim Olson from GF&P and he said several staff members were out to the GPA last Friday and they did not see and problems. I also talked to Chad Switzer (353-6699) who was there on Friday, and he said everything look good. The only water outside of the project was in the road ditch and was being backed up by Bachelor Creek/drainage ditch. I suggest that they either call Mr. Moe of maybe we set up a meeting with him on site and go over everything with him one more time. Chad thought that would be a good idea, and was going to get back to me one this suggestion.



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

(1)

Colman, S.D. Dak.
Oct - 30 - 2006

Timothy B. Schaal, P.E.
Natural Resources Engineer
Division of Water Rights
Joe Foss Building
523 East Capitol Ave
Pierre, S.D. 57501

RECEIVED
NOV - 1 2006
WATER RIGHTS
PROGRAM

Dear Mr Schaal:

I am writing in regards to water Permit application 6213-3 held by the South Dakota Department of Game, Fish and Parks

At water Management Board meeting December 6, 2000. Mr Schaal said Mr Moe is concerned that if water is stored at the Wentworth SPA project, water, due to lateral seepage will also be present on Mr Moe's property.

This was a concern of mine when I contested this application Permit No. 6213-3 December 6, 2000 and it still is a issue and concern of mine

(2)

In the years (5) since the Wentworth Game Production Area Dam was built I have often noticed that water is present both inside and outside impoundment.

From what I can tell the water level is pretty much the same inside and outside so the presence of the water outside the structure is troubling.

If my observations are correct I believe there is a significant amount of water seeping through the berms surrounding the WGP A as had been my original concern. If this is the case the WGP A may not be functioning in the manner intended and permitted.

I am with this letter requesting that the conditions described above be investigated by your office. The WGP A is operated under a permit granted and held by the State. It therefore seems reasonable for the State to investigate potential problems related to the permit.

after so many years (5) that WYPA
has been in existence there is evidence
that there is lateral seepage. I would
like to get a commitment from -

"The Natural Resources Engineering Specialists"

Is there or isn't there any
lateral seepage at the Wentworth Game
Production Area?

If you have any questions about my
comments or request, please let me know.
Otherwise I look forward to your response

Sincerely,

Richard Moe

Richard Moe
23446 - 466th Avenue
Colman, S. D. 57017
(605) 534 - 3163



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

November 21, 2006

Richard Moe
23446 466th Ave.
Colman, SD 57017

Dear Mr. Moe:

I am writing in response to your November 13, 2006 letter to me regarding Water Permit Application No. 6213-3, held by the South Dakota Department of Game Fish and Parks for the impoundment at the Wentworth Game Production Area (WGPA) and your concern for lateral seepage/flooding on your property located in the NW ¼ of Sec. 18-T106N-R50W.

I am sorry for the confusion, but as I tried to explain to you in my October 17, 2006 letter and also during my conversation with you on September 18, 2006, "No" I do not believe that the WGPA project is causing any lateral seepage on your property.

Remember, this morning I visited with you and set up a meeting at 2:00 pm on Monday November 27, 2006, to discuss your concerns on this matter with GF&P staff and myself. Again, I do not believe that lateral seepage from the WPGA is an issue with your property.

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

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
DENR, Water Rights Program
(605) 773-3352

c: Diane Best, Attorney General's Office
Tim Olson, GF&P

Colman, So. Dak.
Nov- 13 - 2006

RECEIVED
NOV 16 2006
WATER RIGHTS
PROGRAM

Timothy D. Schaal P.E.,
Natural Resources Engineer
Division of Water Rights
Joe Foss Building
523 East Capitol Ave
Pierre, S.D. 57501

Dear Mr Schaal

I am writing in regards to water Permit application 6213-3 held by the South Dakota Department of Game, Fish and Parks and in response to your letter of Oct-17-2006 and our telephone conversation.

I feel I have expressed myself pretty clearly how I feel about Lateral seepage of water, it is a Big Issue and concern of mine today (2006) as much as it was in Dec 6 - 2000 as my property is below the Wentworth Game and Production Area Project

In the years Wentworth Game Production Area has been operating I feel the project should not have been approved because of the presents of Sand and Gravel in the Soil which causes lateral water seepage and will not hold water.

The "Fact" that there is gravel in the soil makes lateral seepage "Very Likely"

The last 2 years the Colman Township Board and The Moody County Director of Equalization has allowed us a property tax break because My land has become a Wetland due to water seepage and sub surface flooding!!

Refer to:
Findings of Facts - Sheets
Feb 6 - 2001
Paragraph # 6
7
8

In 2001 when Wentworth Home and Production Area Project was being constructed it's a known fact that at the time there was sand and gravel in the borrow ditches for the embankments being built.

With this known fact can I expect a Ruling from the engineers of this project to give Me a ruling "yes" there is or "No" there isn't water seepage or sub surface flooding from Wentworth Home and Production Area since 2001 when WYPA was built

If you have any questions about my comments or request, please let me know Otherwise I look forward to your response

Yours Truly
Richard Moe

Richard Moe
23446 - 466th Ave
Colman, S.D 57017
(605) 534 - 3163

Water Rights Division -DENR
Conversation or File Documentation

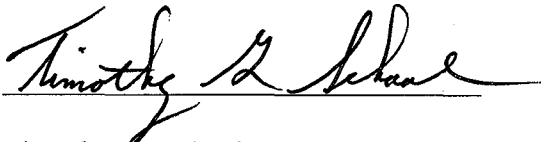
NAME OF PERSON OR FILE: Richard Moe

ADDRESS: 23446 466th Ave. Colman, SD 57017 COUNTY: Moody/Lake

DATE: December 1, 2006 TELEPHONE: XXXXXXX

RE: Complaint regarding GF&P Water Permit No. 6213-3 (Wentworth GPA)

On Monday November 27, 2006 I met with Mr. Moe along with Steve VanderBeek and Rocco Murano from the Dept. of Game, Fish & Parks to discuss Water Permit No. 6213-3. Steve, Rocco and I all agreed, and tried to explain to Mr. Moe, that we did not think the Ducks Unlimited project associated with Water Permit No. 6213-3 was causing seepage/flooding problems on Mr. Moe's property. We discussed everything involved with the project and local area including the soil types, construction process, the weather and local precipitation, Bachelor Creek/drainage ditch, CRP and CRP maintenance, the fact that most of the WGPA and Mr. Moe's property was considered wetland and wetland characteristics. At first, Mr. Moe was a little reluctant to believe us, but I think by the time we left he was a little more understanding and had fewer concerns.



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