

**WATER PERMIT NO. 6148-3**

Name of Applicant: Gary Rausch

Address: 22857 SD Hwy 20, Onaka SD 57466

Phone: 605 447-5882

Amount of Water Claimed: 117 acre-feet

Total Acres: NA

Source of Water Supply: runoff

Water to be used for: fish & wildlife propagation

County: Faulk

Type of Waste Disposal System: NA

Location: 3 miles southeast of Onaka

PRIORITY Date Received: 12-18-1998

Fee: \$150.00

Corrected Application Received: 9-8-1999

Period of Annual Use: January 1 – December 31

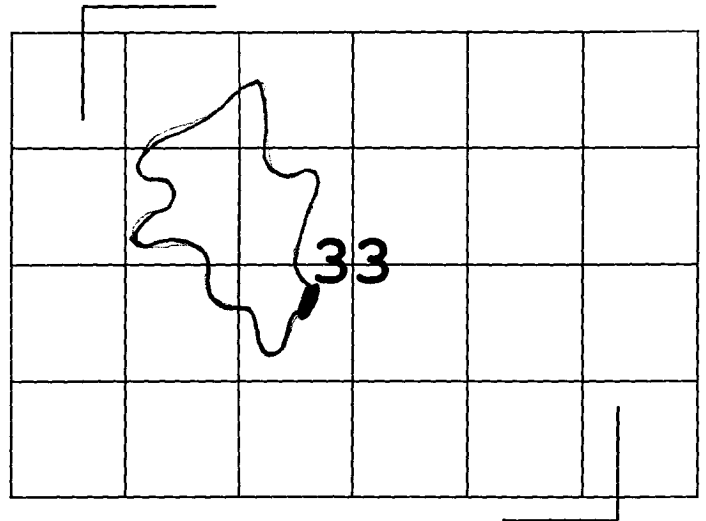
Remarks:

Diversion Point: NE ¼ SW 1/4

Sec 33-T120N-R71W

Water Impounded: NW ¼, N ½ SW ¼

Sec 33-T120N-R71W



Depth of Well: NA

Well Driller:

Remarks:

Type of Map: plat

Prepared by: Dave Konechne

Reviewed and the Number Assigned on: 9-8-1999

By: Karen Schlaak

Notice of Hearing - date to intervene: \_\_\_\_\_

**SOUTH DAKOTA  
WATER PERMIT NO. 6148-3**

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Date of first receipt of application December 18, 1998.

Date of return to applicant for corrections, amendments or changes December 18, 1998.

Date of receipt of corrected application September 8, 1999.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6148-3 to Gary Rausch, 33857 SD Hwy 20, Onaka SD 57466 authorizing the construction of the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 6148-3 authorizes impoundment of 117 acre-feet of water from runoff by constructing a dam located in the NE ¼ SW ¼ Section 33 with water impounded in the NW ¼, N ½ SW ¼ Section 33; all in T120N-R71W. This permit authorizes impoundment of sufficient water to maintain water at the outlet elevation.
2. The water appropriated shall be used for the purpose of supplying water for fish & wildlife propagation and livestock watering purposes and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 6148-3 is October 18, 1999.
5. The date from which applicant may claim right is September 8, 1999.
6. One-fifth of the construction is to be completed on or before April 18, 2001.
7. All construction is to be completed on or before October 18, 2004.
8. Water is to be put to beneficial use on or before October 18, 2008.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

**QUALIFICATIONS**

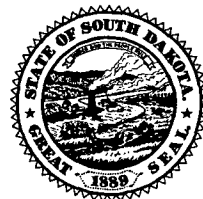
1. Water Permit No. 6148-3 authorizes a dam with storage capacity of 117.0 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

**WATER MANAGEMENT BOARD**

By: John Hatch  
John Hatch, Chief Engineer  
Water Rights Program  
Department of Environment and Natural Resources

NOV 30 1999

date



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

|                                                                                                                    |                                                 |                                                      |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------|
| Mail to:<br>Water Rights Program<br>Joe Foss Building<br>523 E. Capitol<br>Pierre, SD 57501-3181<br>(605) 773-3352 | No. <u>6148-3</u>                               | (office use only)<br>Hydrologic Unit <u>10160007</u> |
|                                                                                                                    | Basin <u>DAMES RIVER</u>                        |                                                      |
|                                                                                                                    | Newspaper <u>FAULK CO. RECORD, FAULKTON, SD</u> |                                                      |
|                                                                                                                    |                                                 |                                                      |



Application For

Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

|                                                            |                                           |                                                     |                                          |
|------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------|------------------------------------------|
| <input type="checkbox"/> Municipal                         | <input type="checkbox"/> Suburban Housing | <input type="checkbox"/> Recreational               | <input type="checkbox"/> Institutional   |
| <input type="checkbox"/> Rural Water System                | <input type="checkbox"/> Commercial       | <input checked="" type="checkbox"/> Fish & Wildlife | <input type="checkbox"/> Geothermal Heat |
| <input checked="" type="checkbox"/> Domestic (over 18 gpm) | <input type="checkbox"/> Industrial       | <input type="checkbox"/> 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 GARY RAUSCH Phone (605)447-5882  
(check one) ☒ Owner ☐ Tenant/lessee  
Mailing Address 33857 SD HWY 20 ONAKA State SD 57466  
(Street, RR. or Box) (Zip Code)

2. Amount of water claimed \_\_\_\_\_ \*CFS or \_\_\_\_\_ \*\*GPM 117 \*\*\*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 RUNOFF TO AN UNNAMED CREEK

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) DUGOUT DAM IN NE 1/4 SW 1/4  
SECTION 33-T120N-R71W  
Water Impounded: NW 1/4, N 1/2 SW 1/4 sec. 33-T120N-R71W  
County FAULK

5. County or counties where water will be used FAULK

6. Annual period during which water is to be used YEAR AROUND 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)

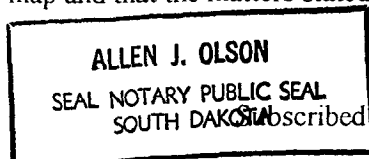
AN EARTHEN EMBANKMENT WILL BE CONSTRUCTED USING THE SPOIL PILE FROM A DUGOUT.

STATE OF SOUTH DAKOTA)

County of Faulk)

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, Gary Rausch, 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 Gary Rausch

Subscribed and sworn to before me this 28 day of October 19 98

Allen J. Olson  
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:

SAND LAKE NWR  
39650 SAND LAKE DRIVE  
COLUMBIA SD 57433-9761

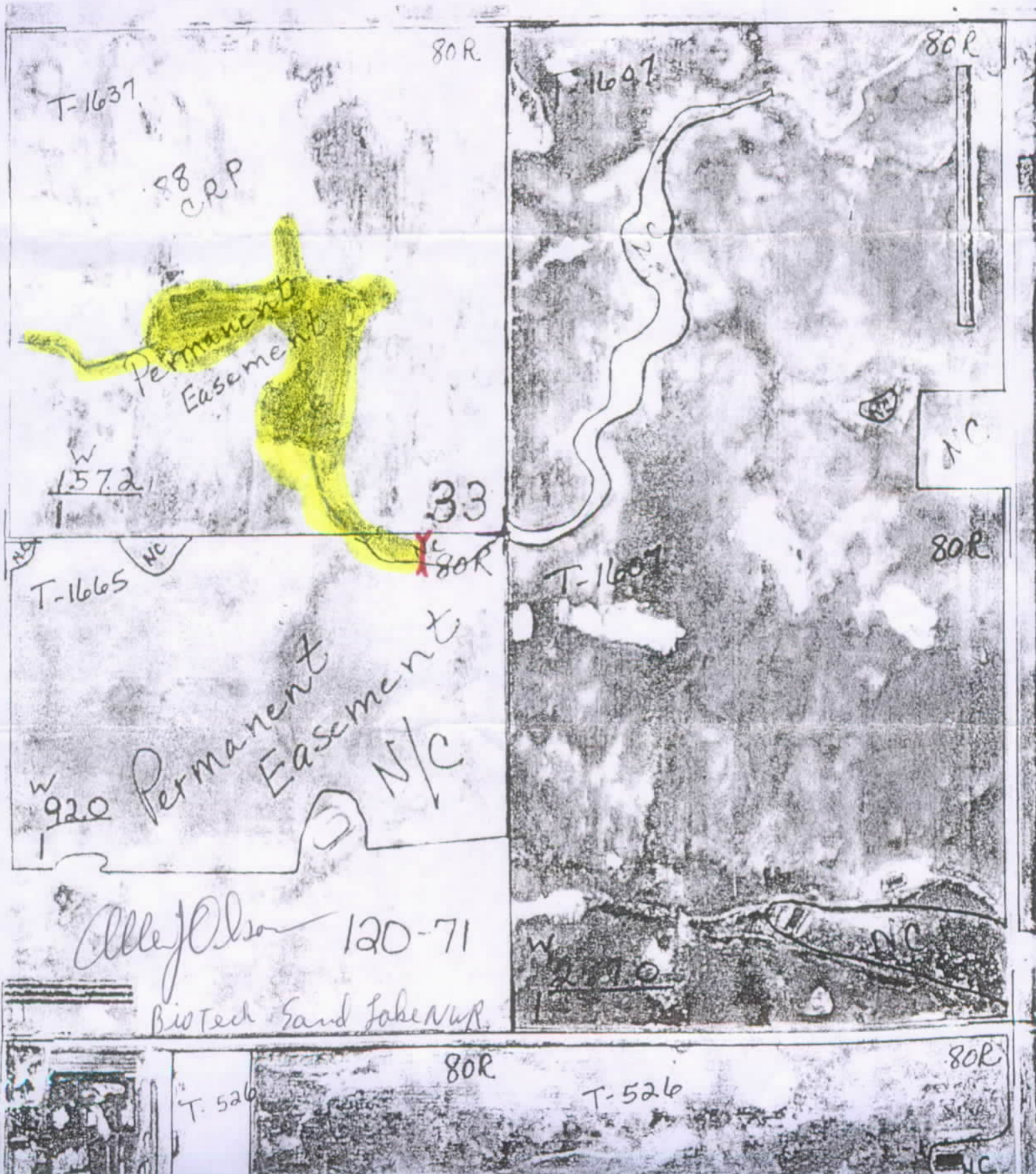
- b) Freeboard 3 FEET
- c) Crest Width 12 FEET  
Crest Length 200 FEET
- d) Height 10.5 FEET
- e) Primary Outlet Capacity GRASS SPILLWAY

If pipe, diameter \_\_\_\_\_

- f) Secondary Spillway Capacity 440 CFS  
Spillway Width 80 FEET
- g) X & Y Slope \_\_\_\_\_  
Upstream 3:1  
Downstream 3:1
- h) Surface Area of Impoundment 39 ACRES
- i) Storage 117 Acre Feet
- j) Drainage Area Above Dam 2,517 Acres



MAP NOT TO SCALE  
THIS IS NOT AN OFFICIAL WETLAND MAP



# RECEIPT

## Water Rights Program

South Dakota Department of Environment and Natural Resources

NO 415978

Pierre, December 18, 19 98

RECEIVED OF Sand Lake NWR (Gary Rausch), 39650 Sand Lake Drive, Columbia, SD 57433-9761  
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. 6148-3 to Appropriate Water, to construct  
and to put water to beneficial use \_\_\_\_\_

150 00

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

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

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

Fee for Filing Transfer Form \_\_\_\_\_

Fee for Filing Extension Request \_\_\_\_\_

Fee for \_\_\_\_\_

(Any Other Work Provided by Law)

Total

150 00

By

Chief Engineer

*John H. Hatcher*

# RECEIPT

## Water Rights Program

South Dakota Department of Environment and Natural Resources

No 416182

Pierre, September 8, 19 99

RECEIVED OF US Fish & Wildlife Service (Gary Rausch), 39650 Sand Lake Drive, Columbia, SD 57433  
the following amount in fees for services rendered as provided for by law:

|                                                                                                                         |       |       |
|-------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Fee for Application for Permit No. _____ to Appropriate Water, to construct<br>and to put water to beneficial use _____ |       |       |
| Fee for Application for Permit No. _____ to Appropriate Water, for Future<br>Use _____                                  |       |       |
| Fee to retain Future Use Permit No. _____ after period of seven years.                                                  |       |       |
| Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water<br>License No. _____                  | 50    | 00    |
| Fee for Filing Transfer Form _____                                                                                      |       |       |
| Fee for Filing Extension Request _____                                                                                  |       |       |
| Fee for _____                                                                                                           |       |       |
| _____                                                                                                                   |       |       |
| _____                                                                                                                   |       |       |
| (Any Other Work Provided by Law)                                                                                        | Total | 50 00 |

By

Chief Engineer

*John Hatcher*

# Water Permit Application #6148-3

Gary Rausch

Top of Dam Elev. - 100  
 Spillway Elev. - 97  
 DIS Emb. Toe Elev. - 90 } HH = 10 ft

Cat. 3 - Low Hazard Dam

Normal Storage Capacity = 117 Ac.-Ft  
 Max Storage Capacity = 165 Ac.-Ft

Max Capacity x Eff. HH =  $165 \times 10 = 1650 < 3000 \therefore$  25 year  
Minimum Spillway Design

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

DA = 3.93

Slope = 25 ft/mi.

SI = 3.16

$$\begin{aligned} Q_{25} &= 83.4 A^{.60} S^{.44} \dots^{-.072} \\ &= 83.4 (3.93)^{.60} (15)^{.44} (3.16)^{-.072} \\ &= 83.4 (2.27) (3.29) (0.44) \\ &= \underline{270 \text{ cfs}} \end{aligned}$$

$$\begin{aligned} Q_{100} &= 132 A^{.65} S^{.46} \dots^{-.67} \\ &= 132 (3.93)^{.65} (15)^{.46} (3.16)^{-.67} \\ &= 132 (2.43) (3.47) (0.46) \\ &= \underline{514 \text{ cfs}} \end{aligned}$$

## Spillway Flow

$$\begin{aligned} Q &= C L H^{3/2} \quad C = 2.6, L = 100, H = 3 \\ &= 2.6 (100) (3)^{1.5} \\ &= \underline{1350 \text{ cfs}} \end{aligned}$$

## Section 74:02:08:09

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

## NRCS Annual Yield

$$ISO = 2 \quad CN = 75 \quad DA = 2.517 A_c$$

$$\begin{aligned} 80\% \text{ chance} &= 0.13 \\ 0.13 \times 2.517^{1/2} &= \underline{27 \text{ Ac.-Ft}} \end{aligned}$$

$$\begin{aligned} 50\% \text{ chance} &= 0.35 \\ 0.35 \times 2.517^{1/2} &= \underline{73 \text{ Ac.-Ft}} \end{aligned}$$

$$\begin{aligned} 10\% \text{ chance} &= 1.8 \\ 1.8 \times 2.517^{1/2} &= \underline{378 \text{ Ac.-Ft}} \end{aligned}$$

\*\*\*\*\*  
 SITES XEQ 01/14/99 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM  
 VER 96.1 (USER MANUAL - DATED MAY 1996)  
 TIME 15:08:00

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

SITES 03/01/96 TYPICAL DESIGN RUN - 378 ES CREST ONLY

STRUCTURE Gary Rausch Faulk CO. NESW Sec33, T120N, R71W

|      |        |       |     |     |
|------|--------|-------|-----|-----|
| (90) | 1795.0 | 0.0   | 90  | 0   |
| (95) | 1800   | 80.0  | 97  | 117 |
| (98) | 1803   | 304.0 | 100 | 165 |

ENDTABLE

|          |       |    |                    |                    |                      |               |
|----------|-------|----|--------------------|--------------------|----------------------|---------------|
| WSDATA   | 2A101 | AC | 75.0 <sup>CN</sup> | 2550 <sup>DA</sup> | 25.4 <sup>Tc/L</sup> |               |
| PDIRECT  |       |    | 4.2                |                    | 4.2                  | 25 yr / 24 hr |
| POOLDATA | ELEV  |    | 1800               | 1800               | 1800                 | 1795.0        |
| ASCREST  |       |    | 1800               |                    |                      |               |
| ASDATA   | 1 C   |    | 100                |                    | 2.0                  | 5.0           |
| BTMWIDTH | FEET  |    | 100                | 150                |                      |               |

\* THIS PROGRAM IS USED TO COMPUTE THE HYDROLOGY WHEN THE  
 \* TIME OF CONCENTRATION IS GREATER THAN 10 HOURS  
 \* EMERGENCY SPILLWAY STORM IS 25 YR. 24 HR TYPE II STORM  
 \*

GO, DESIGN NE TYPE2 24 TYPE1378 24  
 ENDJOB

\*\*\*\*\*

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

\*\*\*\*\* MESSAGE - VEGETAL RETARDANCE INDEX (CI) OF 5.60 USED FOR RETARDANCE  
 CLASS C (TABLE 3.2, AH-667).

SITES XEQ 01/14/99 ----- COMMENT PAGE -----  
VER 96.1 TYPICAL DESIGN RUN - 378 ES CREST ONLY WSID = ff&w1

THIS PROGRAM IS USED TO COMPUTE THE HYDROLOGY WHEN THE

TIME OF CONCENTRATION IS GREATER THAN 10 HOURS

EMERGENCY SPILLWAY STORM IS 25 YR. 24 HR TYPE II STORM

SITES -----  
 XEQ 01/14/99 TYPICAL DESIGN RUN - 378 ES CREST ONLY WSID= ff&w1  
 VER 96.1 h Faulk C0. NESW Sec33, T120N, R71W SUBW= 01  
 TIME 15:08:00 SITE = Gary PASS= 1 PAGE= 1

\*\*\*\*\* BASIC DATA \*\*\*\*\*  
 HUMID- SUBHUMID CLIMATE AREA DESIGN CLASS A1 = LT 3000.

STORM DISTRIBUTION-PSH 24 HOUR TYPE I RAINFALL DISTRIBUTION

STORM DISTRIBUTION AUX. -24 HOUR TYPE II RAINFALL DISTRIBUTION

|                      |             |      |      |  |
|----------------------|-------------|------|------|--|
| PRECIP. - P-PS,1-DAY | P-PS,10-DAY | P-SD | P-FB |  |
| 4.20                 | .00         | .00  | 4.20 |  |

|             |       |       |     |     |
|-------------|-------|-------|-----|-----|
| WSDATA - CN | DA-SM | TC/L  | -/H | QRF |
| 75.00       | 3.98  | 25.40 | .00 | .00 |

|                     |          |         |           |      |
|---------------------|----------|---------|-----------|------|
| SITEDATA- PERM POOL | CREST PS | FP SED  | VALLEY FL | 378? |
| 1800.00             | 1800.00  | 1800.00 | .00       | YES  |

|          |            |           |           |
|----------|------------|-----------|-----------|
| BASEFLOW | INITIAL EL | EXTRA VOL | SITE TYPE |
| .00      | .00        | .00       | DESIGN    |

|                   |        |       |     |
|-------------------|--------|-------|-----|
| PSDATA - NO. COND | COND L | DIA/W | -/H |
| .00               | .00    | .00   | .00 |

|      |     |        |       |
|------|-----|--------|-------|
| PS N | KE  | WEIR L | TW EL |
| .000 | .00 | .00    | .00   |

|         |       |       |            |
|---------|-------|-------|------------|
| 2ND STG | ORF H | ORF L | START AUX. |
| .00     | .00   | .00   | .00        |

|                  |       |       |       |       |
|------------------|-------|-------|-------|-------|
| ASCRESTS - AUX.1 | AUX.2 | AUX.3 | AUX.4 | AUX.5 |
| 1800.00          | .00   | .00   | .00   | .00   |

|                    |            |             |              |
|--------------------|------------|-------------|--------------|
| AUX.DATA - REF.NO. | RETARD. Ci | TIE STATION | INLET LENGTH |
| 1                  | 5.60       | .00         | 100          |

|                     |            |         |            |             |
|---------------------|------------|---------|------------|-------------|
| AUX.DATA - INLET Ci | SIDE SLOPE | EXIT Ci | EXIT SLOPE | ACTUAL AUX? |
| 5.600               | 2.00       | 5.600   | .050       | NO          |

|                 |        |     |     |     |
|-----------------|--------|-----|-----|-----|
| BTM WIDTH - BW1 | BW2    | BW3 | BW4 | BW5 |
| ft 100.00       | 150.00 | .00 | .00 | .00 |

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

## SITES

-----  
XEQ 01/14/99      TYPICAL DESIGN RUN - 378 ES CREST ONLY      WSID= ff&wl  
VER 96.1      h Faulk CO. NESW Sec33, T120N, R71W      SUBW= 01  
TIME 15:08:00      SITE = Gary      PASS= 1      PAGE= 2

|            |            |           |        |        |
|------------|------------|-----------|--------|--------|
| PERM POOL  | 1800.00 FT | 80.0 ACFT | .00 AC | .0 CFS |
| CREST PS   | 1800.00 FT | 80.0 ACFT | .00 AC | .0 CFS |
| SED ACCUM  | 1800.00 FT | 80.0 ACFT | .00 AC | .0 CFS |
| START ELEV | 1800.00 FT | 80.0 ACFT | .00 AC | .0 CFS |

\*\*\*\*\* WARNING - CREST OF AUXILIARY SPILLWAY 1800.00 IS BELOW START ROUTING  
ELEVATION 1800.00.

SITES -----  
 XEQ 01/14/99 TYPICAL DESIGN RUN - 378 ES CREST ONLY WSID= ff&wl  
 VER 96.1 h Faulk CO. NESW Sec33, T120N, R71W SUBW= 01  
 TIME 15:08:00 SITE = Gary PASS= 1 PAGE= 3

AUX. CREST 1800.00 FT 80.0 ACFT .00 AC .0 CFS

PS STORAGE .0 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 1800.00 FT 80.0 ACFT .00 AC .0 CFS

EFFECTIVE HEIGHT(H) = 5.0 FEET, PRODUCT= 400. (H \* STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-FBH D= 24.00 HR P= 4.20 IN Q= 1.82 IN DA= 3.98 SM  
 TC= 25.40 HR CN= 75.00 VOL= 386.4 ACFT

PEAK = 209.9 CFS, AT 29.1 HRS.

| ROUTED RESULTS | BTM WIDTH<br>FT | MAX ELEV<br>FT | VOL-MAX<br>ACFT | AREA-MAX<br>AC | AUX.-HP<br>FT | VOL-AUX.<br>ACFT |
|----------------|-----------------|----------------|-----------------|----------------|---------------|------------------|
| NRCS-FBH       | 100.0           | 1801.29        | 176.5           | .0             | 1.29          | 96.5             |

| PEAK - CFS<br>DISCHARGE = | Q-PS<br>.0 | Q-AUX.<br>199.5 | Q-TOT.<br>199.5 |
|---------------------------|------------|-----------------|-----------------|
|---------------------------|------------|-----------------|-----------------|

|                           | CRITICAL<br>DEPTH<br>FT | CRITICAL<br>VELOCITY<br>FT/SEC | CRITICAL<br>SLOPE-Sc<br>FT/FT | 25% OF Q<br>Sc<br>FT/FT |
|---------------------------|-------------------------|--------------------------------|-------------------------------|-------------------------|
| AUXILIARY<br>SPILLWAY --- | .50                     | 3.98                           | .066                          | .390                    |

AUXILIARY SPILLWAY DURATION FLOW = 424.1 HOURS  
 ATTACK, OE/B = 3.8 ACFT/FT

EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= 3.7 FT/SEC  
 EXIT SLOPE = .050 FT/FT  
 FLOW DEPTH = .5 FT

\*\*\*\*\* WARNING - USER SUPPLIED RATING CURVE DID NOT MEET CRITERIA FOR  
 MINIMUM FLOW THROUGH AUXILIARY SPILLWAY ( 468.52 CFS).

>>>> NHCP378 RUN - MINIMUM DEPTH, CREST AUX. TO TOP OF DAM IS 2.00 FT.  
 NEW TOP OF DAM ELEVATION = 1802.00.

| ROUTED RESULTS | BTM WIDTH<br>FT | MAX ELEV<br>FT | VOL-MAX<br>ACFT | AREA-MAX<br>AC | AUX.HP<br>FT | VOL-AUX.<br>ACFT |
|----------------|-----------------|----------------|-----------------|----------------|--------------|------------------|
| MINIMUM AUX.   | 100.0           | 1802.00        | 229.3           | .0             | 2.00         | 149.3            |

| PEAK - CFS<br>DISCHARGES = | Q-PS<br>.0 | Q-AUX.<br>576.1 | Q-TOT.<br>576.1 |
|----------------------------|------------|-----------------|-----------------|
|----------------------------|------------|-----------------|-----------------|

|                           | CRITICAL<br>DEPTH<br>FT | CRITICAL<br>VELOCITY<br>FT/SEC | CRITICAL<br>SLOPE-Sc<br>FT/FT | 25% OF Q<br>Sc<br>FT/FT |
|---------------------------|-------------------------|--------------------------------|-------------------------------|-------------------------|
| AUXILIARY<br>SPILLWAY --- | 1.00                    | 5.63                           | .025                          | .095                    |

>>>> NHCP378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM; 1.00 FT REQUIRED  
 FOR THIS PASS. NEW TOP OF DAM ELEVATION = 1802.29.

| ROUTED RESULTS | BTM WIDTH<br>FT | MAX ELEV<br>FT | VOL-MAX<br>ACFT | AREA-MAX<br>AC | AUX.HP<br>FT | VOL-AUX.<br>ACFT |
|----------------|-----------------|----------------|-----------------|----------------|--------------|------------------|
| MINIMUM AUX.   | 100.0           | 1802.29        | 251.2           | .0             | 2.29         | 171.2            |

|              |      |        |        |
|--------------|------|--------|--------|
| PEAK - CFS   | Q-PS | Q-AUX. | Q-TOT. |
| DISCHARGES = | .0   | 752.2  | 752.2  |

|              |          |          |          |          |
|--------------|----------|----------|----------|----------|
|              | CRITICAL | CRITICAL | CRITICAL | 25% OF Q |
|              | DEPTH    | VELOCITY | SLOPE-Sc | Sc       |
| AUXILIARY    | FT       | FT/SEC   | FT/FT    | FT/FT    |
| SPILLWAY --- | 1.20     | 6.14     | .021     | .070     |

\*\*\*\*\* WARNING - EMBANKMENT QUANTITIES NOT COMPUTED, NO VALID CLPROFILE ENTERED.

|          |           |          |         |          |         |          |
|----------|-----------|----------|---------|----------|---------|----------|
| ROUTED   | BTM WIDTH | MAX ELEV | VOL-MAX | AREA-MAX | AUX.-HP | VOL-AUX. |
| RESULTS  | FT        | FT       | ACFT    | AC       | FT      | ACFT     |
| NRCS-FBH | 150.0     | 1801.14  | 165.3   | .0       | 1.14    | 85.3     |

|             |      |        |        |
|-------------|------|--------|--------|
| PEAK - CFS  | Q-PS | Q-AUX. | Q-TOT. |
| DISCHARGE = | .0   | 205.3  | 205.3  |

|              |          |          |          |          |
|--------------|----------|----------|----------|----------|
|              | CRITICAL | CRITICAL | CRITICAL | 25% OF Q |
|              | DEPTH    | VELOCITY | SLOPE-Sc | Sc       |
| AUXILIARY    | FT       | FT/SEC   | FT/FT    | FT/FT    |
| SPILLWAY --- | .39      | 3.52     | .100     | .696     |

|                                    |             |
|------------------------------------|-------------|
| AUXILIARY SPILLWAY DURATION FLOW = | 331.9 HOURS |
| ATTACK, OE/B =                     | 2.6 ACFT/FT |

|                                              |            |
|----------------------------------------------|------------|
| EXIT CHANNEL FLOW SUBCRITICAL: MAX VELOCITY= | 2.9 FT/SEC |
| EXIT SLOPE =                                 | .050 FT/FT |
| FLOW DEPTH =                                 | .5 FT      |

\*\*\*\*\* WARNING - USER SUPPLIED RATING CURVE DID NOT MEET CRITERIA FOR  
MINIMUM FLOW THROUGH AUXILIARY SPILLWAY ( 468.52 CFS ).

>>>> NHCP378 RUN - MINIMUM DEPTH, CREST AUX. TO TOP OF DAM IS 2.00 FT.  
NEW TOP OF DAM ELEVATION = 1802.00.

|              |           |          |         |          |        |          |
|--------------|-----------|----------|---------|----------|--------|----------|
| ROUTED       | BTM WIDTH | MAX ELEV | VOL-MAX | AREA-MAX | AUX.HP | VOL-AUX. |
| RESULTS      | FT        | FT       | ACFT    | AC       | FT     | ACFT     |
| MINIMUM AUX. | 150.0     | 1802.00  | 229.3   | .0       | 2.00   | 149.3    |

|              |      |        |        |
|--------------|------|--------|--------|
| PEAK - CFS   | Q-PS | Q-AUX. | Q-TOT. |
| DISCHARGES = | .0   | 861.4  | 861.4  |

|              |          |          |          |          |
|--------------|----------|----------|----------|----------|
|              | CRITICAL | CRITICAL | CRITICAL | 25% OF Q |
|              | DEPTH    | VELOCITY | SLOPE-Sc | Sc       |
| AUXILIARY    | FT       | FT/SEC   | FT/FT    | FT/FT    |
| SPILLWAY --- | 1.00     | 5.65     | .025     | .094     |

>>>> NHCP378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM; 1.00 FT REQUIRED  
FOR THIS PASS. NEW TOP OF DAM ELEVATION = 1802.14.

|              |           |          |         |          |        |          |
|--------------|-----------|----------|---------|----------|--------|----------|
| ROUTED       | BTM WIDTH | MAX ELEV | VOL-MAX | AREA-MAX | AUX.HP | VOL-AUX. |
| RESULTS      | FT        | FT       | ACFT    | AC       | FT     | ACFT     |
| MINIMUM AUX. | 150.0     | 1802.14  | 239.9   | .0       | 2.14   | 159.9    |

|              |      |        |        |
|--------------|------|--------|--------|
| PEAK - CFS   | Q-PS | Q-AUX. | Q-TOT. |
| DISCHARGES = | .0   | 983.7  | 983.7  |

|              |          |          |          |          |
|--------------|----------|----------|----------|----------|
|              | CRITICAL | CRITICAL | CRITICAL | 25% OF Q |
|              | DEPTH    | VELOCITY | SLOPE-Sc | Sc       |
| AUXILIARY    | FT       | FT/SEC   | FT/FT    | FT/FT    |
| SPILLWAY --- | 1.10     | 5.90     | .022     | .081     |

\*\*\*\*\* WARNING - EMBANKMENT QUANTITIES NOT COMPUTED, NO VALID CLPROFILE ENTERED.

SITES....JOB NO. 1 COMPLETE.

---

ff&wl            TYPICAL DESIGN RUN - 378 ES CREST ONLY

0 SUBWATERSHED(S) ANALYZED.

1 STRUCTURE(S) ANALYZED.

2 HYDROGRAPHS ROUTED AT LOWEST SITE.

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

\*\*\*\*\*

SITES XEQ 01/14/99      WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM  
VER 96.1                      (USER MANUAL - DATED MAY 1996)  
TIME 15:08:00

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

\*\*\*\*\* MESSAGE - NO "END RUN" CONTROL COMMAND FOUND.

SITES.....COMPUTATIONS COMPLETE

## SUMMARY TABLE 1

SITES VERSION 96.1  
DATED 03/01/96

| WATERSHED ID | RUN DATE | RUN TIME |
|--------------|----------|----------|
| ff&wl        | 01/14/99 | 15:08:00 |

| >>> | SITE ID | SUBWS ID | SUBWS DA (SQ MI) | CURVE NO. | TC (HRS) | TOTAL DA (SQ MI) | TYPE DESIGN | STRUC CLASS | <<< |
|-----|---------|----------|------------------|-----------|----------|------------------|-------------|-------------|-----|
|     | Gary    | 01       | 3.98             | 75.       | 25.40    | 3.98             | 378NR       | A1          |     |

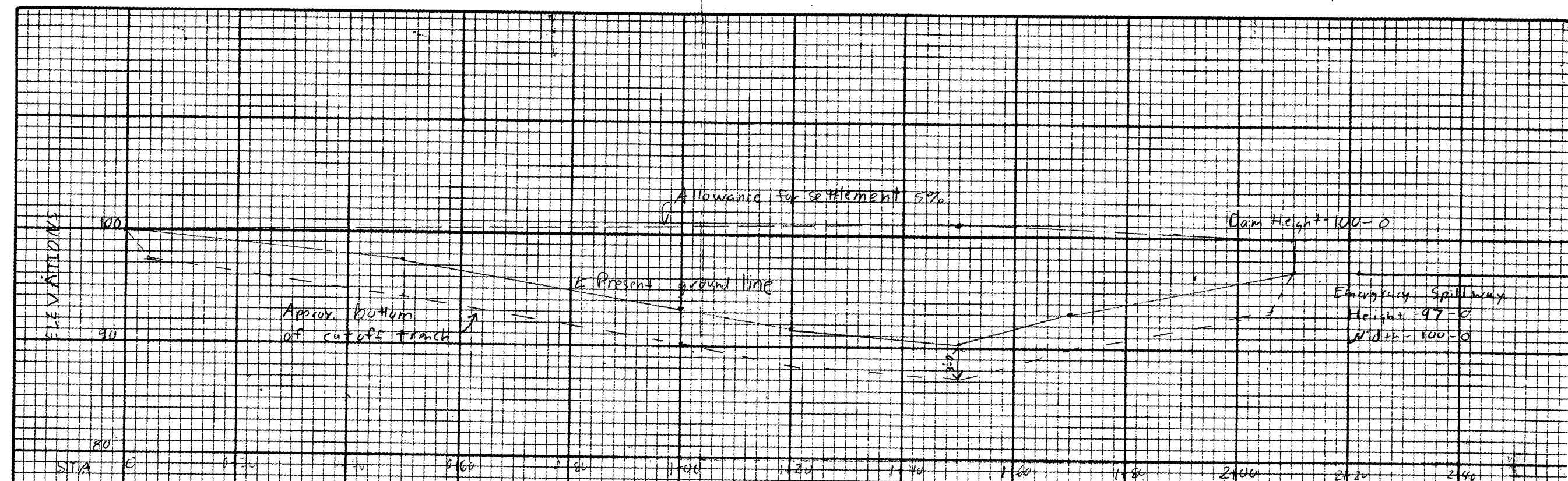
| PASS NO. | DIA./ WIDTH (IN/FT) | AUX.CREST ELEV (FT) | BTM. WIDTH (FT) | MAX. HP (FT) | MAX. ELEV (FT) | EMB. VOL. (CY) | INTEGR.* DIST. (FT) | EXIT* VEL. (FT/SEC) | TYPE HYD  |
|----------|---------------------|---------------------|-----------------|--------------|----------------|----------------|---------------------|---------------------|-----------|
| 1        | .0                  | 1800.0              | 100.0           | 2.3          | 1802.3         | 0.             | 0.                  | 3.7                 | MIN. AUX. |
| 1        | .0                  | 1800.0              | 150.0           | 2.1          | 1802.1         | 0.             | 0.                  | 2.9                 | MIN. AUX. |

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

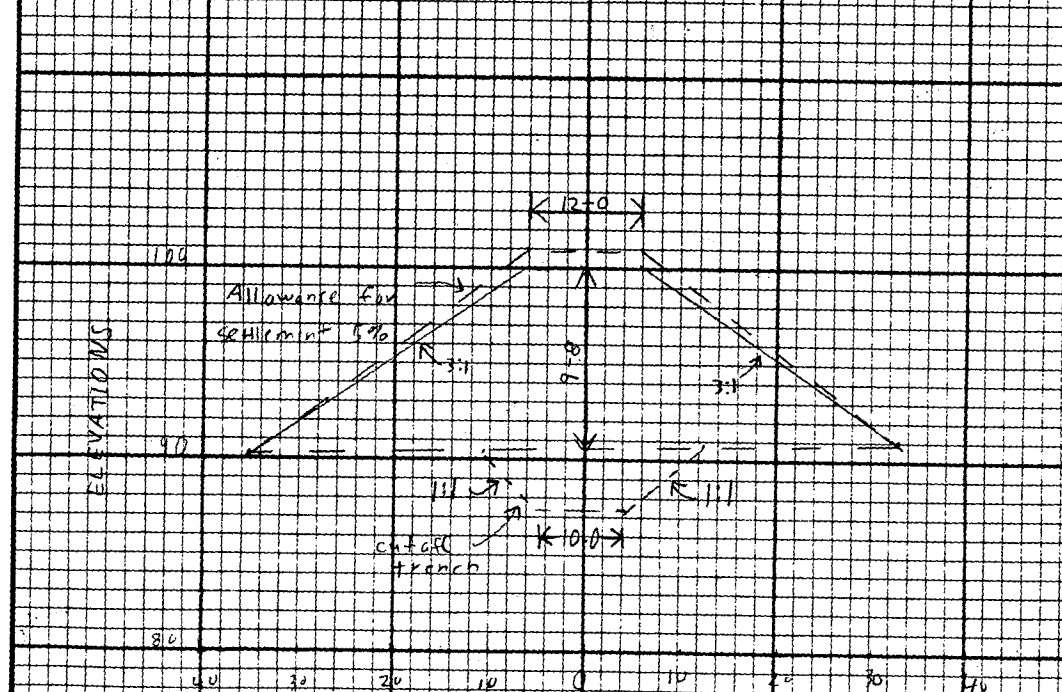
SITES.....SUMMARY TABLE 1 COMPLETED.

NRCS SITES VERSION 96.1 ,03/01/96  
ff&wl FILESINPUT = d:\sites\ff&wl  
OUTPUT = LPT1

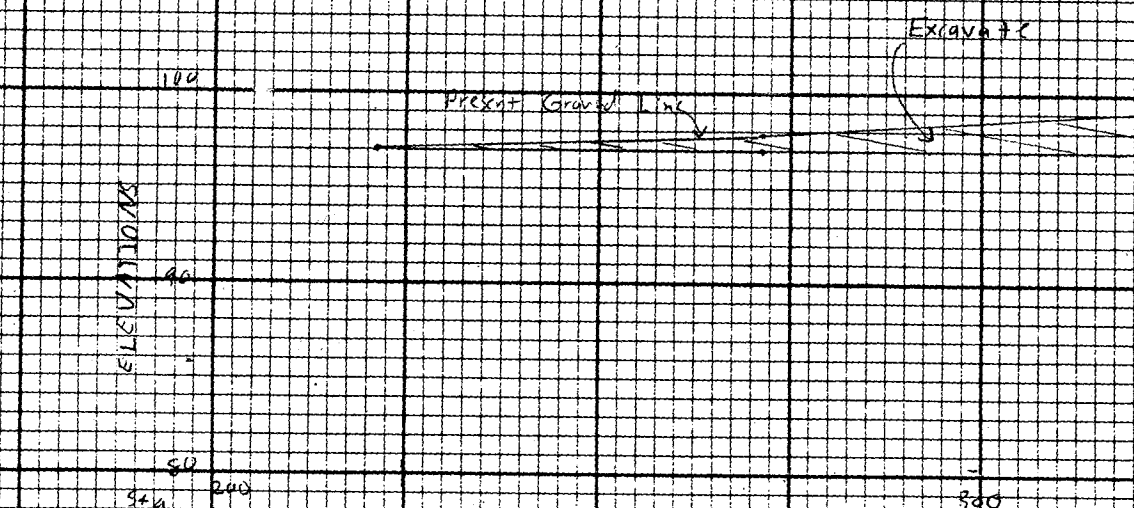
DATED 01/14/99 15:08:00



CROSS SECTION AT CREST OF EMERGENCY SPILLWAY AND PROFILE ALONG E OF DAM



MAXIMUM CROSS SECTION OF DAM



PROFILE ALONG E OF EMERGENCY SPILLWAY

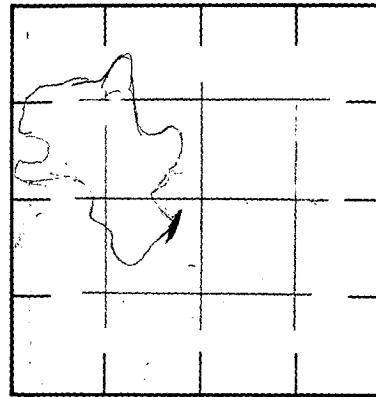
SEDIMENT YIELD

| ERODIBILITY<br>AREA<br>ACRES | GROSS<br>RATE<br>A.F./AC./YR. | DRAINAGE<br>AREA<br>ACRES | DELIVERY<br>RATE<br>% | DESIGN<br>PERIOD<br>YEARS | REQ'D. SEDIMENT<br>VOLUME<br>AC.FT. |
|------------------------------|-------------------------------|---------------------------|-----------------------|---------------------------|-------------------------------------|
| I                            | .0017                         | 2517                      | 30                    | 20                        | 25.7                                |

## STRUCTURE DATA

| DRAINAGE<br>AREA | ANNUAL<br>YIELD | PEAK<br>RUNOFF | EMERG.<br>SPLWY.<br>CAPACITY | WATER<br>DEPTH | SURFACE<br>AREA | SEDIMENT<br>STORAGE | TOTAL<br>STORAGE |
|------------------|-----------------|----------------|------------------------------|----------------|-----------------|---------------------|------------------|
| ACRES            | AC. FT.         | 25-YR.         | C.F.S.                       | FEET           | ACRES           | AC. FT.             | AC. FT.          |
| 2517             | 69.2            | 210            | 210                          | 7.5            | 39              | 25.7                | 117              |

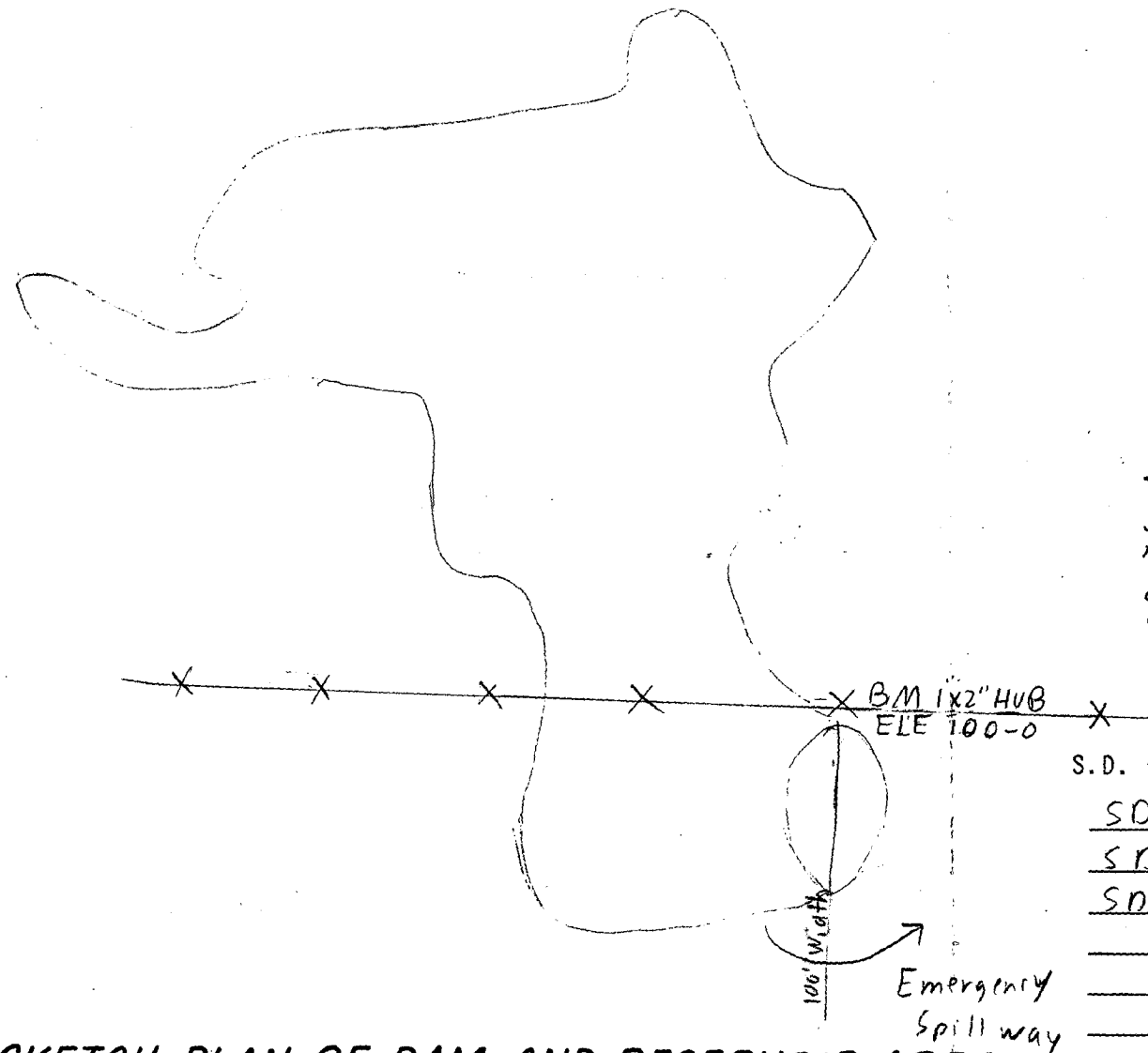
NOTE: Storage > 50% of 2yr runoff  
- principal spillway not required.



Sec. 33 T. 120 R. 71  
Faulk County

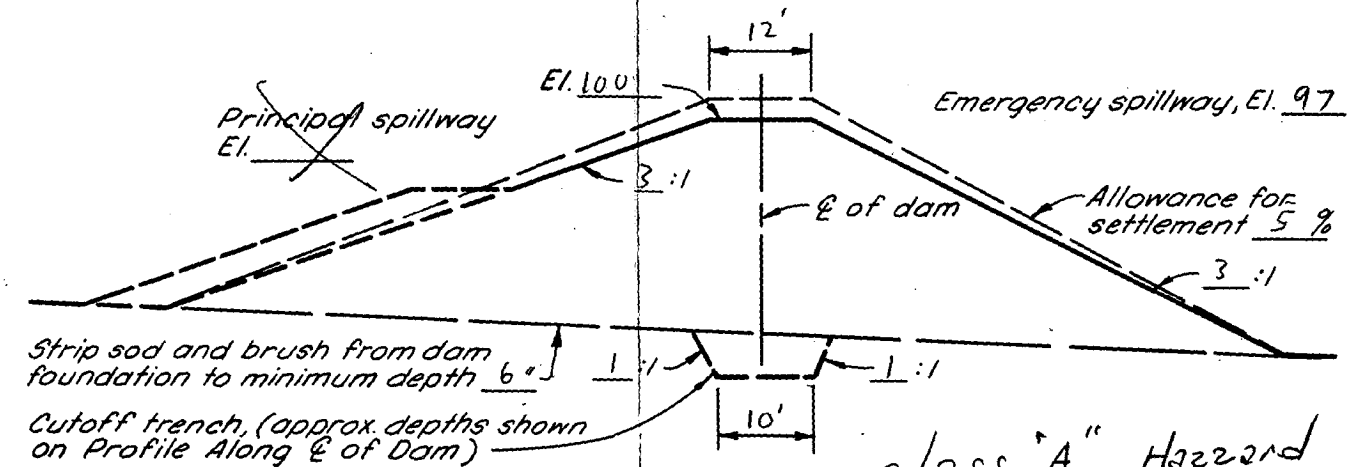
**LOCATION**

## TABLE OF QUANTITIES

[illegible]

SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" = \_\_\_\_\_



**TYPICAL CROSS SECTION OF DAM**

*EARTH DAM*

**S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:**

SD-4 - Stripping

SD-5 - Excavation

SD-75 - Earth Fill - Class S

OPERATOR: Gary Rausch

CONSERVATION DISTRICT: Faulk

Sec 33 T120N R71W

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Designed: Moh/ha Date: 7/99 Approved by: [Signature]

Drawn \_\_\_\_\_

|        |       |             |
|--------|-------|-------------|
| Traced | Title |             |
|        | Sheet | Drawing No. |

|         |    |
|---------|----|
| Checked | No |
|---------|----|

REFERENCE: GUIDE PLAN NO. 1.0

JOB PLAN NO. 1.0

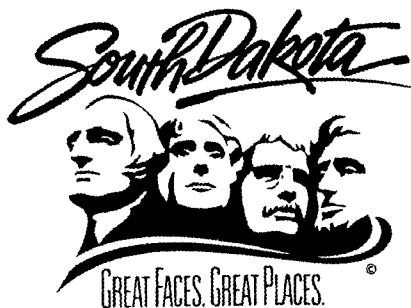
Tim,  
Here are the plans and Specs  
for Gary Kausch dam.  
Also, there is a money order  
for \$50.00 enclosed.

We are still hoping to  
get this project done this  
season if possible

Thanks

Alley Olsen





**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3181  
[www.state.sd.us/denr](http://www.state.sd.us/denr)

September 23, 1999

Gary Rausch  
22857 SD Hwy. 20  
Onaka, SD 57466

Dear Mr. Rausch:

We have reviewed the plans and specifications for your dam located in the NE ¼ SW ¼ of Section 33-T120N-R71W, in Faulk County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the project. Construction of the project may not begin until Water Permit Application No. 6148-3 is approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release you, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The Rausch Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 10 feet and a normal storage capacity of 117 acre-feet and a maximum storage capacity of 165 acre-feet.

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

Sincerely,

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

c: Allen Olson, USFWS

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT  
APPLICATION NO. 6148-3, Gary Rausch**

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. 6148-3, Gary Rausch, 33857 SD Highway 20, Onaka, SD 57466.

The Chief Engineer is recommending APPROVAL of Application No. 6148-3 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. 6148-3 authorizes a dam with storage capacity of 117.0 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.



JOHN HATCH, Chief Engineer  
September 22, 1999

REPORT ON  
WATER PERMIT APPLICATION NO. 6148-3

Gary Rausch  
September 15, 1999

Water Permit Application No. 6148-3 has been filed by Gary Rausch to impound 117 acre-feet of water from runoff by constructing a dam located in the NE ¼ SW ¼ of Section 33-T120N-R71W, in Faulk County. The application also requests impoundment of sufficient water to maintain the reservoir at the outlet elevation. The water will be used for fish and wildlife propagation and livestock watering.

Discussion:

The Rausch Dam will be classified as a Category 3, Low Hazard dam. The dam has been designed by the Natural Resources Conservation Service. The plans and specifications have been reviewed and will be approved; however, construction of the dam can not begin until Water Permit Application No. 6148-3 is approved.

The Rausch Dam will be 10 feet high with a normal storage capacity of 117 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 165 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

The dam is designed to have a 100 foot wide earthcut spillway with 3 feet of available head. The dam will have a drainage area of 2517 acres (3.93 square miles). A 25-year frequency event will produce a peak of approximately 270 cfs and a 100-year frequency event will produce a peak of approximately 514 cfs. The 100 foot wide spillway will have a capacity of approximately 1350 cfs.

The annual yield for this drainage area with a 10 percent chance of occurrence, or 1 out of 10 years, is expected to be 378 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 73 acre-feet and the annual yield with a 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 27 acre-feet.

The Rausch Dam will be located in the SW ¼ of Section 33-T120N-R71W on an unnamed tributary, which flows into Clark Lake, about 3 miles upstream of Clark Lake. There are no existing Water Permits/Rights located on the unnamed tributary or Clark Lake.

Conclusions:

1. Water Permit Application No. 6148-3 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 6148-3.

*Timothy G. Schaal/cg*

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

Approved by:

*Gale N. Selken*

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



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3181  
[www.state.sd.us/denr](http://www.state.sd.us/denr)

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

September 23, 1999

Gary Rausch  
33857 SD Hwy. 20  
Onaka, SD 57466

Dear Mr. Rausch:

Water Permit Application No. 6148-3 for fish and 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 Faulk Co. Record printed at Faulkton, SD (Ph # (605) 598-6525). 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.

c: Allen J. Olson, Sand Lake NWR, 39650 Sand Lake Drive, Columbia, SD 57433-9761.



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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

September 23, 1999

Faulk Co. Record  
Box 68  
Faulkton, SD 57438-0068

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 6148-3 to Appropriate Water to be published twice. Please publish the first notice on September 29, 1999, 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 Gary Rausch, 33857 SD Hwy. 20, Onaka, SD 57466 (Ph # (605) 447-5882).

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

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

Sincerely,

Eric Gronlund  
Natural Resources Engineer  
605 773-3352

enclosures

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

No. 6148-3

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

Date \_\_\_\_\_

We are in receipt of your letter of September 23, 1999, enclosing Notice of Hearing to Appropriate Water by Application No. 6148-3 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 September 29, 1999, with the second publication 7 days later. The applicant is responsible for payment.

---

NOTICE OF APPLICATION NO. 6148-3 to Appropriate Water

Notice is given that Gary Rausch, 33857 SD Hwy 20, Onaka SD 57466 has filed an application for a water permit to impound 117 acre-feet of water from runoff by constructing a dam located in the NE  $\frac{1}{4}$  SW  $\frac{1}{4}$  Section 33 with water impounded in the NW  $\frac{1}{4}$ , N  $\frac{1}{2}$  SW  $\frac{1}{4}$  Section 33; all in T120N-R71W. This application requests impoundment of sufficient water to maintain water at the outlet elevation. The water is to be used for fish and wildlife propagation and livestock watering purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6148-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by October 18, 1999.

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. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

Form 8



## PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA )  
County of Faulk ) SS

I, James B. Moritz

certify that the attached printed Notice was taken

from the \_\_\_\_\_

printed and published in Faulkton

County of Faulk and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

Wednesday, Sept. 29, 1999

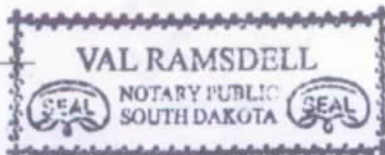
Wednesday, Oct. 6, 1999

Cost of Printing \$37.42

James B. Moritz  
(Signature)

Publisher  
(Title)

10-6-99  
(Date Signed)



My Commission Expires  
Jan. 17, 2005

No. 237, Sept. 29, Oct. 6, 1999  
**NOTICE OF APPLICATION**

**NO. 6148-3 to Appropriate Water**

Notice is given that Gary Rausch, 33857 SD Hwy 20, Onaka SD 57466 has filed an application for a water permit to impound 117 acre-feet of water from runoff by constructing a dam located in the NE 1/4 SW 1/4 Section 33 with water impounded in the NW 1/4, N 1/2 SW 1/4 Section 33; all in T120N-R71W. This application requests impoundment of sufficient water to maintain water at the outlet elevation. The water is to be used for fish and wildlife propagation and livestock watering purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6148-3 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.

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**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3181  
[www.state.sd.us/denr](http://www.state.sd.us/denr)

NOV 30 1999

Gary Rausch  
33857 SD Hwy. 20  
Onaka, SD 57466

Dear Mr. Rausch:

Enclosed is Water Permit No. 6148-3 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.

Very truly yours,

JOHN HATCH, Chief Engineer  
Water Rights Program  
(605) 773-3352

enclosures

**Permit No. 6148-3  
Faulk County**

**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, **August 20, 2013** made a thorough examination of the pond and dam maintained and owned by **Gary Rausch, 33857 SD Hwy 20, Onaka, SD 57466, holder of Water Permit No. 6148-3**, bearing the priority date of **September 8, 1999** and authorizing the retention of **117 acre-feet (ac-ft)** of water within a pond for the purposes of supplying water for **fish and wildlife propagation in the W ½ of Section 33, T120N-R71W in Faulk County**. The dam itself is located in the **NE ¼ SW ¼ of Section 33, T120N-R71W**.

I have the following conditions to report for the system in question:

- 1) Works used to retain water:  
**Earthen dam.**
- 2) Works used to transport water to a place of use:  
**N/A**
- 3) Works used to apply water to beneficial use:  
**N/A**

The dam is in the following condition: well maintained. The dam associated with Water Permit No. 6148-3 is located in the **NE ¼ SW ¼ of Section 33, T120N-R71W**. . The exact location of the dam is as follows:

- **2,700 feet south and 2,100 feet east of the northwest corner of Section 33, T120N-R71W.  
Lat 43.23945N Lon 97.51184W.**

Although the area of the pond varies, the lands inundated by the water behind the dam include:

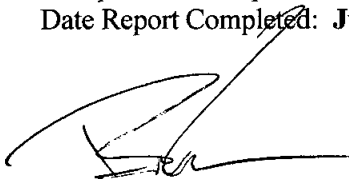
- 1) **NW ¼ NW ¼ Section 33, T120N-R71W.**
- 2) **NE ¼ NW ¼ Section 33, T120N-R71W.**
- 3) **SE ¼ NW ¼ Section 33, T120N-R71W.**
- 4) **SW ¼ NW ¼ Section 33, T120N-R71W.**
- 5) **NE ¼ SW ¼ Section 33, T120N-R71W.**

License should be issued for the **permitted volume of 117 ac-ft.**

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

Exceptions to compliance are: **None**

Date Report Completed: **June 5, 2014**



Bracken Capen  
Natural Resources Engineer  
DENR, Water Rights Program

## FIELD INVESTIGATION REPORT FOR WATER PERMIT NO. 6148-3

|                                                                                          |                                                                                                                                        |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| DATE OF INVESTIGATION:                                                                   | August 20, 2013                                                                                                                        |
| NAME & ADDRESS OF PERMIT HOLDER                                                          | Gary Rausch<br>33857 SD Hwy 20<br>Onaka, SD 57466                                                                                      |
| NAME & ADDRESS OF INVESTIGATION CONTACT/<br>RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE | Mark Rausch, son of Gary Rausch                                                                                                        |
| DIVERSION POINT LEGAL LOCATIONS                                                          | Dam located 2,700 feet south and 2,100 feet east of<br>the northwest corner of Section 33, T120N-R71W.<br>Lat 43.23945N Lon 97.51184W. |

### DAM INFORMATION:

- 1) Height to Crest: **10 feet**
- 2) Crest Width: **10 feet**
- 3) Crest Length: **162 feet**

### Spillway:

- 1) Spillway Width: **78 feet**
- 2) Height to Spillway: **7 foot**

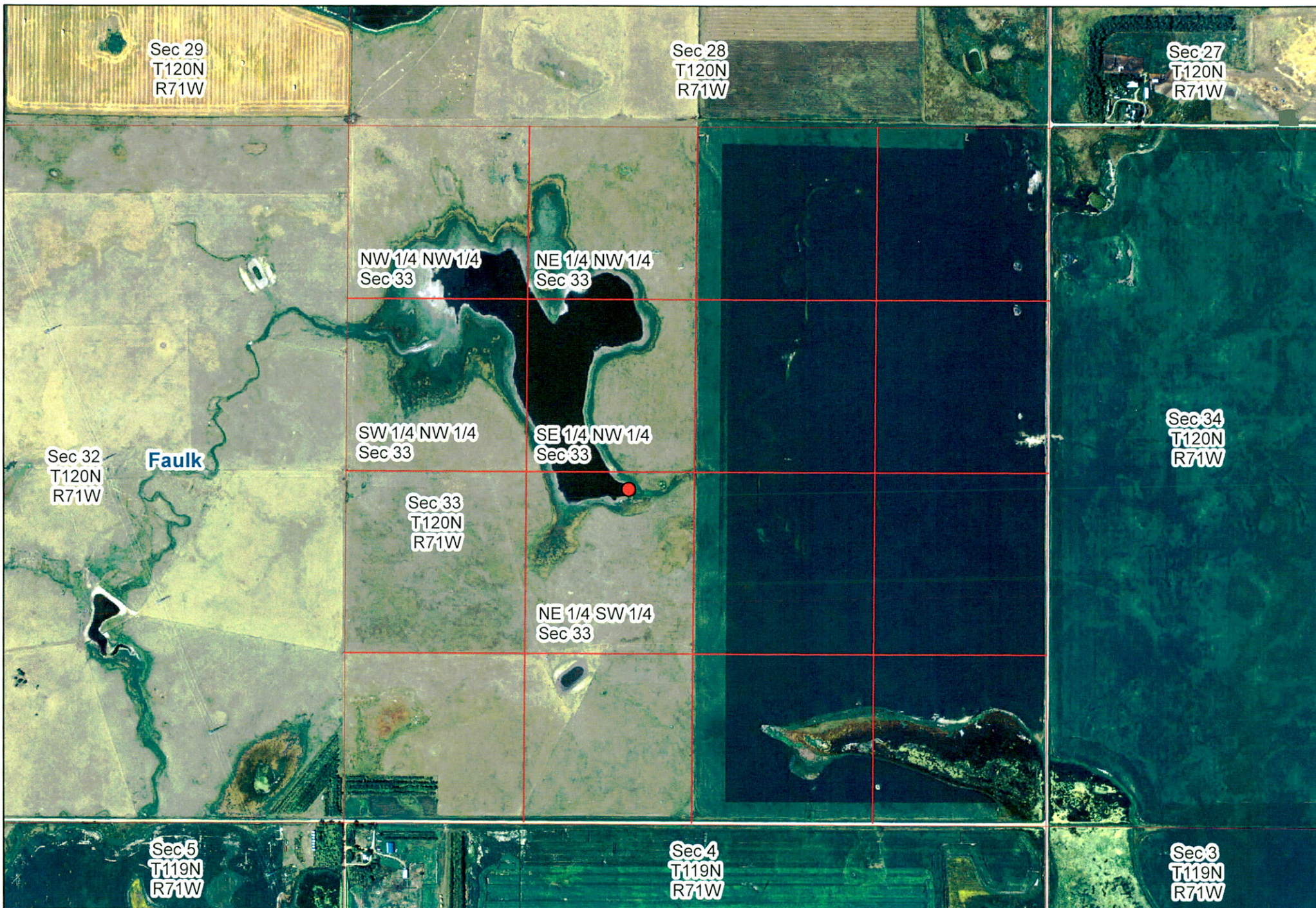
**Secondary Spillway:** N/A

### PERMIT QUALIFICATIONS:

- 1) Special qualifications to permit being abided by: **N/A**
- 2) All structures, wells, and lands on map: **Yes**
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by end of construction period: **N/A**

### COMMENTS:

- 1) This dam does not include a secondary spillway.
- 2) Maintenance on the dam at time of inspection was mostly adequate. No trees or bushes seen growing on dam, adequate grass cover. However, some erosion visible on the upstream side of dam.



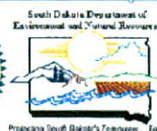
## Legend

- Section Boundaries - PLSS
- Location of Dam



0 0.075 0.15 0.3 Miles

Prepared by Bracken Capen  
Natural Resources Engineer  
DENR, Water Rights Program





**DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES**

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



**JUN 18 2014**

6148-3

Gary Rausch  
33857 SD Hwy 20  
Onaka SD 57466

Dear Mr. Rausch:

Enclosed is Water License No. 6148-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

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

enclosures

# STATE OF SOUTH DAKOTA

## WATER LICENSE NO. 6148-3

(1) Gary Rausch, 33857 SD Hwy 20, Onaka SD 57466 made Application No. 6148-3, December 18, 1998 for a water permit to impound 117 acre feet of water from runoff in a dam located in Faulk County, South Dakota and used for fish & wildlife propagation and domestic livestock water purposes. Permit No. 6148-3, with a priority date of September 8, 1999 was approved October 18, 1999 and issued to the applicant for impoundment of water with construction of the storage dam to be completed on or before October 18, 2004 and the application to beneficial use of water on or before October 18, 2008.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the storage dam and is entitled to impound 117 acre feet of water beneficial use with sufficient water annually to maintain the water level to the outlet elevation.

The location of the storage dam (spillway) is 2,700 feet south and 2,100 feet east of the NW corner of Section 33, T120N, R71W (NE ¼ SW ¼). Water is impounded in the NW ¼ & NE ¼ SW ¼ Section 33.

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Gary Rausch, 33857 SD Hwy 20, Onaka SD 57466 the holder and/or owner of Water Right No. 6148-3 is issued a license to impound 117 acre feet water from runoff into a storage dam with a priority date of September 8, 1999 from the location specified in (2) of this license. The water is used for fish and wildlife propagation, recreation and domestic livestock watering.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 6148-3 and subject to the following qualifications:

- Water Right No. 6148-3 authorizes a dam with storage capacity of 117 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be bypassed.



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

JUN 18 2014

date

