

FLOOD CONTROL PERMIT

The Water Management Board hereby approves Flood Control Permit No. FC-1 for M.C. Johnson, 607 W Bridge, Philip, South Dakota, 57567, to construct and maintain flood control facilities located in the east forty feet of the east 140 feet of Lot B; west 100 feet of the east 140 feet out of Lot B; both in Mann's Addition of the Town of Philip, T1N, R20E.

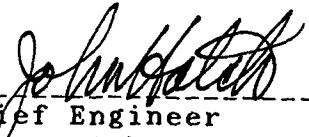
Date of first receipt of application: April 1, 1980

Approved: September 25, 1980

Findings of Fact, Conclusions of Law and Order approved:
November 20, 1980

1. The date from which the applicant made claim right is April 1, 1980
2. The project has been constructed.
3. The project is for the purpose of flood control caused by flood flows in the northfork of the Bad River.
4. The prior rights of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be unlawfully impaired by this flood control project.

WATER MANAGEMENT BOARD



Chief Engineer
Water Rights Division
Dept. of Water and Natural
Resources

NOV 2 1987

STATE OF SOUTH DAKOTA
WATER MANAGEMENT BOARD

IN THE MATTER OF THE APPLICA-)
TION OF FLOOD CONTROL FACILITY)
PLANS, FC-1)

FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER

Having heard and considered all the evidence presented before the Board in the above-entitled matter, the Board hereby makes the following:

FINDINGS OF FACT

I.

That in November of 1979, Mr. M. C. Johnson caused the construction of a dike on the north fork of the Bad River on the west boundary of Philip, South Dakota, more particularly described as follows:

East 40 feet of the East 140 feet of Lot B and the West 100 feet of the East 140 feet out of Lot B, both in Mann's addition to the Town of Philip, South Dakota.

II.

That about that same time, Mr. Johnson caused an alternate channel to be excavated around the dike to allow for the free flow of water.

III.

That the purpose of such construction was to prevent erosion under the house located on the above-described premises caused by flood flows in the north fork of the Bad River.

IV.

That on April, 1980, an application for approval of the plans for this project was submitted to the Office of Water Rights of the Department of Water and Natural Resources.

V.

That notice of hearing on said application was duly published.

VI.

That construction of this project will not effect present supplies or uses of water.

VII.

That an inspection has been made of the completed flood control facilities.

VIII.

That these facilities provide adequate capacity and are designed such that flood flows in the new channel will remain sub-critical and will not add to or cause any change in the normal pattern of flooding.

CONCLUSIONS OF LAW

I.

That the Water Management Board has jurisdiction over this application.

II.

That the flood control facility constructed by the applicant will not adversely effect water supplies for domestic and other beneficial uses or existing water rights.

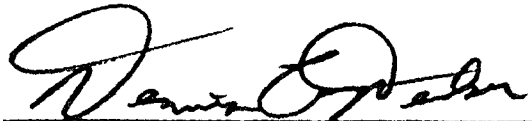
III.

That the project is safe and poses no increased risk to life or property.

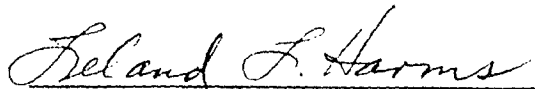
ORDER

That the application for approval of plans for flood control facility FC-1 is hereby approved.

Dated this 20th day of November, 1980.



CHAIRMAN, WATER MANAGEMENT BOARD



SECRETARY, WATER MANAGEMENT BOARD



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

NOV 2 1987

M C Johnson
607 W Bridge
Philip, SD 57567

Dear Mr. Johnson:

Enclosed is your Flood Control Permit No. FC-1. A recent review of your permit file found that although your permit was approved in 1980, an actual permit had not been written up. Issuance of a permit at this time does not affect your priority date of April 1, 1980.

If you have any questions, please contact us.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John Hatch".

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

April 1, 1980



Mr. John Hatch
Office of Water Rights
Department of Water and Natural Resources
Foss Building
Pierre, South Dakota 57501

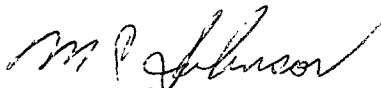
Dear Mr. Hatch:

This is a request for approval of a flood-control facility pursuant to SDCL 46-19. Mr. Curtis Wilson of the Attorney General's Office indicated that I should send my request to your office. My request concerns some fill work which I had performed in which dirt fill was put into the North Fork of the Bad River to prevent it from washing out the bank from under our house. At that same time, we dug another channel for the water to flow through. I understand that in order to get a permit for the work I had performed it is necessary that we allow you to enter onto our property and inspect the work to assure that it is safe. You have our permission to enter onto our property, following reasonable notice, for the purpose of inspecting the fill work which we had performed in order to verify the engineering safety of that work.

If there is anything further which you need with regard to this request for a permit, please let me know.

Thank you very much.

Sincerely yours,

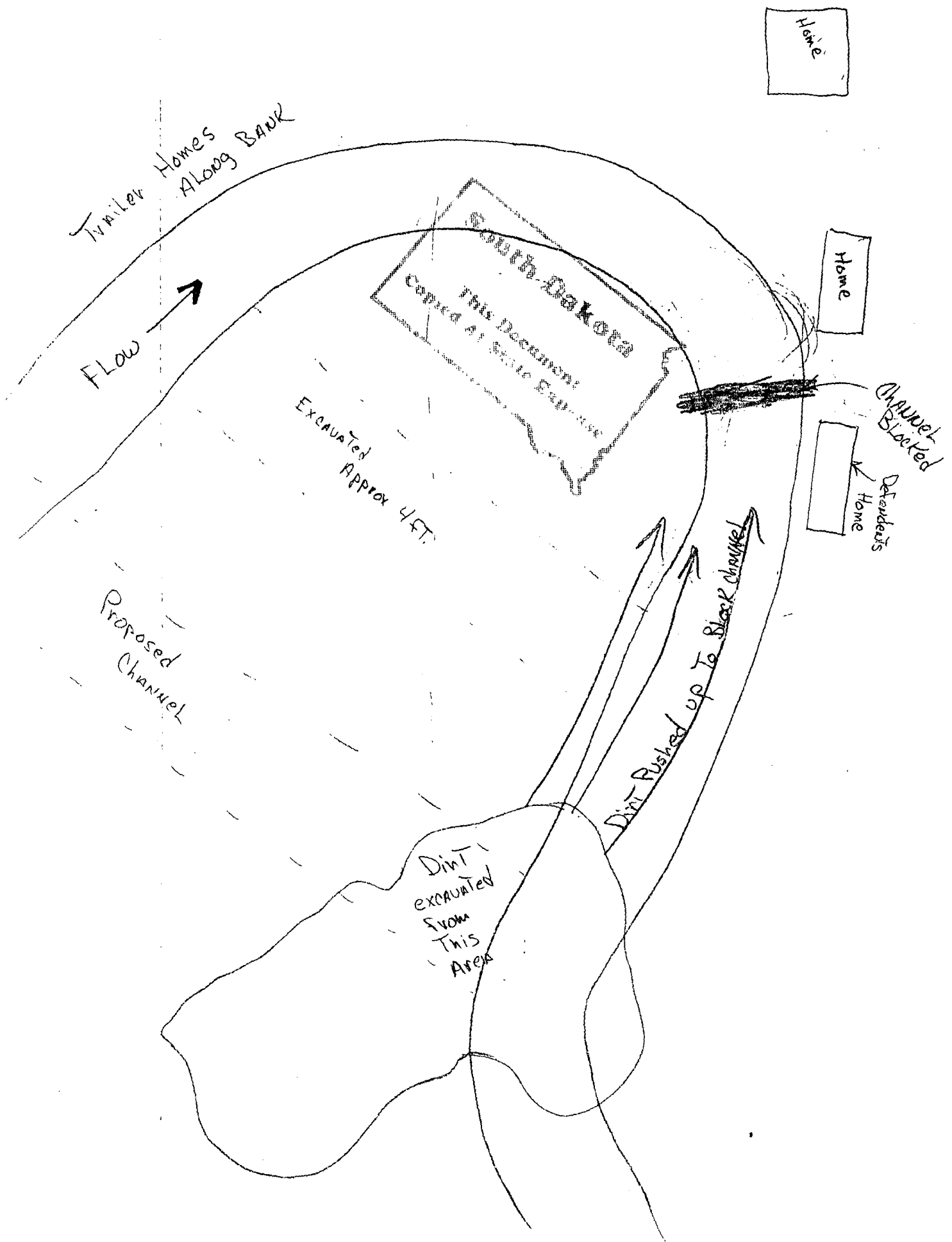

M.C. Johnson

Ella Hart
607 West Bridge
Philip, South Dakota 57790



M.C. Johnson

Drillers License No 417 1979



March 31, 1980

Mr. M. C. Johnson
607 West Bridge
Philip, South Dakota 57790

Re: State v. M. C. Johnson, et al.

Dear Mr. Johnson:

Following our meeting on March 21, 1980, I spoke with Mr. Lovald who has no objections to my negotiating directly with you to resolve this matter. As we discussed when you were in my office, the State's primary objective is to assure that the fill work you have done presents no threat to the lives and property of your neighbors. The best way to achieve this and to put yourself into compliance with state law is to apply for a permit for a flood-control facility pursuant to SDCL 46-19. At our meeting you offered to make application for such a permit and this letter is to advise you how to proceed to obtain such a permit.

Flood-control facility permits are issued by the Board of Water Management. Application is to be made to the Office of Water Rights which is responsible for administering the applications for the Board. I have contacted that office on your behalf to see what needs to be done to acquire a permit. They have no formal application form for flood-control works and indicated that it would be sufficient if you were simply to address a letter to Mr. John Hatch, who heads the office, and request a permit for a flood-control facility. That will give them a formal record of your request. In addition, because they will need permission to enter on your property to inspect your project, the letter should indicate that you agree to allow an inspection. In order to speed things along I have taken the liberty of drafting a letter for your signature which includes the necessary request and permission to inspect. If you will sign and return it in the enclosed envelope, that will put things in motion.

Mr. M. C. Johnson
March 31, 1980
Page 2

Once the Office of Water Rights receives your request they will send an engineer to inspect the site. If they find it acceptable they will recommend to the Board of Water Management that a permit be issued. If the engineer feels further work needs to be done they will recommend modifications before the permit is issued. The decision on your permit will be made by the Board at one of its monthly public meetings held in Pierre. It will be necessary to publish legal notice of that meeting in a county paper, the cost of which is not expensive, but must be paid by the applicant for the permit. If everything is in order and the engineer is satisfied that your dam is safe, I anticipate no problems in the Board issuing a permit. Once that is done, we will ask the court to dismiss our suit against you, Ms. Hart and Mr. O'Connell.

Finally, I appreciate your cooperation in this matter. I think you will agree that applying for a permit is the easiest and best method for all concerned to achieve their original objectives. If you have any questions about this matter, please let me know.

Sincerely yours,

Curtis Wilson
Assistant Attorney General

CW:ly

Enclosures

No. FC-1

Publish first publication, on or before July 10, 1980

NOTICE OF HEARING ON APPLICATION
TO CONSTRUCT FLOOD CONTROL FACILITIES

Pierre, South Dakota 57501

July 2, 1980

Notice is hereby given, M. C. Johnson whose post office address is Phillip, South Dakota, has ^{*petitioned*} made an application in accordance with SDCL 46-19-1 for a permit to construct and maintain flood control facilities located in the east forty feet of the east 140 feet of Lot B; west 100 feet of the east 140 feet out of Lot B; Both in Mann's Addition of Phillip

~~of Section~~ 21E, Twp. 1N, Range 20E

*Call from atty Bryan 7/2/80
called paper 7/2/80 BW.*

This Application No. FC-1 will be considered by the Water Management Board at Meeting Room #1, Kneip Building, Church & Illinois, Pierre, South Dakota

upon the 24th day of July, 1980 at 9 A. M. The Board is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Board decision who desires to present or cross-examine witnesses according to SDCL 1-26 may notify the Board in writing prior to the hearing or orally at the hearing.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Board may be appealed to the Courts as provided by law.

Any handicapped person wishing to attend this hearing can contact the Water Rights Division, DWRN, Joe Foss Building, Pierre, South Dakota, prior to the hearing date for assistance to assure access to the hearing.

WATER MANAGEMENT BOARD

BETTY WESTLUND
Water Rights Specialist

cc: M. C. Johnson
607 West Bridge
Phillip SD 57790

*appl. not changed
may be in the future
to Petitioned.*



Department of Water & Natural Resources

Joe Foss Building
Pierre, South Dakota 57501

Division of Water Rights
(605) 773-3352

July 2, 1980

M. C. Johnson
607 West Bridge
Phillip SD 57790

Dear Mr. Johnson:

You are hereby notified that your Application No. FC-1 for a permit to construct flood control facilities has been examined and found to comply with the laws of South Dakota and the regulations thereunder. A notice of your intent to construct flood control facilities has been sent to the Publisher of the

PIONEER - REVIEW printed at Phillip, South Dakota for your information, a copy of this notice is enclosed.

The Publisher of the PIONEER - REVIEW has been instructed that he is to publish the notice of your proposed appropriation of water once a week, for two consecutive weeks after you have verified that the notice is to be published. The Publisher has also been informed that you are to pay the cost of publication and that you should make the necessary arrangements with him to pay these costs.

You should know that the Publisher is to furnish proof of publication to the Water Management Board within 60 days of the date of this letter.

You are also notified that SDCL 1-26 provides you the opportunity to meet informally with the Water Management Board Staff to discuss proposed recommendations by the staff to the Board prior to the scheduled hearing. If we do not hear from you, we will assume that the opportunity for an informal meeting is being waived and you wish to proceed directly to the hearing on your application before the Board.

Sincerely,

BETTY WESTLUND
Water Rights Specialist

Enclosures

Equal Opportunity Employer



Department of Water & Natural Resources

Joe Foss Building
Pierre, South Dakota 57501

Division of Water Rights
(605) 773-3352

July 2, 1980

Les Ravellette
PIONEER - REVIEW
Phillip SD 57567

Dear Mr. Ravellette:

Enclosed is a Notice of Intent to Construct Flood Control Facilities by M.C. Johnson

Application No. FC-1 in Haakon County, South Dakota.
Please publish this notice once a week for two weeks in your paper, the

PIONEER- REVIEW as provided for in SDCL 46-5-17 amended. The first publication should be on, or before July 10, 1980.

The Applicant should verify to you that the notice is to be published, before you make the first publication. The applicant is to pay the costs of publication and should make the necessary arrangements with you to pay these costs.

Please receipt for this notice immediately after first publication attaching thereto a copy of the first publication so that it may be compared with the records. For your convenience, you may use the printed form below for this purpose.

After final publication, please complete the enclosed Form 8 to furnish Proof of Publication. The permit to construct flood control facilities cannot be issued until this proof of final publication is received. This Proof of Publication must be filed within 60 days of this notice for the applicant to retain this priority.

Sincerely, Water Management Board

Enclosure
cc: applicant

BETTY WESTLUND, Water Rights Specialist

No. FC-1
TO: Division of Water Rights
Joe Foss Building
Pierre SD 57501

Date _____

Dear Sirs:

We are in receipt of your letter of _____, 1980 enclosing Notice of Intent to Construct Flood Control Facilities, as proposed in our issue of _____, 1980.
ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Sincerely,

No. FC-1

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Haakon) ss.

I, Les Ravellette hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Pioneer Review

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the _____

City of Philip

County of Haakon and State of South Dakota;
that the said notice was published in said newspaper on the following
two dates:

July 10, 1980

July 17, 1980

B. Ravellette
(Signature)

Publisher
(Title)

July 18, 1980
(Date Signed)

NOTICE OF HEARING ON
APPLICATION TO
CONSTRUCT FLOOD
CONTROL FACILITIES
Pierre, South Dakota 57501
July 2, 1980

Notice is hereby given, M.C. Johnson whose post office address is Philip, South Dakota, has made an application in accordance with SDCL 46-19-1 for a permit to construct and maintain flood control facilities located in the east forty feet of the east 140 feet of Lot B; west 100 feet of the east 140 feet out of Lot B; Both in Mann's Addition of Philip, Twp. 1N, Range 20E.

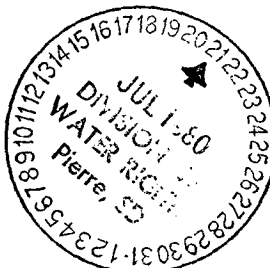
This Application No. FC-1 will be considered by the Water Mangement Board at Meeting Room #1, Kneip Building, Church & Illinois, Pierre, South Dakota upon the 24th day of July, 1980 at 9 A.M. The Board is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Board decision who desires to present or cross-examine witnesses according to SDCL 1-26 may notify the Board in writing prior to the hearing or orally at the hearing.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Board may be appealed to the Courts as provided by law.

Any handicapped person wishing to attend this hearing can contact the Water Rights Division, DWRN, Joe Foss Building, Pierre, South Dakota, prior to the hearing date for assistance to assure access to the hearing.

WATER MANAGMENT
BOARD

/s/ Betty Westlund
Water Rights Specialist
(Publish July 10 & 17, 1980)





July 18, 1980
Philip, So. Dak. 57567

Water Rights Commission
Pierre, South Dakota

Dear Sir:

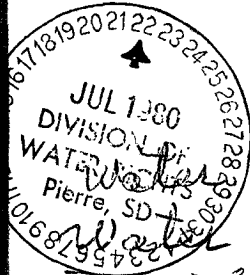
In regard to M.C. Johnson's petition for flood control, I am concerned that he might do more construction work in the area and further alter the natural water way.

I live on lots 7 and 8 in the Russell Addition and the north loop of Bad River goes along my back lot. I would not want the natural water way changed so water no longer flows along this route as it would have effect on my well. Also it could cause further destruction to the trees in that area.

Other home owners in the area would also be concerned if more work is instigated in that area.

Sincerely,

Ann R. Williams
Box 504
Philip, So. Dak. 57567



Box 148 Philip, S.D. 57567

Water Management Board
Water Rights Division DWNR,
Joe Foss Building

Pierre S.D. 151 Betty Westlund

This letter is in regards to
the notice of Hearing on
construction of Flood Control
Facilities, application made
by M. C. Johnson of Philip S.D.
and published in The Pioneer
Review Philip S.D. under legal
notices on dates 10 and 17 July

A hearing is to be held¹⁹⁸⁰
according to this notice on the
24th of July, 1980 by the
water management Board in
Room #1 Kneep Building Pierre S.D.
I am an older man of 74
but hope to be at this
meeting as I own the land

adjoining the M. C. Johnson, and
Ella Hart property on the north.
I don't have to tell you as
The Water Resources Board
knows already how he
~~illegally entered or caused to~~
~~enter my property and bull-~~
doze upon 2 different occasions
dozens of trees and under-
brush and excavated much
dirt which was not all
replaced, some of these trees
were 12 to 14 inches in diameter.
before I managed to stop
them from digging a new
diversion channel across my
property, with out 1 word
of prior notice and legally.

Sincerely

Enoch C. Anderson

Philip, S. D. 57567

July, 22, 1980



Water Management Board

Betty Westlund

Re- M C Johnson, Philip, S.D.--Application No. FC-1

This spring when the natural contour of the North Fork of Bad River was being desecrated, I called the Attorney General's office to register my protest.

Because, we have had no rain, I am not sure how it will effect my property.

Will there be more of a chance of the water coming over the bank at the Anderson property?

Or will it prevent the natural flow of water around that bend? This has a great effect on my shallow well. If the water flows around that bend, in the spring, I have water in my well all summer.

The natural ecology has been disturbed. There will be cutting and silting, if we ever get any rain, because there is now 'raw' earth where there was a cover of trees brush and grass.

If there are laws regarding the changing of natural water ways, are they to be ignored?

I hope you give this matter your serious consideration.

Sincerely

Jean M. Burns

Jean M. Burns

Box 306

Philip, S. D.

57567

FC-1

**Department of
Water & Natural Resources**

Joe Foss Building
Pierre, South Dakota 57501

Water Rights Division
605 773-3352

September 10, 1980

*file received
2:50 9/25/80*

TO: Persons Interested in M.C. Johnson Flood Control Application

FROM: John Hatch, Chief Engineer, Water Rights Division

SUBJECT: Reconsideration of Deferred Application

The Water Management Board will reconsider deferred Flood Control Application FC-1 at 1:30 pm., on September 25, 1980 at Meeting Room #1, Kneip Building, Church & Illinois St., Pierre SD.

This reconsideration hearing will be conducted in accordance with the provisions of SDCL 46-1-1 thru 46-1-9; 46-1-14; 46-2-9 thru 46-2-11; 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22; 46-5-41; 46-6-3; 46-6-5; 46-6-6.1; 46-6-10; 46-6-3.1; 46-6-14 and Board Rules ARSD 52:01:01:01 thru 52:01:01:13.

This application was previously deferred by the Board pending staff investigation. A report on the deferred application has been prepared by the Water Right Staff and is available upon request.

After reconsideration of the deferred application the Board can approve, conditionally approve, defer, or deny all or part of the Application.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process right will be forfeited if they are not exercised at the hearing. Decisions of the Board may be appealed to the Courts as provided by law.

You are also notified that SDCL 1-26 provides any interested party the opportunity to meet informally with the Water Rights Division Staff to discuss proposed recommendations by the staff to the Board prior to the scheduled hearing. If we do not hear from you, we will assume that the opportunity for an informal meeting is being waived and you wish to proceed directly to the hearing on the application before the Board.

Any handicapped person wishing to attend this hearing can contact the Water Rights Division, DWNR, Joe Foss Building, Pierre SD, prior to the hearing date for assistance to assure access to the hearing.

Very truly yours,

John Hatch

JOHN HATCH, Chief Engineer
Water Rights Division

JH:kw

Equal Opportunity Employer

REPORT ON M.C. JOHNSON
CHANNEL CHANGE

September 23, 1980

The peak discharges for a 2, 5, and 10 year storm for the 164 square mile drainage area was determined by using the flood frequency equations found in the pamphlet titled "A Method for Estimating Magnitude and Frequency of Floods in South Dakota", prepared by the U.S. Geological Survey for the South Dakota Department of Transportation.

$$Q_2 = 110 A^{0.54} E^{-1.16}$$

$$Q_2 = 110 (164)^{0.54} E^{-1.16}$$

$$Q_2 = \underline{657 \text{ cfs}}$$

$$Q_5 = 320 A^{0.49} E^{-0.84}$$

$$Q_5 = \underline{1934 \text{ cfs}}$$

$$Q_{10} = 528 A^{0.48} E^{-1.16}$$

$$Q_{10} = \underline{3162 \text{ cfs}}$$

E = mean base elevation in thousands of feet above mean sea level

A stage height of six feet in the upstream channel was used. A greater depth would cause out of channel flow. Manning's equation was then used to determine the approximate channel capacity. An "n" value of 0.07 was used for the upstream channel. This value was based on a channel which is winding, irregular and obstructed with debris and weeds. The Manning's Equation is as follows:

$$V = \frac{1.49}{n} R^{2/3} S^{1/2}$$

where V = velocity of flow in ft per sec.
R = hydraulic radius in ft.
S = bed slope
n = the Manning roughness coefficient

The following table of value are the result of the 310 cfs of flow.

Upstream <u>X - section</u>	New Channel <u>X - section</u>	Downstream <u>X = section</u>
Q = 310 cfs	310	310
Wp = 35.8 ft	22.04 ft	26.0 ft
A = 150 ft ²	52.8 ft ²	74.25 ft ²
N = 0.07	0.035	0.070
V = 2.06 ft/s	5.86 ft/s	4.17 ft/s
SE = 6.067 ft	4.05 ft	4.77 ft
v ² /2g = 0.067 ft	0.53 ft	0.27 ft
y _c = 2.25 ft	2.70 ft	2.0 ft
S = 0.0014	0.006	0.01
y = 6.0 ft	3.52 ft	4.5 ft

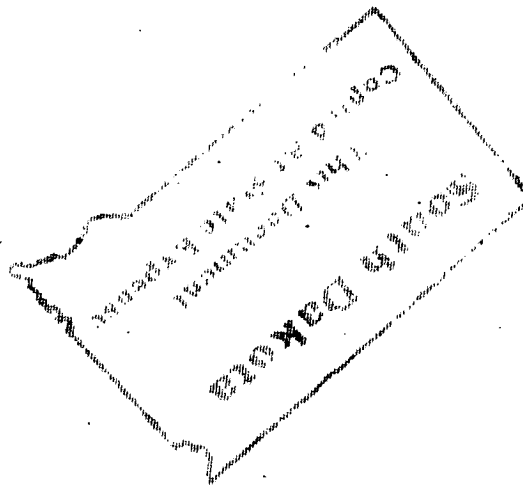
The depth of flow in the new channel caused by the 310 cfs is greater than the depth which would cause a supercritical condition, the flow would therefore be subcritical throughout this reach of the river. Because of the larger capacity of the new channel, flows normally occurring can easily be conveyed. The channel change will not cause any abnormal conditions of flow nor any critical conditions of flow.

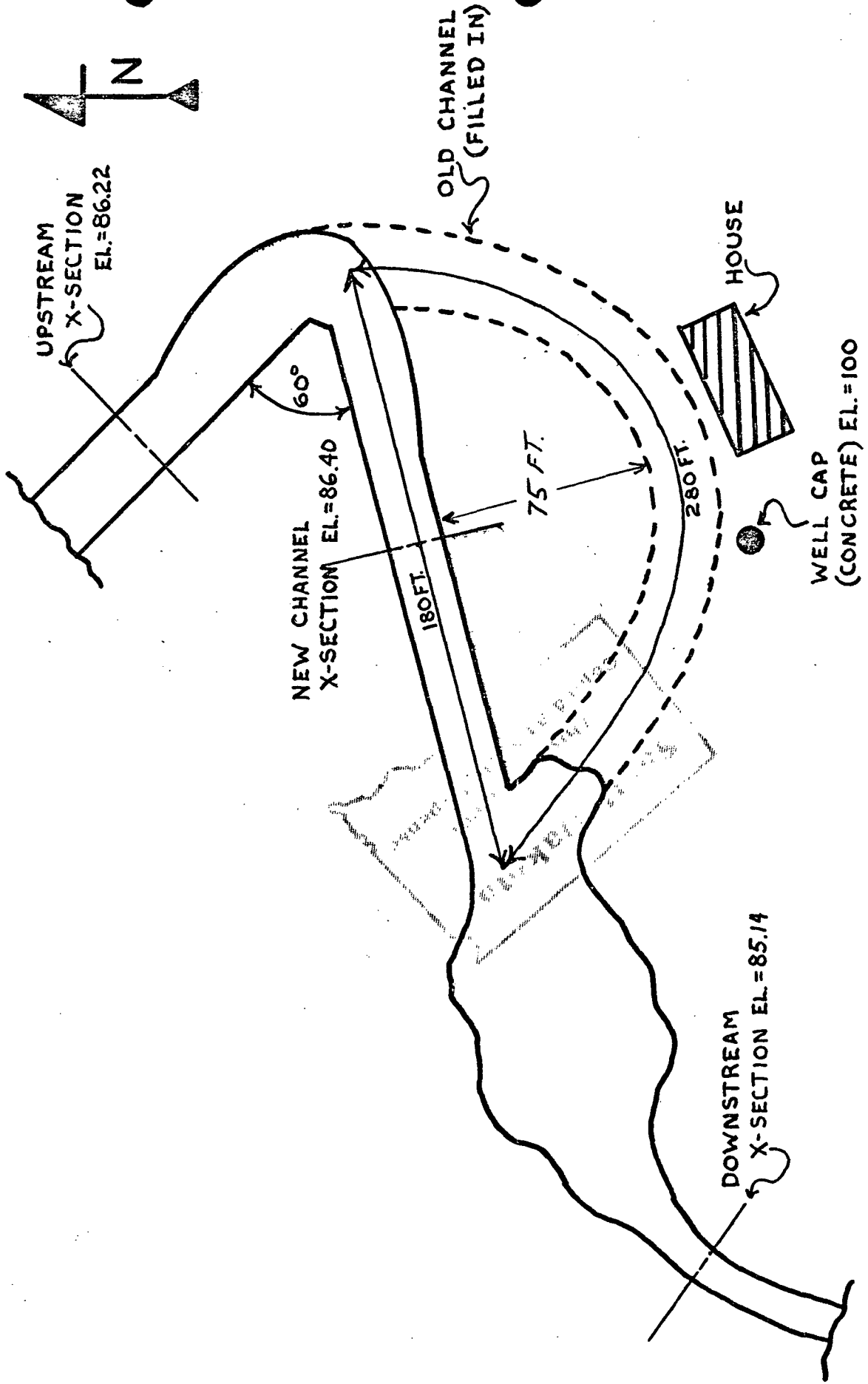
The upstream channel capacity is one half of a two year flow. On the average flooding can be expected to occur every other year. Out of bank flow conditions would occur upstream before reaching the new channel. The new channel will not add to nor cause any change in the normal pattern of flooding. The channel alteration was made to protect the house from being undercut.

The 60° bend of the river channel from the upstream into the new channel as well as an increasing velocity will more than likely cause eroding of the embankment and will again cause the channel to move toward the house. Some bank statilization work should be conducted for the protection of this embankment.

TIM SCHAAL
Water Resources Engineer

JIM WINTERTON
Water Resources Engineer

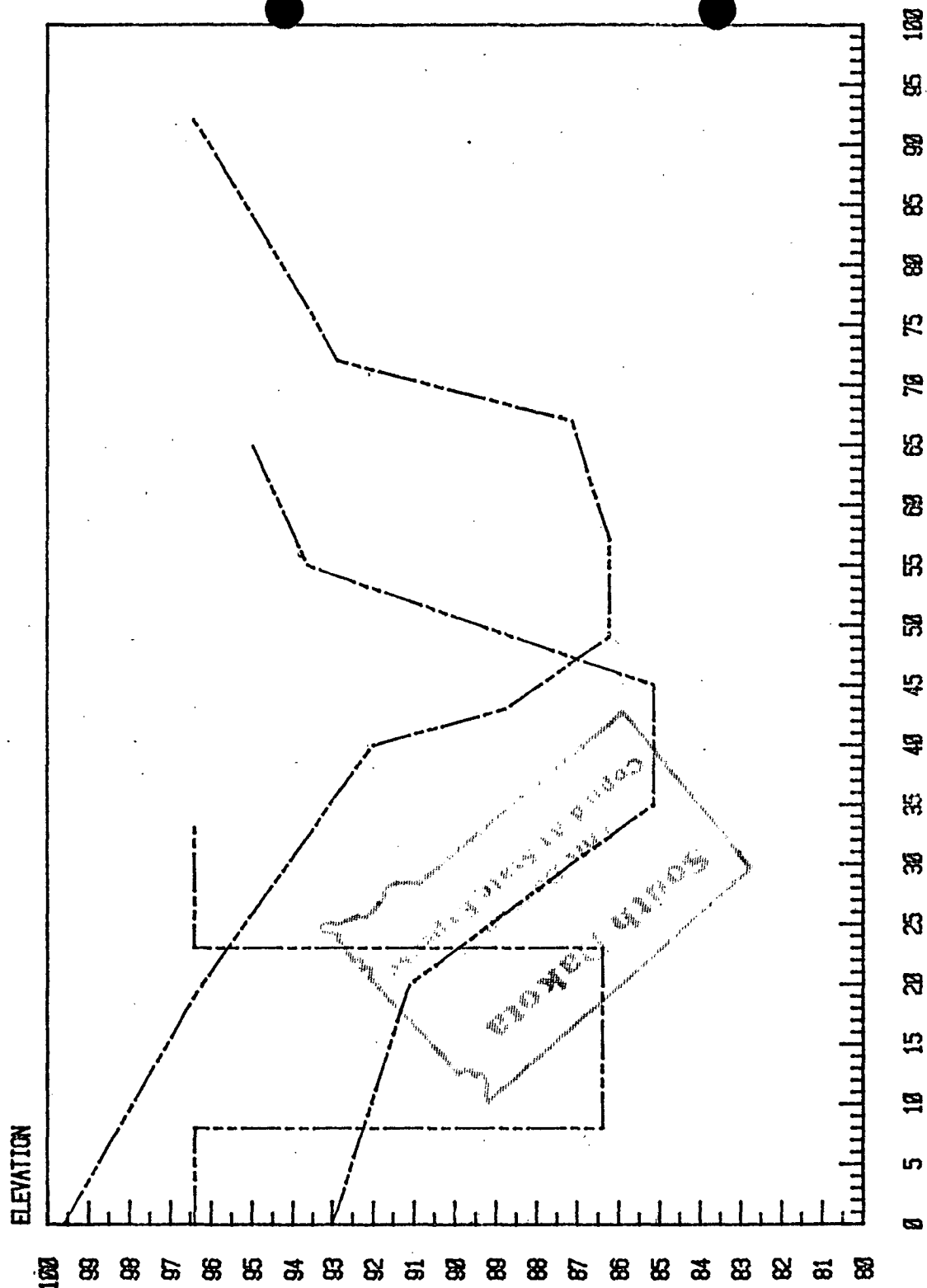




SCALE $\frac{1}{4}'' = 10'$
KCL 26 AUG 80

M. C. JOHNSON FLOOD CONTROL STRUCTURE

PHILIP, SD 22 AUG. 88



UPSTREAM
X-SECTION

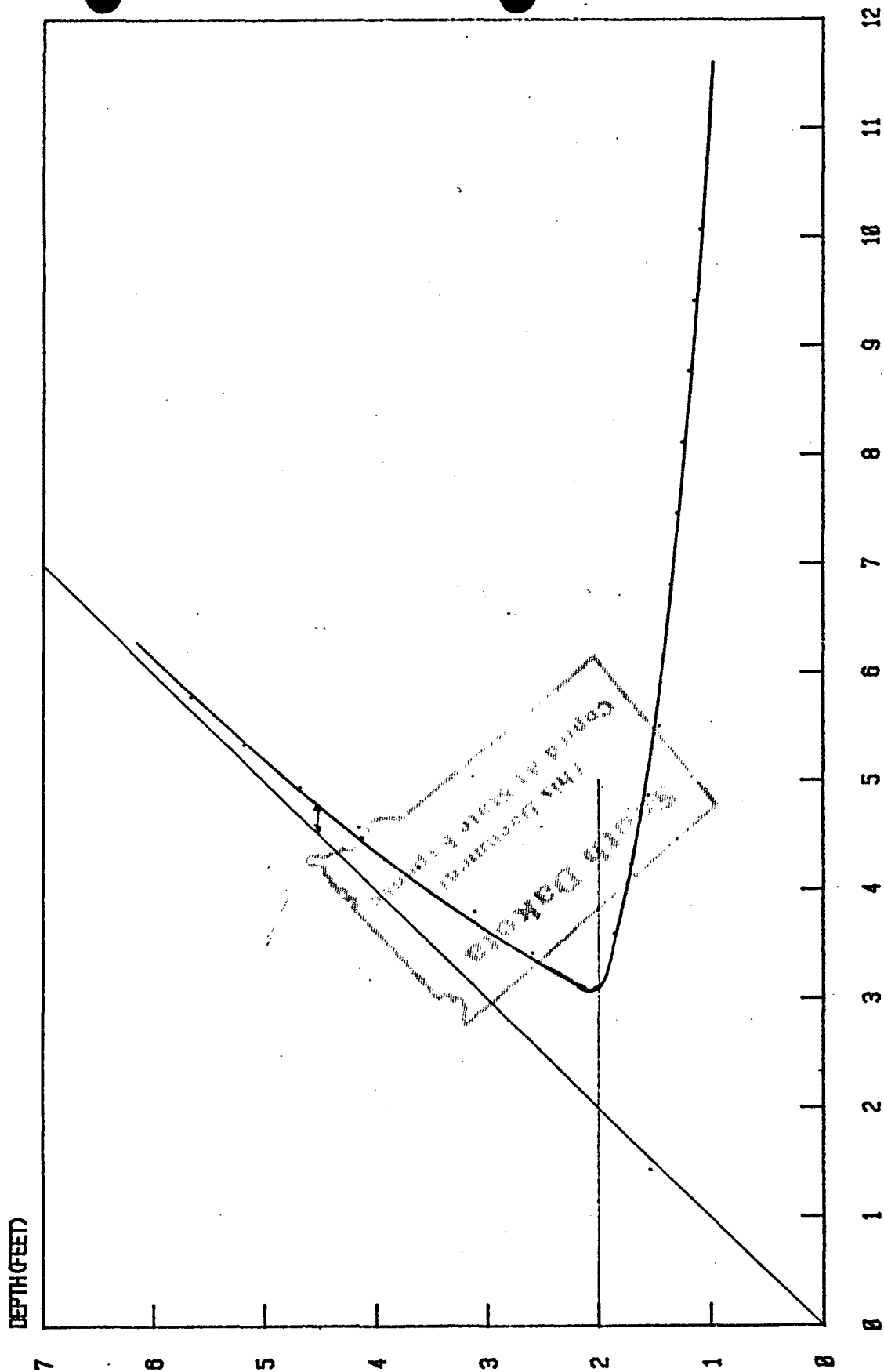
NEW CHANNEL
X-SECTION

DOWNSTREAM
X-SECTION

DISTANCE

SPECIFIC ENERGY DIAGRAM

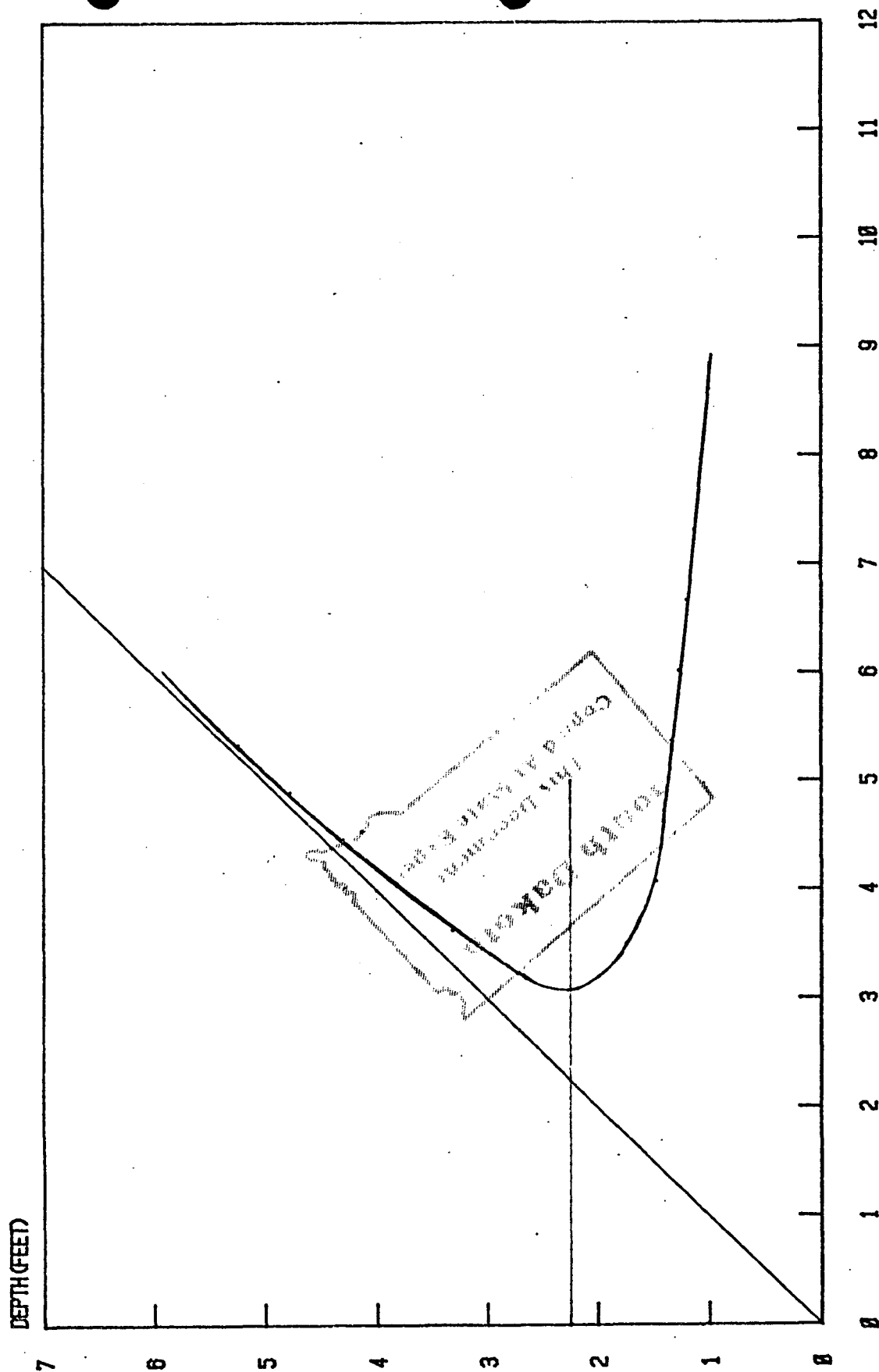
DOWNSTREAM CHANNEL X-SECTION



SPECIFIC ENERGY (FEET)

SPECIFIC ENERGY DIAGRAM

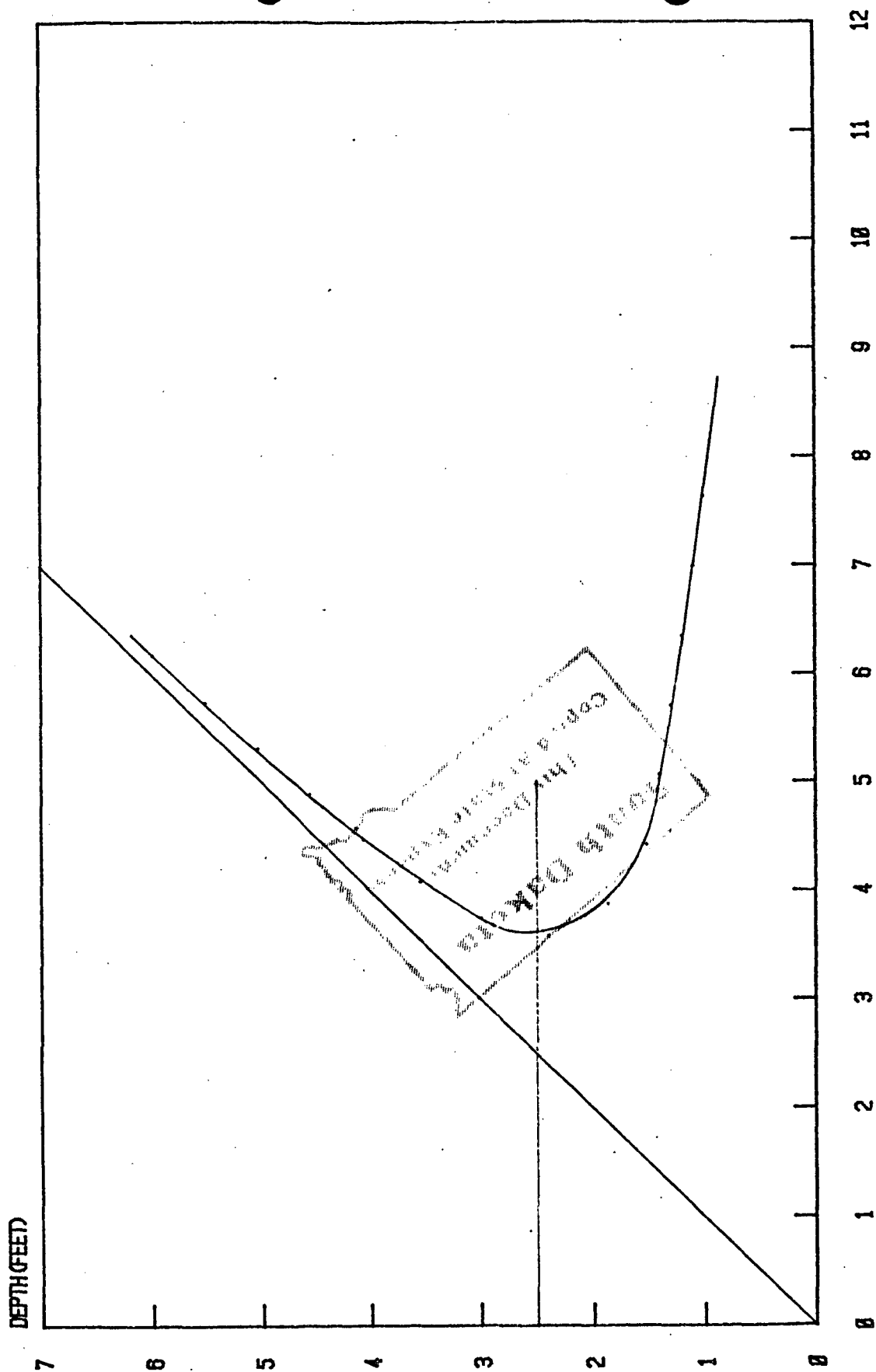
UPSTREAM X-SECTION



SPECIFIC ENERGY (FEET)

SPECIFIC ENERGY DIAGRAM

NEW CHANNEL X-SECTION





Department of Water & Natural Resources

Joe Foss Building
Pierre, South Dakota 57501

Water Rights Division
605 773-3352

December 2, 1980

M. C. Johnson
607 W. Bridge
Phillip SD 57790

Dear Mr. Johnson:

This is to notify you that final Decisions including Findings of Fact and Conclusions of Law were adopted by the Water Management Board for the application of a Flood Control Facility which was considered at the September meeting.

The Final Decision, Findings and Conclusions are on file in this office and signed copies will be furnished upon request. South Dakota Statutes provide that the decisions of the Board may be appealed to the Courts.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:kw

cc: Jay Crowser
E. C. Anderson

Equal Opportunity Employer

RECEIPT

WATER RIGHTS COMMISSION

State of South Dakota

No 4 7709

PIERRE, September 26, 1980

RECEIVED OF Curt Wilson, Pierre, SD 57501

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

Fee for Application for Permit to Appropriate Water No. _____ (examination, processing, recording and filing) _____		
Fee for inspecting Construction, and issuing Cert. of Construction No. _____		
Fee for inspecting Beneficial Use, and issuing Water License No. _____		
Fee for issuing Location Certificate-Dry Draw, No. _____		
Fee for filing _____		
Fee for certified copy of _____		
Fee for Print copy of map _____		
Fee for Certifying _____		
Fee for filing (flood control) FC-1 _____ (any other work as provided by law)		2. 50
TOTAL		2. 50

WATER RIGHTS COMMISSION

By *John Hatch*
Chief Engineer, Executive Officer

JOHN HATCH /bt

Division of Water Rights (605) 773-3352

December 18, 1980

Curt Wilson
Earth Resources
Anderson Building
Pierre, SD 57501

Dear Mr. Wilson:

Enclosed please find receipt No. 4 7709 in the amount of \$2.50, filing fees received for the FC-1 (Division II) M.C. Johnson flood control facilities.

Sincerely,

BETTY WESTLUND
Water Rights Specialist

BW/gy

encl

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. FC1-2

I have this day **June 9, 2019** made a site visit of the project constructed by **M C Johnson, Philip SD** of Permit No. **FC1-2**, bearing the priority of **4/1/1980** authorizing a previously constructed channel on the **Bad River** for **Flood Control** purposes in **Haakon** County.

A. Works used to divert the water: A section of the North Fork of the Bad River was rerouted to prevent further erosion and encroachment of the river to nearby homes located along the left bank in the town of Philip. Approximately 180 feet of channel was excavated and the resulting excavated material used to fill a portion of an oxbow.

B. Compliance with Permit Requirements: yes

C. Condition and Location: The Bad River in the immediate vicinity of the channel reconstruction appears relatively stable. The old oxbow which was filled is vegetated and floods when the River is at high stage and out of its banks. There is a considerable amount of woody debris partially obstructing flow just upstream of the sharp bend at the beginning of the reconstructed portion of the river channel. The project seems functioning as intended.

Approximate upstream end of channel:

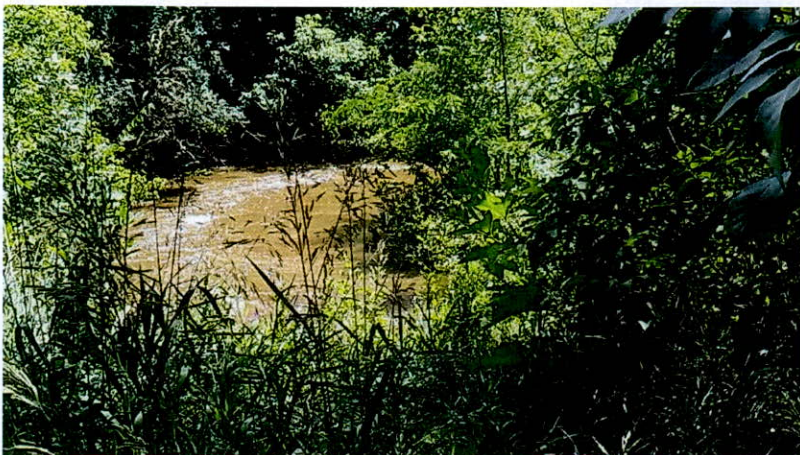
1,317' W and 52' S of NE corner Section 23 T 1N R20E (44.038081, -101.671974)

D. Comments or other permit(s) associated with the project: The trailer house which may have been the home most at risk from erosion appears to have been removed.



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: **7/10/2019**



Looking downstream from the left bank of the Bad River just upstream of the reconstructed channel.

M C Johnson
Flood Control Permit No. FC1-2
Philip So. Dak.
Haakon County
6/9/2019

West Pine Street

Philip Avenue

Sec 14
T001N
R20E

Reconstructed Channel Section
NW 1/4 NE 1/4 S23 T1N R20E

Photo Pt. and upstream end of channel
Lat: 44.038081 Lon: -101.671974

North Fork Bad River

Channel abandoned

Bridge Street



Water Rights Inspector
DNR Water Rights Program

Sec 23
T001N
R20E

STATE OF SOUTH DAKOTA

WATER LICENSE NO. FC1-2

(1) M C Johnson, Philip SD 57567 (see footnote) made Application No. FC1-2, April 1, 1980 for a flood control permit to reroute a portion of the Bad River to prevent further erosion and encroachment of the river to nearby homes located along the left bank in the town of Philip in Haakon County, South Dakota. Permit No. FC1-2, with a priority date of April 1, 1980 was approved September 25, 1980 with Findings of Fact and Conclusions of Law approved November 20, 1980.

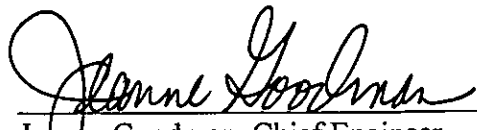
(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the flood control project. An approximately 180 feet channel was excavated, and the resulting material used to fill a portion of an oxbow. The immediate vicinity of the channel reconstruction appears to be stable and functioning as intended.

The approximate upstream end of the channel is located:

- 1,317'W and 52'S of NE corner Section 23, T1N, R20E (N ½ NE ¼)
Latitude 44.038081, Longitude -101.671974

(3) Pursuant to South Dakota Water Law 46-5-30.1 Permit No. FC1-2 is licensed for the purpose of flood control caused by flood flows in the north fork of the Bad River and is subject to South Dakota Water Law, any limitations or conditions listed in Flood Control Permit No. FC1-2 including the following:

- Prior rights of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be unlawfully impaired by this flood control project.

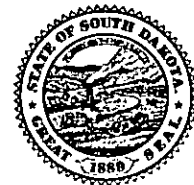

Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

AUG 20 2019

date



Footnote: M C Johnson passed away in 2005. There is no record of who ownership of this flood control permit should be transferred to. Therefore, this flood control permit has been licensed and filed with the administrative record.