Considered: _____ WATER PERMIT NO. 2199-2

Phone: 394-4165

Name of Applicant: City of Rapid City

Post Office Address: 300 6th St, Rapid City SD 57701

Amount of Water Claimed: 0.64 cfs Total Acres: NA

Source of Water Supply: Rapid Creek

Water to be used for: municipal County: Pennington

About _____ miles _____ of _____

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

F.F.& C/.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY Date Received: 8-6-91 Fee: $50 Remarks Change in use of a portion of irrigated land under Murphy Ditch

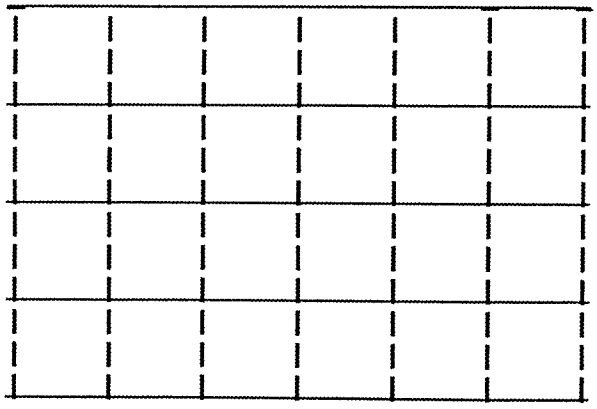
Corrected Application Received _____ Period of Annual Use Jan 1- Dec 31

WATER QUALITY APPROVAL RECEIVED NA APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES ____ NO ____ REMARKS _____

Diversion Point: SE 1/4 NE 1/4, SW 1/4 SW 1/4 Sec 3, NW 1/4 SE 1/4 Sec 8, SE 1/4 NE 1/4 Sec 9; (Pactola Reservoir Diversion) all in T1N-R7E; & NW 1/4 SW 1/4 Sec 2-T1N-R5E

Land to be Irrigated: _____



Well Log: Driller: NA Licensed YES ____ NO ____

Depth of Well: _____ REMARKS _____

Type of Map: _____ PREPARED BY: _____ Reviewed and the Number Assigned on 9-17-91 By Karen Schlaak

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

Mail to: Water Rights Div.
523 E. Capitol
Pierre, SD 57501
(605) 773-3352
Letter 4/16/90

No. 2199-2 Hydrologic Unit 10120110
Map No. _____ Basin Upper Cheyenne
Newspaper Rapid City Journal, PO Box 450
57709

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

Check use of water: Industrial ☒ Commercial ☒ Municipal ☒ Other Common Distribution System ☒
Rural Water System ☒ Suburban Housing ☒ Geothermal Heat ☐ Institutional ☐ Recreational ☐
Domestic ☒ (above 18gpm) Other ☐

AUG 1991 DIVISION OF WATER RIGHTS Pierre, SD

Type of Application: Check one or more of the following

New ☐ Vested Right ☐ Future Use ☐ Change Use ☒
☒ Amend Permit No. 1727-2 with old priority date retained
Change diversion point(s) ☒ Add diversion point(s) ☒ Other ☐ _____
☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. N/A
☐ Construction to use water reserved by Future Use Permit No. N/A

1. Name of Applicant City of Rapid City Phone No. (605) 394-4165
   Post Office Address 300 6th Street, Rapid City State SD 57701
   (Street, RR, or Box) (City) Zip Code
2. Amount of water claimed (c.f.s) ~~0.4~~ 0.05 cfs not to exceed 6.4 af/yr, or 5.4 af/yr at alternate Pactola Reservoir diversion
3. Source of water supply Rapid Creek (see attached Exhibit 1)
4. Location of point of diversion See attached Exhibit 2 for legal description of City of Rapid City Water Treatment Plant, Galleries and alternate Pactola Reservoir diversion points County Pennington
5. Counties where water will be used Pennington County
6. Annual period during which water is to be used April 15 through October 15 (January 1 through December 31 for Pactola diversion releases from storage)
7. Give a brief description of proposed 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 overall project is described in detail in the October 1990 Wright Water Engineers, Inc. report previously submitted in connection with the Tyler Property. The project will divert water from Rapid Creek to the City of Rapid City Water Treatment Plant through the existing diversion structure on Rapid Creek and to the existing infiltration galleries. The project will also, in the alternative but not simultaneously divert water from Rapid Creek to storage in Pactola Reservoir. The Pelle property described in Exh. 1 is adjacent to the Tyler Property.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
County of Pennington)ss

I, Edward R. McLaughlin, Mayor for the City of Rapid City 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 Edward R. McLaughlin

DONNA M. WILLIAMS
NOTARY PUBLIC State of South Dakota
MY COMMISSION EXPIRES 4/19/99
SEAL

Subscribed and sworn to before me this 1st day of August 19 91

Donna M Williams
Notary Public

SOUTH DAKOTA
WATER PERMIT No. 2199-2

Date of first receipt of application August 6, 1991.

The Water Management Board approved Water Permit Application No. 2199-2 on May 7, 1992 for the City of Rapid City, 300 6th Street, Rapid City SD 57701 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2199-2 is to transfer the use of a portion of Rapid Creek natural flows historically used to irrigate approximately 4 acres know as the Pelle property. The portion of Rapid Creek natural flows to be transferred to the city is 0.05 cubic feet of water per second (cfs) with an annual volume limitation of 6.2 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 5.3 acre-feet, if stored in Pactola Reservoir. Historically, the 0.05 cfs has been used to irrigate approximately 4 acres located in Lot B-3 of Lot B of Government Lot 1 (NW 1/4 NW 1/4) of Section 19-T1N-R9E also known as the Pelle property. The existing diversion point on Rapid Creek for Murphy Ditch is located in the SW 1/4 Section 8-T1N-R8E. This permit changes the diversion point for the 0.05 cfs to diversion points for use by the city located in the SE 1/4 NE 1/4 Section 3 (Rapid City Water Treatment Plant); SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); NW 1/4 NE 1/4 Section 9 (Meadowbrook Gallery); NW 1/4 SE 1/4 Section 8 (Jackson Springs Gallery); all in T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is the NW 1/4 SW 1/4 Section 2-T1N-R5E and the reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. This permit does not authorize any new water appropriation from Rapid Creek and the claimed priority date of April 6, 1878 for use of 0.05 cfs is to be retained by the city.

2. The water appropriated shall be used for the purpose of meeting Rapid City's water needs and may not exceed the amount of water needed for beneficial use for municipal, industrial, commercial, common distribution system, rural water system, suburban housing and domestic purposes.

3. The water is to be used during the following described annual period: April 15 - October 15 for diversions from the Water Treatment Plant, Sioux Park Gallery, Meadowbrook Gallery and Jackson Springs Gallery and January 1 - December 31 for Pactola Reservoir diversion releases from storage.

4. The date from which applicant may claim right is April 6, 1878.

(continued)

5. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. That Permit No. 2199-2 is limited to a diversion rate of 0.05 cfs for a total annual volume of 5.3 acre feet at Pactola Reservoir or a total annual volume of 6.2 acre feet at Sioux Park Gallery (SW 1/4 SW 1/4 Section 3), Meadowbrook Gallery (NW 1/4 NE 1/4 Section 9) Jackson Springs Gallery (NW 1/4 SE 1/4 Section 8) and the Rapid City Water Treatment Plant (SE 1/4 NE 1/4 Section 3), all in T1N-R7E. Maximum monthly diversion volumes at Pactola or the diversion points within Rapid City are as follows:

Month	Monthly acre feet at Pactola	Monthly acre feet at diversion points within Rapid City
May	0.70	0.83
June	0.82	0.96
July	1.11	1.31
August	1.42	1.68
September	0.97	1.14
October	0.28	0.33

Diversions during a month may be made at either Pactola Reservoir or at the diversion points within Rapid City, but not simultaneously at both Pactola and the Rapid City diversion points.

2. That the City of Rapid City report to the Chief Engineer annually the amount of water withdrawn each month at Pactola Reservoir or the diversion points within Rapid City.

3. That the Water Management Board is retaining jurisdiction of Permit No. 2199-2 in the event that additional information shows that changes need to be made in the monthly or total annual volume authorized by Permit No. 2199-2.

4. The amount of water with an April 6, 1878 priority date which may be appropriated under Vested Water Right Claim No. 1727-2 is decreased by 0.05 cfs to 16.31 cfs.

WATER MANAGEMENT BOARD

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

NOV 17 1992
(date)

Form 2A

Supplemental Information

(type or print in ink)

AUG 1991 DIVISION OF WATER RIGHTS Pierre, SD

1. Well Information - Proposed construction N/A

   a) Drill Hole Diameter _____ Depth _____

   b) Casing Type _____ Diameter _____ Thickness _____

   c) Screen Type _____ Diameter _____ Thickness _____

   d) Gravel Pack Thickness _____ Length of Gravel Pack _____

   e) Depth to Top of Water Bearing Material _____

   f) Depth to Water (ground surface to water level) _____

   g) Distance to nearest existing domestic well:

   On applicants property _____ On property owned by others _____

2. Dugout Information Estimates N/A

   a) Surface Dimensions _____ Depth _____

   b) Depth to water (ground surface to water level) _____

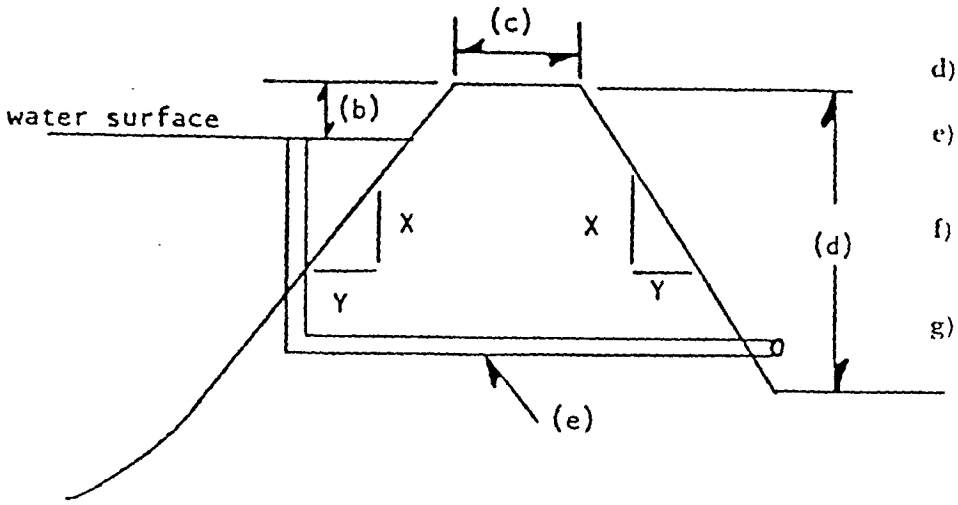
3. Water Storage Dams (Existing Pactola Reservoir)

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

United States Bureau of Reclamation

Department of Interior



b) Freeboard 3.3 ft.

c) Crest Width 40 ft.

Crest Length 5,200 ft. (including dikes)

d) Height 245 feet

e) Primary Outlet Capacity 1,150 cfs
If Pipe, diameter two 2.75 ft. x 2.75 ft. gates

f) Secondary Spillway Capacity 245,000 cfs
Spillway width 425 ft.

g) X & Y Slope
Upstream 2-1/2:1

Downstream 2:1

Surface Area of Impoundment 1,232 acres 1/

Storage 99,029 1/ acre feet

Drainage area above dam 319 sq. mi.

1/ includes flood pool

x Edward R. McLaughlin
Signature of Applicant
Mayor, City of Rapid City, SD

4-87

EXHIBIT 1

LEGAL DESCRIPTION OF IRRIGATED LAND
AFFECTED BY APPLICATION

Lot B-3 of Lot B of Government Lot 1 of Section 19 in Township 1 North, Range 9 East of the Black Hills Meridian, Pennington County, South Dakota as shown on Plat filed in Plat Book 23, Page 62 in Office of Pennington County, South Dakota Register of Deeds.

EXHIBIT 2

APPLICATION FOR PERMIT TO APPROPRIATE WATER
WITHIN THE STATE OF SOUTH DAKOTA

4. Location of Points of Diversion

City of Rapid City Water Treatment Plant:

North 71° 39' West, 1025 ft. from East ¼ corner of Section Three (3), Township One (1) North, Range Seven (7) East of the Black HIlls Meridian.

Sioux Park "Girlscout" Gallery:

1270 ft. North 54° 05' East of Southwest Corner of Section Three (3), Township One (1) North, Range Seven (7) East of the Black Hills Meridian.

Meadowbrook Gallery:

2032 ft. South 31° 41' West of Northeast corner of Section Nine (9), Township One (1) North, Range Seven (7) East of the Black Hills Meridian.

Jackson Springs Gallery:

2943 ft. North 58° 54' West of Southeast Corner of Section Eight (8), Township One (1) North, Range Seven (7) East of the Black Hills Meridian.

Alternate Pactola Reservoir Diversion (Inlet to Service Spillway):

South 19° East, 3740 feet of Northwest Corner of Section Two (2), Township One (1) North, Range Five (5) East of the Black Hills Meridian.

Reservoir generally located in portions of Sections Two (2), Three (3), Four (4), Five (5), Ten (10) and Eleven (11), Township One (1) North, Range Five (5) East of the Black Hills Meridian, and portions of Sections Thirty-One (31), Thirty-Two (32), Thirty-Three (33) and Thirty-Four (34), Township Two (2) North, Range Five (5) East of the Black Hills Meridian.

All of the above in Pennington County, South Dakota.

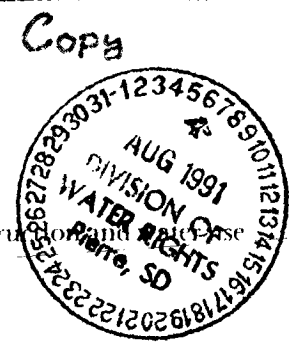
Copy

Form 2B

Affidavit of Water Use

No. 1727-2

(Type or Print in Ink)



Note: This Form is supplemental to Form 2 and is to be used when an affidavit pertaining to construction and water use already constructed is needed, primarily with vested right claims.

Affidavit Of Construction Of Water Use System And Application Of Water To Beneficial Use

Name of Applicant (Same as Form 2) Donald J. Pelle and Joan L. Pelle, husband and wife

Post Office Address Route 2, Box 4010, Rapid City, SD57701
(Street, RR or Box) (State) (Zip Code)

A. Notice of Appropriation See No. 1727-2 Date of Posting _____

Date of recording _____ Recording date _____
Where Book Page

B. Date of start of construction of water supply system See No. 1727-2

C. Date that water was first applied to beneficial use See No. 1727-2

D. Name of owner of original water supply system See No. 1727-2

E. Amount of water originally applied to beneficial use See No. 1727-2

F. Present Use of Water - Amount of water now being used approximately 1.59 acre feet per irrigated acre

Date that this water was first used See No. 1727-2

G. Chronological History of Water Use Purchased Lot B-3 of Lot B of Government Lot 1 of Section 19 in Township 1 North, Range 9 East of the Black Hills Meridian as shown on Plat filed inPlat Book 23, Page 62 in Office of Register of Deeds, Pennington County, South Dakota. Irrigated with side roll sprinkler system last summer as has been done at least each of the last 4 years.

Attach to this Form 2B any copies of notices, postings, filings, publications, affidavits, or other records that apply. You may also attach any written statement by you, or by others, that you deem pertinent.

State of South Dakota)
ss
County of Pennington)

I/We, Donald J. Pelle and Joan L. Pelle (print or type) the applicant, certify that I/we have read the foregoing and that the matters therein stated are true.

Signed (X) Don J Pelle

Signed (X) Joan L Pelle

Subscribed and sworn to before me 7/23, 19 91

seal expires 8/27/93
Notary Public or other qualified officer

I, the undersigned do hereby certify that I know about the water use system described above, that I have read the foregoing, and that the matters therein stated are true.

Don J Pelle 7/23 19 91
(Print name)

Joan L Pelle 7/23 19 91
(Print name)

RECEIPT

412701

Division of Water Rights

South Dakota Department of Water and Natural Resources

Pierre, August 6, 19 91

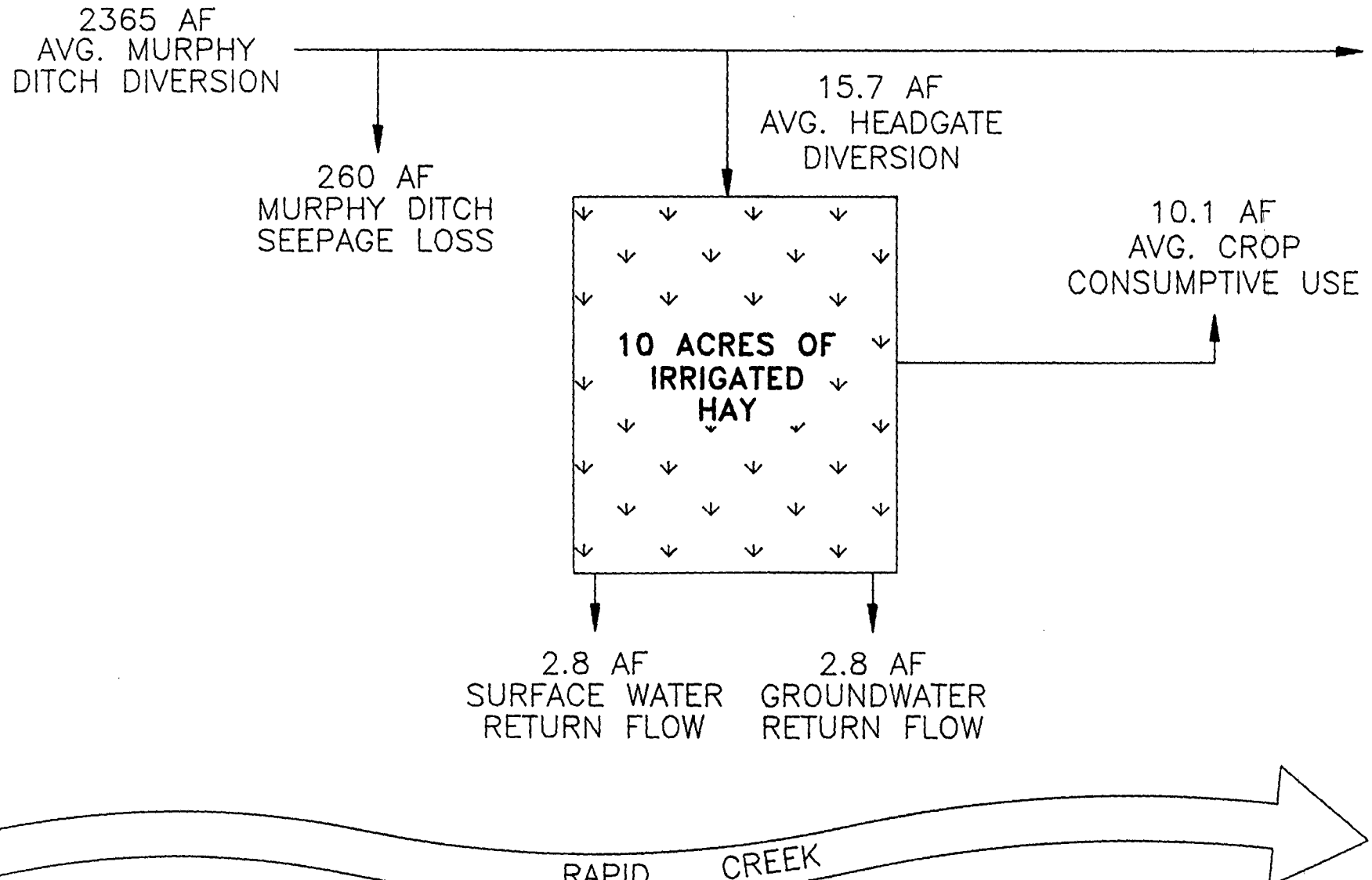
RECEIVED OF Leslie J. England, Attorney at Law, 731 St. Joseph St., Rapid City, SD 57701

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

Fee for Application for Permit No. 2199-2 to Appropriate Water, to construct works and to put water to beneficial use	50	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 Certified Copy of		
Fee for Print Copy of Map		
Fee for Certifying		
Fee for _____ (Any Other Work Provided by Law) **Total**	50	00

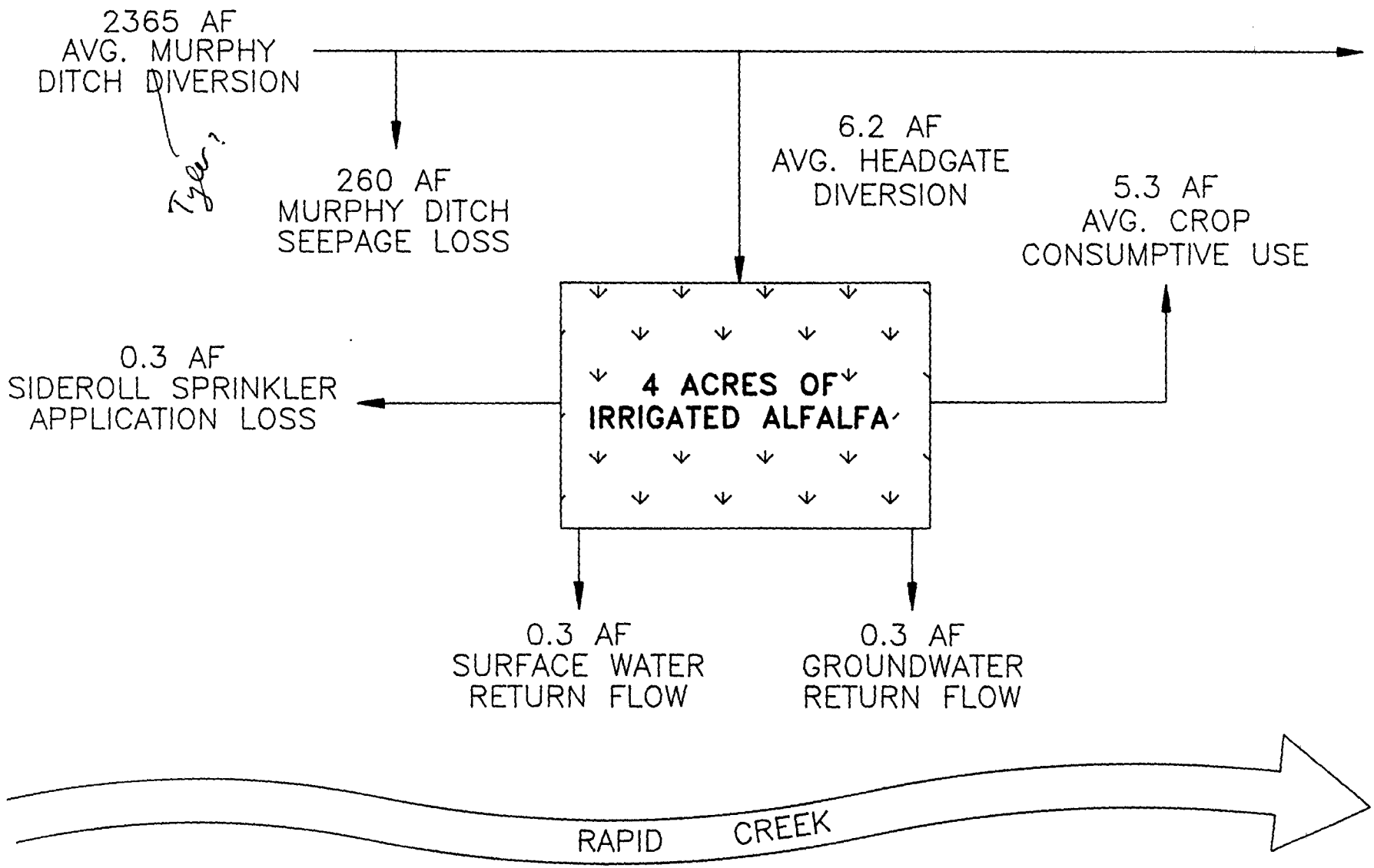
By [signature]
Chief Engineer

LONG PROPERTY WATER BALANCE



WRIGHT WATER ENGINEERS, INC.
2490 W. 26TH AVE., 100A
DENVER, CO. 80211 480-1700

PELLE PROPERTY WATER BALANCE



WRIGHT WATER ENGINEERS, INC.
2490 W. 26TH AVE., 100A
DENVER, CO. 80211 480-1700

STATE OF SOUTH DAKOTA - BUREAU OF ADMINISTRATION - OFFICE OF RECORDS MANAGEMENT - CERTIFICATE OF AUTHENTICITY
I HEREBY CERTIFY THAT THE PHOTOGRAPHIC IMAGE APPEARING ON THIS SLIDE OF MICROFILM IS AN ACCURATE AND COMPLETE REPRODUCTION OF THE ORIGINAL RECORD AS RECEIVED AND MICROFILMED IN THE REGULAR COURSE OF BUSINESS ACCORDING TO THE PROVISIONS OF SDCL 1-27-3 THROUGH 1-27-7. I FURTHER CERTIFY THAT THE PHOTOGRAPHIC PROCESS USED FOR MICROFILMING OF THE RECORD AND MICROFILM WHICH MEET THE MINIMUM REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS FOR MICROPHOTOGRAPHIC REPRODUCTION.
DATE MICROFILMED 12/16/92
ROLL NO. 2335 REDUCTION 25:1

WATER DEED

DONALD J. PELLE and JOAN L. PELLE, husband and wife, grantors, Rapid City, Pennington County, South Dakota, for and in consideration of One Dollar ($1.00) and other good and valuable consideration to them in hand paid, the receipt of which is hereby acknowledged, do hereby grant, convey and warrant to the CITY OF RAPID CITY, a South Dakota municipal corporation, grantee, of 300 6th Street, Rapid City, Pennington County, South Dakota 57701, the following described water right, appropriation and use of water, lying and being in the County of Pennington, State of South Dakota:

> The right to the use of that appropriation of water from Rapid Creek, diverting through the Murphy Ditch (Rapid Valley Water Company, Inc.), under South Dakota DENR Water License No. 1727-2, with priority of April 6, 1878, in the amount of .03 cubic foot of water per second of time, which is appurtenant for the irrigation of:
>
> > Lot B-3 of Lot B of Government Lot 1 of Section 19 in Township One North (T1N), Range Nine East (R9E) of the Black Hills Meridian, Pennington County, South Dakota, as shown on the Plat filed in Plat Book 23, Page 62, in the Office of the Register of Deeds, Pennington County, South Dakota;
>
> ☐ TRANSFER FEE PAID $ ...
> ☒ ... TRANSFER FEE
>
> consisting of a total of four (4) acres, more or less, with exclusive right to take, and divert and use said appropriation of water and to the exclusion of the remaining part of this or any other appropriation of water of the grantors.
>
> Exempt from transfer fee, SDCL §§ 43-4-21, 22(2).

The grantee is hereby authorized to detach the water right from the lands herein described and change its use to include any and all beneficial uses, as described in SDCL Title 46, and also to change the point of diversion and means of conveyance of the water of said appropriation to any location that may be designated by the grantee, and to file the necessary proceedings with the South Dakota Water Management Board to make these changes; and any order or decree of the said Water Management Board or confirmation of same by any court is hereby acquiesced in by the grantors, and it shall be binding upon the said grantors, their successors and assigns.

The grantors hereby waive any and all notices which may be required by law, and state that neither they nor their successors or assigns shall, at any time in the future, file any adverse claim or institute any proceedings in law or equity attacking adversely, or in any manner whatsoever, the equities, right, title or interest of any part or all of the water right herein referred to and for which it is hereby agreed that the grantors have received full and adequate compensation. The conveyance, transfer, covenants, warranties and representations contained herein shall bind grantors, their successors and assigns, and inure to the benefit of grantee, its successors and assigns.

Dated this 5 day of December, 1991.

Donald J. Pelle, Grantor

Joan L. Pelle, Grantor

STATE OF SOUTH DAKOTA)
)SS
COUNTY OF PENNINGTON)

On this 5th day of December 1991, before me, the undersigned officer, personally appeared grantors, Donald J. Pelle and Joan L. Pelle, husband and wife, known to me or satisfactorily proven to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Karen M. Layman
Notary Public

My Commission expires: 3/20/99

KAREN M. LAYMAN NOTARY PUBLIC SEAL SOUTH DAKOTA

RECORDED
INDEXED

DOC NO 83744
BOOK 44 PAGE 378
FEE 5.00 Deed

91 DEC -5 PM 3:38

MARILYS FABER
PENNINGTON COUNTY
REGISTER OF DEEDS

REGISTER OF DEEDS SEAL PENNINGTON COUNTY SOUTH DAKOTA

2

State of South Dakota
County of Pennington ss
I hereby certify that the foregoing is a true correct and complete copy of the instrument as it appears in this office including the filing thereon.
Dated Feb 25, 1992 Marilys Faber
Register of Deeds
by Jan Ewert

WATER DEED

JAMES K. LONG and LAURETTA M. LONG, husband and wife, grantors of Pennington County, South Dakota, for and in consideration of One Dollar ($1.00) and other good and valuable consideration to them in hand paid, the receipt of which is hereby acknowledged, do hereby grant, convey and warrant to the CITY OF RAPID CITY, a South Dakota municipal corporation, grantee, of 300 6th Street, Rapid City, Pennington County, South Dakota 57701, the following described water right, water appropriation and use of water, lying and being in the County of Pennington, State of South Dakota:

> The right to the use of that appropriation of water from Rapid Creek, diverting through the Murphy Ditch (Rapid Valley Water Company, Inc.), under South Dakota DENR water license No. 1727-2, with priority of April 6, 1878, in the amount of .18 cubic foot of water per second of time, which is appurtenant for the irrigation of:
>
> > Lot C of the Northeast Quarter Southwest Quarter (NE¼SW¼) and Lot B of the Southeast Quarter Northwest Quarter (SE¼NW¼), Section 14, Township One (1) North, Range Eight (8) East of the Black Hills Meridian, as shown on the Plat filed in Plat Book 7, Page 23, in the Office of the Register of Deeds, Pennington County, South Dakota;
>
> consisting of a total of nine (9) acres, more or less, with exclusive right to take, and divert and use said appropriation of water and to the exclusion of the remaining part of this or any other appropriation of water of the grantors.
>
> Exempt from transfer fee, SDCL §§ 43-4-21, 22(2).

The grantee is hereby authorized to detach the water right from the lands herein described and change its use to include any and all beneficial uses, as described in SDCL Title 46, and also to change the point of diversion and means of conveyance of the water of said appropriation to any location that may be designated by the City of Rapid City, South Dakota, grantee, and to file the necessary proceedings with the South Dakota Water Management Board to make these changes; and any order or decree of the said Water Management Board or confirmation of same by any court is hereby acquiesced in the grantors, and it shall be binding upon the said

grantors, their successors and assigns.

The grantors hereby waive any and all notices which may be required by law, and state that neither they nor their successors or assigns shall, at any time in the future, file any adverse claim or institute any proceedings in law or equity attacking adversely, or in any manner whatsoever, the equities, right, title or interest of any part or all of the water right herein referred to and for which it is hereby agreed that the grantors have received full and adequate compensation. The conveyance, transfer, covenants, warranties and representations contained herein shall bind grantors, their successors and assigns, and inure to the benefit of grantee, its successors and assigns.

Dated this 23rd day of December 1991.

James K. Long
James K. Long

Lauretta M. Long
Lauretta M. Long

STATE OF SOUTH DAKOTA)
)SS
COUNTY OF PENNINGTON)

On this 23rd day of December 1991, before me, the undersigned officer, personally appeared James K. Long and Lauretta M. Long, husband and wife, known to me or satisfactorily proven to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Karen M. Rayman
Notary Public

My commission expires: 3/20/99

(SEAL) NOTARY PUBLIC SEAL SOUTH DAKOTA

RECORDED DOC NO 59667
INDEXED BOOK 44 PAGE 2341
FEE 5.00 Deed
91 DEC 27 AM 10:59
MARLYS FABER
PENNINGTON COUNTY
REGISTER OF DEEDS

2

REGISTER OF DEEDS SEAL PENNINGTON COUNTY SOUTH DAKOTA

State of South Dakota
County of Pennington ss
I hereby certify that the foregoing is a true correct and complete copy of the instrument as it appears in this office including the filing thereon.
Dated: Feb 25, 1992

Marlys Faber
Register of Deeds
by Jean Fuerst, deputy

RESUME

LEO M. EISEL
VICE-PRESIDENT
WRIGHT WATER ENGINEERS, INC.

EDUCATION:

Ph.D. Engineering (with minor in economics and government), 1970
Harvard University, Cambridge, Mass.

M.S. Hydrology (First Class Honors) (Fulbright Scholar)
Lincoln College, University of Canterbury, Christchurch, New Zealand, 1966

B.S. Forestry (Highest Distinction), 1964
Colorado State University, Fort Collins, Colorado

REGISTRATION:

Professional Engineer: States of Colorado, Nebraska, Wyoming, Arizona, and Oklahoma

CURRENT:

Consultant on water problems related to ground and surface water supply, ground and surface water hydrology, water resources planning and management, hazardous waste management, floodplain analysis and management; and hazard mitigation planning.

RECENT PROJECTS:

Water rights appraisals for Agri Com, Inc., Phoenix, Arizona on a 29,000-acre property in western Arizona. This work involved preliminary feasibility analysis and water rights appraisal of project to develop 70,000 acre-feet/year of groundwater in western Arizona and transportation to Phoenix metro area in Granite Reef Aqueduct (CAP).

Water rights appraisal for L.C. Fulenwider Company property on Blue River tributary, Colorado. This work involved determination of historic water rights use and consumptive use and obtaining necessary comparable sales data to value these water rights.

Water Rights Appraisals at New Denver Airport. Responsible for determination of yield of surface and groundwater rights including water quality studies at new Denver airport (52,000 acres). Prepared detailed appraisals for use in acquisition and/or condemnation. Determination of feasibility of using groundwater for supply at Denver airport.

Engineering and Economic Analysis of Missouri River Water Availability to Montana. This investigation was performed for the Montana Department of Natural Resources and Conservation to determine alternatives available to the state for protecting an appropriate share of Missouri River water for future use. The investigation included estimating likely future demands by all Missouri River basin states and analyzing the potential of equitable apportionment, Congressional apportionment or an interstate compact for resolving conflicting claims to Missouri River water.

Flood Hazard Mitigation Handbook of Common Procedures. Preparation of a handbook for use by interagency hazard mitigation teams. The manual includes operation of the teams, preparation of the hazard mitigation team report, implementation, and a discussion of hazard mitigation techniques.

WRIGHT WATER ENGINEERS, INC.

Master Flood Control and Drainage Plan for South Platte River Reach Through Denver, Colorado. This master plan was prepared for the Urban Drainage & Flood Control District and involved planning of flood control and drainage projects together with hazard mitigation measures.

Lowry Landfill. Responsible for surface water hydrology investigation at Lowry Landfill, a Superfund site, near Denver. This project involved determination of the existing contamination at the Lowry site, the potenital for massive increase in contamination spread during flood events and alternatives for reducing contamination. The project also involved installation of flow measuring devices, water quality sampling, data analysis, and flood frequency estimates.

Criner, Oklahoma Superfund Site. Project manager for a groundwater and surface water investigation of this Superfund site.

Investigation of Consumptive Use From Man-made Snowmaking. A two-year study to determine consumptive use of man-made snowmaking for Colorado Ski Country USA.

Cotter Corporation Superfund Site Investigation. An analysis and determination of the area of groundwater contamination by the Cotter Corporation uranium mill at Canon City, Colorado and development of a water management plan (groundwater and surface water) for this Superfund site.

Groundwater and Surface Water Hydrologic Analysis for El Paso v. New Mexico. Development of deterministic model of monthly flows and groundwater depletion and accretion to the middle and lower Rio Grande. Development of two-dimensional groundwater model to estimate depletion to river and alluvial aquifers from the exportation of 250,000 acre-feet per year of New Mexico groundwater to the city of El Paso.

Operation Study of Ruedi Reservoir for Exxon Company, USA. Development of a model for an operations study of Ruedi Reservoir. Analysis of the impact of reservoir releases for Battlement Mesa and the Colony Shale Oil Projects on minimum flows in the Colorado River.

Evaluations and Recommendations for Hazard Mitigation Team Process. This project was completed for FEMA, Washington, D.C. and required an analysis of the successes and failures of the Flood Hazard Mitigation Handbook of Common Procedures.

1986 Flood Recovery and Flood Hazard Mitigation Process Development (Tulsa, OK). This was a very practical project to determine how the Tulsa Stormwater Management Department could best implement hazard mitigation practices.

Water Supply Alternatives for Battelle National Laboratories. Hydrologic studies and investigations of various water supply sources for a major industrial facility in southeastern Utah. Evaluation of the feasibility of various sources of supply from an engineering and water rights standpoint.

Hydrologic Study of the Platte River for Lower Platte North Natural Resources District and National Audubon Society. Development of stochastic computer model of Platte River flows. Development of groundwater analysis to estimate return flows and analysis of hydrology to determine the effects of future groundwater depletions on surface flows. Presentation of expert testimony concerning water rights applications before the Nebraska Department of Water Resources.

Augmentation Plans for Battlement Mesa and Colony Shale Oil Project (Exxon Company, USA). Hydrologic and engineering analysis for augmentation plans concerned with water rights and the development of sources of replacement water for the new town of Battlement Mesa and the Colony Shale Oil Project.

Groundwater and Surface Water Hydrologic Analysis for the C.S. Cattle Company. In preparing opposition to groundwater development by the Angel Fire Corporation in northern New Mexico, analysis of the effects of harvesting timber crops on runoff from Cieneguilla Creek basin, development of analysis of potentially unsaturated areas adjacent to Cieneguilla Creek.

OTHER EXPERIENCE:

Director, U.S. Water Resources Council, Washington, D.C., 1977 to 1980. Coordination of water resources policy and programs among the member agencies of the U.S. Water Resources Council. Recommendations of water policy to the President. Administration of a planning grant program to the States. Responsibility for the National Assessment of the Nation's Water Resources, the Water for Energy program in cooperation with the Department of Energy, the Principles and Standards for Evaluating Federal Water Projects, and various special studies of national water resource problems and policies. [The Director reports to the Council Chairperson, who has traditionally been the Secretary of the Interior.]

Director, Illinois Environmental Protection Agency, 1977 to 1977. Responsibility for control of water, air, noise and land pollution in the State as well as implementation of a public water supply program. Administration of a pollution control facilities grants program. Proposal and enforcement of environmental regulations. Emergency assistance for environmental incidents (chemical spills, etc.). Environmental planning for the State. Monitoring of air and water quality. (The Director is a Cabinet member and reports directly to the Governor.)

Director, Illinois Division of Water Resources, 1973 to 1977. Development and management of water resources for flood control, water supply, navigation, recreation, and fish and wildlife conservation. Division programs include: (1) design, construction and operation of water resources projects; (2) floodplain management; (3) coastal zone management; (4) allocation of Lake Michigan water supply; (5) liaison with federal agencies for water resources projects in Illinois; (6) planning for development of the State's water resources; (7) permitting activities relating to coal mining and development of new energy facilities where water resources are affected or required; (8) work with numerous state agencies, local units of government and the state legislature to obtain a water supply source for coal development.

Staff Scientist, Environmental Defense Fund, East Setauket, New York, 1971 to 1973. Responsibility for 12 environmental lawsuits primarily involving water resources and their relation to land use and energy problems. Selection of cases, preparation of witness testimony and analysis.

Research Associate, Harvard University Development Advisory Service and Consultant to U.S. State Department, 1970 to 1971. Study of land use and water problems associated with the "green revolution" in Pakistan. Development of a mathematical programming model for analyzing irrigation problems.

Consultant to Meta Systems, a Cambridge Consulting Firm, 1970. Development of mathematical programming models for water resource and irrigation systems.

Team Member, US AID Industrial Development Project, Bahia, Brazil, 1964-65. Completion of small industry feasibility studies.

PROFESSIONAL SOCIETIES:

National Academy of Science--National Research Council, Water Resources Technology Board
National Academy of Science--National Research Council Committee to Review the Washington Metropolitan Area Water Supply Study, Panel on Water Supply

PROFESSIONAL SOCIETIES: (Continued)

National Academy of Science--National Research Council. Commission on Natural Resources. Panel on Environmental Impacts of Natural Resources Management

Upper Mississippi River Basin Commission, Great Lakes Basin Commission, Great Lakes Basin Commission and Ohio River Basin Commission, Illinois Commissioner

Great Lakes Water Quality Committee, International Joint Commission, Illinois Representative

Ohio River Valley Water Sanitation Commission, Illinois Commissioner

Phi Kappa Phi, Scholastic Honorary, Colorado State University

American Geophysical Union

American Water Resources Association

American Society of Civil Engineers

International Water Resources Association

OTHER HONORS:

Clemens Hershel Price for excellence in applied hydraulic engineering, Harvard University.

Fulbright Fellowship to University of Canterbury, Christchurch, New Zealand.

PUBLICATIONS:

"Estimated Consumptive Loss from Man-made Snow", Paper submitted to Water Resources Research, 1986.

"Improved Principle Standards and Procedures," Water Resources Research, April 1, 1982.

"Groundwater Problems from the National Perspective," Proceedings of the 14th California Groundwater Conference. California Department of Water Resources, Sacramento, California, 1981.

"Improving Procedures for Planning and Evaluating Federal Water Resources Projects," Scientific, Technological, and Institutional Aspects of Water Resources Policy, edited by Yacov Y. Haimes, American Association for the Advancement of Science, Washington, D.C., 1980.

"Financing Federal Water Development Projects and Sharing the Costs," (with Richard M Wheeler and Gerald D. Seinwill), Water Resources Bulletin, 16(2), April 1980.

Reservoir Yield, An Important Environmental Parameter," Water Resources Bulletin, 13(5), October 1977.

Comments on "An Environmental Evaluation System for Water Resources Planning," by Norbert Dee et al., Water Resources Research, 10(2), April 1974.

"Strategic Uncertainty and the National Environmental Policy Act," Proceedings of the Symposium on Uncertainties in Hydrologic and Water Resource Systems. Tucson, Arizona, December 1972.

"Water Resource Projects and NEPA," Paper presented at December 1972 AAAS Meeting, Washington, D.C., to be published in an AAAS monograph.

"A Chance-Constrained Programming Model for Irrigation Reservoir Design," Water Resources Research, April 1972.

"Land-Use Management in Wildland Areas - A Systems Approach," Water Resources Research, April 1972.

Eisel et al., 1970, The Massachusetts Department of Public Health - A Critical Study of Failure in Government. Committee on Environmental Pollution, Union of Concerned Scientists, Box 289, M.I.T., Branch Station, Cambridge, Mass.

Land-Use Management in a Water Resources System, Ph.D. thesis, Harvard University, June 1970.Comments on the Linear Decision Rule in Reservoir Management and Design by Charles Revelle, Erhard Joeres and William Kirby," Water Resources Research, Vol. 6, Nr. 4, August 1970, pp. 1239-41.

H. Holstener-Jorgensen and L.M. Eisel, "The Influence of Type and Diameter of Observation Wells on Groundwater Level Measurement," Saertryk af Det Forstlige Forsogsvaesen i Danmark, Beretning Nr. 24 i bd. XXXI, h.1, 1968, published in English and Danish summary.

_____, "Investigation Into the Possibility of Root Drowning as a Cause of Cryptococcus fagi Attacks and Other Diseases in Beech Stands," Saertryk af Det Forstlige Forsogvaesen i Danmark, Beretning Nr. 250 bd. XXXII, h.1, 1968, published in English with Danish summary.

_____, "A Comparison of Recordings of Ground Water Tables and Soil Moisture Measurements by Neutron-Scattering Device," Saertryk af Det Forstlige Forsogvaesen i Danmark, Beretning Nr. 242, bd. XXXI, h.1, 1968.

RESUME

LEO M. EISEL
(Continued)

PUBLICATIONS:

"A Principles Component Analysis of Surface Runoff Data from a New Zealand Alpine Catchment," Proceedings of the International Hydrology Symposium. Colorado State University, September 1967.

Experimental Design of Hydrology Land-Use Studies, M. Sc. thesis, Lincoln College, University of Canterbury, Christchurch, New Zealand, 1966.

Peanuts of Paragussu, A Feasibility Report and Preliminary Design of a Projected Peanut Oil Industry for the Paragussu River Valley in Bahia, Brazil, published in the collection of feasibility reports of the University of Bahia - Colorado State University - U.S.A.A.I.D. Rural Industrial Development Project, published in English and Portuguese, 1965.

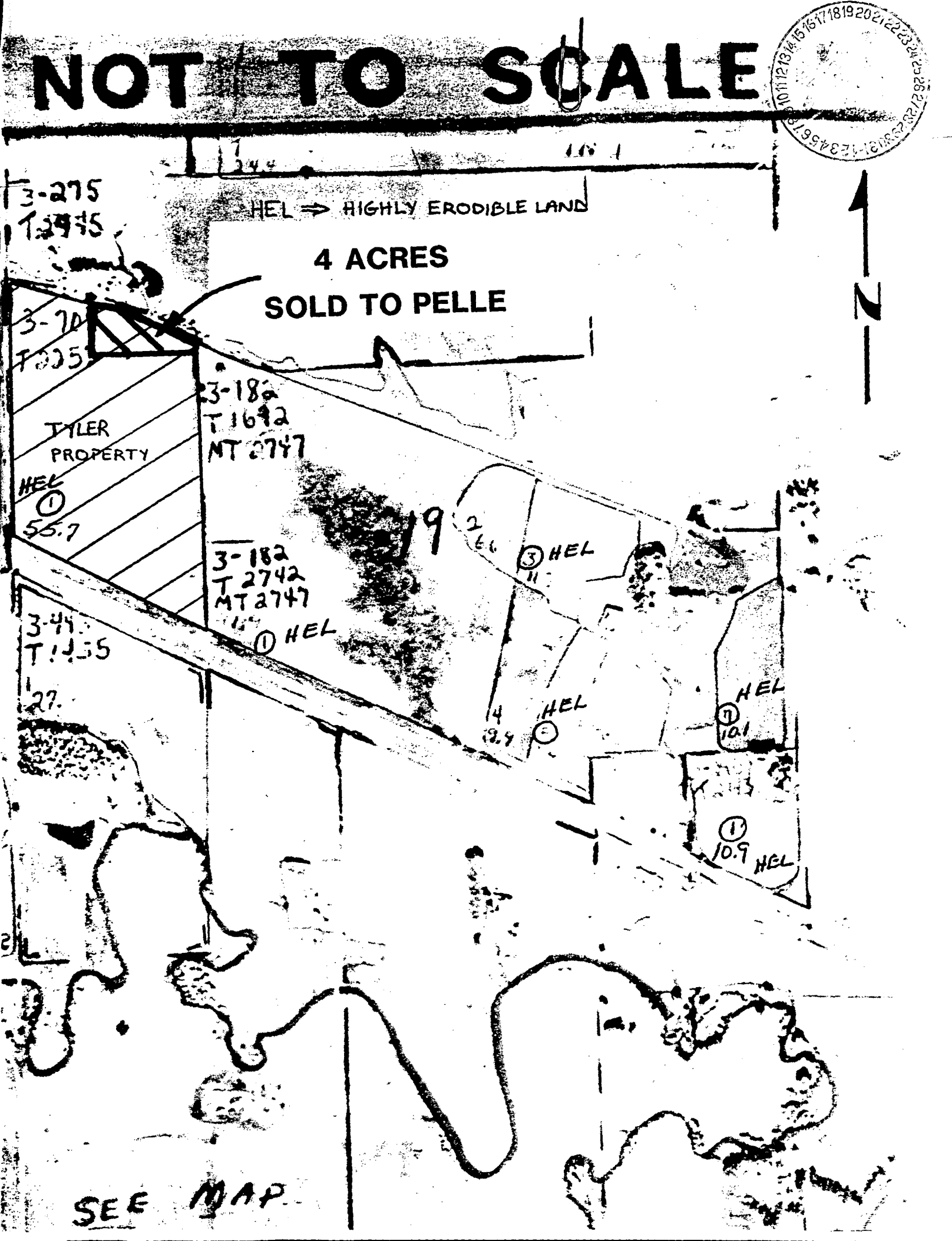
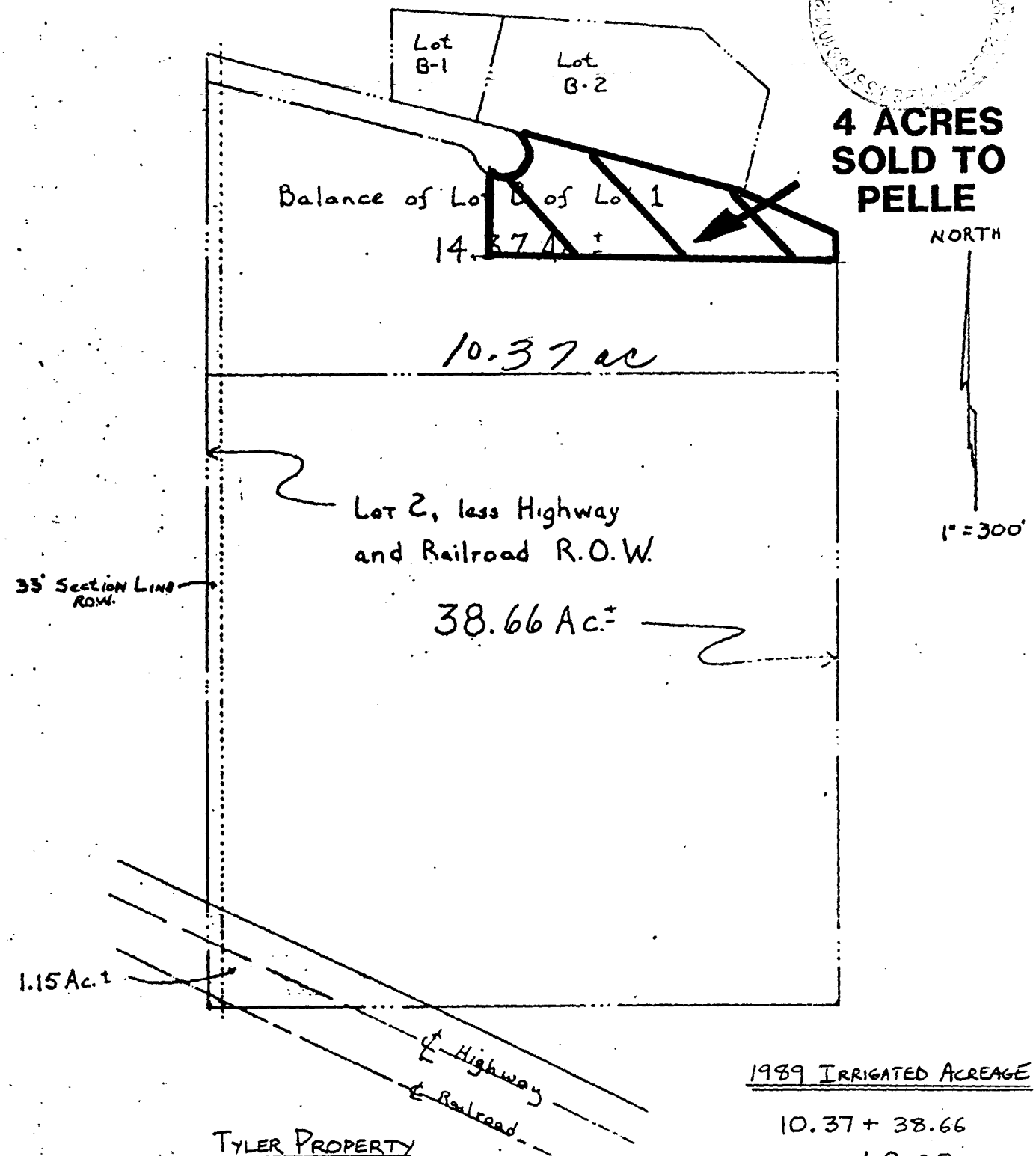

NOT TO SCALE
HEL ⇒ HIGHLY ERODIBLE LAND
4 ACRES
SOLD TO PELLE
3-275
T2945
3-70
T2955
TYLER
PROPERTY
HEL
1
55.7
3-182
T1692
MT2747
3-182
T2742
MT2747
1 HEL
3-44
T1455
27.
19
2
66
3 HEL
11
14
12.4
HEL
HEL
11
10.1
1
10.9
HEL
SEE MAP

FIGURE III-1



1989 IRRIGATED ACREAGE

10.37 + 38.66

= 49.03

TYLER PROPERTY

SECTION 19

T1N R9E B.H.M.

PENNINGTON COUNTY, SOUTH DAKOTA

LAW FIRM OF
LESLIE JAMES ENGLAND

LESLIE J. ENGLAND
(ALSO ADMITTED IN COLORADO)

SUITE 102, WESTERN MUTUAL BUILDING
731 ST. JOSEPH STREET
RAPID CITY, SOUTH DAKOTA 57701

TELEPHONE (605) 341-7600
FAX (605) 343-4131

August 1, 1991

Mr. John Hatch
Chief Engineer
Water Rights Division
Department of Environment
and Natural Resources
Joe Foss Building
Pierre, SD 57501

RE: City of Rapid City/Pelle Change of Use Application
(Irrigation to Municipal Use)

Dear Mr. Hatch:

Enclosed for filing please find two (2) completed and executed copies of Form 2, Application to Appropriate Water and two (2) completed and executed copies of Form 2A, along with my law firm check in the amount of $50.00 representing the application fee. Maps entitled "Location of Proposed Alternate Points of Diversion for The City of Rapid City Water Rights Transfer" signed by Daniel L. Berjke, P.E., dated September 10, 1990 were previously submitted in duplicate original form to you for filing. Please advise if additional signed copies of these identical maps will be necessary. Also enclosed is the original executed Water Use Affidavit of Don and Jean Pelle as requested by Mark Rath. I will call Mark in the next few days to review this.

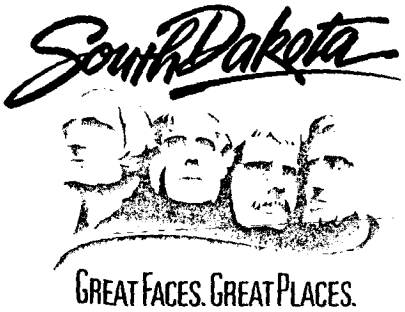
A discussion of the Wright Water Engineers, Inc. report previously filed describing the project for the Tyler transfer will be provided under separate cover as it relates to the Pelle transfer.

If you have any questions about the application or enclosures, or any other matters in these regards, please do not hesitate to contact me. Thank you for your kind attention to this application.

Yours very truly,

Leslie J. England

LJE/NMM
enclosures



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

September 3, 1991

Leslie J England, Attorney
Suite 102, Western Mutual Building
731 St. Joseph St
Rapid City SD 57701

Dear Mr. England:

We received the water permit application for the City of Rapid City on August 6, 1991. The letter submitted with the application states that a Wright Water Engineers, Inc. report would be provided as it relates to the Pelle transfer.

Upon receipt of the report, further processing of the application will continue. If you have any questions, please contact this office.

Sincerely,

Karen Schlaak

Karen Schlaak
Natural Resources Analyst
605 773-3352

Water Rights Division - DWNR File No. _____

Conversation or File Documentation

NAME OF PERSON OR FILE: LES ENGLAND (CITY OF RAPID CITY)

ADDRESS: _____ COUNTY PENNINGTON

DATE: 9/5/91 TELEPHONE _____

RE: RAPID CREEK TRANSFER OF WATER RIGHTS

COMMENTS:

LES ENGLAND CALLED, HE SAID THAT THE CITY WANTED TO USE THE SAME REPORT THAT THEY USE FOR THE TYLER TRANSFER HE WANTED TO KNOW WHAT WE NEED ADDITIONALLY TO BE ABLE TO USE THIS REPORT FOR THE PELLE TRANSFER

I TOLD HIM TO HAVE WRIGHT WATER ENGINEERS PUT TOGETHER THE INFORMATION ~~FOR~~ SPECIFIC TO THIS TRANSFER AND THEN REFERENCE THE REPORT WHERE NEEDED

HE ALSO INDICATED THE CITY MAY BE SENDING IN 3 ADDITIONAL APPLICATIONS

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: [signature]

4/82

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100-A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

SEP 1991
DIVISION OF
WATER RIGHTS
Pierre, SD

September 12, 1991

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Dear Mr. Rath:

We are providing you with an explanation of the Pelle transfer as it relates to the Tyler transfer of Murphy Ditch water detailed in our report dated October 1990.

Figure III-1 of the Tyler report shows the location of the 4 acres purchased by Pelle from Tyler. Pelle's 4 acre parcel was irrigated by Tyler's sprinkler irrigation system. This parcel is essentially part of the field in which Tyler had historically planted alfalfa, and therefore the calculations and assumptions made for Tyler apply to Pelle.

To determine the historic consumptive use (the amount of water transferable to storage in Pactola Reservoir) and the amount transferable to the City's water treatment plant and infiltration galleries, associated with Pelle's 4 acre parcel, a pro rata share can be calculated using the summary presented at the bottom of Table III-3 in the Tyler report:

a) To storage in Pactola Reservoir, the transferable amount would be;
(4 acres) x (1.35 acre-feet/acre) = 5.4 acre-feet

b) To the City's WTP and infiltration galleries, the transferable amount would be;
(4 acres) x (1.59 acre-feet/acre) = 6.4 acre-feet.

The rate of diversion (calculated on page IV-5 of the Tyler report) of 0.64 cfs applies to the entire irrigated acreage originally owned by Tyler (53 acres). The diversion rate of Tyler's (now the City's) 49 acres is 0.59 cfs and 0.05 cfs for Pelle's 4 acres.

If these calculations or explanations need further clarification, please do not hesitate to contact us.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Leo M. Eisel, P.E.

By _____
Guy C. Warren

LME/GCW:ard
901-046.000
(RAPIDC/EXPLOFPE.LME)

LAW FIRM OF
LESLIE JAMES ENGLAND

LESLIE J. ENGLAND
(ALSO ADMITTED IN COLORADO)

SUITE 102, WESTERN MUTUAL BUILDING
731 ST. JOSEPH STREET
RAPID CITY, SOUTH DAKOTA 57701

TELEPHONE (605) 341-7600
FAX (605) 343-4131

September 19, 1991

TRANSMITTED BY FEDERAL EXPRESS

Mr. John Hatch, Chief Engineer
Water Rights Division
Department of Environment and
Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Re: City of Rapid City/Pelle Change of Use Application
(Irrigation to Municipal Use)

Dear Mr. Hatch:

Enclosed for filing in connection with the above-referenced application, please find two original executed and sealed maps entitled "Location of Proposed Alternate Points of Diversion for the City of Rapid City Water Rights Transfer". Leo Eisel's letter concerning application of the October 1990 Tyler report to this change of use was provided to Mark Rath last week. If additional information is needed please let me know.

Yours very truly,

Leslie J. England

LJE/kmr

Enclosures: As Stated

cc: Daniel Bjerke
Robert Jackson

TABLE A

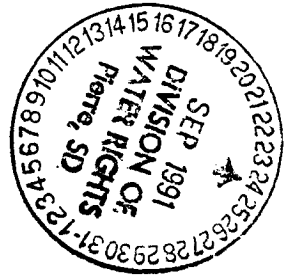
TR-21 CONSUMPTIVE USE CALCULATIONS (AVERAGE)

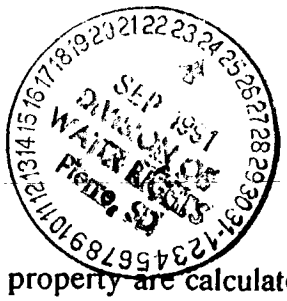
LATITUDE: 44 N
IRR. APPL. IN.: 3.00
f= 1.00067
CROP: HAY
STATION: RAPID CITY WSO AP
LIMIT: 45 F MEAN TEMP
YEAR: 49-54,56-59,63-68,70-79

MONTH	DAYS	TEMP	ADJ. TEMP.	% DAY	ADJ. DAY	CU FACTOR	CLIMATE COEFF.	GROWTH COEFF.	CU COEFF.	MONTH CU	MONTH PPT.	PPT. FACTOR	EFFECT. PPT.	ADJUSTED CU
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
JAN	—	—	—	6.48	0.00	0.0000	0.3000	0.49	0.1470	0.00	—	-0.12	0.00	0.00
FEB	—	—	—	6.57	0.00	0.0000	0.3000	0.57	0.1710	0.00	—	-0.12	0.00	0.00
MAR	—	—	—	8.29	0.00	0.0000	0.3000	0.73	0.2190	0.00	—	-0.12	0.00	0.00
APR	9	43.9	47.4	9.05	2.72	1.2869	0.5060	0.85	0.4301	0.55	0.63	0.38	0.38	0.17
MAY	31	55.4	55.4	10.25	10.25	5.6785	0.6444	0.90	0.5800	3.29	2.58	1.72	1.72	1.57
JUN	30	63.2	63.2	10.39	10.39	6.5665	0.7794	0.92	0.7170	4.71	3.29	2.31	2.31	2.40
JUL	31	72.3	72.3	10.41	10.41	7.5264	0.9368	0.92	0.8618	6.49	1.87	1.54	1.54	4.94
AUG	31	70.8	70.8	9.71	9.71	6.8747	0.9108	0.91	0.8289	5.70	1.55	1.24	1.24	4.46
SEP	30	60.5	60.5	8.41	8.41	5.0881	0.7326	0.87	0.6374	3.24	1.10	0.78	0.78	2.46
OCT	26	49.3	51.1	7.64	6.41	3.2744	0.5700	0.79	0.4503	1.47	0.63	0.40	0.40	1.07
NOV	—	—	—	6.50	0.00	0.0000	0.3000	0.67	0.2010	0.00	—	-0.12	0.00	0.00
DEC	—	—	—	6.22	0.00	0.0000	0.3000	0.55	0.1650	0.00	—	-0.12	0.00	0.00

SUM	188

INCHES	25.46	11.65		8.38	17.07
FEET	2.12	0.97		0.70	1.42





The rate of diversion for the transferable amounts from the Long property are calculated by the same method detailed on page IV-5 of the Tyler report. Appendix E of the Tyler report shows that Long has 10 miners inches, and therefore the diversion rate would be;

(10 miners inches/50 miners inches per cfs) x (1.00 - 0.11)
= 0.18 cfs

where the 11 percent carriage loss would remain in the ditch.

These transferable amounts and this rate of diversion insure that there will be no injury to downstream water rights, and that depletions to Rapid Creek will not exceed historic depletions.

If these calculations or explanations need further clarification, please do not hesitate to contact us.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Leo M. Eisel, P.E.

By _____
Guy C. Warren

LME:ard
901-046.000
Encls.
(RAPIDC/RATHLTRR.GCW)

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100 A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

September 20, 1991

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Re: Water Rights Transfer from Long Property

Dear Mr. Rath:

We are providing you with an explanation of the transfer of Murphy Ditch water rights associated with the Long property as it relates to information detailed in the engineering report prepared for the Tyler property dated October 1990.

The Long property, like the Tyler property, is adjacent to the Murphy Ditch (see attached copy of 1981 ASCS aerial photo). The irrigated acreage associated with the Long property is 9 acres (comprised of mostly hay and some alfalfa) and Murphy Ditch water has historically been applied to this parcel by flood irrigation. The Tyler property crop was primarily alfalfa which was irrigated with a side roll sprinkler irrigation system. Tables III-2 and III-3 in the Tyler report were adjusted to account for these differences and are presented as Tables A and B, respectively. Therefore, the calculations, assumptions and analyses made for Tyler apply to Long.

The calculations show that:

a) To storage in Pactola Reservoir, the average year transferable amount would be;
(9 acres) x (1.03 acre-feet/acre) = 9.3 acre-feet

b) To the City's WTP and infiltration galleries, the average year transferable amount would be;
(9 acres) x (1.60 acre-feet/acre) = 14.4 acre-feet

Water Rights Division - DWNR File No. 2199-2

Conversation or File Documentation

NAME OF PERSON OR FILE: Guy Warren (Wright Water Engineers)

ADDRESS: Denver, Co COUNTY Pennington

DATE: 10/8/91 TELEPHONE 303-460-1700

RE: Rapid City's Water Right Transfers

COMMENTS:

I Called Mr Warren Concerning The Two Rapid City Water Right Transfers. I Asked Him About Table B That Was Submitted With the Long Transfer. I Clarified The Method They Used To Come Up With The Transferred Amount of Water. I Told Him That I Had Found An Error In [redacted] Table And Told Him I Would Be Correcting It. I Also Told Him That We Would Be Sending A Monthly Accounting Application. He Explained To Me How They Came Up With The October Water Associated With Making Green Diversions. He Indicated That There Were No Available Records From The Ditch Instead They Determined Crop Consumption And Used That Figure.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: [signature]

4/82

Water Rights Division - DWNR

Conversation or File Documentation

File No. 2199-2
2201-2

NAME OF PERSON OR FILE: Guy Warren (Wilbert Water Engineers)

ADDRESS: Rapid City COUNTY Pennington

DATE: 10/16/91 TELEPHONE 303-480-1700

RE: Transfer Applications

COMMENTS:

I Called Guy Warren With Wilbert Water Engineers So He Could Specify the Monthly ~~Figures~~ Volumes To Be Transferred

2099-2 : Pelle Property :	Poltola	WTP	Long Property : 2201-2 Poltola	WTP
May	0.7 AF	0.8 AF	1.2 AF	1.9 AF
Jun	0.8	1.0	1.4	2.2
Jul	1.1	1.3	2.0	3.0
Aug	1.5	1.7	2.5	3.9
Sep	1.0	1.2	1.7	2.6
Oct	0.3	0.3	0.5	0.8
	5.4	6.3	9.3	14.4

I Told Him That The Water ~~Sep~~ Diverted At The Water Treatment Plant Does Not Add Up To 6.4 ac-ft Claimed On The Application. He Indicated That He Would Look Into The Problem To Get The Correct Numbers, And Would Include This In The Letter He Was Sending Me.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Mark Rath

4/82

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100 A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

October 17, 1991

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Re: Water Rights Transfer from Long and Pelle Properties

Dear Mr. Rath:

In response to your request, I have enclosed the following:

a. Consumptive use/transferable amount tables for the Long and Pelle properties which include monthly diversions to either storage in Pactola Reservoir or to the Rapid City water treatment plant.

b. Footnotes to each of these tables, and

c. Assumptions applicable to these tables.

If you have any questions regarding these enclosures, please do not hesitate to contact me.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Guy C. Warren

GCW:ard
901-046.010
Encls.
(RAPIDC/WTRRIGHT.GCW)

S	T
MONTH	MURPHY WATER (AF)
MAY	331
JUN	385
JUL	523
AUG	671
SEP	455
TOTAL	2365

TRANSFERABLE AMOUNT FROM LONG PROPERTY UNDER MURPHY DITCH (AVERAGE)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
MONTH	C.U. (IN)	PRECIP. (IN)	EFFECT. PRECIP. (IN)	PRECIP. ADJ. C.U. (IN)	EXCESS PRECIP. TO SOIL MOIST. DURING MONTH (IN)	SOIL MOIST. USED TO SATISFY ADJUST. C.U. (IN)	REMAIN. CROP REQUIR. (IN)	GROSS CROP NEEDS (IN)	FARM IRRIG. SUPPLY (IN)	EXCESS IRRIG. SOIL MOIST. CONTRIB. (IN)	ACCUM. SOIL MOIST. STORAGE AFTER IRRIG. (IN)	ADDITIONAL WATER REQUIRED TO MEET C.U. NEEDS FROM SUBIRRIG. (IN)	DEEP PERC. (IN)	SURFACE WATER RETURN FLOW (17.5%) (IN)	CLAIMED IRRIG. C.U. FOR TRANSPER (IN)	DIVERSION TO STORAGE IN PACTOLA RESERVOIR (AC.FT)	DIVERSION AT THE RAPID CITY WTP (AC.FT)
NOV	0.00	0.53	0.37	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
DEC	0.00	0.41	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00
JAN	0.00	0.50	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00
FEB	0.00	0.59	0.41	0.00	0.41	0.00	0.00	0.00	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00
MAR	0.00	1.11	0.78	0.00	0.78	0.00	0.00	0.00	0.00	0.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00
APR	0.55	2.11	1.48	0.17	0.93	0.17	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00
MAY	3.29	2.58	1.72	1.57	0.00	1.57	0.00	0.00	2.53	1.65	3.20	0.00	0.44	0.44	1.57	1.18	1.90
JUN	4.71	3.29	2.31	2.40	0.00	2.40	0.00	0.00	2.95	1.91	2.72	0.00	0.52	0.52	1.91	1.44	2.21
JUL	6.49	1.87	1.54	4.94	0.00	2.72	2.22	3.42	4.00	0.38	0.38	0.00	0.70	0.70	2.60	1.95	3.00
AUG	5.70	1.55	1.24	4.46	0.00	0.38	4.08	6.28	5.13	0.00	0.00	0.75	0.90	0.90	3.34	2.50	3.85
SEP	3.24	1.10	0.78	2.46	0.00	0.00	2.46	3.78	3.48	0.00	0.00	0.20	0.61	0.61	2.26	1.70	2.61
OCT	1.47	0.75	0.53	1.07	0.00	0.00	1.07	1.65	1.07	0.00	0.00	0.37	0.19	0.19	0.70	0.52	0.80
TOTAL	25.45	16.39	11.80	17.07	3.13	7.23	9.84	15.14	19.16	3.94	15.07	1.32	3.35	3.35	12.38	9.29	14.37

AVERAGE CONDITIONS, CROP = HAY
MURPHY DITCH IRRIGATED ACREAGE = 1396
11% SEEPAGE LOSS
LONG IRRIGATED ACREAGE = 9.0
65% IRRIGATION EFFICIENCY USING FLOOD IRRIGATION
DEEP PERCOLATION IS ONE HALF OF IRRIGATION INEFFICIENCY (17.5%) PLUS EXCESS SOIL MOISTURE
OTHER HALF OF IRRIGATION INEFFICIENCY (17.5%) IS SURFACE WATER RETURN FLOW
PACT. = PACTOLA RESERVOIR
WTP = RAPID CITY WATER TREATMENT PLANT AND INFILTRATION GALLERIES

TRANSFERABLE AMOUNT FROM LONG PROPERTY UNDER MURPHY DITCH			
LOCATION	(INCHES)	(FEET)	(AC.FT)
TO PACT.	12.38	1.03	9.3
TO WTP	19.16	1.60	14.4

FOOTNOTES FOR LONG TRANSFERABLE AMOUNT TABLE

Column A

Month

Column B

Gross consumptive use calculated by Blaney-Criddle method in Table A of letter report submitted to DENR, September 20, 1991.

Column C

Total monthly precipitation taken from NOAA gage at Rapid City airport

Column D

Effective precipitation is precipitation available to meet crop consumptive use requirements

Nongrowing season:	$0.7 \times C_i$
Growing season:	Calculated by Blaney-Criddle regression in Table A of letter report submitted to DENR, September 20, 1991

Column E

Net consumptive use

Growing season:	$B_i - D_i$
Nongrowing season:	0

Column F

Excess precipitation to soil moisture in storage

All months: if $D_i \geq B_i$, then $D_i - B_i$, else 0

Column G

Soil moisture used to satisfy adjusted consumptive use

All months: if $E_i = 0$, then 0, else if $L_{i-1} \geq E_i$, then E_i, else L_{i-1}

FOOTNOTES FOR LONG TRANSFERABLE AMOUNT TABLE
(Continued)

Column H

Remaining crop needs

All months: if $E_i \geq L_{i-1}$, then $E_i - L_{i-1}$, else 0

Column I

Gross crop needs account for farm irrigation inefficiencies

All months: H/0.65

Column J

Farm irrigation supply is prorated for Long property as percentage of Murphy water (11 percent Murphy Ditch seepage loss and 1,396 total acres of land irrigated by Murphy Ditch under both the 1878 and 1893 priorities under average year conditions. It was necessary to allocate total Murphy Ditch diversion on the basis of the 1,396 acres irrigated under both the 1878 and the 1893 priorities because no separate diversion records exist for diversion of the 1878 and 1893 priorities at the Murphy Ditch headgate).

All months: R x 0.89 x 12/1,396 (average year conditions)

Column K

Excess irrigation soil moisture contribution

All months: if $J_i = 0$, then 0, else, if $J_i \geq I_i$, then 0, else $(J_i - I_i) \times 0.65$

Column L

Accumulative soil moisture storage after irrigation

All months: if $J_i - I_i < 0$, then 0 else,
if $F_i = 0$ then $L_{i-1} - G_i + K_i$, else $L_{i-1} + F_i$

FOOTNOTES FOR LONG TRANSFERABLE AMOUNT TABLE
(Continued)

Column M

Additional water required to meet consumptive use needs from subirrigation

All months: if $L_i = 0$, then $(I_i - J_i) \times 0.65$, else 0

Column N

Deep percolation with flood irrigation

All months: if $L_i > 9.5$, then $L_i - 9.5 + (J_i \times 0.175)$, else $J_i \times 0.175$

Column O

Surface water return flow

All months: $J_i \times 0.175$

Column P

Claimed irrigation consumptive use for transfer from Long property

All months: if $J_i = 0$, then 0, else if ~~$E_i < J_i$~~ $E_i < J_i \times 0.65$ then E_i, else $J_i \times 0.65$

Column Q

Amount transferable to storage in Pactola Reservoir

All months: P_i x 9 acres x 1 foot/12 inches

Column R

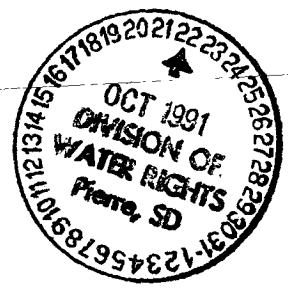
Amount transferable ot the Rapid City WTP

All months: J_i x 9 acres x 1 foot/12 inches

Column S

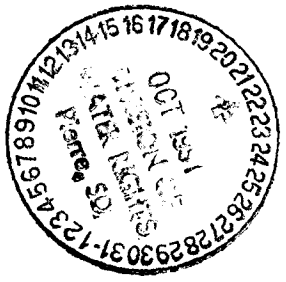
Month during irrigation season

FOOTNOTES FOR LONG TRANSFERABLE AMOUNT TABLE
(Continued)



Column T

Murphy Ditch diversions (AF)



U	V
MONTH	MURPHY WATER (AF)
MAY	331
JUN	385
JUL	523
AUG	671
SEP	455
TOTAL	2365

TRANSFERABLE AMOUNT FROM PELLE PROPERTY UNDER MURPHY DITCH (AVERAGE)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
MONTH	C.U. (IN)	PRECIP. (IN)	EFFECT. PRECIP. (IN)	PRECIP. ADJ. C.U. (IN)	EXCESS PRECIP. TO SOIL MOIST. DURING MONTH (IN)	SOIL MOIST. USED TO SATISFY ADJUST. C.U. (IN)	REMAIN. CROP REQUIR. (IN)	GROSS CROP NEEDS (IN)	FARM IRRIG. SUPPLY (IN)	EXCESS IRRIG. SOIL MOIST. CONTRIB. (IN)	ACCUM. SOIL MOIST. STORAGE AFTER IRRIG. (IN)	ADDITIONAL WATER REQUIRED TO MEET C.U. NEEDS FROM SUBIRRIG. (IN)	DEEP PERC. WITH SPRINKLER IRRIG. (10%) (IN)	SPRINK. APPL. LOSSES (5%) (IN)	SPRINK. TAIL-WATER RETURN (5%) (IN)	REUSE FROM DEEP PERC. (5%) (IN)	CLAIMED IRRIG. C.U. FOR TRANSFER (IN)	DIVERSION TO STORAGE IN PACTOLA RESERVOIR (AC.FT)	DIVERSION AT THE RAPID CITY WTP (AC.FT)
NOV	0.00	0.53	0.37	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEC	0.00	0.41	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JAN	0.00	0.50	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FEB	0.00	0.59	0.41	0.00	0.41	0.00	0.00	0.00	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAR	0.00	1.11	0.78	0.00	0.78	0.00	0.00	0.00	0.00	0.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
APR	0.00	2.11	1.48	0.00	1.48	0.00	0.00	0.00	0.00	0.00	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAY	3.95	2.58	1.79	2.16	0.00	2.16	0.00	0.00	2.53	2.03	3.54	0.00	0.25	0.13	0.13	0.13	2.15	0.72	0.84
JUN	5.78	3.29	2.46	3.33	0.00	3.33	0.00	0.00	2.95	2.36	2.57	0.00	0.29	0.15	0.15	0.15	2.50	0.83	0.98
JUL	7.83	1.87	1.66	6.16	0.00	2.57	3.60	4.50	4.00	0.00	0.00	0.40	0.40	0.20	0.20	0.20	3.40	1.13	1.33
AUG	6.64	1.55	1.31	5.33	0.00	0.00	5.33	6.66	5.13	0.00	0.00	1.22	0.51	0.26	0.26	0.26	4.36	1.45	1.71
SEP	3.69	1.10	0.80	2.89	0.00	0.00	2.89	3.61	3.48	0.00	0.00	0.10	0.35	0.17	0.17	0.17	2.96	0.99	1.16
OCT	1.18	0.75	0.53	0.98	0.00	0.00	0.98	1.22	0.98	0.00	0.00	0.20	0.10	0.05	0.05	0.05	0.83	0.28	0.33
TOTAL	29.07	16.39	12.22	20.85	3.68	8.06	12.80	16.00	19.07	4.38	15.43	1.92	1.91	0.95	0.95	0.95	16.21	5.40	6.36

AVERAGE CONDITIONS, CROP = ALFALFA
PELLE IRRIGATED ACREAGE = 4.0
PACT. = PACTOLA RESERVOIR
WTP = RAPID CITY WATER TREATMENT PLANT AND INFILTRATION GALLERIES

TRANSFERABLE AMOUNT FROM PELLE PROPERTY			
	(INCHES)	(FEET)	(AC.FT)
TO PACT.	16.21	1.35	5.4
TO WTP	19.07	1.59	6.4

FOOTNOTES FOR PELLE TRANSFERABLE AMOUNT TABLE

Columns A through R are the same as those described in the footnotes to Table III-3 of the Tyler report.

Column S

Amount transferable to storage in Pactola Reservoir

All months: R_i x 4 acres x 1 foot/12 inches

Column T

Amount transferable to the Rapid City WTP

All months: J_i x 4 acres x 1 foot/12 inches

Column U

Month during irrigation season

Column V

Murphy Ditch diversions (AF)

ASSUMPTIONS

A. Assumptions applicable to Long transfer:

1. Irrigate acreage = 9.0
2. Crop is a hay/alfalfa mix consisting of mostly hay
3. Flood irrigation efficiency is 65 percent
4. Murphy Ditch has an 11 percent seepage loss
5. 35 percent flood irrigation inefficiency is distributed as follows:

    a. One-half (17.5 percent) is surface water return flow
    b. Other half (17.5 percent) plus any soil moisture in excess of the water holding capacity of the soil (9.5 inches) is deep percolation.

B. Assumptions applicable to Pelle transfer:

1. Irrigated acreage = 4.0

Other assumptions applicable to the Long and Pelle transfers are described in the Tyler report.

Water Rights Division - DWNR

Conversation or File Documentation

File No. 2199-2
2201-2

NAME OF PERSON OR FILE: LES ENGLAND

ADDRESS: RAPID CITY COUNTY PENNINGTON

DATE: 10/18/91 TELEPHONE 341-7600

RE: WATER RIGHT TRANSFERS

COMMENTS:

I CALLED LES ENGLAND CONCERNING APPLICATION NOS 2199-2 & 2201-2 I TOLD HIM THERE MAY BE A DISCREPANCY BETWEEN CLAIMED AC-FT AND CALCULATED AC-FT ON 2199-2. I ALSO TOLD HIM WE WOULD HAVE TO DECREASE THE ACREAGE FROM THE VALIDATED 10ac TO 9ac FOR THIS TRANSFER. I TOLD HIM WE DID IT WHAT I ORIGINALLY GAVE.

HE WANTED TO SET UP A MEETING BETWEEN THIS OFFICE AND WEIGHT WATER ENGINEERS AT THE END OF OCTOBER.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Mark D Rath

4/82

Water Rights Division - DWNR File No. 2199-2

Conversation or File Documentation

NAME OF PERSON OR FILE: Les England (Radio City Attorney)

ADDRESS: Radio City COUNTY Pennington

DATE: 10/22/91 TELEPHONE

RE: Application No 2199-2

COMMENTS:

Les England Wanted To Know How We Were Planning On Handling The Pelle Acreage (4 ac.) on The Water License. I Told Him That The Acreage Was Included In The Valuation At The December 1991 Water Management Board Meeting, But Was Inadvertently Left Off The Reissued License. Because Donald & John Pelle Have Submitted An AFFIDAVIT Stating That The Acreage Had Continued To Be Irrigated With The Tyler Property It Could Be Considered To Be Still Covered By The Water License 1727-2.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME:

4/82

Water Rights Division - DWNR

File No. 2199-2
2201-2

Conversation or File Documentation

NAME OF PERSON OR FILE: LES ENGLAND (CITY OF RAPID CITY)

ADDRESS: RAPID CITY, SD COUNTY PENNINGTON

DATE: 11/1/91 TELEPHONE 341-7600

RE: WATER RIGHT TRANSFERS

COMMENTS:

I CALLED LES ENGLAND CONCERNING THE DIVERSION RATES FOR THE WATER RIGHT TRANSFERS. I ASKED HIM IF THE CITY HAD AN OFFICIAL LIST OF THE MINERS INCHES ASSOCIATED WITH THE IRRIGATED LAND. HE SAID THAT THEY DID NOT, AND THAT HE REALIZED THERE MIGHT BE PROBLEMS WITH MAKING TRANSFERS IN THAT MANNER. HE SAID THAT HE CONSIDERED THE DIVERSION RATE OF 1 cfs per 70 acres AS THE METHOD TO GO WITH. I TOLD HIM THE TYLER TRANSFER WAS MADE WITH 36 MINERS INCHES FOR 49 acre which WAS 0.72 cfs and based on 1cfs/70ac. it should have been 0.70 cfs

LES ENGLAND MADE A CONFERENCE CALL TO WEIGHT WATER ENGINEERS MR ENGLAND & THE WEIGHT ENGINEERS AGREED THAT THE DIVERSION RATE TRANSFER SHOULD BE 1cfs/70ac SO THAT THE RATE TO BE TRANSFER DIVERSION SHOULD BE 0.11 cfs FOR THE LONG PROPERTY & THE DIVERSION RATE TRANSFER FOR THE PELLE PROPERTY SHOULD BE 0.03 cfs.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: [signature]

4/82

COPY of Original Letter From 1727-2

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

November 6, 1991

David Lamb, President
Rapid Valley Water Company, Inc.
Rt 2 Box 160
Rapid City, SD 57701

Dear Mr. Lamb:

This letter is in regard to the diversion rate for Rapid Valley Water Company's Vested Water Right No. 1727-2. The vested water right claim was filed and validated for 20 cfs, with 17 cfs having the priority date of April 6, 1878, and 3 cfs having a priority date of April 26, 1893. We are concerned with the diversion rate associated with the separate parcels of irrigated land. The information that we have concerning the separate rates is as follows:

Appropriation Owner's Name	1878 Priority (miner's inch)	1893 Priority (miner's inch)
Joseph M. Lytle	41	
C.E. Morris	105	
David S. Lamb	230	
Marty Rypkema	36	
Jerry L. Olson	9	
Rapid Valley Fire Dept.	8	
Arlene J. Murphy	38	
James K. Long	10	
Cora Buckholtz	9	
Kenneth Buckholtz	6	
Higgins Ranch	120	
Wayne R. Anderson	12	
Dale A. Wileman	7	
Rick L. Whiting	1	
Wes Wileman	33	
Bruce Weber	46	
H. Lee Ahrlin	47	
Dorothy J Tyler *	36	
Merrill P. Carley	50	
Roseanne Heavlin		25
Merlin Stromer		114
James A. Bloom		41

* transferred under Water Permit No. 2142-2

The total number of miner's inches listed is 1024, with 844 miner's inches being under the 1878 priority, and 180 miner's inches under the 1893 priority.

We want to know if this list is correct, and if it is, how these rates relate to the 20 cfs that was approved under Vested Water Right No. 1727-2. Please respond as soon as possible.

Sincerely,

Mark D. Rath
Natural Resources Engineer II
Divsion of Water Rights
(605) 773-3352

cc: Michael M. Hickey
Leslie J. England

Copy of ORIGINAL 14
1727-2

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

December 9, 1991

David Lamb, President
Rapid Valley Water Company, Inc.
Rt 2 Box 160
Rapid City, SD 57701

Dear Mr. Lamb:

This letter is a follow-up to the November 6, 1991 letter requesting information concerning the diversion rate for Rapid Valley Water Company's Vested Water Right No. 1727-2. As I indicated we are concerned with the diversion rate associated with the separate parcels of irrigated land. The information that we have concerning the separate rates is as follows:

Appropriation Owner's Name	1878 Priority (miner's inch)	1893 Priority (miner's inch)
Joseph M. Lytle	41	
C.E. Morris	105	
David S. Lamb	230	
Marty Rypkema	36	
Jerry L. Olson	9	
Rapid Valley Fire Dept.	8	
Arlene J. Murphy	38	
James K. Long	10	
Cora Buckholtz	9	
Kenneth Buckholtz	6	
Higgins Ranch	120	
Wayne R. Anderson	12	
Dale A. Wileman	7	
Rick L. Whiting	1	
Wes Wileman	33	
Bruce Weber	46	
H. Lee Ahrlin	47	
Dorothy J Tyler *	36	
Merrill P. Carley	50	
Roseanne Heavlin		25
Merlin Stromer		114
James A. Bloom		41

* transferred under Water Permit No. 2142-2

The total number of miner's inches listed is 1024, with 844 miner's inches being under the April 6, 1878 priority, and 180 miner's inches under the April 26, 1893 priority.

We need to know if this list is correct, and if so how it relates to the 20 cfs approved under Vested Water Right No. 1727-2. I would appreciate an early response concerning this.

If you have any questions concerning this matter feel free to contact me.

Sincerely,

Mark D. Rath

Mark D. Rath
Natural Resources Engineer II
Division of Water Rights
(605) 773-3352

cc: Michael M. Hickey
Leslie J. England

2201-2

Water Rights Division - DWNR File No. ~~2201-2~~ 2199-2

Conversation or File Documentation

NAME OF PERSON OR FILE: LES ENGLAND

ADDRESS: RAPID CITY COUNTY PENNINGTON

DATE: 12/12/91 TELEPHONE

RE: TRANSFER APPLICATIONS

COMMENTS:

I CALLED LES ENGLAND TOLD HIM THAT THE CHIEF ENGINEER WAS NOT COMFORTABLE MAKING A RECOMMENDATION ON THE TRANSFERS UNTIL THE DIVERSION RATE PROBLEM IS SETTLED. I TOLD HIM WE MAY BE RECOMMENDING DEFERRAL UNTIL THE MATTER IS TAKEN CARE OF.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Mark Hall

4/82

2199-2

Water Rights Division - DWNR File No. 2201-2

Conversation or File Documentation

NAME OF PERSON OR FILE: LES ENGLAND (CITY OF RAPID CITY)

ADDRESS: RAPID CITY COUNTY PENNINGTON

DATE: 12/13/91 TELEPHONE

RE: METHOD FOR DETERMINING DIVERSION RATES FOR TRANSFERS

COMMENTS:

(CONFERENCE CALL BETWEEN LES ENGLAND, LEO EISER (WWSE) JONAHATCH, AND MYSELF) LES ENGLAND EXPRESSING CONCERN THAT MURPHY DITCH COULD HOLD UP ACTION ON THE TWO TRANSFER APPLICATIONS BASED ON THE METHOD of DETERMINING THE ALLOWABLE DIVERSION RATE. HE AND LEO EISER PROPOSE TO COMPARE THE REVISED PROPOSED HISTORICAL RATE (MINERS INCHES) AND ACTUAL PRORATED BENEFICIAL USE DIVERSION RATE THEY WILL PLAN TO USE THE MOST APPROPRIATE ONE.

THEY INDICATED THAT THEY WILL BE SENDING IN MORE INFORMATION.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME:

4/82

WWE
Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100 A
Denver, Colorado 80211
Tel. (303) 480-1700
Fax (303) 480-1020

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P.O. Box 219
Glenwood Springs, Colorado 81602
Tel. (303) 945-7755
Denver Direct Line: 893-1608
Fax (303) 945-9210

FAX TRANSMISSION

To: Mark Rath
From: Leo Eisel, Gary Witt
Fax Number: 1-605-773-6035
Date: Dec. 19, 1991
Total Pages Including Cover: 3
Job Number: 901-046.010

Comments:

Mark-

Here are a couple of tables of information on the comparison of miners inches to prorata acreage for Murphy Ditch users.

We will call to discuss these later today or tomorrow.

Gary Witt

Please call Beth at (303) 480-1700 if you do not receive all pages.

File Name: A:\Murphy\compar.wq1

MURPHY DITCH

1878 Priorty (17 cfs)

Parcel number	Water Rights Holder	Release license acreage (2/20/91)	1990 Validated acreage (10/23/90)	Appendix E Tyler Report acreage	Rivers Edge from 12/6/91 letter
1	Joseph Lytle	45	45	*	41
2 & 13	C.E. Morris	64+104	64+104	213	105
3	David S. Lamb	368	380	445	230
4	Mary Rypkema			*	36
4.5	Jerry L. Olson			*	9
5	Rapid Valley Fire Dept	5	5	8	8
6	Arlene J. Murphy	32	32	43	38
7	James K. Long	10	10	10	10
8	Cora Buckholtz	5	5	5	9
9	Kenneth Buckholtz	5	5	5	6
10	Higgins Ranch	121	121	121	120
11	Wayne R. Anderson	2	2	?	12
12	Dale A. Wileman	5	6	6	7
14	Rick L. Whiting	1	1	1	1
15	Wes Wileman	28	28	28	33
16	Dorthy J. Tyler	49	49	65	36
17	Merril P. Carley	145	145	145	50
18	Bruce Weber	63	63	63	46
19	H. Lee Ahrlin	51	51	51	47
	TOTAL	**1103**	**1116**	**1209**	**844**

1883 Priorty (3 cfs)

20	Roseanne Heavlin	26	26	-	25
21	Merlin Stromer	125	125	-	114
22	James A. Bloom	38	38	-	41
	TOTAL	**189**	**189**	**-**	**180**

File Name: b:\table.wq1

MURPHY DITCH

Diversion Limitation Comparison

Miner's Inches vs. Pro rata acreage

Owner	Based on miner's inches (cfs)	Based on pro rata acreage (cfs)
Pelle	0.053	0.055
Long	0.178	0.137

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100-A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

December 20, 1991

Mr. Delvin D. Brosz, P.E.
Hydrologist-Engineer
Division of Water Rights
Department of Water and Natural Resources
523 East Capitol Avenue
Pierre, South Dakota 57501

Re: Maximum Diversion Rate for Pelle Property and Water Rights Transfer

Dear Mr. Brosz:

This letter is provided to you per the decisions made in our telephone conference of December 20, 1991 concerning the maximum diversion rate for the Pelle property.

The maximum diversion rate for the Pelle property rights water transfer is calculated in the attached set of calculations. These calculations are based on the following:

1. Total irrigated acreage for the Murphy Ditch is 1,191 acres.
2. The agreed upon acreage for the Pelle property is 4 acres.
3. The Murphy Ditch under its 1878 priority is licensed to divert 17 cfs from Rapid Creek.
4. The ditch loss for the Murphy Ditch is 11 percent of ditch headgate diversions.

Based upon these data and the procedure detailed in the attached set of calculations, the maximum diversion rate for the water rights associated with the Pelle property is 0.05 cfs.

If you have questions or concerns involving this matter, please contact me.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By Leo M. Eisel
Leo M. Eisel, P.E.

LME:ard
901-046.010
(RAPIDC/PELLWTRR.LME)
cc: Leslie J. England

WRIGHT WATER ENGINEERS, INC.
2490 West 26th Ave. - Suite 100-A
Denver, Colorado 80211
Tel. (303) 480-1700

Date 12/20/91 Sheet 1 of 1
Proj. No. 901-046.010
Proj. Name Rapid City
Des. By LHE Ckd. By GDW
Subject Max Diversion Rate For Pelle Property Water Rights Transfer and for Long Property

- Total Irrigated Acreage for Murphy Ditch as per 12/20/91 Telcon with Mark Rath and Del Brosz is 1191 Acres

- Agreed to acreage for Pelle property per 12/20/91 Telcon is 4 acres

- The following is the agreed upon formula for calculating the max diversion rate based on pro rata acreage:

$$\text{Diversion Limit} = \left[\frac{\text{Specific Property Acreage}}{1191 \text{ Acres}}\right] \times \left[\begin{matrix}17 \text{ cfs} \\ \text{Murphy} \\ \text{Ditch HG} \\ 1878 \\ \text{priority}\end{matrix}\right] \times \left[1.0 - 0.11\right]$$

$$= \left[\frac{4}{1191}\right]\left[17\right]\left[0.89\right] = \underline{0.05 \text{ cfs}} \leftarrow \text{Pelle Property}$$

.051 cfs g. Swit chng

- Long property Irrigated Acreage = 10 acres

$$\text{Diversion Limit} = \frac{10}{1191} \times 17 \times 0.89 = \underline{0.13 \text{ cfs}} \leftarrow$$

.127 cfs g. Swit chng

DEC 1991
DIVISION OF WATER RIGHTS
Pierre, SD

MEMORANDUM

TO: File 901-046.010

FROM: Leo M. Eisel

DATE: December 20, 1991

RE: Murphy Ditch and South Side Ditch Acreage

This memo summarizes the results of the telephone conference with Mark Rath and Del Brosz of the South Dakota Department of Water and Natural Resources on December 20, 1991 concerning the Murphy Ditch and South Side Ditch acreages.

MURPHY DITCH

The attached summary of Murphy Ditch acreages contains the agreed-upon total of 1,191 acres to be used for calculation of farm headgate diversions for the Murphy Ditch. The 1,191 acres was agreed to by adding the following acreage amount to the 1,103 acres shown in the reissue license acreage of February 20, 1991:

- Marty Rypkema - 36 acres;
- Jerry Olson - 9 acres;
- Pelle property - 4 acres;
- David Lamb - 38 acres; and
- Dave Wileman - 1 acre.

The David Wileman 1 acre is in addition to the existing 5 acres shown for Dave Wileman and results because of some problem with the legal description.

The total of 1,191 acres includes acreage that the Department is now considering adding to the total acreage for the Murphy Ditch; these additional acres have been requested by the Murphy Ditch.

Therefore, we will use the 1,191 acres as the basis for determining the farm headgate diversion.

We will use the pro rata method to estimate the maximum permitted diversion for the transferred water rights. The pro rata acreage method consists of the following formula:

Diversion limit = (specific property acreage/1,191 acres)/(17 cfs ditch headgate 1878 priority) x (1.0 0.11)

WRIGHT WATER ENGINEERS, INC.

MEMORANDUM

TO: File 901-046.010

FROM: Leo M. Eisel and Gary D. Witt

DATE: January 7, 1992

RE: Murphy Ditch and South Side Ditch Acreages to be used in Calculations

The purpose of this memo is to document the agreements reached in a January 3, 1992 telephone conference with Del Brosz and Mark Rath concerning the referenced topic.

Many of the agreements reached are summarized in the attached two tables. In addition, the following agreements were made:

1. Wright Water Engineers will use the 1991 reissued Murphy Ditch licensed acreage plus the additional properties to be added to the 1878 priority as per the 12/20/1991 telephone conference with Del Brosz and Mark Rath. This is a total of 1,191 acres which includes the 1,103 acres from the revised 1991 license, plus the 88 acres from the Pelle, Rypkema, Olson, Wileman, and Lamb properties.

2. In the case where a field-determined acreage is greater than the reissued license acreage, the reissued license acreage will be used. In the case where the field-determined acreage is less than the 1991 reissued license acreage, the option exists for using the field-determined acreage.

3. In the case of the Stromer property where Wright Water Engineers has field-determined that 192.5 acres of irrigated land exists as compared to the 1987 validated acreage of 241 acres, we will use the 192.5 acres.

4. Therefore, in the case of the South Side Ditch we will go with the same procedure as in the case of the Murphy Ditch: (1) if the field-determined acreage is less than the validated acreage, we will use the field-determined acreage; (2) if the field-determined acreage is greater than the validated acreage, we will use the validated acreage.

5. Mark Rath made the important point that in the case of the Stromer property, we will transfer the water rights associated with 192.5 acres, but the license will be reduced by 241 acres. This will be the policy in the case of other transfers for the Murphy and the South Side Ditch where there is a disparity between the actual irrigated acreage and the

WRIGHT WATER ENGINEERS, INC.

validated acreage. The 241 acres is the 1987 validated acreage for the Stromer property.

6. There has been no validation for the Little Giant Ditch.

7. All other Rapid Creek ditches have been validated.

LME:ard
901-046.010
Encls.
(RAPIDC/MURANDSO.LME)

TABLE 1
REVISED CALCULATIONS OF MURPHY DITCH ACREAGE TO BE USED FOR DETERMINATION OF FARM HEADGATE DIVERSIONS

o Murphy Ditch priority (revised 1991 license)	1,103
o 1893 Murphy Ditch priority	189
o Additional acreage to be added to 1878 Murphy Ditch priority by State	
Subtotal	1,292
a) Pelle	4
b) Rypkema	36
c) Olson	9
d) Wileman	1
e) Lamb	38
Subtotal	1,380
o Other priorities diverting at Murphy Ditch headgate as determined by Wright Water Engineers in 10/90	
a) Little Giant (1878 priority)	27
b) Blanche Sedivy (leased by Valley Green Sod Farm - 1886 priority)	15
c) Olson (1981 priority)	4
	1,426

TABLE 2
AGREED-UPON ACREAGES TO BE USED FOR SOUTH SIDE AND MURPHY DITCH TRANSFERS AS PER JANUARY 3, 1992 TELECON WITH DEL BROSZ AND MARK RATH

Ditch/Property	Acreage to be Used to Determine if Full Irrigation Supply Exists	Acreage to be Used to Calculate Maximum Diversion for Transferred Rights	Acreage for Specific Transfers
Murphy Ditch (1878 Priority)	1,426[1]	1,191[2]	--
o Long	1,426	1,191	10
o Pelle	1,426	1,191	4
o Bucholz	1,426	1,191	10
South Side Ditch	1,313[3]	1,877[3]	--
o Stromer	1,313	1,877	192.5[4]
o Keller	1,313	1,877	29.2[5]

[1] See attached Table 1.

[2] See memo documenting 12/20/91 telecon with Brosz and Rath.

[3] See maps 10 and 11 in U.S. Bureau of Reclamation, 1990, Rapid Valley Water Management Study for 1,078 acres irrigated in 1989. To this 235 acres have been added for acreage irrigated by the Little Giant Ditch diverting at the South Side Ditch headgate.

[4] As planimetered from 1981 ASCS aerial photograph and field checked by Wright Water Engineers. The 1987 license lists 241 acres.

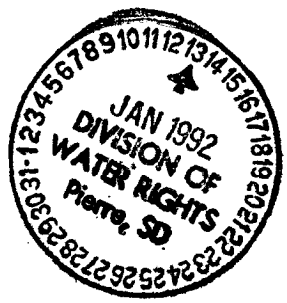
[5] As planimetered from 1981 ASCS aerial photograph. The 1987 license lists 34 acres.

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100 A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

January 8, 1992



Mr. Mark Rath
Mr. Del Brosz
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Re: Water Rights Transfer from Flood Irrigated Properties

Dear Mark and Del:

Attached is a memo to the file clarifying the calculations of transferable consumptive use for both flood irrigated properties and sprinkler irrigated property.

This is in response to the point made by Mark Rath in the January 7 telephone conference. Mark, thank you very much for finding this error in our footnotes explaining the calculation of transferable consumptive use.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Leo M. Eisel, P.E.

LME:ard
901-046.010
cc: Les England
(RAPIDC/EXPLOFCA.LME)

MEMORANDUM

TO: File 901-046.010

FROM: Leo M. Eisel and Gary Witt

DATE: January 8, 1992

RE: Calculations of Transferable Consumptive Use for Properties Irrigated by Flood Irrigation or Sprinkler Irrigation

The purpose of this memo is to provide a response to a point raised by Mark Rath in a telephone call on January 7, 1992 concerning the calculation of transferable consumptive use associated with the sprinkler and flood irrigated properties.

In the case of flood irrigated properties, e.g. Long and Stromer, the claimed irrigation consumptive use for transfer as calculated in Column P is as follows:

If $J_i = 0$, then $P_i = 0$
If $E_i \leq 0.65\ J_i$, then $P_i = E_i$
If $E_i > 0.65\ J_i$, then $P_i = 0.65\ J_i$

In the case of the sprinkler irrigated properties (i.e. Tyler and Pelle), the claimed irrigation consumptive use for transfer as calculated in Column R which is calculated as follows:

If $J_i = 0$, $R_i = 0$
If $E_i \leq 0.80\ J_i$, then $R_i = E_i$
If $E_i > 0.80\ J_i$, then $R_i = 0.80\ J_i + Q_i$

These explanations of the calculations of the relevant columns in the transferable consumptive use tables will be included as footnotes to these tables in future reports.

LME/GDW:ard
cc: Les England
Mark Rath and Del Brosz
(RAPIDC/EXPLOFCA.LME)

WRIGHT WATER ENGINEERS, INC.

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100-A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

JAN 1992
DIVISION OF
WATER RIGHTS
Pierre, SD

January 10, 1992

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building, 523 East Capitol
Pierre, South Dakota 57501-3181

Re: Water Rights Transfer From Pelle Property

Dear Mr. Rath:

We are providing you with an explanation of the Pelle transfer as it relates to the Tyler transfer of Murphy Ditch water detailed in our report dated October 1990 and our recent telephone conference regarding the total irrigated acreage under the Murphy Ditch. This letter report supersedes all previous reports regarding the amount of water transferable to storage in Pactola Reservoir and to the City's water treatment plant and infiltration galleries.

Figure III-1 of the Tyler report shows the location of the 4 acres purchased by Pelle from Tyler. Pelle's 4 acre parcel was irrigated by Tyler's sprinkler irrigation system. This parcel is essentially part of the field in which Tyler had historically planted alfalfa, and therefore the calculations and assumptions made for Tyler apply to Pelle.

To determine the historic consumptive use (the amount of water transferable to storage in Pactola Reservoir) and the amount transferable to the City's water treatment plant and infiltration galleries associated with Pelle's 4 acre parcel, Table III-3 in the Tyler report was adjusted and the results are presented in the attached table.

The calculations show that:

a) To storage in Pactola Reservoir, the transferable amount would be;
(4 acres) x (1.32 acre-feet/acre) = 5.3 acre-feet.

b) To the City's WTP and infiltration galleries, the transferable amount would be;
(4 acres) x (1.56 acre-feet/acre) = 6.2 acre-feet.

The rate of diversion for the transferable amounts from the Pelle property is calculated by the following method:

4 acres / 1,191 acres	x	17 cfs at the ditch headgate (1878 priority)	x	(1.0 - 0.11) = 0.05 cfs

where the 11 percent carriage loss would remain in the ditch.

If these calculations or explanations need further clarification, please do not hesitate to contact us.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Leo M. Eisel, P.E.

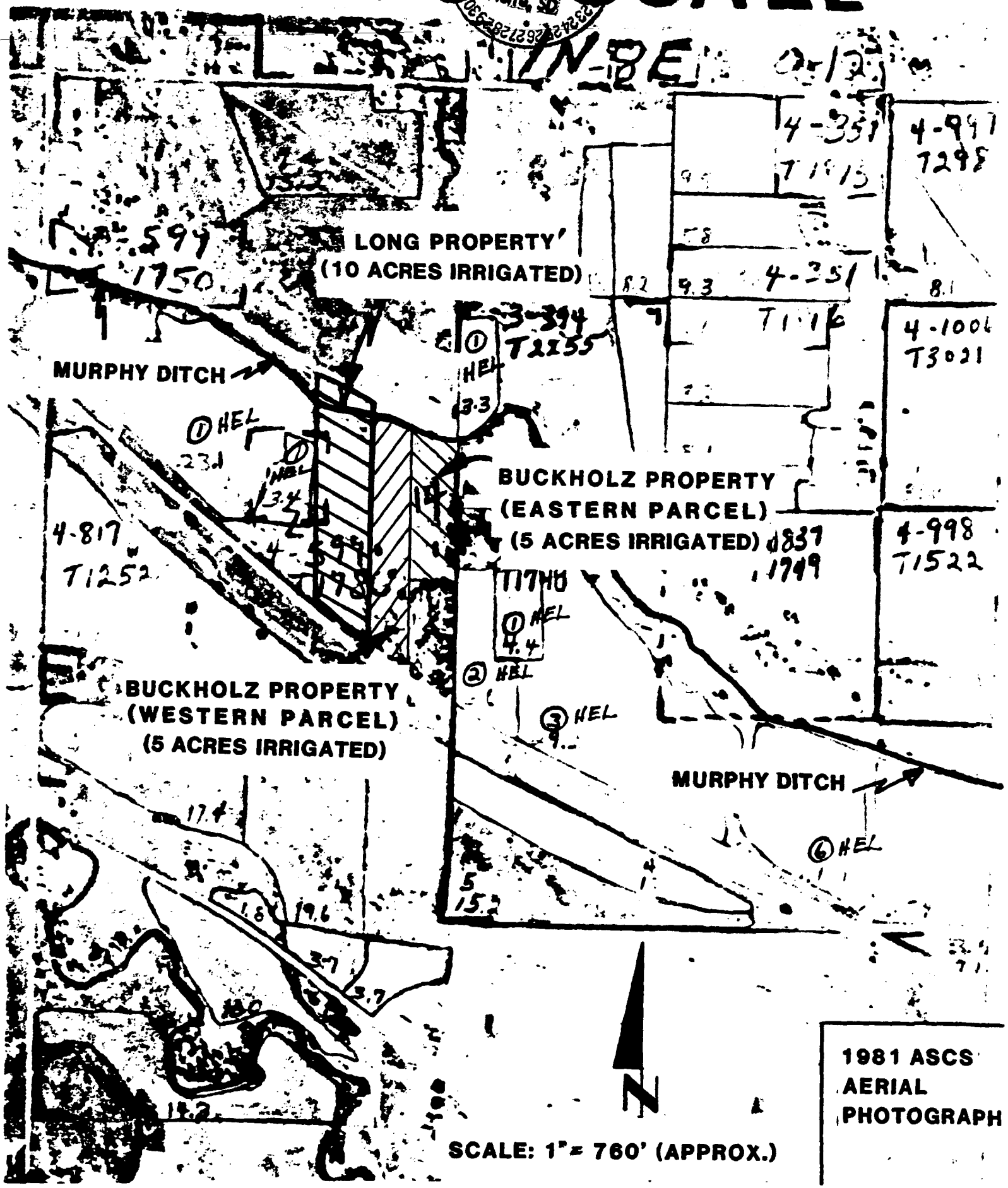
By _____
Gary D. Witt

LME/GDW:ard
901-046.010
(RAPIDC/EXPLOFPE.LME)

DRAFT

NOT TO SCALE

JAN 1992
DIVISION OF
WATER RIGHTS
Pierre, SD



1981 ASCS AERIAL PHOTOGRAPH

DETERMINATION OF CONSUMPTIVE USE FOR TRANSFER
RAPID CITY WATER RIGHTS
901-046.010
JANUARY 8, 1992 FILENAME: B:\PELLE\PELLAVCU.WQ1

S	T
MONTH	MURPHY WATER (AF)
MAY	331
JUN	385
JUL	523
AUG	671
SEP	455
TOTAL	2365

TRANSFERABLE AMOUNT FROM PELLE PROPERTY UNDER MURPHY DITCH (AVERAGE)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
MONTH	C.U. (IN)	PRECIP (IN)	EFFECT. PRECIP. (IN)	PRECIP. ADJ. C.U. (IN)	EXCESS PRECIP. TO SOIL MOIST. DURING MONTH (IN)	SOIL MOIST. USED TO SATISFY ADJUST. C.U. (IN)	REMAIN. CROP REQUIR. (IN)	GROSS CROP NEEDS (IN)	FARM IRRIG. SUPPLY (IN)	EXCESS IRRIG. SOIL MOIST. CONTRIB. (IN)	ACCUM. SOIL MOIST. STORAGE AFTER IRRIG. (IN)	ADDITIONAL WATER REQUIRED TO MEET C.U. NEEDS FROM SUBIRRIG. (IN)	DEEP PERC. WITH SPRINKLER IRRIG. (10%) (IN)	SPRINK. APPL. LOSSES (5%) (IN)	SPRINK. TAIL-WATER RETURN (5%) (IN)	REUSE FROM DEEP PERC. (5%) (IN)	CLAIMED IRRIG. C.U. FOR TRANSFER (IN)
NOV	0.00	0.53	0.37	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
DEC	0.00	0.41	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00
JAN	0.00	0.50	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00
FEB	0.00	0.59	0.41	0.00	0.41	0.00	0.00	0.00	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00
MAR	0.00	1.11	0.78	0.00	0.78	0.00	0.00	0.00	0.00	0.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00
APR	0.00	2.11	1.48	0.00	1.48	0.00	0.00	0.00	0.00	0.00	3.68	0.00	0.00	0.00	0.00	0.00	0.00
MAY	3.95	2.58	1.79	2.16	0.00	2.16	0.00	0.00	2.48	1.98	3.49	0.00	0.25	0.12	0.12	0.12	2.11
JUN	5.78	3.29	2.46	3.33	0.00	3.33	0.00	0.00	2.88	2.31	2.47	0.00	0.29	0.14	0.14	0.14	2.45
JUL	7.83	1.87	1.66	6.16	0.00	2.47	3.69	4.61	3.92	0.00	0.00	0.56	0.39	0.20	0.20	0.20	3.33
AUG	6.64	1.55	1.31	5.33	0.00	0.00	5.33	6.66	5.03	0.00	0.00	1.31	0.50	0.25	0.25	0.25	4.27
SEP	3.69	1.10	0.80	2.89	0.00	0.00	2.89	3.61	3.41	0.00	0.00	0.16	0.34	0.17	0.17	0.17	2.90
OCT	1.18	0.75	0.53	0.98	0.00	0.00	0.98	1.22	0.98	0.00	0.00	0.20	0.10	0.05	0.05	0.05	0.83
TOTAL	29.07	16.39	12.22	20.85	3.68	7.96	12.89	16.11	18.69	4.29	15.30	2.22	1.87	0.93	0.93	0.93	15.89

AVERAGE CONDITIONS, CROP = ALFALFA
MURPHY DITCH IRRIGATED ACREAGE = 1426
11% SEEPAGE LOSS
PELLE IRRIGATED ACREAGE = 4.0
80% IRRIGATION EFFICIENCY USING SPRINKLER IRRIGATION
DEEP PERCOLATION IS ONE HALF OF IRRIGATION INEFFICIENCY (10%) PLUS EXCESS SOIL MOISTURE
OTHER HALF OF IRRIGATION INEFFICIENCY (10%) IS SPLIT EVENLY BETWEEN SPRINKLER APPLICATION LOSSES (5%) AND TAIL WATER RETURN FLOW (5%)
PACT. = PACTOLA RESERVOIR
WTP = RAPID CITY WATER TREATMENT PLANT AND INFILTRATION GALLERIES

TRANSFERABLE AMOUNT FROM PELLE PROPERTY UNDER MURPHY DITCH			
	(INCHES)	(FEET)	(AC.FT)
TO PACT.	15.89	1.32	5.3
TO WTP	18.69	1.56	6.2

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100-A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

January 14, 1992

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Re: Water Rights Transfer from Long and Pelle Properties

Dear Mr. Rath:

In response to your request, I have enclosed the following:

a. Consumptive use/transferable amount Tables I and II for the Long and Pelle properties, respectively.

b. Footnotes to each of these tables,

c. Assumptions applicable to these tables, and

d. Monthly transfer summaries to storage in Pactola Reservoir and the Rapid City water treatment plant for the Long and Pelle properties.

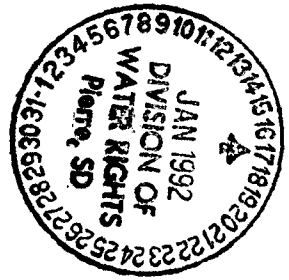
If you have any questions regarding these enclosures, please do not hesitate to contact me.

Sincerely,
WRIGHT WATER ENGINEERS, INC.

By _____
Gary D. Witt

By _____
Leo M. Eisel, P.E.

GDW/LME:ard
901-046.010
Encls.
(RAPIDC/WTRRIGHT.GDW)



S	T
MONTH	MURPHY WATER (AF)
MAY	331
JUN	385
JUL	523
AUG	671
SEP	455
TOTAL	2365

TABLE II

TRANSFERABLE AMOUNT FROM PELLE PROPERTY UNDER MURPHY DITCH (AVERAGE)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
MONTH	C.U. (IN)	PRECIP. (IN)	EFFECT. PRECIP. (IN)	PRECIP. ADJ. C.U. (IN)	EXCESS PRECIP. TO SOIL MOIST. DURING MONTH (IN)	SOIL MOIST. USED TO SATISFY ADJUST. C.U. (IN)	REMAIN. CROP REQUIR. (IN)	GROSS CROP NEEDS (IN)	FARM IRRIG. SUPPLY (IN)	EXCESS IRRIG. SOIL MOIST. CONTRIB. (IN)	ACCUM. SOIL MOIST. STORAGE AFTER IRRIG. (IN)	ADDITIONAL WATER REQUIRED TO MEET C.U. NEEDS FROM SUBIRRIG. (IN)	DEEP PERC. WITH SPRINKLER IRRIG. (10%) (IN)	SPRINK. APPL. LOSSES (5%) (IN)	SPRINK. TAIL-WATER RETURN (5%) (IN)	REUSE FROM DEEP PERC. (5%) (IN)	CLAIMED IRRIG. C.U. FOR TRANSFER (IN)
NOV	0.00	0.53	0.37	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
DEC	0.00	0.41	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00
JAN	0.00	0.50	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00
FEB	0.00	0.59	0.41	0.00	0.41	0.00	0.00	0.00	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00
MAR	0.00	1.11	0.78	0.00	0.78	0.00	0.00	0.00	0.00	0.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00
APR	0.00	2.11	1.48	0.00	1.48	0.00	0.00	0.00	0.00	0.00	3.68	0.00	0.00	0.00	0.00	0.00	0.00
MAY	3.95	2.58	1.79	2.16	0.00	2.16	0.00	0.00	2.48	1.98	3.49	0.00	0.25	0.12	0.12	0.12	2.11
JUN	5.78	3.29	2.46	3.33	0.00	3.33	0.00	0.00	2.88	2.31	2.47	0.00	0.29	0.14	0.14	0.14	2.45
JUL	7.83	1.87	1.66	6.16	0.00	2.47	3.69	4.61	3.92	0.00	0.00	0.56	0.39	0.20	0.20	0.20	3.33
AUG	6.64	1.55	1.31	5.33	0.00	0.00	5.33	6.66	5.03	0.00	0.00	1.31	0.50	0.25	0.25	0.25	4.27
SEP	3.69	1.10	0.80	2.89	0.00	0.00	2.89	3.61	3.41	0.00	0.00	0.16	0.34	0.17	0.17	0.17	2.90
OCT	1.18	0.75	0.53	0.98	0.00	0.00	0.98	1.22	0.98	0.00	0.00	0.20	0.10	0.05	0.05	0.05	0.83
TOTAL	29.07	16.39	12.22	20.85	3.68	7.96	12.89	16.11	18.69	4.29	15.30	2.22	1.87	0.93	0.93	0.93	15.89

AVERAGE CONDITIONS, CROP = ALFALFA
MURPHY DITCH IRRIGATED ACREAGE = 1426
11% SEEPAGE LOSS
PELLE IRRIGATED ACREAGE = 4.0
80% IRRIGATION EFFICIENCY USING SPRINKLER IRRIGATION
DEEP PERCOLATION IS ONE HALF OF IRRIGATION INEFFICIENCY (10%) PLUS EXCESS SOIL MOISTURE
OTHER HALF OF IRRIGATION INEFFICIENCY (10%) IS SPLIT EVENLY BETWEEN SPRINKLER APPLICATION LOSSES (5%) AND TAIL WATER RETURN FLOW (5%)
PACT. = PACTOLA RESERVOIR
WTP = RAPID CITY WATER TREATMENT PLANT AND INFILTRATION GALLERIES

TRANSFERABLE AMOUNT FROM PELLE PROPERTY UNDER MURPHY DITCH			
	(INCHES)	(FEET)	(AC.FT)
TO PACT.	15.89	1.32	5.3
TO WTP	18.69	1.56	6.2

FOOTNOTES FOR PELLE TRANSFERABLE AMOUNT TABLE

Columns A through I and K through Q are the same as those described in the footnotes to Table III-3 of the Tyler report.

Column J

Farm irrigation supply is prorated for the Long property as percentage of Murphy water (11 percent Murphy Ditch seepage loss and 1,426 total acres of land irrigated by Murphy Ditch) under average year conditions. As shown in our attached memo of January 7, 1992, the total agreed to irrigated acreage diverting at the Murphy Ditch headgate is 1,426 acres.

All months: R x 0.89 x 12/1,426 (average year conditions)

Column R

Claimed irrigation consumptive use for transfer from Pelle property.

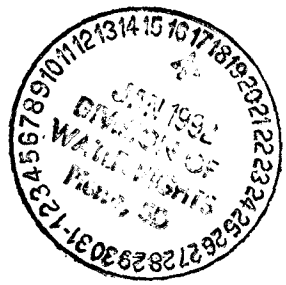
if $J_i = 0$, then $R_i = 0$;
if $E_i \leq 0.80\ J_i$, then $R_i = E_i$;
if $E_i > 0.80\ J_i$, then $R_i = 0.80\ J_i + Q_i$

Column S

Month during irrigation season

Column T

Murphy Ditch diversions (AF)



ASSUMPTIONS

A. Assumptions applicable to Long transfer:

1. Irrigate acreage = 10.0
2. Crop is a hay/alfalfa mix consisting of mostly hay
3. Flood irrigation efficiency is 65 percent
4. Murphy Ditch has an 11 percent seepage loss
5. 35 percent flood irrigation inefficiency is distributed as follows:

    a. One-half (17.5 percent) is surface water return flow
    b. Other half (17.5 percent) plus any soil moisture in excess of the water holding capacity of the soil (9.5 inches) is deep percolation.

B. Assumptions applicable to Pelle transfer:

1. Irrigated acreage = 4.0
2. Crop is alfalfa
3. Sprinkler irrigation efficiency is 80 percent
4. Murphy Ditch has an 11 percent seepage loss.
5. 20 percent flood irrigation inefficiency is distributed as follows:

    a. One-half (10 percent) plus any soil moisture in excess of the water holding capacity of the soil (9.5 inches) is deep percolation.
    b. One-quarter (5 percent) is due to sprinkler application losses (evaporation).
    c. One-quarter (5 percent) is tailwater return flow.

Other assumptions applicable to the Long and Pelle transfers are described in the Tyler report.

MONTHLY TRANSFER SUMMARY

PELLE PROPERTY

MONTH	DIVERSION TO STORAGE IN PACTOLA RESERVOIR (AC.FT)*	DIVERSION AT THE RAPID CITY WTP AND INFILTRATION GALLERIES (AC.FT)**
MAY	0.70	0.83
JUNE	0.82	0.96
JULY	1.11	1.31
AUGUST	1.42	1.68
SEPTEMBER	0.97	1.14
OCTOBER	0.28	0.33
TOTAL	**5.30**	**6.23**

* Monthly amount transferable to storage in Pactola Reservoir:

Column R (Table II) x 4 acres x 1 foot/12 inches

** Monthly amounts transferable to Rapid City WTP and infiltration galleries:

Column J (Table II) x 4 acres x 1 foot/12 inches

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 15, 1992

COPY

Mark Vickers
Worldwild Sporting Adventures
P.O. Box 8124
Rapid City, SD 57709

Dear Mr. Vickers:

Last November you wrote this office expressing an interest in water right issues on streams in the Black Hills. Enclosed is a copy of the Notice of Hearing for Water Permit Application Nos. 2199-2 and 2201-2 for the City of Rapid City. These applications propose to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use by Murphy Ditch (Rapid Valley Water Company, Inc.) to use by the city. The notice of hearing is scheduled to be published in the Rapid City Journal for two consecutive weeks.

If you have any questions regarding the application, please feel free to call me.

Sincerely,

Eric Gronlund

Eric Gronlund
Water Rights Division
605 773-3352

enclosure

LAW FIRM OF
LESLIE JAMES ENGLAND

LESLIE J. ENGLAND
(ALSO ADMITTED IN COLORADO)

SUITE 102, WESTERN MUTUAL BUILDING
731 ST. JOSEPH STREET
RAPID CITY, SOUTH DAKOTA 57701

TELEPHONE (605) 341-7600
FAX (605) 343-4131

January 15, 1992

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Dear Mark:

I just wanted to thank you, Del Brosz, Eric Gronlund, and the rest of your staff involved in reviewing the Pelle and Long water right transfer applications and reports for the City of Rapid City. This will confirm that the City of Rapid City will request an automatic continuance and hearing in these regards.

Yours very truly,

Leslie J. England

LJE/kmr

cc: Daniel Bjerke
Leo Eisel

Report on Water Permit Application No. 2199-2
City of Rapid City
January 13, 1992

Application No. 2199-2, City of Rapid City, proposes to transfer an annual volume of 6.2 acre-feet of water (ac-ft), if diverted at the city's water treatment plant and infiltration galleries, or 5.3 ac-ft, if stored in Pactola Reservoir. The maximum diversion rate proposed for this transfer is 0.05 cubic feet of water per second (cfs). The transfer is from irrigation to municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic uses for the City of Rapid City.

Application No. 2199-2 proposes to transfer water which has been historically used to irrigate 4 acres located in Lot B-3 of Lot B of Government Lot 1 (NW1/4 NW1/4) of Section 19-T1N-R9E, also known as the Pelle property. This property had been part of the Tyler property, and had been irrigated under Vested Water Right No. 1727-2. An Affidavit submitted to the Division of Water Rights by Donald J. Pelle and Joan L. Pelle states that they had purchased the land and have continued to irrigate this land. The property was included in the acreage validated under Vested Water Right No. 1727-2, Rapid Valley Water Company, Inc.

The source of the water for the proposed transfer is from the natural flow of Rapid Creek through the Rapid Valley Water Company system, also known as Murphy Ditch. Rapid Valley Water Company, Inc. holds Vested Water Right No. 1727-2 which was validated for 17.00 cfs with a priority date of April 6, 1878 and 3.00 cfs with a priority date of April 26, 1893. The existing diversion point for Murphy Ditch is located in the SW1/4 of Section 8 T1N-R8E. The locations of the diversion points for the proposed transfer are in the SE1/4 NE1/4 Section 3 (Rapid City Water Treatment Plant); SW1/4 SW1/4 Section 3 (Sioux Park Gallery); NW1/4 NE1/4 Section 9 (Meadowbrook Gallery); NW1/4 SE1/4 Section 8 (Jackson Springs Gallery); all in T1N-R7E and NW1/4 SW1/4 Section 2 T1N-R5E (Pactola Reservoir). Pactola Reservoir impounds water in portions of Section 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. This application does not authorize any new water appropriation from Rapid Creek and the claimed priority date of April 6, 1878 is to be retained by the city.

Review of Existing Water Rights

The water to be transferred has been appropriated under Vested Water Right No. 1727-2, Rapid Valley Water Company, with a priority date of April 6, 1878. The water has been historically used to irrigate 4 acres located in the NW1/4 NW1/4 of Section 19-T1N-R8E.

There are 60 existing water rights/permits on Rapid Creek from Pactola Reservoir to the Cheyenne River. Of these, 3 water

rights which appropriate approximately 3.37 cfs have priority dates which are senior to this proposed transfer. These are Water Right No. 504-2, Cleghorn Springs Water Users, for 0.89 cfs, Water Right No. 0646-2A, City of Rapid City, for 1.48 cfs, and Water Right No. 2023-2, Leedy Ditch, for 1.00 cfs.

Review of the Proposed Transfer

SDCL 46-5-34.1 states that no transfer can occur unless the transfer can be made without detriment to existing rights having a priority before July 1, 1978, or to individual domestic users. The volume of water which could be stored at Pactola Reservoir is 5.3 ac-ft annually. This volume of water is equal to the amount of water predicted to have been consumed by the crop. The amount of water which can be diverted at Rapid City water system intakes is 6.2 ac-ft annually. This volume of water is equal to the amount of water consumed by the crop plus the amount of return water which is not used by the crop and is returned to Rapid Creek.

The volume of water predicted to have been consumed by the crop is calculated on a monthly basis and totaled for an annual amount. For each month the maximum amount of water the crop would use is calculated. This is compared to the amount of water that is available for the crop's use based on historical ditch diversion and the total acreage irrigated annually from the ditch. A determination is made, on a monthly basis, whether maximum crop water usage or available water supply is the limiting factor. The lessor of these is used as the volume of crop consumed water for that particular month. It has been determined that water which has been returned to Rapid Creek through the irrigation process would also be returned to Rapid Creek by Rapid City through their waste water treatment system. (Wright, 1990)

Measurements, completed by Wright Water Engineers Inc. on the Rapid Valley Water Company ditch, estimate seepage losses in the ditch to be at 11 percent. (Wright, 1990)

In reviewing measurements made by the Bureau of Reclamation on the Little Giant ditch and the South Side ditch, one can conclude that the 11 percent seepage loss for Rapid Valley Water Company ditch is reasonable. The Little Giant ditch and South Side ditch are in close proximity to Rapid Valley Water Company ditch. Seepage loss rates for the Rapid Valley Water Company ditch would range from 5.5 percent to 17.3 percent when applying the Little Giant ditch and South Side ditch rates.

The maximum diversion rate proposed for transfer is based on the 11% ditch loss, the pro rata acreage and the validated 1878 priority diversion rate of 17 cfs. The total acreage used in the calculating the transferable diversion rate is 1191 acres. This includes acreage listed under the reissued Water License No. 1727-2, acreage to be included based on the Pelle Affidavit, and

acreage Rapid Valley Water Company is in the process of applying to have included under the ditch water right. The 1191 acres is greater than the 1103 acres listed on Water License No. 1727-2 under the 1878 priority. If the proposed additional acreages are not approved, then the City can request that the maximum transferred diversion rate be increased to reflect the lower approved acreage.

Each owner of Rapid Valley Water Company has a diversion rate in miner's inches assigned with his irrigated property. On a per acre basis, the assigned diversion rates are not uniform. These assigned diversion rates have been ignored during actual operations. Farm turnouts do not have measuring devices, so actual individual diversions from the ditch are unknown. Water in the ditch is shared by the users as needed. Based on actual past operations, the calculated diversion rate transfer is based on a pro rata share of the total ditch diversion. The proposed diversion rate transfer is based on water beneficially used as described under SDCL 46-1-8.

The transferable diversion rate, based on the pro rata share of water, is calculated by taking the individual irrigated acreage and dividing by the total irrigated acreage under the specific priority. This value is then multiplied by the authorized diversion rate at the ditch headgate and in this case equals 0.06 cfs. This amount is decreased by the 11% carriage loss that is to remain in the ditch, giving a transferable diversion rate of 0.05 cfs.

The authorized diversion rate and acreage covered under Water Right No. 1727-2 with a priority date of April 6, 1878 had been decreased by 0.64 cfs to 16.36 cfs, and by 49 acres to 1058 acres by a previous water right transfer. If this transfer is approved, the diversion rate and acreage covered by the 1878 priority date of Water Right 1727-2 should be decrease by an additional 0.05 cfs and 4 acres.

To insure that the transfer of the water can be made without detriment to existing water rights, the Water Management Board should monitor the management and operation of the proposed transfer.

Conclusions

1. SDCL 46-5-34.1 allows for the transfer of irrigation water rights apart from the land to municipal use when the transfer can be made without causing detriment to existing rights.

2. The water has been used to historically irrigate 4 acres. This land had previously been part of the Tyler property.

3. The priority date of April 6, 1878 should be retained.

4. The diversion rate to be transferred is 0.05 cfs, and is based on the pro-rated share of the total diversion rate.

5. The amount of water requested to be transferred, 5.3 ac-ft and 6.2 ac-ft seem reasonable. The following table lists the monthly diversion associated with each volume:

Month	Diversion at intakes (ac-ft)	Diversion at Pactola (ac-ft)
May	0.83	0.70
June	0.96	0.82
July	1.31	1.11
Aug	1.68	1.42
Sept	1.14	0.97
Oct	0.33	0.28

6. If application No. 2199-2 is approved, the authorized diversion rate and acreage for Rapid Valley Water Company under the April 6, 1878 priority date should be decreased by 0.05 cfs and 4 acres.

7. The Water Management Board should continue to monitor the management and operation of the transfer of the water right and of existing water rights.

Mark D. Rath
Natural Resources Engineer II

Approved by,

Delvin D. Brosz
Natural Resources Engineer IV

References

1. Wright Water Engineers, Inc. 1990. Engineering Report for Transfer of Tyler Property Share of Validated 1878 Murphy Ditch Priority. Wright Water Engineers, Inc. Engineering Consultants, Denver, Colorado.

2. U.S. Bureau of Reclamation. 1990. Rapid Valley Water Management Study. U.S. Bureau of Reclamation, Belle Fourche Projects Office, Newell, South Dakota.

3. S.D. Department of Environment and Natural Resources. Division of Water Rights Records.

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2199-2, City of Rapid City

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 2199-2, City of Rapid City, 300 Sixth Street, Rapid City, SD 57701.

The Chief Engineer is recommending APPROVAL of Application No. 2199-2 because 1) the proposed diversion can be developed without unlawful impairment of existing rights, 2) the proposed use is a beneficial use and 3) in the public interest with the following qualifications:

1. That Permit No. 2199-2 is limited to a diversion rate of 0.05 cfs for a total annual volume of 5.3 acre feet at Pactola Reservoir or a total annual volume of 6.2 acre feet at Sioux Park Gallery (SW1/4 SW1/4 Section 3), Meadowbrook Gallery (NW1/4 NE1/4 Section 9) Jackson Springs Gallery (NW1/4 SE1/4 Section 8) and the Rapid City Water Treatment Plant (SE1/4 NE1/4 Section 3), all in T1N-R7E. Maximum monthly diversion volumes at Pactola or the diversion points within Rapid City are as follows:

Month	Monthly acre feet at Pactola	Monthly acre feet at diversion points within Rapid City
May	0.70	0.83
June	0.82	0.96
July	1.11	1.31
August	1.42	1.68
September	0.97	1.14
October	0.28	0.33

Diversions during a month may be made at either Pactola Reservoir or at the diversion points within Rapid City, but not simultaneously at both Pactola and the Rapid City diversion points.

2. That the City of Rapid City report to the Chief Engineer annually the amount of water withdrawn each month at Pactola Reservoir or the diversion points within Rapid City.

3. That the Water Management Board is retaining jurisdiction of Permit No. 2199-2 in the event that additional information shows that changes need to be made in the monthly or total annual volumes authorized by Permit No. 2199-2.

See report on application for additional information.

JOHN HATCH, Chief Engineer
January 14, 1992

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 15, 1992

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

Les England
Suite 102, Western Mutual Bldg.
731 St. Joseph Street
Rapid City SD 57701

Dear Mr. England:

Water Permit Application Nos. 2199-2 and 2201-2 for municipal use have 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 Rapid City Journal printed at Rapid City SD. Copies of the report and the Chief Engineer's recommendation will be sent to you at a later date. 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
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.

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 15, 1992

Rapid City Journal
PO Box 450
Rapid City SD 57709

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application Nos. 2199-2 and 2201-2 to be published twice. Please publish the first notice on January 17, 1992 or January 18, 1992 with the second publication on January 24, 1992.

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 the City of Rapid City, 300 6th Street, Rapid City SD.

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

----------CUT HERE----------

FIRST TRANSMITTAL NOTICE

No._____

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

Date_____
We are in receipt of your letter of _____ enclosing Notice of Hearing to Appropriate Water by Application Nos._____ 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 January 17, 1992 with the second publication on January 24, 1992. The applicant is responsible for payment.

NOTICE OF HEARING on Application Nos. 2199-2 and 2201-2 to Transfer Use

Notice is given that the City of Rapid City, 300 6th Street, Rapid City SD 57701 has filed Water Permit Application Nos. 2199-2 and 2201-2 pursuant to SDCL 46-5-34.1 to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use by Murphy Ditch (Rapid Valley Water Company, Inc.) to municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic uses by the City of Rapid City.

Water Permit Application No. 2199-2 is to transfer the use of a portion of Rapid Creek natural flows historically used to irrigate approximately 4 acres known as the Pelle property. The portion of Rapid Creek natural flows to be transferred to the city is 0.05 cubic feet of water per second (cfs) with an annual volume limitation of 6.2 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 5.3 acre-feet, if stored in Pactola Reservoir. Historically, the 0.05 cfs has been used to irrigate approximately 4 acres located in Lot B-3 of Lot B of Government Lot 1 (NW1/4 NW1/4) of Section 19-T1N-R9E also known as the Pelle property. The existing diversion point on Rapid Creek for Murphy Ditch is located in the SW 1/4 Section 8-T1N-R8E. This application is to change the diversion point for the 0.05 cfs to diversion points for use by the city located in the SE 1/4 NE 1/4 Section 3 (Rapid City Water Treatment Plant); SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); NW 1/4 NE 1/4 Section 9 (Meadowbrook Gallery); NW 1/4 SE 1/4 Section 8 (Jackson Springs Gallery); all in T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is the NW 1/4 SW 1/4 Section 2-T1N-R5E and the reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. This application does not authorize any new water appropriation from Rapid Creek and the claimed priority date of April 6, 1878 for use of 0.05 cfs is to be retained by the city

Water Permit Application No. 2201-2 is to transfer the use of a portion of Rapid Creek natural flows historically used to irrigate approximately 10 acres known as the Long property. The portion of Rapid Creek natural flows to be transferred to the city is 0.13 cubic feet of water per second (cfs) with an annual volume limitation of 15.7 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 10.1 acre-feet, if stored in Pactola Reservoir. Historically, the 0.13 cfs has been used to irrigate approximately 10 acres located in Lot C of the NE 1/4 SW 1/4 and Lot B of the SE 1/4 NW 1/4 Section 14-T1N-R8E also known as the Long property. The existing diversion point on Rapid Creek for Murphy Ditch is located in the SW 1/4 Section 8-T1N-R8E. This application is to change the diversion point for the 0.13 cfs to diversion points for use by the city to be located in the SE 1/4 NE 1/4 Section 3 (Rapid City Water Treatment Plant); SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); NW 1/4 NE 1/4 Section 9 (Meadowbrook Gallery); NW 1/4 SE 1/4 Section 8 (Jackson Springs Gallery); all in T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is the NW 1/4 SW 1/4 Section 2-T1N-R5E and the reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. This application does not authorize any new water appropriation from Rapid Creek and the claimed priority date of April 6, 1878 for use of 0.13 cfs is to be retained by the city

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2199-2 and 2201-2 with qualifications because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendation, the Water Management Board will NOT CONDUCT a HEARING to consider these applications and the chief engineer will issue the permits as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

Any person interested in opposing or supporting these applications must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, 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 February 3, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application Nos. 2199-2 and 2201-2 and 2) the chief engineer's recommendation, a meeting at the Division of Water Rights office to hear these applications are scheduled for February 13, 1992 at 9:00 am in Room 413, Joe Foss Building, 523 E Capitol, Pierre SD. If these applications are opposed or the recommendation is contested, the February 13, 1992 hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The February 13, 1992 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 applications. The request for an automatic delay must be filed by February 3, 1992.

If a hearing is held, 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 these applications based on the facts presented at the public hearing. Any hearing will be an adversary proceeding. Any person filing a petition 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. Contact the Water Rights Division to request copies of information pertaining to these applications or to assure access to the hearing by the handicapped.

These applications are 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; 46-5-1 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, 46-5-33 thru 46-5-35; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

2199-2

Affidavit of Publication

JAN 1992
DIVISION OF WATER RIGHTS
Pierre, SD

OF SOUTH DAKOTA

ss.

ty of Pennington

y J. Shoener, *being first duly sworn, oath says: That he is now and was at all times hereinafter mention- nployee of the RAPID CITY JOURNAL COMPANY, a corpora- Rapid City, South Dakota, the owner and publisher of the RAPID OURNAL, a legal and daily newspaper printed and published in ity, in said County of Pennington, and has full and personal know- all the facts herein stated as follows: that said newspaper is and the times herein mentioned has been a legal and daily newspaper onafide paid circulation of at least Two Hundred copies daily, and printed and published in the English language, at and within an aintained by the owner and publisher thereof, at Rapid City, in nington County, and has been admitted to the United States mail e second class mailing privilege for at least one year prior to the ion herein mentioned; that the advertisement, a printed copy of aken from said RAPID CITY JOURNAL, the paper in which the s published, is attached to this sheet and made a part of this affi- as published in said newspaper once each* week *two successive weeks, the blication thereof being on the* 17th *day of* uary, *19* 92, *that the fees charged for the ion thereof are* One hundred ninty-six *Dollars and* ty-two *cents.*

Jerry J. Shoener

Subscribed and sworn to before me this 24th *day of* uary, *19* 92.

Peggy Wiedenheyer

Notary Public.

Commission expires April 18, 1995

Jan. 17, 24 L992

NOTICE OF HEARING ON APPLICATION NOS. 2199-2 AND 2201-2 TO TRANSFER USE

Notice is given that the City of Rapid City, 300 6th Street, Rapid City, SD 57701 has filed Water Permit Application Nos. 2199-2 and 2201-2 pursuant to SDCL 46-5-34.1 to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use by Murphy Ditch (Rapid Valley Water Company, Inc.) to municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic uses by the City of Rapid City.

Water Permit Application No. 2199-2 is to transfer the use of a portion of Rapid Creek natural flows historically used to irrigate approximately 4 acres known as the Pelle property. The portion of Rapid Creek natural flows to be transferred to the city is 0.05 cubic feet of water per second (cfs) with an annual volume limitation of 6.2 acre-feet. If diverted at the city's water treatment plant and infiltration galleries or 5.5 acre-feet if stored in Pactola Reservoir. Historically, the 0.05 cfs has been used to irrigate approximately 4 acres located in Lot B-3 of Lot B of Government Lot 1 (NW¼ NW¼) of Section 19-T1N-R9E also known as the Pelle property. The existing diversion point on Rapid Creek for Murphy Ditch is located in the SW¼ Section 8-T1N-R8E. This application is to change the diversion point for the 0.05 cfs to diversion points for use by the city located in the SE¼ NE¼ Section 3 (Rapid City Water Treatment Plant); SW¼ SW¼ Section 3 (Sioux Park Gallery); NW¼ NE¼ Section 9 (Meadowbrook Gallery); NW¼ SE¼ Section 8 (Jackson Springs Gallery); all in T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is the NW¼ SW¼ Section 2-T1N-R5E and the reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. This application does not authorize any new water appropriation from Rapid Creek and the claimed priority date of April 6, 1878 for use of 0.05 cfs is to be retained by the city.

Water Permit Application No. 2201-2 is to transfer the use of a portion of Rapid Creek natural flows historically used to irrigate approximately 10 acres known as the Long property. The portion of Rapid Creek natural flows to be transferred to the city is 0.13 cubic feet of water per second (cfs) with an annual volume limitation of 15.7 acre-feet. If diverted at the city's water treatment plant and infiltration galleries or 10.1 acre-feet if stored in Pactola Reservoir. Historically, the 0.13 cfs has been used to irrigate approximately 10 acres located in Lot C of the NE¼ SW¼ and Lot B of the SE¼ NW¼ Section 16-T1N-R8E also known as the Long property. The existing diversion point on Rapid Creek for Murphy Ditch is located in the SW¼ Section 9-T1N-R8E. This application is to change the diversion point for the 0.13 cfs to diversion points for use by the city to be located in the SE¼ NE¼ Section 3 (Rapid City Water Treatment Plant); SW¼ SW¼ Section 3 (Sioux Park Gallery); NW¼ NE¼ Section 9 (Meadowbrook Gallery); NW¼ SE¼ Section 8 (Jackson Springs Gallery); all in T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is the NW¼ SW¼ Section 2-T1N-R5E and the reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. This application does not authorize any new water appropriation from Rapid Creek and the claimed priority date of April 6, 1878 for use of 0.13 cfs is to be retained by the city.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2199-2 and 2201-2 with qualifications because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendation, the Water Management Board will NOT CONDUCT a HEARING to consider these applications and the chief engineer will issue the permits as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

Any person interested in opposing or supporting these applications must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, 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 February 3, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signatures and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application Nos. 2199-2 and 2201-2 and 2) the chief engineer's recommendation, a meeting at the Division of Water Rights office to hear these applications are scheduled for February 13, 1992 at 9:00 a.m. in Room 413, Joe Foss Building, 523 E. Capitol, Pierre, S.D. If these applications are opposed or the recommendation is contested, the February 13, 1992 hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The February 13, 1992 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 applications. The request for an automatic delay must be filed by February 3, 1992.

If a hearing is held, 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 these applications based on the facts presented at the public hearing. Any hearing will be an adversary proceeding. Any person filing a petition 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. Contact the Water Rights Division to request copies of information pertaining to these applications or to assure access to the hearing by the handicapped.

These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16, 46-2-2.1, 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, 46-5-1 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, 46-5-32 thru 46-5-35 and Board Rules ARSD 74:02:01:01 thru 74:02:01:13.

IN THE _____ COURT

COUNTY OF PENNINGTON

Publisher's and Attorney's Affidavit

Filed in the office of _____

_____ on

the _____ day of _____

19_____

_____

_____

_____

Attorney for _____

_____

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 15, 1992

Dear :

Enclosed is a copy of the Notice of Hearing for Water Permit Application Nos. 2199-2 and 2201-2 for the City of Rapid City. These applications propose to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use by Murphy Ditch (Rapid Valley Water Company, Inc.) for use by the city. The notice of hearing is scheduled to be published in the Rapid City Journal for two consecutive weeks.

I am sending you a copy of this notice since you filed a petition to intervene in Rapid City's previous water permit application (No. 2142-2) to transfer use.

If you have any questions regarding the application, please feel free to contact Mark Rath or myself at 773-3352.

Sincerely,

Eric Gronlund
Water Rights Division
(605) 773-3352

enclosure

Persons Sent Copy of Notice for Water Permit Nos. 2201-2 and 2199-2

Proponent

Leslie J. England, Attorney
Suite 102, Western Mutual Bldg.
731 St. Joseph Street
Rapid City, SD 57701

attorney for:

- City of Rapid City
  300 Sixth Street
  Rapid City, SD 57701

Craig Kjar
209 Dartmouth Ave.
Newell, SD 57760

Opponents

Michael M. Hickey, Attorney
818 St. Joseph Street
Box 2670
Rapid City, SD 57709

attorney for:

- Hawthorne Ditch Co., % Charles Johnson. 1500 E. 27th St., Rapid City, SD 57701
- Mary McMasters & Harry Morris, RR 5, Box 480, Rapid City, SD 57701
- Rapid Valley Water Conservancy Dist., % Jerry Hammerquist
- Rapid Valley Water Co., Inc., % David Lamb, Rt 2, Box 160, Rapid City, SD 57701

A. Carl Ham
Ham Ranch, Inc.
HCR 36, Box 34
Caputa, SD 57725

Keith Ham, President
St. Germain Ditch
HCR 36, Box 34
Caputa, SD 57725

Jerry Marsh
Marsh Hereford Ranch
HCR 36, Box 35
Caputa, SD 57725

Melvin Brassfield
Box 24
Caputa, SD 57725

Jerry Hammerquist
Box 26
Caputa, SD 57725

Robert Dustman
Dustman Ranch Partnership
Box 53
Caputa, SD 57725

Walter Jones, Secretary
Lone Tree Water Co.
RR 2, Box 4970
Rapid City, SD 57701

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 27, 1992

Dan Bjerke
City of Rapid City
300 6th Street
Rapid City, SD 57701

Dear Mr. Bjerke:

Enclosed please find the reports and recommendations for Water Permit Application Nos. 2199-2 and 2201-2, City of Rapid City.

Sincerely,

Eric Gronlund

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 enclosed notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

cc: Leslie England, Attorney, Ste 102 Western Mutual Bldg, 731 St Joseph St, Rapid City, SD 57701

PARTIES OF RECORD

WATER PERMIT APPLICATION NOS. 2199-2 and 2201-2

Applicant

Edward McLaughlin, Mayor
City of Rapid City
300 6th St.
Rapid City, SD 57701

Attorney
Leslie England
England Law Firm
731 St. Joseph
Suite 102
Rapid City, SD 57701

Petition of Opposition

A. Carl Ham
HCR 36, Box 34
Caputa, SD 55725

Rapid Valley Water Company
represented by:

Michael Hickey, Attorney
Bangs, McCullen, Butler,
Foye & Simmons
P.O. Box 2670
Rapid City, SD 57709

G.E. Marsh
Marsh Hereford Ranch
HCR 36 Box 35
Caputa, SD 57725

Petition of Interest

Bruce Laymon, Project Manager
Bureau of Reclamation
P.O. Box 226
Newell, SD 57760

Water Rights Division - DWNR

Conversation or File Documentation

File No. 2199-2
2201-2

NAME OF PERSON OR FILE: CARL HAM

ADDRESS: CAPUTA SD COUNTY PENNINGTON

DATE: 1/27/92 TELEPHONE —

RE: TRANSFER APPLICATIONS Nos 2199-2, 2201-2

COMMENTS:

Mr CARL HAM, CALLED HE SAID THAT HE WAS CONCERNED WITH THE STORAGE PART OF THE PROPOSED TRANSFER. HE SAID THAT MURPHY DITCH IS NOT PART OF THE RAPID VALLEY WATER CONSERVANCY DISTRICT (RVWCD) AND DOES NOT HAVE A STORAGE RIGHT IN PACTOLA RESERVOIR. ALSO THE CITY CANNOT STORE WATER IN PACTOLA, BUT HE SAID THAT THE WAY THE APPLICATION IS WORDED THAT THEY WILL BE ABLE TO DO JUST THAT.

I TOLD HIM THAT THE STORAGE AMOUNT LISTED IN THE TWO APPLICATIONS IS JUST WATER TO BE LEFT IN PACTOLA AND NOT BYPASSED. AS THE BOR CONTRACTS ARE CURRENTLY WRITTEN THE WATER COULD NOT BE ENCUMBERED TO ANYBODY SPECIFICALLY BUT WOULD BE AVAILABLE FOR ALL PARTIES USE

Mr HAM DID NOT AGREE TO THIS, AND SAID HE WOULD BE SENDING IN A LETTER TO BECOME A PARTY

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Mark Rath

4/82

Water Rights Division - DWNR

File No. 2199-2
2201-2

Conversation or File Documentation

NAME OF PERSON OR FILE: Craig Kyar

ADDRESS: Newell, SD COUNTY Butte

DATE: 1/27/92 TELEPHONE 456-2695

RE: Transfer Applications 2199-2, 2201-2

COMMENTS:

Craig Kyar, BOR Called, He said that Call Hahn had Called Him And Was Concerned About These Transfer Applications. I Told Him That They Were Similar To The Tyler Transfer, (2142-2). Unless the City Renegotiates For A Storage Contract, Any Storage To Pactola By These Proposals Would Not Be Specifically Enumerated

I Told Him We Would Send Him Copies of the Reports And Recommendations

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: [signature]

4/82

South Dakota

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 30, 1992

England Law Firm
ATTN: Leslie England
731 St. Joseph, Suite 102
Rapid City, SD 57701

Dear Mr. England:

Per your request, enclosed is a list of the individuals who received a copy of the Notice on Water Permit Application Nos. 2199-2 and 2201-2 for the City of Rapid City.

If you have further questions, please feel free to contact Eric Gronlund at the phone number listed below, or the address stated above.

Sincerely,

Cheryl F. Frost

Cheryl F. Frost
Secretary
Water Rights Division
(605) 773-3352

encl.

Bangs, McCullen, Butler, Foye & Simmons

Lawyers

George A. Bangs
W. A. McCullen (1943-1987)
Joseph M. Butler
Thomas H. Foye
Thomas E. Simmons
Ronald E. Clabaugh
Charles L. Riter
Allen G. Nelson
James P. Hurley

818 St. Joe Street
Mailing Address P. O. Box 2670
Rapid City, South Dakota 57709
605-343-1040
Telecopier 605-343-1503

Michael M. Hickey
Mark F. Marshall
Terry L. Hofer
Rebecca A. McMahon
Patrick K. Duffy
Rodney W. Schlauger
Matthew V. Ressegieu

JAN 1992
DIVISION OF
WATER RIGHTS
Pierre, SD

Recycled Paper

January 30, 1992

Mr. John Hatch
Chief Engineer
Water Rights Division
Foss Building
523 E. Capitol
Pierre, SD 57501

Re: Water Permit Application Nos. 2201-2
and 2199-2

Dear Mr. Hatch:

Please find enclosed for filing in the above matter, two original Objections to Application for Water Permit Applications Nos. 2201-2 and 2199-2. Also enclosed is a copy of each of the objections and this is intended as service by mail upon you. By a copy of this letter, I am sending a copy of both objections to the City of Rapid City. This is also intended as service by mail upon the City of Rapid City.

If you have any questions or comments, please do not hesitate to contact me. Thank you.

Sincerely,

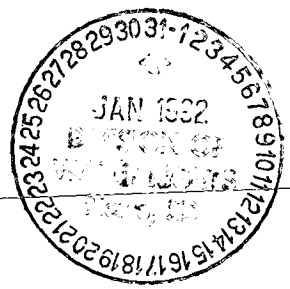
BANGS, McCULLEN, BUTLER, FOYE & SIMMONS

Michael M. Hickey

MMH/dcc

Enclosures

cc: City of Rapid City
clients



STATE OF SOUTH DAKOTA

DEPARTMENT OF WATER AND NATURAL RESOURCES

IN THE MATTER OF WATER PERMIT)
) **OBJECTION TO APPLICATION**
APPLICATION NO. 2199-2.)

Comes now Rapid Valley Water Company, Inc., by and through its undersigned counsel of record and hereby files its objection to the application filed by the City of Rapid City for a permit to transfer the use of a portion of Rapid Creek Natural Flows identified as the "Pelle property" from irrigation purposes to municipal and domestic uses of the City. Said protect and objection is based upon the following grounds and for the following reasons:

1) That the proposed transfer is not being made by the license holder and owner of the water right, which right is held and owned by Rapid Valley Water Company, Inc., which license contains no irrigation water for use on any property known as the "Pelle property;"

2) That the proposed transfer would injure and be prejudicial to the rights of other members and shareholders of Rapid Valley Water Company, Inc.;

3) That the proposed transfer is not in the public interest and would unlawfully impair other existing rights;

4) That the proposed transfer of water is improper as any such water used on any property known as the "Pelle property"

has already been transferred to the City of Rapid City in the Tyler transfer;

5) That the transfer should not be allowed as the City of Rapid City has failed to conduct the additional seepage lose studies or drill appropriate ground water testing and water monitoring wells to accurately establish the rate of ground water return flow.

Dated this 30 day of January, 1992.

BANGS, McCULLEN, BUTLER, FOYE & SIMMONS

BY: Michael M. Hickey
MICHAEL M. HICKEY
Attorneys for Rapid Valley Water Company, Inc.
818 St. Joseph Street; P.O. Box 2670
Rapid City, SD 57709

CERTIFICATE OF SERVICE

The undersigned hereby certifies that he served a copy of this legal document upon the person herein next designated, all on the date below shown, by depositing a copy thereof in the United States mail at Rapid City, South Dakota, postage prepaid, in envelopes addressed to said addressees, to wit:

Chief Engineer
Water Rights Division
Foss Building
523 E. Capitol
Pierre, SD 57501

City of Rapid City
300 Sixth Street
Rapid City, SD 57701

which addresses are the last addresses of the addressees known to the subscriber.

Dated this 30 day of January, 1992.

MICHAEL M. HICKEY

Jan. 30, 1992

Department of Environment and Natural Resources
Water Rights Division
Foss Building
523 E. Capitol
Pierre, S.D., 57501

Dear Sirs:

I intend to protest Water Permit Applications 2199-2 and 2201-2 for the same reasons:

1. Storage in "Bactola Reservoir" is available to "the Conservancy District" and not to an individual irrigator.

2. The "Bureau of Reclamation" and not the "Water Rights Division" is responsible for distributing the stored water in the Bactola Reservoir.

Enclosed is a copy of "the Deerfield and Bactola Reservoir Operating Criteria". In the last sentence of paragraph 7 on page three will be found what stored water is available to whom.

Yours truly,
A. Earl Hann

South Dakota

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 31, 1992

Les England, Attorney
England Law Firm
731 St. Joseph
Suite 102
Rapid City, SD 57701

Dear Mr. England:

Please find enclosed copies of petitions of opposition that have been received, to date, by this office regarding Water Permit Application Nos. 2199-2 and 2201-2 for the City of Rapid City.

Sincerely,

Eric Gronlund

Eric Gronlund
Water Rights Division
605 773-3352

enclosures

JAN 1992
DIVISION OF
WATER RIGHTS
Pierre, SD

Revised May 1978

DEERFIELD AND PACTOLA RESERVOIR OPERATING CRITERIA

1. The irrigation season as defined in Contract No. 14-06-600-5312 and district water year as defined in Contract No. Ilr-1413 are synonymous and are the period from May 1 through September 30 of each year.

2. Deerfield and Pactola Reservoirs will be operated on a pooled storage basis as provided for in Contract No. 14-06-600-5312 between Rapid Valley Water Conservancy District and the Bureau of Reclamation and Contract No. 114-06-W-51 between the City of Rapid City and the Bureau. All releases from Pactola Reservoir will be measured at the USGS gaging station below Pactola Dam. Releases from Deerfield Reservoir storage will not be assessed for conveyance losses between the Deerfield and the Pactola Reservoirs.

3. Natural flows in Rapid Creek and its tributaries above Pactola Dam will be passed through the Deerfield and the Pactola Reservoirs during the irrigation season as needed to satisfy prior water rights.

4. Requests for release of stored water to the Rapid Valley Water Conservancy Conservancy District will be made by the President of the Board of Directors, or his authorized representative (watermaster), by verbal (telephone 342-3696) or written requests to the Reservoir Superintendent, Bureau of Reclamation, Box 155, Keystone Route, Rapid City, South Dakota, located at Pactola Dam. Verbal requests shall be documented with a written request within 24 hours. This request should include the rate of release, time and date to start the release, and the reservoir source of the water. This written documentation is essential to maintain complete and accurate water records and to determine payment obligations in accordance with Contract No. Ilr-1413 among the City, Conservancy District and the Bureau in Contract No. 14-06-600-5312 between the Conservancy District and the Bureau.

5. Changes in water release rate to fulfill Conservancy District requests will generally be made on Tuesday and Friday. Other arrangements for releases, when necessary, will be worked out between the watermaster and the reservoir superintendent on a case-by-case basis.

6. Rapid City municipal water withdrawals from Rapid Creek will be replaced with water in storage from either Pactola or Deerfield Reservoirs during the irrigation season as needed to satisfy prior rights. Requests for water for Rapid City during the irrigation season will be made by the watermaster by verbal (telephone 342-3696) or written requests to the Reservoir Superintendent, Bureau of Reclamation, Box 155, Keystone Route, Rapid City, South Dakota. Verbal requests shall be documented with a written request to the reservoir superintendent within 24 hours and will specify the dates and times for the release and the rate of release. Release rates during the nonirrigation season, October through April, will be in accordance with city withdrawals from Rapid Creek and streamflow conditions in Rapid Creek as determined by the Bureau of Reclamation in consultation with the City.

7. Rapid City replacement water will be determined from its water usage and withdrawals from Rapid Creek as furnished by the City each week. Adjustments in releases of water from Pactola Reservoir will generally be made on Friday. During periods of high water use it may be appropriate to estimate releases in advance for replacement of withdrawals by the City. If requests are made in advance and adjustments in releases are considered necessary to correct the actual amount withdrawn, these adjustments will be made the following week.

8. Natural flows above Pactola Dam which exceed water right needs as determined by the watermaster in consultation with the Reservoir Superintendent will be

stored and credited to the City and the Conservancy District in accordance with the above-cited contracts. Water in storage in Deerfield and Pactola Reservoirs on May 1 is credited and made available for use by Rapid City and the Conservancy District in accordance with Contracts Nos. Ilr-1413 and 14-06-W-51. Basically, the contracts provide Rapid City with a maximum of 7,000 acre-feet of available stored water in Deerfield Reservoir and an additional amount as available in Pactola Reservoir for a total of 14,000 acre-feet in the two reservoirs. The Conservancy District is provided with a maximum 8,000 acre-feet of stored water in Deerfield Reservoir and can purchase additional stored water from Pactola Reservoir as available under Contract No. 14-06-600-5312. If there would be less than 14,000 acre-feet of water available to the City on May 1, storable inflows will be credited to the City until a total of 14,000 acre-feet has been credited to the City for the year and all remaining water will be available to the Conservancy District.

These operating criteria are intended to complement Contracts Nos. Ilr-1413, 14-06-W-51, and 14-06-600-5312 and do not preclude compliance with the provisions of the respective contracts.

/s/ A. Carl Ham
President, Rapid Valley Water Conservancy District

/s/ Arthur P. LaCroix
Mayor, City of Rapid City

/s/ Robert A. McCullough
Acting Project Manager
Bureau of Reclamation

United States Department of the Interior
BUREAU OF RECLAMATION
Great Plains Region
Belle Fourche Projects Office
P.O. Box 226
Newell, South Dakota 57760

TAKE PRIDE IN AMERICA

IN REPLY
REFER TO:

JAN 31 1992

FEB 1992
DIVISION OF
WATER RIGHTS
Pierre, SD

WTR 4.10-
BF-430

Mr. John Hatch, Chief Engineer
Water Rights Division
South Dakota Department of Water
and Natural Resources
523 E. Capitol
Pierre SD 57501-3181

Subject: Water Permit Application Nos. 2199-2 and 2201-2 (Water Rights)

Dear Mr. Hatch:

We have reviewed the subject applications and request to be listed as a party of interest in any hearings held by the Water Management Board that relate to these permits. We do not oppose the application nor contest the recommendation to approve the applications, but would like the opportunity to testify in the event that a Water Management Board hearing is required.

As you are aware, the Bureau of Reclamation owns and operates Pactola Dam and Reservoir. As this facility is mentioned within these permit applications to the extent that both documents reference a quantity of water that can potentially be stored in Pactola Reservoir, we feel that it is important for this office to maintain an active presence in any proceedings associated with the permit applications.

If you have any questions, please contact Craig Kjar at (605) 456-2695.

Sincerely,

Bruce M. Laymon

Bruce M. Laymon
Project Manager

February 1, 1992

Cheif Engineer
South Dakota Water Rights Division
Foss Building
523 E. Capitol
Pierre, S. D. 57501

Dear Sir:

Marsh Hereford Ranch, HCR 36 Box 35, Caputa, S.D. 57725 is herewith filing a petition in opposition to the application of the City of Rapid City in the matter of the transfer of water rights to Rapid City, Water Permit Application numbers 2199-2 and 2201-2.

Marsh Hereford Ranch holds irrigation water rights in Rapid Creek. We are opposed to provisions in the requests of Rapid City that would permit storage in Pactola Reservoir of any natural flows of Rapid Creek during periods when the total natural flows of Rapid Creek are not sufficient to meet the demands for irrigation water. The natural flows which Rapid City desires to store in Pactola Reservoir have historically been a part of Rapid Creek stream flows which are available to other water right holders when the senior right is not using those flows for irrigation. We believe that existing water rights would be unlawfully impaired if natural flows of Rapid Creek are held in storage in Pactola Reservoir.

Sincerely,

L E Marsh

Marsh Hereford Ranch
HCR 36 Box 35
Caputa, S.D. 57725

cc; City of Rapid City
300 6th Street
Rapid City, S.D. 57701

LAW FIRM OF
LESLIE JAMES ENGLAND

LESLIE J. ENGLAND
(ALSO ADMITTED IN COLORADO)

SUITE 102, WESTERN MUTUAL BUILDING
~~731 ST. JOSEPH STREET~~
RAPID CITY, SOUTH DAKOTA 57701

TELEPHONE (605) 341-7600
FAX (605) 343-4131

February 3, 1992

Mr. John Hatch, Chief Engineer
Water Rights Division
Department of Environment and
Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Re: Change of Use Transfer Application Nos. 2199-2 (Pelle) and 2201-2 (Long)

Dear Mr. Hatch:

Enclosed please find for filing the City of Rapid City's written notice requesting a postponement of the date set for hearing on the above referenced Applications. Please cancel the original hearing on the Applications and reschedule the Applications for hearing by the Water Management Board not less than 20 days after the published day for the hearing.

Yours very truly,

Leslie J. England

LJE/kmr

Enclosure: As Stated
cc: Daniel L. Bjerke

South Dakota

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

February 3, 1992

NOTICE

TO: Edward McLaughlin, Mayor
City of Rapid City
300 6th Street
Rapid City, SD 57701
and Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer
Water Rights Division
605 773-3352

SUBJECT: Rescheduling of Hearing For Water Permit Application Nos. 2199-2 and 2201-2

Petition in opposition to Water Permit Application No. 2199-2 and 2201-2 have been filed with this office. The meeting at the Division of Water Rights to hear these applications will no longer be held on February 13, 1992.

The Water Management Board will now consider Water Permit Application Nos. 2199-2 and 2201-2 on March 4, 1992 at 2:00 pm in the Conference Room, Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Ave., Pierre, SD 57501. The agenda time is an estimate. The actual time of hearing may be later than 2:00 pm due to prior agenda items and it may become necessary to continue consideration of this application to the morning of March 5, 1992. Applicable provisions of the Notice of Hearing published January 17 and 24, 1992 in the Rapid City Journal will still apply at this hearing.

This hearing is an adversary proceeding. Any party 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. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

cc: Diane Best, Assistant Attorney General
Dan Bjerke, Rapid City Water Superintendent

CERTIFICATION

I hereby certify that on February 3, 1992 I have personally deposited with the U.S. Mail postage prepaid envelopes containing a Notice of Rescheduling of Hearing for Water Permit Application Nos. 2199-2 and 2201-2 addressed as stated below:

Edward McLaughlin, Mayor, City of Rapid City, 300 6th Street, Rapid City, SD 57701.

Dan Bjerke, Rapid City Water Superintendent, 300 6th St., Rapid City, SD 57701.

Leslie England, England Law Firm, 731 St. Joseph, Suite 102, Rapid City, SD 57701.

A. Carl Ham, HCR 36, Box 34, Caputa, SD 57725.

Michael Hickey, Attorney, Bangs, McCullen, Butler, Foye & Simmons, P.O. Box 2670, Rapid City, SD 57709.

Bruce Laymon, Project Manager, Bureau of Reclamation, P.O. Box 226, Newell, SD 57760.

Sent Inter-office To:

Diane Best, Assistant Attorney General, Capitol Building.

Cheryl F. Frost

Cheryl F. Frost
Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 4th day of February, 1992.

John Hatch

Notary Public

JOHN HATCH
SEAL NOTARY PUBLIC SEAL
SOUTH DAKOTA
My Commission Expires Apr. 1, 1993

STATE OF SOUTH DAKOTA
WATER MANAGEMENT BOARD

IN THE MATTER OF WATER RIGHT CHANGE OF USE APPLICATIONS NO. 2199-2 AND NO. 2201-2 OF THE CITY OF RAPID CITY, SOUTH DAKOTA	))))))	**NOTICE OF AUTOMATIC EXTENSION**

Comes now the City of Rapid City, Applicant in the above-referenced matters, by and through the undersigned counsel, and respectfully requests postponement of the February 13, 1992, date set for hearing on said application, and further requests the Chief Engineer cancel the original hearing on the application and reschedule the application for hearing by the Water Management Board not less than twenty (20) days after the published date for hearing.

Dated this 3 day of February, 1992.

Leslie J. England
Attorney for Applicant
731 St. Joseph Street, Suite 102
Rapid City, SD 57701
(605)341-7600

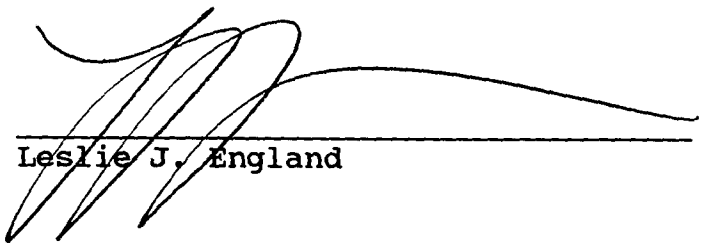
CERTIFICATE OF SERVICE

I, Leslie J. England, hereby certify that I served a true and correct copy of the foregoing Notice of Automatic Extension by first class mail, proper postage affixed, this 3rd day of February, 1992, on the following persons:

John Hatch, Chief Engineer
Water Rights Division
Department of Environment and Natural Resources
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181

Michael M. Hickey
Attorney for Rapid Valley Water Company, Inc.
818 St. Joseph Street
P.O. Box 2670
Rapid City, SD 57709

A. Carl Ham
Ham Ranch, Inc.
HCR 36, Box 34
Caputa, SD 57725



Leslie J. England

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

February 4, 1992

Les England, Attorney
Suite 102, Western Mutual Building
731 St. Joseph Street
Rapid City, SD 57701

Dear Les:

Enclosed is another petition of opposition to the City of Rapid City's Water Permit Application Nos. 2199-2 and 2201-2. The petition met the deadline for filing petitions to intervene in that it was postmarked on February 3, 1992.

I have also enclosed a copy of the amended parties of record list which now includes Marsh Hereford Ranch.

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

Sincerely,

Eric Gronlund

Eric Gronlund
Water Rights Division
605 773-3352

enclosure

CERTIFICATION

I hereby certify that on February 4, 1992 I have personally deposited with the U.S. Mail postage prepaid envelopes containing a Notice of Rescheduling of Hearing for Water Permit Application Nos. 2199-2 and 2201-2 addressed as stated below:

G. E. Marsh, Marsh Hereford Ranch, HCR 36, Box 35, Caputa, SD 57709.

Cheryl F. Frost

Cheryl F. Frost
Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 5th day of February, 1992.

JOHN HATCH
NOTARY PUBLIC
SOUTH DAKOTA
SEAL SEAL
My Commission Expires Apr. 1, 1993

John Hatch
Notary Public

Water Rights Division - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: **City of Rapid City**

ADDRESS: _____ COUNTY: _____

DATE: **2/14/92** TELEPHONE: _____

RE: **Rapid City's transfer applications from irrigation to municipal use**

COMMENTS:

While reviewing the two recent applications for Rapid City's transfer of South Side Ditch irrigation water right to the city for municipal use, I found a discrepancy in the legal description for the Meadowbrook infiltration gallery. The legal notices for WP No. 2142-2 and Application Nos. 2217-2 and 2218-2 had the Meadowbrook Gallery described as being located in the NW1/4 NE1/4 Section 9, T1N, R7E. The application and the submitted map have this gallery located in the SE1/4 NE1/4 Section 9, T1N, R7E. Since the gallery is located less than 660 feet from the advertised quarter-quarter, the notice for hearing is still valid and Nos. 2142-2, 2217-2 and 2218-2 will not need to be readvertised.

The error occurred in that the applicant provided the following legal description: 2032 ft. South 31 41' West of Northeast corner of Section 9, T1N, R7E. The angle used to locate gallery was taken as West 31 41' of the Northeast corner.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Eric Gronlund

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100 A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

FEB 1992
DIVISION OF
WATER RIGHTS

February 17, 1992

Mr. Mark Rath
Water Rights Division
Department of Environment and Natural Resources
523 East Capitol
Joe Foss Building
Pierre, South Dakota 57501-3181

Dear Mr. Rath:

It has been brought to our attention that the 1981 ASCS photo accompanying our January 10, 1992 letter report regarding the Pelle property transfer did not show the Pelle portion of the Tyler property.

Enclosed is a copy of the 1981 ASCS aerial photo showing the Pelle property and Figure III-1 of the Tyler report (October 1990) which is a plat map of the Tyler and Pelle properties.

Please include this information in your Pelle property transfer files.

We are sorry for any inconvenience this may have caused.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By _____
Leo M. Eisel, P.E.

By _____
Gary D. Witt

LME/GDW:ard
901-046.010
Encls.
(RAPIDC/PELLPROP.LME)

Wright Water Engineers, Inc.

DENVER OFFICE
2490 West 26th Ave., Suite 100 A
Denver, Colorado 80211
(303) 480-1700

GLENWOOD SPRINGS OFFICE
818 Colorado Avenue
P. O. Box 219
Glenwood Springs, Colorado 81602
(303) 945-7755
Denver Direct Line: 893-1608

February 25, 1992

Mr. Del Brosz
Water Rights Division
Department of Environment and Natural Resources
523 East Capitol
Joe Foss Building
Pierre, South Dakota 57501-3181

Dear Mr. Brosz:

As per our conversation of February 21, 1992, I am writing to explain the manner in which the maximum diversion rate was determined for the Pelle property transfer.

In our previous engineering report for the Tyler property, the maximum diversion rate was determined by multiplying the 36 miners inches held by Tyler (0.72 cfs) by 89 percent (1.0-0.11 due to seepage losses) to get 0.64 cfs. This diversion rate was determined for the entire 53 acres of Tyler irrigated land including the 4 acres that Pelle irrigates.

In recent months, we have discussed with your office the inequity of using the miners inch shares for determining the amount of water available to each irrigator. It was decided that a more appropriate method of determining the water rights would be based on a proportionate share of the total acres irrigated.

Therefore, the maximum diversion rate for the Pelle property (4 acres) proportionate share of the 1878 Murphy Ditch priority was calculated in the following manner:

(4 acres/1,191 total acres) (17 cfs) (1.0-0.11) = 0.05 cfs

Based on prorated acreage of 49 acres of irrigated land on the Tyler property (53 total acres minus the 4 acres Pelle irrigates) the maximum diversion rate would be:

(49 acres/1,191 acres total) (17 cfs) (1.0-0.11) = 0.62 cfs

Using the two diversion rates based on prorated acreage for the total 53 acres irrigated equals 0.67 cfs, which is 0.03 cfs greater than the calculation using the miners inches. This difference is quite small. However, in order to maintain continuity throughout future transfers, we feel the pro rata share of acreage calculation should be used.

This discrepancy can be corrected by using your continued jurisdiction over the Tyler transfer to reduce the maximum diversion rate to 0.62 cfs which, combined with the Pelle diversion

rate, is 0.67 cfs. Another correction method would be to reduce the Pelle rate to 0.03 cfs which, in combination with the approved Tyler rate, again equals 0.67 cfs.

We feel this matter should be addressed so that any questions concerning this matter can be answered in the March hearing.

Thank you for your time and consideration in this matter.

Sincerely,

WRIGHT WATER ENGINEERS, INC.

By Leo M. Eisel, P.E.

By Gary D. Witt

LME/GDW:ard
901-046.010
(RAPIDC/LETTEXPL.GDW)
cc: Leslie England

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

February 27, 1992

Leo M. Eisel, P.E.
Wright Water Engineers, Inc.
2490 West 26th Ave.,Suite 100 A
Denver, Colorado 80211

Dear Mr. Eisel:

I am writing in answer to your letter of February 25, 1992 regarding the diversion rates for the Tyler and Pelle transfers.

An explanation of the change in method will need to be presented to the Water Management Board during the Pelle transfer hearing. If the Board accepts the change, the Pelle transfer should be established at 0.05 cfs. We would then need to schedule a hearing, at a later Water Management Board meeting, to reduce the Tyler transfer to 0.62 cfs.

Sincerely,

Delvin D. Brosz

Delvin D. Brosz, P.E.
Natural Resources Engineer
for John Hatch, Chief Engineer
Division of Water Rights
(605) 773-3352

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

March 10, 1992

NOTICE

TO: Edward McLaughlin, Mayor
City of Rapid City
300 6th Street
Rapid City, SD 57701
and Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer
Water Rights Division
(605)773-3352

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

The Water Management Board has directed John Guhin, The Board's attorney to prepare proposed Findings of Fact, Conclusions of Law and a Final Decision Water Permit Application Nos. 2199-2 and 2201-2. The Board will consider the proposed Findings, Conclusions and Final Decision at 1:00 pm, May 6, 1992, Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD. The agenda time is an estimate. The actual time of consideration may be delayed due to prior agenda items.

The Board has requested that a copy of the proposed Findings, Conclusions and Final Decision be mailed to each Board member and all Parties of Record and their attorneys (copy enclosed) by April 16, 1992. Any comments pertaining to the proposed Findings, Conclusions and Decision are to be mailed to each Board member, the Board attorney and all Parties of Record and their attorneys by April 27, 1992.

The public hearing was completed March 4, 1992. No additional testimony will be received on May 6, 1992.

cc: John Guhin, Deputy Attorney General
Diane Best, Assistant Attorney General
Rapid Valley Water Company, Rt 2 Box 160, Rapid City, SD 57701

CERTIFICATION

I hereby certify that on March 10, 1992, I have personally deposited with the U.S. Mail, postage prepaid envelopes containing a Notice dated March 10, 1992, regarding Preparation of Findings of Fact, Conclusions of Law and Final Decision (Permit Application Nos. 2199-2 and 2201-2) addressed to:

Edward McLaughlin, Mayor, City of Rapid City, 300 6th Street, Rapid City, SD 57701
and Parties of Record (as shown on the attached list)

A copy of the Notice was sent to:

Rapid Valley Water Company, Rt 2 Box 160, Rapid City, SD 57701

A copy of the Notice was sent through inter-office mail to:

John Guhin, Deputy Attorney General
Diane Best, Assistant Attorney General

Jaci R Konop

JACI R. KONOP
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 11th day of March, 1992.

John Hatch

Notary Public

STATE OF SOUTH DAKOTA

BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF WATER PERMIT APPLICATION NO. 2199-2, AN APPLICATION OF THE CITY OF RAPID CITY TO TRANSFER THE USE OF WATER APPROPRIATED UNDER VESTED WATER RIGHT CLAIM NO. 1727-2	FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL DECISION

FINDINGS OF FACT

I

The City of Rapid City has applied for a change in the use of water which has been used to irrigate certain land presently owned by Donald J. and Joan L. Pelle in Pennington County. The water in question is supplied by Rapid Valley Water Company, Inc. a/k/a Murphy Ditch, from Rapid Creek.

II

The water to be transferred has been appropriated under Vested Water Right Claim No. 1727-2, Rapid Valley Water Company, Inc. with the priority date of April 6, 1878.

III

The City of Rapid City wishes to change the diversion point either to several diversion points within the City of Rapid City itself, at points west of the present diversion point, or to Pactola Reservoir, a point to the west of the existing diversion point.

IV

The City of Rapid City seeks the transfer as part of a comprehensive approach to future water planning which also includes water conservation, the search for new water

supplies and negotiations with the United States seeking storage in Pactola Reservoir for its water.

V

The average head gate diversion to the Pelle property from Murphy Ditch is historically 6.2 acre feet per year.

VI

The water has been employed on the property to irrigate four acres of alfalfa.

VII

Of the 6.2 acre feet diverted, 5.3 acre feet per year is consumed by the alfalfa on an average annual basis.

VIII

Of the remainder of the water, 0.3 acre feet per year is surface water return flow, 0.3 acre feet per year is ground water return flow and 0.3 acre feet per year is side roll sprinkler application loss.

IX

As set forth above, Rapid City desires to transfer the use of water in question to one of two diversion points. The first of the two diversion points is actually a group of diversion points within the City of Rapid City. These points are upstream and westerly of the present diversion point. The City of Rapid City claims the right to use the entire 6.2 acre feet per year average head gate diversion if it employs the Rapid City diversion points.

X

The Board finds that recognition of this portion of the claim will not cause any detriment to those who hold water rights between the present point of diversion and the Rapid City points of diversion. This is so because the appropriator between the present point of diversion and the point of proposed diversion, Hawthorne Ditch Company, holds a right junior to the right sought to be transferred. Because Hawthorne Ditch had to historically bypass the water sought to be transferred, it can not legally be harmed through the proposed transfer.

XI

The Board also concludes there will be no harm to Ham Ranch, Inc. or Marsh Hereford Ranch, which are protestors below Rapid City, from utilization of the Rapid City diversion points if Rapid diverts the entire 6.2 acre feet per year. This is because the City of Rapid City returns approximately forty-seven percent of its total water diversion to points below Rapid City in return flow. Therefore, the operations identified, which are below the Rapid City Sewage Treatment Plant, will be receiving more water with the change in diversion point to Rapid City than they received when water was being utilized by the property in question.

XII

The users below the present point of diversion will be protected, moreover, in that the times for the use

of water are limited by the Final Decision to the times the water was historically used on the property in question, i.e., during specific months of the irrigation season and at specific quantities.

XIII

The City of Rapid City has succeeded in carrying the burden of showing there will be no impairment of rights downstream of the present property from the change in diversion to points within Rapid City.

XIV

The City of Rapid City also desires the authority to change the proposed diversion, at times when the Rapid City points of diversion are not used, to Pactola Reservoir. Pactola Reservoir is upstream of the present point of diversion and is to the west.

XV

The City of Rapid City asserts that if the Pactola diversion is utilized the proper diversion rate is 5.3 acre feet per year or the average amount of water consumed by four acres of irrigated alfalfa on the Pelle property.

XVI

The Board concludes that the appropriate quantity of water which might be transferred to Pactola Reservoir storage from the Tyler property is 5.3 acre feet per year in that this was the average crop consumptive use.

XVII

The Board furthermore finds that no harm has been shown to any user from transfer of the average consumptive use in the present point of diversion to a diversion upstream.

XVIII

The Board finds that four acres of the Pelle property have historically been irrigated with the Tyler property but that this fact does not affect the analysis of the Board as to the legitimacy of the proposed change in diversion point.

XIX

The Board finds that the Murphy Ditch diverts an average of two thousand three hundred sixty five (2,365) acre feet per year with an average seepage loss in the ditch of two hundred and sixty (260) acre feet. Therefore it is appropriate to, and the present claims do in fact, provide for the 11 percent seepage loss to remain within the present area. The Board finds further that the seepage loss calculations are subject to further refinement and therefore will retain jurisdiction of this matter, including the jurisdiction to adjust the amounts of water which may be diverted pursuant to this permit.

XX

Although the Board finds that the allowance of the transfer may cause a slight diminution in the head of water flowing into Murphy Ditch, the Board finds that this is

insufficient reason to disallow the transfer. First, the reduction in head is likely to be very small. Second, uncontradicted evidence indicates that the head can easily be increased by simple mechanical means.

XXI

The Board further finds that it is appropriate to retain jurisdiction to adjust diversion rates because of association of this property with the Tyler property.

CONCLUSIONS OF LAW

I

The Board has jurisdiction of this matter.

II

The applicant's request for a change in use can be made without detriment to existing rights if accomplished as set forth in the Final Decision

III

The proposed change from irrigation use to municipal use is a beneficial use and is in the public interest. The Board finds specifically that the change is in support of the Rapid City's long-term comprehensive plans for the development of a municipal water supply and that such long-term planning is in the public benefit and should be encouraged.

IV

Because this right was established for irrigation purposes, the transferred water right may likewise only be

used during the irrigation season as set forth in the Final Decision below.

V

The water transferred under this application is limited to a diversion rate of 0.05 cfs, the historical maximum rate of diversion for this property.

VI

The water utilized under this permit is limited to a total annual volume of 5.3 acre feet if diverted at Pactola Reservoir or a total annual volume of 6.2 acre feet if diverted at the Rapid City points of diversion. Diversions under this regime will not adversely affect the exercise of existing rights when scheduled as set out in the Final Decision.

VII

Although the applicant is allowed under this permit to store water at Pactola under an anticipated agreement with the United States, the present action of the Board does not purport to direct or compel the United States or the applicant to enter into any such agreement.

VIII

The Board concludes that the water in question in this matter was historically regarded as appurtenant to the land and that the cases of Butte County v. Lovinger and Jewett v. Red Water Irrigation Ditch are therefore inapplicable to this transfer of water.

VIV

Additional information will be made available to the Board with regard to seepage rates and with regard to the hydrology of the area which may require adjustment of monthly or total annual volumes authorized by this permit. Likewise, adjustments appear to be appropriate in the rate of diversion. Therefore, the Board retains jurisdiction to make these and other appropriate adjustments.

FINAL DECISION

The application for Permit No. 2199-2 is GRANTED with the following qualifications:

1. That Permit No. 2199-2 is limited to a diversion rate of 0.05 cfs for a total annual volume of 5.3 acre feet at Pactola Reservoir or a total annual volume of 6.2 acre feet at Sioux Park Gallery (SW1/4 SW1/4 Section 3), Meadowbrook Gallery (NW1/4 NE1/4 Section 9) Jackson Springs Gallery (NW1/4 SE1/4 Section 8) and the Rapid City Water Treatment Plant (SE1/4 NE1/4 Section 3), all in T1N-R7E. Maximum monthly diversion volumes at Pactola or the diversion points within Rapid City are as follows:

Month	Monthly acre feet at Pactola	Monthly acre feet at diversion points within Rapid City
May	0.70	0.83
June	0.82	0.96
July	1.11	1.31
August	1.42	1.68
September	0.97	1.14
October	0.28	0.33

Diversions during a month may be made at either Pactola Reservoir or at the diversion points within Rapid City, but

not simultaneously at both Pactola and the Rapid City diversion points.

2. That the City of Rapid City report to the Chief Engineer annually the amount of water withdrawn each month at Pactola Reservoir or the diversion points within Rapid City.

3. That the Water Management Board is retaining jurisdiction of Permit No. 2199-2 in the event that additional information shows that changes need to be made in the monthly or total annual volumes authorized by Permit No. 2199-2.

4. The amount of water with an April 6, 1878 priority date which may be appropriated under Vested Water Right Claim No. 1727-2 is decreased by 0.05 cfs to 16.31 cfs.

Dated this 23rd day of May, 1992.

BY THE BOARD

Francis E Brink

Chairman

c-pld9.jpg

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

May 27, 1992

NOTICE

TO: Edward McLaughlin, Mayor
City of Rapid City
300 6th Street
Rapid City, SD 57701
and Parties of Record (see attached list)

FROM: for John Hatch, Chief Engineer
Water Rights Division
605 773-3352

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

This is to notify you that a Final Decision, including Findings of Fact and Conclusions of Law were adopted by the Water Management Board for Water Permit Application Nos. 2199-2 and 2201-2 at the May 7, 1992, meeting.

A copy of the signed final Decision, Findings and Conclusions is enclosed for the applicant. Copies will be furnished to anyone else upon request. South Dakota Statutes provide that decisions of the Board may be appealed to the Courts.

cc: Diane Best, Assistant Attorney General
Rapid Valley Water Company, Rt 2 Box 160, Rapid City, SD 57701

CERTIFICATION

I hereby certify that on May 27, 1992, I have personally deposited with the United States Mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated May 27, 1992, regarding Adoption of Findings of Fact, Conclusions of Law and Final Decision, along with a copy of the signed final Decision, Findings and Conclusions for Water Permit Application Nos. 2199-2 and 2201-2, and a copy of the Parties of Record addressed as stated below:

Edward McLaughlin, Mayor, City of Rapid City, 300 6th Street, Rapid City, SD 57701.

Copy of Notice & Parties of Record Sent To:

Rapid Valley Water Company, Rt 2, Box 160, Rapid City, SD 57701.

Leslie England, England Law Firm, 731 St. Joseph, Suite 102, Rapid City, SD 57701.

A. Carl Ham, HCR 36, Box 34, Caputa, SD 57725.

Michael Hickey, Attorney, Bangs, McCullen, Butler, Foye & Simmons, P.O. Box 2670, Rapid City, SD 57709.

G. E. Marsh. Marsh Hereford Ranch, HCR 36, Box 35, Caputa, SD 57725.

Bruce Laymon, Project Manager, Bureau of Reclamation, P.O. Box 226, Newell, SD 57760.

Copy of Notice & Parties of Record Sent Inter-office To:

Diane Best, Assistant Attorney General, Capitol Building.

Cheryl F. Frost

Cheryl F. Frost
Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 29th day of May, 1992.

JOHN HATCH
SEAL NOTARY PUBLIC SOUTH DAKOTA SEAL
My Commission Expires Apr. 1, 1993

John Hatch

Notary Public

GREAT FACES. GREAT PLACES.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

NOV 17 1992

Richard Wahlstrom, Finance Officer
City of Rapid City
300 6th Street
Rapid City, SD 57701

Dear Mr. Wahlstrom:

Enclosed is Water Permit Nos. 2199-2 and 2201-2 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Very truly yours,

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

Enclosures

Water Rights Division - DENR

File Documentation

Name of Person: City of Rapid City and Rapid Valley Water Co. File No. 2199-2 & 1727-2
Address: County: Pennington County
Date: 8/28/1997 Telephone:
RE: **Pelle property Validation**

Comments: ***The 4 acres associated with the Pelle property were actually validated by the Water Management Board in December of 1990. When Vested Water Right License No. 1727-2 was issued the acres were inadvertently left off even though they had been validated. When the City of Rapid City applied for Water Permit No. 2199-2 to transfer the natural flow irrigation water from te Pelles property, this was the determination that was made. The priority date for these acres was April 6, 1878.***

Mark D Rath
Natural Resources Engineer

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

November 5, 1998

Daniel L Bjerke
City of Rapid City
300 6th St
Rapid City SD 57701-2724

Dear Mr. Bjerke:

The investigation of the City of Rapid City's water use systems was conducted on September 9, 1998, by Mark Rath, staff engineer. The investigation included the extent of application of water to beneficial use, as developed under each permit. The final water right documents, the Water Licenses, can now be issued. Below is a list of the permits that were investigated.

Permit No.	amount	source	
2136-2	0.78 cfs	Rapid Creek	Sioux Park
2138-2	12.38 cfs	Rapid Creek	Water Treatment Plant
* 2274-2	0.78 cfs	Rapid Creek	Water Treatment Plant
2156-2	1.11 cfs	Madison Formation	SW ¼ SE ¼ Sec 16-T1N-R7E
transfer the use of a portion of Rapid Creek flows			**formerly known as**
2142-2	0.62 cfs	Murphy Ditch	Tyler property
2199-2	0.05 cfs	Murphy Ditch	Pelle property
2201-2	0.13 cfs	Murphy Ditch	Long property
2217-2	0.33 cfs	South Side Ditch	Keller property
2218-2	2.16 cfs	South Side Ditch	Stromer property
2234-2	0.79 cfs	South Side Ditch	Eisenbraun property
2249-2	1.19 cfs	South Side Ditch	Weber property
2296-2	2.85 cfs	South Side Ditch	Jundt property
2316-2	0.81 cfs	Murphy Ditch	Morris property
2317-2	0.84 cfs	Hawthorne Ditch	Morris property
2360-2	0.37 cfs	South Side Ditch	Soetaert property
2397-2	0.59 cfs	South Side Ditch	Eisenbraun property
2399-2	0.75 cfs	Murphy & Little Giant Ditch	Wileman property

* license fee already submitted

Statutes require that we charge $50.00 fee for the investigation and issuance of the each Water License. Upon receipt of the $800.00 fee (16 permits x $50) we will process the Water Licenses.

Please sent fee to: Dept. of Environment & Natural Resources, Water Rights Program, 523 E. Capitol, Pierre, SD 57501-3181. If you have questions, please contact us.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

№ 415955

Pierre, December 9, 1998

RECEIVED OF City of Rapid City, 300 6th St., Rapid City, SD 57701-2724
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use _____		
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. 2199-2	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

Permit No. 2199-2

Cheyenne River - Water District

Report Of Examination Of Works

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

On, **September9, 1998**, I made a thorough examination of the water use system constructed by **City of Rapid City** of **300 6th St, Rapid City SD** holder of Permit No. **2199-2**, bearing the priority of **April 6, 1878** authorizing the diversion of **0.05** cu. ft. per second and an annual appropriation of **6.2** acre-feet if taken at Rapid City's municipal diversion points or **5.3** acre-feet if stored in Pactola Reservoir of the natural flow waters of **surface water from Rapid Creek** for **municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic purposes**, in **Pennington** County.

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

A. Works used to divert the water:
Pumps at the water treatment plant, Jackson Springs Gallery Sioux (aka Girl Scout) Gallery, Meadowbrook Gallery and storage in Pactola Reservoir.

The system is in the following condition **good**. The points of diversion are located **in the SE1/4 NE1/4 Section 3 (Rapid City Water Treatment Plant); SW1/4 SW1/4 Section 3 (Sioux Park Gallery); SE1/4 NE1/4 Section 9 (Meadowbrook Gallery); NW1/4 SE1/4 Section 8 (Jackson Springs Gallery); all in T1N-R7E and NW1/4 SW1/4 Section 2 T1N-R5E (Pactola Reservoir). Pactola Reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E.** The permit holder is entitled to divert and convey to the place of use **0.05** cu. ft. per second of water and an annual appropriation of **6.2** acre-feet if taken at Rapid City's municipal diversion points or **5.3** acre-feet if stored in Pactola Reservoir which is to be used for **municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic purposes**. Water has been put to beneficial use to the maximum extent and the license should be issued for **0.05** cfs and an annual appropriation of **6.2** acre-feet if taken at Rapid City's municipal diversion points or **5.3** acre-feet if stored in Pactola Reservoir

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

Exceptions to compliance are: **none**

Mark D. Rath
Natural Resources Engineer
DENR, Water Rights Program

9/28/98
Date

REPORT ON INSPECTION OF PERMIT NO. 2199-2

DATE OF INSPECTION: September 9, 1998

Contact Person & Address: **John Wagner, 300 6th St, Rapid City SD 57701**

DIVERSION POINT LEGAL LOCATIONS: are in the SE1/4 NE1/4 Section 3 (Rapid City Water Treatment Plant); SW1/4 SW1/4 Section 3 (Sioux Park a.k.a.Girl Scout Gallery); SE1/4 NE1/4 Section 9 (Meadowbrook Gallery); NW1/4 SE1/4 Section 8 (Jackson Springs Gallery); all in T1N-R7E and NW1/4 SW1/4 Section 2 T1N-R5E (Pactola Reservoir). Pactola Reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E.

WATER SUPPLY Source: **Rapid Creek**

WATER TREATMENT PLANT

Pump\ Motor:

1) Pump Make **Peerless** 2) Model **258595**
3) Capacity **5600** GPM 4) Motor Make **GE**
5) Model No. **5K405DP7011B FR2G** 6) Horsepower rating **75** hp

1) Pump Make **Layne Bowler** 2) Model **14MSL**
3) Capacity **2780** GPM 4) Motor Make **US Electrical**
5) Model No. **326UP** 6) Horsepower rating **30** hp

1) Pump Make **Vertiline** 2) Model **27908**
3) Capacity **5560** GPM 4) Motor Make **US Electrical**
5) Model No. **445UPY** 6) Horsepower rating **60** hp

1) Pump Make **Layne Bowler** 2) Model **85522**
3) Capacity **5875** GPM 4) Motor Make **Louis Allis**
5) Model No. **COG5B** 6) Horsepower rating **60** hp

1) Pump Make **Vertiline** 2) Model **27989**
3) Capacity **8000** GPM 4) Motor Make **US Electrical**
5) Model No. **CFU** 6) Horsepower rating **100** hp

SIOUX PARK (a.k.a. Girl Scout) GALLERY

Pump\ Motor:

1) Pump Make **Worthington** 2) Model **12H13501**
3) Capacity **1400** GPM 4) Motor Make **US Electrical**
5) Model No. **324UP** 6) Horsepower rating **25** hp

1) Pump Make **Worthington** 2) Model **12H13501**
3) Capacity **1400** GPM 4) Motor Make **US Electrical**
5) Model No. **324UP** 6) Horsepower rating **25** hp

MEADOWBROOK GALLERY

Pump\ Motor:

1) Pump Make **Worthington** 2) Model **10QHA0**
3) Capacity **1525** GPM 4) Motor Make **US Electrical**
5) Model No. **2743715** 6) Horsepower rating **15** hp

1) Pump Make **Worthington** 2) Model **10QHA0**
3) Capacity **1475** GPM 4) Motor Make **US Electrical**
5) Model No. **2745675** 6) Horsepower rating **15** hp

1) Pump Make **Worthington** 2) Model **10QHA0**
3) Capacity **1525** GPM 4) Motor Make **US Electrical**
5) Model No. **2744261** 6) Horsepower rating **15** hp

JACKSON SPRINGS GALLERY

Pump\ Motor:

1) Pump Make **Fairbanks-Morse** 2) Model **T4B242990A**
3) Capacity **1390** GPM 4) Motor Make **GE**
5) Model No. **5K6258XH1A** 6) Horsepower rating **75** hp

Pump\ Motor:

1) Pump Make **Fairbanks-Morse**
2) Model **T4B242992A**
3) Capacity **2085** GPM
4) Motor Make **GE**
5) Model No. **5K6268XH1A**
6) Horsepower rating **125** hp

Pump\ Motor:

1) Pump Make **Fairbanks-Morse**
2) Model **T4B242991A**
3) Capacity **2085** GPM
4) Motor Make **GE**
5) Model No. **5K6258XH1A**
6) Horsepower rating **125** hp

PACTOLA RESERVOIR : This is a US Bureau of Reclamation dam with 55, 972 acre-feet of active storage

DISTRIBUTION LINES OR CANALS:

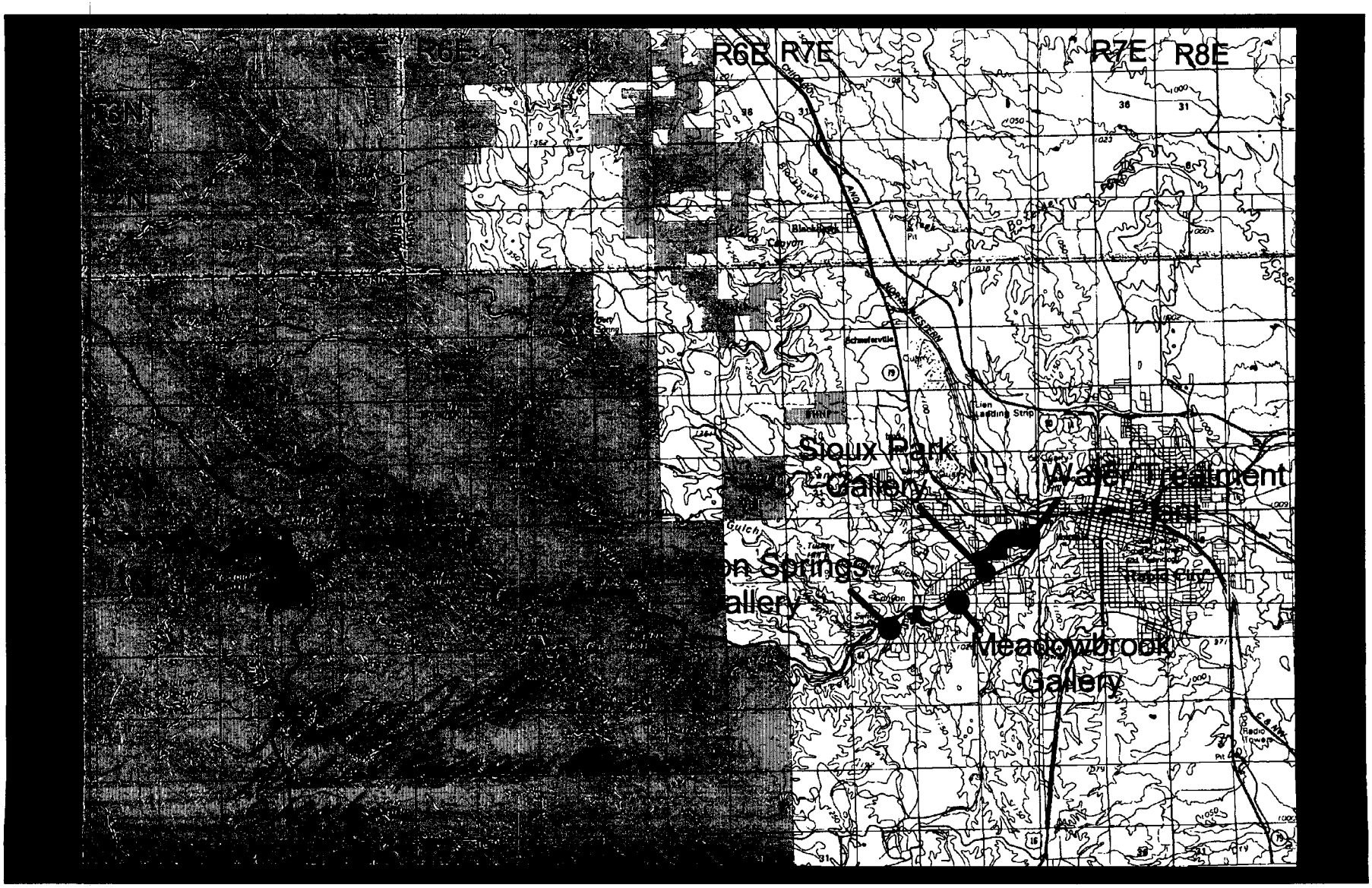
Municipal distribution system

PERMIT QUALIFICATIONS AND REGULATIONS:

1) Special qualifications to permit being abided by **yes**
2) All structures, wells and lands on map **yes**

COMMENTS: #

Area Map for Pactola Reservoir to Rapid City



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2199-2

(1) The City of Rapid City, 300 6th St, Rapid City SD 57701 made Application No. 2199-2, August 6, 1991 for a water permit to divert 0.05 cubic feet of water per second (cfs) from Rapid Creek with an annual volume limitation of 6.2 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 5.3 acre-feet, if stored in Pactola Reservoir, Pennington County, South Dakota for municipal, industrial, commercial, common distribution system, rural water system, suburban housing and domestic purposes. Permit No. 2199-2, with a priority date of April 6, 1878 (established by Murphy Ditch) was approved May 7, 1992 and issued to the City of Rapid City for diversion of water with construction of the described water supply system and the application to beneficial use of said water completed.

(2) It is certified that the City of Rapid City has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.05 cfs from Rapid Creek with an annual volume limitation of 6.2 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 5.3 acre-feet, if stored in Pactola Reservoir for beneficial use. The location of the diversion points are: SE ¼ NE ¼ Section 3 (Rapid City Water Treatment Plant); SW ¼ SW ¼ Section 3 (Sioux Park Gallery); SE ¼ NE ¼ Section 9 (Meadowbrook Gallery); NW ¼ SE ¼ Section 8 (Jackson Springs Gallery); all in T1N-R7E and NW ¼ SW ¼ Section 2-T1N-R5E (Pactola Reservoir). Pactola Reservoir impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E.

(3) The City of Rapid City 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 the City of Rapid City, 300 6th St, Rapid City SD 57701 the holder and/or owner of Water Right No. 2199-2 is issued a license to appropriate water, the right to use 0.05 cfs from Rapid Creek with an annual volume limitation of 6.2 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 5.3 acre-feet, if stored in Pactola Reservoir with a priority date of April 6, 1878 (established by Murphy Ditch) from the locations specified in (2) of this license for municipal, industrial, commercial, common distribution system, rural water system, suburban housing and domestic purposes. This license is subject to any limitations or qualifications listed in Water Right No. 2199-2 and subject to South Dakota State Law.

John Hatch

JOHN HATCH, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JAN 15 1999
date

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

JAN 15 1999

Daniel L Bjerke
City of Rapid City
300 6th St
Rapid City SD 57701-2724

Dear Mr. Bjerke:

Enclosed are the Water Licenses and receipts for the investigation and issuance of the water licenses. These water licenses are the final document which complete the process of obtaining a water right.

As long as the City of Rapid City uses the water beneficially, as stated in the water licenses, State Water Law provides that the City has a continuing right to use the water.

Very truly yours,

John Hatch

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

ks

enclosures

2199-2

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

September 30, 2005

INTERNAL MEMORANDUM

TO: Garland Erbele, Chief Engineer
DENR Water Rights Program

FROM: Donald E. Stroup
Natural Resources Project Engineer
DENR Water Rights Program

SUBJECT: Rapid City – Rapid Valley Water Rights Transfers

A total of 16.75 cubic feet per second (cfs) of water has been transferred from Rapid Valley irrigation ditches to Rapid City, SD. The amounts of flow transferred and acres retired by ditch are:

Ditch	Flow (cfs)	Acres
Murphy	4.12	325
Little Giant	0.99	26
South Side	10.80	1001.8
Hawthorne	0.84	46

The locations of the land retired from irrigation are shown on the Rapid City-Rapid Valley Water Rights Transfers Map. Following is a list summarizing the water transfers from Rapid Valley irrigators to Rapid City:

2399-2: Retired 52-acres and 0.75-cfs of Wileman property from future irrigation, 26-acres and 0.33-cfs from Murphy Ditch and 26-acres and 0.42-cfs from Little Giant Ditch. Land located in the NE¼ Section 24 T1N R8E and water via Murphy Ditch at the same location.

2316-2: Retired 64-acres and 0.81-cfs of Morris property from future irrigation via Murphy Ditch. Land located in the SE¼ Section 9 T1N R8E and water via Murphy Ditch at the same location.

2201-1: Retired 10-acres and 0.13-cfs of Long property from future irrigation via Murphy Ditch. Land located in the center of Section 14 T1N R8E and water via Murphy Ditch at the same location.

2199-2 Retired 4-acres and 0.05-cfs of Pelle property from future irrigation via Murphy Ditch. Land located in the NW¼ Section 19 T1N R9E and water via Murphy Ditch at the same location.

2142-2 Retired 49-acres and 0.62-cfs of Tyler property from future irrigation via Murphy Ditch. Land located in the NW¼ and SW¼ Section19 T1N R9E and water via Murphy Ditch at the same location.

2469-2 Retired 27-acres and 0.34-cfs of Murphy property from future irrigation via Murphy Ditch. Land located in the NW¼ and SW¼ Section 14 T1N R8E and water via Murphy Ditch at the same location.

2512-2 Retired 145-acres and 1.84-cfs of Schroeder property from future irrigation via Murphy Ditch. Land located in Section 19 T1N R9E and water via Murphy Ditch at the same location.

2513-2 Retired 74.9-acres and 0.84-cfs of Steen property from future irrigation via South Side Ditch. Land located in the NE¼ Section 25, and SW¼ and SE¼ Section 24 T1N R8E and water via South Side Ditch in Section 25 T1N R8E. The turnout for the supplying lateral has a turn screw gate that is functional.

2234-2 Retired 70-acres and 0.79-cfs of Eisenbraun property from future irrigation via South Side Ditch. Land located in the NE¼ Section 26 T1N R8E and water via South Side Ditch at the same location. The turnout for the supplying lateral is into a buried pipeline capped with a plastic bucket.

2411-2 Retired 3.6-acres and 0.04-cfs of Eisenbraun property from future irrigation via South Side Ditch. Land located in the NE¼ Section 26 T1N R8E and water via South Side Ditch at the same location. The turnout for the supplying lateral is into a buried pipeline capped with a plastic bucket.

2397-2 Retired 59.3-acres and 0.59-cfs of Eisenbraun property from future irrigation via South Side Ditch. Land located in the NE¼ Section 26 T1N R8E and water via South Side Ditch at the same location. The turnout for the supplying lateral is into a buried pipeline capped with a plastic bucket.

2468-2 Retired 34.8-acres and 0.57-cfs of Howie property from future irrigation via Little Giant Ditch water delivered via Murphy Ditch. Land located in the SW¼ Section 19 and NW¼ Section 30 T1N R9E and water via Murphy Ditch in the NE¼ Section 19 T1N R9E. The turnout for the supplying lateral is blocked by a silted-in board.

2249-2 Retired 105.5-acres and 1.19-cfs of Weber property from future irrigation via South Side Ditch. Land located in the NW¼ and SW¼ Section 30 T1N R9E and water via South Side Ditch in the SW¼ Section 30 T1N R9E.

2296-2 Retired 253.4-acres and 2.85-cfs of Jundt property from future irrigation via South Side Ditch. Land located in Section 33 T1N R9E and water via South Side Ditch in the NE¼ Section 33 T1N R9E. The turnout for the supplying lateral is not blocked and ditch and lateral do not appear to be maintained.

2360-2 Retired 32.6-acres and 0.37-cfs of Soetaert property from future irrigation via South Side Ditch. Land located in the E½ Section 33 T1N R9E and water via South Side Ditch in the NE¼ Section 33 T1N R9E. The turnout for the supplying lateral is not blocked and ditch and lateral do not appear to be maintained.

2415-2 Retired 146-acres and 1.64-cfs of Howie property from future irrigation via South Side Ditch. Land located in the NE¼ and SE¼ Section 32 T1N R9E and water via South Side Ditch in the NE¼ Section 32 T1N R9E. The turnout for the supplying lateral is not blocked and ditch and lateral do not appear to be maintained.

2217-2 Retired 29.2-acres and 0.33-cfs of Keller property from future irrigation via South Side Ditch. Land located in the SE¼ Section 29 T1N R9E and water via South Side Ditch in the NE¼ Section 32 T1N R9E. The turnout for the supplying lateral is not blocked and ditch and lateral do not appear to be maintained.

2218-2 Retired 192.5-acres and 2.16-cfs of Stromer property from future irrigation via South Side Ditch. Land located in the NW¼, SW¼ , and SE¼ of Section 29 T1N R9E and water via South Side Ditch in the SW¼ Section 29 T1N R9E. The turnout for the supplying lateral is not blocked and ditch and lateral do not appear to be maintained.

2317-2 Retired 46-acres and 0.84-cfs of Morris property from future irrigation via Hawthorne Ditch. Land located in the center of Section 9 T1N R8E and water via Hawthorne Ditch in the NE¼ Section 9 T1N R8E. Hawthorne Ditch is now piped underground through the area where the turnout for the supplying lateral was and the new Elk Vale Road by-pass, a school, and Western Electric have been constructed where the lateral previous ran. There is no evidence of a lateral at the location.

cc: Individual Files

DOCUMENTATION OF IRRIGATION DIVERSION POINT ABANDONMENT FOR CITY OF RAPID CITY PROJECT NO. 12-2034, CIP NO. 50922

Topical Report RSI-2317

prepared for

City of Rapid City
Public Works Department
Water Division
300 6th Street
Rapid City, SD 57701

January 2016

RESPEC

DOCUMENTATION OF IRRIGATION DIVERSION POINT ABANDONMENT FOR CITY OF RAPID CITY PROJECT NO. 12-2034, CIP NO. 50922

Topical Report RSI-2317

by

Peter P. Rausch
Curtis D. Anderson
Adam J. Rutz
Jared K. Oswald

RESPEC
3824 Jet Drive
Rapid City, South Dakota 57703

prepared for

City of Rapid City
Public Works Department
Water Division
300 6th Street
Rapid City, SD 57701

January 2016

TABLE OF CONTENTS

1.0 BACKGROUND 1

2.0 DATA SOURCES 2

3.0 IRRIGATION DITCH SUMMARIES 4

3.1 CYCLONE DITCH 4

3.1.1 Permit 2655-2 4

3.1.1.1 Turnout 4

3.1.1.2 Access 4

3.1.1.3 Disablement 4

3.2 HAWTHORNE DITCH 5

3.2.1 Permit 2317-2 5

3.2.1.1 Turnout 6

3.2.1.2 Access 6

3.2.1.3 Disablement 6

3.3 MURPHY DITCH 6

3.3.1 Permit 2316-2 6

3.3.1.1 Turnout 7

3.3.1.2 Access 8

3.3.1.3 Disablement 8

3.3.2 Permit 2469-2 10

3.3.2.1 Turnouts 10

3.3.2.2 Access 10

3.3.2.3 Disablement 11

3.3.3 Permit 2201-2 13

3.3.3.1 Turnout 13

3.3.3.2 Access 13

3.3.3.3 Disablement 13

3.3.4 Permit 2399-2 14

3.3.4.1 Turnouts 14

3.3.4.2 Access 14

3.3.4.3 Disablement 16

3.3.5 Permit 2468-2 18

3.3.5.1 Turnouts 18

3.3.5.2 Access 18

3.3.5.3 Disablement 18

3.3.6 Permits 2142-2 and 2199-2 19

3.3.6.1 Turnout 19

3.3.6.2 Access 19

3.3.6.3 Disablement 19

3.3.7 Permit 2512-2 20

TABLE OF CONTENTS

3.3.7.1 Turnouts 20
3.3.7.2 Access 20
3.3.7.3 Disablement 20
3.4 SOUTH SIDE DITCH 23
3.4.1 Permits 2234-2, 2397-2, and 2411-2 24
3.4.1.1 Turnouts 24
3.4.1.2 Access 24
3.4.1.3 Disablement 24
3.4.2 Permit 2513-2 25
3.4.2.1 Turnouts 25
3.4.2.2 Access 27
3.4.2.3 Disablement 27
3.4.3 Permit 2249-2 28
3.4.3.1 Turnouts 28
3.4.3.2 Access 32
3.4.3.3 Disablement 32
3.4.4 Permit 2218-2 36
3.4.4.1 Turnouts 36
3.4.4.2 Access 36
3.4.4.3 Disablement 36
3.4.5 Permit 2415-2 37
3.4.5.1 Turnouts 37
3.4.5.2 Access 41
3.4.5.3 Disablement 41
3.4.6 Permit 2217-2 46
3.4.6.1 Turnouts 46
3.4.6.2 Access 46
3.4.6.3 Disablement 46
3.4.7 Permit 2296-2 and 2360-2 47
3.4.7.1 Turnouts 47
3.4.7.2 Access 47
3.4.7.3 Disablement 47

4.0 PERMITS AND REGULATIONS 48
4.1 CLEAN WATER ACT SECTION 404 PERMIT 48
4.2 CLEAN WATER ACT SECTION 402 PERMIT 48
4.3 FLOODPLAIN DEVELOPMENT PERMITS 48
4.4 HISTORIC PRESERVATION 48

5.0 REFERENCES 49

APPENDIX A TURNOUT VICINITY MAPS A-1

LIST OF TABLES

TABLE		PAGE
2-1	Information for Water Rights Transferred to the City of Rapid City	3
3-1	Cyclone Ditch Turnout Information	4
3-2	Hawthorne Ditch Turnout Information	5
3-3	Murphy Ditch Turnout Information	6
3-4	South Side Ditch Turnout Information	24

LIST OF FIGURES

FIGURE PAGE

3-1 The Turnout Ditch (Left Arrow) and Former Location of Flume (Right Arrow) Associated With Permit 2655-2 5

3-2 Wooden Flume Used as a Check for Permit 2316-2 7

3-3 Opening to 12-Inch-Diameter Corrugated Metal Pipe Turnout for Permit 2316-2 7

3-4 Removal of Turnout associated with Permit 2316-2 8

3-5 Removal of Turnout associated with Permit 2316-2 9

3-6 Pipe Turnout A for Permit 2469-2 10

3-7 Pipe Turnout B for Permit 2469-2 11

3-8 Removal of Turnout A Associated with Permit 2469-2 12

3-9 Removal of Turnout B Associated with Permit 2469-2 12

3-10 Photograph Taken From in the Murphy Ditch Running Right to Left (Bank in Foreground Is Likely Former Turnout Location for Permit 2201-2). 13

3-11 Wooden Remains Found Near the Site for Permit 2201-2. 14

3-12 Backfill Material at the Former Location of Turnout A for Permit 2399-2 15

3-13 Turnout B for Permit 2399-2 (The 12-Inch Steel Canal Gate was Located on the Far Bank Adjacent to the Concrete Culvert, and Murphy Ditch Runs Right to Left). 15

3-14 Removal of Turnout B for Permit 2399-2 Located on Murphy Ditch on Radar Road. 16

3-15 Removal of Turnout B for Permit 2399-2 Located on Murphy Ditch on Radar Road. 17

3-16 Disabled Turnout Ditch for Permit 2468-2 Running From the Foreground to the Background Along the East Side of Radar Hill Road (The Lateral Ditch Is in the Left Foreground, Turning Left at the Visible Tree Root) 18

3-17 Former Location of the Turnout for Permits 2142-2 and 2199-2 (The Concrete Check Structure and a Disconnected Corrugated Metal Pipe Segment Sit on the Far Bank, and Murphy Ditch Flows Right to Left). 19

3-18 Pipe Used for Turnout A of Permit 2512-2 (Red Arrow). 20

3-19 Plywood Headgate for Turnout B of Permit 2512-2. 21

3-20 Junction Box With 24-Inch Canal Gate for Turnout C of Permit 2512-2 (Turnout C Shown With Red Arrow, Leading South) 21

3-21 Removal of Turnout C for Permit 2512-2 Located on Murphy Ditch on the East Side of Airport Road 22

3-22 Removal of Turnout C for Permit 2512-2 Located on Murphy Ditch on the East Side of Airport Road Going South to the Airport 23

3-23 Turnout for Permit 2234-2 25

3-24 Inlet Structure, Weir Box, and Air Vent Associated With Turnout 2513-2 26

LIST OF FIGURES (continued)

FIGURE PAGE

3-25 Inlet Structure, Weir Box, and Air Vent Associated With Turnout 2513-2 26
3-26 Inside the Weir Box for Turnout 2513-2 27
3-27 Removal of Turnout for Permit 2513-2 28
3-28 Turnout A structure Associated with Permit 2249-2 29
3-29 Culvert Crossing Used as a Check for Turnout B Associated with Permit 2249-2 29
3-30 Outlet end of Turnout B pipe (Red Arrow). (Looking South, Towards South Side Ditch) 30
3-31 Second Culvert Crossing, Used as Check for Turnout C Associated With Permit 2249-2 30
3-32 Wooden Structure (Red Arrow) for Turnout C Associated With Permit 2249- 31
3-33 Metal Framed Canal Gate of Turnout D Associated With Permit 2249-2 31
3-34 Turnout D Division Box Associated With Permit 2249-2 32
3-35 Turnout A Associated with Permit 2249-2 33
3-36 Turnout B Associated with Permit 2249-2 33
3-37 Turnout C Associated With Permit 2249-2 34
3-38 Turnout D Associated With Permit 2249-2 34
3-39 Turnout D Associated With Permit 2249-2 35
3-40 Turnout D Associated With Permit 2249-2 35
3-41 Turnout for Permit 2218-2 36
3-42 Turnout A for Permit 2415-2. 37
3-43 Wooden Flume Used as a Check for Turnout A of Permit 2415-2 38
3-44 Turnout B (Red Arrow) and the Flume Associated with Permit 2415-2 38
3-45 Turnout C (Red Arrow) and the Wooden Weir Associated With Permit 2415-2 39
3-46 Turnout C and the 24-Inch-Diameter Concrete Pipe (Red Arrow) Associated With Permit 2415-2 39
3-47 Concrete Flume/Check Structure for Turnout D Associated With Permit 2415-2 (Looking Downstream). 40
3-48 North Flume/Check Structure Wall and Outlet for Turnout D Associated With Permit 2415-2 40
3-49 South Flume/Check Structure Wall and Outlet for Turnout D Associated With Permit 2415-2 41
3-50 Removal of Turnout A associated with Permit 2415-2 42
3-51 Turnout A Wooden Flume Structure Associated With Permit 2415-2, Removed 43
3-52 Turnout B Associated With Permit 2415-2. Timber Turnout Removed 43
3-53 Turnout B Associated With Permit 2415-2. Wooden Flume Structure Removed 44

LIST OF FIGURES (continued)

FIGURE PAGE

3-54 Turnout C Associated With Permit 2415-2 Timber Gate Turnout Structure, Concrete Abutments, and Timber Weir Check Structure Removed 44

3-55 Turnout C Associated With Permit 2415-2 45

3-56 Turnout D Associated With Permit 2415-2 45

3-57 Turnout D Associated With Permit 2415-2 46

3-58 Turnout Associated With Permit 2296-2 and Permit 2360-2, Currently Serving an Active Permit for 50 Acres Irrigated by Mr. Donald Jundt 47

A-1 Cyclone Ditch Turnout Vicinity Map. A-2

A-2 Hawthorne Ditch Turnout Vicinity Map. A-3

A-3 Murphy Ditch Turnout Vicinity Map (1 of 2). A-4

A-4 Murphy Ditch Turnout Vicinity Map (2 of 2). A-5

A-5 South Side Ditch Turnout Vicinity Map (1 of 2). A-6

A-6 South Side Ditch Turnout Vicinity Map (2 of 2) A-7

1.0 BACKGROUND

The City of Rapid City has obtained the water permits from several irrigators served by Rapid Creek in the Rapid Valley area. According to the South Dakota Department of Environment and Natural Resources (SD DENR) Water Rights Division, the holder of a transferred permit shall permanently render inoperable the structural means of diverting water to land that is no longer subject to the water permit. The City of Rapid City has record of transfers and has now completed abandonment of the aforementioned diversion structures. The abandonment of the structures was performed by the City of Rapid City and reviewed by SD DENR personnel. This report documents the permits transferred, the diversion points associated with those permits, and the abandonment of those diversion points.

2.0 DATA SOURCES

Six sources were used to identify the diversion structures (turnouts) to be disabled. The first is the South Dakota Water Rights Program online permit database that is operated by the SD DENR [2012]. This database includes water rights documentation for each of the Rapid Valley irrigation ditches, identifies all permit transfers, and has documentation for individual water rights permits.

The second source is the Rapid Valley Water Management Study, which was completed in 1990 by the U.S. Bureau of Reclamation for ditches that have storage in Deerfield Reservoir, including the South Side, Cyclone, Little Giant, and Hawthorne irrigation ditches [U.S. Bureau of Reclamation, 1990]. The Murphy Ditch was excluded from the Rapid Valley Water Management Study because its water right is for natural Rapid Creek flows and, therefore, contractually has no storage in Deerfield Reservoir managed by the Bureau of Reclamation. The documentation from the study includes photographs of irrigation turnouts; associated notes; and irrigation ditch maps with turnout locations, photograph locations, and irrigated acreages.

The third source is an undocumented study conducted by the City of Rapid City in 2008. This study includes photographs of irrigation turnouts, associated notes, and maps that include data pertinent to water rights transferred to the city. The last three sources include parcel delineation and owner information from RapidMap [City of Rapid City and Pennington County, 2014], field investigations, and direct communication with irrigation ditch personnel and landowners.

Searches were conducted within the SD DENR Water Rights Program database to identify the water rights transferred to the City of Rapid City. Permit documentation associated with these transfers was downloaded. The water rights flow rate, acreage, location, previous owner, and approval date were identified for each transfer and this information is provided in Table 2-1.

By combining the information from Table 2-1 with the data from the RapidMap geodatabase, the parcels associated with each transfer were identified. Then, structure location maps from the Rapid Valley Water Management Study were used to identify the locations of turnouts requiring disablement. These locations were field-verified with help from ditch personnel and were recorded with Global Positioning System (GPS). Verified structure locations were digitized with ArcGIS mapping software.

Table 2-1. Information for Water Rights Transferred to the City of Rapid City

Permit No.	Ditch(s)	Previous Owner	Acres	Flow (cfs)[a]	Section	Township	Range	Quarter	Transfer Date
2655-2	Cyclone	Lamb	58	0.83	22	1N	8E	SW NW, NW NW	12/1/2010
2317-2	Hawthorne	Morris	46	0.84	9	1N	8E	SW NE, SE NW, NE SW, NW SE	5/1/1996
2399-2	Little Giant and Murphy	Wileman	52	0.75	24	1N	8E	E NE	5/7/1998
2468-2	Little Giant via Murphy	Howie	34.8	0.57	19; 30	1N	9E	W SW; NW NW	12/5/2001
2142-2	Murphy	Tyler	49	0.62	19	1N	9E	W NW, NW SW	5/1/1991
2199-2	Murphy	Pelle	4	0.05	19	1N	9E	NW NW	5/7/1992
2201-2	Murphy	Long	10	0.13	14	1N	8E	C	5/7/1992
2316-2	Murphy	Morris	64	0.81	9	1N	8E	W SE	5/1/1996
2469-2	Murphy	Murphy	27	0.34	14	1N	8E	S NW, N SW	12/5/2001
2512-2	Murphy	Schroeder	145	1.84	19	1N	9E	E NW, NE SW, SW SE, N SE, S NE	12/3/2003
2217-2	South Side	Keller	29.2	0.33	29	1N	9E	SE SE	7/22/1992
2218-2	South Side	Stromer	192.5	2.16	29	1N	9E	SW	7/22/1992
2234-2	South Side	Eisenbraun	70	0.79	26	1N	8E	E NE	5/1/1996
2249-2	South Side	Weber	105.5	1.19	30	1N	9E	E NW, NW SW, E SW	5/5/1993
2296-2	South Side	Jundt	253.4	2.85	28; 33	1N	9E	SW, SW SE; NW, W NE, NW SE, N SW	1/6/1994
2360-2	South Side	Soetaert	32.6	0.37	33	1N	9E	W NW	7/10/1996
2397-2	South Side	Eisenbraun	59.3	0.59	26	1N	8E	W NE	2/25/1998
2411-2	South Side	Eisenbraun	3.6	0.04	26	1N	8E	N NE	10/1/1998
2415-2	South Side	Howie	146	1.64	32	1N	9E	NE, N SE	12/2/1998
2513-2	South Side	Steen	74.9	0.84	24; 25	1N	8E	W SE; SW NE	12/3/2003

(a) cfs = cubic feet per second

3.0 IRRIGATION DITCH SUMMARIES

The information gathered for turnouts to parcels with water rights transferred from irrigation use to the City of Rapid City is described by permit number in the following sections. The information includes each turnout location, access, and disablement information. All maps can be found in Appendix A.

All references to compacted backfill or compacted embankment were completed according to City of Rapid City Specifications Section 14-Embankment. Rapid City Specifications are located at www.rcgov.org under Departments – Public Works – Engineering Services – Standard Specifications & Details 2007.

3.1 CYCLONE DITCH

A single Cyclone Ditch water right has been transferred to the City of Rapid City with a single associated turnout. Table 3-1 describes the turnout location and Figure A-1 maps the vicinity. The following section describes the turnout details.

Table 3-1. Cyclone Ditch Turnout Information

Turnout	Longitude	Latitude	Adjacent Landowner
2655-2	–103.151	44.034	David Lamb

3.1.1 Permit 2655-2

This permit is for 58 acres and 0.85 cubic feet per second (cfs) transferred from Mr. David Lamb.

3.1.1.1 *Turnout*

The single turnout for this permit was an open ditch cut through the bank of Cyclone Ditch. Water was directed down the turnout ditch by boarding up a steel flume immediately downstream in the Cyclone Ditch.

3.1.1.2 *Access*

The turnout was located adjacent to property owned by the Rapid City Area School District No. 51-4 (PIN 3822100004). Direct access to the site is along an over 1-mile, two-track road that runs through fields on property owned by Mr. David Lamb. It is accessible by a private driveway at 4555 Reservoir Road, south of East Highway 44.

3.1.1.3 *Disablement*

The flume has been removed, the turnout ditch filled, and the ditch reshaped by the landowner as illustrated in Figure 3-1.

Figure 3-1. The Turnout Ditch (Left Arrow) and Former Location of Flume (Right Arrow) Associated With Permit 2655-2. Cyclone Ditch Runs From Foreground to Background Through Large Concrete Pipe.

3.2 HAWTHORNE DITCH

A single Hawthorne Ditch water right has been transferred to the City of Rapid City with a single associated turnout. Table 3-2 provides the turnout location and Figure A-2 maps the vicinity. The following section describes the turnout details.

Table 3-2. Hawthorne Ditch Turnout Information

Turnout	Longitude	Latitude	Current Landowner
2317-2	–103.162	44.064	N/A

3.2.1 Permit 2317-2

This permit is for 46 acres and 0.84 cfs transferred from Mr. Morris.

3.2.1.1 *Turnout*

The supplying lateral and turnout for this permit no longer exist. An internal memorandum of SD DENR dated September 30, 2005, states "Hawthorne Ditch is now piped underground through the area where the turnout for the supplying lateral was and the new Elk Vale Road bypass, a school, and (the West River Electric Association building) have been constructed where the lateral previously ran. There is no evidence of a lateral at the location" [Stroup, 2005]. This statement was field-verified.

3.2.1.2 *Access*

The approximate, former location of the turnout is along East Highway 44 near the Elk Vale Road bypass.

3.2.1.3 *Disablement*

The turnout was previously disabled.

3.3 MURPHY DITCH

Eight Murphy Ditch water rights have been transferred to the City of Rapid City, and 11 associated turnout locations are described in Table 3-3 in order from upstream to downstream. Two vicinity maps of the turnouts are illustrated by Figures A-3 and A-4. The following sections describe each of the Murphy Ditch turnout locations by permit. The ditch has a 20-foot easement on either side for access and maintenance.

Table 3-3. Murphy Ditch Turnout Information

Turnout	Longitude	Latitude	Adjacent Landowner
2316-2	–103.158	44.059	Yasmeen Dream
2469-2 A	–103.128	44.049	Dennis Murphy
2469-2 B	–103.127	44.049	Dennis Murphy
2201-2	–103.121	44.047	Ramona Buchholz
2399-2 A	–103.097	44.038	Michelle Minnerath
2399-2 B	–103.091	44.037	Penn. Co. ROW
2468-2	–103.091	44.031	SD DOT
2142-2 and 2199-2	–103.089	44.037	Randall Albers or Melvin Ross
2512-2 A	–103.083	44.035	Rapid City
2512-2 B	–103.077	44.034	Rapid City
2512-2 C	–103.070	44.031	Rapid City ROW

3.3.1 Permit 2316-2

This permit is for 64 acres and 0.81 cfs transferred from Mr. Morris.

3.3.1.1 *Turnout*

A single turnout was associated with this permit. A wooden flume within the Murphy Ditch was used to check water up to a 12-inch-diameter corrugated metal pipe (CMP). The flume throat was 8 feet long, 4 feet 8 inches wide, and 4 feet 2 inches tall. The CMP was sedimented in and remained in segments. Figure 3-2 is a photograph of the flume and Figure 3-3 is a photograph of the CMP opening.

Figure 3-2. Wooden Flume Used as a Check for Permit 2316-2.

Figure 3-3. Opening to 12-Inch-Diameter Corrugated Metal Pipe Turnout for Permit 2316-2.

3.3.1.2 *Access*

The flume and pipe were adjacent to property owned by Yasmeen Dream that is accessible from Lytle Lane off of East Highway 44.

3.3.1.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling the Permit 2316-2 turnout:

- Removed the wooden flume and all associated concrete from Murphy Ditch
- Removed the upstream CMP section from the ditch embankment
- Backfilled with compacted embankment material where items were removed
- Reshaped the ditch banks through the project area to match the cross section of existing banks outside of the project area

Figure 3-4 and Figure 3-5 document removal of the turnout.

Figure 3-4. Removal of Turnout associated with Permit 2316-2. Date 3/20/2014

Figure 3-5. Removal of Turnout associated with Permit 2316-2. Date 3/20/2014

3.3.2 Permit 2469-2

This permit is for 27 acres and 0.34 cfs transferred from Ms. Arlene Murphy.

3.3.2.1 *Turnouts*

Two turnouts were associated with this permit, and they were located at either end of an inverted siphon through which the Murphy Ditch passes. Both turnouts were approximately 10-inch-diameter plastic pipes through the ditch bank. The upstream pipe (Turnout A) was mostly buried and is shown in Figure 3-6. The downstream pipe (Turnout B) was exposed, as illustrated in Figure 3-7.

Figure 3-6. Pipe Turnout A for Permit 2469-2.

3.3.2.2 *Access*

Both turnouts were adjacent to property owned by Dennis Murphy (PIN 3814105010), and the sites are accessible from a private driveway at 5670 East Highway 44. Direct access to both turnouts was through fields along a two-track path. Access to the Turnout B site requires crossing an existing drainage or can alternatively be accessed by a two-track path off the end of Springfield Road.

Figure 3-7. Pipe Turnout B for Permit 2469-2.

3.3.2.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling the Permit 2469-2 turnouts

- Removed both pipe turnouts from the ditch embankment
- Backfilled with compacted embankment material to match the existing bank cross section

Figures 3-8 and Figure 3-9 document removal of the turnouts.

Figure 3-8. Removal of Turnout A Associated With Permit 2469-2. Date 4/22/2014

Figure 3-9. Removal of Turnout B Associated With Permit 2469-2. Date 4/22/2014.

3.3.3 Permit 2201-2

This permit is for 10 acres and 0.13 cfs transferred from Mr. Long.

3.3.3.1 *Turnout*

The old turnout ditch for this permit was identified, but the turnout had been removed. No evidence of a turnout could be identified on the ditch side of the bank, as illustrated in Figure 3-10. The remains of wooden structures, possibly related to the turnout, were found nearby, as shown in Figure 3-11.

3.3.3.2 *Access*

The site is adjacent to property owned by Ms. Ramona Buchholz (PIN 3814326004) and is located directly west of Apple Tree Road. It is accessible from East Highway 44.

3.3.3.3 *Disablement*

The structure was previously disabled.

Figure 3-10. Photograph Taken From in the Murphy Ditch Running Right to Left (Bank in Foreground Is Likely Former Turnout Location for Permit 2201-2).

Figure 3-11. Wooden Remains Found Near the Site for Permit 2201-2.

3.3.4 Permit 2399-2

This permit is for 52 acres and 0.75 cfs transferred from Mr. Wesley Wileman.

3.3.4.1 *Turnouts*

Two turnout locations were associated with this permit. Turnout A had been removed but was not properly backfilled, as illustrated in Figure 3-12. A meeting on site with Mr. Jeep Williams, watermaster for Murphy Ditch, in April 2014 verified that the backfill at that site has been repaired since the photograph was taken. Turnout B was a 12-inch steel canal gate, as shown in Figure 3-13.

3.3.4.2 *Access*

The Turnout A site is adjacent to property owned by Ms. Michelle Minnerath (PIN 3824200002) and is north of Morris Lane. Direct access to the location is through a field with no defined path. Turnout B was located in the west ditch of Radar Hill Road.

Figure 3-12. Backfill Material at the Former Location of Turnout A for Permit 2399-2. This area has since had material added to the bank.

Figure 3-13. Turnout B for Permit 2399-2 (The 12-Inch Steel Canal Gate was Located on the Far Bank Adjacent to the Concrete Culvert, and Murphy Ditch Runs Right to Left).

3.3.4.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling the Permit 2399-2 turnouts:

- Turnout A was previously disabled
- Turnout B
  - Removed the canal gate from Murphy Ditch
  - Removed a portion of the pipe from the ditch bank and backfilled with compacted embankment material to match the existing bank cross section

Figure 3-14 and Figure 3-15 document removal of Turnout B.

Figure 3-14. Removal of Turnout B for Permit 2399-2 Located on Murphy Ditch on Radar Road. Date 4/22/2014

Figure 3-15. Removal of Turnout B for Permit 2399-2 Located on Murphy Ditch on Radar Road. Date 4/22/2014

3.3.5 Permit 2468-2

This permit is for 34.8 acres and 0.57 cfs transferred from Mr. Gordon Howie.

3.3.5.1 *Turnouts*

A single turnout for this permit was once located on a lateral ditch. The turnout ditch was identified, as shown in Figure 3-16, but no turnout structure exists.

Figure 3-16. Disabled Turnout Ditch for Permit 2468-2 Running From the Foreground to the Background Along the East Side of Radar Hill Road (The Lateral Ditch Is in the Left Foreground, Turning Left at the Visible Tree Root).

3.3.5.2 *Access*

The site is located on property owned by the South Dakota Department of Transportation (SD DOT) on the east side of Radar Hill Road, south of East Highway 44 (PIN 3824427001).

3.3.5.3 *Disablement*

The structure was previously disabled.

3.3.6 Permits 2142-2 and 2199-2

Permit 2142-2 is for 49 acres and 0.62 cfs transferred from Mr. Tyler. Permit 2199-2 is for 4 acres and 0.05 cfs transferred from Mr. Pelle.

3.3.6.1 *Turnout*

A single turnout location was used for these two permits. Upon inspection, the turnout ditch was identified and a short, disconnected segment of a 12-inch-diameter CMP was found lying in the ditch at the site, but an existing turnout structure was not evident. The concrete check structure for the turnout has been removed and sits on the ditch bank at the location illustrated in Figure 3-17.

Figure 3-17. Former Location of the Turnout for Permits 2142-2 and 2199-2 (The Concrete Check Structure and a Disconnected Corrugated Metal Pipe Segment Sit on the Far Bank, and Murphy Ditch Flows Right to Left).

3.3.6.2 *Access*

The site is adjacent to property owned by Mr. Randall Albers (PIN 3919100002) along Morris Lane. Direct access to the site is through the Albers property or the neighboring property owned by Melvin Ross (PIN 391900001), or from the top side of the Murphy Ditch through Mr. Jerry Olson's property.

3.3.6.3 *Disablement*

The structure was previously disabled and no further action was required, as per a meeting with SD DENR personnel in April 2014.

3.3.7 Permit 2512-2

This permit is for 145 acres and 1.84 cfs transferred from Ms. Merrilyn Schroeder.

3.3.7.1 *Turnouts*

Three turnouts were associated with this permit. Turnout A was a 10-inch-diameter plastic pipe through the ditch bank but was capped and buried, as shown in Figure 3-18. Turnout B was a clay pipe 12-inches in diameter and 20 feet long through the ditch bank. The downstream end of this pipe was previously buried. Figure 3-19 is a photograph of a plywood headgate used for Turnout B. Turnout C was a 24-inch steel canal gate secured in a concrete junction box, as shown in Figure 3-20. The junction box is on a lateral ditch and is shared with an identical gate for a separate, active permit.

Figure 3-18. Pipe Used for Turnout A of Permit 2512-2 (Red Arrow).

3.3.7.2 *Access*

Turnouts A and B were located adjacent to property owned by the City of Rapid City (PIN 3919200001). Turnout C was located in the west right-of-way for Airport Road.

3.3.7.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling the Permit 2512-2 turnouts:

- Turnout A was previously disabled and no further action was required per discussion with the Murphy Ditch watermaster and SD DENR personnel in April 2014.
- Turnout B was previously disabled and no further action was required per discussion with the Murphy Ditch watermaster and SD DENR personnel in April 2014.

- Turnout C
  - Removed the canal gate and disabled the pipe with a Class M-5 concrete plug.

Figure 3-21 and Figure 3-22 document disablement of the Turnout C structure.

Figure 3-19. Plywood Headgate for Turnout B of Permit 2512-2.

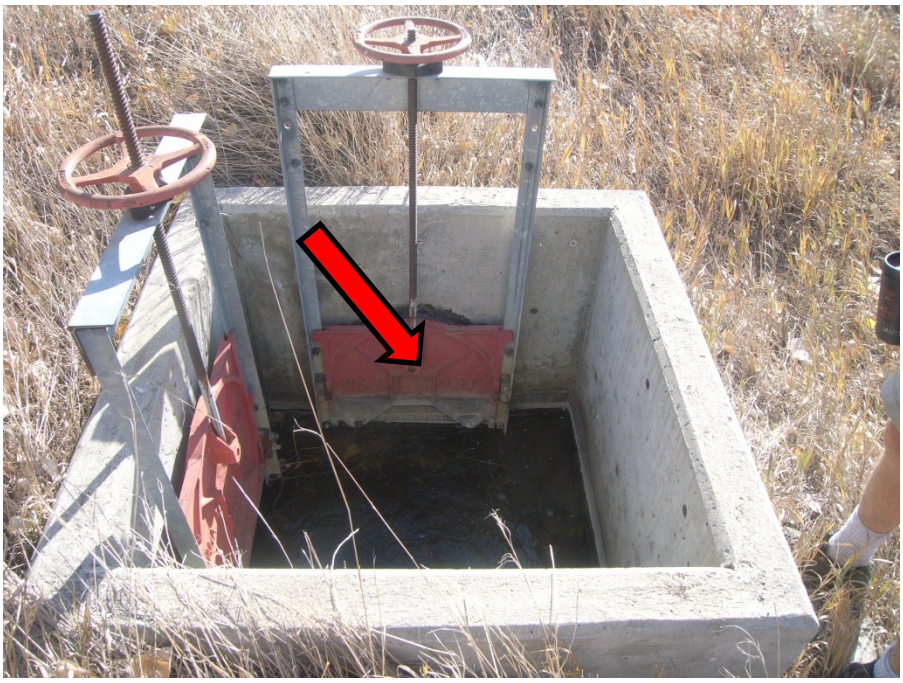


Figure 3-20. Junction Box With 24-Inch Canal Gate for Turnout C of Permit 2512-2 (Turnout C Shown With Red Arrow, Leading South).

Figure 3-21. Removal of Turnout C for Permit 2512-2 Located on Murphy Ditch on the East Side of Airport Road. Date 4/22/2014

Figure 3-22. Removal of Turnout C for Permit 2512-2 Located on Murphy Ditch on the East Side of Airport Road Going South to the Airport. Date 4/22/2014.

3.4 SOUTH SIDE DITCH

Ten South Side Ditch water rights have been transferred to the City of Rapid City, and 13 associated turnout locations were identified by using maps from the Rapid Valley Water Management Study [U.S. Bureau of Reclamation, 1990] and field investigations. The locations are described in Table 3-4 from upstream to downstream. Two vicinity maps of the turnouts are provided by Figures A-5 and A-6.

Table 3-4. South Side Ditch Turnout Information

Turnout	Longitude	Latitude	Adjacent Landowner
2234-2, 2397-2 & 2411-2	–103.115	44.017	Reinhold Eisenbraun (south) Randy Christensen (north)
2513-2	–103.100	44.018	City of Rapid City
2249-2 A	-103.095	44.017	City of Rapid City
2249-2 B	-103.091	44.015	City of Rapid City
2249-2 C	–103.091	44.015	City of Rapid City
2249-2 D	–103.084	44.011	City of Rapid City
2218-2	–103.071	44.010	Merlin Stromer
2415-2 A	–103.065	44.008	Matt Bowen
2415-2 B	–103.061	44.006	Matt Bowen
2415-2 C	–103.059	44.006	Matt Bowen
2415-2 D	–103.056	44.006	Matt Bowen
2217-2	–103.056	44.011	Leonard V. Keller Trust
2296-2 and 2360-2	–103.05	44.007	Donald Jundt

3.4.1 Permits 2234-2, 2397-2, and 2411-2

Permit 2234-2 is for 70 acres and 0.79 cfs, Permit 2397-2 is for 59.3 acres and 0.59 cfs, and Permit 2411-2 is for 3.6 acres and 0.04 cfs, all transferred from Mr. Reinhold Eisenbraun.

3.4.1.1 *Turnouts*

One turnout structure could be found in the described vicinity of these permits, located in Section 26, 1N 8E. The ditch was walked for approximately 1/2 mile to the west and the only turnout found is shown in Figure 3-23.

3.4.1.2 *Access*

The turnout for Permit 2234-2 is accessed off of Highway 44 by turning south on Anderson Rd. and continuing south past Southside Dr. approximately 3/8 mile to South Side Ditch. The site is approximately 1/4 mile west. The land north of the ditch, including the structure, is owned by Mr. Randy Christensen, and the land south of the ditch is owned by Mr. Eisenbraun.

3.4.1.3 *Disablement*

The structure was previously disabled, and no further action was required by SD DENR personnel.

Figure 3-23. Turnout for Permit 2234-2. Note the headwall sticking out of the snow just upstream from the culvert crossing on the left or north side of the ditch (red arrow). The ditch behind the headwall has been filled in.

3.4.2 Permit 2513-2

This permit is for 74.9 acres and 0.84 cfs transferred from Mr. Steen.

3.4.2.1 *Turnouts*

One turnout was associated with Permit 2513-2. The turnout was located straight south of the Rapid City Water Treatment Plant near the middle of section 25 on South Side Ditch. The turnout inlet structure was concrete with a 15-inch canal gate and PVC pipe going under the north bank to a weir box. On the north side of the weir box, 15-inch PVC pipe ran from the box to a vertical PVC air vent and then continued north. Figures 3-24, 3-25, and 3-26 show the structures associated with Permit 2513-2.

Figure 3-24. Inlet Structure, Weir Box, and Air Vent Associated With Turnout 2513-2.

Figure 3-25. Inlet Structure, Weir Box, and Air Vent Associated With Turnout 2513-2.

Figure 3-26. Inside the Weir Box for Turnout 2513-2. Note center wall weir and PVC pipe exiting the box.

3.4.2.2 *Access*

The site is located on land owned by the City of Rapid City and occupied by Mr. Bud Steen. The site may be accessed by turning off Highway 44 on Anderson Rd., then turning east on Southside Dr. to the treatment plant, then south on Redemption Road at the west edge of the treatment plant. At South Side Ditch, the site is located just east of the road.

3.4.2.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling the turnout associated with Permit 2513-2:

- Cut existing turnout pipe 5 feet north from air vent
- Removed the air vent, inlet structure, and appurtenances.
- Backfilled with compacted embankment material

Figure 3-27 documents disablement of the structure.

Figure 3-27. Removal of Turnout for Permit 2513-2. Headgate removed, measurement box filled with dirt and pipeline air vent removed. Date: 10/29/2015

3.4.3 Permit 2249-2

This permit is for 105.5 acres and 1.19 cfs transferred from Mr. Weber.

3.4.3.1 *Turnouts*

Four turnouts were associated with Permit 2249-2. Turnout A was located 1,500 feet downstream from the Permit 2513-2 turnout site and consisted of a steel-framed headgate and concrete headwall. The structure is shown in Figure 3-28.

Turnout B was located upstream from a culvert crossing, shown in Figure 3-29. This culvert was used as a check structure for Turnout B and is located just west of the line between Section 25, 1N 8E and Section 30, 1N 9E. Figure 3-30 shows the outlet end of the Turnout B pipe.

Turnout C consisted of a wooden structure on the north bank of South Side Ditch, just upstream from a second culvert crossing, shown in Figure 3-31. The Turnout C site is shown in Figure 3-32 and located just east of the line between Section 25, 1N 8E and Section 30, 1N 9E.

Turnout D was located in the SW1/4 of Section 30 T1N R9E and consisted of a steel frame canal gate and division box. The gate is shown in Figure 3-33 and the division box is shown in Figure 3-34.

Figure 3-28. Turnout A structure Associated with Permit 2249-2.

Figure 3-29. Culvert Crossing Used as a Check for Turnout B Associated with Permit 2249-2.

Figure 3-30. Outlet end of Turnout B pipe (Red Arrow). (Looking South, Towards South Side Ditch).

Figure 3-31. Second Culvert Crossing, Used as Check for Turnout C Associated With Permit 2249-2.

Figure 3-32. Wooden Structure (Red Arrow) for Turnout C Associated With Permit 2249-2. This structure is immediately upstream of the culvert crossing in Figure 3-31, on the north bank.

Figure 3-33. Metal Framed Canal Gate of Turnout D Associated With Permit 2249-2.

Figure 3-34. Turnout D Division Box Associated With Permit 2249-2. Date 10/30/2015.

3.4.3.2 *Access*

The turnout sites may be accessed by turning south from Highway 44 on Anderson Rd., then east on Southside Dr. to the treatment plant. The sites are adjacent to property owned by the City of Rapid City, southeast from the treatment plant.

3.4.3.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling turnouts A, B, C, and D associated with Permit 2249-2:

- Turnout A
    - Removed turnout head gate
    - Placed concrete plug in turnout pipe
    - Filled turnout ditch with compacted material
- Turnout B
    - Removed pipe and structure
    - Backfilled with compacted embankment material to match existing ditch cross section
- Turnout C
    - Removed the wooden structure
    - Backfilled with compacted embankment material to match existing ditch cross section
- Turnout B
    - Removed the steel framed canal gate and structure
    - Backfilled with compacted embankment material to match the existing ditch cross section

Figures 3-35 through Figure 3-40 document the disablement of these four turnouts.

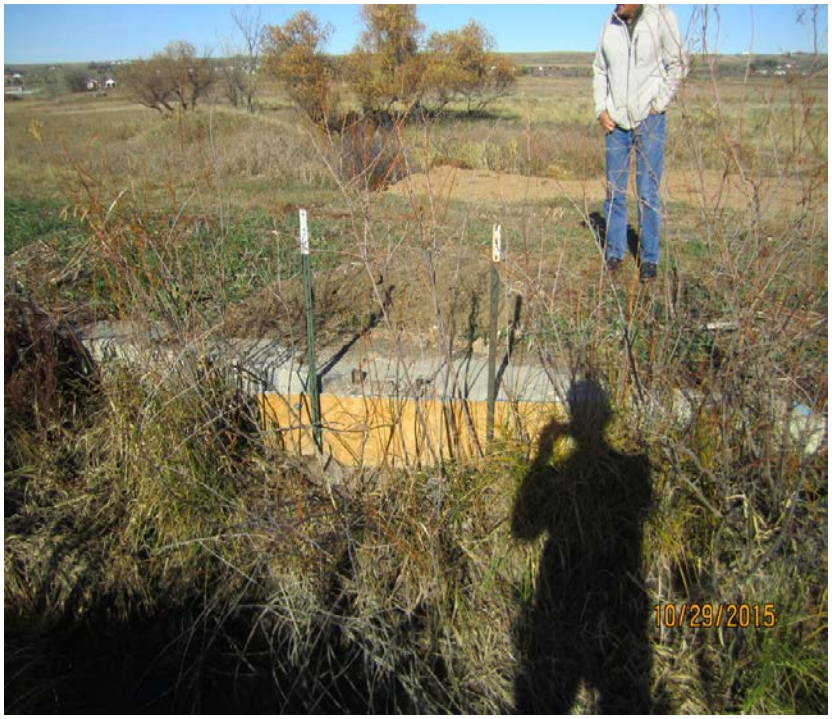


Figure 3-35. Turnout A Associated with Permit 2249-2. Headgate removed, turnout pipe filled with concrete, and outlet filled in. Date 10/29/2015

Figure 3-36. Turnout B Associated with Permit 2249-2. The old turnout structure has been removed. Date 10/29/2015.

Figure 3-37. Turnout C Associated With Permit 2249-2. Removed turnout structure. Date 10/29/2015.

Figure 3-38. Turnout D Associated With Permit 2249-2, removed by the City. Date 10/30/2015

Figure 3-39. Turnout D Associated With Permit 2249-2. Turnout being backfilled. Date 10/30/2015.

Figure 3-40. Turnout D Associated With Permit 2249-2. Photo of the division box being removed and backfilled by the City. Date 10/30/2015.

3.4.4 Permit 2218-2

This permit is for 192.5 acres and 2.16 cfs transferred from Mr. Merlin Stromer.

3.4.4.1 *Turnouts*

One turnout was associated with Permit 2218-2. The turnout consisted of a pipe inlet, a metal valve well, and an air vent immediately downstream of the valve well, shown in Figure 3-41.

3.4.4.2 *Access*

The turnout site for Permit 2218-2 is located turning south on Airport Road from Highway 44 and travelling about 0.7 miles to the driveway into Mr. Merlin Stromer's property, then another 0.3 miles south through the Stromer property to South Side Ditch.

3.4.4.3 *Disablement*

A discussion with Mr. Merlin Stromer in April of 2014 was that after Mr. Stromer sold his water rights to the city, he hired a contractor to disable the turnout. No water can be or has been delivered through the turnout since the water right transfer. Discussion with SD DENR was that this would satisfy abandonment requirements and the turnout would not be disturbed since it has been disabled.

Figure 3-41. Turnout for Permit 2218-2. This turnout has been disabled and will not be disturbed.

3.4.5 Permit 2415-2

This permit is for 146 acres and 1.64 cfs transferred from Mr. Gordon Howie.

3.4.5.1 *Turnouts*

Four turnouts were associated with Permit 2415-2, designated Turnout A through Turnout D (upstream to downstream on the South Side Ditch). Turnout A consisted of a gate structure composed of timber and is shown in Figure 3-42. A wooden flume was used as a check structure for Turnout A, located approximately 35 feet downstream and shown in Figure 3-43.

Turnout B was also a gate structure composed of timbers. As shown in Figure 3-44, a wooden flume was located next to Turnout B (Turnout B indicated by red arrow) and was used as a check structure.

Turnout C consisted of a wooden gate structure supported by concrete abutments. Figure 3-45 displays Turnout C (red arrow) along with a wooden weir check structure located downstream from Turnout C. The ditch from Turnout C led to a 24-inch-diameter concrete pipe that was used to convey diverted water, shown in Figure 3-46.

Turnout D consisted of a concrete flume/check structure, shown in Figure 3-47. The structure included outlets on both the north and south walls, with timbers used to convey diverted water from the structure. Figures 3-48 and 3-49 show the north and south outlets, respectively.

Figure 3-42. Turnout A for Permit 2415-2. The turnout is composed of timber.

Figure 3-43. Wooden Flume Used as a Check for Turnout A of Permit 2415-2.

Figure 3-44. Turnout B (Red Arrow) and the Flume Associated with Permit 2415-2.

Figure 3-45. Turnout C (Red Arrow) and the Wooden Weir Associated With Permit 2415-2.

Figure 3-46. Turnout C and the 24-Inch-Diameter Concrete Pipe (Red Arrow) Associated With Permit 2415-2.

Figure 3-47. Concrete Flume/Check Structure for Turnout D Associated With Permit 2415-2 (Looking Downstream).

Figure 3-48. North Flume/Check Structure Wall and Outlet for Turnout D Associated With Permit 2415-2.

Figure 3-49. South Flume/Check Structure Wall and Outlet for Turnout D Associated With Permit 2415-2.

3.4.5.2 *Access*

Turnouts A through D are adjacent to property owned by Mr. Matt Bowen (PINs 3932100003 and 3932200001). The sites are accessed by travelling approximately 1/2 mile south on Bradsky Road from Highway 44 to a private drive just north of the South Side Ditch crossing.

- The Turnout A and Turnout B sites are accessed by travelling west on the private drive for approximately 1/2 mile from Bradsky Road, crossing South Side Ditch, then leaving the private drive and following South Side Ditch along its south bank.
- The Turnout C and Turnout D sites are accessed from the private drive on the north bank of South Side Ditch, approximately 1/2 mile and 1/4 mile west of Bradsky Road, respectively.

3.4.5.3 *Disablement*

The following are the procedures the City of Rapid City used in disabling the four turnouts associated with Permit 2415-2.

- Turnout A
    - Removed the timber turnout and the wooden flume structure
    - Backfilled with compacted embankment material to match existing ditch cross section

- Turnout B
    - Removed the timber turnout and the wooden flume structure
    - Backfilled with compacted embankment material to match existing ditch cross section
- Turnout C
    - Removed the wooden gate turnout structure, concrete abutments, and wooden weir check structure from South Side Ditch
    - Backfilled ditch banks with compacted embankment material to match existing ditch cross section
    - Backfilled existing turnout ditch from South Side Ditch to existing concrete pipe with compacted material to match existing adjacent grade
- Turnout D
    - Removed the concrete inlets and wooden turnouts from the north and south banks.
    - Backfilled with compacted embankment material to match existing ditch cross section.

Figures 3-50 through 3-57 document the disablement of the structures associated with the four turnouts.

Figure 3-50. Removal of Turnout A associated with Permit 2415-2. Date 7/30/2015

Figure 3-51. Turnout A Wooden Flume Structure Associated With Permit 2415-2, removed. Date 7/30/2015

Figure 3-52. Turnout B Associated With Permit 2415-2. Timber Turnout Removed. Date 7/30/2015.

Figure 3-53. Turnout B Associated With Permit 2415-2. Wooden Flume Structure Removed. Date 7/30/2015.

Figure 3-54. Turnout C Associated With Permit 2415-2 Timber Gate Turnout Structure, Concrete Abutments, and Timber Weir Check Structure Removed. Date 7/30/2015.

Figure 3-55. Turnout C Associated With Permit 2415-2. Turnout ditch filled in. Date7/30/2015.

Figure 3-56. Turnout D Associated With Permit 2415-2. Headgate removed and concrete plug put in place for south turnout. Date 7/30/2015

Figure 3-57. Turnout D Associated With Permit 2415-2. Headgate removed and concrete plug put in place for north turnout. Date 7/30/2015.

3.4.6 Permit 2217-2

This permit is for 29.2 acres and 0.33 cfs transferred from Mr. Leonard Keller.

3.4.6.1 *Turnouts*

No turnouts associated with this permit were located.

3.4.6.2 *Access*

The site is along Back Country Trail off of Bradsky Road.

3.4.6.3 *Disablement*

This turnout was previously disabled.

3.4.7 Permit 2296-2 and Permit 2360-2

Permit 2296-2 is for 253.4 acres and 2.85 cfs transferred from Mr. Donald Jundt. Permit 2360-2 is for 32.6 acres and 0.37 cfs transferred from Mr. Soetaert.

3.4.7.1 *Turnouts*

The turnout structure associated with transferred Permit 2296-2 and transferred Permit 2360-2, shown in Figure 3-58, also serves the active Permit 2526-2 for 0.71 cfs currently serving 50 acres of irrigated land owned by Mr. Donald Jundt. The turnout will not be disabled.

Figure 3-58. Turnout Associated With Permit 2296-2 and Permit 2360-2, Currently Serving an Active Permit for 50 Acres Irrigated by Mr. Donald Jundt.

3.4.7.2 *Access*

The turnout for Permit 2296-2 and Permit 2360-2 is located approximately 1/2 mile south of Highway 44 on the east side of Bradsky Road at the South Side Ditch. All associated structures are on property owned by Mr. Donald Jundt.

3.4.7.3 *Disablement*

No disablement was required.

4.0 PERMITS AND REGULATIONS

4.1 CLEAN WATER ACT SECTION 404 PERMIT

According to the U.S. Army Corps of Engineers [2007]:

> "Under Section 404(f)(1)(C) of the CWA (see also 33 CFR 323.4(a)(3) and 40 CFR 232.3(c)(3)), discharges of dredged or fill material associated with construction or maintenance of irrigation ditches, or the maintenance (but not construction) of drainage ditches, are not prohibited by or otherwise subject to regulation under Section 404 of the CWA (i.e., these activities are exempt from the need to obtain a Section 404 Permit from the Department of the Army (DA)). Discharges of dredged or fill material associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant to and functionally related to irrigation ditches are included in the exemption for irrigation ditches."

A 404 Permit was not required.

4.2 CLEAN WATER ACT SECTION 402 PERMIT

According to the South Dakota Department of Environment and Natural Resources [2010] Section 2.2.2:

> "Storm water discharges from operators disturbing less than one acre that are part of a larger common plan of development or sale that, combined, disturb one or more acres."

The combination of ground area disturbed by the combination of all disablements associated with this project did not exceed 1 acre.

A 402 Permit was not required.

4.3 FLOODPLAIN DEVELOPMENT PERMITS

After reviewing both the Pennington County and Rapid City Flood Insurance Rate Maps, it was determined that none of the disablement sites lie within the 100-year floodplain.

Floodplain permits were not required.

4.4 HISTORIC PRESERVATION

As required by State Preservation Law (South Dakota Codified Law (SDCL) 1-19A-11.1), the Office of History was given notice and an opportunity to investigate and comment on this proposed project. The Office of History concluded that the irrigation ditches in Rapid Valley are listed on neither the State nor the National Register of Historic Places. Additionally, because federal funding will not be used for this proposed project, Section 106 of the National Historic Preservation Act did not apply.

5.0 REFERENCES

City of Rapid City and Pennington County, 2012. *RapidMap*, retrieved September 19, 2012, from http://www.rcgov.org/GIS/rapidmap.html

South Dakota Department of Environment and Natural Resources, 2012. *South Dakota Water Rights*, retrieved September 19, 2012, from http://denr.sd.gov/des/wr/dbwrsearch.aspx

South Dakota Department of Environment and Natural Resources, 2010. *General Permit for Storm Water Discharges Associated With Construction Activities*, prepared by the South Dakota Department of Environment and Natural Resources, Pierre, SD.

Stroup, D. E., 2005. *Rapid City – Rapid Valley Water Rights Transfers*, internal memorandum from D. E. Stroup, South Dakota Department of Environment and Natural Resources, Water Rights Program, Pierre, SD, to G. Eberle, South Dakota Department of Environment and Natural Resources, Water Rights Program, Pierre, SD, September 30.

U.S. Army Corps of Engineers, 1990. *Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches under Section 404 pf C;eam Water Act*, Regulatory Guidance Letter, prepared by U.S. Army Corps of Engineers, Washington, DC, July 4.

U.S. Bureau of Reclamation, 1990. *Rapid Valley Water Management Study*, prepared by U.S. Bureau of Reclamation, Newell, South Dakota.

APPENDIX A
TURNOUT VICINITY MAPS

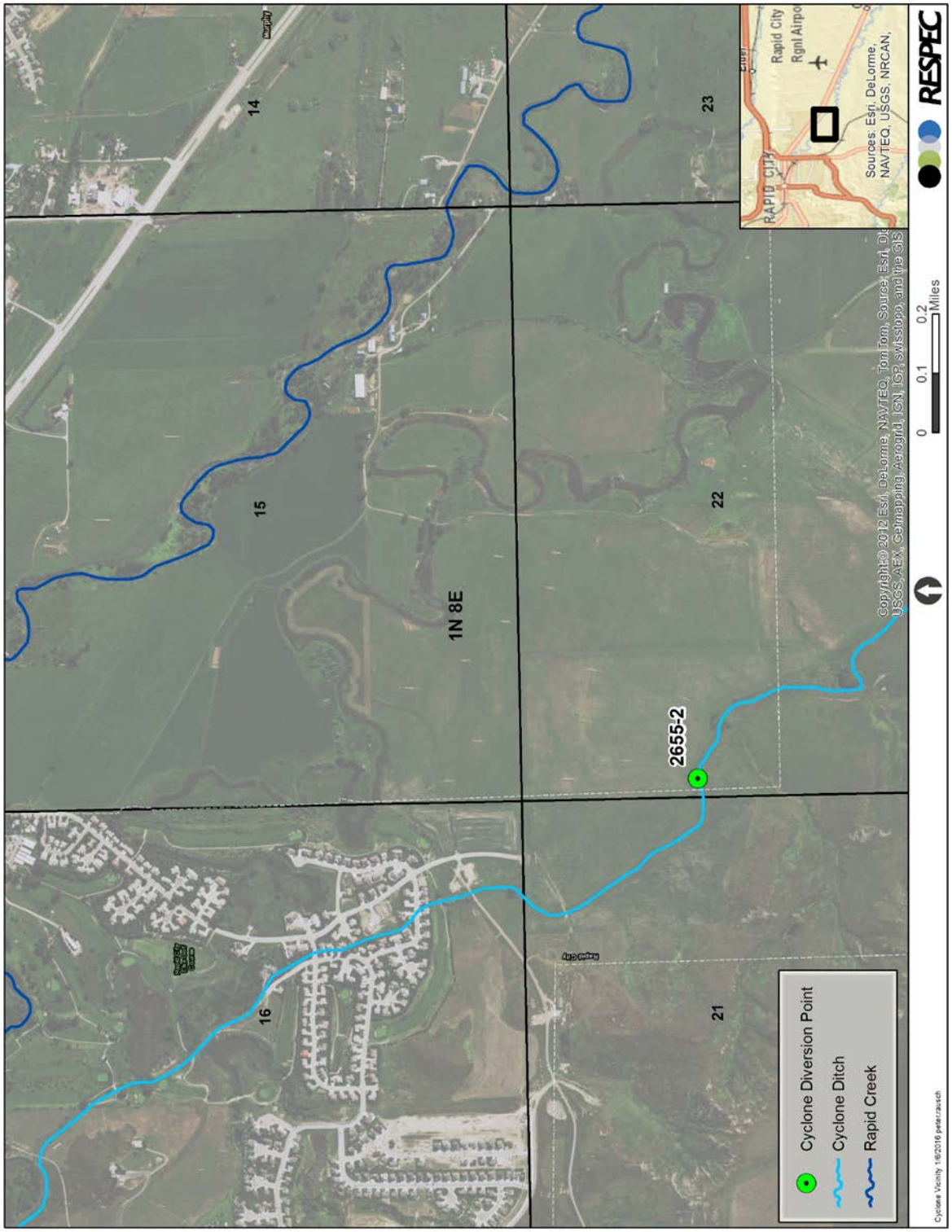


Figure A-1. Cyclone Ditch Turnout Vicinity Map.

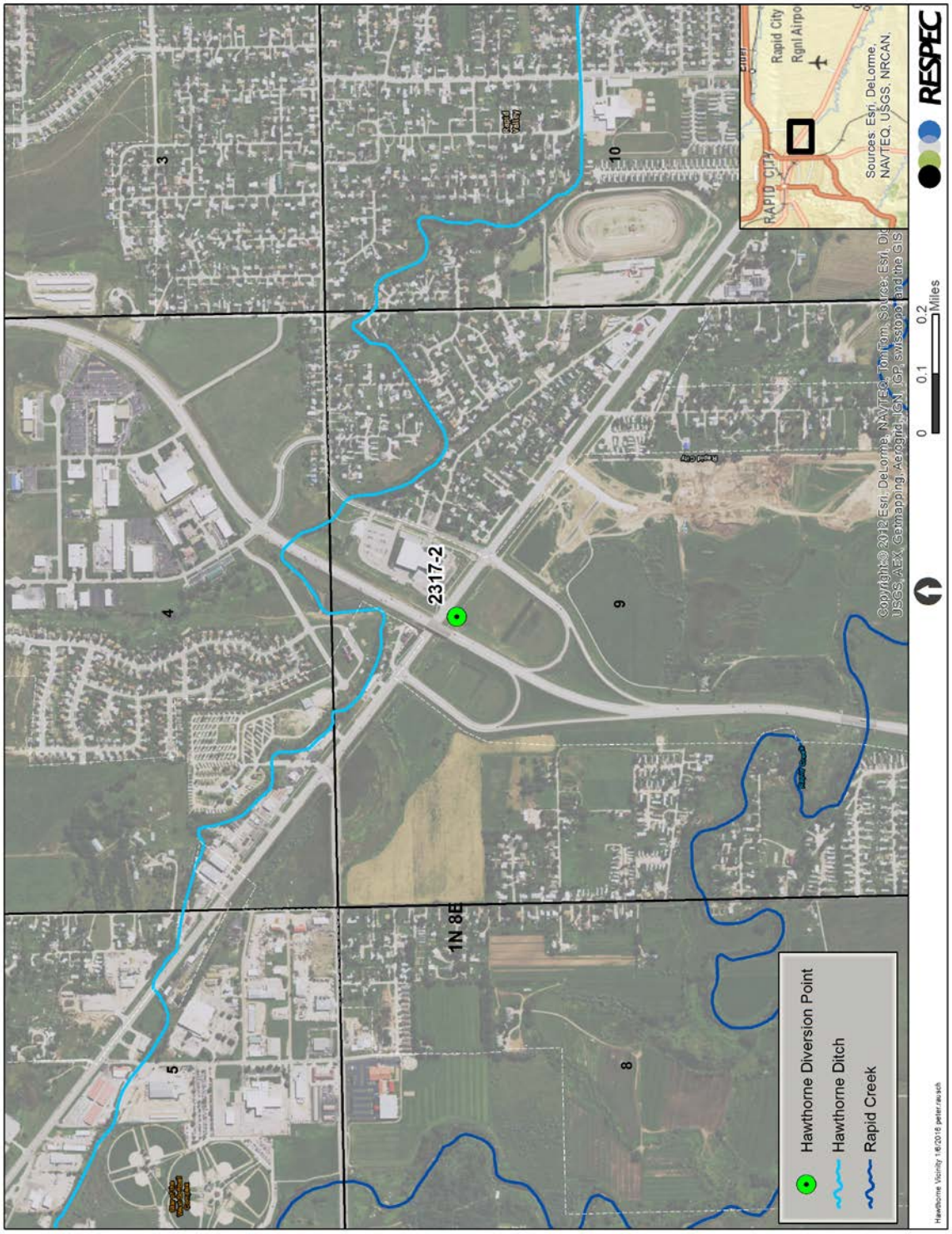


Figure A-2. Hawthorne Ditch Turnout Vicinity Map.

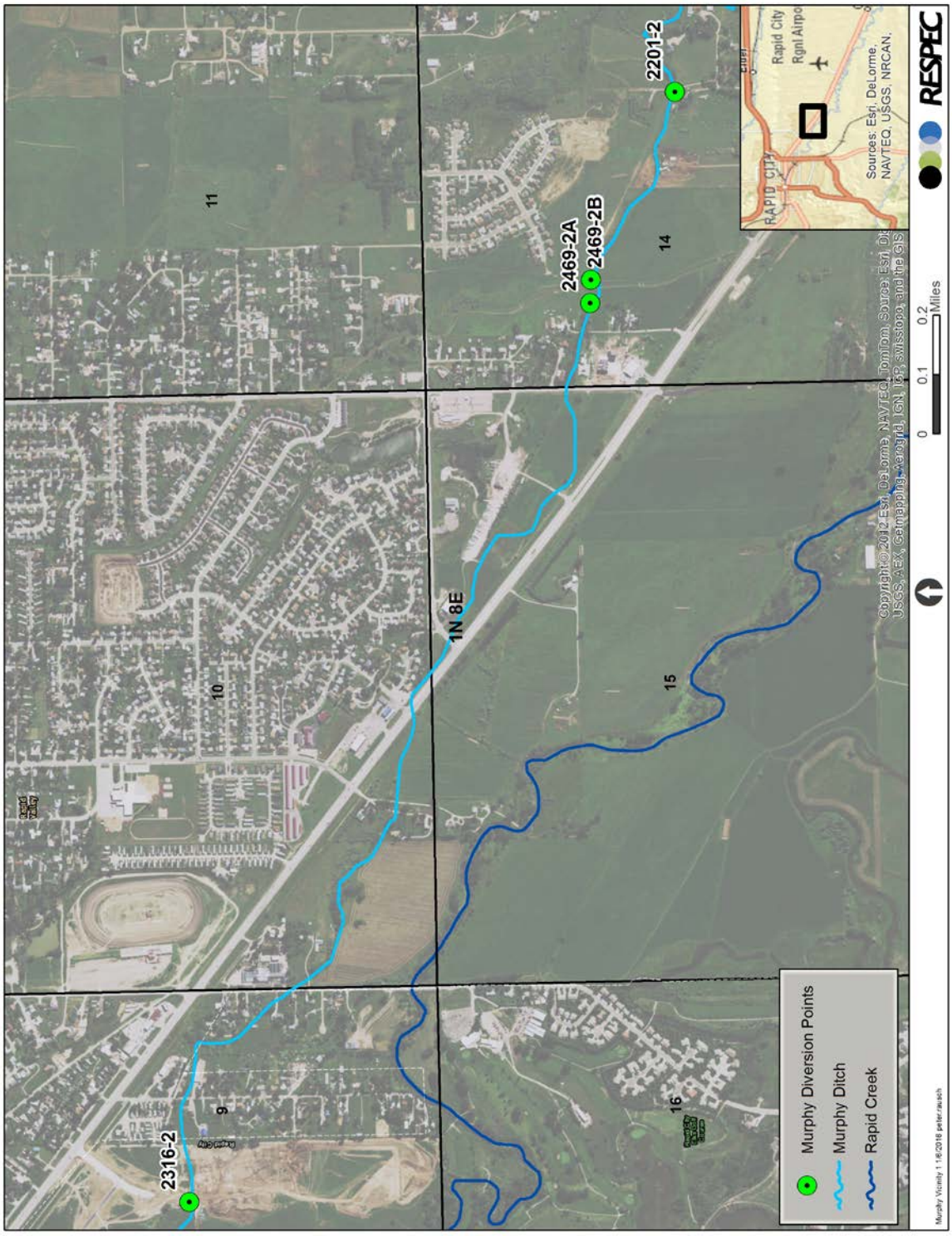


Figure A-3. Murphy Ditch Turnout Vicinity Map (1 of 2).

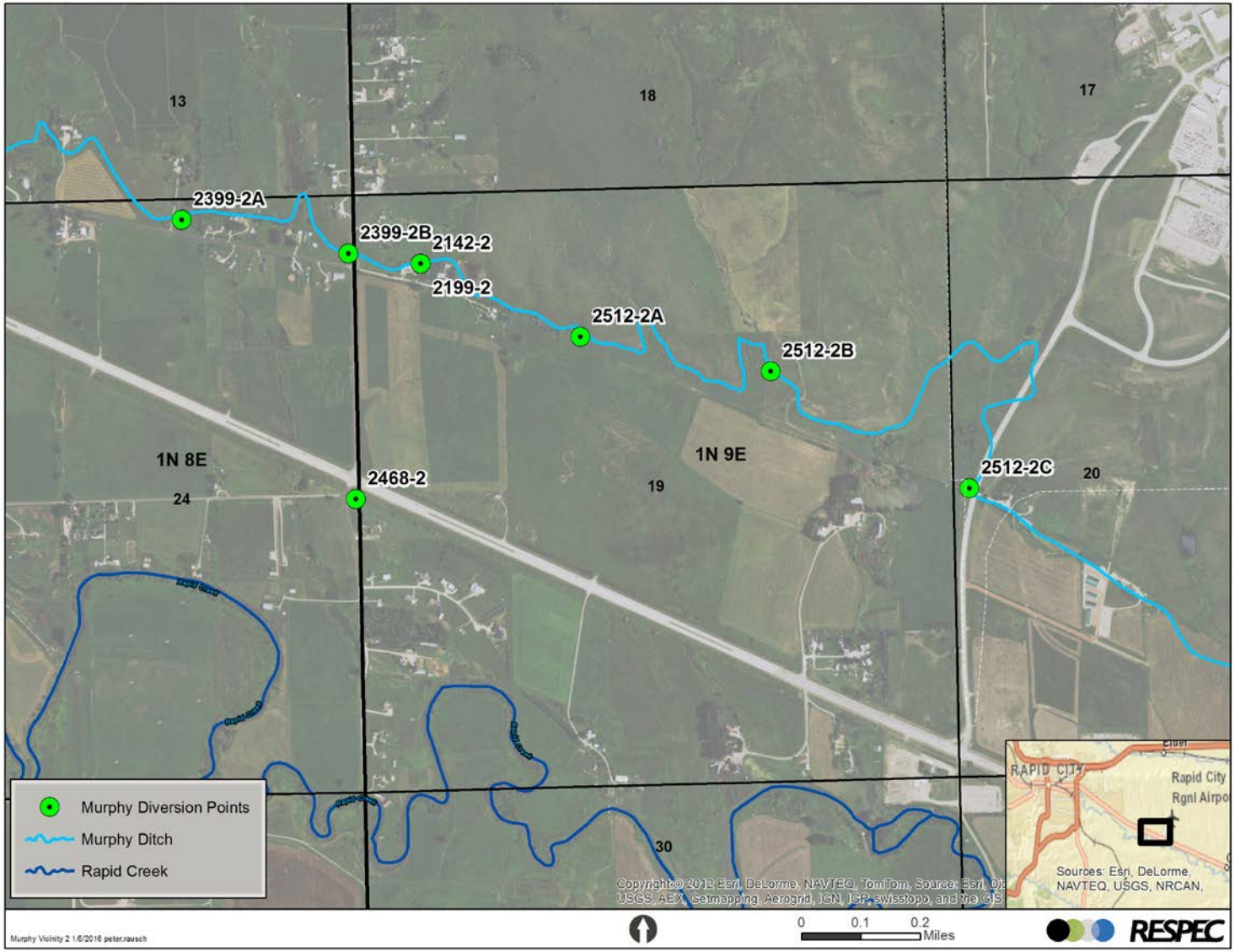


Figure A-4. Murphy Ditch Turnout Vicinity Map (2 of 2).

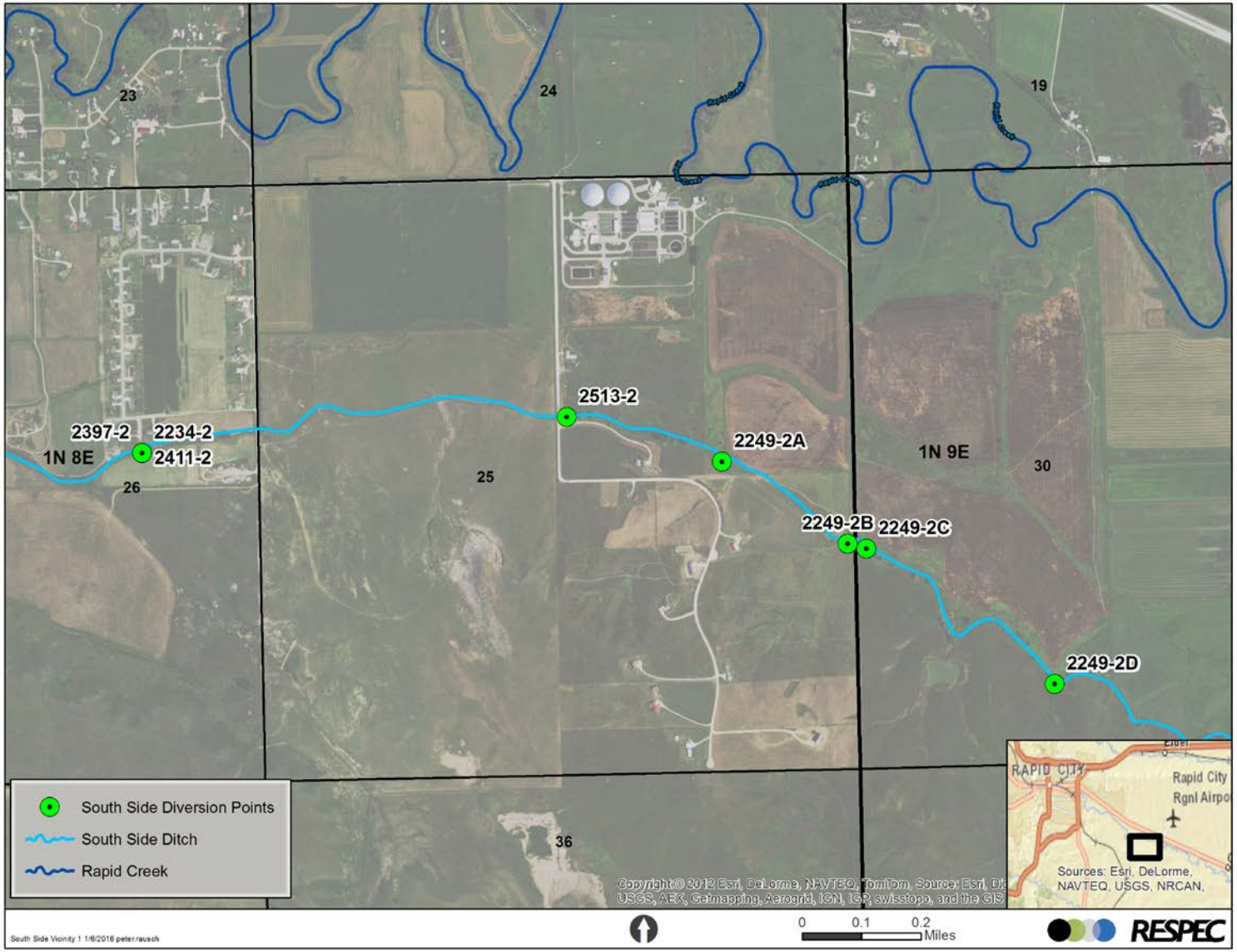


Figure A-5. South Side Ditch Turnout Vicinity Map (1 of 2).

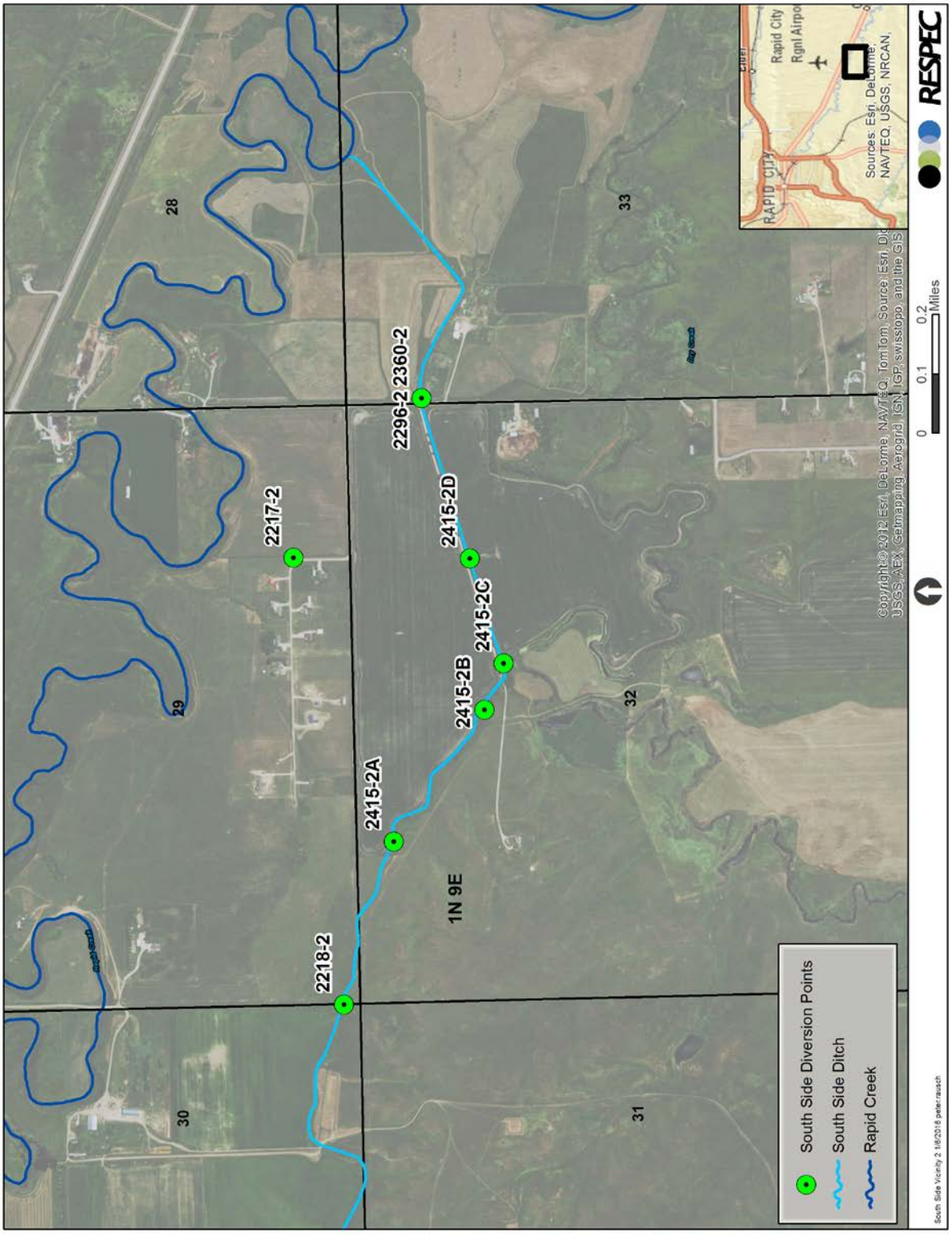


Figure A-6. South Side Ditch Turnout Vicinity Map (2 of 2)