

WATER PERMIT NO. 2768-2

Name of Applicant: City of Rapid City

Address: 300 6th St, Rapid City SD 57701 Phone: 605 394-4165

Amount of Water Claimed: 0.35 Total Acres: NA

Source of Water Supply: Rapid Creek

Water to be used for: municipal County: Pennington

Type of Waste Disposal System:

Location: East of Rapid City

PRIORITY Date Received: 7-5-17 Application/License Fee: \$

Corrected Application Received: Period of Annual Use: Jan 1 – Dec 31

Remarks: Amendment to Permit 2383-2 (Little Giant Ditch) – change use

Diversion Point:

Land to be Irrigated: NA

Depth of Well: NA

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 7-10-17

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

SD EForm - 1585LD V5

FORM 2: Application for uses other than irrigation

(type or print)

Mail to:

DENR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

No. 2768-2 (office use only) Hydrologic Unit 10120110
Basin Upper Cheyenne
Newspaper Rapid City Journal

RECEIVED

JUL 05 2017

WATER RIGHTS
PROGRAM

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

Check use(s) of water:

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

Type of Application:
(check one)

☐ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☒ Amendment/Correction to Permit No. 2383-2

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

Change Use, Change Diversion Project

1. Name to Appear on Water Permit City of Rapid City

Mailing Address 300 Sixth Street Rapid City ☒ SD ☒ 57701
(Address) (City) (State) (Zip Code)

Phone 605.394.4165 Mobile _____ Email _____

2. Amount of water claimed 0.35 *CFS or 68.8 **GPM and 68.8 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use)

3. Source of water supply Rapid Creek (see attached Exhibit 1 for maps)

4. Location of point of diversion See attached Exhibit 2 for legal descriptions and map County Pennington ☒
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☐ No

If "Yes," where will water be used? _____
(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Pennington, South Dakota6. Annual period during which water is to be used April 1-October 31 (Jan. 1-Dec. 31 for Pactola Storage)

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

Project will divert water from Rapid Creek to the city water treatment plant and/or the city infiltration galleries located along Rapid Creek. Alternatively, the project will, but not simultaneously, divert water from Rapid Creek to storage in Pactola, Reservoir. See the attached Exhibit 3 (engineering report).

I, Dale Tech Public Works Director, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

2015-10

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

SOUTH DAKOTA
WATER PERMIT NO. 2768-2

Date of first receipt of application July 5, 2017.

The Water Management Board approved Water Permit No. 2768-2 on October 5, 2017 for the City of Rapid City, 300 6th St, 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. 2768-2 transfers a portion of Little Giant Ditch Company's landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2383-2 (Brian Dail shareholder) using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 0.38 cubic feet of water per second (cfs) with an annual volume limitation of 68.8 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 34.4 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit changes the diversion point for 0.38 cfs to diversion points for use by the city to be located in the SE 1/4 NE 1/4 Section 3 (Mountain View Water Treatment Plant); the SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); the NE 1/4 SW 1/4 Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is in the NW 1/4 SW 1/4 Section 2, T1N-R5E and 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 appropriations from Rapid Creek.
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.
3. The water is to be used during the following described annual period: May 1 - September 30 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 June 14, 1878 (established by Vested Water Right No. 2383-2).
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. Permit No. 2768-2 is limited to a diversion rate of 0.38 cubic feet of water per second for a total annual volume of 34.4 acre feet of water annually at Pactola Reservoir or a total annual volume of 68.8 acre feet of water annually at the SE 1/4 NE 1/4 Section 3 (Mountain View Water Treatment Plant); the SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); the NE 1/4 SW 1/4 Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E. Maximum monthly diversion volumes at Pactola or the diversion points within Rapid City are as follows:

(continued)

Monthly Volume Limitation (acre-feet)

Water Permit No. 2768-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	8.4	4.2
May	6.4	3.2
June	9.7	4.8
July	11.7	5.8
Aug	14.8	7.4
Sept	9.7	4.9
Oct	8.1	4.1
Totals	68.8	34.4

Diversion 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. Permit No. 2768-2 authorizes diversion of only natural flow water by the city of Rapid City and does not include any rights to stored irrigation water available under contract from Deerfield Reservoir.
3. Diversions under this permit when taken at the Jackson Springs treatment plant Rapid Creek intake are limited to natural flows that exceed 10 cubic feet of water per second (cfs) as measured at USGS gaging station Rapid Creek above Canyon Lake near Rapid City No. 06412500. During the period April 1 through September 30 natural flow diversions are limited to the amount exceeding 20 cfs with the remainder of the diversion being released supplemental water equal to the amount released from storage through Rapid City's Deerfield and Pactola contracts with the United States Bureau of Reclamation.
4. The city of Rapid City shall report to the Chief Engineer annually the amount of water withdrawn each month at Pactola reservoir or the diversion points within Rapid City.
5. The Water Management Board retains jurisdiction of Permit No. 2768-2 in the event that changes occur in the system that require adjustments to be made in the monthly or total annual volumes authorized by Permit No. 2768-2.
6. Diversion under Permit No. 2768-2 may not interfere with existing water rights in effect prior to approval of No. 2768-2 or any domestic rights.
7. The amount of water with a June 14, 1878, priority date which may be appropriated under Vested Water Right No. 2383-2 is reduced by 0.38 cfs.

WATER MANAGEMENT BOARD

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

OCT 13 2017
date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)

- a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)
- b) If existing wells, how many ____ Provide copy of log(s), if available. Drilled by ____

For either Existing or Proposed Wells:

- c) Well Depth (required) ____ Depth to Top of Water Bearing Material ____ Depth to Water from Surface ____
- d) Distance to nearest domestic well on applicant's property ____ Property owned by others ____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) ____
- b) System Capacity (gallons) ____ Year Constructed ____
- c) Connected to the City of ____ Sanitary System

3. Dugout Information

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

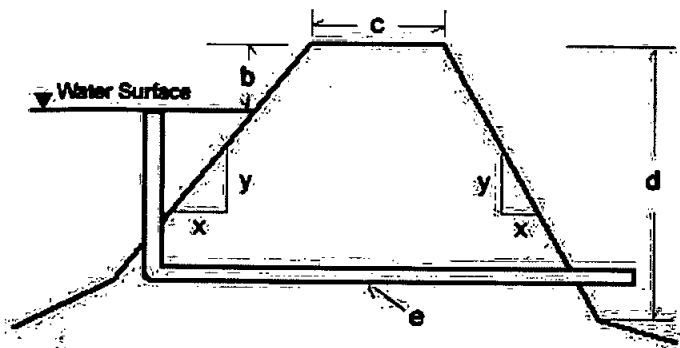
4. Water Storage Dams

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

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

U.S. Bureau of Reclamation
Department of the Interior

- b) Freeboard 3.3 feet
- c) Crest Width 40 feet
Crest Length 5,200 including dikes
- d) Height 245 feet
- e) Primary Outlet Capacity 1,150 cfs
If pipe, diameter 2-2.75 feet x 2.75 feet
- f) Secondary Spillway Capacity 245,000 cf
Spillway Width 425 feet
- g) X & Y Slope (e.g. 3 to 1 is a typical slope)
Upstream 2.5:1
Downstream 2:1
- h) Surface Area of Impoundment 1,232 acres
- i) Storage 99,029.0 Acre Feet
- j) Drainage Area Above Dam 319.0 Acres



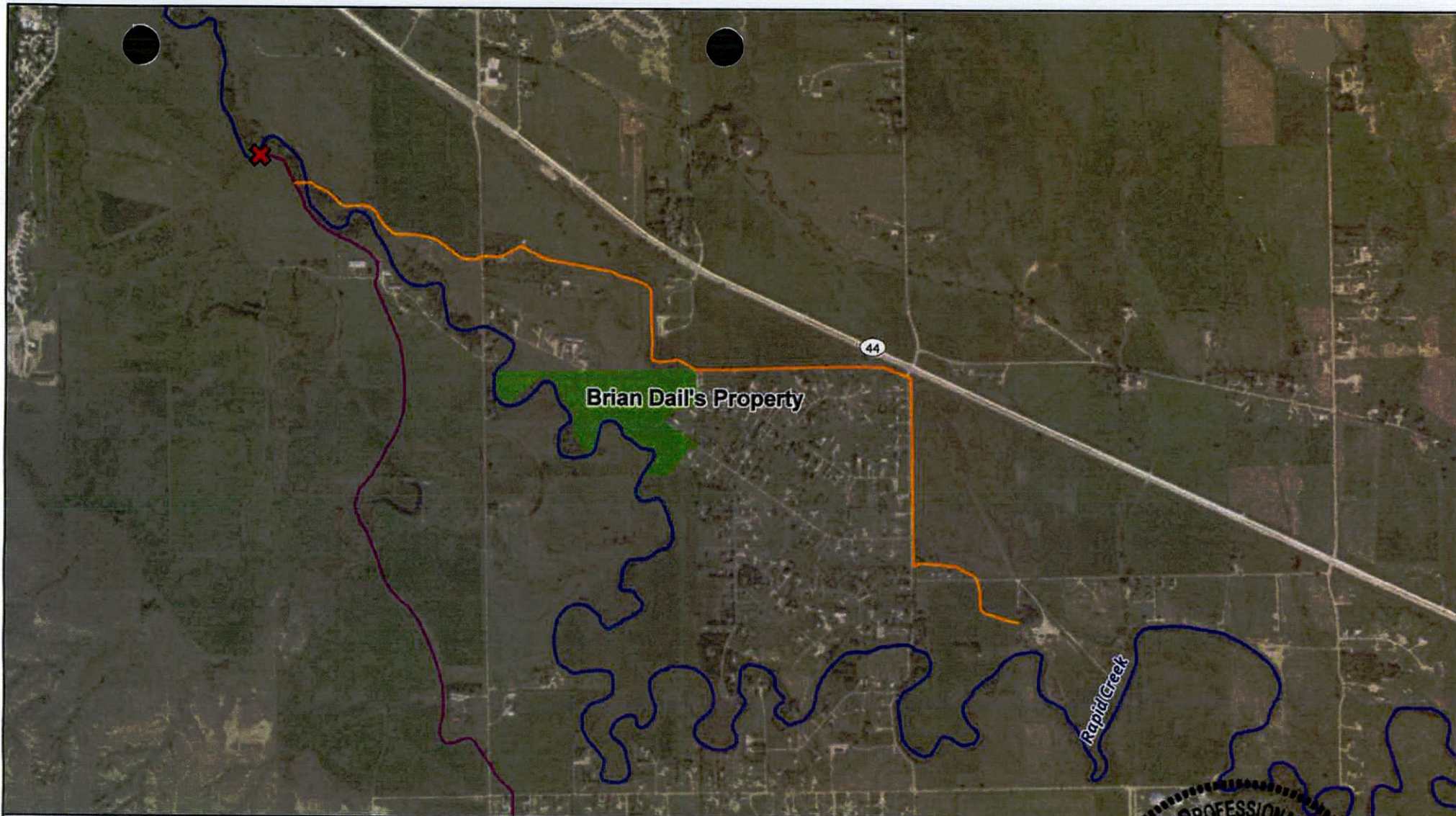
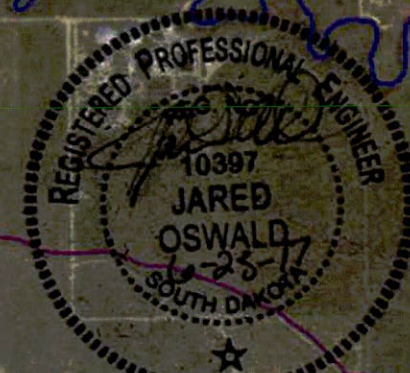


Exhibit 1

-  **South Side/Little Giant Ditch Diversion Point: Section 15, Township 1N, Range 8E**
-  **Brian Dail's Property: 38 ac within Section 23, Township 1N, Range 8E**
-  **Rapid Creek**
-  **Little Giant Ditch**
-  **South Side Ditch**



Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID,



0 0.15 0.3
Miles



EXHIBIT 2

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

LOCATION OF POINT OF DIVERSION

Jackson Springs Gallery

2,943 feet North 58 degrees 54 feet West of Southeast corner of Section Eight (8), Township One (1) North, Range Seven (7) East of the Black Hills Meridian.

Sioux Park "Girl Scout" Gallery

1,270 feet North 54 degrees 5 feet East of Southwest corner of Section Three (3), Township One (1) North, Range Seven (7) East of the Black Hills Meridian.

Mountain View Water Treatment Plant

North 71 degrees 39 feet West, 1,205 feet from East $\frac{1}{4}$ corner of Section Three (3), Township One (1) North, Range Seven (7) East of the Black Hills Meridian.

Alternate Pactola Reservoir Diversion (Inlet to Service Spillway)

South 19 degrees East 3,740 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 Section 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 One (1) North, Range Five (5) East of the Black Hills Meridian.

All of the above in Pennington Country, South Dakota.

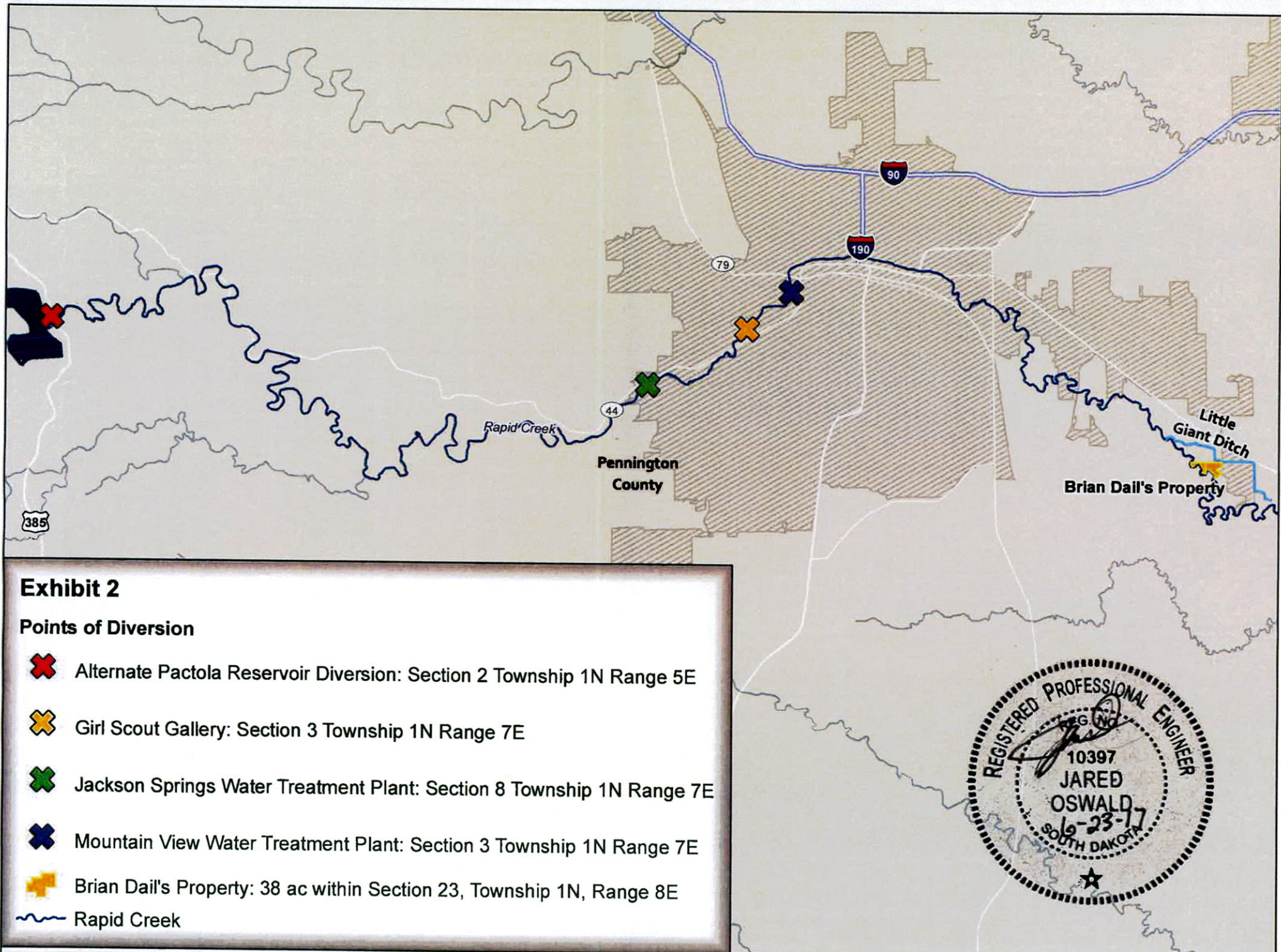
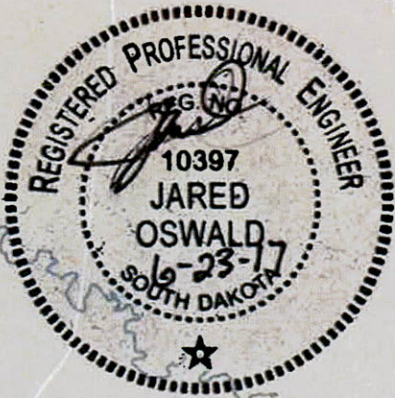


Exhibit 2

Points of Diversion

-  Alternate Pactola Reservoir Diversion: Section 2 Township 1N Range 5E
-  Girl Scout Gallery: Section 3 Township 1N Range 7E
-  Jackson Springs Water Treatment Plant: Section 8 Township 1N Range 7E
-  Mountain View Water Treatment Plant: Section 3 Township 1N Range 7E
-  Brian Dail's Property: 38 ac within Section 23, Township 1N, Range 8E
-  Rapid Creek



CITY OF RAPID CITY LITTLE GIANT DITCH WATER RIGHTS TRANSFER

TOPICAL REPORT RSI-2712

PREPARED BY

Jared K. Oswald

RESPEC

3824 Jet Drive

Rapid City, South Dakota 57703

PREPARED FOR

City of Rapid City

300 Sixth Street

Rapid City, South Dakota 57701

JUNE 2017

Project Number 2897



FOREWORD

An engineering analysis was conducted on the property owned by Mr. Brian Dail to determine the amount of water that the property has the right to transfer to the water supply system for the City of Rapid City, South Dakota. The 38-acre property that is being assessed is located within Section 23, Township 1 North, Range 8 East, Black Hills Meridian, Pennington County, South Dakota. The property has been served irrigation water through a vested right (State of South Dakota Reissued Vested Water Right License No. 2383-2), which allows 5.26 cubic feet per second (cfs) to be diverted from Rapid Creek into the Little Giant Ditch. The analysis determined that 68.8 acre-feet of water (approximately 1.8 acre-feet per acre) can be transferred annually from the property to diversion points within Rapid City from April 15 to November 1 not to exceed a prorated acreage share of 0.35 cfs. A total annual volume of 34.4 acre-feet is available for transfer to Pactola Reservoir storage.

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
1.1 HISTORIC CROP WATER USE.....	1
1.2 HISTORIC DIVERSIONS.....	7
1.3 DELIVERY SYSTEM LOSSES.....	7
2.0 WATER RIGHTS AVAILABLE FOR TRANSFER.....	10
APPENDIX A. HISTORIC CROP WATER USE BY YEAR.....	A-1

LIST OF TABLES

TABLE	PAGE
1-1 Calculated, Weighted Water-Holding Capacity for the Dail Property.....	7
1-2 Amount of Irrigation Demand Based on Historic Crop Water Use Analysis.....	9
1-3 Historic Diversions and Monthly Pro Rata Share Available for Transfer from the Dail Property Based on Historic Diversion Records for the South Side Ditch Prorated to Little Giant Ditch Company.....	9
2-1 Irrigation Amounts Available for Transfer From the City of Rapid City Property.....	11
2-2 Approximate Locations of City of Rapid City Diversion Points/Galleries.....	12

LIST OF FIGURES

FIGURE	PAGE
1-1 Location of the Brian Dail Property Off of the Little Giant Ditch	2
1-2 Crop Coefficient (Kc) Throughout the Growing Season for Alfalfa Developed Specifically for the Dail Property	4
1-3 Plant-Available Coefficient (Ka) Response to Changes in Percent of Available Water in the Soil Profile	5
1-4 Location of the Dail Property With Soils Overlayed	6
1-5 Water Balance Tracking for 1970 Irrigation Season	8
1-6 Total Values of Rainfall, Irrigation, Reference Evapotranspiration, and Actual Evapotranspiration During the Analysis Period of 1970–2015	8
2-1 City of Rapid City Diversion Points	13
A-1 Crop Water Use Calculation for Year 1970	A-2
A-2 Crop Water Use Calculation for Year 1971	A-2
A-3 Crop Water Use Calculation for Year 1972	A-3
A-4 Crop Water Use Calculation for year 1973	A-3
A-5 Crop Water Use Calculation for Year 1974	A-4
A-6 Crop Water Use Calculation for Year 1975	A-4
A-7 Crop Water Use Calculation for Year 1976	A-5
A-8 Crop Water Use Calculation for Year 1977	A-5
A-9 Crop Water Use Calculation for Year 1978	A-6
A-10 Crop Water Use Calculation for Year 1979	A-6
A-11 Crop Water Use Calculation for Year 1980	A-7
A-12 Crop Water Use Calculation for Year 1981	A-7
A-13 Crop Water Use Calculation for Year 1982	A-8
A-14 Crop Water Use Calculation for Year 1983	A-8
A-15 Crop Water Use Calculation for Year 1984	A-9
A-16 Crop Water Use Calculation for Year 1985	A-9
A-17 Crop Water Use Calculation for Year 1986	A-10
A-18 Crop Water Use Calculation for Year 1987	A-10
A-19 Crop Water Use Calculation for Year 1988	A-11
A-20 Crop Water Use Calculation for Year 1989	A-11
A-21 Crop Water Use Calculation for Year 1990	A-12
A-22 Crop Water Use Calculation for Year 1991	A-12
A-23 Crop Water Use Calculation for Year 1992	A-13

LIST OF FIGURES (CONTINUED)

FIGURE	PAGE
A-24 Crop Water Use Calculation for Year 1993	A-13
A-25 Crop Water Use Calculation for Year 1994	A-14
A-26 Crop Water Use Calculation for Year 1995	A-14
A-27 Crop Water Use Calculation for Year 1996	A-15
A-28 Crop Water Use Calculation for Year 1997	A-15
A-29 Crop Water Use Calculation for Year 1998	A-16
A-30 Crop Water Use Calculation for Year 1999	A-16
A-31 Crop Water Use Calculation for Year 2000	A-17
A-32 Crop Water Use Calculation for Year 2001	A-17
A-33 Crop Water Use Calculation for Year 2002	A-18
A-34 Crop Water Use Calculation for Year 2003	A-18
A-35 Crop Water Use Calculation for Year 2004	A-19
A-36 Crop Water Use Calculation for Year 2005	A-19
A-37 Crop Water Use Calculation for Year 2006	A-20
A-38 Crop Water Use Calculation for Year 2007	A-20
A-39 Crop Water Use Calculation for Year 2008	A-21
A-40 Crop Water Use Calculation for Year 2009	A-21
A-41 Crop Water Use Calculation for Year 2010	A-22
A-42 Crop Water Use Calculation for Year 2011	A-22
A-43 Crop Water Use Calculation for Year 2012	A-23
A-44 Crop Water Use Calculation for Year 2013	A-23
A-45 Crop Water Use Calculation for Year 2014	A-24
A-46 Crop Water Use Calculation for Year 2015	A-24

1.0 INTRODUCTION

An engineering analysis was completed on two parcels of property, which are owned by Mr. Brian Dail, with irrigation rights off the Little Giant Ditch, which receives diversions from Rapid Creek. The property is located in the NW ¼ NW ¼ (10 acres) and the NE ¼ NW ¼ (28 acres) of Section 23. Section 23 is located within the Township 1 North of Range 8 East of the Black Hills Meridian. The engineering analysis is divided into three report sections (Historic Crop Water Use, Historic Diversions, and Delivery System Losses) to comprehensively assess the volume and flow rate that are available for transfer to diversion points within the City of Rapid City, South Dakota. The historic irrigation requirements (demand) and diversions (supply) were compared on a monthly basis to determine if supply or demand is the limiting amount. The delivery system losses were subtracted from Historic Diversion records to determine the monthly acre-feet of water available for transfer.

The water right volume for transfer and the rate of diversion for the Little Giant Ditch is calculated based on acres and the current State of South Dakota Reissued Vested Water License No. 2383-2 (Water License No. 2383-2). Little Giant Ditch Company is discussed in the "Report on Water Filings on Rapid Creek for Irrigation Purposes," which was written by Raymond F. Lund in July and August of 1942, and states that Little Giant Ditch Company is not incorporated and the report makes no mention of shares. This report discusses a contract, dated March 15, 1898, that was signed between South Side Ditch Company and Little Giant Ditch Company and agrees that Little Giant Ditch should have 400 miner inches (in). The assessments for Operation and Maintenance (O&M) were made according to the amount of water each landowner is assigned. The Little Giant Ditch Company presently assesses four water right holders on the ditch for O&M expenses that are incurred by the ditch. These assessments are currently based on 296 acres.

Using assessed acreage is viable for operational and financial management of the Little Giant Ditch. However, these acres do not relate to the 514.9 acres legally described in Water License No. 2383-2. Therefore, using assessments is not a viable method to determine transferrable water rights. The only fair and equitable method to determine water-right volumes and rate of diversion is to use acreage and distribute the water rights using Water License No. 2383-2, which was issued by the State of South Dakota in 2015.

1.1 HISTORIC CROP WATER USE

An assessment was conducted to determine the historic crop water use and irrigation requirements of The Dail property, which is shown in Figure 1-1. An online irrigation scheduling consultant tool, developed for individual landowners within the Belle Fourche Irrigation District (BFID) in western South Dakota, tracks the daily water balance in a field and provides a recommendation of irrigation timing and depth. Because of the proximity of the BFID to the property, the methods used to develop the tool were deemed appropriate to assess historic crop water use.

The analysis was run daily from April 15 to October 31 from 1970–2015. The inputs required to track a daily water balance are local weather and rainfall estimates, crop type, and soil water-holding capacity. Weather and rainfall data were collected from the Rapid City Regional Airport, which is located approximately 3 miles northeast of the property and is, therefore, deemed representative.

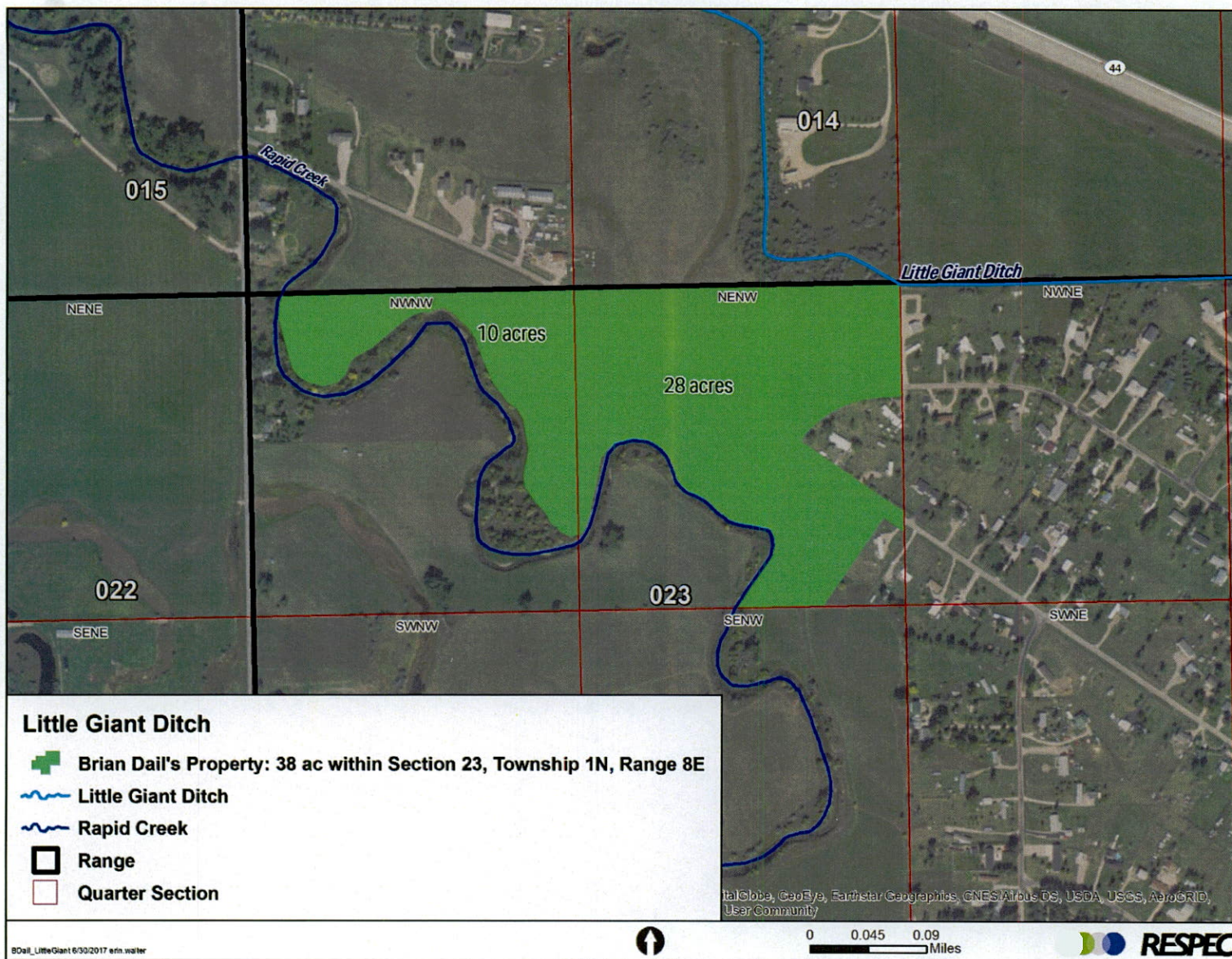


Figure 1-1. Location of the Brian Dail Property Off of the Little Giant Ditch.

The weather data were input into the American Society of Civil Engineers (ASCE) Penman Monteith (PM) equation (Equation 1-1) to calculate daily evapotranspiration (ET).

This equation requires daily average values of dew point, maximum and minimum temperature, average wind speed, and solar radiation. All of the variables, with the exception of solar radiation, were available from the Rapid City Regional Airport weather station. Solar radiation data were calculated based on the station's average daily cloud cover and an empirical curve of radiation as a function of the station's latitude.¹ The output value from the ASCE PM equation were converted from millimeters per day (mm d⁻¹) to inches per day (in d⁻¹).

$$ET = \frac{0.408 \Delta (R_n - G) + \gamma \frac{C_n}{T + 273} u_2 (e_s - e_a)}{\Delta + \gamma (1 + C_d u_2)} \quad (1-1)$$

where:

ET = evapotranspiration (mm d⁻¹)

R_n = calculated net radiation at the crop surface (MJ m⁻² d⁻¹)

G = soil heat flux density at the soil surface (MJ m⁻² d⁻¹)
set as 0.05 MJ m⁻² d⁻¹

T = mean daily air temperature at 1.5–2.5-m height (m s⁻¹)

u_2 = mean daily wind speed at 2-m height (m s⁻¹)

e_s = mean actual vapor pressure at 1.5–2.5-m height (kPa)
calculated using the maximum and minimum air temperature

e_a = mean actual vapor pressure at 1.5–2.5-m height (kPa)
calculated using the average dew point temperature

Δ = slope of the saturation vapor pressure-temperature curve (kPa °C⁻¹)

γ = psychrometric constant (kPa °C⁻¹)

C_n = numerator constant that changes with reference type and calculation
time step (K mm s³ Mg⁻¹ d⁻¹), set as 1600 K mm s³ Mg⁻¹ d⁻¹

C_d = denominator constant that changes with reference type and calculation
time step (s m⁻¹), set as 0.38 s m⁻¹.

Units for the 0.408 coefficient are m² mm MJ⁻¹.

Mr. Dail indicated that the field has been historically irrigated for alfalfa/grass hay. The ASCE PM equation estimates daily evapotranspiration and references a 0.5-meter (m)-tall crop similar to full-cover alfalfa. The PM equation uses the weather parameters that are required to estimate the amount of water that would be lost from full-cover alfalfa on that day.

¹ Hamon, R. W., L. L. Weiss, and W. T. Wilson, 1954. "Insolation as an Empirical Function of Daily Sunshine Duration," *Monthly Weather Review*, Vol. 82, No. 6, pp. 141–146.

This reference ET (ET_r) estimate is multiplied by a crop coefficient (K_c) to adjust this value to any crop or crop stage other than full-cover alfalfa with a plant-available water coefficient (K_a) that adjusts for changes in soil moisture to calculate the actual ET estimate (ET_a) (Equation 1-2):

$$ET_a = ET_r \times K_c \times K_a \quad (1-2)$$

The values for K_c used in this analysis are shown in Figure 1-2. The start of the growing season is assumed to begin, on average, on April 15. For alfalfa, the plant is assumed to thrive when the first 5 days of average temperature exceed 41 degrees Fahrenheit, which usually occurs in April for this area. At this time, the K_c is estimated to be 0.5, or half of the water used for a full-cover alfalfa crop. After the start of the season, the value steadily increases until the crop is harvested and the K_c drops immediately to a 0.3, and the cycle repeats itself. For this analysis, the alfalfa is assumed to be harvested, on average, on June 2, July 12, and August 21.

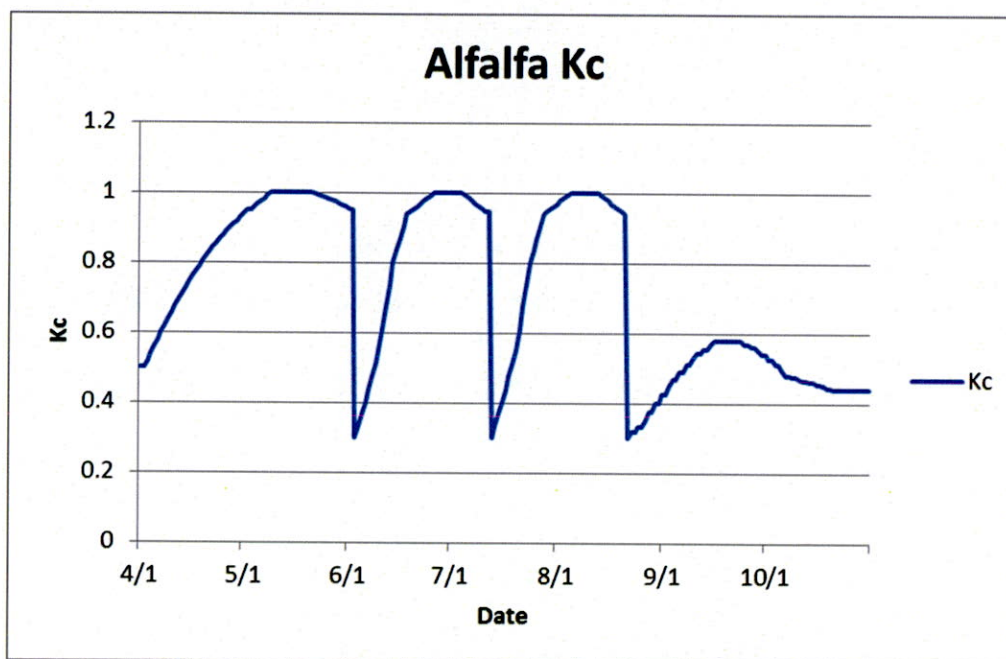


Figure 1-2. Crop Coefficient (K_c) Throughout the Growing Season for Alfalfa Developed Specifically for the Dail Property.

The ET_r estimate is also multiplied by a plant-available water coefficient (K_a) to determine the daily ET_a. This value takes into account the current soil water balance. The form of the coefficient is depicted in Figure 1-3. In essence, the more saturated the soil profile, the closer K_a gets to one, and the more readily available the water is to be released.

To assess the percent available water in the soil, the water-holding capacity must be known. Figure 1-4 provides an aerial view of the Dail property with the soils overlayed. The 38 acres that are being assessed consist of 93 percent Egas Silty Clay Loam (Eg) and 7 percent Bridgeport Silt Loam (Bp). The overall water-holding capacity of the property was determined by calculating an area-weighted value. This was found by estimating water-holding capacity in inches per foot for the top 4 ft for each soil type. The top 4 ft are considered the effective rooting depth for an established alfalfa crop and were used.

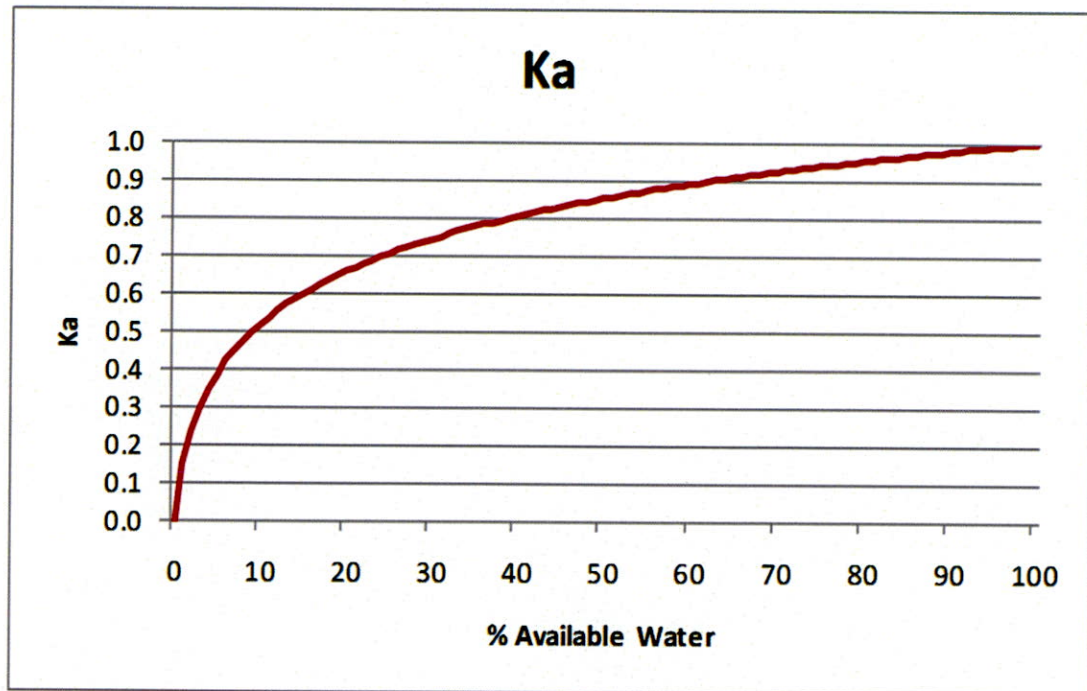


Figure 1-3. Plant-Available Coefficient (Ka) Response to Changes in Percent of Available Water in the Soil Profile.

The estimated water-holding capacity of the individual soil types is then multiplied by the percentage of area that they cover on the property. The calculated, area-weighted, water-holding capacity for the property is represented in Table 1-1.

The daily water balance is found by adding the daily rainfall and simulated irrigation amounts and subtracting the ETa calculated by using Equation 1-3. Irrigation events were simulated and assumed to occur when the calculated balance reached 50 percent of the water-holding capacity (i.e., field capacity). Irrigation amounts fully replenished any soil water deficit at the time.

$$\text{Available Water} = \text{Previous Day Available Water} - \text{ETa} + \text{Rainfall} + \text{Irrigation} \quad (1-3)$$

Figure 1-5 provides a graphical representation of the estimated water balance from 1970 using the described methods. During the 1970 irrigation season from April 15 to October 31, the field received 11.39 in of rainfall and 40.56 in of ETa deficit, which induced 24.98 in of irrigation. The graphs from the remaining years are displayed in Appendix A. Figure 1-6 displays the total yearly values for reference, rainfall, irrigation, reference ET (ETr), and actual ET (ETa) throughout the analysis period. On average, 57.97 in of ETr, 40.57 in of ETa, 12.82 in of rainfall, and 24.36 in of irrigation were estimated. The greatest irrigation amount simulated (35.19 in) occurred in 1988 in response to receiving only 8.58 in of rain and 50.63 in of ETa.

According to Mr. Dail, the property has been surface irrigated throughout its existence, and irrigation efficiency was, therefore, assumed to be 50 percent. Table 1-2 displays the water available to be transferred from the Dail property by month, based on analyzing historic crop water use. According to this analysis, the crop demands an average of 21.7 acre-feet during the irrigation season with monthly delivery rates that are needed to supply this demand, varying from 0.13 cubic feet per second (cfs) in October to 0.58 cfs in July.

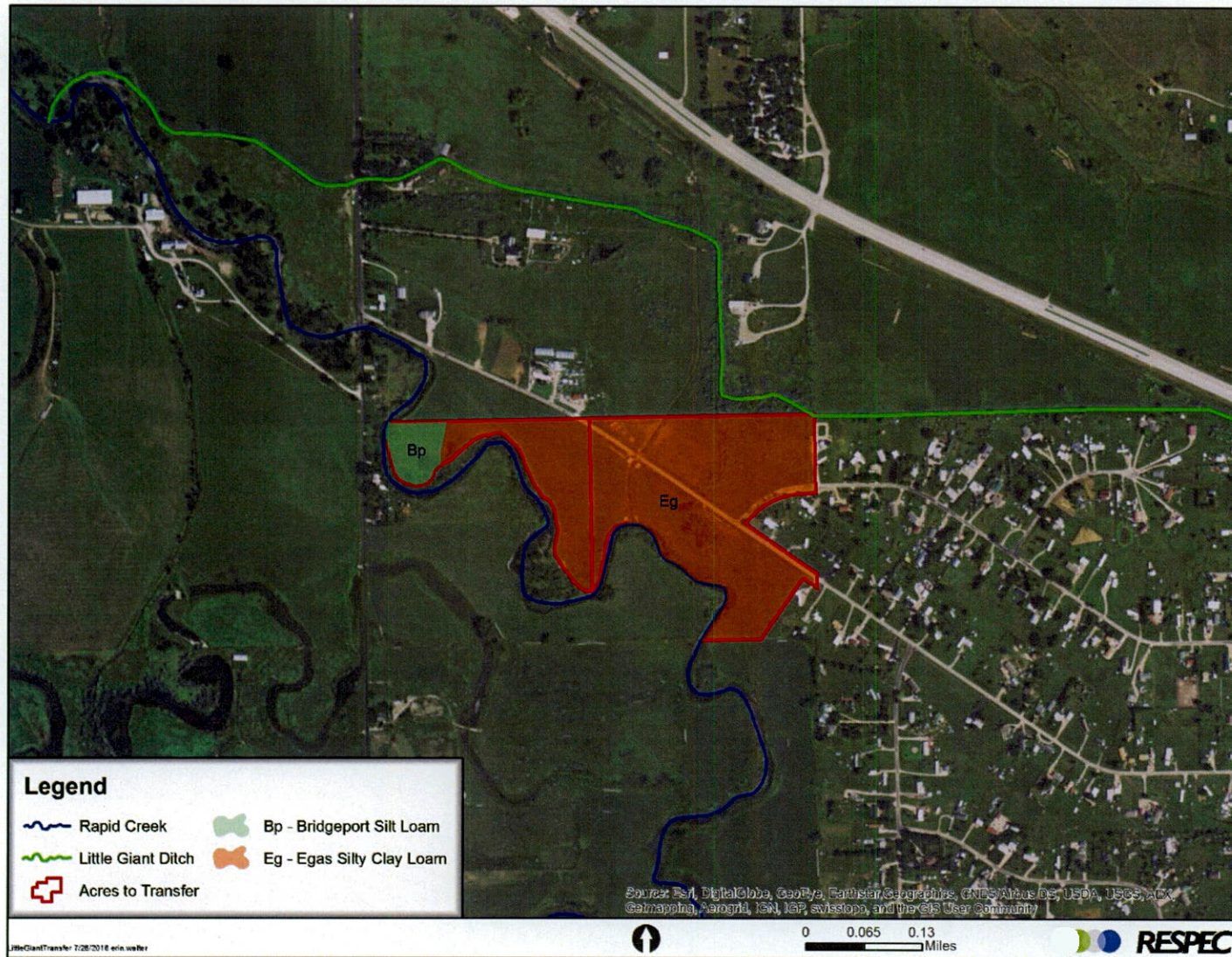


Figure 1-4. Location of the Dail Property With Soils Overlayed.

Table 1-1. Calculated, Weighted Water-Holding Capacity for the Dail Property

Depth (ft)	Water-Holding Capacity (in/ft)
1	1.62
2	1.50
3	1.38
4	1.38
Total	5.88

1.2 HISTORIC DIVERSIONS

Little Giant Ditch has two diversion points off of Rapid Creek. One is a joint diversion point with the South Side Ditch Company and is located in the SE ¼ NW ¼ of Section 14, Township 1 North, Range 8 East. The second diversion point is operated by the Rapid Valley Water Company (Murphy) Ditch, which is located in the SW ¼ of Section 8, Township 1 North, Range 8 East. Murphy Ditch supplies water for a portion of Little Giant Ditch Company's irrigated land, supplying 56.9 acres. The water serving the Dail property in Section 23, from the Little Giant Ditch, is diverted off of the South Side Ditch diversion point. Because no water delivery records are available from the Little Giant Ditch Company, the historic diversion data for the South Side Ditch were applied to this transfer report. The historic diversions to Little Giant Ditch were assumed to be the same acre-feet per acre as the historic diversions off of the South Side Ditch.

Diversion records were collected by the US Bureau of Reclamation (USBR) for the South Side Ditch on a monthly basis over a 13-year period (data from the Reclamation Rapid Valley Project Histories for 1963–1968 and 1972–1978). These records, which are included in Table 1-3, were proportioned to represent the acre-feet that are diverted to Little Giant Ditch. To determine the historic monthly delivery amount to the field, the estimated historic diversions to the ditch were then multiplied by the fraction of land (pro rata share) that the Dail property encompasses within the water rights on the Little Giant Ditch minus estimated delivery losses (Equation 1-4). The Water License No. 2383-2 identifies that the 38-acre property is approximately 7.4 percent of the 514.9 acres that are designated as irrigable under this right. Table 1-3 shows the amount of water available for transfer using this method of analysis with the South Side Ditch Company's diversion data.

$$\text{Monthly Pro Rata Share} = \text{Monthly Historic Diversion for Little Giant} \times \frac{38}{514.9} \times [1 - \text{Delivery Losses (9.8\%)}] \quad (1-4)$$

1.3 DELIVERY SYSTEM LOSSES

Delivery system losses were estimated in a 1989 USBR study as 9.8 percent. This number has been consistently referenced in all of the previous transfers from the South Side Ditch or Rapid Valley Water Conservancy District.

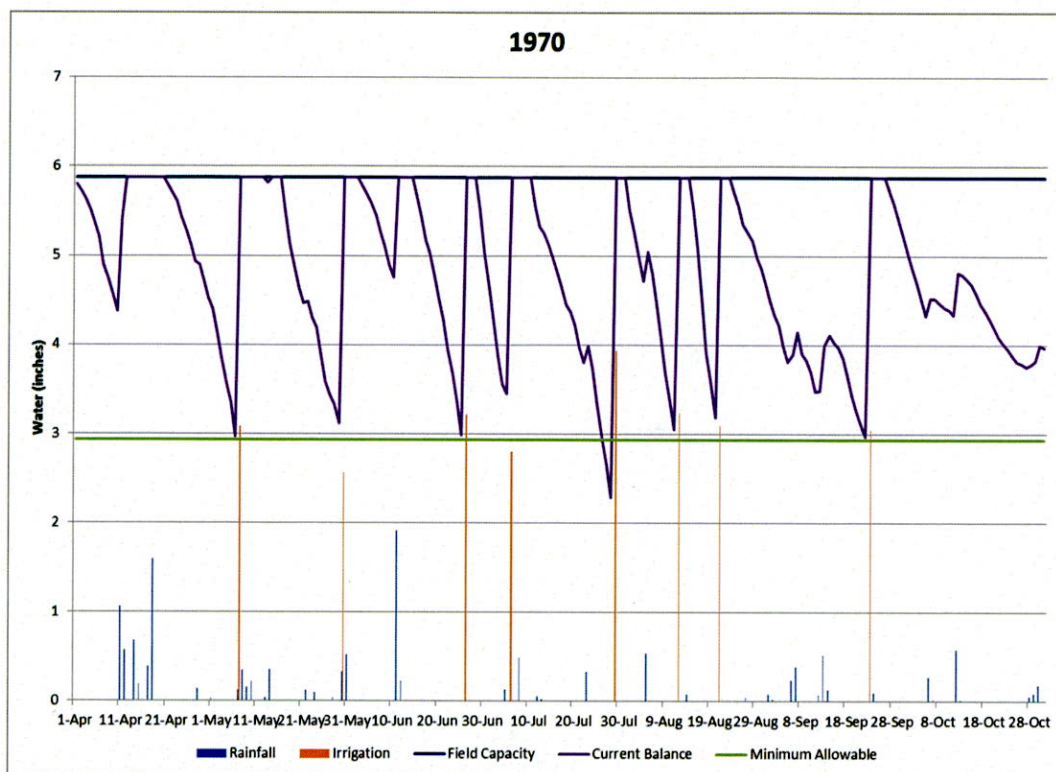


Figure 1-5. Water Balance Tracking for 1970 Irrigation Season.

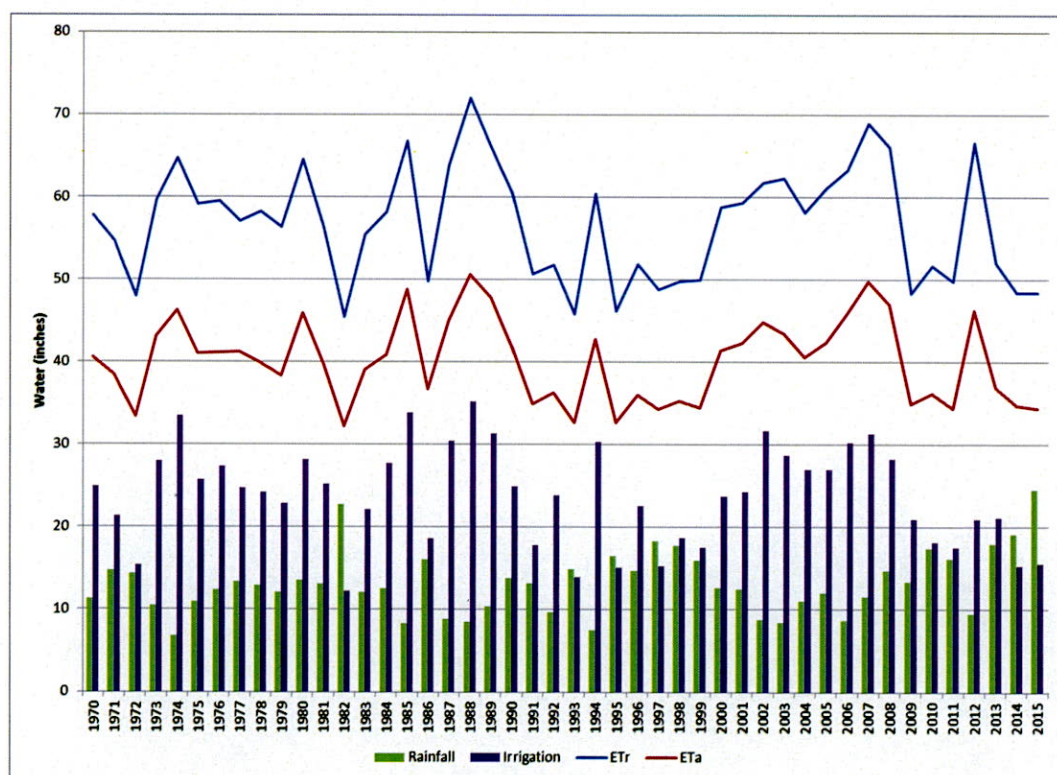


Figure 1-6. Total Values of Rainfall, Irrigation, Reference Evapotranspiration, and Actual Evapotranspiration During the Analysis Period of 1970–2015.

Table 1-2. Amount of Irrigation Demand Based on Historic Crop Water Use Analysis

	April	May	June	July	August	September	October	Total
Crop Demand (inches)	1.3	4.2	3.7	5.6	5.1	2.8	1.3	24.0
Crop Demand at 50 Percent Application Efficiency (inches)	2.7	8.3	7.3	11.3	10.2	5.7	2.5	48.0
Acre-Feet/Acre Crop Demand	0.22	0.69	0.61	0.94	0.85	0.47	0.21	
Number of Acres	38	38	38	38	38	38	38	
Acre-Feet of Crop Demand	8.4	26.3	23.2	35.7	32.2	18.0	8.1	151.9
Days of Delivery	15	31	30	31	31	30	31	199
CFS Equivalent	0.28	0.43	0.39	0.58	0.52	0.30	0.13	

CFS = cubic feet per second.

Table 1-3. Historic Diversions and Monthly Pro Rata Share Available for Transfer from the Dail Property Based on Historic Diversion Records for the South Side Ditch Prorated to Little Giant Ditch Company (Based on Acres)

	April	May	June	July	August	September	October	Total
Historic Diversions To Ditch (Acre-Feet)		96	146	175	222	146		785
Pro Rata Share of Historic Diversions Minus Ditch Loss (Acre-Feet)	0	6.4	9.7	11.7	14.8	9.7	0	52.3

2.0 WATER RIGHTS AVAILABLE FOR TRANSFER

An engineering analysis was completed to determine the water rights that were available for transfer from the Dail property located within Sections 23, Township 1 North, Range 8 East of the Black Hills Meridian, Pennington County, South Dakota. To complete this analysis, the historic crop water use for the 38-acre parcel and historic diversion records for South Side Ditch prorated to Little Giant Ditch Company were assessed. Table 2-1 provides a monthly summary of the findings in acre-feet, subtracting out the 9.8 percent delivery losses and the irrigation rights available for transfer in acre-feet and cfs. The irrigation rights to be transferred were found by taking the lesser of the two analyses (i.e., crop water use or diversions), except in April and October when the crop water use amount was used because no historic delivery records were available.

The analysis determined that 68.8 acre-feet of water (approximately 1.8 acre-feet per acre) can be transferred annually from the property to diversion points within Rapid City (Table 2-2 and Figure 2-1) from April 15 to November 1, not to exceed a prorated acreage share of 0.35 cfs. A total annual volume of 34.4 acre-feet is available for transfer to Pactola Reservoir storage.

Table 2-1. Irrigation Amounts Available for Transfer From the City of Rapid City Property

Row	Description	April	May	June	July	August	September	October	Total
A ^(a)	Historic Diversions to Ditch (Acre-Feet)		96	146	175	222	146		785
B ^(b)	Pro Rata Share of Historic Diversions Minus Ditch Loss (Acre-Feet)	0	6.4	9.7	11.7	14.8	9.7	0	52.3
C ^(c)	Crop Demand Minus Ditch Loss (Acre-Feet)	8.4	26.3	23.2	35.7	32.2	18.0	8.1	151.9
D ^(d)	Irrigation Right to Be Transferred to Diversion Points in Rapid City Minus Upstream Return Flows (Acre=Feet)	8.4	6.4	9.7	11.7	14.8	9.7	8.1	68.8
E ^(e)	Irrigation Right to Be Transferred to Pactola Reservoir (Acre-Feet)	4.2	3.2	4.8	5.8	7.4	4.9	4.1	34.4
F ^(f)	Irrigation Right to Be Transferred to Diversion Points in Rapid City (cfs)	0.14	0.10	0.16	0.19	0.24	0.16	0.13	

- (a) Taken from previous South Side Ditch water rights transfers and calculated for Little Giant Ditch acreage outlined in Section 1.2.
- (b) Calculated by multiplying Row A by the ratio of acres to be transferred to the total irrigated acres validated.
- (c) Calculated using an online irrigation scheduling tool outlined in Section 1.1.
- (d) The lesser of Row B and C are used, except for April and October when no diversion data were available.
- (e) Multiply Row D by assumed irrigation efficiency of 50 percent.
- (f) Multiply Row D by conversion factor.

Table 2-2. Approximate Locations of City of Rapid City Diversion Points/Galleries

Location Name	Location
Jackson Springs Gallery	NW¼ SE¼ Section 8
Girl Scout Gallery	SW¼ SW¼ Section 3
Mountain View Water Treatment Plant	SE¼ NE¼ Section 3

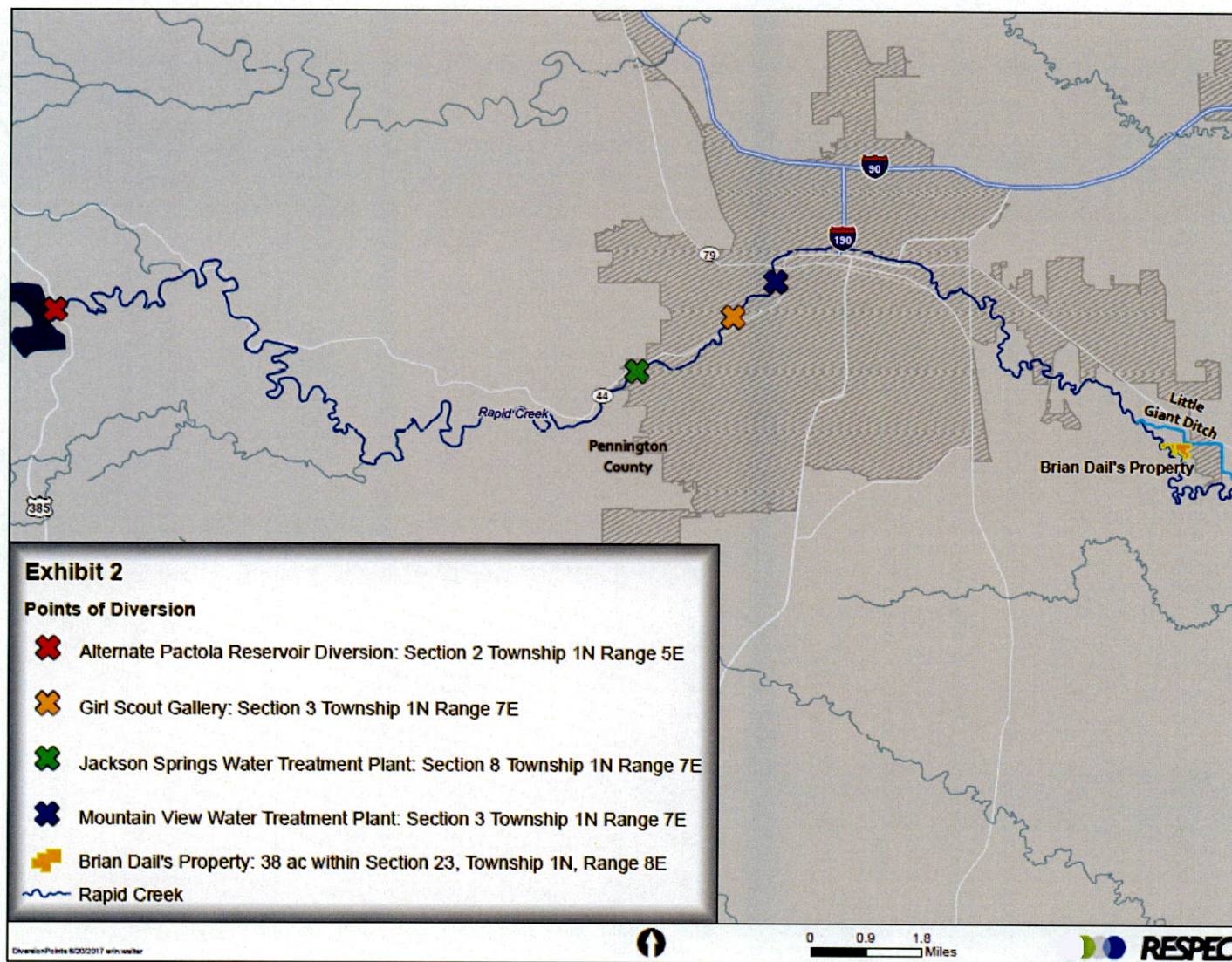
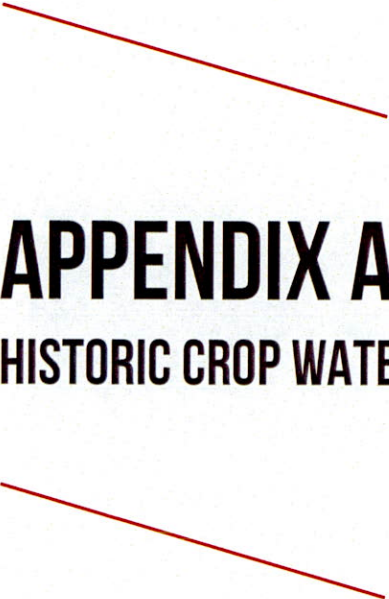


Figure 2-1. City of Rapid City Diversion Points.



APPENDIX A

HISTORIC CROP WATER USE BY YEAR



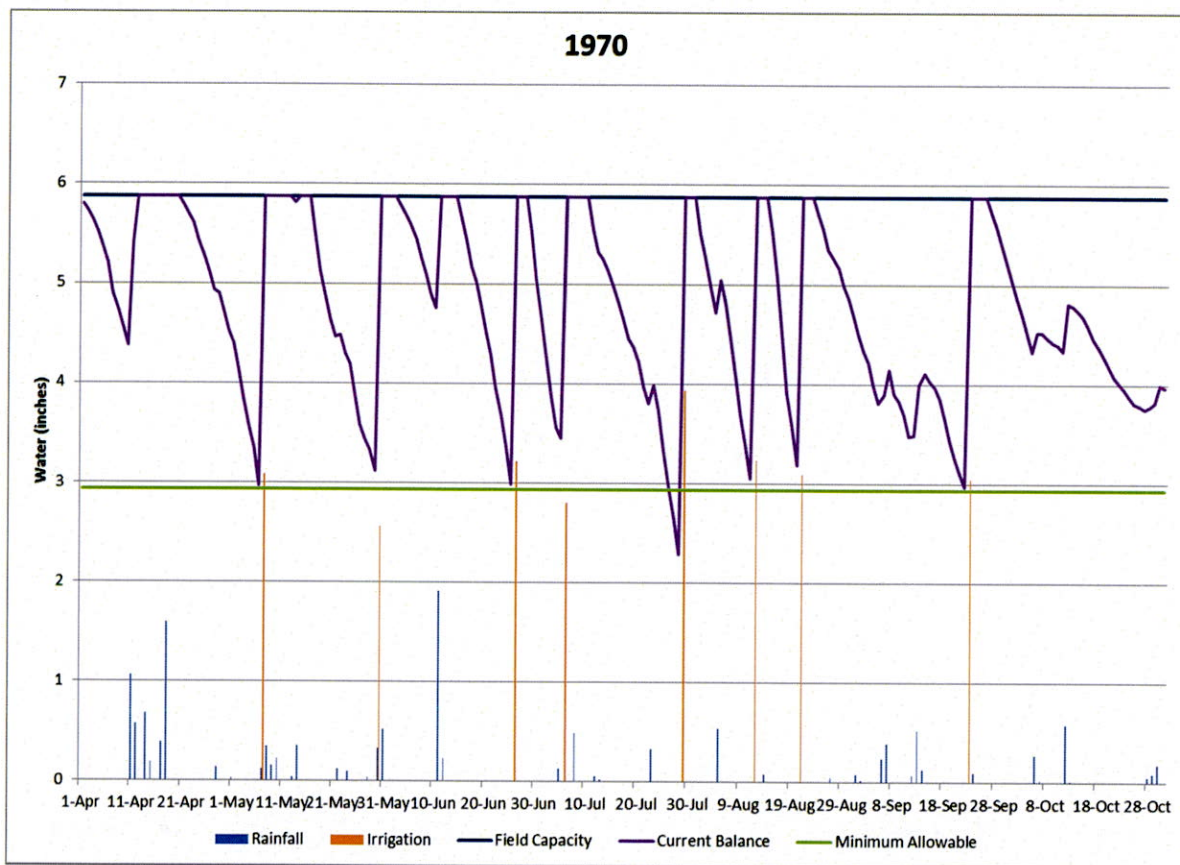


Figure A-1. Crop Water Use Calculation for Year 1970.

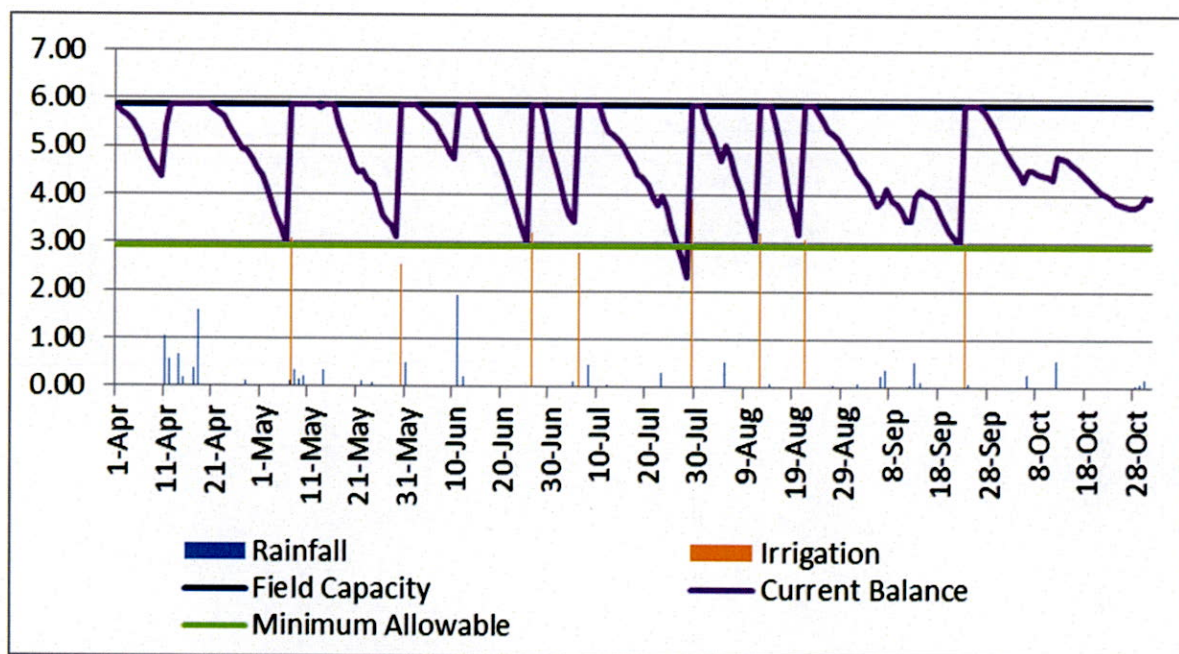


Figure A-2. Crop Water Use Calculation for Year 1971.

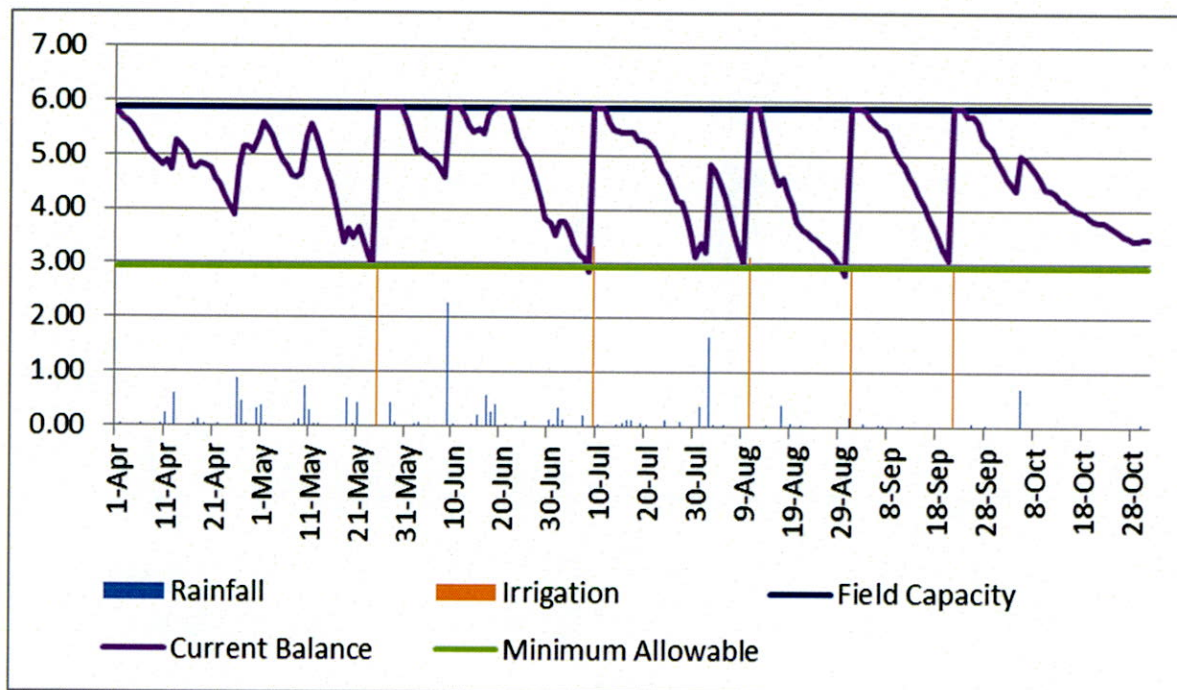


Figure A-3. Crop Water Use Calculation for Year 1972.

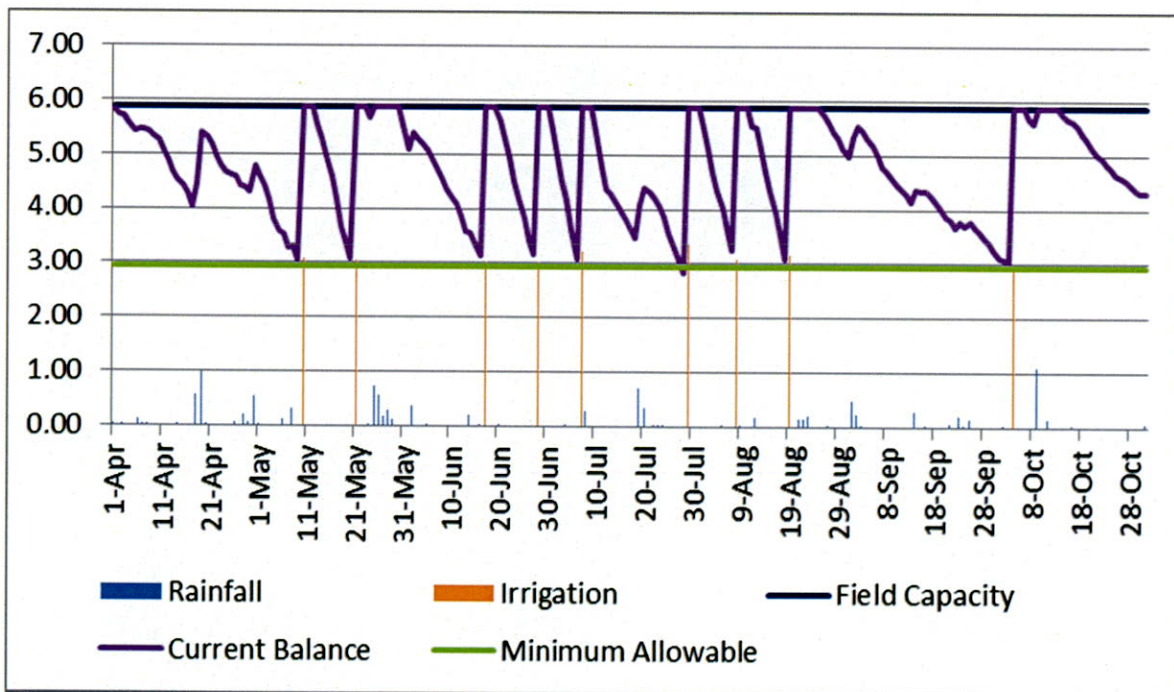


Figure A-4. Crop Water Use Calculation for year 1973.

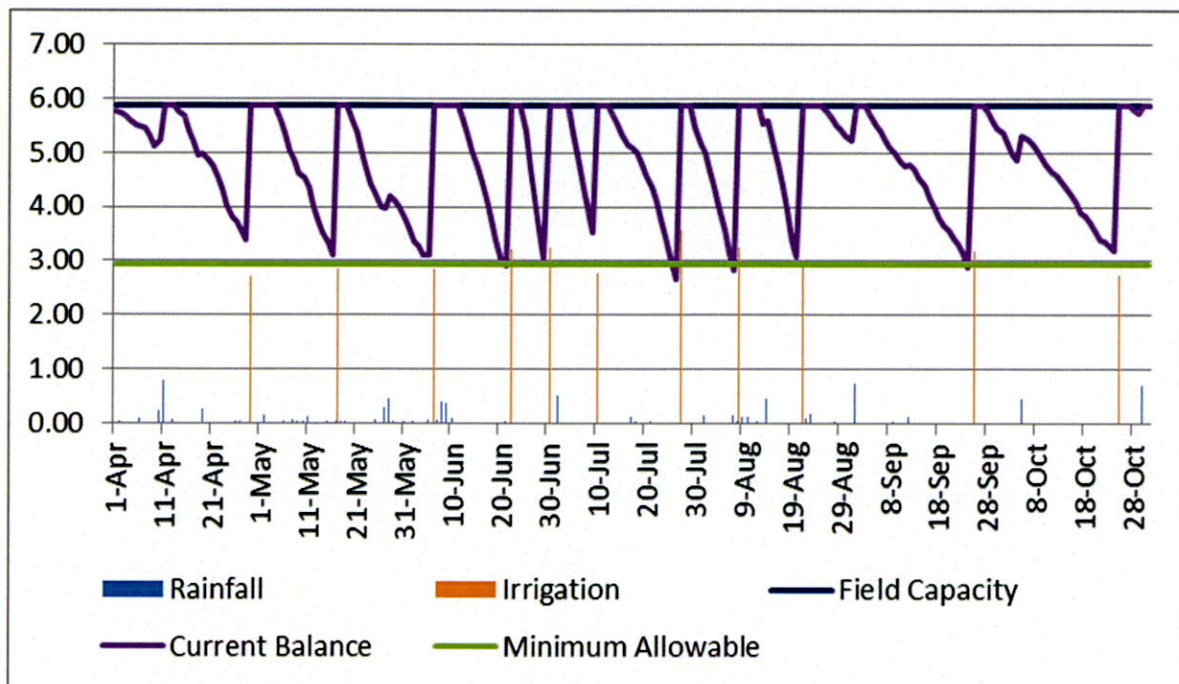


Figure A-5. Crop Water Use Calculation for Year 1974.

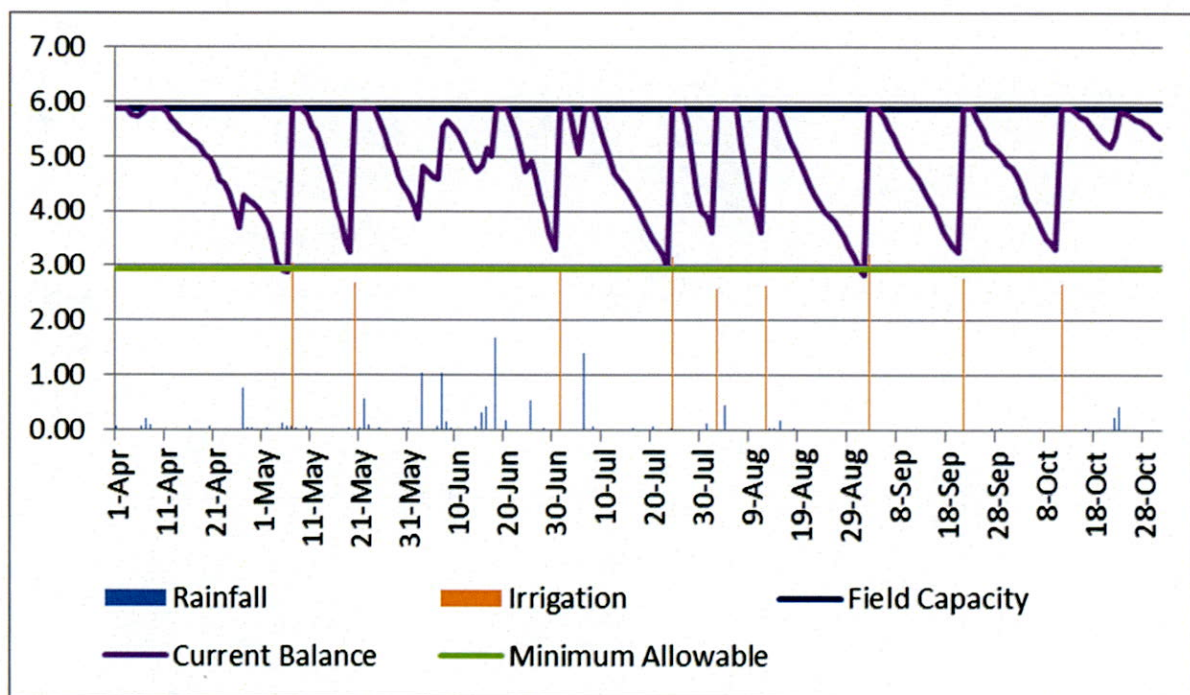


Figure A-6. Crop Water Use Calculation for Year 1975.

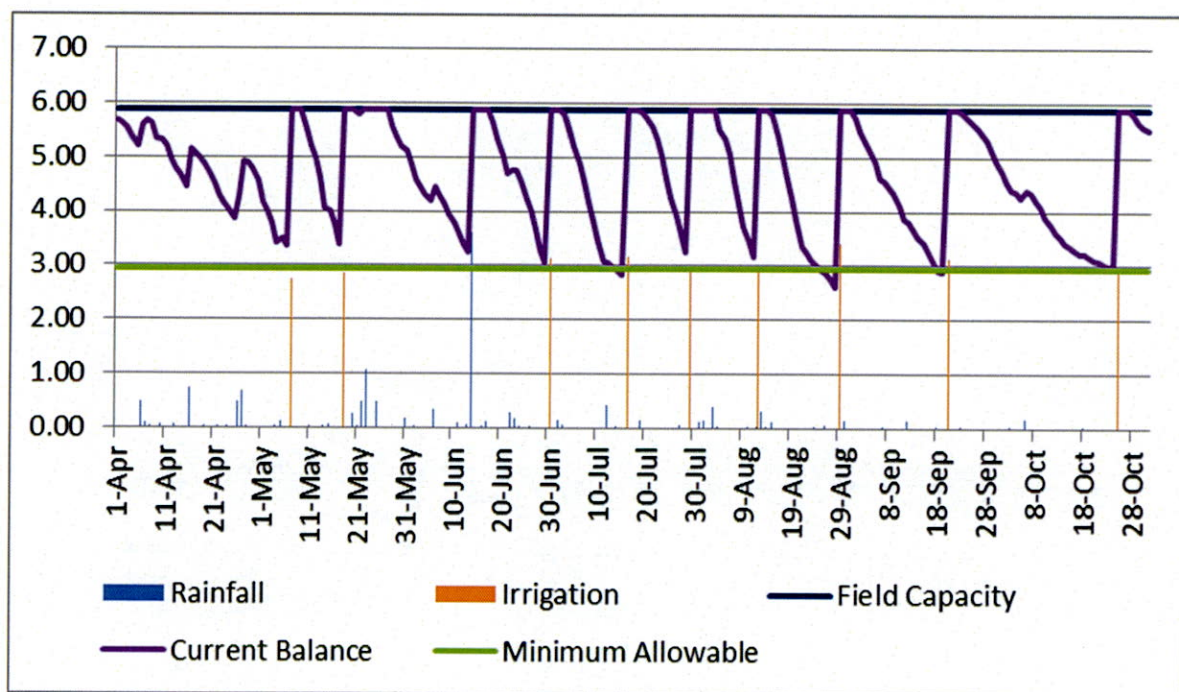


Figure A-7. Crop Water Use Calculation for Year 1976.

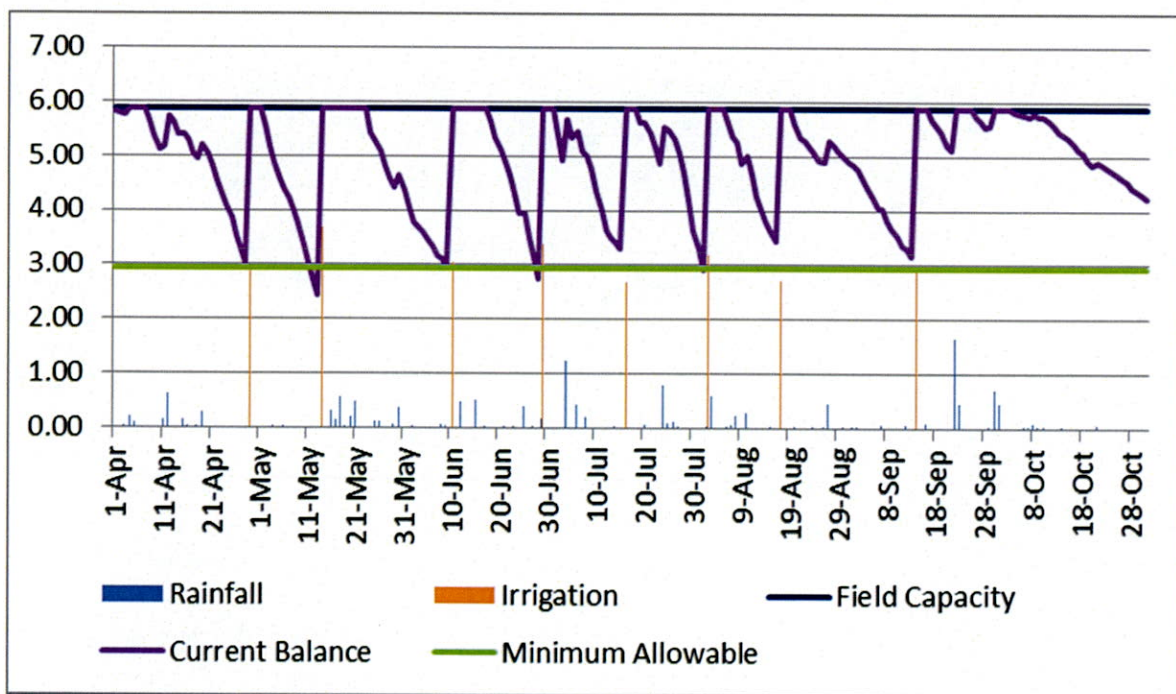


Figure A-8. Crop Water Use Calculation for Year 1977.

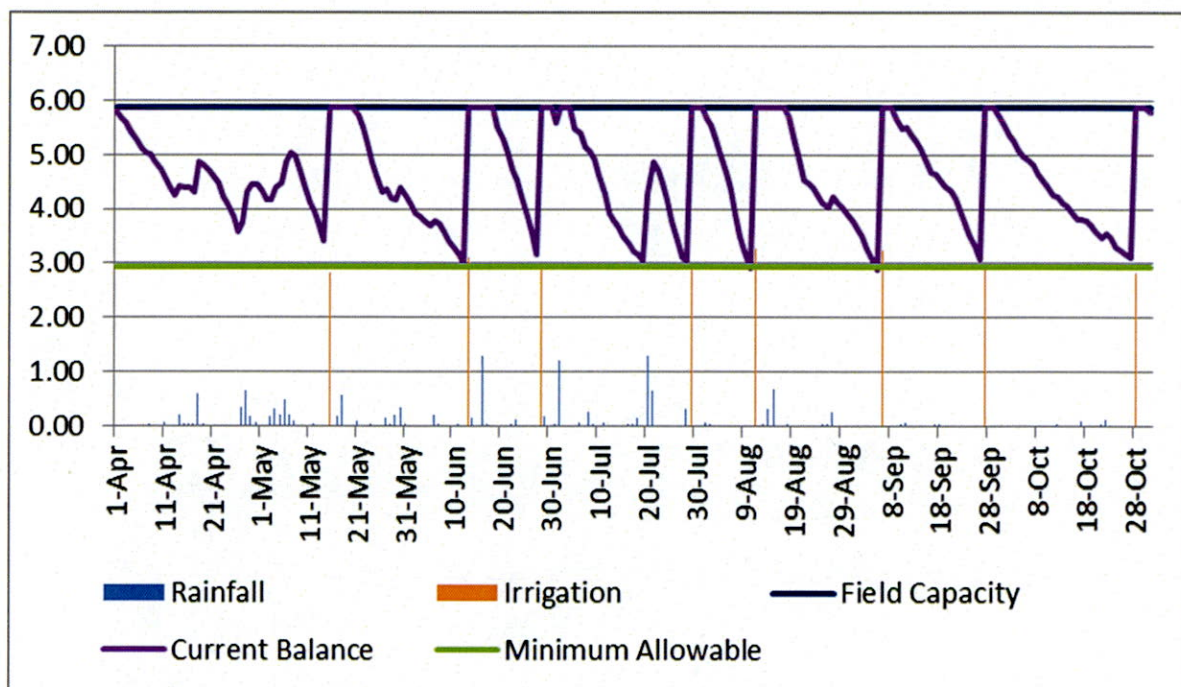


Figure A-9. Crop Water Use Calculation for Year 1978.

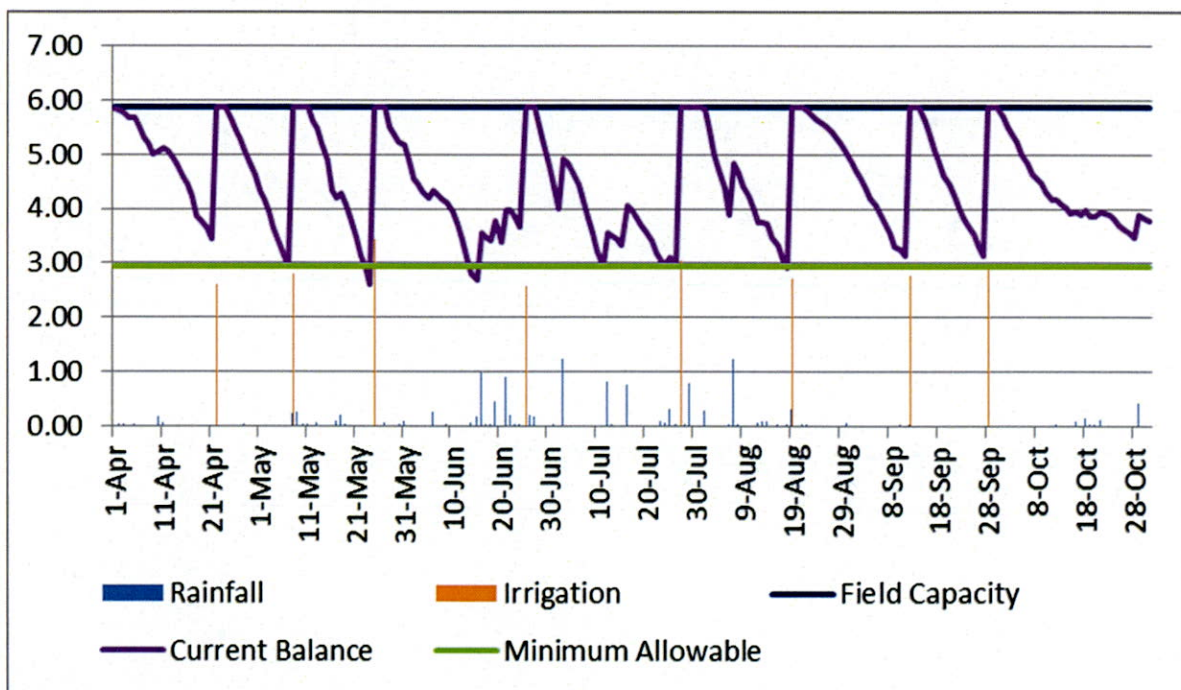


Figure A-10. Crop Water Use Calculation for Year 1979.

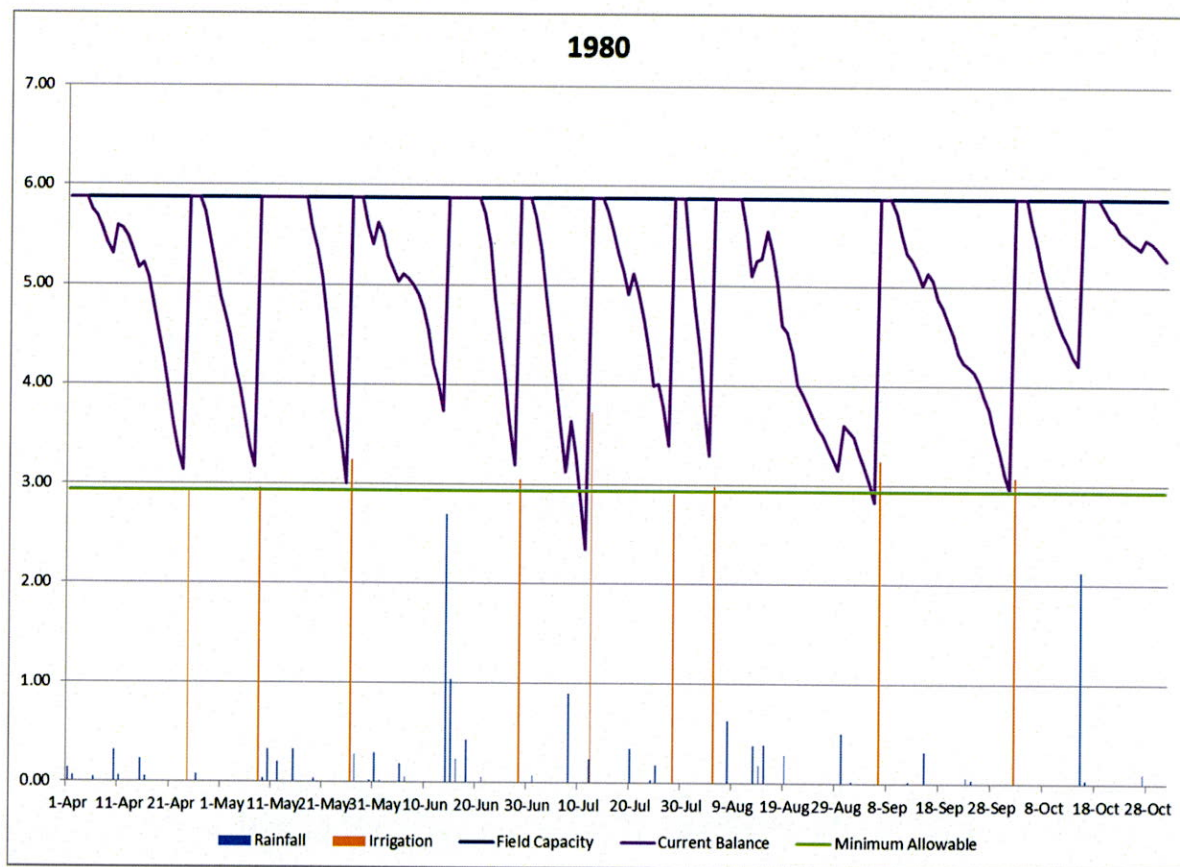


Figure A-11. Crop Water Use Calculation for Year 1980.

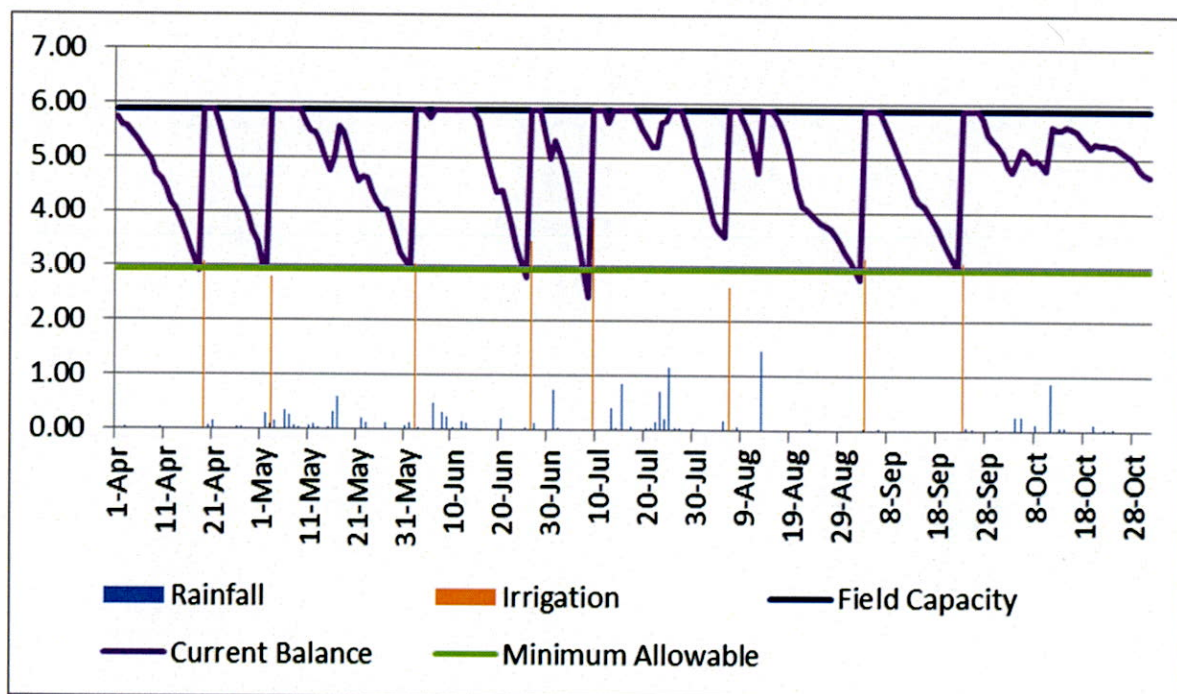


Figure A-12. Crop Water Use Calculation for Year 1981.

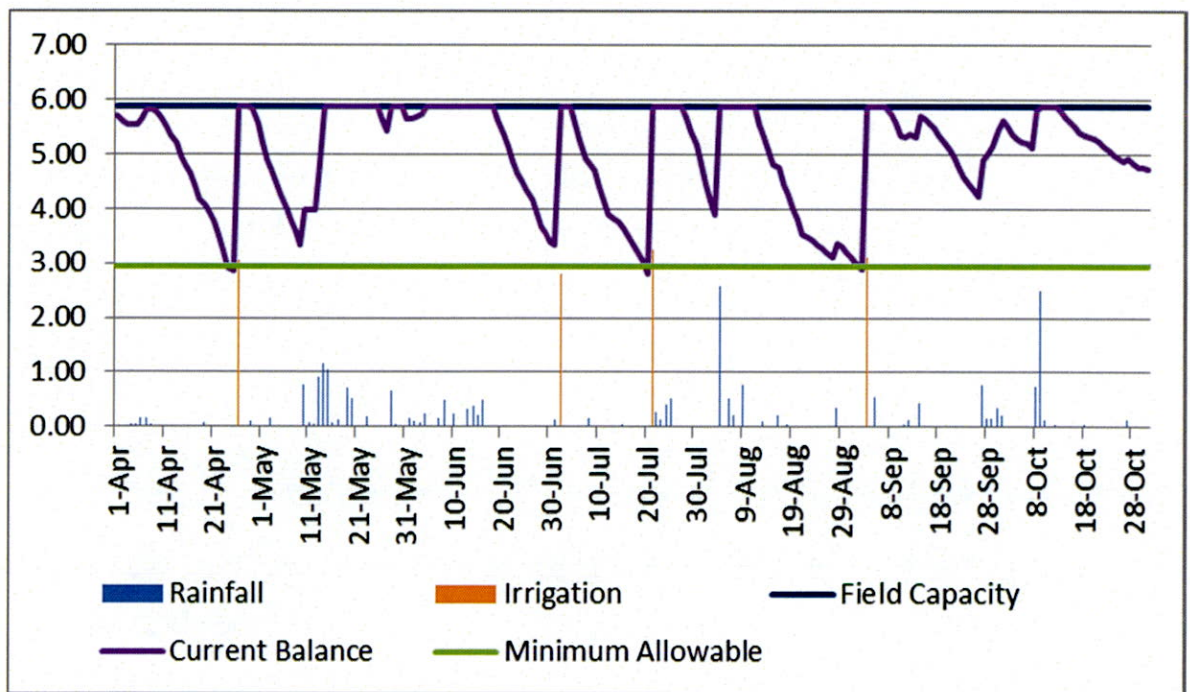


Figure A-13. Crop Water Use Calculation for Year 1982.

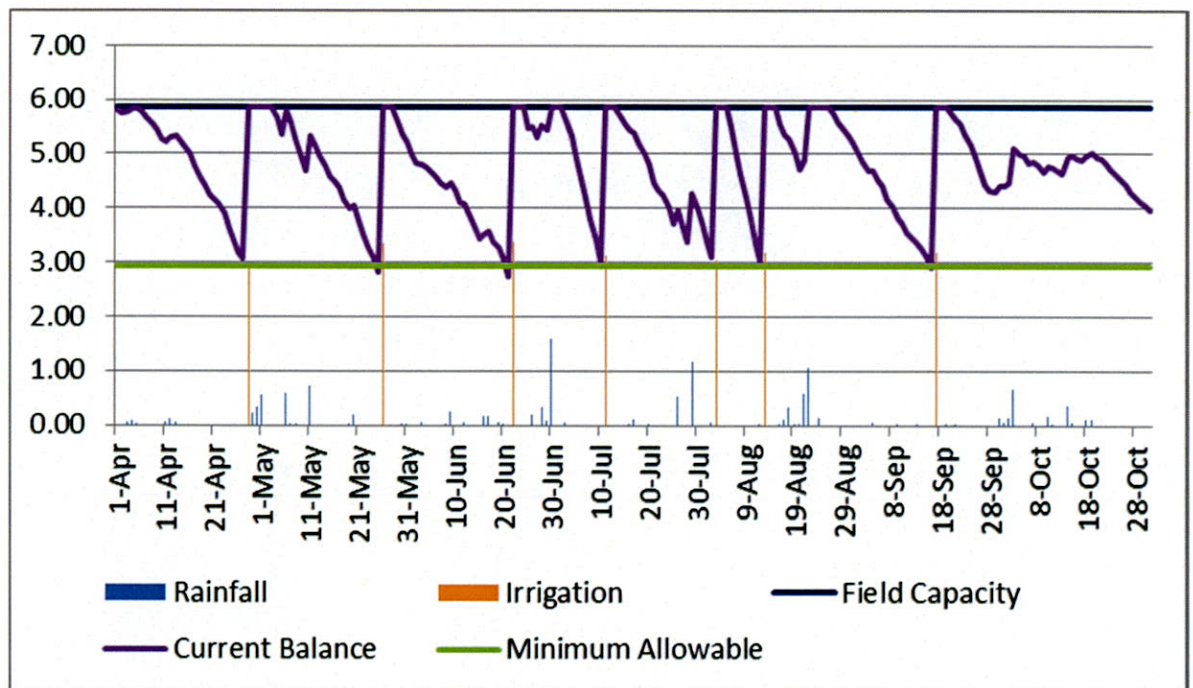


Figure A-14. Crop Water Use Calculation for Year 1983.

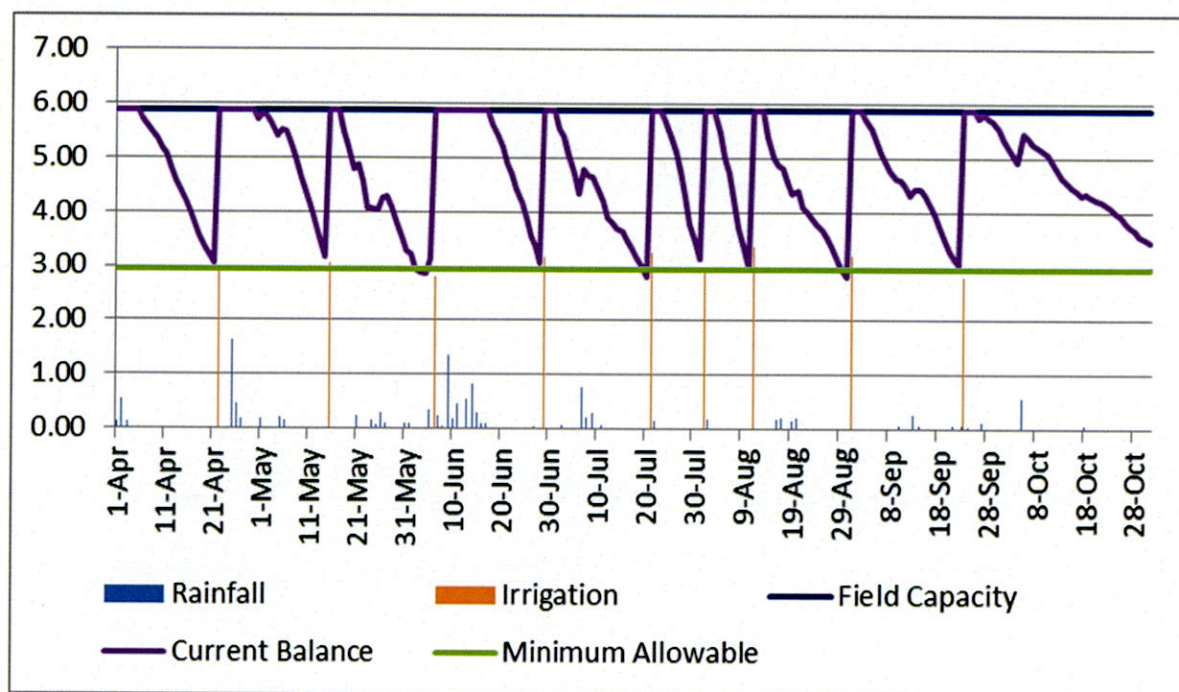


Figure A-15. Crop Water Use Calculation for Year 1984.

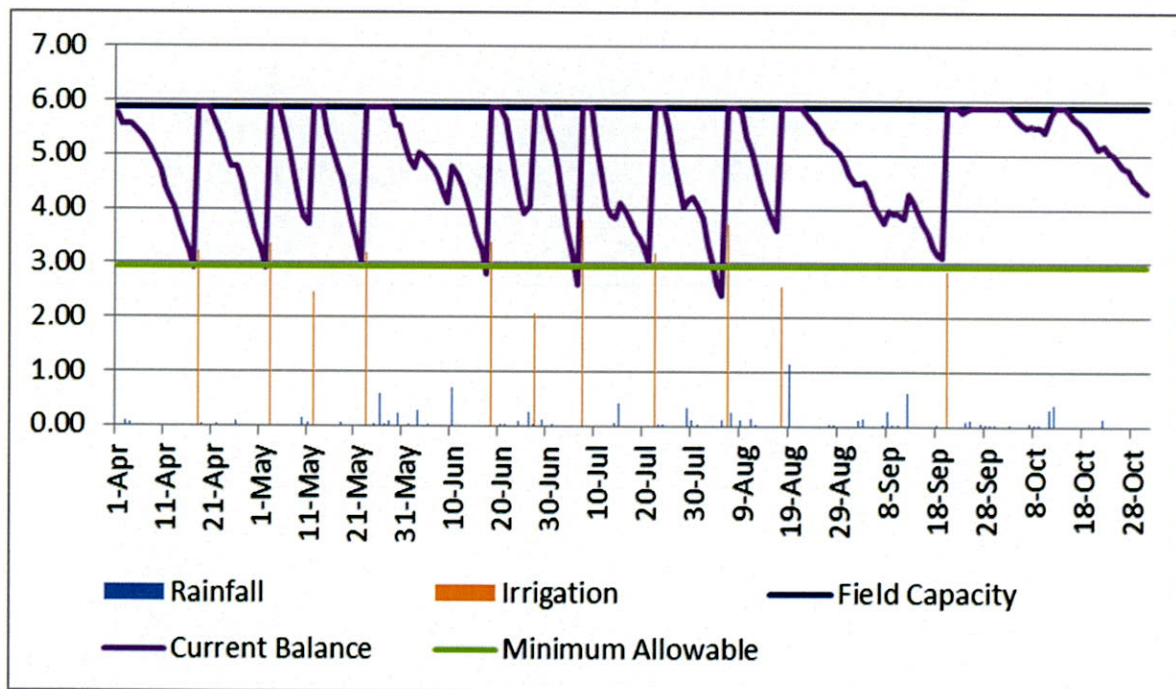


Figure A-16. Crop Water Use Calculation for Year 1985.

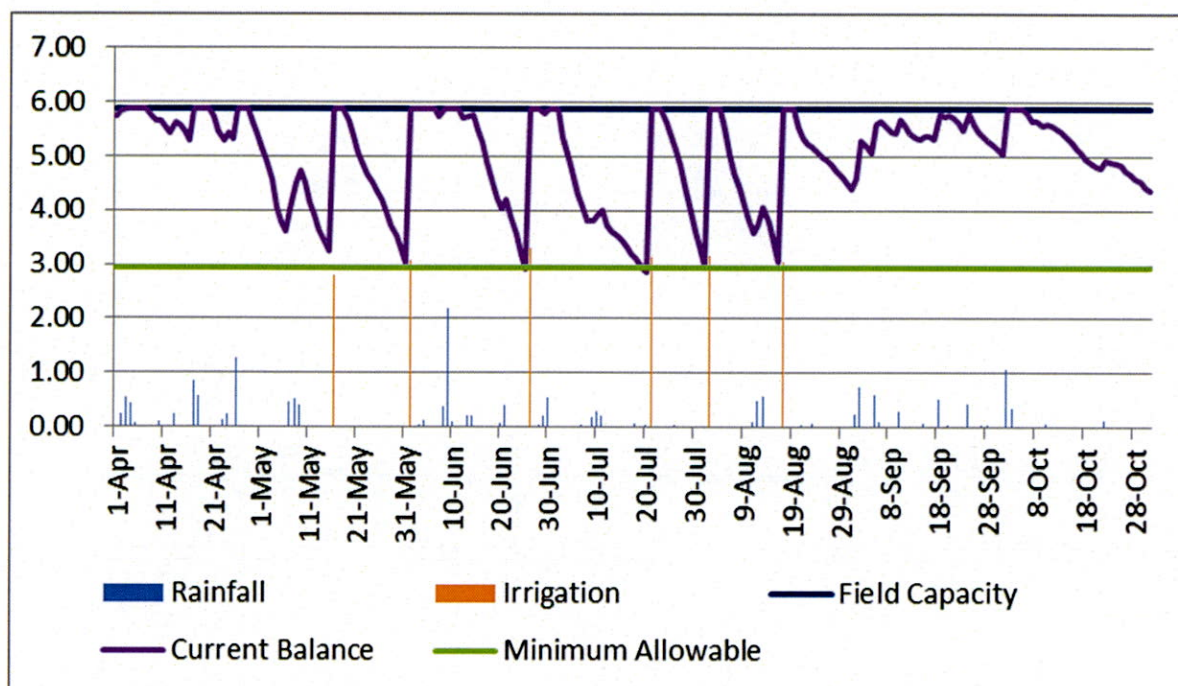


Figure A-17. Crop Water Use Calculation for Year 1986.

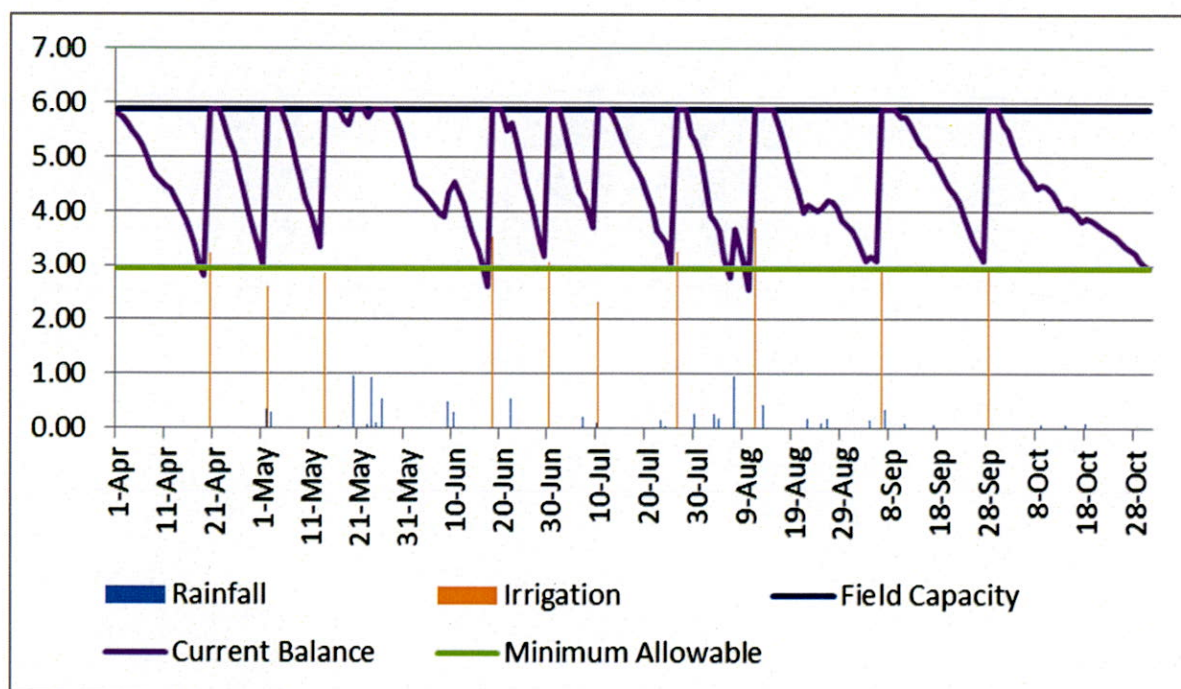


Figure A-18. Crop Water Use Calculation for Year 1987.

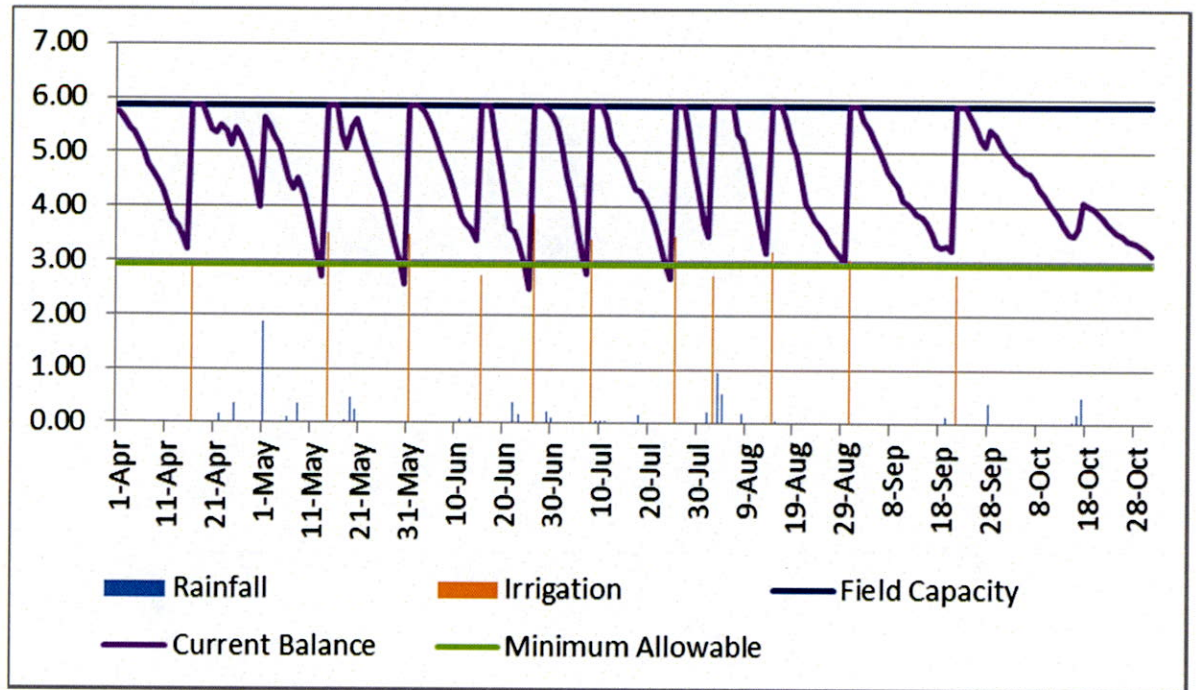


Figure A-19. Crop Water Use Calculation for Year 1988.

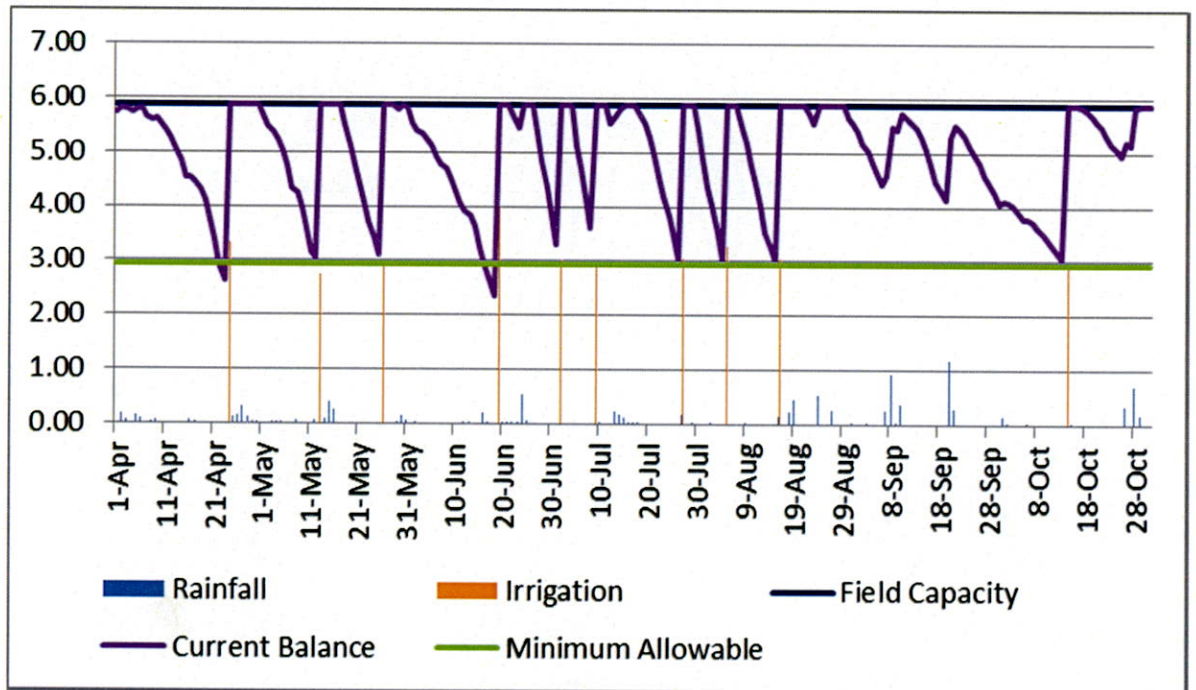


Figure A-20. Crop Water Use Calculation for Year 1989.

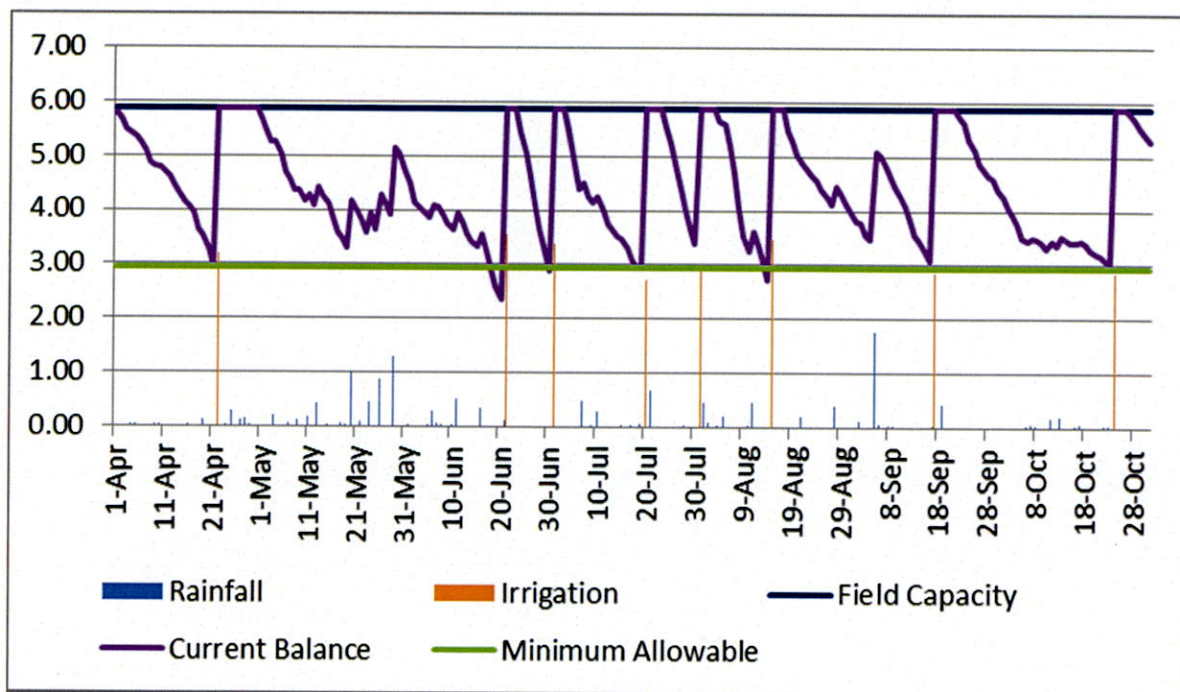


Figure A-21. Crop Water Use Calculation for Year 1990.

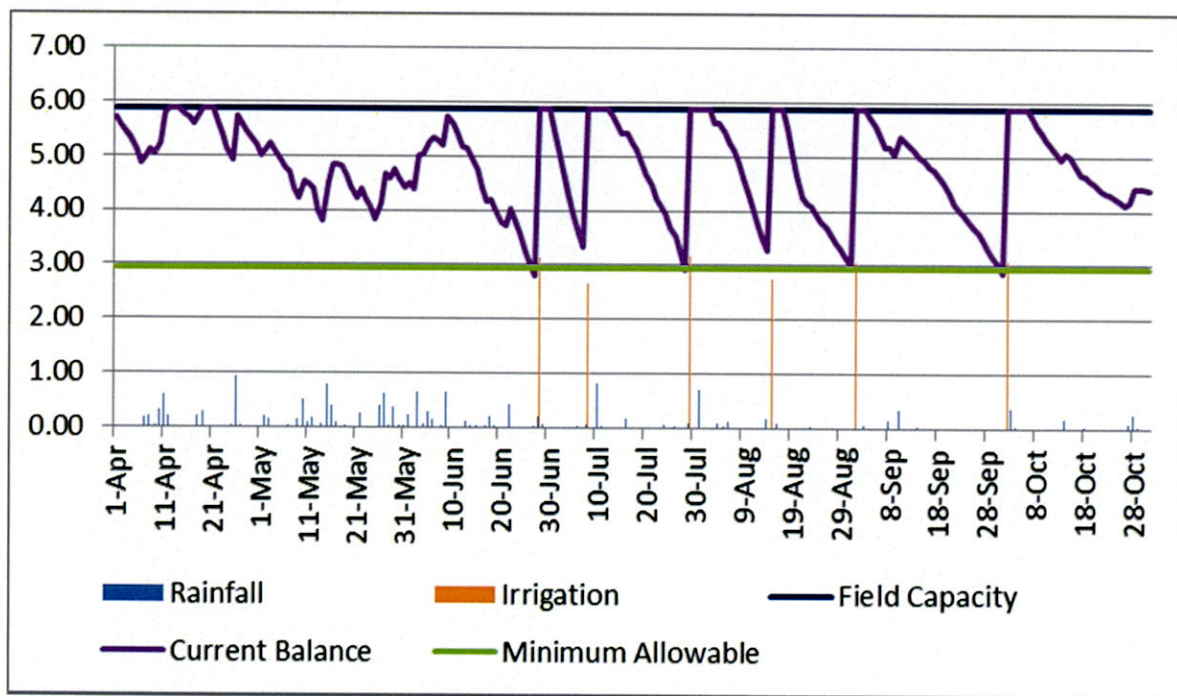


Figure A-22. Crop Water Use Calculation for Year 1991.

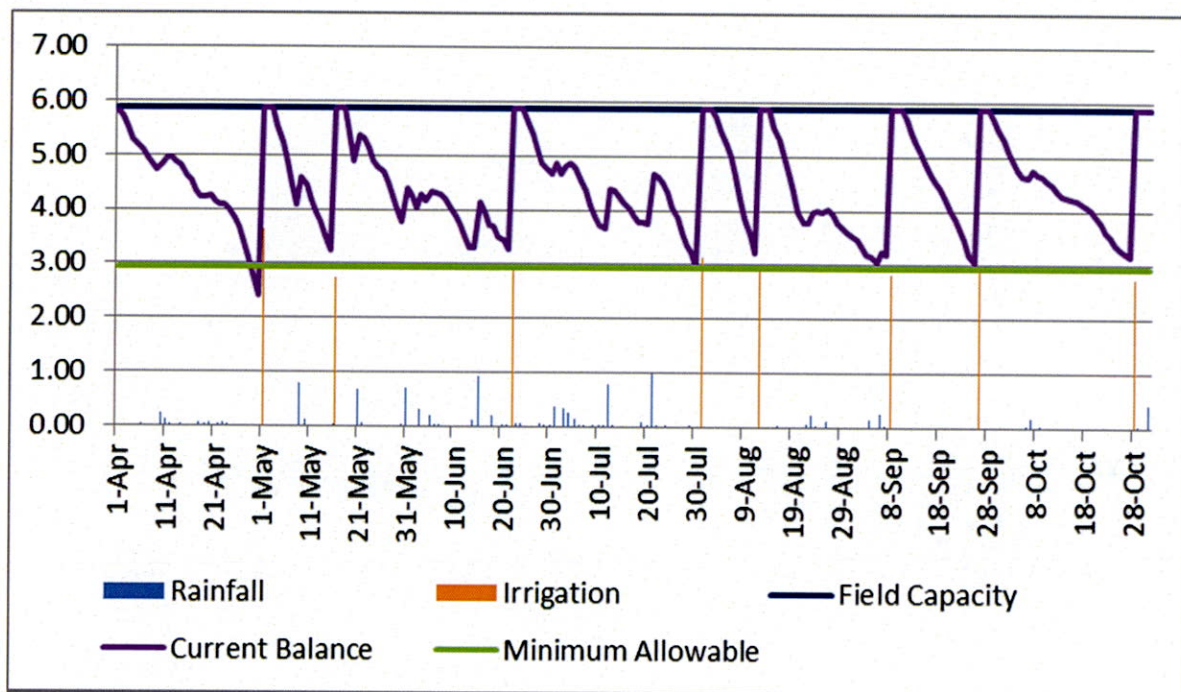


Figure A-23. Crop Water Use Calculation for Year 1992.

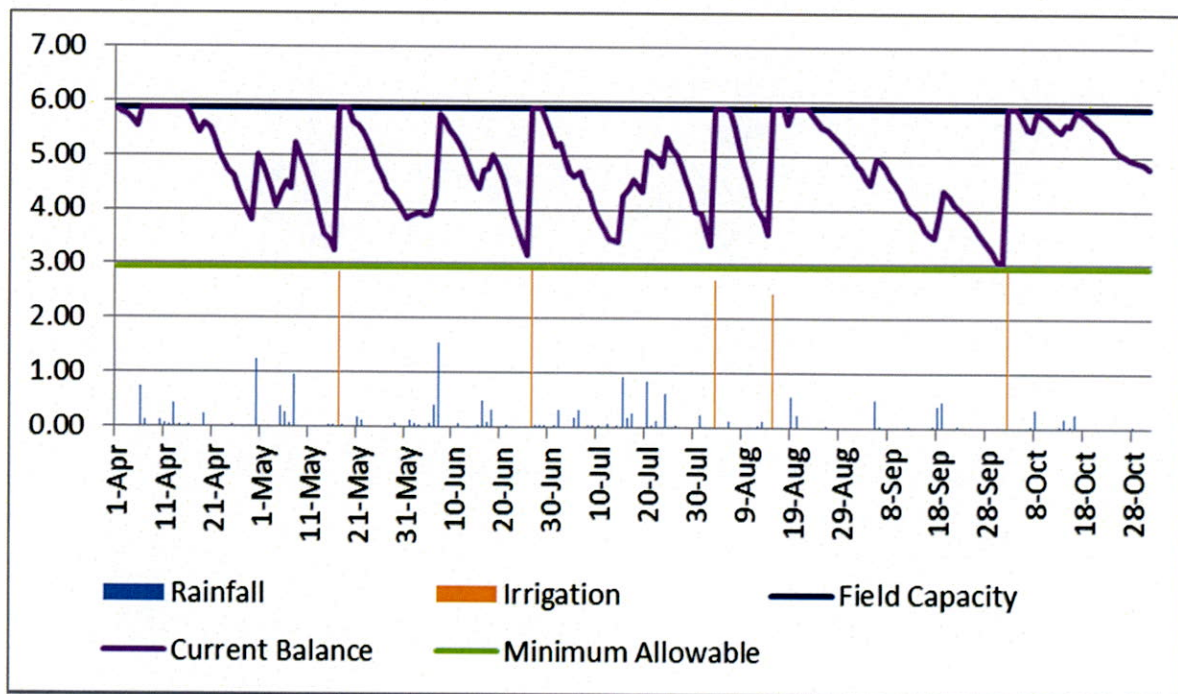


Figure A-24. Crop Water Use Calculation for Year 1993.

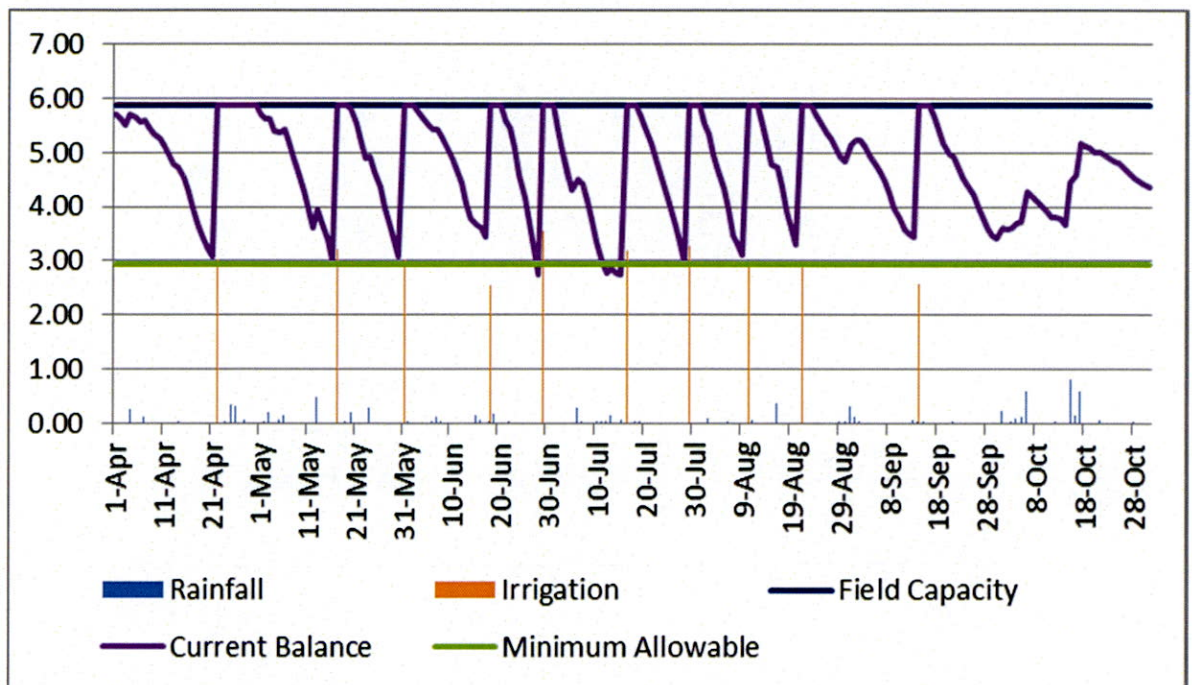


Figure A-25. Crop Water Use Calculation for Year 1994.

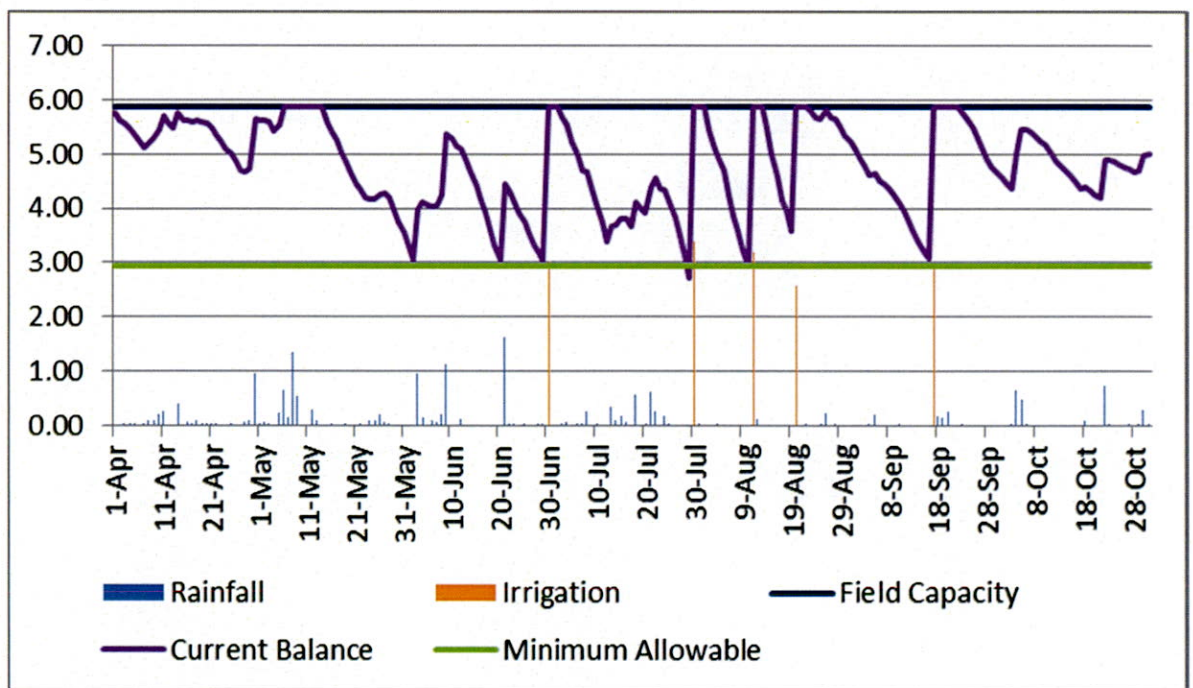


Figure A-26. Crop Water Use Calculation for Year 1995.

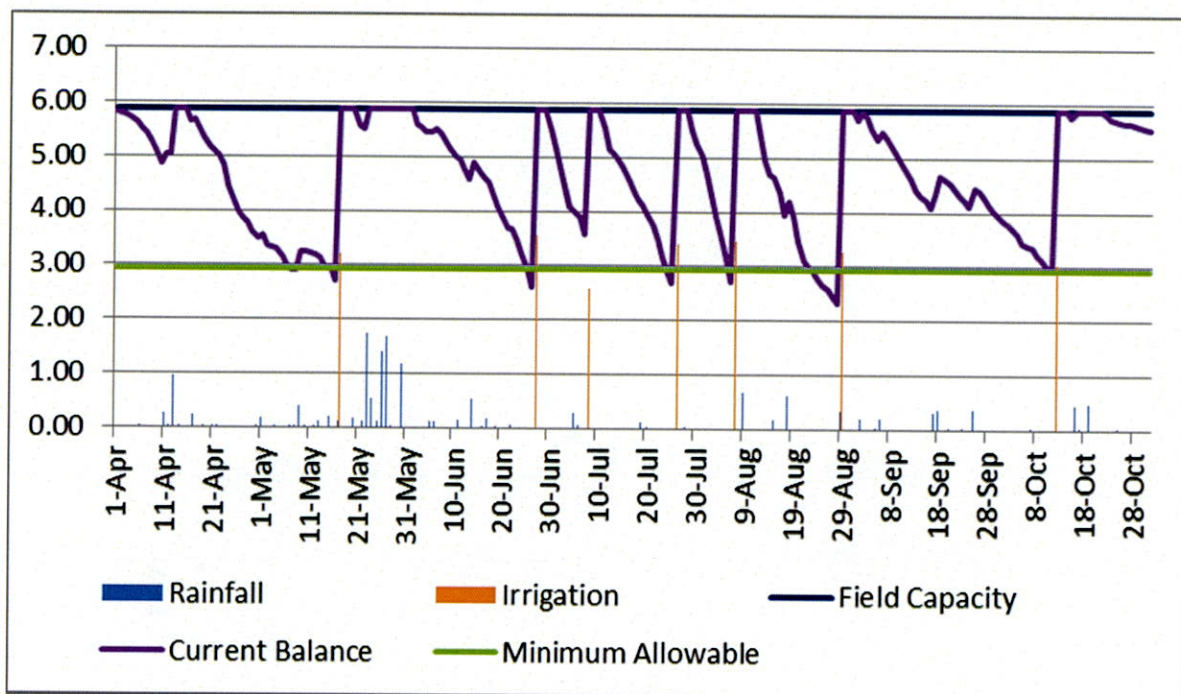


Figure A-27. Crop Water Use Calculation for Year 1996.

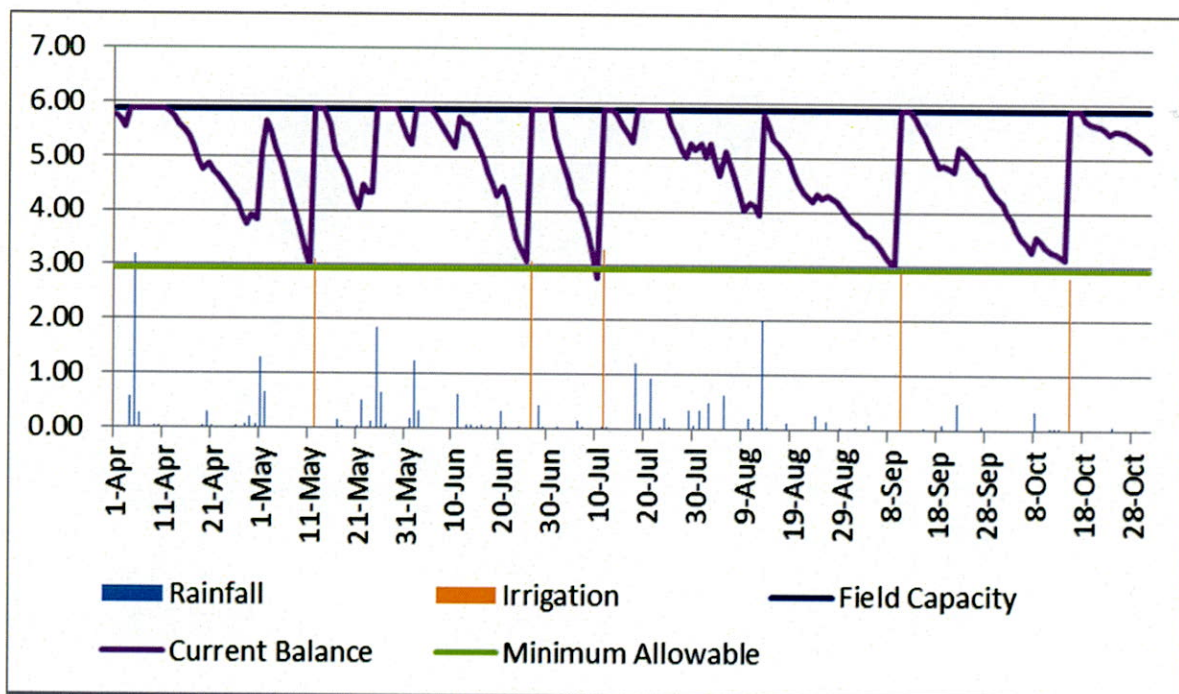


Figure A-28. Crop Water Use Calculation for Year 1997.

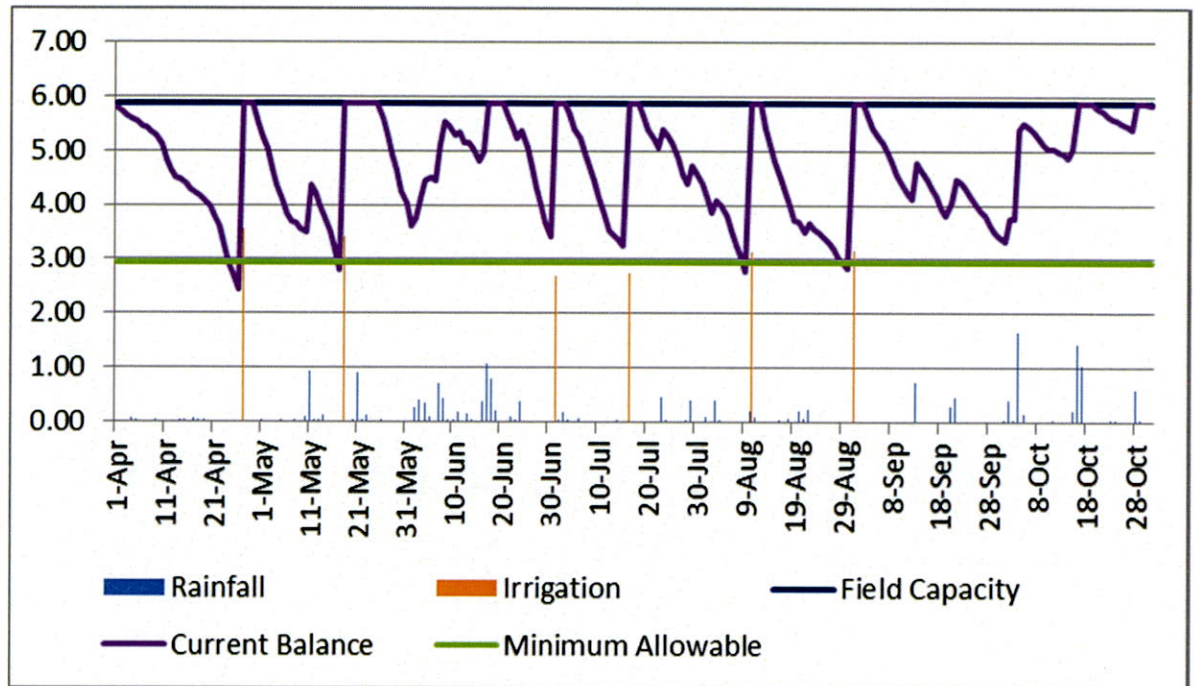


Figure A-29. Crop Water Use Calculation for Year 1998.

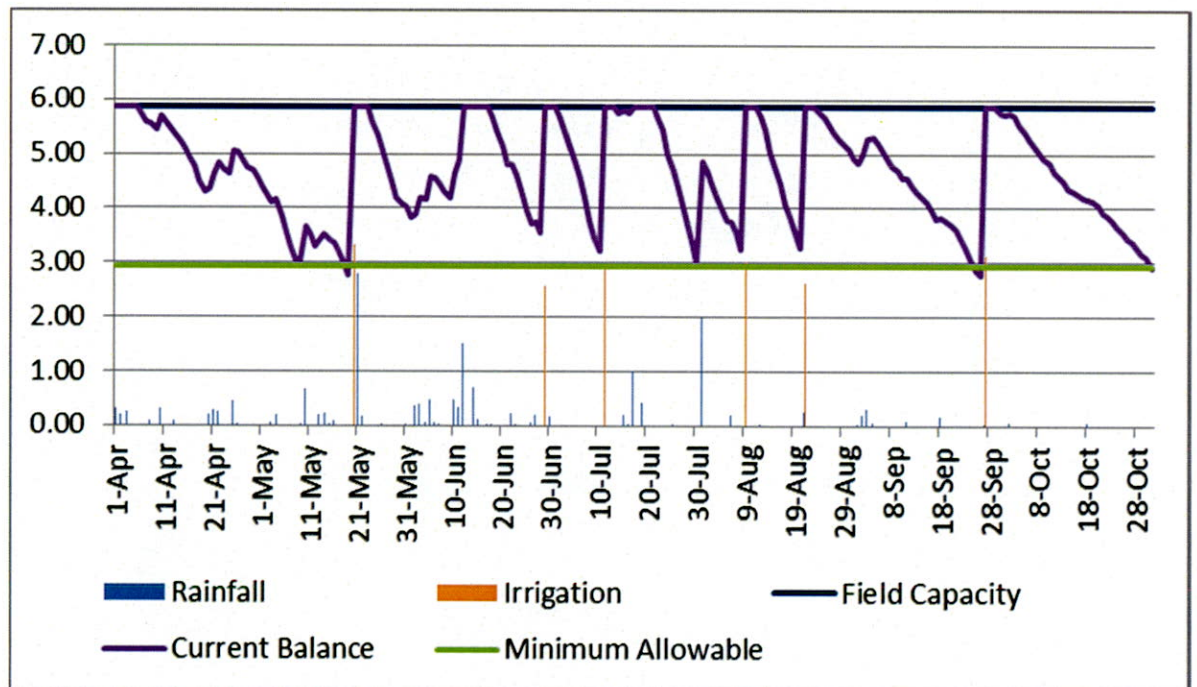


Figure A-30. Crop Water Use Calculation for Year 1999.

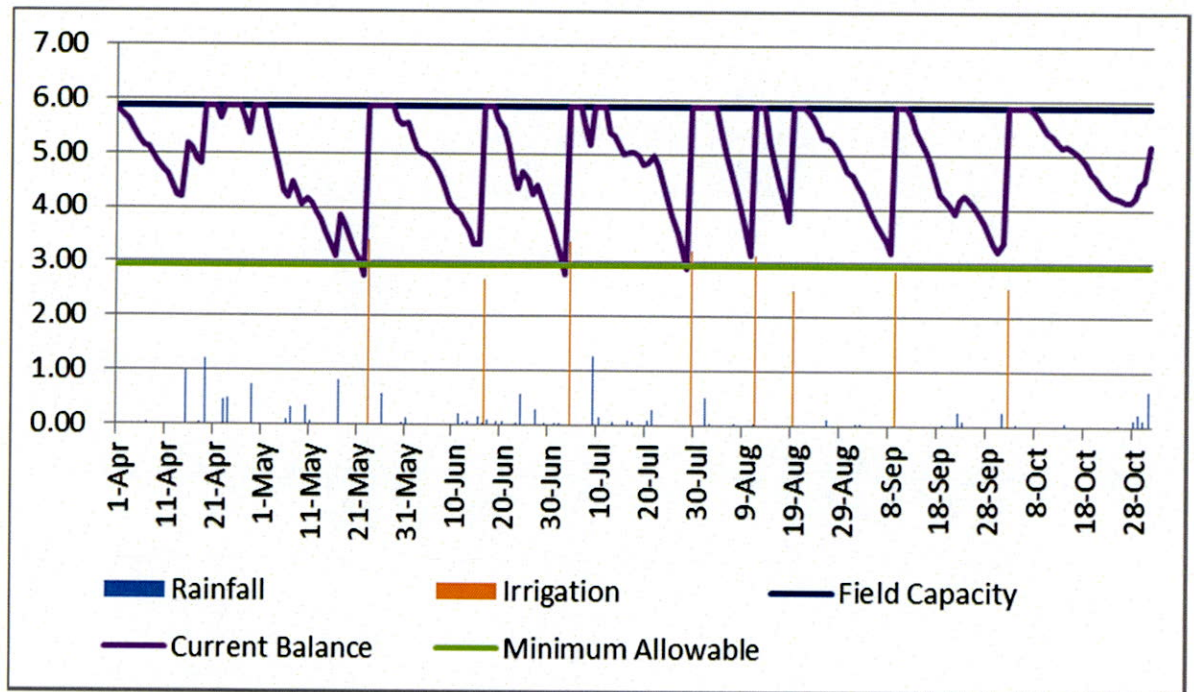


Figure A-31. Crop Water Use Calculation for Year 2000.

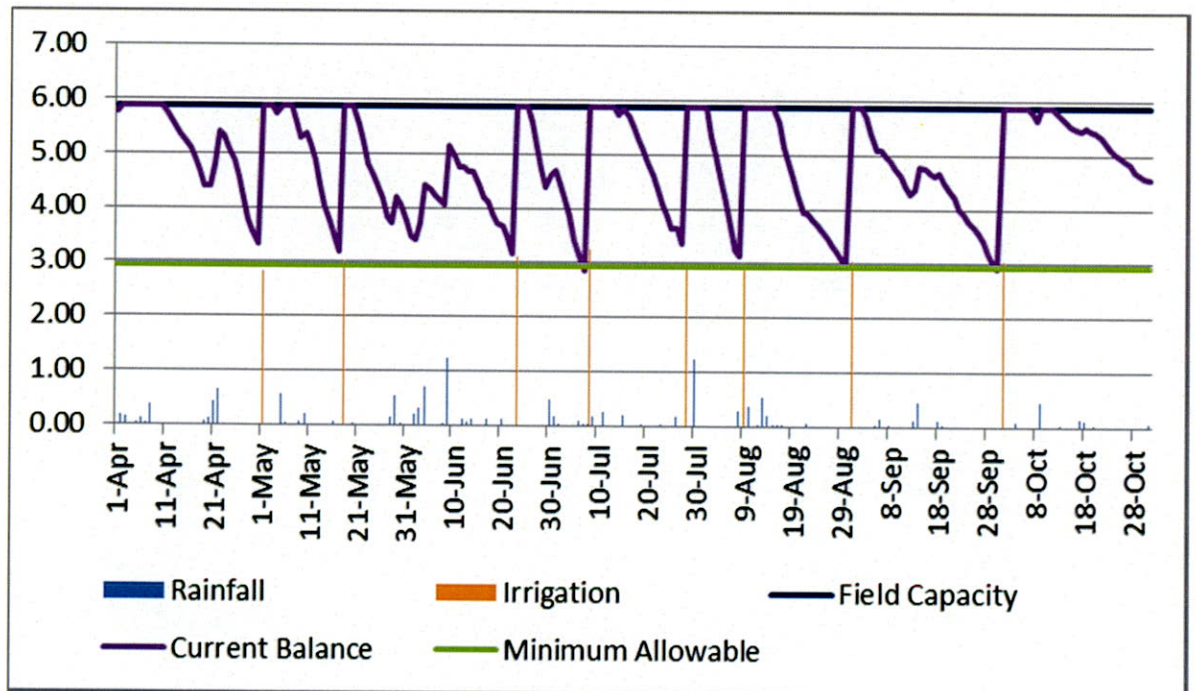


Figure A-32. Crop Water Use Calculation for Year 2001.

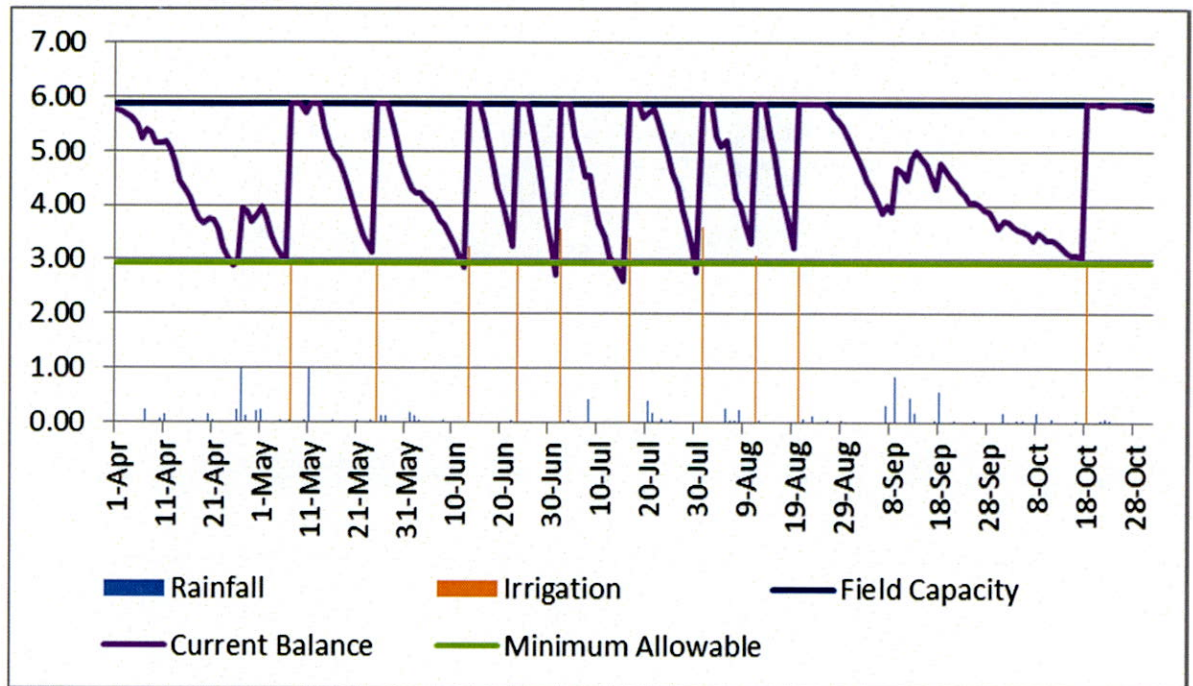


Figure A-33. Crop Water Use Calculation for Year 2002.

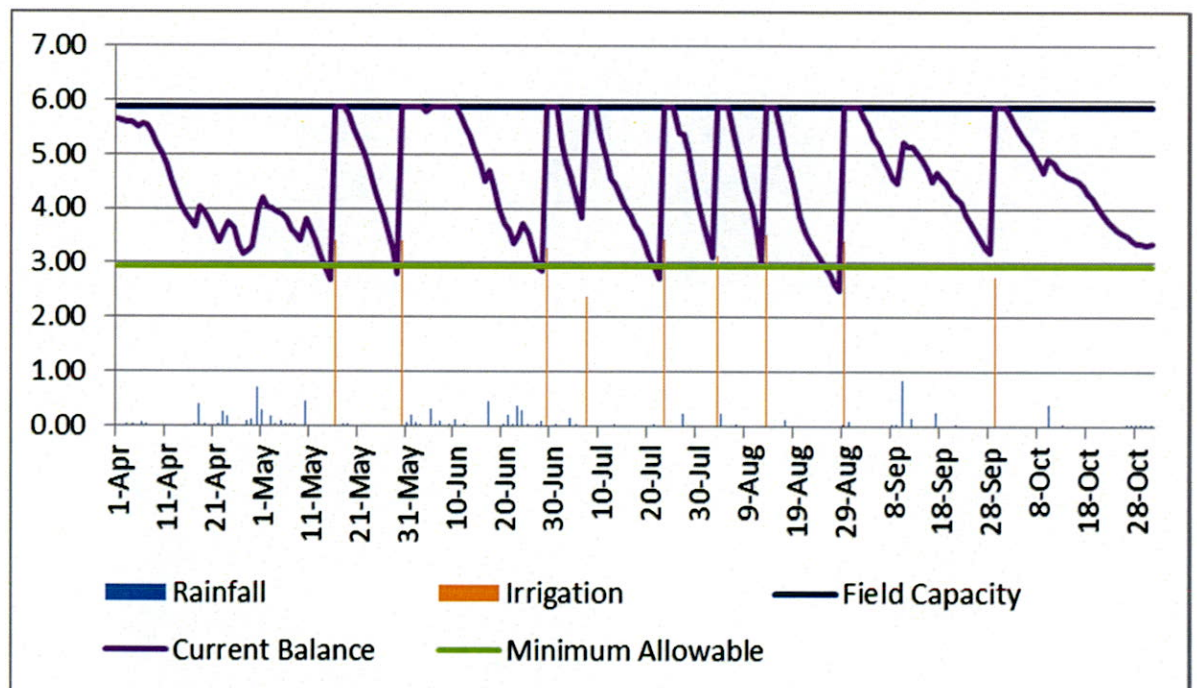


Figure A-34. Crop Water Use Calculation for Year 2003.

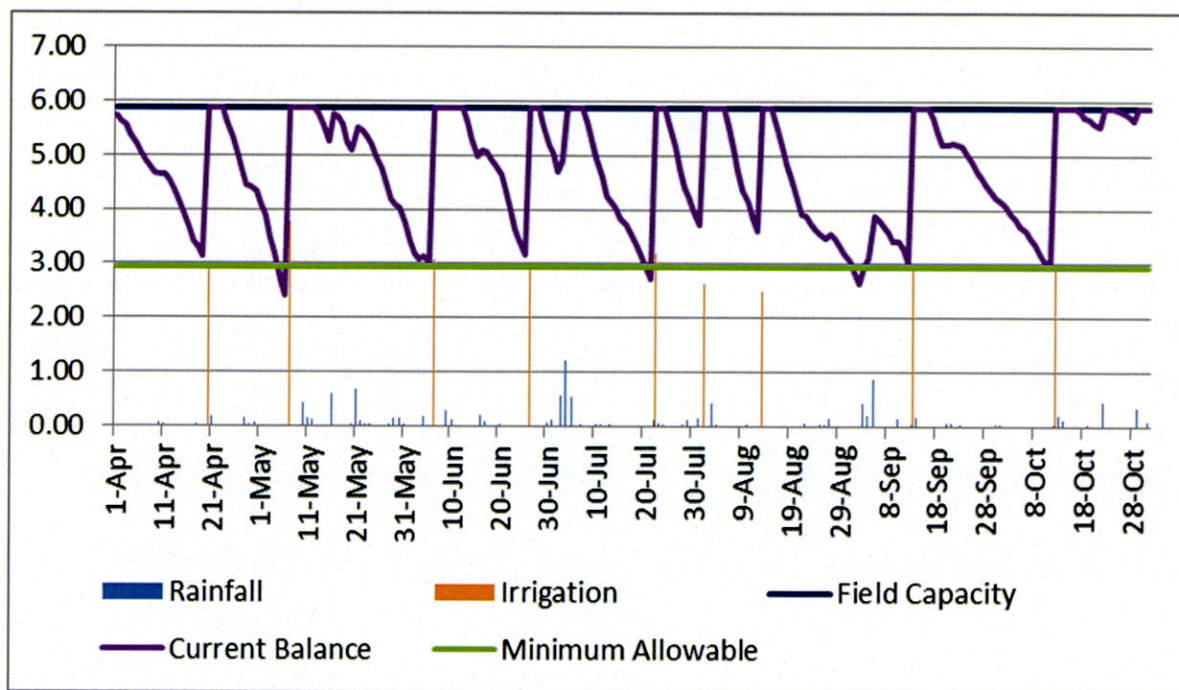


Figure A-35. Crop Water Use Calculation for Year 2004.

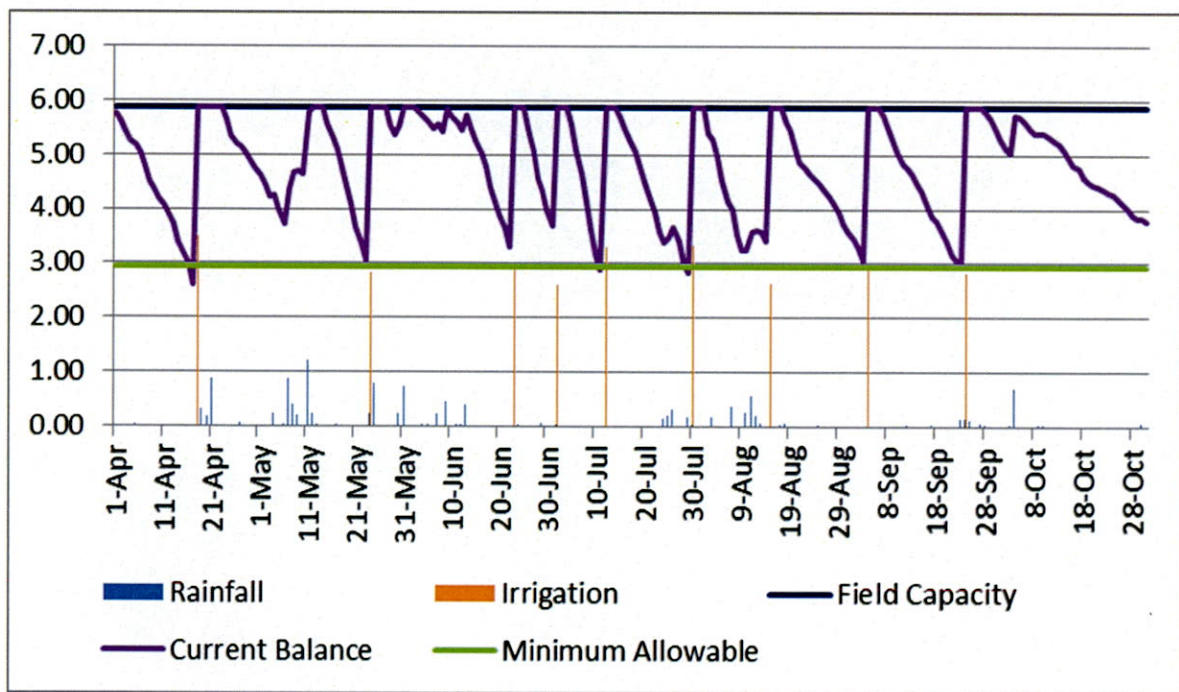


Figure A-36. Crop Water Use Calculation for Year 2005.

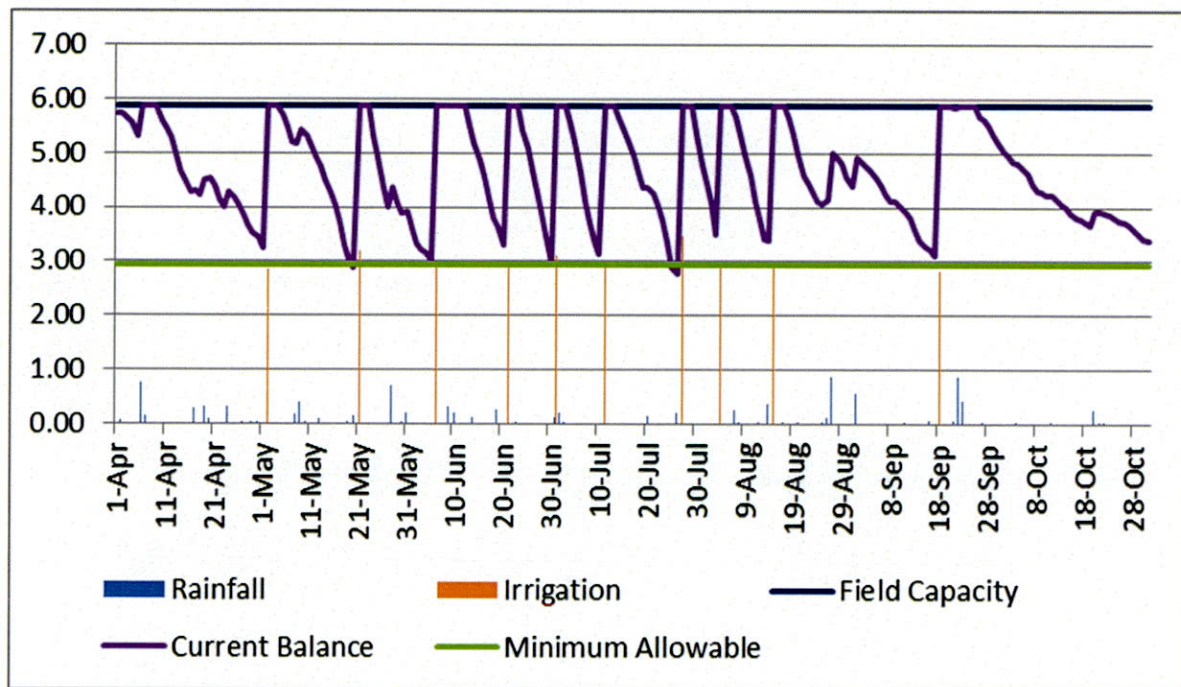


Figure A-37. Crop Water Use Calculation for Year 2006.

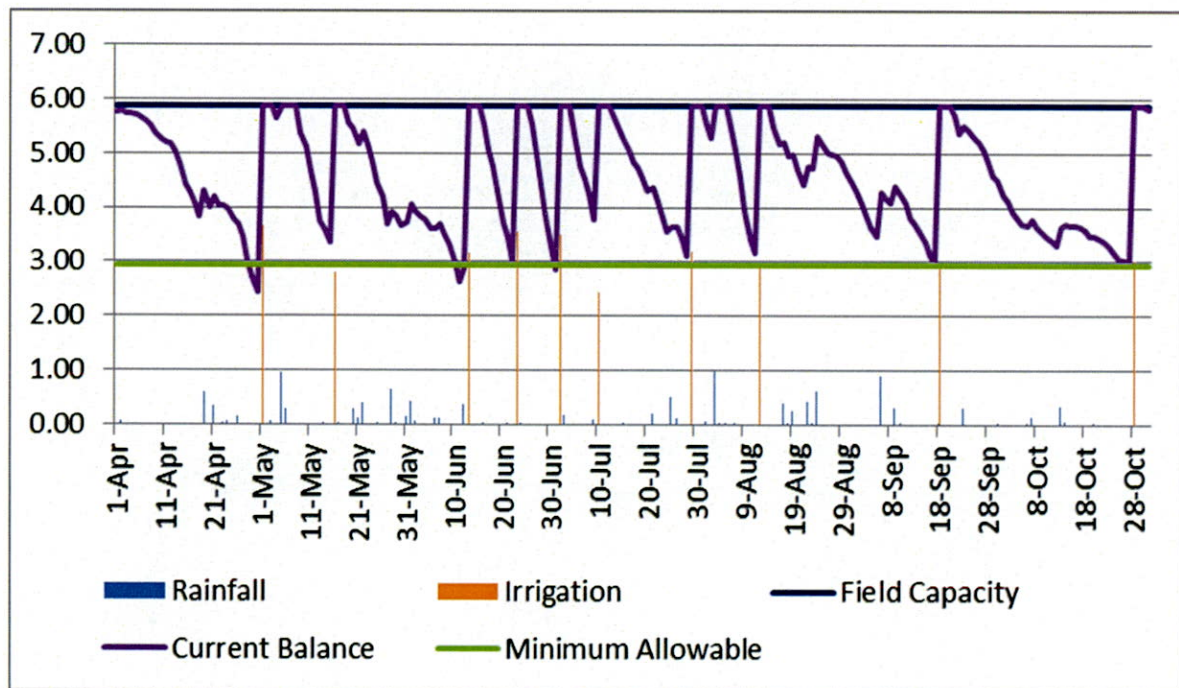


Figure A-38. Crop Water Use Calculation for Year 2007.

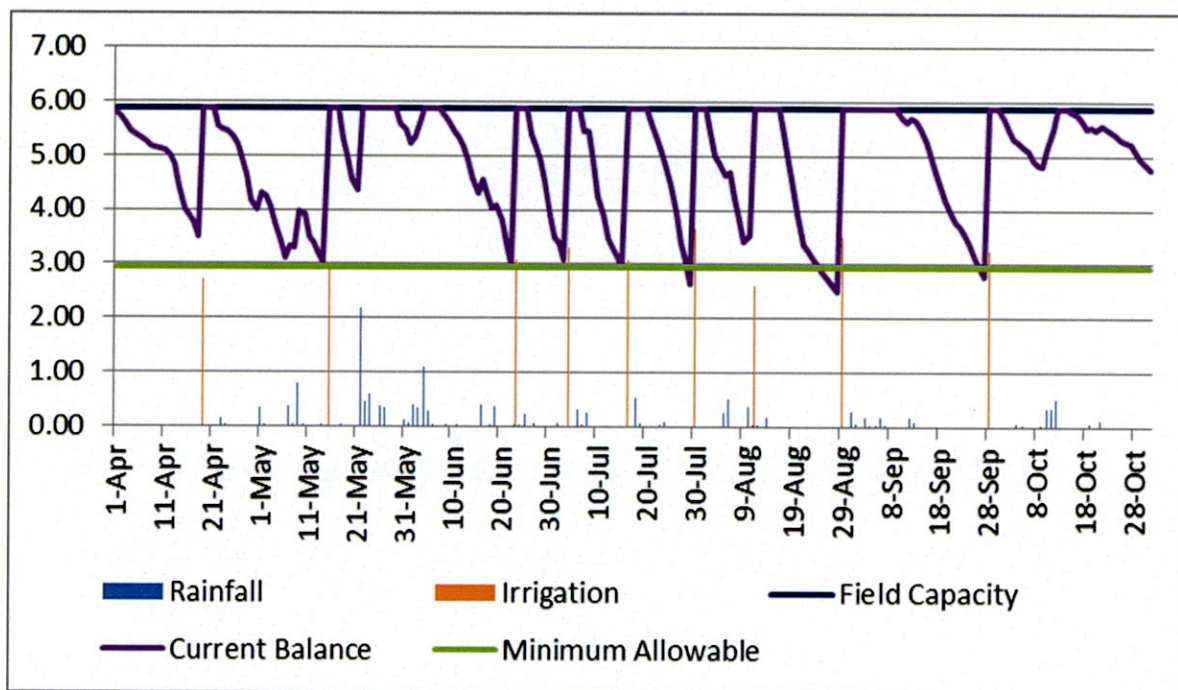


Figure A-39. Crop Water Use Calculation for Year 2008.

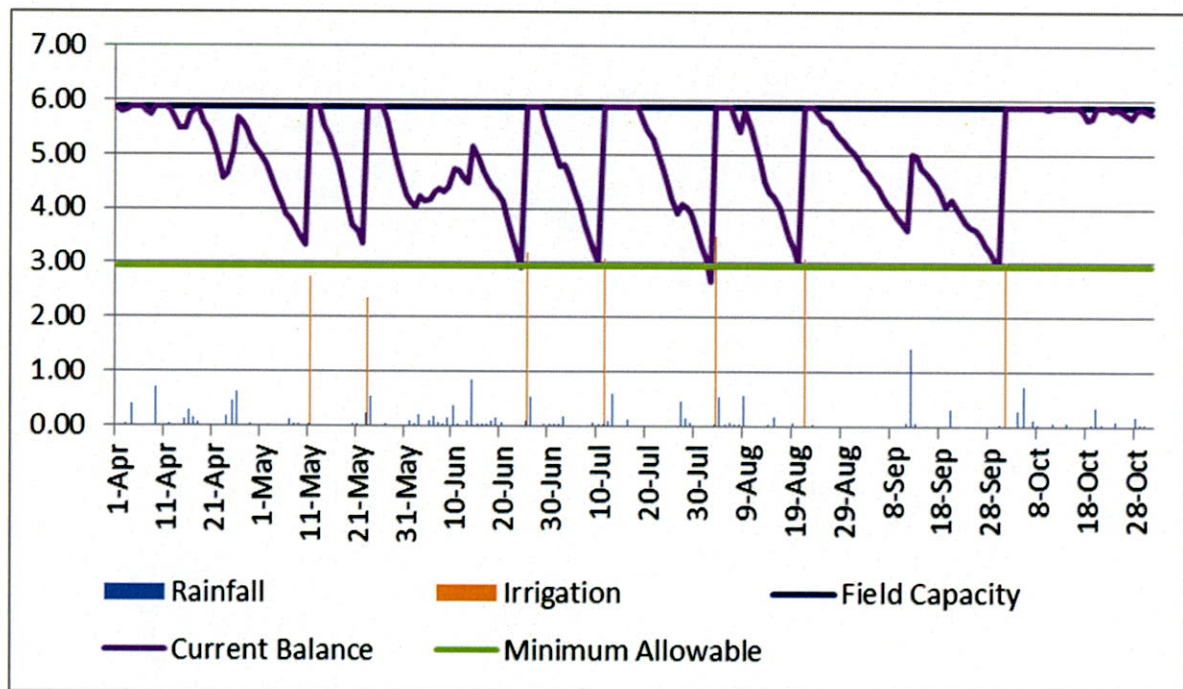


Figure A-40. Crop Water Use Calculation for Year 2009.

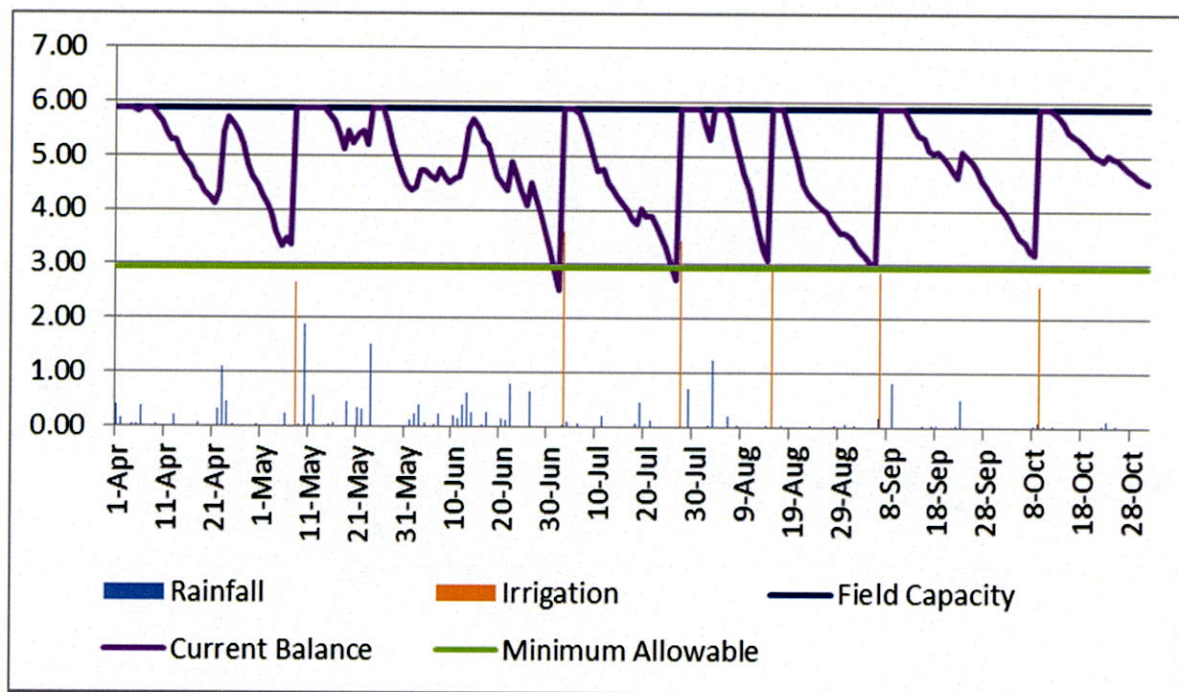


Figure A-41. Crop Water Use Calculation for Year 2010.

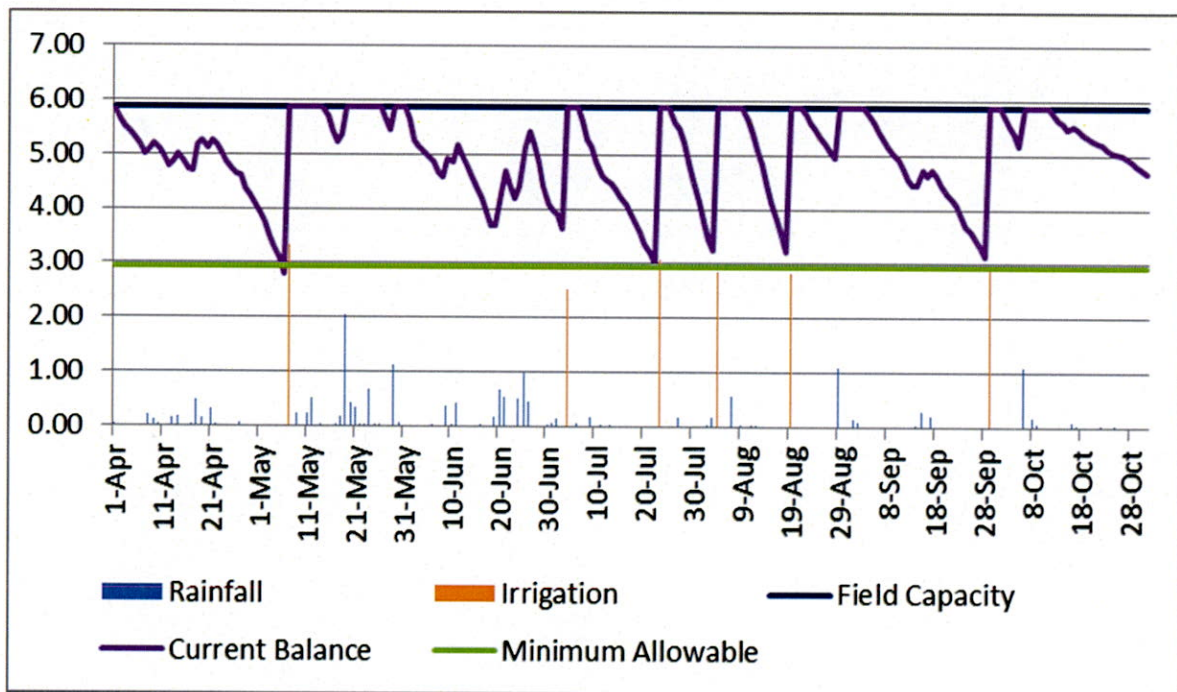


Figure A-42. Crop Water Use Calculation for Year 2011.

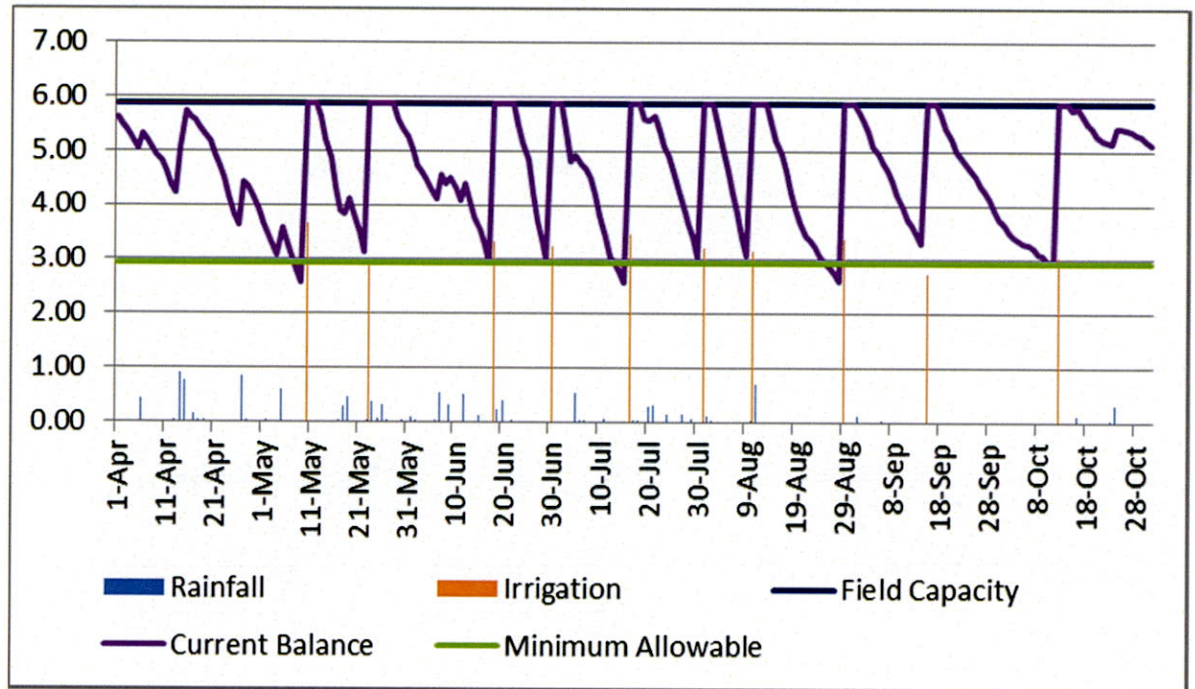


Figure A-43. Crop Water Use Calculation for Year 2012.

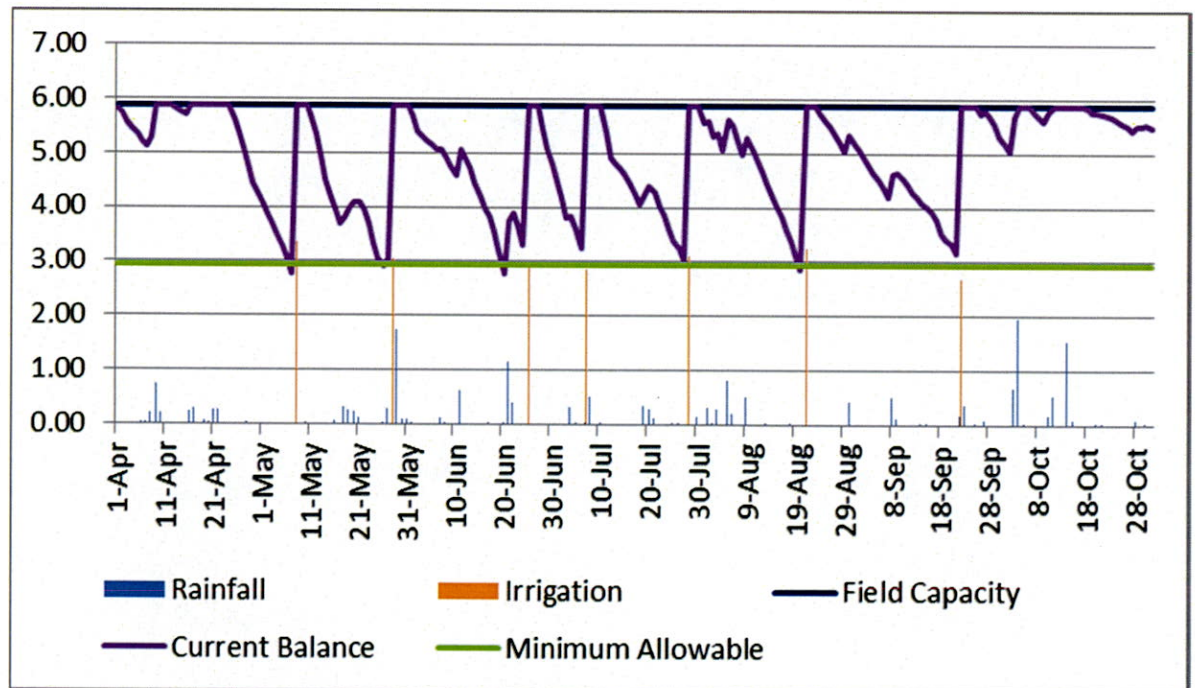


Figure A-44. Crop Water Use Calculation for Year 2013.

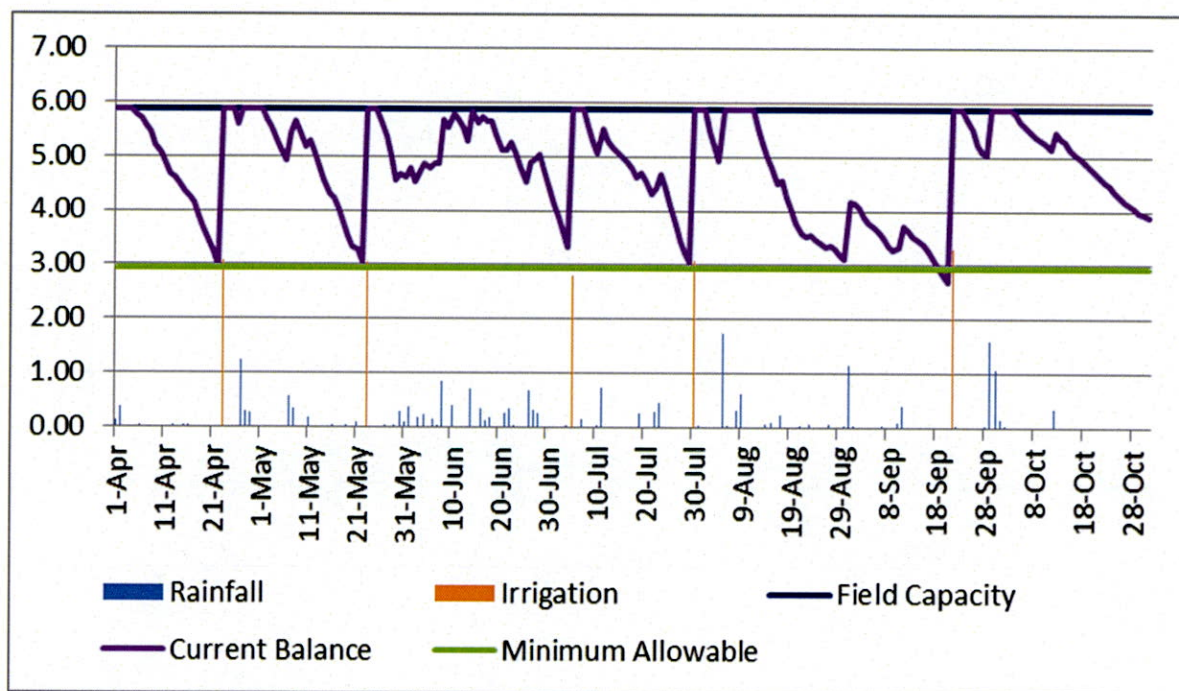


Figure A-45. Crop Water Use Calculation for Year 2014.

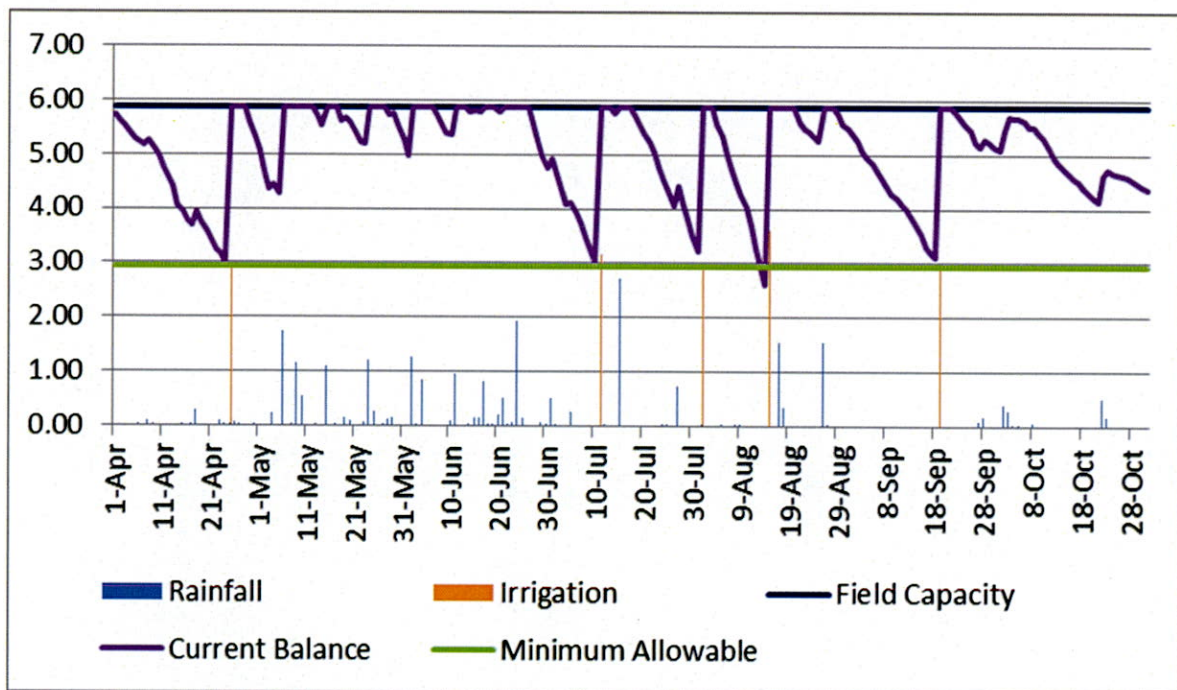


Figure A-46. Crop Water Use Calculation for Year 2015.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date July 21, 20 17

RECEIVED OF City of Rapid City 300 6th St Rapid City SD 57701

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

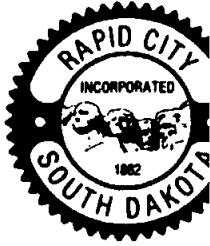
Fee for Application for Permit No. <u>2768-2</u> to Appropriate Water, to construct and to put water to beneficial use	100	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>2768-2</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	300 00

No. **08302**

By

Shanne Goodman
Chief Engineer

vm



CITY OF RAPID CITY

Engineering Services

300 Sixth Street

Rapid City, SD 57701-5035

Telephone: (605) 394-4154 FAX: (605) 355-3083

www.rcgov.org

RECEIVED
JUL 21 2017
WATER RIGHTS
PROGRAM

TRANSMITTAL

To: Eric Gronlund
Department of Environment and Natural Resources
Water Rights Program
523 E. Capitol Ave.
Pierre, SD 57501-3182

Re: Water Right Permit Application Fees

Enclosed is the following:

- | | | | |
|---|---|--|---|
| ☐ Shop Drawing | ☐ Prints | ☐ Plans | ☐ Specifications |
| ☐ Copy of Letter | ☐ Change Order # | ☐ Notice to Proceed | |
| ☐ Contract | ☒ Other <u>Check No. 00419403 for Water Right Permit Application Fees</u> | | |

Copies	Date	Number	Description

Transmitted:

- | | | |
|--|---|---|
| ☐ For review & approval | ☐ Approved as submitted | ☐ Resubmit _____ copies for approval |
| ☐ For your use | ☐ Approved as noted | ☐ Submit _____ copies for distribution |
| ☒ As requested | ☐ Returned for corrections | ☐ Return _____ corrected prints |
| ☐ For review and comment | ☐ Reviewed by: _____ | ☐ Prints Returned After Loan to Us |
| ☐ For bids due on _____ | | ☐ Other _____ |

Remarks: Check No. 00419403 for \$900.00 for Little Giant Ditch and South Side Ditch Applications for Permits to Appropriate Water within the State of South Dakota.


Dan Coon, PE

Operations Management Engineer

7-18-17
Date



EQUAL OPPORTUNITY EMPLOYER



CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701

Public Works Department Engineering Services Division

300 Sixth Street

Telephone: (605) 394-4154 Fax: (605) 355-3083

Web: www.rcgov.org

July 3, 2017

Department of Environment and Natural Resources
Water Rights Program
523 E. Capitol Ave.
Pierre, SD 57501-3182

RECEIVED

JUL 05 2017

**WATER RIGHTS
PROGRAM**

Ref: Application for Permit to Appropriate Water Within the State of South Dakota
Amendment to Permit No. 2383-2
Little Giant Ditch

Gentlemen:

Enclosed please find two copies of the above referenced permit application and supporting documentation. A check for the permit application fee will be submitted at a later date. With submittal of this application the City of Rapid City requests a change in the use and diversion points for vested water right permit No. 2383-2.

If you require additional information concerning this item please contact me at (605) 394-4154.

Sincerely,

Dan Coon, P.E.
Operations Management Engineer

Cc: Wayne Anderson – Little Giant Ditch w/enclosure
Jon Buxton – Little Giant Ditch w/enclosure
Jeff Crocket – City of Rapid City w/o enclosure
Brian Dail – w/enclosure
Dale Tech – City of Rapid City w/o enclosure

Enclosure



EQUAL OPPORTUNITY EMPLOYER



CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701

Public Works Department Engineering Services Division

300 Sixth Street

Telephone: (605) 394-4154 Fax: (605) 355-3083

Web: www.rcgov.org

RECEIVED

SEP 05 2017

**WATER RIGHTS
PROGRAM**

September 1, 2017

Aaron Tieman
Department of Environment and Natural Resources
Water Rights Program
523 E. Capitol Ave.
Pierre, SD 57501-3182

Ref: Revisions to Reports and Applications on the Water-Rights Transfer Off the Little Giant Ditch and South Side Ditch Companies Between the City of Rapid City and Mr. Brian Dail

Dear Mr. Tieman,

Attached please find a memorandum prepared by RESPEC to address comments resulting from the South Dakota Department of Environment and Natural Resources (SDDENR) review of the above referenced water right transfer applications. The memorandum clarifies Mr. Dail's current property ownership status for the properties identified in the applications and modifies the validated acres and diversion rate for the Little Giant Ditch transfer applications. These and other revisions that may result from the SDDENR's review will be reflected in the final reports to be submitted to the SDDENR.

Please contact me if you have questions concerning these items.

Sincerely,

Dan Coon, P.E.
Operations Management Engineer

Cc: Wayne Anderson - Little Giant Ditch w/attachment
Jon Buxton - Little Giant Ditch w/attachment
Jeff Crocket - City of Rapid City w/attachment
Brian Dail w/attachment
David Lamb - Southside Ditch w/attachment

Attachment



EQUAL OPPORTUNITY EMPLOYER



EXTERNAL MEMORANDUM

To: Mr. Dan R. Coon
City of Rapid City
300 6th Street
Rapid City, SD 57701

cc: Project Central File 2713 — Category A

From: Mr. Jared K. Oswald, PE
Manager, Watershed Management
RESPEC
P.O. Box 725
Rapid City, SD 57709

Date: August 31, 2017

Subject: Revisions to Reports and Applications on the Water-Rights Transfer Off the Little Giant Ditch and South Side Ditch Companies Between the City of Rapid City and Mr. Brian Dail.

APPLICATION ADDENDUM

PROPERTY OWNERSHIP

All reports that were filed to the SD Department of Environment and Natural Resources contain an error in discussing property ownership. In May 2016, Mr. Dail sold his property off the Little Giant Ditch and South Side Ditch. However, within the sale and documented in a "Real Estate Purchase Agreement Commercial/Agricultural" signed May 7, 2016, Mr. Dail stated that the sale "does not include any water rights." Although Mr. Dail does not own the land on the properties discussed, he has retained the water rights off the Little Giant and South Side Ditch Companies. To correctly discuss the transfer of water rights between the City of Rapid City and Mr. Dail, each report will replace the text "property owned by" to "property previously owned by." These corrections will be applied in the Foreword and Introduction sections for each report.

HISTORIC DIVERSION CALCULATIONS

Each report pertaining to transfers off the Little Giant Ditch Company should also include a revision to Equation 1-4. Originally, RESPEC assumed that the reissued water-rights license signed December 3, 2015, should be used to set the total acreage (514.9 acres) and diversion rate (5.26 cubic feet per second [cfs]) authorized to the Little Giant Ditch Company. These numbers are used to calculate the pro rata share of the water rights available for transfer within the application. However, discussions with the SD DENR during the application review process concluded that these computations must be consistent with previous transfers off

3824 JET DRIVE
RAPID CITY, SD 57703
P.O. BOX 725 // RAPID CITY, SD 57709
605.394.6400



the Little Giant Ditch Company. The value of 514.9 acres should be replaced with 716 acres and the value of 5.26 cfs should be replaced with 8.0 cfs, which are the original validated acres and diversion rate contained within Little Giant Ditch, Vested Water Right No. 2383-2 before any transfers were processed. This change in the validated available acreage and diversion rate that were used in the pro rata share calculation does not have an impact to the overall volume of water available for transfer. However, the change does have a minor impact on the pro rata diversion rate, which should be adjusted from 0.35 cfs to 0.38 cfs for the 38-acre transfer and 1.42 cfs to 1.55 cfs for the 154-acre transfer.

The revisions discussed above will be addressed in the final reports.

JKO:krl

REPORT ON APPLICATION NOS. 2768-2, 2769-2 & 2770-2

For City of Rapid City, c/o Dale Tech, Public Works Director

September 5, 2017

Water Permit Application Nos. 2768-2, 2769-2 & 2770-2 propose to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use to municipal, industrial, commercial, common distribution system, rural water system, suburban housing and domestic use by the City of Rapid City.

Water Permit Application No. 2768-2 proposes to transfer a portion of Little Giant Ditch Company's stockholder/landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2383-2 using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred is 0.38 cubic feet of water per second (cfs) with an annual volume limitation of 68.8 acre-feet, if diverted at the water treatment plants and infiltration galleries or 34.4 acre-feet, if stored in Pactola Reservoir.

The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 15, T1N-R8E. This application, if approved, changes the diversion point for 0.38 cfs to diversion points for use by the city to be located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 3 (Mountain View Water Treatment Plant); the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 3 (Sioux Park Gallery); the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 2, T1N-R5E and impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. Additionally, if this application is approved, it will retain the June 14, 1878, priority date established by the Vested Water Right No. 2383-2.

Water Permit Application No. 2769-2 proposes to transfer a portion of Little Giant Ditch Company's stockholder/landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2383-2 using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred is 1.55 cfs with an annual volume limitation of 280.9 acre-feet, if diverted at the water treatment plants and infiltration galleries or 140.4 acre-feet, if stored in Pactola Reservoir.

The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 15, T1N-R8E. This application, if approved, changes the diversion point for 1.55 cfs to diversion points for use by the city to be located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 3 (Mountain View Water Treatment Plant); the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 3 (Sioux Park Gallery); the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 2, T1N-R5E and impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and



Sections 31, 32, 33, 34 of T2N-R5E. Additionally, if this application is approved, it will retain the June 14, 1878, priority date established by the Vested Water Right No. 2383-2.

Water Permit Application No. 2770-2 proposes to transfer a portion of South Side Ditch Company's stockholder/landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2040-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2040-2 using South Side Ditch. The portion of Rapid Creek natural flows to be transferred is 0.25 cfs with an annual volume limitation of 39.8 acre-feet, if diverted at the water treatment plants and infiltration galleries or 19.9 acre-feet, if stored in Pactola Reservoir.

The existing diversion point on Rapid Creek for South Side Ditch is located in the SE¼ NW¼ Section 15, T1N-R8E. This application, if approved, changes the diversion point for 0.25 cfs to diversion points for use by the city to be located in the SE¼ NE¼ Section 3 (Mountain View Water Treatment Plant); the SW¼ SW¼ Section 3 (Sioux Park Gallery); the NE¼ SW¼ Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is in the NW¼ SW¼ Section 2, T1N-R5E and impounds water in portions of Sections 2, 3, 4, 5, 10, 11 of T1N-R5E and Sections 31, 32, 33, 34 of T2N-R5E. Additionally, if this application is approved, it will retain the May 3, 1880, priority date established by the Vested Water Right No. 2040-2.

REVIEW OF METHODOLOGY

Previous Board action should be noted. In 1987, Lone Tree Ditch Company filed a vested right claim and the Board validated Vested Water Right No. 2038-2 in 1988. In 1990, Lone Tree Ditch Company became aware that a number of acres had been inadvertently omitted from the validation completed in 1988. Therefore, Lone Tree Ditch Company filed Vested Water Right Claim No. 2479-2 for the additional acres. In 2002, during the hearing for validation of Vested Water Right 2479-2, Lone Tree Ditch Company's attorney successfully argued that based on a 1974 South Dakota Supreme Court ruling (*Jewett v. Redwater Ditch Co.*) that Lone Tree Ditch Company is a stock-share irrigation company (established in corporate by-laws), owns a pre-1907 water right and that the water right is not appurtenant to the land. In the case of the stock-share ditch companies with pre-1907 water rights, the Board's decision allows the Chief Engineer to regulate the maximum diversion rate and where the water is taken but not where it is used. The Board determined that Lone Tree Ditch Company had continued to practice the allocation of irrigation water based upon the number of shares held by individual stockholders rather than the number of acres irrigated. As referenced in Conclusion of Law #3, the Board concluded that pre-1907 water rights held by ditch companies are not appurtenant to any particular land unless the by-laws or organization of the company so provide (Water Rights, 2017).

In previous Rapid City transfers of Rapid Creek water from irrigation to municipal use were done under South Dakota Codified Law (SDCL) 46-5-34.1. Because pre-1907 water rights are not appurtenant to the land, SDCL 46-5-34.1 is not applicable to these applications.

APPLICABLE STATUTES

SDCL 46-2A-12. Amendment of permit or license--When granted. An amendment of an existing permit or license may be granted for a change in use, a change in point of diversion or other change only if the change does not unlawfully impair existing rights and is for a beneficial use and in the public interest.

SDCL 46-5-30.4. Amendment of permits or rights. Subject to the limitations in §§ 46-5-33 and 46-5-34 governing changes in irrigation rights from one parcel of land to another, any water permit or right holder may apply for a change of use of the water, a change of location of the use or other amendment to the permit or right. Permits or rights may be amended pursuant to the procedure contained in chapter 46-2A. Priority shall be retained upon amendment. An amendment of a water permit or right may not increase the rate of diversion or increase the volume of water to be appropriated under the original water permit or right. The amendment may not impair existing rights.

Both SDCL 46-2A-12 and SDCL 46-5-30.4 allow existing rights to be amended but do not allow the amendment to impair existing rights.

The City of Rapid City contracted with RESPEC Consulting & Services (RESPEC) to conduct the analysis of the proposed transfers. The consultant was also tasked with determining the method in which to quantify the amount of water to be transferred and demonstrate the transfers can be completed without impairing existing rights.

In the case of Water Permit Application Nos. 2768-2 & 2769-2 the City of Rapid City is proposing to transfer a portion of Vested Water Right No. 2383-2, a pre-1907 water right, held by Little Giant Ditch Company. According to the review conducted by the consultant, Little Giant Ditch Company is a ditch organization but is not incorporated, does not contain corporate by-laws, and makes no mention of shares. Presently, the Little Giant Ditch Company assesses a fee to individual landowners to cover operational and maintenance expenses that are incurred by the ditch. These assessments are based on the amount of water each landowner is assigned. However, using assessments is not a viable method to determine transferrable water rights. The applicant is proposing to calculate the amount of water by acres irrigated as the method to quantify and also to demonstrate existing rights are not being impaired, recognizing the water is not appurtenant to any specific acres under Vested Water Right No. 2383-2.

In the case of Water Permit Application No. 2770-2 the City of Rapid City is proposing to transfer a portion of Vested Water Right No. 2040-2, a pre-1907 water right, held by South Side Ditch Company. According to the review conducted by the consultant, South Side Ditch Company is incorporated and is a stock-share irrigation ditch company (established by corporate by-laws). The

by-laws of South Side Ditch discuss distribution of water in proportion to shares held. After reviewing the financial accounting system that is maintained by South Side Ditch, it appears the shares are not representative of the actual distribution of water and a number of discrepancies were identified, such as: acres listed incorrectly, a landowner is listed with shares and no acres, and several landowners are listed with acres and no shares. Based on the examples mentioned, basing transfers on shares held is not a viable method to determine transferrable water rights. Therefore, the applicant is proposing a method to make a fair and equitable determination of water right volumes and rate of diversion by utilizing acreage and distribute the water rights using Vested Water Right No. 2040-2 for South Side Ditch.

DELIVERY SYSTEM LOSS DISCUSSION

The delivery system loss, or carriage loss is the water lost to seepage within the irrigation ditch as the water travels from the creek diversion to the where the water is applied. The carriage loss remains in the ditch to ensure that the proposed transfer does not unlawfully impair or adversely affect the remaining/existing water rights. Delivery system losses were estimated in a Bureau of Reclamation 1989 study to be 9.8 percent for South Side Ditch and Little Giant Ditch. This number has been consistently referenced in all previous transfers.

REVIEW OF PROPOSED TRANSFERS

The City's consultant conducted an engineering analysis to determine the volume and flow rate available and to ensure that the proposed transfer does not unlawfully impair or adversely affect existing water rights. The analysis included an assessment of the historic crop water use and historic ditch diversion records.

For the historic crop water use assessment, an online irrigation scheduling consultant tool was used, which was developed for the individual landowners within the Belle Fourche Irrigation District (BFID) in western South Dakota. This consultant tool tracks the daily water balance in a field and provides recommendation of irrigation timing and depth. Because of the close proximity of the BFID, the methods used to develop the tool were deemed appropriate to assess historic crop water use. The assessment ran daily (April 15 to October 31) from 1970-2015. The inputs required to track a daily water balance are local weather and rainfall estimates, crop type and field boundaries. Weather and rainfall data were collected from the Rapid City Regional Airport located approximately 3 miles northeast of the property and, therefore, deemed representative. The weather data were input into the American Society of Civil Engineers (ASCE) Penman Monteith (PM) equation to calculate daily evapotranspiration (ET). This equation requires daily values of dew point, high temperature, low temperature, average wind speed and solar radiation, all of which were available from the airport weather station for the entire analysis period.

For the historic diversion assessment, the ditch company's diversion records were collected by the Bureau of Reclamation on a monthly basis over a 13-year period. The historic diversion estimates to the ditch were then multiplied by the fraction of land (pro rata share) that the property encompasses

within the water rights minus the estimated delivery system losses of 9.8 percent in order to determine the historic monthly delivery amount to the field.

For **Water Permit Application No. 2768-2**, the engineering analysis determined the portion of Rapid Creek natural flows to be transferred to the City of Rapid City is 0.38 cfs with an annual volume limitation of 68.8 acre-feet if diverted at diversion points within Rapid City or 34.4 acre-feet if stored in Pactola Reservoir. Following the transfer, diversions should be limited to monthly and annual diversion amounts shown in Table 1.

Table 1. Monthly and annual diversion limits (acre-feet).

Water Permit Application No. 2768-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	8.4	4.2
May	6.4	3.2
June	9.7	4.8
July	11.7	5.8
Aug	14.8	7.4
Sept	9.7	4.9
Oct	8.1	4.1
Totals	68.8	34.4

For **Water Permit Application No. 2769-2**, the engineering analysis determined the portion of Rapid Creek natural flows to be transferred to the City of Rapid City is 1.55 cfs with an annual volume limitation of 280.9 acre-feet if diverted at diversion points within Rapid City or 140.4 acre-feet if stored in Pactola Reservoir. Following the transfer, diversions should be limited to monthly and annual diversion amounts shown in Table 2.

Table 2. Monthly and annual diversion limits (acre-feet).

Water Permit Application No. 2769-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	34.0	17.0
May	25.9	12.9
June	39.4	19.7
July	47.2	23.6
Aug	59.8	29.9
Sept	39.4	19.7
Oct	35.2	17.6
Totals	280.9	140.4

For **Water Permit Application No. 2770-2**, the engineering analysis determined the portion of Rapid Creek natural flows to be transferred to the City of Rapid City is 0.25 cfs with an annual volume limitation of 39.8 acre-feet if diverted at diversion points within Rapid City or 19.9 acre-feet if stored in Pactola Reservoir. Following the transfer, diversions should be limited to monthly and annual diversion amounts shown in Table 3.

Table 3. Monthly and annual diversion limits (acre-feet).

Water Permit Application No. 2770-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	5.0	2.5
May	3.7	1.9
June	5.6	2.8
July	6.8	3.4
Aug	8.6	4.3
Sept	5.6	2.8
Oct	4.5	2.2
Totals	39.8	19.9

REVIEW OF EXISTING WATER PERMITS/RIGHTS

Not including the water rights for Little Giant and South Side irrigation ditches, there are 96 existing water rights/permits appropriating 255.81 cfs on Rapid Creek between Pactola Reservoir and the confluence with the Cheyenne River. Seventy-four (74) of these rights/permits which appropriate 229.08 cfs are junior in priority and twenty-two (22) of these rights/permits which appropriate 26.73 cfs are senior in priority to the May 3, 1880, South Side Ditch water right and June 14, 1878, Little Giant Ditch water right.

If Water Permit Application Nos. 2768-2 & 2769-2 are approved, the authorized diversion rate described in Vested Water Right No. 2383-2 for the Little Giant Ditch Company will be decreased by 1.93 cfs. If Water Permit Application No. 2770-2 is approved, the authorized diversion rate described in Vested Water Right No. 2040-2 for the South Side Ditch Company will be decreased by 0.25 cfs.

Credited diversions taken at the City's intakes include crop consumptive use and return flows that historically have been available to downstream water right holders. The City returns treated effluent to Rapid Creek at the City's sewage treatment facility. This allows existing downstream water rights to divert this water based upon priority availability. If in the future the City of Rapid City stops returning effluent to Rapid Creek, then the diversions proposed by these water permit applications will need to be recalculated to reflect that change.

The South Dakota Water Management Board should retain jurisdiction in order to monitor the management and operation of the proposed transfers.

CONCLUSIONS

1. Water Permit Application No. 2768-2 proposes to be transfer 0.38 cfs which is based on the pro-rated share of Little Giant's total ditch diversion rate minus 9.8% carriage loss.
2. If Water Permit Application No. 2768-2 is approved, the amount of water requested to be transferred has an annual volume limitation of 68.8 acre-feet if diverted at the city's water treatment plants and infiltration galleries or 34.4 acre-feet if stored in Pactola Reservoir, not to exceed the acre-feet amounts listed in the following table:

Water Permit Application No. 2768-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	8.4	4.2
May	6.4	3.2
June	9.7	4.8
July	11.7	5.8
Aug	14.8	7.4
Sept	9.7	4.9
Oct	8.1	4.1
Totals	68.8	34.4

3. If Water Permit Application No. 2768-2 is approved, the authorized diversion rate of Vested Water Right No. 2383-2 should be decreased by 0.38 cfs.
4. If approved, Water Permit Application No. 2768-2 will retain the June 14, 1878, priority date established by the Vested Water Right No. 2383-2 and does not authorize any new water appropriations from Rapid Creek.
5. Water Permit Application No. 2769-2 proposes to be transfer 1.55 cfs which is based on the pro-rated share of Little Giant's total ditch diversion rate minus 9.8% carriage loss.
6. If Water Permit Application No. 2769-2 is approved, the amount of water requested to be transferred has an annual volume limitation of 280.9 acre-feet if diverted at the city's water treatment plants and infiltration galleries or 140.4 acre-feet if stored in Pactola Reservoir, not to exceed the acre-feet amounts listed in the following table:

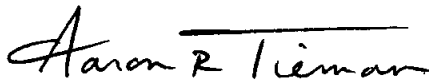


Water Permit Application No. 2769-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	34.0	17.0
May	25.9	12.9
June	39.4	19.7
July	47.2	23.6
Aug	59.8	29.9
Sept	39.4	19.7
Oct	35.2	17.6
Totals	280.9	140.4

7. If Water Permit Application No. 2769-2 is approved, the authorized diversion rate of Vested Water Right No. 2383-2 should be decreased by 1.55 cfs.
8. If approved, Water Permit Application No. 2769-2 will retain the June 14, 1878, priority date established by the Vested Water Right No. 2383-2 and does not authorize any new water appropriations from Rapid Creek.
9. Water Permit Application No. 2770-2 proposes to be transfer 0.25 cfs which is based on the pro-rated share of South Side's total ditch diversion rate minus 9.8% carriage loss.
10. If Water Permit Application No. 2770-2 is approved, the amount of water requested to be transferred has an annual volume limitation of 39.8 acre-feet if diverted at the city's water treatment plants and infiltration galleries or 19.9 acre-feet if stored in Pactola Reservoir, not to exceed the acre-feet amounts listed in the following table:

Water Permit Application No. 2770-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	5.0	2.5
May	3.7	1.9
June	5.6	2.8
July	6.8	3.4
Aug	8.6	4.3
Sept	5.6	2.8
Oct	4.5	2.2
Totals	39.8	19.9

11. If Water Permit Application No. 2770-2 is approved, the authorized diversion rate of Vested Water Right No. 2040-2 should be decreased by 0.25 cfs.
12. If approved, Water Permit Application No. 2770-2 will retain the May 3, 1880, priority date established by the Vested Water Right No. 2040-2 and does not authorize any new water appropriations from Rapid Creek.
13. South Dakota Codified Law, SDCL 46-2A-12 states "An amendment of an existing permit or license may be granted for a change in use, a change in point of diversion or other change only if the change does not unlawfully impair existing rights and is for a beneficial use and in the public interest." The proposed changes, if approved as designated, will not unlawfully impair existing rights.
14. The Water Management Board should retain jurisdiction in order to monitor the management and operation of the proposed transfer.
15. During certain dry periods in the past, natural flow water has not been available for Vested Water Right Nos. 2383-2 & 2040-2, so approval of this application does not guarantee that natural flow water will be available every year.



Aaron R. Tieman
Natural Resources Engineer II

Approved by



Mark D. Rath
Natural Resources Engineer III



BIBLIOGRAPHY

RESPEC Consulting & Services, June 2017. Topical Report RSI-2712 – Prepared for the City of Rapid City Little Giant Ditch Water Rights Transfer.

RESPEC Consulting & Services, June 2017. Topical Report RSI-2713 – Prepared for the City of Rapid City Little Giant Ditch Water Rights Transfer.

RESPEC Consulting & Services, June 2017. Topical Report RSI-2714 – Prepared for the City of Rapid City South Side Ditch Water Rights Transfer.

Water Rights, 2017, Unpublished Water Rights Data, SD DENR, DES, Water Rights Program, Pierre, SD, 57501.

South Dakota Supreme Court, 1974. O.A. Jewett et al., v. Redwater Irrigating Association.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2768-2, City of Rapid City

Pursuant to SDCL 46 - 2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2768-2, City of Rapid City, c/o Dale Tech, Public Works Director, 300 6th Street, Rapid City SD 57701.

The Chief Engineer is recommending APPROVAL of Application No. 2768-2 because 1) the proposed diversion can be developed without unlawful impairment of existing rights, 2) the proposed use is a beneficial use, and 3) it is in the public interest with the following qualifications:

1. Permit No. 2768-2 is limited to a diversion rate of 0.38 cubic feet of water per second for a total annual volume of 34.4 acre feet of water annually at Pactola Reservoir or a total annual volume of 68.8 acre feet of water annually at the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 3 (Mountain View Water Treatment Plant); the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 3 (Sioux Park Gallery); the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E. Maximum monthly diversion volumes at Pactola or the diversion points within Rapid City are as follows:

Monthly Volume Limitation (acre-feet)

Water Permit No. 2768-2		
Month	Diversion Points within Rapid City	Pactola Reservoir Storage
April	8.4	4.2
May	6.4	3.2
June	9.7	4.8
July	11.7	5.8
Aug	14.8	7.4
Sept	9.7	4.9
Oct	8.1	4.1
Totals	68.8	34.4

Diversion 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. Permit No. 2768-2 authorizes diversion of only natural flow water by the city of Rapid City and does not include any rights to stored irrigation water available under contract from Deerfield Reservoir.

3. Diversions under this permit when taken at the Jackson Springs treatment plant Rapid Creek intake are limited to natural flows that exceed 10 cubic feet of water per second (cfs) as measured at USGS gaging station Rapid Creek above Canyon Lake near Rapid City No. 06412500. During the period April 1 through September 30 natural flow diversions are limited to the amount exceeding 20 cfs with the remainder of the diversion being released supplemental water equal to the amount released from storage through Rapid City's Deerfield and Pactola contracts with the United States Bureau of Reclamation.
4. The city of Rapid City shall report to the Chief Engineer annually the amount of water withdrawn each month at Pactola reservoir or the diversion points within Rapid City.
5. The Water Management Board retains jurisdiction of Permit No. 2768-2 in the event that changes occur in the system that require adjustments to be made in the monthly or total annual volumes authorized by Permit No. 2768-2.
6. Diversion under Permit No. 2768-2 may not interfere with existing water rights in effect prior to approval of No. 2768-2 or any domestic rights.
7. The amount of water with a June 14, 1878, priority date which may be appropriated under Vested Water Right No. 2382-2 is reduced by 0.38 cfs.

See report on application for additional information.

A handwritten signature in cursive script that reads "Jeanne Goodman".

Jeanne Goodman, Chief Engineer
September 6, 2017

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, September 19, 2017 10:17 AM
To: 'Sheri.Sponder@rapidcityjournal.com'
Subject: FW: [EXT] Legals for Water Permit Applications for the city of Rapid City (Sept 14)

Please send me the affidavit for this publication from September 14th. Email if possible.

Thanks,

Karen Schlaak

SD DENR, Water Rights Program
(605) 773-3352



From: Sheri Sponder [<mailto:Sheri.Sponder@rapidcityjournal.com>] **On Behalf Of** RCY Legals
Sent: Monday, September 11, 2017 11:05 AM
To: Gronlund, Eric
Subject: RE: [EXT] Legals for Water Permit Applications for the city of Rapid City (Sept 14)

Scheduled for publication Sept. 14; Cost, \$147.37; Ad # 21058291

Sheri Sponder
605-394-8336



From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]
Sent: Friday, September 08, 2017 12:08 PM
To: RCY Legals
Cc: Schlaak, Karen
Subject: Legals for Water Permit Applications for the city of Rapid City (Sept 14)

Attached is a notice to be published on September 14, 2017.

The city of Rapid City has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit of publication ASAP to the Water Rights Program, 523 E Capitol Avenue, Pierre SD 57501.

Let me know if you have questions. Please acknowledge receipt of this email.

Thank you,

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

September 8, 2017

Dale Tech, Public Works Director
300 Sixth Street
Rapid City SD 57701

Dear Mr. Tech:

Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Rapid City Journal (Ph # 605-394-8300). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF HEARING ON APPLICATION NOS. 2768-2, 2769-2 and 2770-3 to Transfer Use

Notice is given that the City of Rapid City, c/o Dale Tech, Public Works Director, 300 6th St, Rapid City SD 57701 has filed Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use to municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic use by the city of Rapid City.

Application No. 2768-2 proposes to transfer a portion of Little Giant Ditch Company's landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2383-2 (Brian Dail shareholder) using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 0.38 cubic feet of water per second (cfs) with an annual volume limitation of 68.8 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 34.4 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit is to change the diversion point for 0.38 cfs to diversion points for use by the city to be located in the SE 1/4 NE 1/4 Section 3 (Mountain View Water Treatment Plant); the SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); the NE 1/4 SW 1/4 Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is in the NW 1/4 SW 1/4 Section 2, T1N-R5E and 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 seek authorize any new water appropriations from Rapid Creek. This application, if approved, will retain the June 14, 1878 priority date established by Vested Water Right No. 2383-2.

Application No. 2769-2 proposes to transfer a portion of Little Giant Ditch Company's landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2382-2 (Brian Dail shareholder) using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 1.55 cfs with an annual volume limitation of 280.9 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 140.4 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit is to change the diversion point for 1.55 cfs to diversion points for use by the city to be located as described above in Application No. 2768-2. This application does not seek to authorize any new water appropriations from Rapid Creek. This application, if approved, will retain the June 14, 1878 priority date established by Vested Water Right No. 2383-2.

Application No. 2770-2 proposes to transfer a portion of South Side Ditch use of Rapid Creek natural flows appropriated under Vested Water Right No. 2040-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2040-2 (Brian Dail shareholder) from South Side Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 0.25 cfs with an annual volume limitation of 39.8 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 19.9 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for South Side Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit is to change the diversion point for 0.25 cfs to diversion points for use by the city to be located as described above in Application No. 2768-2. This application does not seek to authorize any new water appropriations from Rapid Creek. This application, if approved, will retain the May 3, 1880 priority date established by Vested Water Right No. 2040-2.

SDCL 46-2A-4(10) provides that "if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer

makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board.” In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2768-2, 2769-2, and 2770-2 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.

The Chief Engineer’s recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

The Water Management Board will consider this application at 9:30 AM. on October 5, 2017 in the Matthew Training Center, Joe Foss Building, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application after it reaches a conclusion based on facts at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed 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 Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 25, 2017.

The petition may be informal, but shall be in writing and shall include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The October 5, 2017 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by September 25, 2017. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that “if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17.” This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is September 25, 2017. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1

thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-46, and Board Rules ARSD 74:02:01:01 thru 74:02:01:22

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of _____.

Affidavit of Publication

STATE OF SOUTH DAKOTA

County of Pennington

SS:

Sheri Sponder being first duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, an employee of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, the owner and publisher of the RAPID CITY JOURNAL, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published in the English language, at and within an office maintained by the owner and publisher thereof, at Rapid City, in said Pennington County, and has been admitted to the United States mail under the second class mailing privilege for at least one year prior to the publication herein mentioned; that the advertisement, a printed copy of which, taken from said Rapid City Journal, the paper in which the same was published, is attached to this sheet and made a part of this affidavit, was published in said paper once each day for one successive day, the first publication there of being on the 14th day of Sept 2017 that the fees charged for the publication there of are 117 dollars and 37 cents.

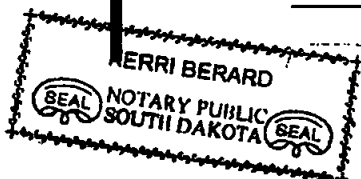
Sheri Sponder

Subscribed and sworn to before me this 19th
day of September, 2017.

Kenneth Berard
Notary public

8/21/19

My commission expires



Sept 14

L21058291

**NOTICE OF HEARING ON
APPLICATION NOS. 2761-2,
2769-2 and 2770-2 to Transfer Use**

Notice is given that the City of Rapid City, c/o Dale Tech, Public Works Director, 300 6th St, Rapid City SD 57701 has filed Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 to transfer the use of a portion of Rapid Creek natural flows appropriated for irrigation use to municipal, industrial, commercial, common distribution system, rural water system, suburban housing, and domestic use by the city of Rapid City.

Application No. 2768-2 proposes to transfer a portion of Little Giant Ditch Company's landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2383-2 (Brian Dall shareholder) using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 0.38 cubic feet of water per second (cfs) with an annual volume limitation of 68.8 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 34.4 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit is to change the diversion point for use by the city to be located in the SE 1/4 NE 1/4 Section 3 (Mountain View Water Treatment Plant); the SW 1/4 SW 1/4 Section 3 (Sioux Park Gallery); the NE 1/4 SW 1/4 Section 8 (Jackson Springs Gallery and Rapid Creek Intake); all within T1N-R7E or to allow storage in Pactola Reservoir. The location of the Pactola Reservoir diversion point is in the NW 1/4 SW 1/4 Section 2, T1N-R5E and 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 seek authorize any new water appropriations from Rapid Creek. This application, if approved, will retain the June 14, 1878 priority date established by Vested Water Right No. 2383-2.

Application No. 2769-2 proposes to transfer a portion of Little Giant Ditch Company's landowner's use of Rapid Creek natural flows appropriated under Vested Water Right No. 2383-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2383-2 (Brian Dall shareholder) using Little Giant Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 1.55 cfs with an annual volume limitation of 280.9 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 140.4 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for Little Giant Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit is to change the diversion point for use by the city to be located as described above in Application No. 2768-2. This application does not seek to authorize any new water appropriations from Rapid Creek. This application, if approved, will retain the June 14, 1878 priority date established by Vested Water Right No. 2383-2.

Application No. 2770-2 proposes to transfer a portion of South Side Ditch use of Rapid Creek natural flows appropriated under Vested Water Right No. 2040-2. The transfer is for Rapid Creek water historically used under Vested Water Right No. 2040-2 (Brian Dall shareholder) from South Side Ditch. The portion of Rapid Creek natural flows to be transferred to the city is 0.25 cfs with an annual volume limitation of 39.8 acre-feet, if diverted at the city's water treatment plant and infiltration galleries or 19.9 acre-feet, if stored in Pactola Reservoir. The existing diversion point on Rapid Creek for South Side Ditch is located in the SE 1/4 NW 1/4 Section 15-T1N-R8E. This permit is to change the diversion point for use by the city to be located as described above in Application No. 2768-2. This application does not seek to authorize any new water appropriations from Rapid Creek. This application, if approved, will retain the May 3, 1880 priority date established by Vested Water Right No. 2040-2.

SDCL 46-2A-4(10) provides that "if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2768-2, 2769-2, and 2770-2 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.

The Chief Engineer's recommendation with qualifications, the application, and staff report are available at

<http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

The Water Management Board will consider this application at 9:30 A.M. on October 5, 2017 in the Matthew Training Center, Joe Foss Building, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application after it reaches a conclusion based on facts of the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed 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 Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 25, 2017.

The petition may be informal, but shall be in writing and shall include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The October 5, 2017 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by September 25, 2017. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is September 25, 2017. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-46, and Board Rules ARSD 74:02:01:01 thru 74:02:01:22

Steven M. Pirmer, Secretary
Department of Environment and
Natural Resources

(Published once at a total approximate cost of \$147.37).



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Wayne Anderson
7900 Morris Lane
Rapid City SD 57701

John Buxton
5100 Reservoir Road
Rapid City SD 57703

Dear Mr. Anderson and Mr. Buxton:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you as a representative of Little Giant Ditch. Please let us know if there are other representatives of South Side ditch that you believe would find this information beneficial. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

David Lamb
South Side Ditch
4555 Reservoir Road
Rapid City 57703

Dear Mr. Lamb:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you as a representative of South Side ditch. Please let us know if there are other representatives of South Side ditch that you believe would find this information beneficial. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Kevin Ham
Rapid Valley Water Master
3724 Freedom Court
Rapid City SD 57701-7639

Dear Mr. Ham:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you because of your continuing interest in Rapid Creek water right issues. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Keith Ham
15567 Hammerquist Road
Caputa SD 57725

Dear Mr. Ham:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you because of your continuing interest in Rapid Creek water right issues. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Jerry Hammerquist
Rapid Valley Conservancy District
PO Box 26
Caputa SD 57725

Dear Mr. Hammerquist:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you because of your continuing interest in Rapid Creek water right issues. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Leslie Murphy
Dept. of Game, Fish and Parks
523 E. Capitol Avenue
Pierre SD 57501

Dear Leslie:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you because of Game, Fish and Parks continuing interest in Rapid Creek water right issues. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Rusty Schmidt
Rapid Valley Sanitary District
4611 Teak Drive
Rapid City SD 57703

Dear Mr. Schmidt:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you because of the Sanitary District's continuing interest in Rapid Creek water right issues. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 11, 2017

Ginger Wessel
Bureau of Reclamation
515 9th Street, Room 101
Rapid City SD 57701

Dear Ms. Wessel:

Enclosed is the report, recommendation and public notice for Water Permit Application Nos. 2768-2, 2769-2 and 2770-2 filed by Rapid City. The applications propose to transfer the use of a portion of Rapid Creek natural flows diverted from either South Side or Little Giant ditches from irrigation to municipal, rural water system and suburban housing purposes by the city. The public notice is scheduled to be published September 14, 2017 in the Rapid City Journal for a hearing to be held before the Water Management Board on October 5, 2017.

This information is being sent to you because of the Bureau of Reclamation's continuing interest in Rapid Creek water right issues. If you have any questions regarding DENR's review of the application, please contact Aaron Tieman at (605) 773-3352.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

enclosures

LAW OFFICES OF
BENNETT MAIN GUBBRUD & WILLERT
A PROFESSIONAL CORPORATION
618 STATE STREET
BELLE FOURCHE, SOUTH DAKOTA 57717-1419
TEL (605) 892-2011
FAX (605) 892-4084
Email: bellelaw@bellelaw.com

MAX MAIN*
DWIGHT A. GUBBRUD*
*LICENSED in SOUTH DAKOTA and WYOMING

Est. 1908

KELLEN B. WILLERT**
**LICENSED in SOUTH DAKOTA, WYOMING and COLORADO

September 22, 2017

Via E-mail Jeanne.Goodman@state.sd.us and U.S. Mail

Ms. Jeanne Goodman, Chief Engineer
DENR Water Rights Program
523 East Capitol
Pierre, SD 57501-3182

**RE: Water Permit Application Nos. 2768-2, 2769-2, and 2770-2 –
City of Rapid City; Our File No. 5797.004017.**

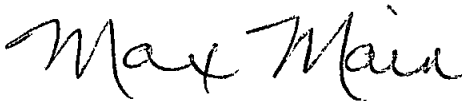
Dear Ms. Goodman:

I represent South Side Ditch & Water Company ("South Side") regarding the above-referenced Applications. South Side does not oppose the Applications, on the condition that the City of Rapid City assumes the transferring shareholder's liability and responsibility for the operation and maintenance of both the Little Giant Ditch and the South Side Ditch.

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

Sincerely,

BENNETT MAIN GUBBRUD & WILLERT, P.C.



Max Main

MM/hp

cc: Client (via email: Catherinerap@aol.com)
Wade E. Nyberg (via email: wade.nyberg@rcgov.org)
Ann F. Mines Bailey (via email: ann.mines@state.sd.us)
Dan Coon (via email: Dan.Coon@rcgov.org)

Gronlund, Eric

From: Goodman, Jeanne
Sent: Tuesday, October 03, 2017 10:24 AM
To: Gronlund, Eric; Mines-Bailey, Ann
Subject: FW: [EXT] South Side Ditch; Water Permit Application Nos 2768-2, 2769-2, and 2770-2.
Attachments: DOC100317-10032017085708.pdf

From: Max Main [<mailto:max@bellelaw.com>]
Sent: Tuesday, October 03, 2017 10:20 AM
To: Goodman, Jeanne
Cc: 'Catherine Steen'; 'Nyberg Wade'
Subject: FW: [EXT] South Side Ditch; Water Permit Application Nos 2768-2, 2769-2, and 2770-2.

Jeanne-

In my September 22 letter to you, I stated that South Side Ditch and Water Company did not oppose the above applications on the condition that the City of Rapid City assumes the transferring shareholder's liability for operation and maintenance of both the South Side Ditch and the Little Giant Ditch.

Attached is a copy of a March 18, 2017 letter from Dan Coon with the Rapid City Public Works Department confirming that Rapid City will pay its prorata share of the reasonable expenses of South Side Ditch Company.

Below is an email confirming that Rapid City will treat the Little Giant Ditch Company expenses the same as South Side's.

These communications from Rapid City are satisfactory to South Side, and South Side does not oppose the above applications.

Thanks, and let me know if you have any questions.

Max Main
BENNETT MAIN GUBBRUD & WILLERT, P.C.
Telephone: 605.892.2011

From: Nyberg Wade [<mailto:Wade.Nyberg@rcgov.org>]
Sent: Monday, October 02, 2017 7:37 PM
To: Max Main <max@bellelaw.com>
Cc: Coon Dan <Dan.Coon@rcgov.org>
Subject: RE: South Side Ditch

Hi Max

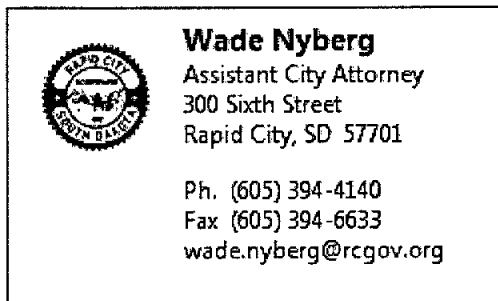
The City would treat the Little Giant Ditch Company the same as South Side Ditch. The City will pay its pro rata share of reasonable expenses related to ditch operation and maintenance. (The City would not be in a position to actually

perform maintenance on the ditch, as it does not own property through which the ditch travels. The South Side Ditch is adjacent to city-owned property, which provides access for the maintenance described in Mr. Coon's letter attached to your email.)

As I mentioned on the phone, the City has not, at least in recent history, received a bill related to Little Giant Ditch Company maintenance fees. The City spoke with Mr. Dail about the fees he paid to the ditch company, and it was expected that those costs would come with the transfer. Also, as we discussed, neither I, nor other city officers, can bind the City for future obligations where appropriations by the City Council are necessary. While that is the case, in the near term, I don't see that as an issue.

Please let me know if there is anything else I can provide.

Wade



From: Max Main [mailto:max@bellelaw.com]
Sent: Friday, September 29, 2017 4:04 PM
To: Nyberg Wade
Cc: attorneysoffice@rcgov.org
Subject: FW: South Side Ditch

Wade-

Could the City confirm the same arrangement for the Little Giant Ditch Company?

Thanks.

Max Main
BENNETT MAIN GUBBRUD & WILLERT, P.C.
Telephone: 605.892.2011

From: Nyberg Wade [mailto:Wade.Nyberg@rcgov.org]
Sent: Tuesday, September 26, 2017 9:14 AM
To: Max Main <max@bellelaw.com>
Subject: FW: South Side Ditch

From: attorneysoffice@rcgov.org [mailto:attorneysoffice@rcgov.org]
Sent: Monday, September 25, 2017 2:08 PM

To: Nyberg Wade
Subject: Message from KM_C368



CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701

Public Works Department Engineering Services Division

300 Sixth Street

Telephone: (605) 394-4154 Fax: (605) 355-3083

Web: www.rcgov.org

March 18, 2017

South Side Ditch and Water Company
6888 Redemption Road
Rapid City, SD 57703

Ref: Agreement on Water Right Transfers

Gentlemen,

Pursuant to recent conversations with members of the South Side Ditch and Water Company (South Side Ditch), the City of Rapid City (City) proposes to draft an agreement between the South Side Ditch and the City to resolve lingering issues between the two. The main points of the agreement are as outlined below.

The City of Rapid City agrees to:

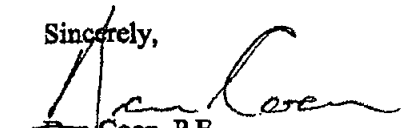
- To pay its pro-rata share of reasonable expenses directly related to operation and maintenance of the South Side Irrigation Ditch.
- Maintain the portion of the South Side Ditch on City property at the City's Water Reclamation Facility. The South Side Ditch will notify the City of the need for ditch maintenance and provide a reasonable time for the City to conduct the maintenance activities.

The South Side Ditch and Water Company agrees to:

- Not oppose acquisition of water rights from the South Side Ditch by the City of Rapid City nor oppose transfer of the diversion point or use of water for South Side Ditch water rights acquired or owned by the City. Upon request from the City the South Side Ditch shall provide a letter to the SDDENR stating it does not oppose the specified application. The letter should also state that water right transfers shall be in accordance with the laws of the State of South Dakota and as determined by the South Dakota Department of Environment and Natural Resources (SDDENR) and the State Water Management Board.

I am available to discuss this item at your convenience.

Sincerely,


Dan Coon, P.E.
Operation Management Engineer



EQUAL OPPORTUNITY EMPLOYER



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

OCT 13 2017

City of Rapid City
Dale Tech, Public Works Director
300 6th St
Rapid City SD 57701

Dear Mr. Tech:

Enclosed are Water Permit Nos. 2676-2, 2768-2, 2769-2 and 2770-2 authorizing construction of the city's water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Form 10's, *Notice of Completion of Works and Application of Water to Beneficial Use*, are enclosed. Please return the completed forms after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An information sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,


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

enclosures

2768-2



CITY OF RAPID CITY

Engineering Services

300 Sixth Street

Rapid City, SD 57701-5035

Telephone: (605) 394-4154 FAX: (605) 355-3083

www.rcgov.org

RECEIVED

OCT 23 2017

WATER RIGHTS
PROGRAM

TRANSMITTAL

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

Re: Notice of Completion of Works and Application of Water to Beneficial Use

Attached are the following:

- | | | | |
|---|---|--|---|
| ☐ Shop Drawing | ☐ Prints | ☐ Plans | ☐ Specifications |
| ☐ Copy of Letter | ☐ Change Order # | ☐ Notice to Proceed | |
| ☐ Contract | ☒ Other | Notice of Completion | |

Copies	Date	Number	Description

Transmitted:

- | | | |
|--|---|--|
| ☐ For review & approval | ☐ Approved as submitted | ☐ Resubmit ____ copies for approval |
| ☒ For your use | ☐ Approved as noted | ☐ Submit ____ copies for distribution |
| ☐ As requested | ☐ Returned for corrections | ☐ Return ____ corrected prints |
| ☐ For review and comment | ☐ Reviewed by: _____ | ☐ Prints Returned After Loan to Us |
| ☐ For bids due on _____ | | ☐ Other _____ |

Remarks:

Enclosed are Notice of Completion of Works and Application of Water to Beneficial Use for Water Permit Numbers 2768-2, 2769-2, 2770-2 and 2676-2.


 Dan Coon, PE
 Operations Management Engineer

10/19/17
 Date



EQUAL OPPORTUNITY EMPLOYER

RECEIVED

OCT 23 2017

WATER RIGHTS
PROGRAM**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**Date 10/19/2017

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

FROM: City of Rapid City

(name)

300 Sixth Street

(address)

Rapid CitySD57701

(city, state, zip)

(605) 394-4154

(phone)

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

Water Permit No. 2768-2 states that the water use system is to be constructed by

10/13/2022

(date)

, and water is to be put to beneficial use by

10/13/2022

(date)

The water use system was completed on 10/17/2017

(date)

Applying the water to beneficial use was completed on

10/17/2017

(date)

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

