

WATER PERMIT NO. 8458-3

Name of Applicant: Concrete Materials

Address: 1500 Sweetman Place, Sioux Falls SD 57104

Phone: 712 279-7570

Amount of Water Claimed: 2.0 cfs (1,452 AF)

Total Acres: NA

Source of Water Supply: groundwater inflow

Water to be used for: industrial use

County: Minnchaha

Type of Waste Disposal System:

Location: 2 miles north of Brandon SD

PRIORITY

Date Received: 10-23-20

Application/License Fee: \$ 2,050.00

Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks: dewatering a quarry

Diversion Point: S 1/2 SW 1/4 Sec 14-T102N-
R48W

Land to be Irrigated: NA

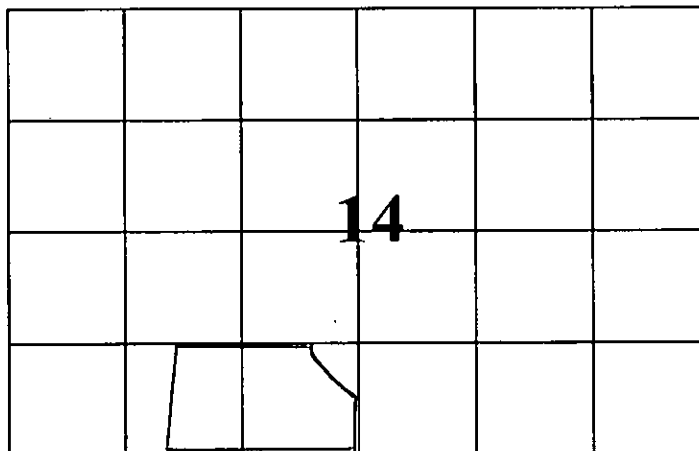
Depth of Well:

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:



Reviewed and the Number Assigned on: 10-27-20

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8458-3**

Date of first receipt of application October 23, 2020.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8458-3 to Concrete Materials, c/o Ron Klinker, 1500 N Sweetman Place, Sioux Falls SD 57104 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. 8458-3 appropriates 1,452 acre-feet of water annually at a maximum pump rate of 2.0 cubic feet of water per second for dewatering of the quarry for industrial use purposes. The source of water is Sioux Quartzite Aquifer and incidental surface runoff into the quarry located in the S 1/2 SW 1/4 Section 14-T102N-R48W. Dewatering will allow quarry operations and water may be used in an aggregate washing system. Discharge will be to the drainageway north of the proposed project. This site is located approximately 2 miles north of Brandon SD.
2. The water appropriated shall be used for the purpose of industrial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 8458-3 is January 11, 2021.
5. The date from which applicant may claim right is October 23, 2020.
6. One-fifth of the construction is to be completed on or before July 11, 2023.
7. All construction is to be completed on or before January 11, 2026.
8. Water is to be put to beneficial use on or before January 11, 2030.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

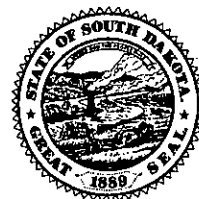
QUALIFICATIONS

1. The quarry is excavated into the Sioux Quartzite and will be located near domestic wells and other wells which may obtain water from the same aquifer. The owner of this Permit shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The Permit holder shall report to the Chief engineer annually the amount of water withdrawn from the Sioux Quartzite aquifer.
3. Water Permit No. 8458-3 authorizes a total consumptive annual diversion of 1,452 acre feet of water from the Sioux Quartzite aquifer.

WATER MANAGEMENT BOARD

By: Eric Gronlund
Eric Gronlund, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JAN 21 2021
date



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	(office use only)	
	No. <u>8458-3</u>	Hydrologic Unit <u>10170203</u>
	Basin <u>Big Sioux River</u>	
	Newspaper <u>Argus Leader</u>	

RECEIVED

OCT 23 2020

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. _____

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

1. Name to Appear on Water Permit Concrete Materials

Mailing Address 1500 N Sweetman Place Sioux Falls SD 57104
 (Address) (City) (State) (Zip Code)

Phone (712)279-7570 Mobile (712)577-6757 Email brooke.muhlack@kniferiver.com

2. Amount of water claimed 2.0 *CFS or 900 **GPM and 1,452 ***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 Groundwater inflow to quarry.

4. Location of point of diversion NE 1/4 SW 1/4 Sec 14-T102N-R48W County Minnehaha
 (example - 3 wells in SW 1/4 NE 1/4 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 - NW 1/4 section 12-T104N-R53W)

5. County or counties where water will be used Minnehaha6. Annual period during which water is to be used January-December

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)

See Attached.

I, Ron Klinker

Name of Person

Environmental Manager

Title (if applicable)

, the applicant, certify under

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)



4787 Shadow Wood Dr. NE
Sauk Rapids, MN 56379
(320) 251-9472
(320) 251-0011 FAX

PAID
OCT 23 2020
Ck# 42005378

October 16, 2020

Eric Gronlund, Chief Engineer
DENR Water Rights
523 E Capitol
Pierre SD 57501

RECEIVED

OCT 23 2020

WATER RIGHTS
PROGRAM

RE: Concrete Materials Corson Quarry

Dear Mr. Gronlund,

Attached please find an Application for Permit To Appropriate Water Within The State Of South Dakota. Concrete Materials was recently granted a Conditional Use Permit to develop a quartzite quarry on Concrete Materials property near Corson, SD.

As quarry dewatering is likely, some study was completed to determine potential inflow rates. It follows that these flowrates and volumes will require a water permit. As shown below, five flowrates and annual volumes were considered, three based on hydraulic conductivities, one on a permitting estimate, and finally on flowrate of receiving tributary.

Conductivity ft/day	Inflow (gpm)	gal/day	gal/yr	acre ft/yr
0.03	2	2,880	1,051,200	3
0.30	21	30,240	11,037,600	34
3.00	195	280,800	102,492,000	315
Permit est. ¹	500	720,000	262,800,000	807
2yr Trib. Rate ²	900	1,296,000	473,040,000	1,452

¹ Estimated dewatering rate used for land use permitting

² 2-year flowrate for south tributary that receives quarry dewatering

Attached as Exhibit 1 is a Technical Memorandum from Barr Engineering that the first three estimates are based. This study contemplates several phases of future quarry. As noted on the memo, Concrete Materials has permitted the first phase noted by Year 6-9 on the Figures.

Attached as Exhibit 2 is Memorandum from Barr Engineering discussing drainage upon which the last estimate is based. This memo determined the flowrate which equates to an average 2-year flow rate for the tributary to Split Rock Creek. This is the flowrate chosen for water permitting. This should ensure that required dewatering will remain within water permit parameters.



4787 Shadow Wood Dr. NE
Sauk Rapids, MN 56379
(320) 251-9472
(320) 251-0011 FAX

At some point in the future, some of the dewatering flow could be diverted to an aggregate washing system. This system will be located at the quarry. Exhibit 3 shows three mining maps. The point of diversion will be within the Open Quarry area. Discharge will be to the drainageway north of the quarry.

If you have any questions or require more information, please let me know. I may be reached at brooke.muhlack@kniferiver.com or 712-577-6757.

Sincerely,

Brooke Muhlack
Environmental Manager
Concrete Materials

Exhibit 1

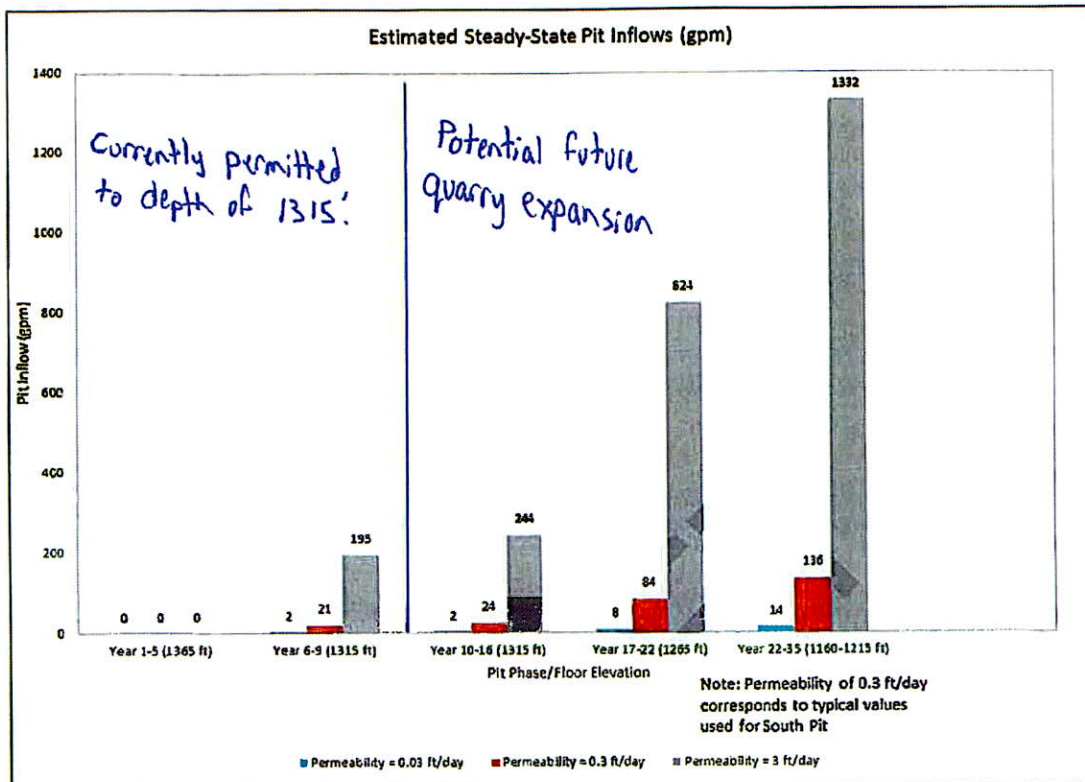


Figure 2 Predicted Inflows into Quarry for Various Phases, Elevations, and Hydraulic Conductivity Values

Inflows into the quarry will likely be more representative of the higher permeability (hydraulic conductivity) values for shallow floor depths and more representative of the lower values as the quarry deepens. This is because secondary porosity features, such as fractures and weathering in the quartzite, are more prevalent and interconnected at shallow depths and tend to become less frequent, smaller, and less connected with depth. The model results should be used to bracket the range in water-handling needs for the quarry operations.

Dewatering of the quarry will result in the lowering of the water table in the vicinity of the quarry. As the quarry deepens, the extent and magnitude of water-table lowering (i.e. "drawdown") will likely increase. The model was used to predict the approximate amount and extent of drawdown of the water table at three distances from the quarry. These are shown on Figure 3. Drawdown may not be uniform in all directions, due to aquifer heterogeneity and the seepage effects of rivers.

To: Billy Pollema, Concrete Materials
 From: Ray Wuolo
 Subject: Results of Corson Quarry Screening-Level Groundwater Inflow Modeling
 Date: January 11, 2017
 Page: 4

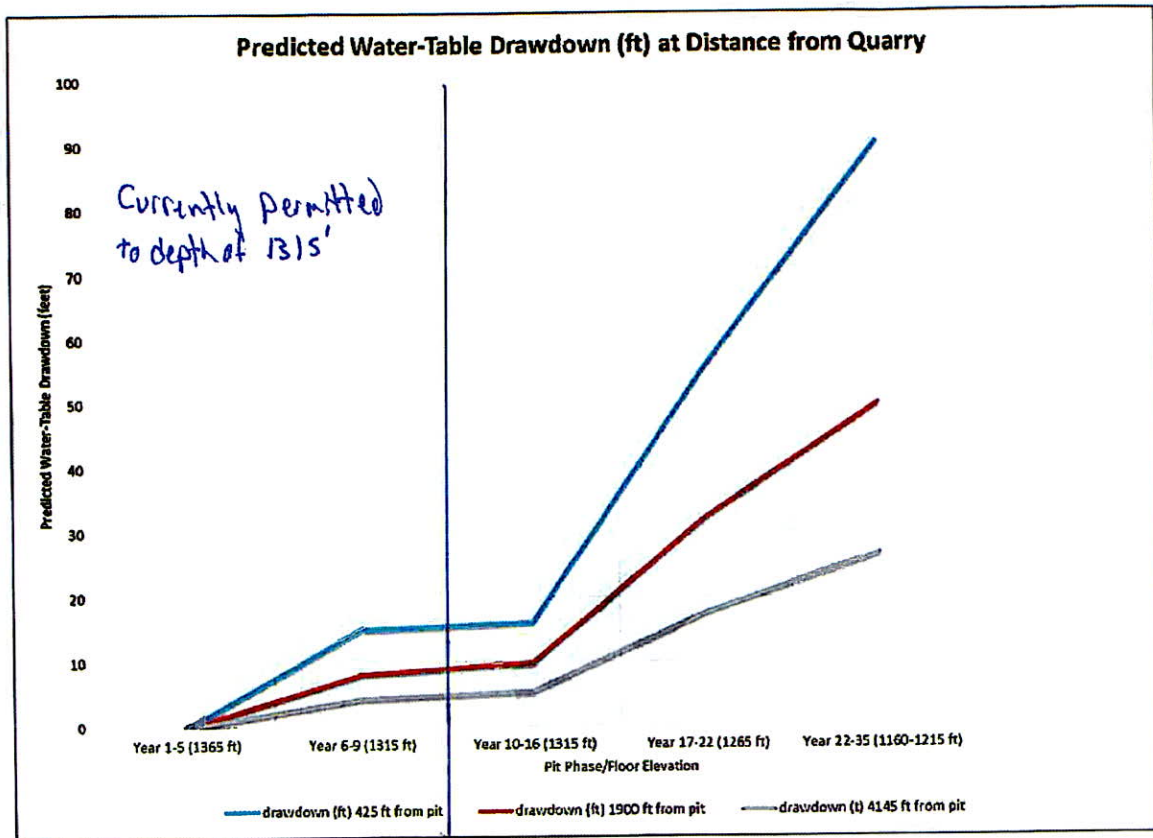


Figure 3 Predicted Water-Table Drawdown at Distance form Quarry

Summary

A groundwater-flow model was used as a screening-level tool to obtain estimates of groundwater inflows into the proposed Corson Quarry and the approximate amount of drawdown of the water table at various distances from the quarry. These results may be used for planning purposes in assessing the water handling needs of the quarry and the potential for water-table drawdown. Inflows into the quarry are dependent upon the water-transmitting characteristics of the Sioux Quartzite, as represented by hydraulic conductivity. For purposes of this screening-level evaluation, the value of hydraulic conductivity was varied by two orders of magnitude. Drawdown is less dependent on hydraulic conductivity, given the structure of the model.

If more precise and accurate estimates of the hydrologic effects of quarrying are required, it is likely that a more detailed and comprehensive model would be necessary, as well as site specific hydrologic data.

To: Billy Pollema, Concrete Materials
From: Ray Wuolo
Subject: Results of Carson Quarry Screening-Level Groundwater Inflow Modeling
Date: January 11, 2017
Page: 5

Much of the necessary data to develop a better estimate for both inflows and drawdown can be collected once mining commences and monitoring of the effects of dewatering can be performed.

References

Lindgren, R.J. and C.A. Niehus, 1991. Water Resources of Minnehaha County, South Dakota, USGS Water Resources Investigation Report, 9-4101, 80 p.

Exhibit 2

Memorandum

To: Ron Klinker – Knife River Corporation
From: Tom MacDonald, PE
Subject: Corson Quarry Phase I Mine Development Drainage Analysis
Date: July 31, 2020
Project: 41491007.01
c:

This memorandum provides a summary of hydrologic and hydraulic modeling that was performed to evaluate floodplain and drainage impacts associated with Knife River Corporation's proposed Phase I mine development in Minnehaha County, South Dakota (Figure 1, Figure 2 and Figure 3). The project includes mine development adjacent to existing streams and wetlands.

In order to proceed with the proposed development, a hydrologic and hydraulic study was performed to evaluate impacts to the 100-year flood elevation and impacts to flows in receiving streams, one of which has an identified Federal Emergency Management Agency (FEMA) Zone A floodplain (the South Tributary) and one that does not have an identified FEMA floodplain (the North Tributary). The Phase I development is adjacent to the South Tributary. The North Tributary is included in the study as it is tributary to a joined stream downstream of the BNSF railway and is situated on the Corson Mine property; it is otherwise unaffected by the Phase I development.

The hydrologic properties of the adjacent streams were evaluated using United States Geological Survey (USGS) regression equations for South Dakota, Subregion A (United States Geological Survey, 1998). The hydraulic properties of the streams were evaluated using U.S. Army Corps of Engineers (COE) HEC-RAS modeling software (United States Army Corps of Engineers, 2016). The modeling results indicate that the proposed Phase I mine development will not cause impacts to 100-year flood elevation for the adjacent streams.

1.0 Hydrologic Evaluation

1.1 Surface Runoff Evaluation

Flow rates for the streams were developed using the most recent USGS regression equations from 1998 (United States Geological Survey, 1998). All streams in the project area are within USGS South Dakota Subregion A, which ascribes the following equation to the 100-year flow rate:

$$Q_{100} = 362CA^{0.521}PH^{4.47} \text{ in cubic feet per second (cfs)}$$

In the above equation, CA is the drainage area in square miles, and PH is the precipitation intensity index. The USGS publishes the precipitation intensity index as isolines for the relevant subregions (United States Geological Survey, 1998). The watershed boundaries and channel slope for each stream were determined based on 2008 Minnehaha County LiDAR (Minnehaha County, 2008). Table 1 summarizes the regression parameters and 100-yr return frequency flow rate for the two impacted streams.

Table 1. USGS Regression Parameters and Return Frequency Flow Rate for 2-Year, 10-Year, and 100-Year Flood

Stream Segment	Drainage Area (square miles)	Precipitation Intensity Index (inches)	2-Year Flow Rate (cfs)	10-Year Flow Rate (cfs)	100-Year Flow Rate (cfs)
North Tributary	0.51	1.2	67	247	576
South Tributary - Existing	2.82	1.2	161	591	1404
South Tributary – Proposed	2.76	1.2	159	585	1388

A second method of hydrologic analysis was performed to confirm the 100-year flow rates determined using the USGS regression equations. The selected second method was a basin comparison with an existing gaged stream. A USGS stream gage is present on Split Rock Creek at Corson, SD (gage 06482610), downstream of the project, and includes the contributing areas of the two project tributaries (Figure 2). Flow frequency statistics were obtained from the USGS for this gage. Table 2 provides a comparison between the Split Rock Creek USGS gage and the North and South Tributary USGS regression results.

Table 2. USGS Regression Parameters and Return Frequency Flow Rates for USGS Gage 06482610 (Split Rock Creek) and comparison to the North and South Tributaries

Stream Segment	Drainage Area (square miles)	Precipitation Intensity Index (inches)	2-Year Flow Rate (cfs)	10-Year Flow Rate (cfs)	100-Year Flow Rate (cfs)
Gage 06482610 (Split Rock Creek at Corson)	475	1.18	2390	8910	26400
North Tributary (percentage of Split Rock Gage)	0.1%	NA	3%	3%	2%
South Tributary (percentage of Split Rock Gage)	0.6%	NA	7%	7%	5%

The results indicate the North and South Tributaries are 0.1% and 0.6% of the Split Rock Creek drainage area but are contributing 2% and 5% of the discharge to Split Rock Creek (based on the USGS regression equations), respectively. Considering that bedrock is present at or near the surface in portions of the North and South Tributary watersheds, it is feasible that these watersheds could be providing slightly higher percentage of the contributing flow. Figure 2 shows the watershed boundaries for the area contributing to the Split Rock Creek Gage at Corson, SD.

1.2 Groundwater Evaluation

The groundwater contribution to the area streams is not defined for existing conditions. A previous study by Barr evaluated potential groundwater inflow rates to the proposed mine pit (Barr, 2017). Based on results from this study, it is predicted that up to 500 gpm may enter the developed Phase I mine as groundwater.

1.3 Pit Dewatering

As the Phase I mine is developed, it will be necessary to dewater the excavation with pumping, along with appropriate treatment. The pumping rate will be maintained below the 2-year flow rate that is contributed to the South Tributary by the mine footprint, or approximately 2 cfs (900 gpm). The 2-year event serves as an approximation of the bankfull flow, which is considered the channel-forming flow from a geomorphic standpoint.

1.4 Perimeter Berms

It is assumed that perimeter berms will be constructed along the south and west boundaries of the mine. Berms and/or fencing will be provided on the remaining boundaries based on County input.

2.0 Hydraulic Evaluation

To evaluate potential impacts to flooding, a steady-state HEC-RAS model was developed using the flow rates shown in Table 1. The hydraulic models for all streams were constructed in HEC-RAS version 4.1.1 (United States Army Corps of Engineers, 2016), distributed by the COE. Topographic data used for existing conditions hydraulic modeling and floodplain mapping was developed from field survey and supplemented for off-site areas using topographic data obtained from the USGS.

The stream channels and overbanks located on the project site were surveyed by Sayre and Associates in 2016. All existing structures (bridges and culverts) were included in this survey and incorporated into the models. Areas outside of the 2016 survey data from Sayre and Associates used the 2008 Minnehaha County LiDAR data (Minnehaha County, 2008). All topographic data is in vertical datum NAVD 1988.

Figure 4 shows the location of all cross sections used in the existing conditions modeling. Cross sections were extracted from the topography using the program GeoHECRAS, distributed by CivilGeo Engineering Software, which merges geographic information systems (GIS) and HEC-RAS, distributed by the COE.

Analyses of topographic data, aerial imagery, and field visits were used to determine ineffective flow areas within each cross section (e.g., backwater areas, or areas of low flow). A topographic map (5-ft contours) of the project site is shown in Figure 4. As recommended by the HEC-RAS reference manual, ineffective flow areas were placed at a 1:1 ratio upstream and at a 4:1 ratio downstream of bridge and culvert openings. Appropriate Manning's roughness coefficients of 0.04 in the channel and 0.05 in the overbanks were used to model stream hydraulics (Chow, 1959), which are consistent with the vegetation observed during field visits.

The existing conditions 100-year flood elevations were used to help define the mine extents, so that the proposed mine footprint does not encroach on the existing floodplain area.

Table 3 summarizes 100-yr water surface elevations and impacts for the existing conditions and proposed Phase I development on the South Tributary. Cross section locations are summarized in Figure 4. The North Tributary will be unaffected by the Phase 1 mine development.

Table 3. South Tributary Existing and Proposed 100-yr Upstream Water Surface Elevations for Interim and Final Phases

HEC-RAS Cross Section	Existing Water Surface Elevation, ft (NAVD88)	Proposed Phase I Water Surface Elevation, ft (NAVD88)	Proposed Rise in WSEL, ft	Concrete Materials Property Yes/No
205	1392.49	1392.49	0.00	Yes**
206	1394.54	1394.54	0.00	Yes**
207	1395.75	1395.75	0.00	Yes**
208	1398.39	1398.39	0.00	No
209	1401.85	1401.85	0.00	No
210	1408.59	1408.59	0.00	No
211	1410.50	1410.50	0.00	No

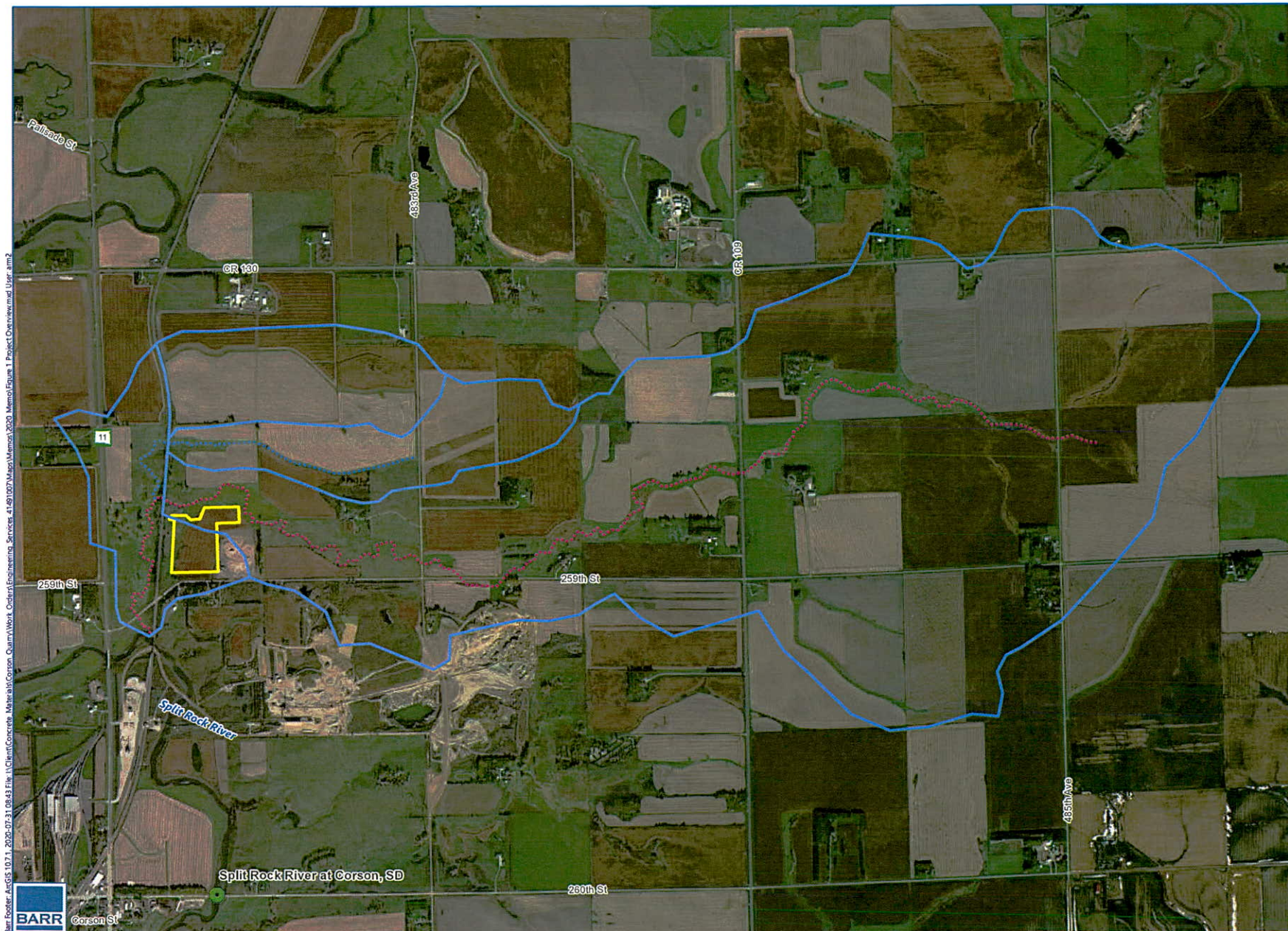
**Portions of cross sections 205, 206, and 207 are located both on and off of Concrete Materials property

3.0 Conclusions

From the hydrologic evaluation, it appears that the proposed Phase I mine development will not impact the adjacent South Tributary provided dewater pumping is maintained below 900 gpm so as to maintain 2-year flood discharge below that of existing conditions. For the floodplain evaluation, there will be no impact on 100-year flood levels provided the Phase I mine footprint does not encroach into the floodplain area based on HEC-RAS modeling that was performed. It should be noted that this area is revised from the approximate floodplain area shown in the effective Flood Insurance Rate Map. The revised area is more accurate because it is based on more detailed modeling and recent LIDAR data. 60% Drawings Issued for Permitting are attached for reference.

4.0 References

- Barr Engineering Co. (2017). Results of Corson Quarry Screening-Level Groundwater Inflow Modeling. Draft technical memorandum.
- Chow, V. T. (1959). *Open Channel Hydraulics*. New York: McGraw-Hill.
- Minnehaha County. (2008, May). 2008 Minnehaha and Lincoln Counties LiDAR, South Dakota.
- United States Army Corps of Engineers. (1994). *EM 1110-2-1601 Hydraulic Design of Flood Control Channels*. Washington, DC: Department of the Army.
- United States Army Corps of Engineers. (2016). *Hydrologic Engineering Center River Analysis System (HEC-RAS) Software, Version 4.1.1*. Retrieved from Hydrologic Engineering Center:
<http://www.hec.usace.army.mil/contact/>
- United States Geological Survey. (1998). *Techniques for Estimating Peak Flow Magnitude and Frequency Relations for South Dakota Streams*.



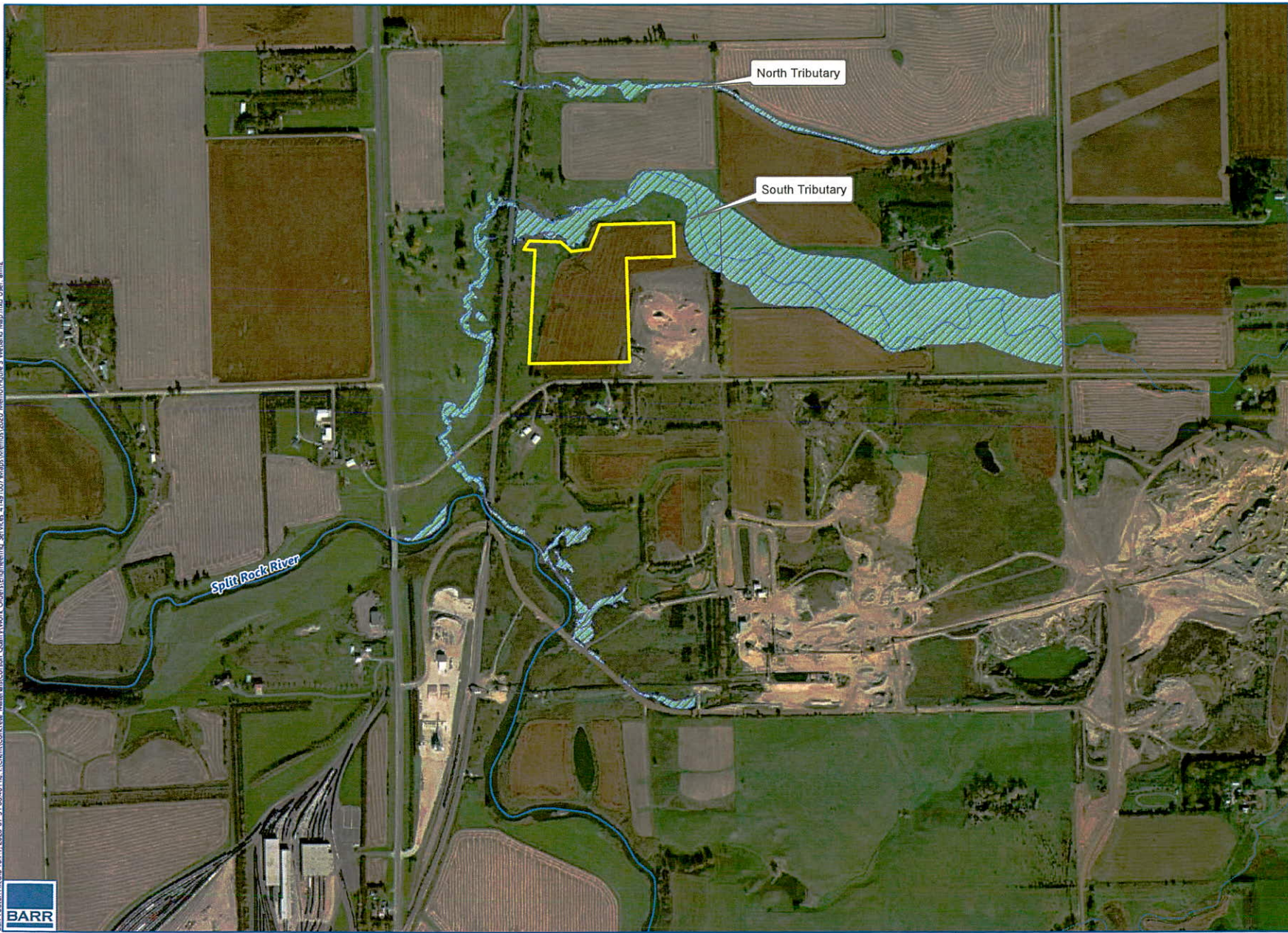
Intermittent Tributary
Contributing Drainage Area
USGS Stream Gage
Phase 1 Footprint
Existing North Intermittent Tributary
Existing South Intermittent Tributary

0 1,500
Feet

PROJECT OVERVIEW
Corson Quarry
Concrete Materials

FIGURE 1

Bar Encoder: Aug 05 10:11 2020 03:11 09:46 File: I:\Client\Concrete Materials\Corson Quarry\Wetland\WetlandMap.mxd User: am2



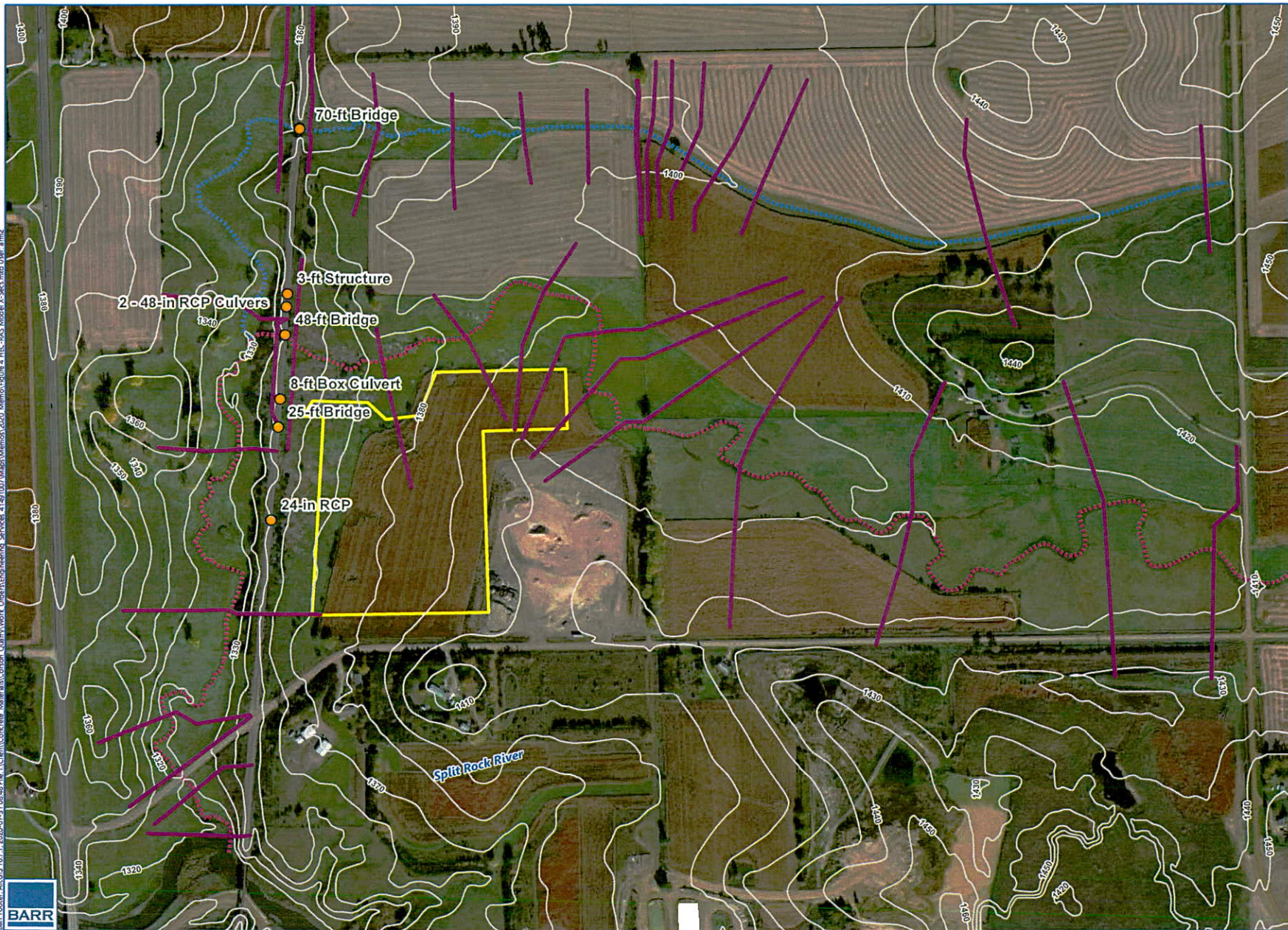
- 2016 Delineated Wetland (Sayre Assoc.)
- Phase 1 Footprint
- Perennial Stream or River
- Intermittent Stream, River, or Wash



WETLAND MAP
Corson Quarry
Concrete Materials

FIGURE 3

Bar_Editor_Aug01 10:71 2020-03-21 08:48 File: \\Client\Corson - Material\Corson - Corson\Work\Material\Corson - Corson\Figure 4 HEC-RAS Model X-Section Line .amx



Legend:

- Existing Rail Crossings
- HEC-RAS Cross Sections
- 5-ft Contours
- Phase 1 Footprint
- Existing North Intermittent Tributary
- Existing South Intermittent Tributary

Scale: 0 to 400 Feet

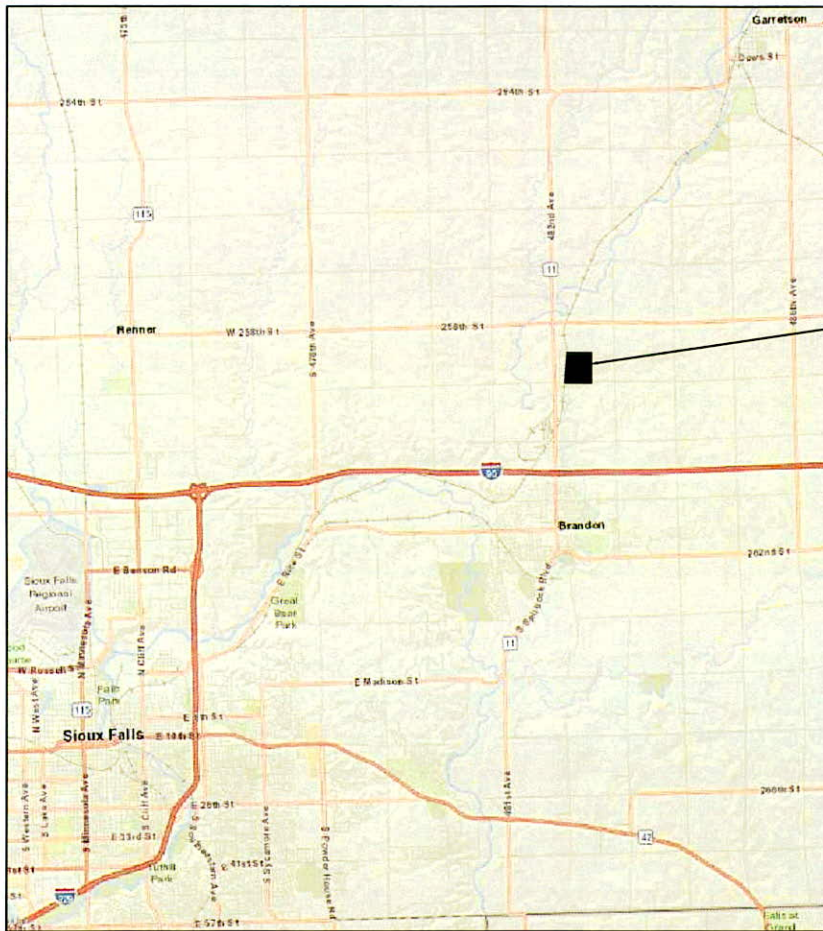
North Arrow

HEC-RAS MODEL X-SECS
Corson Quarry
Concrete Materials

FIGURE 4

**Attachment – 60% Drawings Issued for Permitting, Corson Quarry
Phase 1 Development**

**CONCRETE MATERIALS
CORSON QUARRY PHASE 1 DEVELOPMENT
CORSON, SOUTH DAKOTA**

VICINITY MAP 

PROJECT LOCATION MAP

INDEX OF SHEETS

G-01 . . .	TITLE SHEET AND SITE LOCATION MAP
G-02 . . .	EXISTING CONDITIONS - PLAN
G-03 . . .	PROPOSED PHASE 1 DEVELOPMENT - PLAN
G-04 . . .	STREAM REALIGNMENT OVERVIEW AND SEDIMENT CONTROL PLAN
C-01 . . .	EROSION CONTROL - DETAILS

DATA SOURCE:

BACKGROUND DATA FROM SAYRE AND ASSOCIATES, DRAWINGS 20826-P
& 20826-S. LIDAR WAS OBTAINED FROM USGS.

FLOODPLAIN BOUNDARY SHOWN IS THE ACTIVE FEMA ZONE A 100 YEAR FLOODPLAIN BOUNDARY. THE FEMA ZONE A IS A LIMITED DETAILED STUDY AND MODIFICATIONS OF THE FLOODPLAIN BOUNDARY MAY BE FEASIBLE THROUGH FEMA'S LETTER OF MAP CHANGE PROCESS

DELINEATED WETLAND BOUNDARIES FROM SAYRE AND ASSOCIATES, DRAWING "20826 CORSON QUARRY WETLANDS"

UTILITY LOCATIONS ARE APPROXIMATE VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION

PROJECT IS LOCATED AT MINNEHAHA COUNTY HIGHWAY 11, AND 259TH STREET. SECTION 14-102-48. 43°38'9.71"N 96°33'40.72" W

CONTACTS:

TOM MACDONALD - CIVIL ENGINEER
BARR ENGINEERING CO.
PHONE: 952-832-2729

EMAIL: TEM@BARR.COM

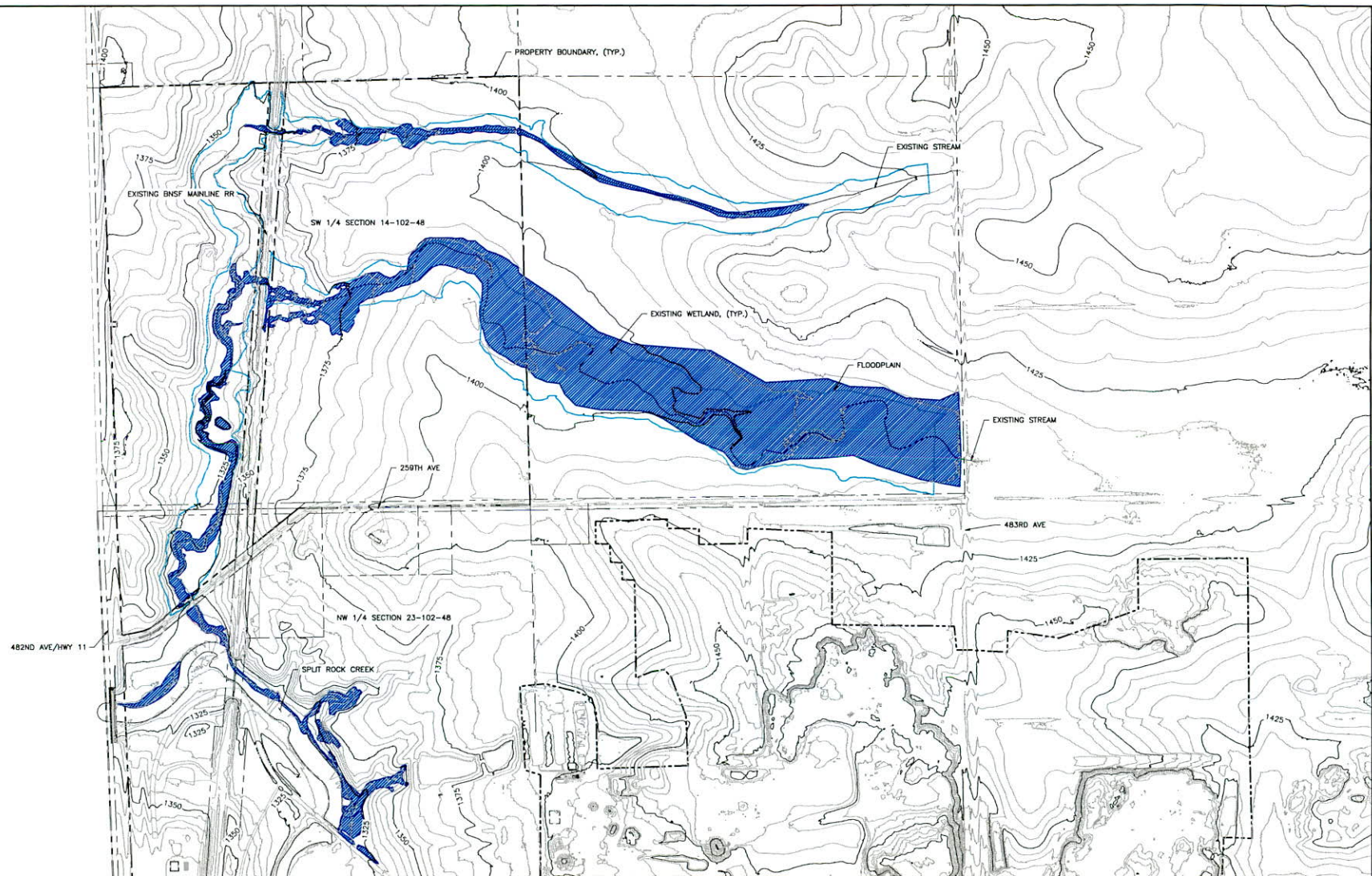
RON KLINKER - ENVIRONMENTAL AND LAND DEVELOPMENT MANAGER
KNIFE RIVER CORPORATION
PHONE: (320) 529-2725
EMAIL: RON.KLINKER@KNIFERIVER.COM

HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD 88

60% DRAWINGS ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION
7/21/2020

SOUTH DAKOTA ONE CALL:
CALL BEFORE YOU DIG.
811 (IN STATE)
1-800-781-7474 (OUT OF STATE)

CLIENT: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE SUITE 200 MINNEAPOLIS, MN 55435 PHONE: 1-800-832-2277 FAX: 1-800-832-2277 PROJECT OFFICE: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE SUITE 200 MINNEAPOLIS, MN 55435 PHONE: 1-800-832-2277 FAX: 1-800-832-2277 SCOPE: AS SHOWN DATE: 6/9/2017 DRAWN: AKH CHECKED: TEM DESIGNED: BARR APPROVED: TEM									
NO. BY CHK. APP. DATE REVISION DESCRIPTION RELEASED TO/ FOR A B C D E 1 2 3 DATE RELEASED									
CONCRETE MATERIALS SIOUX FALLS, SOUTH DAKOTA CORSON QUARRY PHASE 1 DEVELOPMENT CORSON, SD TITLE SHEET AND SITE LOCATION MAP DWG. No. G-01 REV. No. A									



60% DRAWINGS ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION
7/21/2020

CORSON QUARRY PHASE 1 DEVELOPMENT CORSON, SD
EXISTING CONDITIONS PLAN

[illegible]

To: Billy Pollema, Concrete Materials
From: Ray Wuolo
Subject: Results of Corson Quarry Screening-Level Groundwater Inflow Modeling
Date: January 11, 2017
Page: 2

The model employs a finite-difference grid over the model domain, with grid cells equal to 100 x 100 meters in the far-field and 25 x 25 meters in the vicinity of the proposed quarry. For purposes of this screening-level evaluation, the model's base elevation was set at 1,138 feet MSL (mean sea level), which is approximately 20 feet below the proposed maximum depth of the quarry. The model's top elevation was set above regional ground surface to ensure unconfined conditions in the model simulations. Constant-head cells were used to define the model's boundary conditions to the east and west using estimates of groundwater elevation and to induce a general northeast to southwest flow gradient, as described in Lindgren and Niehus (1991) for the Sioux Quartzite in Minnehaha County, SD. These boundaries were located approximately 2.5 miles away from the quarry to minimize boundary condition artifacts on the model results. These constant-head boundaries are surrogates for regional flow and the effects of infiltrating precipitation (as recharge). Split Rock Creek and a portion of the Big Sioux River were represented as River Package cells in the model and were the primary discharge zones. Secondary streams are primarily ephemeral and were not explicitly modeled.

A base condition was established for the model by simulating groundwater flow and water-table elevation over the model domain without the presence of a quarry. The quarry was sequentially added into the model to represent proposed mine phases and years of mining using the Drain Package in MODFLOW. The modeled elevations range from 1,365 feet MSL to a minimum elevation of 1,160 feet, MSL. Elevation changes were modeled in approximately 50-foot increments, accounting for expansions of the quarry footprint as proposed for the various years of operations.

Hydraulic conductivity is the primary variable controlling inflows into the quarry. All other conditions being unchanged, greater rates of groundwater inflow would be expected with higher values of hydraulic conductivity (i.e. permeability). Because values of hydraulic conductivity can be quite variable, a range of two orders of magnitude was evaluated. Based on previous modeling work at the South Pit, a mean value of 0.3 feet/day was assumed for the bulk hydraulic conductivity of the Sioux Quartzite. Values of 0.03 feet/day and 3.0 feet/day were used to evaluate sensitivity and to provide an approximate range of expected inflows.

In addition to quarry inflow rates, estimates of water-table drawdown were also obtained. Given the structure of the model (i.e. the use of constant heads to establish regional gradients and infiltration effects, the predicted drawdown is relatively insensitive to changes in hydraulic conductivity in the model. Drawdown, however, is sensitive to the dewatering elevation in the quarry. Drawdown at three locations from the quarry were extracted from the model results to illustrate the general effects of drawdown.

Model Results

The predicted groundwater inflows into the pit for various depths and hydraulic conductivity values are shown on Figure 2.

Technical Memorandum

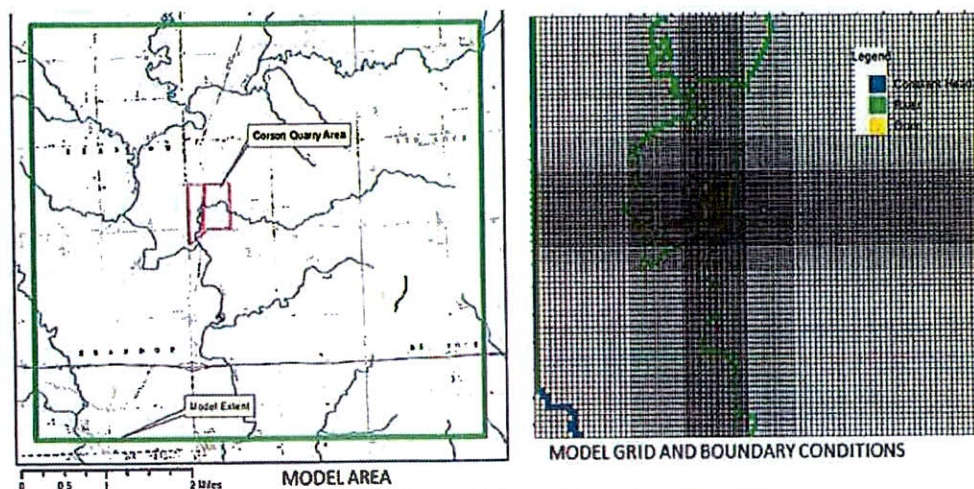
To: Billy Pollema, Concrete Materials
From: Ray Wuolo
Subject: Results of Corson Quarry Screening-Level Groundwater Inflow Modeling
Date: January 11, 2017
Project: 42491007.00
C: Brian Anderson, Barr Engineering Co.

Introduction

This Technical Memorandum summarizes the methods and finding of groundwater-flow modeling of the proposed Corson Quarry near Sioux Falls, SD. The purpose of the model is to develop initial estimates of groundwater inflows into the quarry at various proposed mining depths, using estimated ranges of hydraulic conductivity of the Sioux Quartzite, which is the proposed mined material. This model and the results of the modeling, are at a "screening level", using available data and employing assumptions to expedite estimates of inflows. It uses ranges of hydraulic conductivity, as interpreted from the South Pit mine area and it does not employ vertical or lateral homogeneity. If more precise estimates are required, the model would need modifications and site-specific data would need to be collected. However, for planning-level purposes, the model results are reliable because they employ likely ranges of hydraulic conductivity, use the planned mine depths and extent, and incorporate regional surface-water features.

Methodology

A single-layer, two-dimensional groundwater flow model was constructed using the USGS's MODFLOW-2000 code in the graphical user interface Groundwater Vistas. The areal extent of the model is shown on Figure 1.





Corson Quarry Site

MINING PLAN COVER PAGE

Legend

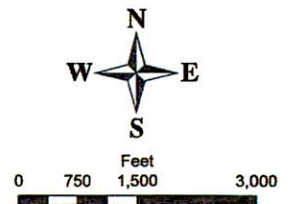
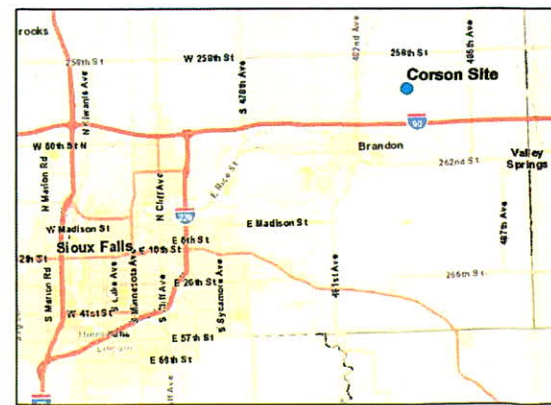
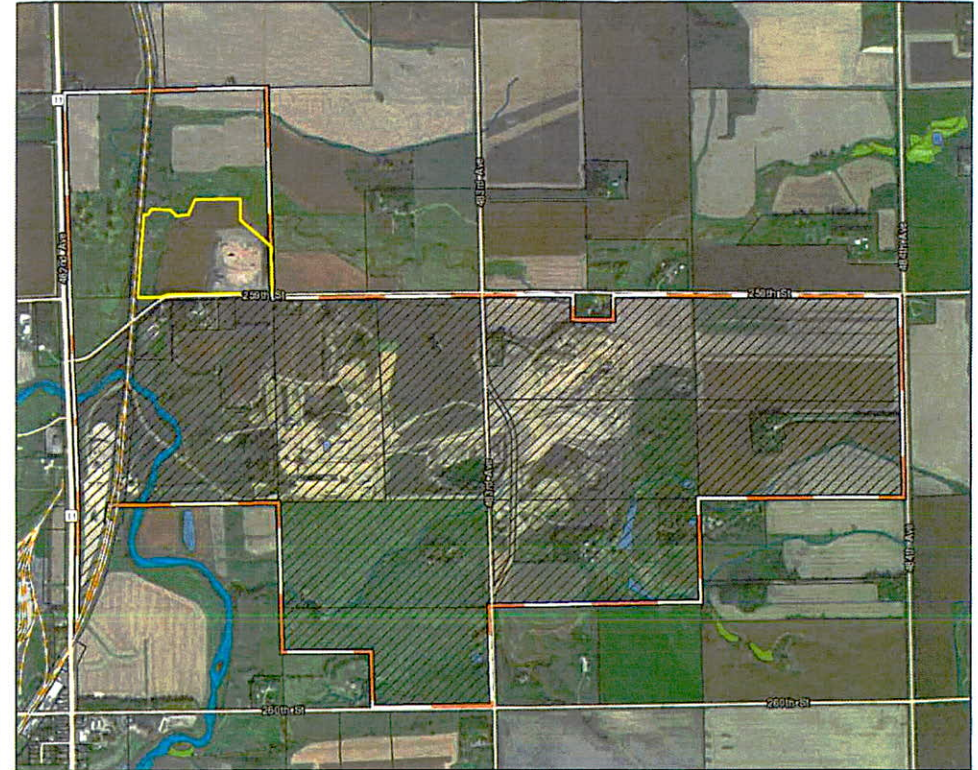
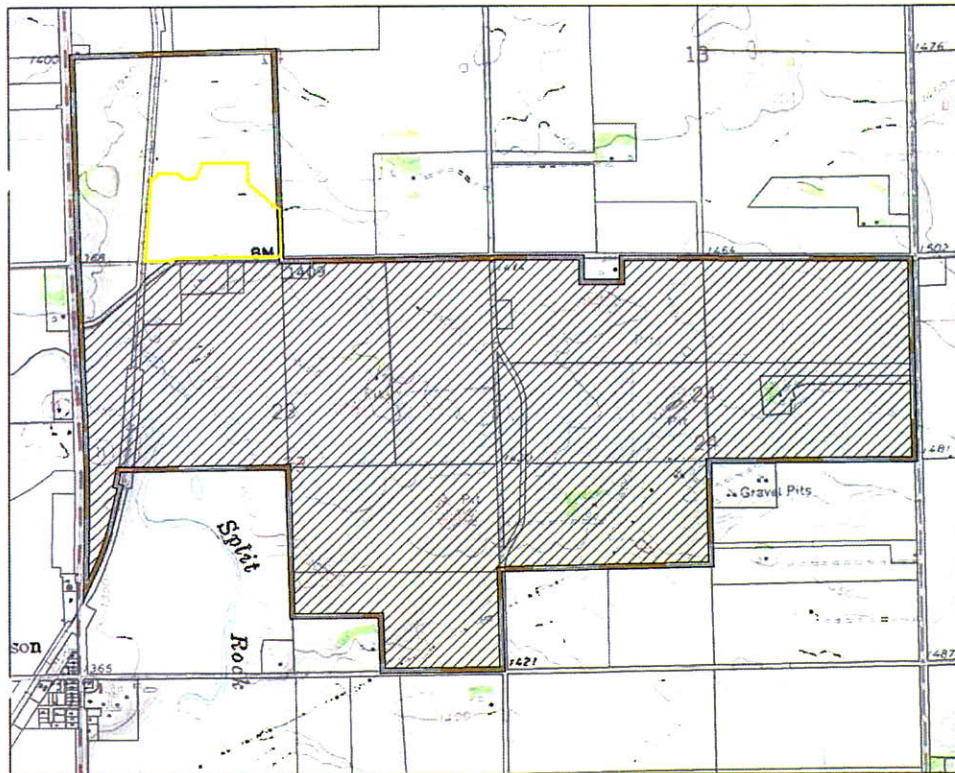
- Permit Area
- Sweetman Property
- Previously Permitted
- County Parcels

Mining Area Property Description

The property described below is a generalized description of where mining operations will occur within the Southwest ¼ of Section 14, Township 122N, Range 48W, Brandon Township, Minnehaha County, South Dakota

USFWS Wetland Type

- | | |
|-----------------|-------------------------------------|
| Freshwater Pond | Estuarine & Marine Deepwater |
| Lake | Estuarine & Marine Wetland |
| Riverine | Freshwater Emergent Wetland |
| Other | Freshwater Forested / Shrub Wetland |

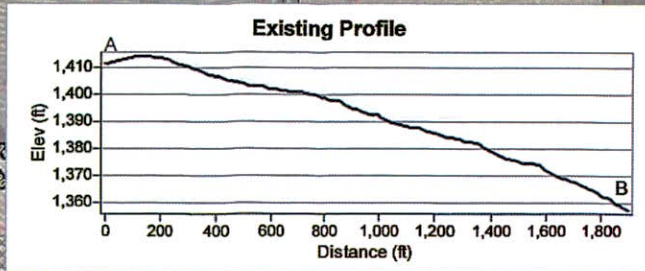
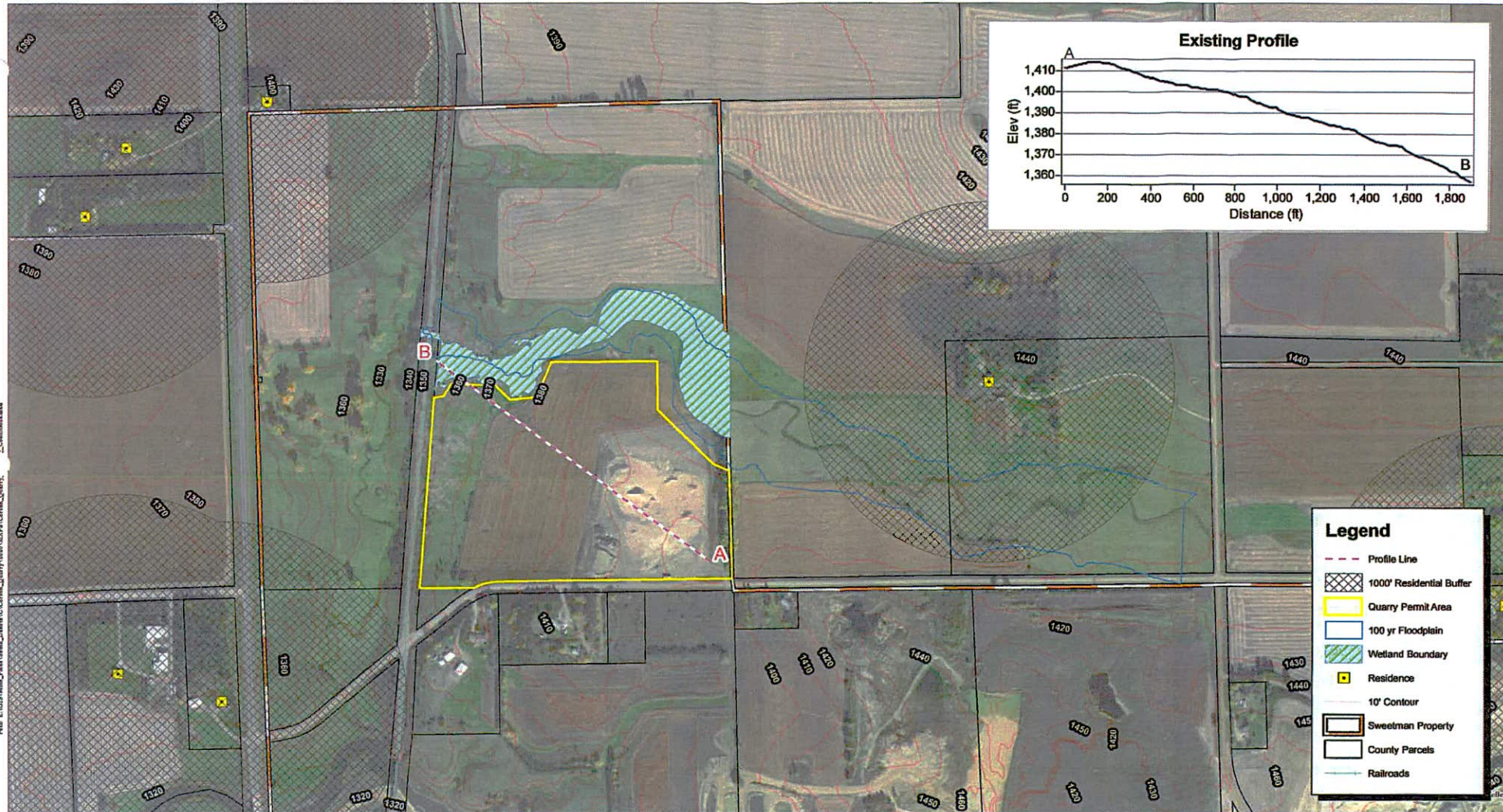


Purpose
An operations and processing report regarding the aforementioned site location.
From Knife River Corporation

Map Author: Jordan Keller

Basemap Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, Copyright © 2013 National Geographic Society, Imagery © 2013, Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Esri (Taiwan), IGN, © OpenStreetMap contributors, and the GIS User Community
Basemap: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Date: 7/24/2020



- Legend**
- Profile Line
 - 1000' Residential Buffer
 - Quarry Permit Area
 - 100 yr Floodplain
 - Wetland Boundary
 - Residence
 - 10' Contour
 - Sweetman Property
 - County Parcels
 - Railroads

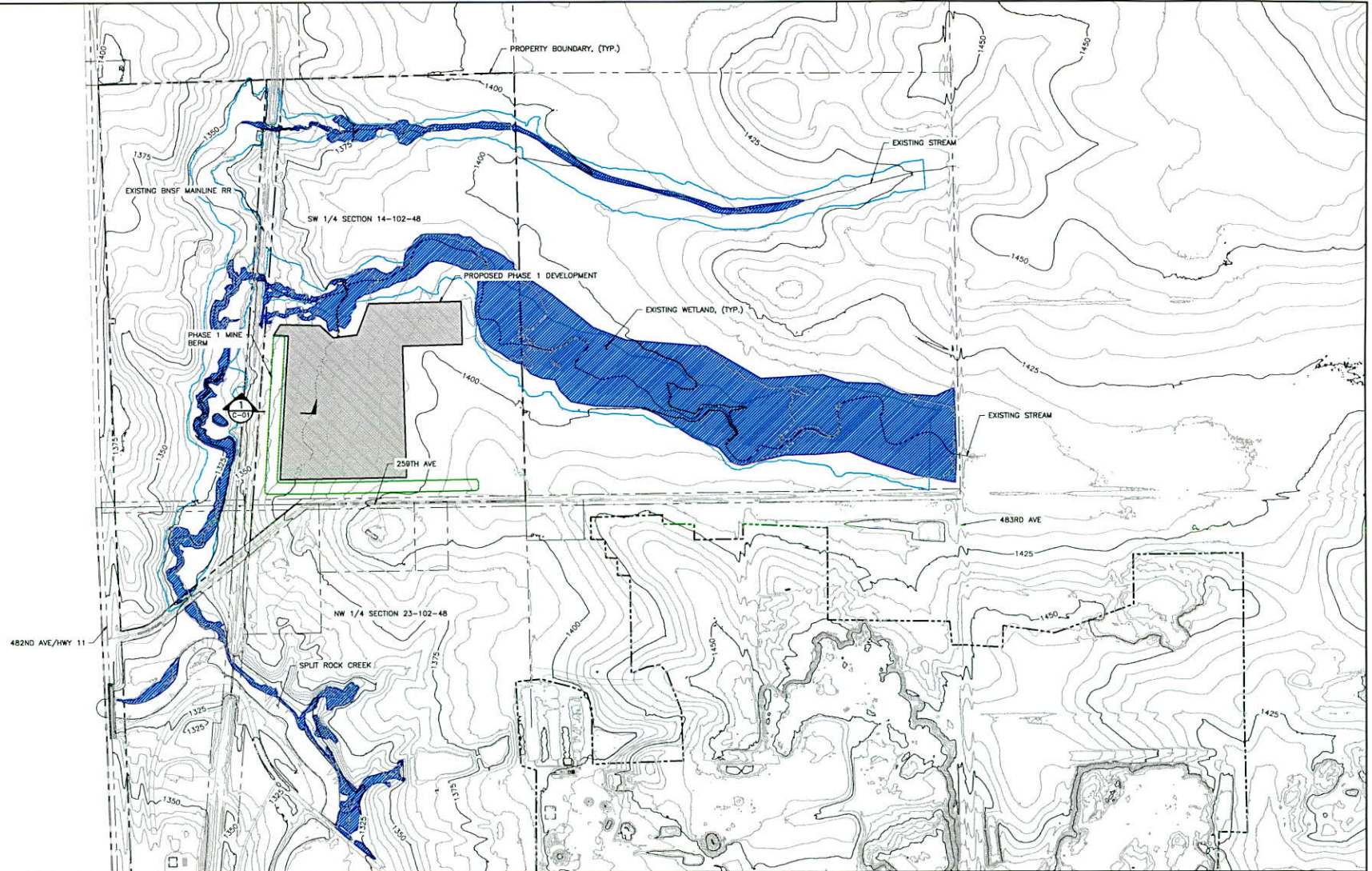
Corson Quarry Site

Existing Conditions

T102N, R48W
Brandon, SD



C:\SDR\6550\6550.dwg PLOT DATE: 7/20/2020 8:01 PM

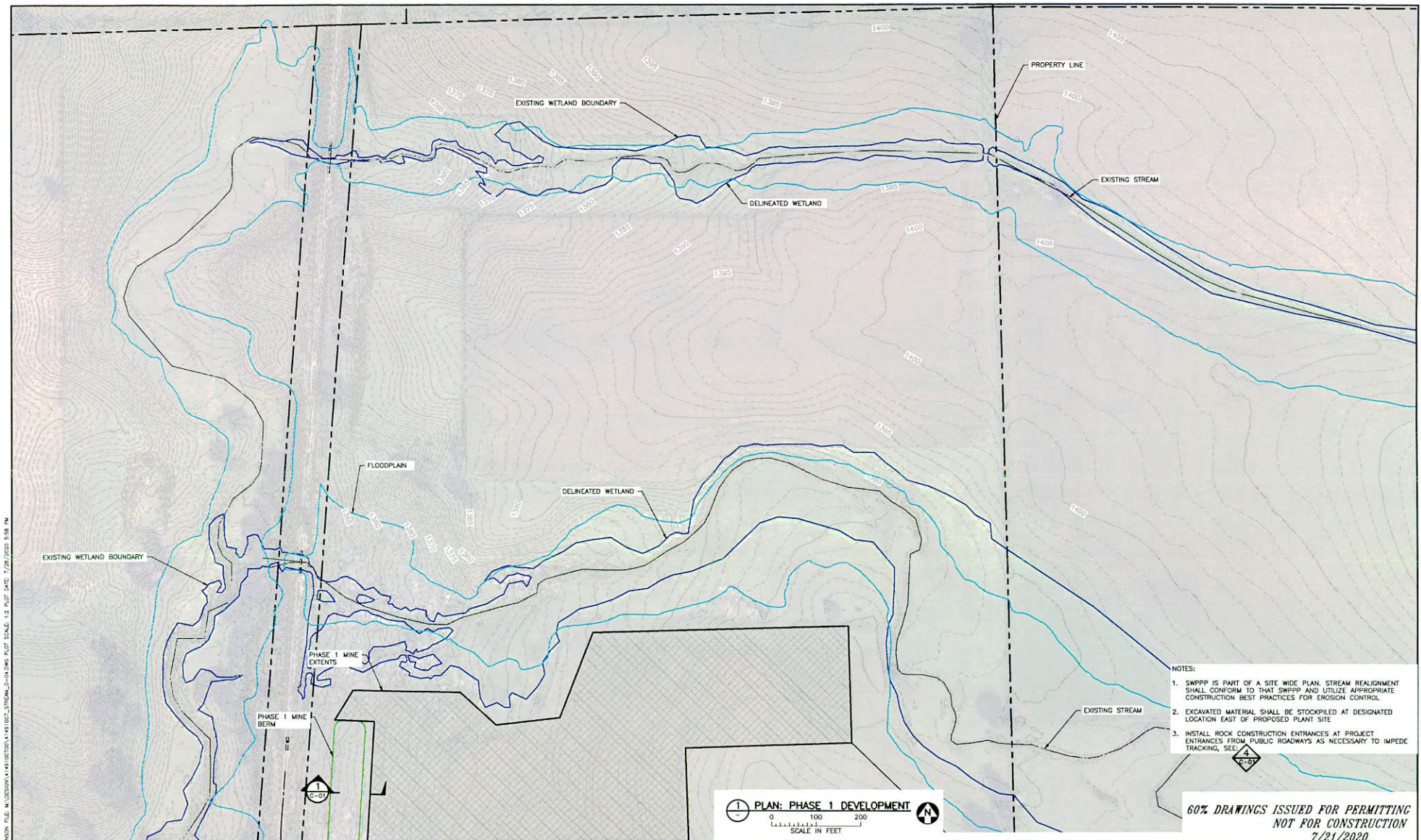


1 PLAN: PHASE 1 DEVELOPMENT
0 300 600
SCALE IN FEET

60% DRAWINGS ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION
7/21/2020

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				BD				BARR ENGINEERING CO.				Date				CORSON, SD				41/49-1007.01			
				CONSTRUCTION				4300 MARKETPOINTE DRIVE				Drawn								CLIENT PROJECT No.			
				PERMITTING				SUITE 200				Checked											
								MINNEAPOLIS, MN 55435				TEM											
								Corporate Headquarters				Designed											
								Minneapolis, Minnesota				BARR											
								Ph: 1-800-632-2277				Approved											
								Fax: (612) 632-2801															
								www.barr.com															
				RELEASED TO/FOR				DATE RELEASED												DWG. No.			
																				G-03			
																				REV. No.			
																				A			

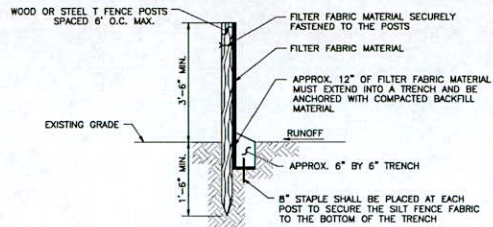
CADD USER: GREG JOHNSON, FILE: M:\J003501\4149-1007-01\STREAM_C-04.DWG, PLOT SCALE: 1:8, PLOT DATE: 7/28/2020 5:58 PM



- NOTES:
1. SWPPP IS PART OF A SITE WIDE PLAN. STREAM REALIGNMENT SHALL CONFORM TO THAT SWPPP AND UTILIZE APPROPRIATE CONSTRUCTION BEST PRACTICES FOR EROSION CONTROL.
 2. EXCAVATED MATERIAL SHALL BE STOCKPILED AT DESIGNATED LOCATION EAST OF PROPOSED PLANT SITE.
 3. INSTALL ROCK CONSTRUCTION ENTRANCES AT PROJECT ENTRANCES FROM PUBLIC ROADWAYS AS NECESSARY TO IMPEDE TRACKING, SEE: 

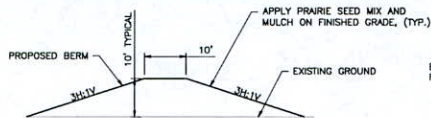
60% DRAWINGS ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION
7/21/2020

										CLIENT		12/26	12/26							 Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-832-2277 Fax: (612) 832-2601 www.barr.com	Scale		AS SHOWN	CONCRETE MATERIALS SIOUX FALLS, SOUTH DAKOTA				CORSON QUARRY PHASE 1 DEVELOPMENT CORSON, SD				BARR PROJECT No. 41/49-1007.01	
										BID								CLIENT PROJECT No.															
										CONSTRUCTION																							
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																	Designed		BARR														
																	Approved		TEM														

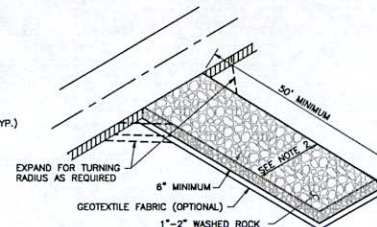


1 DETAIL: SILT FENCE
NOT TO SCALE

NOTE: THIS DETAIL APPLIES TO ALL REACHES OF SILT FENCE



1 SECTION: PHASE 1 BERM
C-53.04 NOT TO SCALE



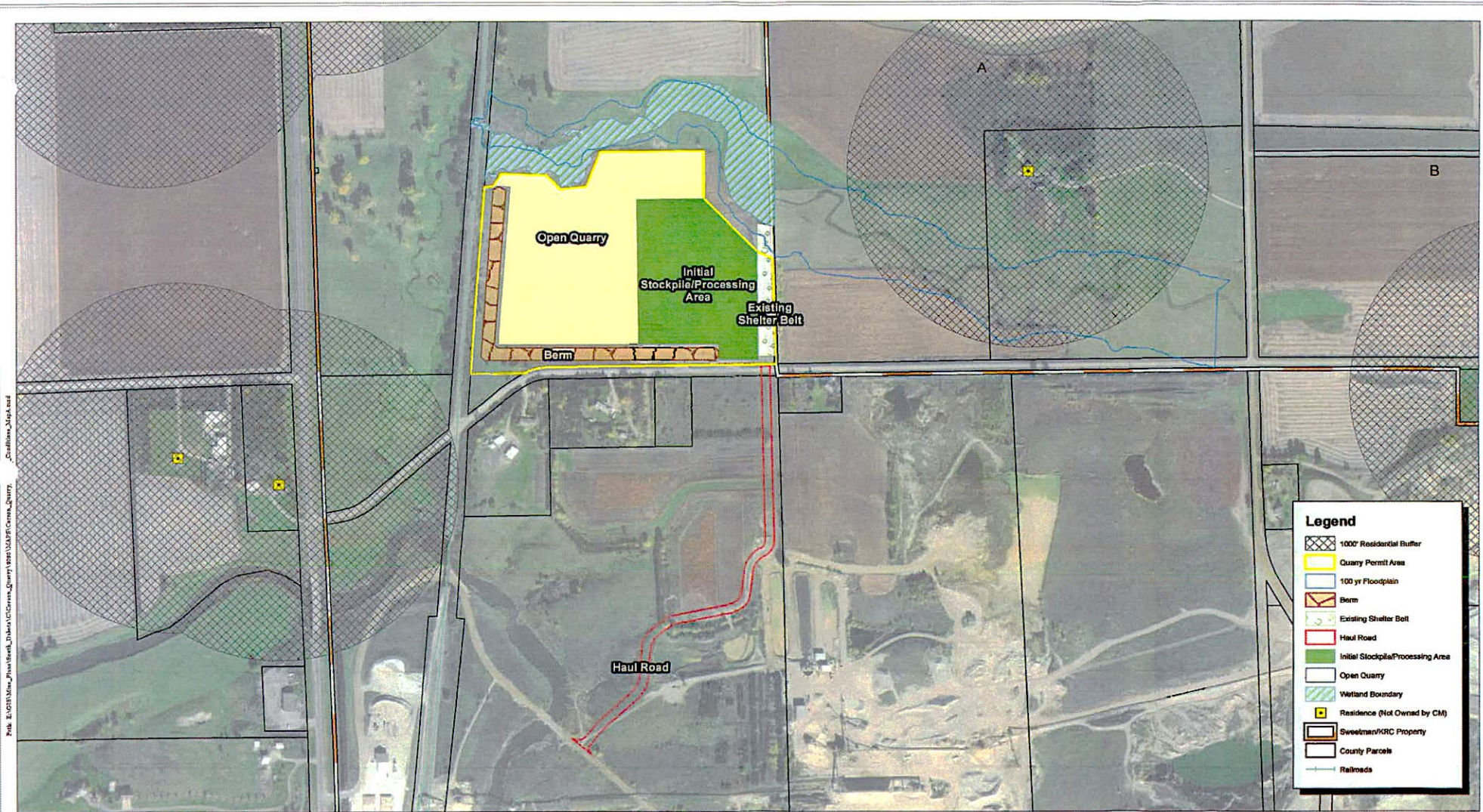
4 DETAIL: STABILIZED CONSTRUCTION ACCESS
NOT TO SCALE

- NOTES:
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 2. MINIMUM WIDTH FOR 1 WAY TRAFFIC = 14', 2 WAY TRAFFIC = 24'
 3. CONSTRUCTION ROAD SHALL HAVE A 1' WIDE SHOULDER.
 4. MAXIMUM CONSTRUCTION ROAD SIDESLOPE = 2H:1V
 5. ENTRANCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIRED OR REPLACED AS REQUIRED TO PREVENT TRACKING OFFSITE
 6. ENTRANCE SHALL BE REMOVED IN CONJUNCTION WITH FINAL GRADING AND SITE STABILIZATION

60% DRAWINGS ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION
7/21/2020

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Exhibit 3



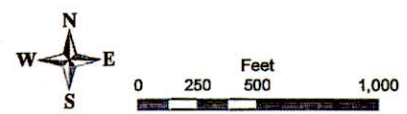
Legend

- 1000' Residential Buffer
- Quarry Permit Area
- 100 yr Floodplain
- Berm
- Existing Shelter Belt
- Haul Road
- Initial Stockpile/Processing Area
- Open Quarry
- Wetland Boundary
- Residence (Not Owned by CM)
- Sweetman/RRC Property
- County Parcels
- Railroads

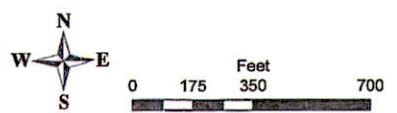
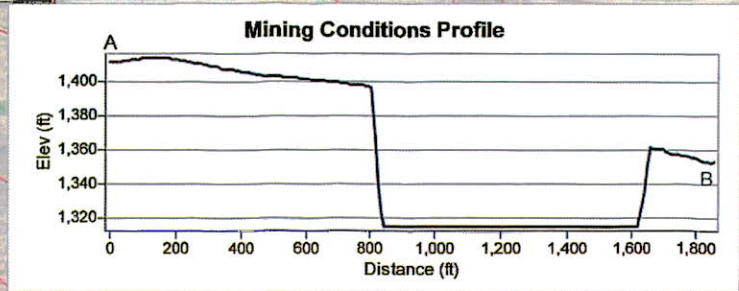
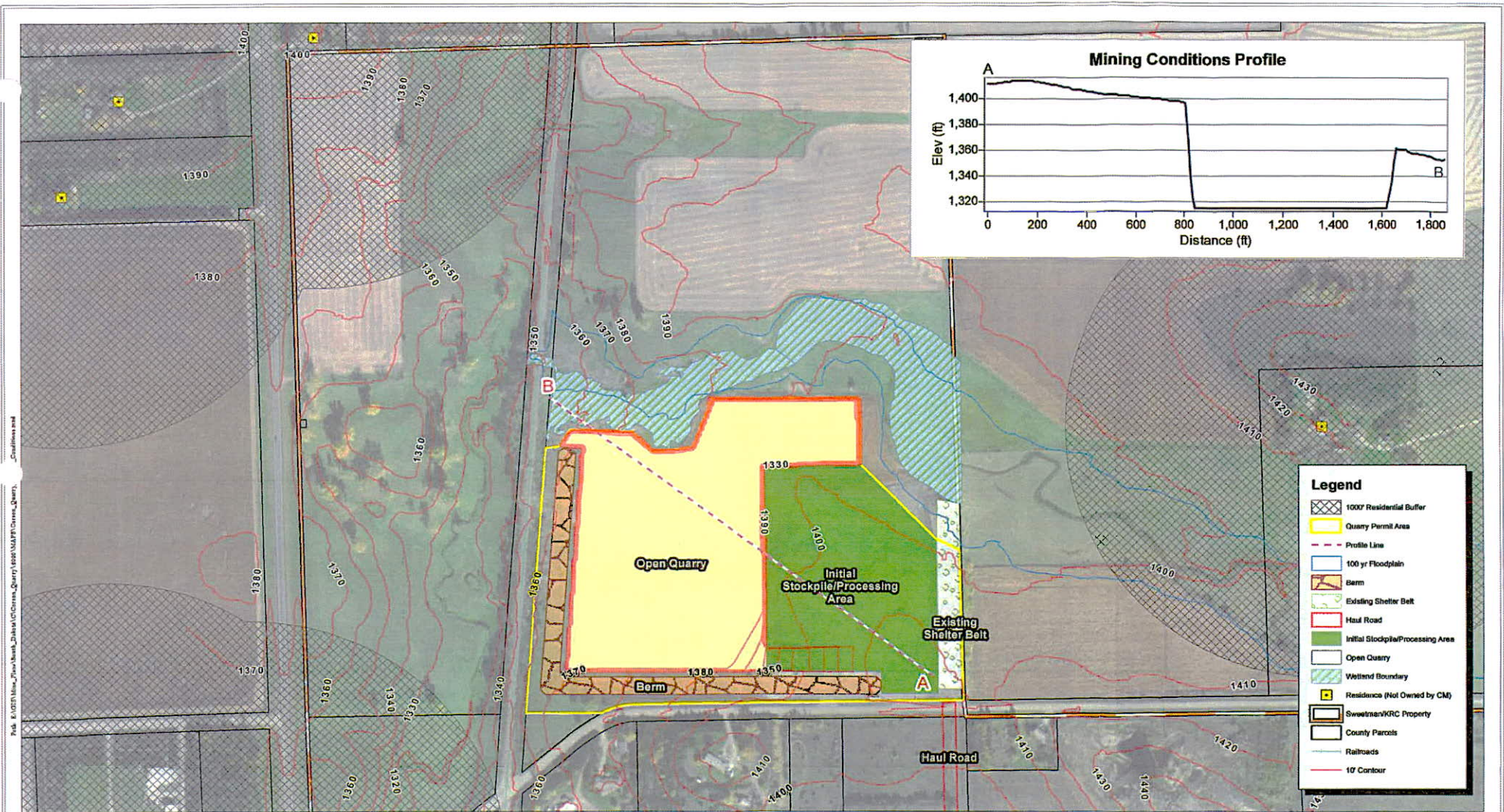
Corson Quarry Site

Mining Conditions: Map A

T102N, R48W
Brandon, SD



Map Author: Jordan Keller



Corson Quarry Site
Mining Conditions: Map B
T102N, R48W
Brandon, SD



Map Author: Jordan Keller

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Environment and Natural Resources

Date October 23 2020

RECEIVED OF Concrete Materials, 1500 N Sweetman Place, Sioux Falls SD 57104

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

Fee for Application for Permit No. <u>8458-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$1,850.00
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>8458-3</u>	\$200.00
Fee for Filing Transfer Form _____	\$
Fee for _____	\$
Fee for Issuing New Well Driller's License No. _____	\$
Fee for Renewal of Well Driller's License No. _____	\$
Fee for Issuing Well Pump Installer's License No. _____	\$
Fee for Renewal of Well Pump Installer's License No. _____	\$
(Any Other Work Provided by Law)	
TOTAL	\$2,050.00

By _____

Eric Gronlund

Chief Engineer

KS



DENR
SOUTH DAKOTA

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. 8458-3, Concrete Materials

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. 8458-3, Concrete Materials, c/o Ron Klinker, 1500 N Sweetman Place, Sioux Falls SD 57104.

The Chief Engineer is recommending APPROVAL of Application No. 8458-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualification:

1. The quarry is excavated into the Sioux Quartzite and will be located near domestic wells and other wells which may obtain water from the same aquifer. The owner of this Permit shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The Permit holder shall report to the Chief engineer annually the amount of water withdrawn from the Sioux Quartzite aquifer.
3. Water Permit No. 8458-3 authorizes a total consumptive annual diversion of 1,452 acre feet of water from the Sioux Quartzite aquifer.

See report on application for additional information.

Eric Gronlund, Chief Engineer
December 21, 2020

NOTE: The quarry being an excavation into the Sioux Quartzite aquifer is not considered an adequate well and therefore will not be afforded protection under water rights law should fluctuation in the water levels occur for obtaining water for the aggregate washing system.

REPORT ON WATER PERMIT APPLICATION NO. 8458-3

Concrete Materials

December 21, 2020

Water Permit Application No. 8458-3 requests the appropriation of 1,452 acre-feet of water annually at a maximum pump rate of 2 cubic feet per second (cfs) for dewatering of a quarry for industrial use purposes. The source of the water is the Sioux Quartzite aquifer and incidental runoff into the quarry located in the S ½ SW ¼ Section 14 T102N-R48W. Dewatering will allow quarry operations, and water may be used in an aggregate washing system. Discharge will be to the drainageway north of the proposed project. The site is located approximately 2 miles north of Brandon, SD.

Aquifer: Sioux Quartzite (SOUX)

Hydrogeology

The Sioux Quartzite consists of pink and reddish to tan, siliceous, fine- to coarse-grained, ironstained orthoquartzite with minor metamorphosed conglomerate and mudstone layers (Martin, Sawyer, Fahrenbach, Tomhave, & Schulz, 2004). The Sioux Quartzite underlies portions of southeastern South Dakota, southwestern Minnesota, and northwestern Iowa with an estimated thickness greater than 1,000 ft (Southwick, 1984; Martin, Sawyer, Fahrenbach, Tomhave, & Schulz, 2004).

The Sioux Quartzite aquifer occurs in areas of the Sioux Quartzite, where extensive fractures and weathering zones allow for the transmission of water. The Sioux Quartzite aquifer has very low primary porosity, so water movement in the aquifer is through secondary porosity (fractures, joints, and faults). Secondary porosity for the Sioux Quartzite aquifer is highly variable and uneven and therefore is site-specific.

Water Right No. 6393-3 is approximately 0.61 miles to the south of the proposed diversion point and included a well completion report that indicated quartzite (Sioux Quartzite) beginning at 110 feet below grade with a static water level of 20 feet below grade at the time of completion (September 16, 2005) indicating the well was confined at the time of completion (Water Rights, 2020b).

South Dakota Codified Law 46-2A-9

Pursuant to SDCL 46-2A-9, "A permit to appropriate water may be issued only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest." This report will address the availability of unappropriated water and potential impacts to existing rights within the Sioux Quartzite aquifer.

Water Availability

SDCL 46-6-3.1 is considered when evaluating the probability of unappropriated water from an aquifer and states, “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.” The Sioux Quartzite aquifer is older and lower than the Greenhorn Formation; however, there is not a water distribution system involved as defined by SDCL 46-16(17). Therefore, the balance of aquifer recharge and withdrawal must be taken into consideration.

Hydrologic Budget

Recharge

The Sioux Quartzite aquifer receives recharge from the infiltration of precipitation, flow between aquifers, and streamflow on the outcrop area (Niehus, 1997). There are no average annual recharge estimates available for the Sioux Quartzite aquifer. Therefore, data is not available to quantitatively compare the estimated average annual recharge to the estimated average annual withdrawal in the Sioux Quartzite aquifer.

Withdrawals

Withdrawals from the Sioux Quartzite aquifer occur through evapotranspiration in areas where the aquifer is near land surface, leakage to other aquifers, and through well withdrawals. Currently, there are 66 water rights/permits appropriating water from the Sioux Quartzite aquifer with two pending applications (Water Permit Application No. 8445-3 for G L Management and Water Permit Application No. 8446-3 for Blue Barn LLC) for the irrigation of 71 acres at a maximum instantaneous diversion rate of 0.44 cfs and a maximum instantaneous diversion rate of 0.089 cfs for backup irrigation of 3.5 acres of lawn, respectively (Water Rights, 2020a).

All current non-irrigation water rights/permits not required to report usage and appropriating water from the Sioux Quartzite aquifer are summarized in Table 1. The amount of water that can be expected to be withdrawn by non-irrigation water rights/permits not required to report usage can be estimated by assuming water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time and those limited by an annual volume will use the entire permitted volume annually.

There are some municipalities that are served by rural water systems. As such, the wells for these municipal water rights/permits are maintained for standby use only (DENR, 2020). Therefore, the water use for these rights/permits is estimated to be zero in Table 1 as the usage for them is reflected in the rural water systems rights/permits they are served by.

Table 1: Summary of expected use of non-irrigation water rights/permits not required to report usage from the Sioux Quartzite aquifer (Water Rights, 2020a)

Use Type	No. of Water Rights/Permits	Permitted Diversion Rate (cfs)	Permitted Volume (ac-ft)	Expected Annual Use (ac-ft)
REC	2	0.156	N/A	68
MUN	17	0.47	N/A	204
IND	3	2.121	N/A	922
INS	1	0.070	N/A	30
DOM	1	0.180	N/A	78
COM	19	2.544	671	1,777
SHD	2	0.253	N/A	110
GEO	7	1.850	39	843
Total	52	7.644	710	4,032
REC = Recreation, MUN = Municipal, IND = Industrial, INS = Institutional, DOM = Domestic, COM = Commercial, SHD = Suburban Housing Development, GEO = Geothermal				

Non-irrigation water rights/permits that are required to report their annual usage are summarized in Table 2, and their usage is calculated using the average of the reported pumpage for the years 2003 to 2019 (Water Rights, 2020f). Water Permit 8437-3 for United Concreted Inc for industrial use was approved this year and is required to report their annual usage; however, there is no usage data yet. Assuming full appropriation, Water Permit 8437-3 will use 18.4 ac-ft/yr.

There are five non-irrigation water rights/permits for quarry dewatering (Water rights/permits 4493-3, 5400-3, 5784-3, 6070-3, and 8345-3) that would use a maximum of 13,521 ac-ft/yr assuming they pumped their authorized diversion rate full time or if limited by an annual volume used their entire volume annually (Water Rights, 2020a). However, four of the five permits are required to report their usage and, on average, use far less than their full appropriation, as seen in Table 2, resulting in a reported pumping average of 4,025 ac-ft/yr.

Table 2: Non-irrigation water rights/permits that are required to report their annual usage from the Sioux Quartzite and their reported usage for the year 2003 to 2019 (Water Rights, 2020f).

Year	5400-3 (IND)	5784-3 (COM) 8345-3 (IND)	6070-3 (COM)	6552A-3 (SHD)	8344-3 (IND)
2003	1,984	3	2,240		
2004	1,801	640	2,190		
2005	1,790	28	2,240		
2006	2,101	0	2,190		
2007	2,100	66	1,680		
2008	2,115	70	1,680		
2009	2,355	63	1,680		
2010	2,752	132	1,690		
2011	2,692	113	1,680		
2012	2,309	10	1,111		
2013	2,027	10	1,120		
2014	2,222	0	1,120	9	
2015	2,114	0	1,248	13	
2016	2,557	1	1,120	10	
2017	2,664	0	1,120	8.5	
2018	2,767	513	1,120	7.7	1.1
2019	3,463	423	1,135	6.1	1.04

average (ac-ft/yr)	2,342	122	1,551	9.05	1.07
IND = Industrial, COM = Commercial, SHD = Suburban Housing Development					

There are 8 water rights/permits for irrigation currently authorized to appropriate water from the Sioux Quartzite aquifer. Of these irrigation water rights/permits, 6 are required to report their annual usage, as shown in Table 3. The average annual usage for irrigation water rights/permits required to report are calculated using the average of the reported usage over the period of record (Water Rights, 2020d).

Table 3: Irrigation water rights/permits authorized to withdraw water from the Sioux Quartzite and required to report their annual usage (Water Rights, 2020d).

Permit No.	Status	Years Reporting Usage	Authorized Acres	Average Reported Usage (acre-feet)
5365-3	LC	9	1.5	0.75
6195-3	LC	20	61	89.45
6618-3	LC	14	71	76.71
6910-3	LC	10	80	5.79
7415-3	PE	7	34	94.66
7805-3	LC	7	8	4.10
Total			255.5	271.46
LC = Water Right, PE = Water Permit				

Water Right Nos. 6451-3 (Bluffs Townhomes Association, 3 acres) and 6653-3 (Prairie Hills Covenant Church, 4 acres) are authorized for irrigation use and are not required to report their annual usage. The estimated average annual usage for these rights can be calculated assuming full appropriation for both (14 ac-ft/yr).

There are a number of well completion reports on file with the DENR-Water Rights Program for domestic wells that appear to be completed into the Sioux Quartzite aquifer in the area of the proposed diversion point (Water Rights, 2020b). It is also likely there are other domestic wells completed into the Sioux Quartzite aquifer in this area that are not on file with the Water Rights Program. In general, the volume of water pumped by domestic users is not a significant amount of the hydrologic budget due to limited diversion rate (less than 18 gpm) and the availability of rural water systems in the area.

Hydrologic budget summary

Without a recharge rate estimate, there is no way to compare the average annual recharge and average annual withdrawal rates directly. The estimated average annual withdrawals from the Sioux Quartzite aquifer are 149 ac-ft/yr from pending applications assuming full appropriation, 8,075.4 ac-ft/yr from non-irrigation users, and 286 ac-ft/yr from irrigation. Assuming this application were to be approved and assuming full appropriation (1,452 ac-ft/yr), the total estimated average annual withdrawal from the Sioux Quartzite aquifer is 9,962.4 ac-ft/yr

Aquifer Water Levels

The DENR-Water Rights Program maintains no observation wells completed into the Sioux Quartzite aquifer in South Dakota (Water Rights, 2020c). However, Lindgren & Niehus (1992) stated, “Water-level fluctuations in observation wells completed in the Sioux Quartzite aquifer show a close correlation with long-term trends in precipitation,” implying that water levels in the Sioux Quartzite aquifer follows climatic conditions (rising during wet years and declining during dry years). By evaluating the static water levels of well logs in the area of the proposed diversion point at the time of completion (Table 4), an estimation of aquifer water levels from the Sioux Quartzite aquifer in the area of the application can be made (Water Rights, 2020b).

Table 4: Well logs completed into the Sioux Quartzite aquifer with recorded static water levels within approximately 6 miles of the proposed diversion point (Water Rights, 2020a; Water Rights, 2020b).

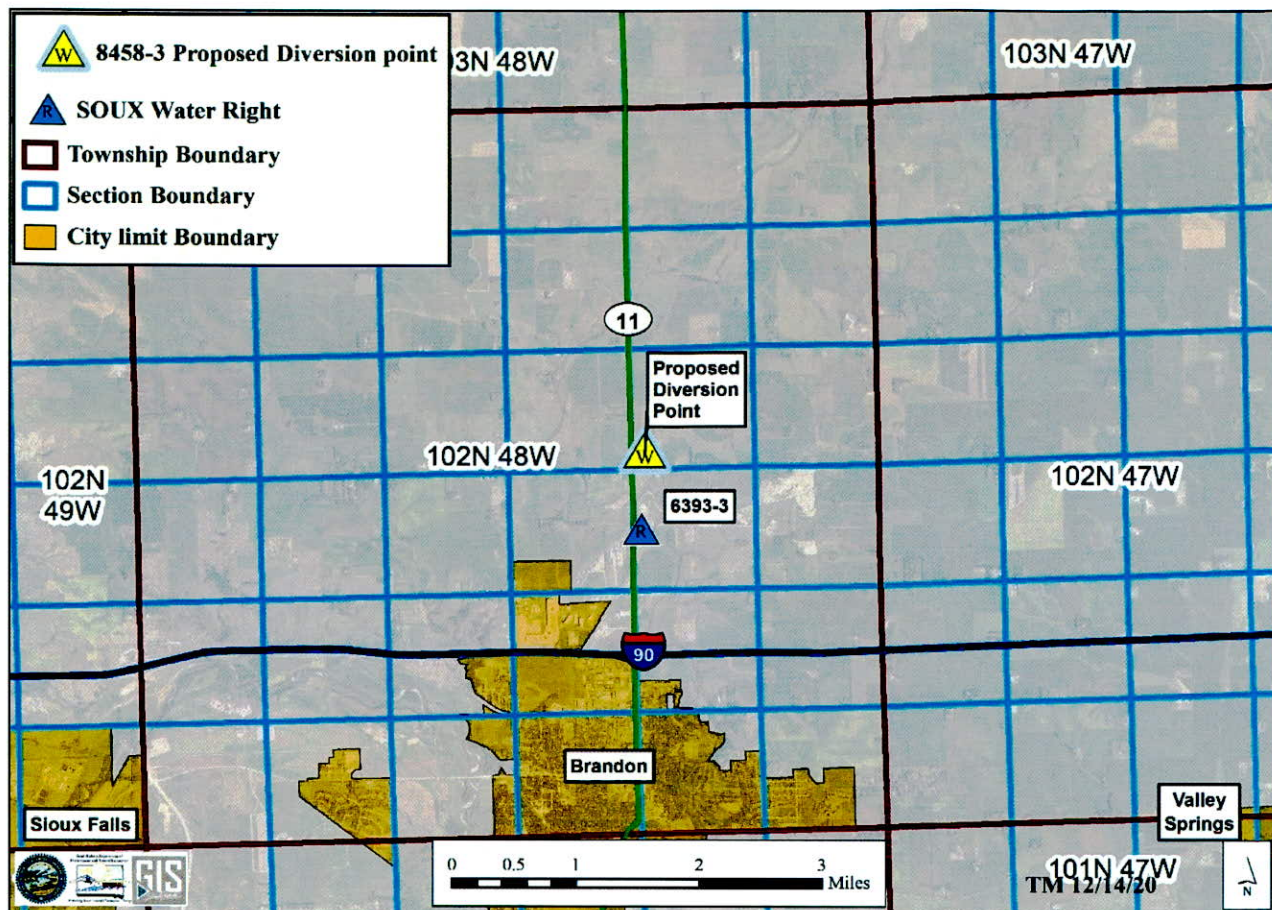
Name	Date Drilled	Direction from proposed diversion point	Approximate Distance from proposed diversion point (mi)	Approximate Ground Elevation (ft)	Approximate Static Water Level Elevation (ft)	Approximate Elevation to top of Sioux Quartzite (ft)
Elert Swenson	2/22/1956	SE	1.08	1391	1371	1337
Clark Cramer	4/10/1973	W	1.00	1394	1329	1300
Ervin Vogel	5/22/1973	S	3.24	1309	1219	1129
Charles Bakker	6/21/1973	SW	5.67	1482	1357	1347
Burton Burkman	11/21/1973	S	1.87	1329	1031	1009
Clark Kramer (Cramer)	7/1/1977	NW	0.53	1363	1292	1203
Doug Hough	1/17/1979	NW	0.96	1327	1281	1156
Dan Konic	2/5/1979	SE	3.39	1418	1327	1263
Jerry Freeman	7/1/1982	S	5.74	1372	1327	1346
Allan Engelbrecht	11/30/1982	NW	0.34	1389	1324	1247

Joe Assid	10/3/1984	SE	3.48	1352	1299	1134
Russ Brandt	3/14/1987	N	0.76	1359	1269	1209
Mike Burke	8/27/1988	W	5.44	1366	1331	1306
Robert Hildring (O)	3/9/1989	SE	4.51	1452	1390	1168
City Of Sioux Falls	4/1/1989	SW	5.59	1311	1303	1237
Ted Swenson	10/23/1989	SE	5.34	1343	1271	1294
Oak Ridge Nursery	6/28/1991	S	4.34	1325	1297	1160
Brad Thill	7/1/1992	W	5.07	1424	1412	1396
Allied Tire	9/23/1994	SW	4.48	1383	1310	1261
City Of Sioux Falls	1/30/1995	S	3.28	1365	1285	1070
Gary Skyberg	10/15/1997	S	5.90	1401	1355	1353
Greg Cormon	6/1/1999	SW	0.87	1364	1319	1292
Rick Bullinger	6/29/1999	S	4.99	1298	1256	1178
Mark Thompson	9/16/2005	S	0.74	1312	1292	1239
Chris Larson	8/29/2008	SE	5.81	1393	1313	1224
Pat Burke	4/9/2013	W	5.37	1380	1338	1290
Tom Williams	7/31/2013	SE	5.29	1321	1261	1176
Tyler Chidress	1/15/2019	W	5.32	1346	1308	1279

The majority of wells in this area are confined with hydraulic head ranging from unconfined (23 feet below the top of formation) to 222 feet above the top of the formation and averaging 67 feet above the top of formation at time of completion. Given the commentary from Lindgren & Niehus (1992), estimated thickness of the Sioux Quartzite (1,000 feet), and the lowest recorded static water level indicated in well logs around the proposed diversion point being 23 feet below the top of the Sioux Quartzite formation, there is a reasonable probability that unappropriated water is available for this proposed diversion.

Potential For Unlawful Impairment Of Existing Water Rights

Currently, there are 66 water rights/permits appropriating water from the Sioux Quartzite (Water Rights, 2020a). The nearest water right/permit completed into the Sioux Quartzite is Water Right 6393-3 held by Brandon Materials CO for commercial use located approximately 0.61 miles to the south of the proposed diversion point (Figure 1), with the next nearest water right/permit being 6.3 miles to the northeast. The nearest well completion report for a well that is completed into the Sioux Quartzite aquifer on file with SD DENR-Water Rights Program is approximately 0.34 miles to the northwest of the proposed diversion point for this application (Water Rights, 2020b). It is possible that other wells completed into the Sioux Quartzite aquifer within 6 miles of the proposed diversion point for this application are not on file with the SD DENR-Water Rights Program.



The Sioux Quartzite aquifer in this area switches between confined and unconfined, so drawdown from pumping the aquifer can vary over a fairly large area when confined and a smaller area when unconfined. The Sioux Quartzite has an estimated thickness greater than 1,000 feet, and nearby well completion reports indicate the top of the Sioux Quartzite at 110 feet below ground surface with a static water level at 20 feet below ground surface. For the majority of aquifers, an adequate well would be a sufficient long term water supply, however for aquifers controlled by secondary porosity (fractured bedrock aquifers) such as the Sioux Quartzite, they may not be.

An adequate well as defined in ARSD 74:02:04:20(6):

“A well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.”

Due to the very low primary porosity of the Sioux Quartzite aquifer, the highly variable and uneven nature of secondary porosity, and the natural climatic fluctuations in bedrock aquifers, 20 feet of saturated thickness may not be sufficient for a dependable water supply. Without conducting an aquifer performance test, the precise drawdown effects caused by pumping cannot be determined.

The lowest recorded static water level indicated in well logs around the proposed diversion point was 15 feet below the top of the Sioux Quartzite. Pump depth requirements are detailed in ARSD 74:02:04:60(2), which states, "The depth of the pump setting shall be determined by dividing the specific capacity into the required yield and adding at least 10 additional feet to maintain pump inlet submergence below the maximum anticipated drawdown, where possible." This rule can help provide guidance for well depth in bedrock aquifers such as the Sioux Quartzite, where due to the highly variable nature of the aquifer, 20 feet of saturated thickness may not be enough for a dependable water supply and accounting for long term precipitation, and drawdown trends is necessary when installing pumps. The drawdown created by this proposed appropriation should not unlawfully impair wells that are constructed in such a way as to account for the highly variable and uneven nature of secondary porosity and the natural climatic fluctuations in bedrock aquifers and also meet the definition of an adequate well.

SDCL 46-6-6.1 does not necessarily protect artesian head pressure as a means of delivery. In the past, the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur (Water Rights, 1995). Given the commentary from Lindgren & Niehus (1992), estimated thickness of the Sioux Quartzite (1,000 feet), the lowest recorded water level of wells in the area being 23 feet below the top of the Sioux Quartzite aquifer at the time of completion, and the lack of well interference complaints in the area, well interference from this proposed diversion is not expected to unlawfully impair nearby wells that are constructed in such a way as to account for the highly variable and uneven nature of secondary porosity and the natural climatic fluctuations in bedrock aquifers.

Since Water Permit Application No. 8458-3 is for mine dewatering, in a formation older and lower than the greenhorn formation, SDCL 46-6-24 applies, which states:

"The failure of a well to meet standards established pursuant to § 46-6-6.1 is not a defense in any action or proceeding regarding damage, loss of water production or quality, replacement cost, or increased operating expenses incurred by a municipal or domestic use well located in a formation older than or stratigraphically lower than the greenhorn formation caused by any person using or withdrawing groundwater for mine dewatering in a formation older than or stratigraphically lower than the greenhorn formation."

Conclusions

1. Water Permit Application No. 8458-3 requests the appropriation of 1,452 acre-feet of water annually at a maximum pump rate of 2 cubic feet per second (cfs) for dewatering of the quarry for industrial use purposes, including use in an aggregate washing system. The source of the water is the Sioux Quartzite, and incidental runoff into the quarry.
2. There is a reasonable probability unappropriated water is available for this proposed appropriation.
3. Well interference from this proposed diversion is not expected to unlawfully impair nearby wells that are constructed in such a way as to account for the highly variable and uneven nature of secondary porosity and the natural climatic fluctuations in bedrock aquifers.

Timothy Magstadt

Timothy Magstadt
Natural Resources Engineer II
SD DENR – Water Rights Program

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Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, December 15, 2020 9:20 AM
To: brooke.muhlack@kniferiver.com
Cc: Gronlund, Eric
Subject: FW: [EXT] Concrete Materials' application for Water Rights Permit- Corson Quarry

Your email was forwarded to me. The report for Water Permit Application No. 8458-3 is currently being reviewed. The Chief Engineer will have a recommendation made by December 23rd. The report, recommendation and information regarding the public notice should be sent out the following week.

Let me know if you have questions.

Karen Schlaak
Water Rights Program
(605) 773-3352



From: Muhlack, Brooke <Brooke.Muhlack@kniferiver.com>
Sent: Tuesday, December 15, 2020 7:53 AM
To: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Subject: [EXT] Concrete Materials' application for Water Rights Permit- Corson Quarry

Good morning Eric,

We had sent in our application for the water rights' permit for the Corson Quarry previously, and I am just wondering how the process is going for this. Do you have any updates you can provide me?

Thank you,

Brooke A. Muhlack
Environmental Manager



Knife River Midwest, LLC
2220 Hawkeye Drive
Sioux City, IA 51105

Office: (712)279-7570

Cell: (712)577-6757



Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, December 21, 2020 11:44 AM
To: brooke.muhlack@kniferiver.com
Subject: Water Permit Application No. 8458-3
Attachments: 0277.pdf; OrderConf.pdf

Attached is a copy of the report, chief engineer recommendation and information regarding the public notice for the Application No. 8458-3, Concrete Materials. As stated in the letter, please contact the paper as soon as possible to authorize publication and arrange for payment. The notice is scheduled to be published December 31, 2020. This information is being mailed to you today.

The second pdf is Confirmation from the Argus Leader. The information on this page should help when contacting them to authorize publication and arrange for payment.

Karen Schlaak
Water Rights Program
(605) 773-3352



Argus Leader

P.O. Box 677349, Dallas, TX 75267-7349

CONCRETE MATERIALS
1500 N SWEETMAN PL
SIOUX FALLS, SD 57107

Account No.: SFA-062620
Ad No.: 0004520707
PO #: NOA 8458-3 to
Appropriate Water
Lines : 116
Ad Total: \$75.70
of Affidavits: 1

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Account No.: SFA-062620
Ad No.: 0004520707

Argus Leader AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA

I being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached,

Thursday, December 31, 2020

Sworn to and subscribed before me this 31 day of December, 2020.

Legal Clerk

Notary Public, State of Wisconsin, County of Brown

My Commission expires

VICKY FELTY
Notary Public
State of Wisconsin

NOTICE OF
APPLICATION NO. 8458-3
to Appropriate Water

Notice is given that Concrete Materials, dba Ron Klinker, 1500 N Sweetman Place, Sioux Falls SD 57104 has filed an application for a water permit to appropriate 1,452 acre-feet of water annually at a maximum pump rate of 2.0 cubic feet of water per second for dewatering of the quarry for industrial use purposes. The source of water is Sioux Quartzite Aquifer and Incidental surface runoff into the quarry located in the S 1/2 SW 1/4 Section 14 - T 10 N - R 46 W. Dewatering will allow quarry operations and water may be used in an aggregate washing system. Discharge will be to the drainage way north of the proposed project. This site is located approximately 2 miles north of Brandon SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8458-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3351)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by January 11, 2021.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the

petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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 recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of 25.00.
4520707 Dec. 31, 2020

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, December 21, 2020 10:38 AM
To: 'legals@argusleader.com'
Subject: 8458-3, Concrete Materials
Attachments: 8458-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on December 31, 2020.

Concrete Materials, c/o Ron Klinker, 1500 N Sweetman Place, Sioux Falls SD 57104 (712 577-6757) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

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

Karen Schlaak

Water Rights Program
(605) 773-3352





DENR
SOUTH DAKOTA

**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 RIGHT AWAY.**

December 21, 2020

Concrete Materials
c/o Ron Klinker
1500 N Sweetman Place
Sioux Falls SD 57104

Dear Mr. Klinker:

Water Permit Application No. 8458-3 for industrial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Argus Leader printed at Sioux Falls SD (Ph # 605 331-2200). 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 papers 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,

Karen Schlaak

Karen Schlaak
Water Rights Program
(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 APPLICATION NO. 8458-3 to Appropriate Water

Notice is given that Concrete Materials, c/o Ron Klinker, 1500 N Sweetman Place, Sioux Falls SD 57104 has filed an application for a water permit to appropriate 1,452 acre-feet of water annually at a maximum pump rate of 2.0 cubic feet of water per second for dewatering of the quarry for industrial use purposes. The source of water is Sioux Quartzite Aquifer and incidental surface runoff into the quarry located in the S 1/2 SW 1/4 Section 14-T102N-R48W. Dewatering will allow quarry operations and water may be used in an aggregate washing system. Discharge will be to the drainageway north of the proposed project. This site is located approximately 2 miles north of Brandon SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8458-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by January 11, 2020.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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 recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of_



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

JAN 21 2021

Concrete Materials
c/o Ron Klinker
1500 N Sweetman Place
Sioux Falls SD 57501

Dear Mr. Klinker:

Enclosed is Water Permit No. 8458-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures



1500 N. Sweetman Place
Sioux Falls, SD 57107

RECEIVED

APR 04 2022

WATER RIGHTS
PROGRAM

RECEIVED

APR 04 2022

DRINKING WATER PROGRAM

March 29, 2022

South Dakota Dept of Agriculture and Natural Resources
Joe Foss Building
ATTN: Water Rights, Eric Gronlund
523 E Capitol
Pierre, SD 57501

Dear Mr. Gronlund,

As of April 1, 2022, Concrete Materials Company will be doing business as Knife River. This name change reflects the purchase of Sweetman Const. Co. by Knife River Corporation in October 2018. The purpose of this letter is to inform you that the following permits issued by SDDANR will be subject to this change.

Facility	Permit Type	Permit#
Rice Street Operations	Water Diversion System and Beneficial Use of Water Permit	1618-3
Rice Street Operations	Water Diversion System and Beneficial Use of Water Permit	5133-3
Brandon/Corson Operations	Water Diversion System and Beneficial Use of Water Permit	6388-3
Brandon/Corson Operations	Water Diversion System and Beneficial Use of Water Permit	6387-3
Yankton Ready Mix	Water Diversion System and Beneficial Use of Water Permit	6170-3
Yankton Gravel-Vellek Pit	Water Diversion System and Beneficial Use of Water Permit	8283-3

If there is further information or notification required, please let me know. If you should have any questions, please contact me at (712)279-7570.

Sincerely,

Brooke Muhlack
Environmental Manager

STATE OF SOUTH DAKOTA

Doing Business As (DBA) Fictitious Business Name Registration

Knife River
ID: UB223693

The address where the main office of the above listed business is to be maintained:

Physical Address:
**1500 N. SWEETMAN PLACE
SIOUX FALLS, SD 57107**

Mailing Address:
**ATTN: LEGAL DEPARTMENT
1200 WEST CENTURY AVENUE
BISMARCK, ND 58503**

The owner of the above listed business is:

Name	Address
SWEETMAN CONST. CO.	Physical: 1500 N. SWEETMAN PLACE, SIOUX FALLS, SD 57107, USA Mailing: 1150 West Century Ave, Bismarck, ND 58503, USA

The DBA/Fictitious Business Name registered above has a filing date of March 29, 2022, and is effective for a term of 5 years and will expire on March 29, 2027.

Steve Barnett
SD Secretary of State



8458-3



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

April 7, 2022

Brooke Muhlack, Env Mgr
Knife River Corporation
1500 N Sweetman Pl
Sioux Falls SD 57107

RE: Water Permit or Right Nos. 8479-3, 8458-3, 8412-3, 6388-3, 6387-3, 6170-3, 5133-3,
4556-3 and 1618-3

Dear Ms. Muhlack:

In follow-up to your letter and our phone conversation, enclosed are nine partially completed "Notice of Transfer of Ownership" forms for all permits and licenses listed under Concrete Materials.

Please review to ensure accuracy and complete as needed. Upon completion, please sign and return the forms to our office with a required filing fee of \$50 each (total of \$450). The check or money order for the fee can be made payable to the Water Rights Program.

If I can answer any questions for you or if I have missed anything on the forms, please let me know.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

enclosures

PAID

MAY 12 2022

Ck# 42009089

Rec't#

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DANR
523 E. Capitol
Pierre, SD 57501-3181

RECEIVED

MAY 12 2022

WATER RIGHTS
PROGRAM

No. 8458-3

Date:

I/We request that Water Permit No. 8458-3

formerly owned by: Concrete Materials

be transferred to: (name & address) Knife River

1500 N Sweetman Pl
Sioux Falls, SD 57107 Telephone No. 605 336 5716

Title to the following described land(s)/property has been transferred as described above:

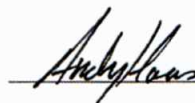
S 1/2 SW 1/4 Section 14, T102N, R48W

I/We understand that the validity of Water Permit No. 8458-3 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We Knife River, the new owner, certify that the above information is true and correct.



(Signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date May 12, 2022

RECEIVED OF Knife River 1500 N Sweetman Pl., Sioux Falls SD 57107

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	\$ _____
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____	\$ _____
Fee for Filing Transfer Form <u>8458-3</u>	\$ <u>50.00</u>
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	
TOTAL	\$ <u>50.00</u>

By Eric Gronlund
Chief Engineer
vm

8458-3



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

May 17, 2022

Brooke Muhlack
Knife River
1500 N Sweetman Pl
Sioux Falls SD 57107

RE: 8479-3, 8458-3, 8412-3, 6388-3, 6387-3, 6170-3, 5133-3, 4556-3, 1618-3

Dear Ms. Muhlack:

Thank you for following up on the ownership changes for the above listed water permits and water rights.

The ownership changes have been completed. Nos. 8479-3, 8458-3, 8412-3, 6388-3, 6387-3, 6170-3, 5133-3, 4556-3, 1618-3 formerly held by Concrete Materials are now listed under Knife River.

Enclosed are receipts for the filing fees paid. If I can answer any questions for you, please let me know.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

enclosures