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MINUTES OF THE 229TH MEETING OF THE
WATER MANAGEMENT BOARD
FLOYD MATTHEW TRAINING CENTER
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA

MARCH 3, 2021

CALL TO ORDER: Chairman Jim Hutmacher called the meeting to order at 9:30 a.m. Central Time. The roll was called, and a quorum was present.

Chairman Hutmacher announced that the meeting was streaming live on SD.net, a service of South Dakota Public Broadcasting.

The following were present for the meeting:

Board Members: Jim Hutmacher, Leo Holzbauer, Chad Comes, and Rodney Freeman attended in person. Tim Bjork, Peggy Dixon, and Bill Larson attended remotely.

Department of Environment and Natural Resources (DENR): Eric Gronlund, Chief Engineer, Ron Duvall, Nakaila Steen, Genny McMath, and Timothy Magstadt, Water Rights Program; Jeanne Goodman, Deputy Secretary/Director, Office of Water.

Attorney General's Office: David McVey, board counsel; Ann Mines Bailey, Water Rights Program counsel.

Request by DENR Secretary Hunter Roberts for Water Management Board to serve as Hearing Examiner in the matters of Groundwater Plan Renewal and Water Quality Variance Review of Wharf Resources' Reliance Spent Ore Depository (GWD 1-94) and Juno/Foley Spent Ore Depository (GWD 1-98): Max Main and Dwight Gubbrud, counsel for Wharf Resources, Julie Santella, intervenor.

Future Use Permit Seven Year Reviews: Ted Wick, Chairman, Southern Black Hills Rural Water System, Matthew Naasz, counsel for Southern Black Hills Rural Water System.

Water Permit Application No. 2813-2, Mineral Mountain Resources (SD) Inc.: Matthew Naasz, counsel for Mineral Mountain Resources (SD), Inc., Kevin Leonard, Port Orchard, WA, Crystal Hocking, RESPEC; Kwinn Neff, Hill City; and Intervenors, Lilias Jarding and Julie Santella, Rapid City; Reno Red Cloud, Sr., and Thomas Brings, Pine Ridge.

Court Reporter: Carla Bachand, Capital Reporting Services.

ADOPT FINAL AGENDA: Motion by Bjork, seconded by Holzbauer, to adopt the agenda. Motion carried unanimously.

CONFLICT DISCLOSURES AND REQUESTS FOR STATE BOARD WAIVERS: None.

ADOPT FEBRUARY 10, 2021, BOARD MINUTES: Motion by Larson, seconded by Bjork, to approve the minutes of the February 10, 2021, Water Management Board meeting. A roll call vote was taken, and the motion carried unanimously.

STATUS AND REVIEW OF WATER RIGHTS LITIGATION: There was no pending or current litigation to report.

ADMINISTER OATH TO DENR STAFF: The court reporter administered the oath to DENR staff who were present and intended to testify during the meeting.

UPDATE ON DENR ACTIVITIES: Eric Gronlund provided a summary and status of the following legislative bills:

SB 50	Repeal the requirement for well pump installer license	Passed Senate Floor (23 - 11) Deferred to 41st Day in House Commerce & Energy
HB 1027	Identify WMB officers, authorize appointment of prehearing office, and define the duties of the prehearing officer	Passed House Floor 69 -1 Passed Senate Floor 34- 1 Signed by Governor
HB 1028	Revise petition requirements and criteria for issuance of a water right permit	Passed House Floor 49 - 21 Passed Senate Floor 24 -11 Signed by Governor
SB 47	Make an appropriation for maintenance and repair of state-owned dams	Amended in committee.
SB 51	Transfer licensure of individuals who may alter, repair, construct, or install on-site wastewater systems to the Plumbing Commission	Passed Senate Floor 34 - 0 Passed House Floor 70 - 0 Signed by Governor
SB 52	Revise the permit duration on certain concentrated animal feeding operations	Passed Senate Floor 27 - 7 Passed House Floor 54 - 14 Signed by Governor
SB 53	Revise certification and renewal fees for water supply and treatment system operators (as amended)	Passed Senate Floor 33 - 1 Passed House Floor 63 - 7 Signed by Governor
SB 99	Contract for the construction of a livestock and equestrian complex at the State Fair	Awaiting action
HB 1042	Revise certain provisions regarding riparian buffer strips	Passed House Floor 69 -0 Passed Senate Floor 35- 0 Signed by Governor
HB 1029	Require a permit to conduct mining operation for certain ore milling facilities	Passed House Floor - 70 - 0 Passed Senate Floor - 33 - 0

HB 1198	Make an appropriation for a hydrology study of Brule County	Deferred to 41st day
HB 1256	Make an appropriation for the cleanup of the Big Sioux watershed and River	Passed House Floor 48 - 20
HB 1264	Make appropriation from the water and environment fund and its revolving fund subfunds for various water and environmental purposes (annual Omnibus Bill)	Passed House Floor 66 - 2

PUBLIC COMMENT PERIOD IN ACCORDANCE WITH SDCL 1-25-1: There were no public comments.

REQUEST BY DENR SECRETARY HUNTER ROBERTS FOR WATER MANAGEMENT BOARD TO SERVE AS HEARING EXAMINER IN THE MATTERS OF GROUNDWATER PLAN RENEWAL AND WATER QUALITY VARIANCE REVIEW OF WHARF RESOURCES' RELIANCE SPENT ORE DEPOSITORY (GWD 1-94) AND JUNO/FOLEY SPSENT ORE DEPOSITORY (GWD 1-98): On December 15, 2020, Assistant Attorney General Ann Mines Bailey, on behalf of the DENR Groundwater Program, filed motions to appoint a hearing chair with the Water Management Board in the matter of Groundwater Plan Renewal and Water Quality Variance Review of Wharf Resources' Reliance Spent Ore Depository (GWD 1-94) and Juno/Foley Spent Ore Depository (GWD1-98).

Mr. McVey stated that the motions requested that the Water Management Board act as the Secretary's hearing examiner for the purpose of conducting all proceedings in relation to the Reliance Spent Ore and Juno/Foley Spent Ore Depository's Groundwater Permit renewals, including the holding of prehearing conferences and conducting a formal contested case hearing. It is intended that in this role, the board will be tasked with conducting its own proceedings regarding review of the Water Quality Variance Permits as well as issuing a written recommended decision to the Secretary regarding renewal of the Ground Water Discharge Permits. The Secretary will retain final decision-making authority regarding renewal of the Groundwater Discharge Permits.

Mr. McVey stated that Secretary Roberts has formally submitted requests for the board to serve as hearing examiner for the Groundwater Plan Renewal and Water Quality Variance Review of Wharf Resources' Reliance Spent Ore Depository (GWD 1-94) and Juno/Foley Spent Ore Depository (GWD1-98).

Mr. McVey requested that the board either accept Secretary Roberts' requests or reject the requests and appoint an uninterested third party as hearing examiner.

Motion by Freeman, seconded by Holzbauer, to accept the Secretary's requests and to appoint William Larson as hearing examiner for Groundwater Plan Renewal and Water Quality Variance Review of Wharf Resources' Reliance Spent Ore Depository (GWD 1-94) and Juno/Foley Spent Ore Depository (GWD19-8).

Chairman Hutmacher asked Julie Santella, intervenor, if she would like to comment on the motion. Ms. Santella indicated that she had no comment.

Chairman Hutmacher asked if Max Main, counsel for Wharf, would like to comment on the motion. Mr. Main stated that, on behalf of Wharf, he and Dwight Gubbrud support the Secretary's request.

In response to a question from Mr. Comes, Mr. McVey explained the contested case hearing procedures.

A roll call vote was taken, and the motion carried unanimously.

APPOINTMENT OF RAPID VALLEY WATER MASTER: Nakaila Steen reported the Rapid Valley Conservancy District has requested that Kevin Ham be appointed as the water master for the 2021 irrigation season for the Rapid Creek area. Mr. Ham has been water master since 2005.

Motion by Freeman, seconded by Dixon, to appoint Kevin Ham as the Rapid Valley water master for the 2021 irrigation season. A roll call vote was taken, and the motion carried unanimously.

IRRIGATION QUESTIONNAIRE VIOLATIONS FOR FAILURE TO REPORT 2020 WATER USE: Genny McMath presented her report on irrigation questionnaire violations.

On October 23, 2020, 3,856 irrigation questionnaires were mailed by first class mail to 1,966 irrigators for reporting water use for 2020. The permit holders were given until December 4, 2020, to return the forms. The cover letter included examples of how questionnaires could be completed and returned. The three options for returning the irrigation forms are online, by mail, or by fax.

On January 22, 2021, approximately 185 notices were mailed to those irrigators who had not returned the irrigation questionnaires by the December 4, 2020, deadline. Additional questionnaire forms were included with the mailing, and all notices were sent by Certified Mail.

The January 22, 2021, notice advised permit holders that the board may take one or more of the following actions pursuant to SDCL 46-1-12 and SDCL 46-1-14:

- The permit(s) could be suspended for:

    1. A period of up to one year for the first violation; or
    2. A period of up to three years for the second violation, which includes one previous suspension.

- The permit(s) could be canceled for a third violation, which includes at least two previous suspensions.

- The permit(s) could be amended to include the mandatory irrigation questionnaire qualification.

- Postpone any action or take no action.

The Water Rights Program recommended that the board take the following action for permits with irrigation questionnaires not received by March 3, 2021:

Suspend the following permits/rights for one year (effective April 3, 2021)

515-3	Daniel Benson, Operator
577-1	Max & Brenda Bowen
5524-3	Wade & Todd Druin
1554A-1	Franklin Dyck
1935-1	Brian Dyck
2675-3	Beau Gregg, Renter
8070-3	Hansen Irrigated Farms
8071-3	Hansen Irrigated Farms
6822-3	Hansen Properties
6565-3	Hansen Ventures LLC, Mgr.
6566-3	Hansen Ventures LLC, Mgr.
6817-3	Hansen Ventures LLC, Mgr.
6818-3	Hansen Ventures LLC, Mgr.
6819-3	Hansen Ventures LLC, Mgr.
7003-3	Hansen Ventures LLC, Mgr.
7383-3	Hansen Ventures LLC, Mgr.
7693-3	Hansen Ventures LLC, Mgr.
7994-3	Hansen Ventures LLC, Mgr.
1150-2	O M Iwan & Sons
4678-3	Craig Jepsen
6960-3	Jepsen Farms
5566-3	Wayne Reierson
7615-3	Wayne Reierson
7616-3	Wayne Reierson
7924-3	Brandon Ritter
4705-3	Brandon Ritter, Mgr.
2350-3	River Valley Farms
2497-2	Marty Vanderploeg

Suspend the following permits/rights for three years (effective April 3, 2021)

4472-3	Darrel Biddle
7970-3	David Hoops

Amend the following permits/rights to include the mandatory irrigation questionnaire qualification (effective March 3, 2021)

1813-3	Hansen Ventures, LLC, Mgr.
974-3	Hansen Ventures, LLC, Mgr.
1994-3	Albert Hattum
3803-3	Brandon Ritter, Mgr.
4448-3A	Brandon Ritter, Mgr.

Mr. Larson asked what the department does to enforce the suspensions. Ms. McMath stated that the department has seasonal staff that can go out and do a "drive by" to see if the permit holders have irrigated or are irrigating.

Mr. Larson stated that in Clay, Union, and Yankton Counties, most of the irrigators draw power from the rural electric cooperative. He asked if the board has the authority to order that power not be distributed to the irrigators whose permits have been suspended.

Eric Gronlund stated that he is not aware or any authority the department or the board may have regarding the electric cooperative, short of a court action. However, if there are violations of water rights law, the board could take legal action.

Mr. Larson said it seems some of the water permit holders do not want to comply with the rules, and he believes the rules need to be enforced.

Mr. Gronlund stated that the department has four water rights inspectors as well as the summer observation well readers that go out in the field in addition to other staff that go out in the field. If the permit holder is irrigating with a suspended permit, staff contacts them.

Ms. Dixon asked if there is a way to appeal and shorten the suspension time when a permit is suspended.

Ms. McMath answered that if the irrigation questionnaire is submitted before April 3, 2021, the permit will not be suspended. After April 3, 2021, the permit holder could request that the board reinstate their water right.

Motion by Bjork, seconded by Larson, to suspend the first and second violations effective April 3, 2021, as recommended by the Water Rights Program, and to amend the five permits/rights as recommended by the Water Rights Program effective March 3, 2021. A roll call vote was taken, and the motion carried unanimously.

FUTURE USE PERMIT SEVEN YEAR REVIEWS: The packet the board members received prior to the meeting included a table listing the six future use permits up for a seven-year review (see attachment). State law requires future use permits to be reviewed by the Water Management Board every seven years, and it requires the permit holder to demonstrate a reasonable need for the future use permit.

Also included in the board packet were letters submitted by the city of Spearfish, Matthew Naasz on behalf of Southern Black Hills Water System, Inc., the city of Brandon, and the Minnehaha

Community Water Corporation, requesting to retain their future use permits, the Chief Engineer's recommendations, and the Affidavits of Publication showing that the hearing was public noticed.

No letters in opposition were received in response to the public notices.

The Chief Engineer recommended that the future use permits listed in the table be allowed to remain in effect for an additional seven years.

Ted Wick, Southern Black Hills Rural Water System, stated that the system has plans to substantially increase the size of the water system in the future. He thanked the board for its consideration in allowing the future use permit to remain in effect.

In response to a question from Mr. Holzbauer, Mr. Duvall stated that the fee for a future use permit is equal to 10 percent of the original application fee, so it varies from permit holder to permit holder.

Motion by Holzbauer, seconded by Comes, to allow the future use permits to remain in effect for an additional seven years for the acre-feet requested. A roll call vote was taken, and the motion carried unanimously.

UNOPPOSED NEW WATER PERMITS ISSUED BY THE CHIEF ENGINEER WITHOUT A HEARING BEFORE THE BOARD: Prior to the meeting the board received a copy of the table listing the unopposed new water permits issued by the Chief Engineer. See attachment.

NEW WATER PERMIT APPLICATIONS: The pertinent qualifications attached to approved water permit applications throughout the hearings are listed below:

Well Interference Qualification
The well(s) approved under this permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

Well Construction Rule Qualification No. 1
The well(s) authorized by Permit No. ____ shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) from the producing formation to the surface pursuant to Section 74:02:04:28.

Well Construction Rule Qualification No. 2
The well(s) authorized by Permit No. ____ shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.

Irrigation Water Use Questionnaire Qualification
This permit is approved subject to the irrigation water use questionnaire being submitted each year.

Low Flow Qualification
Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER PERMIT APPLICATION NO. 2813-2, MINERAL MOUNTAIN RESOURCES (SD) INC.: Chairman Hutmacher opened the hearing at 10:20 a.m.

Water Permit Application No. 2813-2 requests the appropriation of 3.68 acre-feet of water annually at a maximum pump rate of 0.022 cubic feet per second (cfs) (10 gallons per minute) from one well completed into the Crystalline Rock aquifer, 700 feet deep, for commercial and industrial uses for exploratory drilling. The well site is located approximately one-half mile southeast of Rochford SD.

Appearances

Matthew Naasz, counsel for Mineral Mountain Resources (SD) Inc.

Ann Mines Bailey, counsel for the Water Rights Program.

Intervenors

Lilias Jarding, Rapid City
Julie Santella, Rapid City
Reno Red Cloud, Sr. Pine Ridge
Thomas Brings, Pine Ridge

Chairman Hutmacher request opening statements.

Mr. Naasz stated that this is an application by Mineral Mountain Resources (SD) Inc. to appropriate 10 gallons per minute from the Crystalline Rock, a Precambrian aquifer, near Rochford, South Dakota. He said the Chief Engineer has recommended approval of this application with qualifications based on the staff engineer's report. The staff engineer analyzed the application and made the determination that there is reasonable probability of available water and that the permit can be authorized without impairing existing water rights. The purpose for the request is to utilize the water for mineral exploration activities, specifically, to utilize the water to cool the drill bit during the exploratory drilling. In order to engage in this activity, Mineral Mountain Resources (SD) Inc. needed to file an Exploration Notice of Intent (EXNI) with the South Dakota Department of Environment and Natural Resources Minerals and Mining Program. After evaluating the filed EXNI, the Minerals and Mining Program issued a restriction letter. The restriction letter indicates that there is to be no discharge of any water from the exploratory activity into the Rapid Creek watershed. The application filed by Mineral Mountain Resources (SD) Inc. will allow them to have a local source of water for exploratory activity.

Without this local source of water, the exploratory activity and the water utilized in the drilling will be imported from a remote location via water trucks. The water trucks have a detrimental impact on the roads in the area, they increase traffic in the area, which poses a problem all year, especially during the winter months. The water trucks, from an environmental perspective, are burning diesel as they drive back and forth from the drilling location. This is something that will not occur with the localized water source.

Mr. Naasz stated that appropriation requests in the Black Hills draws a lot of attention. He said the intervenors won't bring forward any scientific evidence regarding the availability of water or impairment of existing rights. None of the intervenors have articulated an interest in the water from the Precambrian aquifer. A uniform concern of the intervenors is mining in the Black Hills. Mr. Naasz said it is important to understand that the application before the board today is not for water for mining purposes. The application is for water for exploratory drilling and 10 gallons per minute. He said if there is going to be some large-scale mining operation in this area of the Black Hills someday, more than 10 gallons of water per minute will need to be utilized, and should that occur, Mineral Mountain Resources, or whoever is to do the mining, will be back before the Water Management Board to use water for that purpose. At that time, anyone who wishes to intervene in opposition to the mining application will have an opportunity to do so.

Mr. Naasz stated that during the hearing, he will object to questions that do not pertain specifically to Application No. 2813-2.

Mr. Naasz asked the board to pay special attention to the statutory elements necessary to grant a permit to appropriate water: the availability of water, lack of impairment of existing rights, beneficial use, and whether the use of the water is in the public interest. He stated that the testimony will clearly show that all four of those elements are met.

Ms. Mines Bailey waived the opening statement.

Lilias Jarding thanked the board for the opportunity to address them and for providing time for members of the public to fully participate in this process. Ms. Jarding stated that it is her position that the Chief Engineer, Mineral Mountain Resources, and their identified experts cannot prove several critical matters that are at the heart of this proceeding. She said she would also argue that this proposal is not in the public interest for reasons that will become clear during the hearing. Because this water use would not be in the public interest, it is also not beneficial in the simple meaning of the word. Ms. Jarding asked that the board deny this application.

Julie Santella thanked the board for giving the intervenors the opportunity to raise their concerns regarding this application. Ms. Santella said she is a member of the public, and a lot of what she will be presenting today has to do with public interest. The exploration company will tell you that exploration is separate from mining, and Ms. Santella said she will try to convince the board otherwise, because exploration activities are a part of the same industry as mining. There wouldn't be exploration if the intent wasn't to discover resources that they decide they want to mine for profit. She said it is disingenuous to try to disconnect the two. Ms. Santella said she appreciates the prehearing chairman's decision to deny the motion to preclude evidence regarding mining and possible surface water discharge. She said to her, that indicates that the

board agrees that those matters are relevant to this application. Ms. Santella said she wanted to remind everyone that the land and water in question in the Black Hills is within 1851 and 1868 Treaty Territory. This is land that the U.S. Supreme Court ruled, in a 1980 decision, was stolen and we are all accountable to those treaties, which per Article 6 of the U.S. Constitution remain the supreme law of the land. The Black Hills has plenty of experience with toxic mining projects. By their own admission, the DENR will forever be on the hook for cleanup at Gilt Edge. There have been numerous violations and spills over the years at Wharf. By the company's own accounting, groundwater has been degraded as a result of their operation. Ms. Santella said she is here today because she is tired of contamination of water, disregard for the natural world that sustains us, and disrespect for indigenous sovereignty being justified for the sole purpose of corporate greed. It takes a lot of resources and work to dig this stuff out of the ground and make sure things are safe on the other side. She asked everyone to imagine what we could do with that energy and those resources if we decide that profit for a few weren't enough to justify that destruction. She said failure to comply with just one of the four criteria is enough to deny this permit. Ms. Santella said she is a member of the public, and because of the situation with Covid-19, a lot of people who might be here otherwise, are not able to be here, so she is trying to be a representative of those that cannot be here. She said this permit application is not in her or her community's best interest. She asked the board to deny the permit.

Chairman Hutmacher stated that since Ms. Santella is not an attorney, she can only represent herself.

Reno Red Cloud stated that he is with the Oglala Sioux Tribe Water Resource Department. He said according to the Treaty of 1851 and 1868 Articles 5, 8, and 11, the tribe was the original landowners before the states. The treaties are still law and the tribes still have an interest in anything that goes on in the Treaty territories. Regarding the tribe's treaty rights and water rights, even the South Dakota Water Management Board has their own laws, the tribe still has its laws from before the state was created. Mr. Red Cloud said if this drilling is on federal land then it goes through the NHPA process where tribal consultation is part of the process. This is a federal regulation. The water from the Rapid Creek watershed goes into the Cheyenne River, and Cheyenne River goes into the Missouri River north of the Mni Wiconi water project intake. A concern of the tribe is source water protection. The tribe would like to see a monitoring inspection of this project with the drilling and water quality sampling before, during and after. Mr. Red Cloud has concern with a contingency plan and whether the mining company will be able to reclaim the area and get the water quality back to where it was originally. Mr. Red Cloud said water quality should be on the level with water quantity. A study was done by the School of Mines which shows that the river exceeds the radionuclide levels in the headwaters of the Cheyenne River into Angostura. Mr. Red Cloud said he does not want to see contamination of the tribal or state water resources. He said he is opposed to this drilling project, and he requested that the board deny the permit application.

Thomas Brings stated that he is the Tribal Historic Preservation Officer for the Oglala Sioux Tribe. Mr. Brings said the 16 tribes who have whole ancestral ties to the area were not consulted regarding this application. With the destruction of this land, the tribes' hunting and fishing rights, which are specified in the 1851 Treaty the tribes still hold, are being disrupted. With the destruction of the land goes destruction of the habitat for animals. Mr. Brings said he would like

to remind the Water Management Board that it is because of gold that the Black Hills were taken away from the Oglala Sioux Tribe. He said exploration and drilling is just the start, and in the end, it is destruction of the land without being able to bring it back to where it was.

Ms. Mines Bailey offered DENR Exhibit 1, the administrative file for Water Permit Application No. 2813-2, Mineral Mountain Resources (SD) Inc. The file contains the application, the report, Chief Engineer's recommendation, petitions to intervene, and subsequent filings pursuant to the procedural order in this matter. Chairman Hutmacher admitted the exhibit into the record.

Timothy Magstadt was administered the oath by the court reporter and testified regarding his report on Mineral Mountain Resources (SD) Inc.

Ms. Mines Bailey offered DENR Exhibit 2, the curriculum vitae of Timothy Magstadt; DENR Exhibit 3, area map near proposed diversion point; and DENR Exhibit 4, hydrograph of observation well CU-86A. Chairman Hutmacher admitted the exhibits into the record.

Mr. Magstadt testified that he is an Environmental Engineer II with the Water Rights Program. He has been employed by the DENR Water Rights Program for approximately two and one-half years. He testified regarding his job responsibilities.

Mr. Magstadt pointed out several corrections to his report on Mineral Mountain Resources (SD) Inc. He stated that none of the corrections altered his technical analysis or conclusions.

Mr. Magstadt testified that Water Permit Application No. 2813-2 requests the appropriation of 3.68 acre-feet of water annually at a maximum pump rate of 0.022 cubic feet per second (cfs) (10 gallons per minute) from one well completed into the Crystalline Rock aquifer, 700 feet deep, for commercial and industrial uses for exploratory drilling. The well site is located approximately one-half mile southeast of Rochford SD.

Mr. Magstadt's review of the application included determining whether there is a reasonable probability that unappropriated water is available for the applicant's proposed use and that the proposed diversion could be developed without unlawful impairment of existing rights. The standard for determining the availability of unappropriated water is to prove that there is a reasonable probability that there is greater recharge than there is discharge and that the aquifer is not being mined.

Mr. Magstadt explained meaning of recharge and discharge, or withdrawal.

The Crystalline Rock aquifer in the area of the proposed diversion point is composed of black graphitic slate and schist. The aquifer occurs where there is sufficient secondary porosity for the transmission of water, primarily fracturing and weathering, and therefore, is highly sight specific. The Crystalline Rock aquifer has an estimated 574,000 acres of outcrop area and an estimated 2,900,000 acre-feet of recoverable water in storage. Rather than looking at the aquifer as a whole, it is more appropriate to treat it as multiple aquifers completed into similar materials.

Referring to Exhibit 3, Mr. Magstadt stated that the green dots are domestic well logs completed into the Crystalline Rock aquifer in this area, the yellow triangle is the proposed diversion point, and the blue triangles are water rights completed into the Crystalline Rock aquifer. The orange lines and dashed lines are the approximate locations of faults in the area. When performing his technical review, Mr. Magstadt looked at the entire Crystalline Rock aquifer, but primarily focused on the area shown on Exhibit 3 because the Crystalline Rock aquifers are comprised of localized aquifers and occur based upon the amount of secondary porosity and weathering, and as such, are highly variable and uneven. He chose this area based on the nearby fault and well logs in the area indicating sufficient fracturing. The area shown on the map is a two and one-half to three-mile radius around the proposed diversion point.

Recharge to the Crystalline Rock aquifer occurs primarily through the infiltration of precipitation and streamflow losses on the outcrop area. There is not a way to quantify recharge for the localized area and there is not a way to quantify recharge to the Crystalline Rock aquifer as a whole. A study was conducted by Driscoll and Carter that estimated recharge to the Crystalline Rock aquifer within the core of the Black Hills for the years 1950 to 1998. They concluded that recharge to the Crystalline Rock aquifer must be much larger than withdrawals to account for the excess discharge to streams, but they did not quantify a specific amount.

Two observation wells are completed into the Crystalline Rock aquifer. Mr. Magstadt looked at both observation wells but did not use Observation Well PE-95D as part of his analysis because it is completed into both the Deadwood and Crystalline Rock aquifers. Mr. Magstadt relied primarily on Observation Well CU-86A, which is located approximately 24.3 miles southeast of the proposed diversion point. Observation wells show how an aquifer responds to climatic conditions and withdrawals.

Referring to Exhibit 4, the hydrograph for observation well CU-86A, Mr. Magstadt stated that the period of record for this observation well is from September 11, 1990, to the present. The observation well demonstrates how the Crystalline Rock aquifer responds to climatic recharge, showing a strong correlation to precipitation and the subsequent recharge as well as well withdrawals, and the hydrograph shows that recharge exceeds withdrawals in that area.

Mr. Magstadt stated that even though the observation well is approximately 24.3 miles away from the diversion point, he would expect the localized area he focused on to have similar responses due to it being completed into similar materials and experiencing similar climatic conditions.

Within the localized area, the primary withdrawals are well withdrawals. The withdrawals include domestic wells completed into the Crystalline Rock aquifer in that area as well as Moonshine Gulch Saloon Water Right No. 2195-2, which is approximately 0.8 miles northwest of the proposed diversion point. This water right is for commercial use and diverts water at 0.015 cfs or seven gallons per minute.

The Water Rights Program has on file approximately 30 domestic well logs completed into this localized Crystalline Rock aquifer. All domestic wells are now required to be filed with the Water Rights Program, but prior to 1970 well drillers were not required to submit well

completion reports, so there are some well logs that the Water Rights Program does not have. The nearest domestic well log on file with the Water Rights Program and completed into the Crystalline Rock aquifer is approximately 0.6 miles to the northwest of the proposed diversion point.

The Moonshine Gulch Saloon water right is located approximately 0.2 miles from an existing Crystalline Rock aquifer domestic well. The Water Rights Program has not received any complaints regarding water availability or usage in the localized area.

Mr. Magstadt stated that, based upon the continued development of the Crystalline Rock aquifer without significant history of well interference complaints, the hydrograph for observation well CU-86A, Driscoll and Carter's commentary regarding recharge to the Crystalline Rock aquifer, the protection afforded to adequate wells by South Dakota water law, and the relatively small annual appropriation requested, he believes there is a reasonable probability that unappropriated water is available for this proposed appropriation.

Mr. Magstadt stated that an adequate well means that a well must be completed into at least 20 feet of an aquifer in order to be afforded protection under South Dakota water law rights.

Mr. Magstadt stated that, considering the proximity of Water Right No. 2195-2 to nearby domestic users approximately 0.2 miles southeast of the water right without any reports of interference, and the limited diversion rate requested by the application, he believes that there is a reasonable probability that the diversion proposed by this application will not unlawfully impair nearby adequate wells for existing water rights and domestic use.

A well completion report for a test hole for this proposed diversion site was submitted with the application. Mr. Magstadt believes the applicant wanted to see if it would be feasible for the Crystalline Rock aquifer to be an aquifer that meets their needs. The well was completed February 7, 2020, and the static water level noted in the well log was 30 feet. He said if the aquifer in this area were being mined, he would expect the static water level to be far lower than it is. It indicates that the aquifer in this area has greater recharge than withdrawals.

Mr. Magstadt said he has reviewed the petitions to intervene in this matter. He stated that, to his knowledge, no aquifer has been fully mapped. There is always a degree of uncertainty, however, Driscoll and Carter did research the Crystalline Rock aquifer and concluded that recharge was greater than withdrawals.

Responding to questions from Mr. Naasz, Mr. Magstadt stated that he had reviewed the petitions in opposition to the application, and the majority of the petitions included receiving water from the Crystalline Rock aquifer as one of the concerns. Mr. Magstadt stated that he did not recall any of the petitions in opposition to this application identifying any of the well logs, either domestic or the water right, in the geographic area shown on Exhibit 3.

Ms. Jarding asked if it is correct that there were errors in the report. Mr. Magstadt stated that they were not errors, but corrections, primarily due to a typographical error and a miscalculation. Mr. Magstadt said the errors were discovered during the review of the report. He does not recall

who discovered the errors or who requested that the errors be corrected. Mr. Magstadt said he wrote and submitted the errata sheet.

Ms. Jarding asked who requested or suggested that Mr. Magstadt be included as an expert witness for this matter. Mr. Magstadt said he does not know who suggested it, but he wrote the report and that it is standard procedure.

Ms. Jarding asked Mr. Magstadt if he relied heavily on the report for Water Permit Application No. 2789-2, Rushmore Cave, when writing the report for Application No. 2813-2. Mr. Magstadt said he does not recall ever looking at that report.

Responding to additional questions from Ms. Jarding, Mr. Magstadt said he is aware that the Crystalline Rock aquifer consists of localized aquifers. When writing the report, he relied on the Driscoll and Carter report that was published in 2001. Mr. Magstadt said he would agree that only a small portion of this report has to do with the Precambrian Crystal Rock in the central Black Hills and mostly focuses on the Inyan Kara, Minnelusa, Madison, and Deadwood aquifers, and that he agrees with the Driscoll and Carter report regarding numerous fractures and other structural features in the rock of the Black Hills. Mr. Magstadt said his opinion of what Driscoll and Carter meant by using the word "localized" is that the aquifer is not consistent throughout the Crystalline Rock. He agrees that the Driscoll and Carter report focused, in part, by determining groundwater's response to precipitation. Their study involved observation wells.

Ms. Jarding asked if she could show Mr. Magstadt a page from the Driscoll and Carter report. Ms. Mines Bailey stated that the report has not been admitted into evidence, and she objected to the showing of one page without some clarification that it is from the whole report.

Chairman Hutmacher sustained the objection.

Ms. Jarding asked if Mr. Magstadt agrees that information from one well cannot be generalized to create a conclusion about precipitation-based aquifer recharge for the entire Precambrian Crystalline Rock in the central Black Hills. Mr. Magstadt said he believes that observation wells completed into the Crystalline Rock can provide insight into how climatic conditions affect similar material such as the Crystalline Rock.

Ms. Jarding asked if the aquifers are localized or if Mr. Magstadt can infer from one well what happens across the Precambrian Crystalline core. Mr. Magstadt answered that the observation well that he cited during his testimony gives an indication as to how climatic conditions affect other Crystalline Rock aquifers completed into similar materials.

Ms. Jarding said Driscoll and Carter did not attempt to quantify recharge to the aquifer. She asked if Mr. Magstadt agrees that no one knows how much recharge there is to this specific aquifer the Mineral Mountain Resources wants to draw water from. Mr. Magstadt answered that there is no specific value for the amount of recharge that is occurring to this isolated Crystalline Rock aquifer.

Ms. Jarding asked if the Carter, Driscoll, Hamades 2001 study accurately characterizes the Precambrian Crystalline core in the Black Hills when it says it is "highly variable." Mr. Magstadt said the Crystalline Rock is highly variable.

Ms. Jarding said Mr. Magstadt also relied on the 1979 Rahn study, Groundwater Resources of Western South Dakota. She asked if this study accurately characterizes the aquifers of the Precambrian Crystalline core in the Black Hills when, as quoted in the Rushmore Cave report, it says, "rocks of this aquifer have low primary porosities so water is conveyed to walls along fractures, joints, and faults". Mr. Magstadt said he agrees with that statement.

Ms. Jarding asked if Mr. Magstadt agreed with the Rushmore Cave report that "water availability in the aquifer is site-specific and depends upon the occurrence of fractures, joints, and faults in the subsurface at a given site."

Ms. Mines Bailey objected because the witness has testified that he did not review the Rushmore Cave report.

Chairman Hutmacher sustained the objection.

In response to questions from Ms. Jarding, Mr. Magstadt stated that there is no way for him to specifically state the locations and shapes of fractures, joints, and faults at the site of the well that is the subject of this application. Nowhere in the Crystalline Rock aquifer are fractures mapped to any degree of certainty to which you would be able to tell that kind of information. Mr. Magstadt said he does not know the specific number of wells that are hydrologically connected to the well that is the subject of this application. Determining whether unappropriated water is available for the applicant's use can be done by looking at observation wells completed into similar materials, looking at precipitation data and how that correlates to recharge to the Crystalline Rock aquifer, and looking at nearby well logs completed into the same area as the proposed diversion to determine whether or not those wells are likely completed into the same fractures.

Ms. Jarding asked, given the lack of information, how someone can judge whether this applicant's water use would unlawfully impair other existing rights. Mr. Magstadt answered that considering the proximity of the existing water right in the area in relation to existing wells completed into the Crystalline Rock aquifer and given the distance of the proposed diversion point to other wells completed into the Crystalline Rock, unlawful impairment would be unlikely.

Regarding the observation well used for Mr. Magstadt's report, Ms. Jarding asked if he was not able to determine something 0.8 miles away from the proposed point, but he could determine something from wells that are 24 and 19.5 miles away. Mr. Magstadt stated that the observation well he used for his report is completed into similar materials and information is available for water levels at that site. Ms. Jarding asked if he used that information because it is available but not necessarily because it connects to what is seen 19.5 miles away. Ms. Mines Bailey objected to the question as argumentative. Chairman Hutmacher sustained the objection.

Responding to questions from Ms. Santella, Mr. Magstadt stated that he was responsible for determining whether there was a reasonable probability that unappropriated water is available for the applicant's proposed use and that the proposed diversion could be developed without unlawful impairment of existing rights. He has heard of the Winters Doctrine, but he does not know the specifics of it, so he cannot answer whether he incorporated anything regarding the Winters Doctrine in his report without knowing what comprises the Winters Doctrine.

Responding to questions regarding Exhibit 4, the hydrograph for Observation well CU-86A, Mr. Magstadt said there is no way to correlate a hydrograph to any amount of water in storage. The variation on the hydrograph from year to year is primarily due to withdrawals and climatic conditions.

In response to questions from Mr. Red Cloud, Mr. Magstadt stated that he reviewed all the well logs in the area that the Water Rights Program has on file, but he does not recall if there were any abandoned wells in the area. IOC sampling for metals in wells is outside the scope of his review. Mr. Magstadt believes wells in the Black Hills are cased and screened, but he is not 100 percent sure. There were no pump tests conducted on the observation well that was used for his report. Public water system violations would have shown up on the map (Exhibit 3). The next nearest water right is approximately 7.6 miles southeast of the proposed diversion, and there are no rural water systems in the area.

Responding to questions from Mr. Brings, Mr. Magstadt stated that recharge to the Crystalline Rock aquifers is primarily through the infiltration of precipitation and stream flow losses on the outcrop area. Mr. Magstadt does not know if the drilling will be directional drilling or fracking.

Mr. Brings asked if Mr. Magstadt agrees that because of the fractures and fissures all aquifers are flow-related and can be cross-contaminated. Mr. Magstadt stated that contamination was outside the scope of his review. Mr. Brings asked if Mr. Magstadt agrees that aquifers are flowing into each other. Mr. Naasz objected because it is beyond the scope of direct. Chairman Hutmacher sustained the objection.

Ms. Mines Bailey had no re-direct.

In response to a question from Mr. Bjork, Mr. Magstadt stated that he does not have information on the effect that any of these withdrawals will have on Rapid Creek. If there is a connection between the Crystalline Rock aquifer and Rapid City, it has never been quantified. The effect on the flow would be dependent upon the amount of fracturing that occurs along the creek and whether the potentiometric surface of the aquifer was higher or lower than Rapid Creek.

Mr. Naasz called Kevin Leonard who was administered the oath by the court reporter.

Mr. Leonard testified that he is the operations officer for Mineral Mountain Resources. He discussed his role with Mineral Mountain Resources. Mineral Mountain Resources is currently carrying out a multi-disciplinary exploration program consisting of airborne radiometric magnetometer surveying with structural interpretation, geochronology studies, geochemistry, and diamond drilling. Mineral Mountain Resources has been drilling exploratory holes in South

Dakota since October 2012. Forty-nine exploratory holes have been drilled; 35 in Keystone and 14 at Rochford. After the drill holes are completed, the rods and casing are pulled and, according to the administrative rules, the holes are capped, sealed and plugged under the auspices of a DENR representative.

Mr. Naasz offered Exhibit A, Water Permit Application No. 2813-2, Mineral Mountain Resources (SD) Inc.; Exhibit C, Crystal Hocking curriculum vitae; Exhibit D, EXNI restriction letter; Exhibit E, a photo of a drilling operation to be used for drilling exploration holes; Exhibit G, photo of lined sumps used for water collection; and Exhibit H, photo of solids removal unit. Chairman Hutmacher admitted the exhibits into the record.

Responding to questions from Mr. Naasz, Mr. Leonard stated that Mineral Mountain Resources intends to utilize the water requested in Application No. 2813-2 to lubricate the drill hole and cool the diamond drill bit. Mineral Mountain Resources is requesting 1,200,000 gallons, or 10 gallons per minute.

Mr. Leonard stated that Mineral Mountain Resources will be drilling with a slightly smaller rig, but Exhibit E is an accurate representation of the drilling rig that will be used in association with the water requested by this application.

The lined sump (Exhibit G) is used to contain the water runoff and the drill core cuttings. This is located on Site 8 on the standby property. The water is directed into the sump through channels from the drill collar to the pumps, and the polyurethane double liner is an impervious layer that contains the water.

The solids removal unit (Exhibit H) is equipment used in lieu of sumps. It provides direct circulating water between the drill collar and this unit, which contains a large water tank. It separates the drill muds from the water, giving clean water that goes back down the hole that can be continually reused.

Mineral Mountain Resources intends to utilize solid removal units in conjunction with exploratory drilling operations near Rochford to reduce its water consumption as much as possible and to provide a safe environment around the drillers. Solid removal units can reduce the total amount of muds up to 65 percent and produce drier cuttings. The cuttings can then be sent off to a waste disposal unit or they can be allowed to stay on the ground. This is a state of the art piece of equipment that is used at Superfund sites and various projects around the world that are environmentally sensitive and, in Australia, it is used in areas that don't have much water or areas that have deep water tables.

Water for exploratory drilling has been obtained from the city of Lead and transported to the site in truck-mounted 30,000-gallon tanks. The water haul trucks are detrimental to the roads in the area. Having a local source of water would remove the need to haul water, which would reduce traffic and damage to the roads, and it would provide additional safety for the drivers.

Exhibit D is an October 5, 2020, letter from Roberta Hudson, DENR to Mr. Leonard, Mineral Mountain Resources, stating that the EXNI was procedurally complete and requiring several

restrictions. Restriction No. 2 requires that no discharge of water or sediments into Rapid Creek or tributaries of Rapid Creek is permitted. Restriction No. 7 requires that all test holes shall be capped, sealed, and plugged according to ARSD 74:11:08 (Plugging Standards) immediately following drilling and probing. Mr. Leonard stated that this restriction has been in place for every hole drilled by Mineral Mountain Resources in South Dakota.

Mr. Leonard stated that Mineral Mountain Resources understands that it is required to comply with all the requirements and restrictions listed in Exhibit D during its exploratory activities. Mineral Mountain Resources also understands that, if approved, this permit would not allow water to be used for mining purposes.

Mr. Leonard said the water to be used would be economically beneficial to Mineral Mountain Resources. For the amount of drilling that Mineral Mountain Resources is doing, the water with the other attributes it brings would be very beneficial. He said that if the water permit was denied, the exploration would not necessarily stop.

Mr. Leonard stated that he has read the Chief Engineer's qualifications. He said one of the qualifications requires Mineral Mountain Resources to control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights, and Mineral Mountain Resources would be willing to control the withdrawals to make sure no impairment to adequate domestic wells occurs. Mineral Mountain Resources owns the land upon which the exploration activities are being conducted.

Ms. Mines Bailey had no questions of Mr. Leonard.

Responding to questions from Ms. Jarding, Mr. Leonard stated that he became the operations officer for the Mineral Mountain Resources Rochford project within the last year. He said he agrees that the purpose of this project is to locate, map, and analyze potential mining sites. With any exploration company, one would like to find a mine. He said in a greenfields project like Mineral Mountain Resources, the success for discovery of an economic producing mine is one in one thousand In a brownfields project, with a resource, Mineral Mountain Resources has an 18 to 23 percent chance of success, but Mineral Mountain Resources is willing to take the chance.

There are 60 to 70 acres in the Rochford exploration project. Mr. Leonard said he does not know how many miles to the east the project extends. Mineral Mountain Resources has unpatented mining claims in the area, and there are other operators around the area.

Mineral Mountain Resources' employees are all under contract, and on-site. There are four employees.

Mr. Jarding asked how many full-time employees Mineral Mountain Resources has in Canada. Mr. Naasz objected as it being beyond the scope and as to relevance. Chairman Hutmacher sustained the objection.

In response to more questions from Ms. Jarding, Mr. Leonard stated that all the holes Mineral Mountain Resources intends to drill will be on private land, and the company does not currently have a permit to drill on public land.

Ms. Jarding asked what "n/a" means on Exhibit A, Form 2A, d) and why is there a question mark before "1 mile" on the line asking for distance to property owned by others. Mr. Leonard stated that "n/a" means not applicable and regarding the question mark, he was not absolutely sure of the distance to property owned by others.

Ms. Jarding asked what strata of the Precambrian Crystalline Rock Mineral Mountain Resources' wells are located. Mr. Leonard said they are in Sweed Gulch, Poverty Gulch, and Irish Gulch in phyllite and schist of these three formations and the target lithology is the Rochford iron formation.

In response to additional questions from Ms. Jarding, Mr. Leonard stated that if the water permit is approved, the water will supply Mineral Mountain Resources for future programs.

Mr. Leonard said he prepared the water permit application (Exhibit A). He assumes the sections on the application that handwritten in red ink were done by DENR after asking for the information from Mr. Leonard.

Ms. Jarding asked if it was at DENR's suggestion that this information was changed or added. Mr. Leonard stated that he gave DENR the authority to add this information. Mr. Naasz objected as to relevance. Ms. Jarding said she is trying to figure out how this application changed from when it was submitted to what is shown in Exhibit A. Chairman Hutmacher over-ruled the objection.

Ms. Jarding asked Mr. Leonard at whose suggestion was the red ink added in this application. Mr. Leonard answered that it was DENR because they probably figured this was not a totally completed application, so this was done to complete the application. Ms. Jarding asked if DENR completed the application. Mr. Leonard answered no. Ms. Jarding said that Mr. Leonard just said DENR completed the application. Mr. Naasz objected citing argumentative. Chairman Hutmacher sustained the objection.

Ms. Jarding said there are a few things that are important in the changes that were made to the application. One is at the top of the first page under "Check uses of water." She said that according to Mr. Leonard, the use was commercial, but DENR checked industrial. She asked Mr. Leonard what he understands the difference to be between commercial and industrial for this application. Mr. Leonard said he does not know.

Ms. Jarding said at the top of Form 2A, Mr. Leonard checked "drilling new well" and the DENR added "Using existing wells" and page 1, No. 3 states "new water well." She said it is unclear whether Mr. Leonard's intention when he filed the application was to drill a new well or to use an existing well. Mr. Leonard said it is the current well, which was drilled by Alexander in January 2020. Ms. Jarding stated that the well log on page 3 lists nine formations between the ground at 632 feet. Eight of those layers alternate between hard grey schist and schist fracture.

She asked if this is an accurate representation of the well that will be used. Mr. Leonard answered that it is. Ms. Jarding asked if there are four fractures underground that are filled with water at this location. Mr. Leonard answered yes. She asked if each fracture or aquifer is two feet in depth from top to bottom? Mr. Leonard answered that these are general fractures in the rock. Ms. Jarding asked how common it is for a drill location to include four fractures or aquifers, each of them two feet in depth. Mr. Leonard answered that it is probably very common. Ms. Jarding asked if Mineral Mountain Resources has drilled other wells in the vicinity that confirm the four fractures. Mr. Leonard answered no. Ms. Jarding asked how the company would ensure that water from one fracture doesn't mingle with water from another fracture. Mr. Leonard said Mineral Mountain Resources cannot ensure that, but it does have drillers and geologists look at the holes very intensely.

Ms. Jarding asked if Mineral Mountain Resources has ever had a violation of a federal law for water contamination associated with exploration drilling. Mr. Leonard answered no. She asked if Mineral Mountain Resources has ever had a violation of state law. Mr. Leonard answered that Mineral Mountain Resources had a violation for an unauthorized discharge bentonite clay into Battle Creek. It was contained within hours and vacuum suctioned in one day. Ms. Jarding asked what preventative measures Mineral Mountain Resources has put in place to prevent another spill. Mr. Leonard stated that the solid removal unit is one of the preventative measures used and the sumps are double lined. The bottom of the sump is also inspected for rocks or jagged objects that could puncture the liner.

Ms. Jarding stated that on Form 2A of the application, beside 2. Wastewater Disposal System Information, the following is written in red, "ro wastewater disposal associated w/application." She asked if Mr. Leonard could explain what wastewater disposal system would be. Mr. Leonard answered that he cannot.

Ms. Jarding asked what Mineral Mountain Resources will do if cultural resources are identified as they are working with the well it wants to use for this application. Mr. Naasz objected as to it being beyond the scope and irrelevant. Chairman Hutmacher sustained the motion.

Mr. Leonard stated that all the sites are inspected by DENR and state Archaeology before any EXNI is approved.

Ms. Jarding asked if Mineral Mountain Resources applied for 3.8 acre-feet of water per year or is this a one-time request. Mr. Leonard answered that it is an annual request.

Responding to questions from Mr. Red Cloud regarding Exhibit A, Mr. Leonard stated that this well was completed by Alexander Well Drilling in January 2020. Mineral Mountain Resources wants to use this well for exploratory drilling. Mineral Mountain Resources is aware of the NEPA process and has had interaction with tribes in Canada. Mr. Red Cloud asked if gold is being extracted with any of the 39 wells. Mr. Leonard said these were exploratory drill holes and they have been capped, sealed, and abandoned. The drill holes in Keystone have been inspected and approved by DENR.

Mr. Red Cloud commented that the $20,000 bond should be higher. He asked if Mineral Mountain Resources has an emergency response plan in case something happens. Mr. Leonard said the drill is inspected before drilling every hole and there are emergency numbers to call and a response plan. Mr. Red Cloud asked if anyone is monitoring the water quality to see if it exceeds the Safe Drinking Water Act parameters. Mr. Leonard there is no need to monitor the water.

Mr. Brings asked if Exhibit G is a photo of where the wastewater will be stored. Mr. Leonard stated that there will be sumps on-site. Mr. Brings asked how long the water will be sitting in these lined sumps. Mr. Leonard stated that the sumps are usually reclaimed after drilling. Mr. Brings asked if Mineral Mountain Resources is using directional drilling. Mr. Leonard answered that they are not.

Ms. Santella asked if there is cell phone reception in the area of the exploration. Mr. Leonard said there are a few places in the area that have cell service. Ms. Santella asked Mr. Leonard to explain the purpose of mineral exploration. Mr. Leonard stated that the purpose is to find an ore body. This is a long process. An economic resource needs to be found, and then a rigorous EIS process with the federal government takes place.

Responding to questions from Mr. Naasz regarding Exhibit A, the water permit application, Mr. Leonard stated that on Form 2A of the application the writing in red ink states "no wastewater disposal associated w/application." The 39 exploratory holes Mineral Mountain Resources has drilled in South Dakota are not water production wells or water test wells. The end product of the exploratory drilling holes is to give the company information, not water. Among the first people Mineral Mountain Resources contacted following identification of the bentonite clay leak were their senior geologist, company management, DENR, and all the authorities that are relevant to responding to a leak. Mineral Mountain Resources worked closely with DENR through that process.

There were no questions of Mr. Leonard from the board members.

Mr. Naasz called Crystal Hocking who was administered the oath by the court reporter.

In response to questions from Mr. Naasz, Ms. Hocking stated that she is a geological engineer for RESPEC Consulting in Rapid City, SD.

Ms. Hocking stated that attended South Dakota School of Mines and Technology in Rapid City and obtained a BS in geology, a BS in geological engineering, and a MS in geology and geological engineering. She is a registered professional engineer in the state of South Dakota and several other states, and a registered professional geologist in Wyoming and several other states. The state of South Dakota does not register professional geologists. Ms. Hocking is a member of the Society of Mining, Metallurgy & Exploration, and she was associated with the Geological Society of America in the past. Ms. Hocking stated that she has been studying groundwater in the Black Hills since she was an undergraduate at the School of Mines. Her first research experiences were related to utilizing limestone from Black Hills Quarries to remove arsenic from groundwater in the Keystone area. Her Masters Thesis was regarding aquifer

vulnerability and susceptibility of the Madison aquifer in the Hayward Quadrangle in the Black Hills. Ms. Hocking stated in the 14 years she has been with RESPEC she has had multiple groundwater hydrogeology-related projects, has been involved with aquifer mapping in the northern Black Hills, Butte County, Lawrence County, and Meade County. In those counties she has been involved with hydrogeological investigations including pump tests, groundwater modeling, and well siting for various mining projects including a proposed in situ uranium project near Edgemont and extensive work for Wharf Resources near Lead.

Mr. Naasz asked if Ms. Hocking has worked specifically with the Precambrian Rock or Crystalline Rock aquifers in South Dakota. Ms. Hocking stated that the Wharf mine site is primarily dominated by Precambrian Rock, and she has modeled that area extensively. She is familiar with water flow patterns, how fractures impact groundwater flow, as well as how mining activities impact groundwater quality and groundwater flow. Ms. Hocking noted that the Precambrian Rock aquifer is the same aquifer as the Crystalline Rock aquifer.

Regarding Water Permit Application No. 2813-2, Ms. Hocking stated that Mineral Mountain Resources has requested to withdraw water from the Precambrian or Crystalline Rock aquifer. Ms. Hocking has reviewed the report written by Timothy Magstadt regarding the application, and she agrees with his conclusion that there is a reasonable probability that unappropriated water is available to satisfy this permit application. Ms. Hocking based her opinion on the fact that recharge exceeds withdrawal in this area. She evaluated the same documents looked at the reports by Driscoll and Carter 2001 and other information and came to the same conclusion that there is water available. If there wasn't, the Precambrian would not discharge water to the springs and creeks that are fed by base flow from the Precambrian. Ms. Hocking reviewed the other information about withdrawals in the area and overall general recharge in the Black Hills and recharge rates to aquifers in the area. Ms. Hocking said she did a quick analysis calculation evaluating the average annual recharge in the Black Hills at approximately 3.5 percent annual recharge. With the requested maximum withdrawal rate of 10 gallons per minute, approximately 0.41 square miles would be necessary at that recharge rate in this area to supply this well without impairing any water rights.

Mr. Naasz asked Ms. Hocking if she has an opinion as to the possibility of impairment of existing water rights and adequate wells should this permit be granted. Ms. Hocking stated that upon review of the information and the location of the other wells, she believes that this well would not impact existing water rights or existing domestic wells within the vicinity. She looked into the proximity of the existing water right from the Moonshine Gulch, which is located 0.8 miles to the north of this proposed well, and there have been no interference complaints. The likelihood of interference of a well more than 0.6 miles away from the closest well has a slim to no of occurring.

Ms. Hocking stated that she agrees with the conclusions made by the DENR engineer regarding water availability and impairment of existing rights, based on her education and experience in the field.

Regarding the connection between the Precambrian and Rapid Creek, Ms. Hocking stated that in her opinion, this project would not have any impact on surface water flow in Rapid Creek. The

typical average annual flow in Rapid Creek for this time of year is 20 cubic feet per second, which is approximately 9,000 gallons per minute. Rapid Creek is monitored by the U.S. Geological Survey. There are several gaging stations that monitor flow on Rapid Creek. Ms. Hocking said that based on the relative percentage of flow requested under this water permit application, 10 gallons per minutes, compared to 9,000 gallons per minute that is flowing in Rapid Creek, the amount requested in the application is miniscule in comparison to that. Additionally, there is no guarantee or evidence that suggests that this site is directly linked to Rapid Creek.

Regarding Exhibit 3, Ms. Hocking stated that most of the domestic wells in the area are located along Rapid Creek, possibly even within the Rapid Creek flood plain, including the existing water right of the Moonshine Gulch Saloon. She would assume that these wells are not currently impacting Rapid Creek and this well that is located more than one half mile away from Rapid Creek would also be unlikely to impact Rapid Creek flows.

Ms. Mines Bailey had no questions of Ms. Hocking.

Responding to questions from Ms. Jarding, Ms. Hocking stated that she has reviewed Driscoll and Carter's 2001 publication entitled "Hydraulic Conditions and Budgets for the Black Hills of South Dakota Through Water Year 1998." Ms. Hocking disagreed that the report only focuses on the Madison, Minnelusa and Deadwood aquifers, but she would agree that the report contains less than 20 pages devoted to Precambrian evaluation. Ms. Jarding said Driscoll and Carter describe the Precambrian Crystalline Rock of the central Black Hills as highly variable, and there are numerous fractures, faults and other structural features in the rock of the Black Hills. She asked Ms. Hocking if she would agree that this is accurate. Ms. Hocking answered that she would agree.

Ms. Jarding asked Ms. Hocking if she noticed that Driscoll and Carter used the word "localized" to describe aquifers in the Precambrian Crystalline Rock in at least four places. Ms. Hocking said she did not count how many times the word "localized" was used in the report. She does not know what the authors meant regarding "localized." Ms. Hocking said her interpretation of the word "localized" is an areal extent not defined, necessarily, by a quantitative number, but by more of a geographic nature that the Precambrian in the northern Hills may be different than the Precambrian aquifer in the southern Black Hills.

Ms. Jarding asked if Ms. Hocking would agree that Driscoll and Carter's report focused, in part, on determining groundwater's response to precipitation in the Black Hills. Ms. Hocking answered that, in part, their report concerned that information. She stated that the recharge precipitation is predicted to vary over the Black Hills, but Driscoll and Carter did estimate the average precipitation rate in the Black Hills to be approximately 3.5 percent of annual precipitation.

Ms. Jarding asked if Ms. Hocking would agree that Driscoll and Carter's report included 52 observation wells. Ms. Hocking said she is not familiar with the number of sites, so she cannot comment on whether or not that is correct. Ms. Jarding asked if Ms. Hocking would agree with Driscoll and Carter that regional groundwater flow in the Precambrian rock is assumed to be

negligible. Ms. Hocking said she is not in agreement or disagreement with that statement because she does not have the same information available that they reviewed.

Ms. Jarding asked if Ms. Hocking would agree when Driscoll and Carter say recharge conditions are highly transient and have large, spatial variability, and as a result they do not attempt to quantify the recharge. Ms. Hocking answered that she agrees with that statement and that they did not attempt to quantify the recharge in a localized manner.

Ms. Jarding asked if Ms. Hocking is familiar with Rahn's 1979 Groundwater Resources of Western South Dakota report. Ms. Hocking said she is not intimately familiar with that document. Ms. Jarding asked if Ms. Hocking is familiar with Dr. Rahn and how would she characterize him. Mr. Naasz objected as to relevance. Chairman Hutmacher sustained the objection.

Ms. Jarding asked Ms. Hocking if she recalls Dr. Rahn's conclusion about the Precambrian Crystalline Rock aquifers that, "The amount of groundwater recharge to these rocks is not known. It is undoubtedly very low. It is unlikely that the Precambrian aquifers could produce much more water than is currently being extracted without mining the water, producing a wide-spread permanent decline in the water table." Ms. Hocking said that conclusion may be in the report, but she is not familiar with what is and what isn't in the report. Ms. Jarding asked if Ms. Hocking would say Rahn's conclusion is accurate. Ms. Hocking answered that there are a lot of conclusions in that statement. Ms. Jarding asked Ms. Hocking if she agrees with the statement that the groundwater recharge is not known, and it is undoubtedly very low. Ms. Hocking said she would agree that recharge is low in places, but necessarily everywhere.

In response to a question from Ms. Jarding, Ms. Hocking answered that water does follow fractures, joints and faults underground in the Precambrian core. The porosity or the permeability in the Precambrian aquifer is secondary permeability related to fractures and joints. Ms. Hocking stated that she has not reviewed geological mapping that may be available of the locations and shapes of fractures, joints, and faults. With the data available at this time, Ms. Hocking said she cannot answer the question of how many wells are hydrologically connected to the well that is the subject of this application.

Ms. Jarding asked what aquifer or aquifers in the Precambrian core provide water to the Moonshine Gulch Saloon, the closest water right or permit to the Mineral Mountain Resources well. Ms. Hocking said she has not reviewed the Moonshine Gulch Saloon water right application in detail, but she assumes that they are also either completed in the alluvial aquifer immediately adjacent to Rapid Creek and/or the Precambrian aquifer.

Ms. Jarding asked if there were two inches of rain at the well site that is the subject of this application, how long would it take to recharge the water supply in that area. Ms. Hocking answered that recharge isn't about time. The studies for the Black Hills have been focused on the rate of recharge, not how quickly recharge is occurring.

Ms. Jarding asked, considering that the Crystalline aquifers are localized in the Black Hills, how would Ms. Hocking consider the relevance of an observation well that is over 24 miles away

from the subject well. Ms. Hocking said she believes the distance from DENR's observation well to this location may mean that the well is not directly correlative to what could be seen at the site. However, it is indicative of a general, larger trend in the region and does show impacts of precipitation and withdrawals in the region of that observation well.

Ms. Hocking answered questions from Ms. Jarding about project experience listed on her curriculum vitae (Exhibit C). Ms. Hocking stated that in her professional career she hasn't completed projects involving the Precambrian Crystalline Rock in the central Black Hills defined as what is below the Rapid Creek Watershed where the application is located. However, while she was a student, she did study and evaluate water quality in the central Black Hills, including the work she did as an undergraduate and graduate student evaluating groundwater water quality near Keystone.

Ms. Jarding stated that the well log included in the application shows there are four schist fractures. She asked if that means there are four fractures underground that are filled with water at this location. Ms. Hocking answered that the well completion report does indicate four fracture zones that are listed on the report, but based on her experience and review of the thousands of well logs, she would indicate that these are not the only fractures within this well. These were the places where the driller stopped drilling, paused, and observed if there was inflow into the well. The driller does not stop drilling every two feet or every four feet to determine if there is a fracture that area. This is a very rough estimate, and there could be thousands of fractures in this well. Ms. Hocking stated that there is no way, with the available data, to know whether fractures are connected or not. Ms. Jarding asked if the fractures the company wants to remove water from are hydrologically connected to domestic or commercial wells in the area. Ms. Hocking said the available information does not indicate that they are connected, but there is no evidence that they are or aren't.

Responding to questions from Ms. Santella, Ms. Hocking stated that she is not familiar with the Winters Doctrine.

Mr. Red Cloud asked Ms. Hocking if she has done any studies on elevated radionuclides or radium levels that got into Angostura. Mr. Naasz objected as to relevance. Chairman Hutmacher sustained the objection.

Mr. Red Cloud asked if Ms. Hocking has done any other studies for water quality in the Black Hills tributaries. Ms. Hocking answered that she has conducted studies, collecting water quality samples or other environmental samples that would impact water quality throughout the Black Hills. The places where the studies are focused are areas where there is no contamination. Mr. Red Cloud asked if Ms. Hocking has done any work or studies with creating or developing any source water protection plans. Ms. Hocking said she has done well source protection plans in Wyoming.

Mr. Red Cloud asked Ms. Hocking if she believes water quality should be a bigger emphasis on South Dakota permitting. Mr. Naasz objected as to relevance. Chairman Hutmacher sustained the objection.

In response to a question from Mr. Holzbauer regarding her curriculum vitae, Ms. Hocking stated that she is a project manager at RESPEC.

None of the petitioners had witnesses.

Closing Arguments

Mr. Naasz stated that it has been demonstrated that the application of Mineral Mountain Resources (SD) Inc. for 10 gallons of water per minute from the Precambrian Crystalline Rock aquifer is for beneficial use of water and in the public interest.

Mr. Naasz cited SDCL 45-6C-2 which states, "The relatively unknown and as yet largely undeveloped mineral resources of this state consist in major proportion of minerals below the surface. The exploration for and discovery of these minerals by means of drilling and other methods of detecting mineral deposits are necessary for the economic development of the state and the nation. Every effort should be used to promote and encourage the exploration for mineral resources, but to prevent the waste and spoilage of the land which would deny its future use and productivity. It is the responsibility of the state to ensure that:

(1) Upon completion of an exploration operation the affected land is usable and productive to the extent possible for agricultural or recreational pursuits or future resource development; and
(2) Both during and after an exploration operation, water and other natural resources are not endangered."

Mr. Naasz said the Legislature has made clear that exploring for mineral resources is a beneficial use and is in the public interest. In so doing, the Legislature explicitly required protection of the environment, including water as mineral exploration occurs.

Today the board heard about the application and the project Minerals Mountain Resources is conducting, and the reassurances overseen by DENR Minerals and Mining Program regarding the protection of the land and the water of the state where mineral exploration occurs. The board also heard about how this water use is beneficial to the appropriator and that it cools its drill bits and that it is in the public interest because this allows Mineral Mountain Resources to use water from a local source rather than importing water by using water trucks, Black Hills rural roads, and the impacts that could occur because of that. DENR has made clear that there is to be no discharge of any material into Rapid Creek. The board heard about a previous instance in which there was a discharge and how immediately Mineral Mountain Resources contacted DENR, took measures to make sure it was appropriately addressed, and took measures moving forward to make sure that it didn't happen again.

Mr. Naasz said the board heard from multiple engineers with geology degrees that there is a reasonable probability that unappropriated water is available. The board also heard that it is likely that approving this application will not impair existing rights. There has been no scientific evidence to the contrary. There has been no evidence contrary to any of the four elements the board is to consider in determining whether to grant this water permit application.

Mr. Naasz stated that Mineral Mountain Resources (SD) Inc. respectfully requests that the board grant its water permit application to appropriate 10 gallons of water per minute from the Precambrian Crystalline Rock aquifer near Rochford, SD.

Ms. Mines Bailey stated that South Dakota law requires that the water resources of the state be put to maximum beneficial use to the fullest extent possible. The four factors are set forth in SDCL 46-2A-9, and they provide that the board must find that 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.

Ms. Mines Bailey said reasonable probability is not the same as beyond reasonable doubt. There seems to be some suggestion through the petitions and the questions asked that the board needs to be 100 percent certain on what amount of water is available, what amount of water is going to be used, and what the certain effect will be on the aquifer and the water resources of the state, but SDCL 46-6-3.1, which talks about recharge and withdrawal from groundwater sources, requires the board to rely on the best information reasonably available. Ms. Mines Bailey said that is an important thing to remember. The board heard testimony from Timothy Magstadt who looked at all the resources available. Courts have said that when an expert or a scientist from DENR looks at everything and determines compliance with SDCL 46-6-3.1 that they are taking into account the best available information. While there are not extensive studies done on the Crystalline Rock aquifer, there is information out there. The observation wells show that there is recharge that is getting into the aquifer. The well log that was done at this test hole shows that there is static water 30 feet below ground and that there is water available here. We know from the proximity of water rights to each other in this localized area that there haven't been complaints of well interference or accessing water. Everything indicates a reasonable probability that unappropriated water is available, and this can be developed without the potential for unlawful impairment of existing rights.

Ms. Mines Bailey stated that the application requests a relatively low volume of water. The board heard testimony from Mineral Mountain Resources' expert affirming what the board heard from DENR's expert. Ms. Hocking testified that Rapid Creek is at 9,000 gallons per minute. The effects that this application could have on existing water rights within the Crystalline Rock aquifer are estimated to be incredibly low. The likelihood that the Crystalline Rock aquifer and Rapid Creek are connected has not been demonstrated. Even if they were, 10 gallons of water per minute is not going to have an effect. The board heard testimony from the applicant about how this water would be beneficially used, and this is the type of application that has traditionally been found by the board to be in the public interest of putting water to maximum beneficial use.

Ms. Mines Bailey stated that the Water Rights Program requests that the board grant this water permit with the qualifications set forth by the Chief Engineer's recommendation. These qualifications add an extra measure of protection and require that the applicant control their withdrawals in a manner that would protect existing water rights should something occur.

Ms. Jarding stated that there are several problems with the statements the board has been hearing from the attorneys such as the idea that we know that unappropriated water is available and that the application, if granted, would not impact other water users, which is not known from the evidence presented. Mr. Leonard, who coordinates things for this project didn't know who completed the application form, didn't know why changes were made to it, didn't know the nearest well, and didn't know what strata he would collect water from. Those are all things that someone should know before they are trying to take water out of the ground in South Dakota. Mr. Leonard mentioned that the company has had a violation in the state for an exploration drilling accident that spilled pollution into Battle Creek, and some have suggested that it wasn't very much. The law says, in the public interest, we don't want people contaminating our water. Expert Hocking doesn't know if the fractures for the well log at the project that they want to use are hydrologically connected to domestic or other commercial wells in the area. Her expertise, with all due respect, is not in the central Black Hills. The experts and the sources given for this project have indicated that the Precambrian Crystalline Rock aquifers of the Black Hills, especially the central Black Hills, are not mapped. They are highly sight-specific, they're localized, and the experts can't quantify the recharge to them. However, Dr. Perry Rahn at the School of Mines says that there is not enough water for more use in the Crystalline Rock aquifer in the central Black Hills. Is there enough water? If so, how is it measured? We don't know because this is a localized water that they're drawing from. That is what, by definition, aquifers are in the Crystalline Rock aquifer in the Black Hills.

Ms. Jarding said one of the things she noticed when asking specific questions about the location, the experts were providing very general answers. Things that are general to the whole Crystalline Rock aquifer in the Black Hills are not necessarily specific to the localized water source that we are talking about here. Any connectivity with Rapid Creek is unknown and not quantified. The answer to the questions of whether unappropriated water is available and will it impact other users is unknown.

Ms. Jarding stated regarding public interest, there is only one reason to explore for gold and that is to find it and mine it. Mining has a long history of contaminating the water in the Black Hills. The exploration area that is currently being looked at, as well as the rest of the 7,500 acres that this company has claims on, are upstream from the second biggest city in the state, Rapid City, and they are also upstream from Ellsworth Air Force Base. Both of those entities get their water from Rapid Creek. Ms. Jarding said there are a number of ways that this application is not in the public interest. SDCL 46-1-2 states, "It is hereby declared that the protection of the public interest in the development of the water resources of the state is of vital concern to the people of the state and that the state shall determine in what way the water of the state, both surface and underground, should be developed for the greatest public benefit."

Ms. Jarding asked the board to deny the water permit application.

Ms. Santella said none of the witnesses who provided testimony and were involved in arriving in the determination that there would be no impairment to existing right holders were aware of the Winters Doctrine, and therefore hadn't taken tribal water rights into consideration. This seems to be something missing from that evaluation. There was really no discussion of beneficial use and there was really no discussion of public interest. It is not in the public interest just because

someone says, "this is in the public interest." All four criteria had to be met, and there really wasn't any evidence around beneficial use or public interest. The restriction letter prohibits discharge into Rapid Creek, but we know that things happen, such as the bentonite spill near Keystone in 2012. Ms. Santella said she is not certain that just because something is prohibited in a restriction letter makes certain that it eventually wouldn't happen. Ms. Santella stated that Mr. Leonard said they explore to find resources to mine.

Ms. Santella stated that SDCL 1-54-5 addresses consultation with tribal government regarding state programs.

Ms. Santella encouraged the board to take that public interest question seriously. She said there is significant opinion by members of the public that this is not in their best interest. She asked the board to deny the permit application.

Mr. Red Cloud stated that the tribe has its own water code. Mining and oil drilling are not beneficial uses. The tribe puts emphasis on water quality balanced with water quantity. There is a threat to water resources that affect the tribe; the potential for Rapid Creek to get contaminated down to the Cheyenne River to the Missouri River to the Mni Wiconi Rural Water System. Any federal agency lands need to follow the NEPA and NHPA process with tribal consultation. Mr. Red Cloud stated that, in his opinion after listening to testimony, the contingency plan amount of $20,000 needs to be increased because if anything does happen, more than $20,000 will be needed to clean up. Treaty water rights need to be recognized and honored for these state water permits. He asked the board to deny the water permit application.

Mr. Brings said exploration leads to mining. If they do find something, they are going to mine and once they do, the environment will be destroyed. The company is not locally associated, so they have no interest locally. Once the mining starts, there will be no reclamation. At the Gilt Edge Mine, the acid leaches. He asked how this will be beneficial. Because the company is not from the area, it won't be beneficial to the locals. Mr. Brings stated that there was no tribal consultation.

Chairman Hutmacher requested board discussion and action. There was no board discussion.

Motion by Freeman, seconded by Larson, to approve Water Permit No. 2813-2, Mineral Mountain Resources (SD) Inc. with the qualifications set forth by the Chief Engineer. A roll call vote was taken, and the motion carried unanimously.

Mr. McVey requested that the draft Finding of Fact, Conclusions of Law, and Final Decision be submitted by April 13, 2021, that objections and alternative Findings of Fact, Conclusions of Law, and Final Decision be submitted by April 23, 2021. The board will consider the Findings of Fact, Conclusions of Law and Final Decision at its May 5-6, 2021, meeting.

ADJOURN: Motion by Freeman, seconded by Comes, to adjourn the meeting. Motion carried unanimously.

A court reporter was present for the hearing and a transcript of the proceedings may be obtained by contacting Carla Bachand, Capital Reporting Services, PO Box 903, Pierre SD 57501, telephone number (605) 222-4235.

The meeting was also digitally recorded and the recording is available on the Boards and Commissions Portal at https://boardsandcommissions.sd.gov/Meetings.aspx?BoardID=106.

Approved May 5, 2021.

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Water Management Board

WATER MANAGEMENT BOARD MEETING
March 3, 2021

Qualifications:
wi - well interference
wcr -well construction rules
iq - irrigation questionnaire
lf - low flow

Unopposed New Water Permit Applications Issued Based on the Chief Engineer Recommendations

No.	Name	Address	County	Amount	Use	Source	Qualifications
2000-1	Troy Johnson	St. Onge	BU	0.011 cfs	commercial	1 well-Inyan Kara Aquifer	wi, 1 special
2001-1	Tilton Ranch Inc	Belgrade MT	CN	2.0 cfs	368 acres	Grand River	lf, 1 special
8445-3	G.L. Management LLC	Sioux Falls	MA	0.44 cfs	71 acres	1 well-Sioux Quartzite Aquifer	wi, wcr, iq
8446-3	Blue Barn LLC	Sioux Falls	MA	0.089 cfs	3.5 acres	1 well-Sioux Quartzite Aquifer	wi, wcr, iq
8447-3	Shannon Httrn Brethren	Winfred	HS	4.23 cfs	300 acres	James River	iq, 2 special
8448-3	Rockport Httrn Brethren	Alexandria	HS	2.0 cfs	140 acres	James River	iq, 2 special
8449-3	Rockport Httrn Brethren	Alexandria	HS	5.14 cfs	360 acres	James River	iq, 2 special
8452-3	TJ Farms LLC	Henry	CD	0.1 cfs	commercial	2 wells-Prairie Coteau Aquifer	wi, 4 special
8453-3	City of Redfield	Redfield	SP	0.09 cfs	14.92 acres	1 well-Quaternary Alluvium	wi, iq
8454-3	BKV Thorstenson Ranch LP	Selby	WL	1.78 cfs	132.6 acres	1 well-Grand Aquifer	wi, iq
8456-3	Shannon Klumb	Ethan	DN	0.133 cfs	commercial	2 wells-Codell Aquifer	wi, 4 special
8457-3	River Bend Dairy	Egan	MY	0.637 cfs	commercial	2 wells-Big Sioux:Moody Aqu	wi, 4 special
8458-3	Concrete Materials	Sioux Falls	MA	2.0 cfs	industrial	dewatering-Sioux Quartzite	wi, 2 special
8459-3	Paul Bremer	Vermillion	CL	no add'l	40 acres	1 well-Lower Vermillion Miss	wi, iq
8460-3	Kyle Sueltz	Columbia	BN	3.56 cfs	475 acres	James River	iq, 2 special
8461-3	Jerome Hult	Davis	TU	1.78 cfs	140 acres	1 well-Upper Vermillion Miss:N	wi, wcr, iq
8462-3	Ace Ready Mix	Sioux Falls	MA	0.44 cfs	industrial	1 well-Big Sioux:South	wi, wcr, 2 special
8463-3	Brook Bye	Vermillion	CL	1.78 cfs	120 acres	1 well-Missouri:Elk Point	wi, wcr, iq,1 special

Future Use Reviews

No.	Name	Address	County	Amount Remaining in Reserve	Use	Source	Qualifications
1872-1	City of Spearfish	Spearfish	LA	2,704 AF	municipal	Madison Aquifer	none
2580-2	Southern Black Hills WS	Hot Springs	CU/FR	1,474 AF	rural water	Madison Aquifer	none
4002-3	City of Brandon	Brandon	MA	685 AF	municipal	Big Sioux:South Aquifer	none
4838A-3	Minnehaha Community Water Corp (MCWC)	Dell Rapids	MA	33 AF	rural water	Sioux Falls Management Unit of Big Sioux Aquifer	none
5063A-3	MCWC	Dell Rapids	MA	717 AF	rural water	wells less than 70 feet	none
5716-3	MCWC	Dell Rapids	MA	750 AF	rural water	Sioux Falls Management Unit of Big Sioux Aquifer	none