

MINUTES OF THE 180<sup>th</sup> MEETING OF THE  
WATER MANAGEMENT BOARD  
FLOYD MATTHEW TRAINING CENTER  
523 EAST CAPITOL AVENUE  
PIERRE, SOUTH DAKOTA

MARCH 6-7, 2013

CALL TO ORDER: Chairman Rodney Freeman called the meeting to order at 8:30 a.m. A quorum was present.

The following were present for the meeting:

Board Members: Rodney Freeman, Leo Holzbauer, Everett Hoyt, Chad Comes, Tim Bjork, and Peggy Dixon. Jim Hutmacher was absent.

Department of Environment and Natural Resources (DENR): Garland Erbele, Eric Gronlund, Ron Duvall, Mark Rath, Lynn Beck, Adam Mathiowetz, Tim Schaal, Ken Buhler, Joe Stonesifer, and Karen Schlaak, Water Rights Program; Jeanne Goodman, Surface Water Quality Program; Matt Hicks, Tom Brandner, Bill Markley, and Hannah Albertus-Benham, Ground Water Quality Program; Mike Cepak, Minerals and Mining Program.

Attorney General's Office: Diane Best, Jeff Hallem, and Roxanne Giedd.

APPROVE DECEMBER 6, 2012, MINUTES: Motion by Hoyt, seconded by Bjork, to approve the minutes from the December 6, 2012, Water Management Board meeting. Motion carried.

NEXT MEETING: The next meeting is scheduled for May 1 and 2, 2013, in Pierre.

STATUS AND REVIEW OF WATER RIGHTS LITIGATION: None.

ADMINISTER OATH TO DENR STAFF: Chairman Freeman administered the oath to the DENR staff who intended to testify during the meeting.

Garland Erbele introduced staff members Nicole Van Dyk and Dan Gerhardt, Surface Water Quality Program, temporarily working in the Water Rights Program.

ESTABLISHMENT OF AN OUTLET ELEVATION ON LAKE THOMPSON AND VALIDATION OF RECOGNIZED VESTED WATER RIGHT CLAIM NO. 707-3, DEPARTMENT OF GAME, FISH AND PARKS: A transcript of this hearing was prepared and copy of the transcript may be obtained by contacting Carla Bachand, Capital Reporting Services, PO Box 903, Pierre, SD 57501, telephone number 605-224-7611.

The purpose of the hearing was to consider the petition submitted by Gass Law Office, Gregg A. Gass, on behalf of the Kingsbury County Commission, requesting the Water Management Board determine the outlet elevation for Lake Thompson. In addition, validation of the Department of

Game, Fish, and Parks Vested Water Right Claim No. 707-3 to allow storage of water to elevation 1687.5 feet mean sea level with a priority date of November 2, 1889 was heard.

Please refer to the transcript for the proceedings of this matter.

Motion by Bjork, seconded by Hoyt, to establish the outlet elevation for Lake Thompson at 1686.3 feet mean sea level (fmsl). Motion carried.

Motion by Comes, seconded by Bjork, to validate Vested Right Claim NO. 707-3, Game, Fish, and Parks, for sufficient water to maintain the water level to the outlet elevation of 1686.3 fmsl. Motion carried.

The board directed Mr. Gass to draft proposed Findings of Fact, Conclusions of Law and Final Decision.

SET HEARING DATE FOR CONSIDERATION OF POWERTECH USA'S WATER PERMIT APPLICATION NOS. 2685-2 AND 2686-2, AND GROUND WATER DISCHARGE PLAN APPLICATION: Prehearing officer Everett Hoyt stated that in order to allow 60 days for completion of discovery after April 1, 2013, and keeping with the time schedule that was developed in the procedural order, the earliest possible date for a hearing would be July 15, 2013. He asked that the board set a formal hearing date.

Roxanne Giedd, Deputy Attorney General, presented letters the department received from the Black Hills Wild Horse Sanctuary and Cheryl Rowe regarding the hearing date. She also presented copies of a number of emails the department has received from the intervenors concerning the hearing date. Mike Hickey, attorney, filed a notice of appearance on behalf of the Black Hills Wild Horse Sanctuary, which submitted the letter regarding the hearing date.

Ms. Giedd stated that for the water right applications, there are approximately 130 intervening parties; and for the ground water discharge plan application there are approximately 250 intervening parties. Because of the number of parties, the department asked that an election procedure be established, which Mr. Hoyt ordered. The deadline is March 15, and as of today nine people have indicated they want to participate as full parties.

Ms. Giedd said there are a number of permits that Powertech's operation has to obtain in order to proceed. It is unknown when a decision on the NRC permit will be made. EPA will have some injection control permits that have to be issued, and it is unknown when that will happen. A federal environmental impact statement is being prepared, and the federal government's current estimate for completion is May or June 2013. In addition to the water right and the ground water discharge plan applications pending before the Water Management Board, Powertech will need a state mining permit, which will be heard by the Board of Minerals and Environment. The notice of filing of the mining permit has been issued and the first intervention period is this week. At this time there are approximately 114 intervenors. There is a second intervention period based on the department's recommendation on the mining permit. That will expire on April 15, 20-13. Ms. Giedd said she is anticipating that the Board of Minerals and Environment will hold a

prehearing conference to determine the date of the hearing on the mining permit at its May 2013 meeting.

Ms. Giedd stated that DENR does not take a particular stand on the date of the hearing; however, there are some things that need to be considered. If the Water Management Board holds the hearing in Rapid City, which the prehearing order addressed, it is very difficult to get sufficient sleeping rooms and a conference room large enough in the summer months. Ms. Giedd anticipates the hearing on the water permit applications and the ground water discharge application will probably take two weeks. She suggested that the Water Management Board consider doubling this up as part of an already-scheduled board meeting, when two days are already set aside, and add this hearing to the end of that because it may be difficult for the board members to set aside two full weeks in a row.

#### Appearances

Roxanne Giedd, Deputy Attorney General, represented DENR.

Max Main, attorney, Richard Clement, president, and John Mays, vice president of engineering, represented Powertech.

Bruce Ellison, attorney from Rapid City, represented the Clean Water Alliance.

Susan Henderson, landowner

Marvin Krammerer, landowner

Gena Parkhurst, homeowner

Mary Jo Farrington, SD Peace and Justice

Rebecca Leas, Clean Water Alliance and Dakota Rural Action

Sabrina King, Dakota Rural Action

Waste Win Young, Standing Rock Sioux Tribe

Mr. Hoyt reminded everyone that people can participate in the hearing individually and as members of an organization, but the organization itself has to be represented by an attorney.

Ms. Giedd stated that she does not believe the Standing Rock Sioux Tribe filed a petition to intervene in this matter.

Ms. Young said she is the tribal historic preservation officer for the Standing Rock Tribe and the tribe has been consulting with the NRC on this matter.

Ms. Giedd said if the tribe is interested in participating as a party, they need to file a petition to intervene in order to get party status. She had no objection to Ms. Young stating a position with regard to the hearing date.

Mr. Main stated that Powertech would like to proceed with a hearing as soon as the board's schedule allows. He asked the board to consider starting the hearing in July in Pierre and concluding it sometime after that in Rapid City.

Mr. Ellison, Ms. Henderson, Mr. Krammerer, Ms. Parkhurst, Ms. Farrington, Ms. Leas, and Ms. King all asked that the hearing be held in October or November in Rapid City.

Ms. Young asked the board to hold the hearing sometime after summer.

Discussion took place and the board members concurred that the hearing will be held in Rapid City October 7 through 11, 2013, and October 28 through November 1, 2013.

APPOINTMENT OF RAPID VALLEY WATER MASTER: Eric Gronlund reported that each spring the Rapid Valley Water Conservancy District submits the name of a person to act as water master for the summer water use season for the Rapid Creek area. The Rapid Valley Conservancy District has requested that Kevin Ham again be appointed as the water master for the 2013 irrigation season. Mr. Ham has been the water master since 2005.

Mr. Gronlund requested the board appoint Kevin Ham as Rapid Valley water master.

Motion by Bjork, seconded by Holzbauer, to appoint Kevin Ham as the Rapid Valley water master for the 2013 irrigation season. Motion carried.

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.

APPLICATIONS FROM UPPER VERMILLION:MISSOURI AQUIFER: Diane Best stated that this involves a number of applications that came in for basically the same area. The applications were processed and the chief engineer recommended deferral. In the meantime several more applications came in and the chief engineer recommended deferral for those applications as well. Ms. Best said the analysis for all of these applications is the same and all of the applications were scheduled for hearing at the same time.

Ms. Best said each applicant bears the burden of proof on their own application to show that they meet the four-part test required by state law: there is reasonable probability that there is unappropriated water available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing rights and the proposed use is a beneficial use and in the public interest.

Appearances

Diane Best, Assistant Attorney General, represented DENR

Jason Rumpca, attorney from Beresford, represented Gary and Julie Peterson

Donald Benson, Hurley, applicant

Bruce Hagen, Sioux Falls, applicant, Bethel Hagen Trust and Cleland Hagen Trust

Darrell Osborn, Centerville, applicant

Jerome Hult, Davis, applicant

Mike Stevens, Viborg, applicant

Don McCarty, attorney from Brookings, represented Carrie Miller and Todd Miller

The parties offered opening statements.

Mr. Rumpca offered the following exhibits for Gary and Julie Peterson:

G.P. 1 – Timeline of events

G.P. 2 – Roger Hansen Water Permit Application (Nos. 7383-3 & 7384-3) and engineering report

G.P. 3 – DENR letter and enclosures re: water use summary for Water Right No. 5982-3 and composite map showing the line separating the Upper Vermillion Missouri Aquifer and Lower Vermillion Missouri Aquifer

G.P. 4 – Aerial photo re: Water Permit Application No. 7442-3 which proposes to appropriate up to 80 c-ft/yr to irrigate 40 acres using an existing well which is authorized by water Right No. 5982-3

G.P. 5 – Plat map re: Gary & Julie Peterson land

G.P. 6 – Clay Rural Water System quarterly publication (January 2013, Volume 8, Issue 3)

The parties stipulated to admission of the exhibits. Chairman Freeman admitted the exhibits into the record.

Ms. Best offered the following exhibits for DENR:

DENR 1A – Agency file for No. 7535-3, Donald D Benson

DENR 1B – Agency file for No. 7441-3, Gary or Julie Peterson

DENR 1C – Agency file for No. 7442-3, Gary or Julie Peterson

DENR 1D – Agency file for No. 7452-3, Jerome Hult

DENR 1E – Agency file for No. 7466-3, Bethel Hagen Trust

DENR 1F – Agency file for No. 7467-3, Cleland Hagen Trust

DENR 1G – Agency file for No. 7468-3, Cleland Hagen Trust

DENR 1H – Agency file for No. 7558-3, Cleland Hagen Trust

DENR 1I – Agency file for No. 7587-3, Paul Petersen

DENR 1J – Agency file for No. 7588-3, Paul Petersen

DENR 1K – Agency file for No. 7600-3, Michael D Stevens

DENR 1L – Agency file for No. 7601-3, Michael D Stevens

DENR 1M – Agency file for No. 7602-3, Michael D Stevens

DENR 1N – Agency file for No. 7603-3, Michael D Stevens

DENR 1P – Agency file for No. 7623-3, Darrell Osborn

DENR 1Q – Agency file for No. 7633-3, Brad Farrar

DENR 1 R – Agency file for No. 7653-3, Jeremiah Welsh

DENR 2 – Ken Buhler's vita

DENR 3 – Ken Buhler's Powerpoint presentation

The exhibits were admitted into the record.

Ken Buhler presented his reports and the Powerpoint presentation on the applications. Mr. Buhler prepared two reports because two groups of applications were submitted between September 26, 2012 and January 22, 2013.

Water Management Board  
March 6-7, 2013, Meeting Minutes

Mr. Buhler noted that on page 3 of his February 4 report, the last paragraph before his signature should have included Application Nos. 7603-3 and 7609-3. Also, the date on the report should be February 4, 2013, rather than 2012.

Mr. Buhler stated that there were 18 permit applications for water from the Upper Vermillion:Missouri Aquifer for 2,334 acres of irrigation. Water Permit Application No. 7609-3 has been withdrawn.

Water Permit Application No. 7441-3 filed by Gary or Julie Peterson proposes to appropriate up to 280 acre-feet of per year (ac-ft/yr) at a maximum diversion rate of 1.79 cubic feet of water per second (cfs) from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 175 feet deep and is to be located in the center of the SE $\frac{1}{4}$  of Section 8, T95N-R52W. This application proposes to irrigate 140 acres located in the SE $\frac{1}{4}$  of Section 8, T95N-R52W.

Water Permit Application No. 7442-3 filed by Gary or Julie Peterson proposes to appropriate up to 80 ac-ft/yr to irrigate 40 acres located in the W $\frac{1}{2}$  NE $\frac{1}{4}$  Section 17, T95N-R52W using an existing well which is authorized by Water Right No. 5982-3. Water Right No. 5982-3 appropriates up to 320 ac-ft/yr at a maximum diversion rate of 2.28 cfs from one well 165 feet deep completed into the Upper Vermillion Missouri aquifer, located in the center of the NW $\frac{1}{4}$  of Section 17, T95N-R52W. This application does not propose to increase the diversion rate authorized for this well.

Water Permit Application No. 7452-3 filed by Jerome Hult proposes to appropriate up to 220 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 190 feet deep and is to be located in the SW $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 32, T98N-R52W. The application proposes to irrigate 110 acres located in the W  $\frac{1}{2}$  NE $\frac{1}{4}$ , SE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 32, T98N-R52W. This application is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

Water Permit Application No. 7466-3 filed by Bethel Hagen Trust proposes to appropriate up to 304 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 169 feet deep and is to be located in the approximate center of the NE $\frac{1}{4}$  of Section 5, T96N-R51W. This application proposes to irrigate 152 acres located in the NE $\frac{1}{4}$  of Section 5, T96N-R51W.

Water Permit Application No. 7535-3 filed by Donald Benson proposes to appropriate up to 130 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 220 feet deep and is to be located in the SW $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 30, T98N-R53W. This application proposes to irrigate 65 acres located in the NW $\frac{1}{4}$  of Section 30, T98N-R53W. The application is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

Water Permit Application No. 7467-3 filed by Cleland Hagen Trust proposes to appropriate up to 304 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 134 feet deep and

is to be located in the approximate center of the NW¼ of Section 13, T96N-R51W. This application proposes to irrigate 152 acres located in the NW¼ of Section 5, T97N-R52W.

Water Permit Application No. 7468-3 filed by Cleland Hagen Trust proposes to appropriate up to 304 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 134 feet deep and is to be located in the approximate center of the NE¼ of Section 26, T96N-R51W. This application proposes to irrigate 152 acres located in the NE¼ of Section 5, T98N-R52W.

Water Permit Application No. 7558-3 filed by Cleland Hagen Trust proposes to appropriate up to 240 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 275 feet deep and is to be located in the approximate center between the NW¼ and the SW¼ of Section 1, T98N-R52W. This application proposes to irrigate 120 acres located in the N½ SW¼, S½ NW¼ of Section 1, T98N-R52W in Turner County.

Water Permit Application No. 7587-3 filed by Paul Petersen proposes to appropriate up to 320 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 100 feet deep and is to be located in the approximate center of the SE¼ of Section 10, T98N-R53W. This application proposes to irrigate 160 acres located in the SW¼ of Section 10, T98N-R53W in Turner County.

Water Permit Application No. 7588-3 filed by Paul Petersen proposes to appropriate up to 320 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 145 feet deep and is to be located in the approximate center of the SW¼ of Section 19, T98N-R53W. The application proposes to irrigate 160 acres located in the SW¼ of Section 19, T98N-R53W in Turner County.

Water Permit Application No. 7600-3 filed by Michael D. Stevens proposes to appropriate up to 360 ac-ft/yr at a maximum diversion rate of 3.56 cfs from two wells to be completed into the Upper Vermillion Missouri aquifer. The wells are expected to be approximately 200 feet deep and are to be located in the NE¼ NW¼ and the approximate center of the SW¼ of Section 12, T96N-R52W. This application proposes to irrigate 180 acres located in the NW¼, N½ SW¼ of Section 12, T96N-R52W in Turner County. A pivot in the center of the SW¼ of Section 12 will irrigate the entire SW¼ of the section. A portion of Water Permit No. 7128-3 held by Paul Shubeck authorizes irrigation of the S½ SW¼ of Section 12.

Water Permit Application No. 7601-3 filed by Michael D. Stevens proposes to appropriate up to 264 ac-ft/yr at a maximum diversion rate of 1.89 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 200 feet deep and is to be located in the approximate center of the NE¼ of Section 25, T97N-R53W. This application proposes to irrigate 132 acres located in the NE¼ of Section 25, T97N-R53W in Turner County.

Water Permit Application No. 7602-3 filed by Michael D. Stevens proposes to appropriate up to 264 ac-ft/yr at a maximum diversion rate of 1.89 cfs from one well to be completed into the

Upper Vermillion Missouri aquifer. The well is expected to be approximately 140 feet deep and is to be located in the approximate center between the NW $\frac{1}{4}$  and the NE $\frac{1}{4}$  of Section 34, T97N-R53W. This application proposes to irrigate 132 acres located in the E $\frac{1}{2}$  NW $\frac{1}{4}$  and the W $\frac{1}{2}$  NE $\frac{1}{4}$  of Section 34, T97N-R53W in Turner County.

Water Permit Application No. 7603-3 filed by Michael D. Stevens proposes to appropriate up to 240 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 150 feet deep and is to be located in the approximate center of the NE $\frac{1}{4}$  of Section 33, T97N-R52W. This application proposes to irrigate 120 acres located in the NE $\frac{1}{4}$  of Section 33, T97N-R52W in Turner County. The application proposes a diversion rate in excess of the statutory limit.

Water Permit Application No. 7623-3 filed by Darrell Osborn proposes to appropriate up to 280 ac-ft/yr at a maximum diversion rate of 1.89 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 140 feet deep and is to be located in the SE $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 24, T97N-R52W. This application proposes to irrigate 140 acres located in the NW $\frac{1}{4}$ , W $\frac{1}{2}$  NE $\frac{1}{4}$  of Section 24, T97N-R52W in Turner County.

Water Permit Application No. 7633-3 filed by Brad Farrar proposes to appropriate up to 304 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 205 feet deep and is to be located in the approximate center of the SW $\frac{1}{4}$  of Section 32, T98N-R53W. This application proposes to irrigate 152 acres located in the SW $\frac{1}{4}$  of Section 32, T98N-R53W in Turner County.

Water Permit Application No. 7653-3 filed by Jeremiah Welsh proposes to appropriate up to 170 ac-ft/yr at a maximum diversion rate of 1.67 cfs from one well to be completed into the Upper Vermillion Missouri aquifer. The well is expected to be approximately 180 feet deep and is to be located in the approximate center of the SW $\frac{1}{4}$  of Section 8, T96N-R52W. This application proposes to irrigate 85 acres located in the W  $\frac{1}{2}$  SW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$  Section 8, T96N-R52W. This application proposes a diversion rate greater than the statutory limit.

The Upper Vermillion:Missouri aquifer is a buried glacial outwash deposit that consists of fine sand to medium-pebble gravel. The aquifer underlies approximately 204,832 acres of Hutchinson, Turner, Lincoln and Clay Counties. The aquifer blends into the Lower Vermillion Missouri aquifer in northern Clay County.

The average thickness of the aquifer is estimated to be 68 feet in Turner County and is estimated to be 100-150 feet thick in the areas proposed by these applications. The aquifer contains an estimated 1.8 million ac-ft of water in storage in Turner and Hutchinson Counties and an estimated 317,180 ac-ft of recoverable water in storage in Clay and Lincoln Counties.

The Upper Vermillion:Missouri aquifer is primarily, but not exclusively, under confined (artesian) conditions. Groundwater movement in the aquifer is to the south-southeast at a gradient that was estimated in independent studies to be approximately four feet per mile (ft/mi). However, based on DENR-Water Rights' observation wells the gradient was 4.3- 4.6 ft/mi in May 2012.

The Upper Vermillion:Missouri outwash generally overlies the Carlile Shale although Sioux quartzite directly underlies the aquifer in the northern portion of the aquifer. The Upper Vermillion:Missouri aquifer overlies the Niobrara Formation in western Turner County. The aquifer is generally buried by glacial till; however, in places it is overlain by and is hydraulically connected to the surficial Parker Centerville aquifer.

Recharge to the Upper Vermillion:Missouri aquifer occurs through: 1) direct infiltration of precipitation in areas where the aquifer is at or near ground surface; 2) inflow from fractures in the Sioux Quartzite; and 3) inflow from the Niobrara aquifer. Referring to past independent studies, Mr. Buhler testified that the recharge rate to the Upper Vermillion:Missouri has been estimated at 0.25 inches per acre per year calculated from regional flow net analysis. This would produce an average annual recharge to the overall Upper Vermillion:Missouri aquifer of 4,267 ac-ft/yr.

Mr. Buhler evaluated the recharge potential of the Upper Vermillion:Missouri aquifer by undertaking a regional flow net analysis based specifically on May 2012 water level data from the DENR Observation Well Network. A flow net analysis is a calculation of the amount of water flowing through the aquifer. To do this, Mr. Buhler relied on (a) the average transmissivity of the aquifer based on the calculated transmissivity of irrigation wells in the aquifer where the data to allow these calculations was available, (b) the hydraulic gradient for the Upper Vermillion:Missouri based on data from the observation well network, and (c) the distance of the appropriate cross section of the Upper Vermillion:Missouri. He found that the amount of water moving through the Upper Vermillion:Missouri is approximately 15.99 ac-ft/day or 5,836 ac-ft/yr. In order to sustain this volume of groundwater moving through the aquifer, the recharge rate in inches per acre per year based on the area of the aquifer would be 0.34 inches. This recharge rate cannot be considered "average annual recharge" since it used only 2012 data. The estimate does agree in general with the average annual recharge estimate from the independent studies that Mr. Buhler consulted.

The recharge rates estimated for the Upper Vermillion:Missouri aquifer should be considered reflective of "existing conditions". Mr. Buhler explained that independent studies have found that the southern 19.5 miles of the western boundary of the Upper Vermillion:Missouri in Turner County to be hydraulically connected to (and receiving recharge from) the Niobrara aquifer. Increased recharge will be induced from the Niobrara aquifer with increased pumping from the Upper Vermillion:Missouri.

Discharge from the Upper Vermillion:Missouri Missouri aquifer occurs naturally through groundwater outflow to the Lower Vermillion Missouri aquifer and also by well withdrawals. Reports on file with the DENR-Water Rights Program show that domestic use wells are completed into the Upper Vermillion:Missouri aquifer, however withdrawals from domestic users are not expected to be significant.

In addition to domestic use, there are currently 100 water rights/permits appropriating water from the Upper Vermillion:Missouri. Appropriations authorize municipal, commercial, rural water system and irrigation uses. The cities of Viborg and Davis hold water rights to appropriate water

from this aquifer, but they are supplied completely by TM Rural Water System. The City of Centerville receives 70% of its 64,000 gallons per day average from Lewis and Clark Rural Water System and 30% from the Upper Vermillion:Missouri. The average municipal water use from the Upper Vermillion:Missouri is 21.5 ac-ft/yr.

There are two commercial water rights from this aquifer. One is a concentrated animal feeding operation permitted for 1,800 head of beef cattle with an estimated average annual water use of 36 ac-ft/yr. The other is a fertilizer plant with an estimated average annual water use of 1,000,000 gallons per year (i.e. 3.07 ac-ft/yr).

Two rural water systems are supplied by the Upper Vermillion:Missouri aquifer: TM Rural Water System and South Lincoln Rural Water System. The water use for each of these systems has approached or exceeded 1000 ac-ft/yr since 2009.

The majority of the water pumped from the Upper Vermillion:Missouri aquifer is for irrigation use. In 1979 there were 56 irrigation permits; the number increased to 79 in 2011. Irrigators report pumping annually and pumping has also increased during this period. Pumping exceeded 7000 ac-ft in some recent years, but the average of reported pumping from 1979- 2011 is 4865.42 ac ft/yr.

There are two future use permits for this aquifer. TM Rural Water System holds both of them and they total 740 ac-ft year. A future use permit is a reservation of water and does not authorize withdrawals. However, in theory future use permits can be completely developed.

The total of well withdrawals from the Upper Vermillion:Missouri aquifer plus the amount of water that can be developed from future use permits is estimated to be approximately 7,900 acre-feet per year assuming average municipal, commercial, and irrigation use; 2,250 ac-ft/yr rural water system use; and 740 ac-ft/yr from future use permits. The estimated average annual recharge is currently estimated to be approximately 5,836 ac-ft/yr. The current estimated average annual withdrawal from the Upper Vermillion:Missouri aquifer appears to exceed the estimated average annual recharge to the aquifer.

The DENR-Water Rights Program monitors 29 observation wells in the Upper Vermillion: Missouri. The observation well data shows seasonal fluctuations in water levels corresponding to recharge and discharge. The aquifer responds well to climatic conditions with rising water levels during wet years and gradually declining water levels during dry years.

The hydrograph for an observation well in Clay County in the southernmost part of the aquifer area studied (observation well CL-80K) shows that there is currently more water in storage in the area of the well than when the well was completed. The linear trend line for this well data shows a positive slope, indicating that in general, recharge has exceeded discharge in this area over the period of record since the well was constructed in 1980.

Other observation wells in the Upper Vermillion:Missouri aquifer document downward trends in water levels. The slope of the trend lines for 15 of the 29 observation wells is negative (i.e. downward sloping). The observation wells with downward trending water levels are concentrated in two areas: an area in the north central portion of the aquifer and an area in the

northwest portion of the aquifer. The first area is in the vicinity of South Lincoln Rural Water System wells and the second is in the vicinity of TM Rural Water District wells.

Water use from the two areas of declining water levels has steadily increased. At this time, data is not available to determine if the water levels in these areas will stabilize under steady rural water system withdrawals.

Mr. Buhler said he cannot conclude that unappropriated water is available from the Upper Vermillion:Missouri aquifer. Increased withdrawal is likely to induce additional recharge from the Niobrara aquifer. Additional studies should be done to ensure water from the Upper Vermillion:Missouri aquifer is placed to maximum beneficial use while still protecting existing users and ensuring that withdrawals from the aquifer will not exceed recharge to the aquifer.

The chief engineer recommended deferral of all 17 applications.

Responding to questions from Ms. Best regarding average annual recharge compared to average annual withdrawal, Mr. Buhler said SDCL 46-6-3.1 states that 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. In this case the average annual withdrawal is expected to be 7,900 ac-ft/yr and average annual recharge is at best 5,836 ac-ft/yr. Mr. Buhler said if the board relied on this information alone, the permits would have to be denied, that is the reason he further analyzed the information using the observation well data.

Ms. Best stated that one of the intervenors indicated that there was another water permit application that was recently reviewed by DENR; Roger Hansen, Hansen Properties. She asked Mr. Buhler where that application is located with respect to Gary Peterson's applications. Mr. Buhler stated that Slide No. 10 in his Powerpoint presentation shows the Upper Vermillion: Missouri aquifer and the Lower Vermillion:Missouri aquifer.

Mr. Buhler stated that on February 5, 2013, staff met with several folks in Viborg. One of the questions was where is the line between the Upper Vermillion:Missouri and Lower Vermillion: Missouri, and Mr. Buhler did not know the answer at the time. In the area is the Parker Centerville outwash, Slide No. 36, which is a surficial aquifer. If the Parker Centerville outwash is placed on top of the slide showing the Upper and Lower Vermillion:Missouri aquifers, it is overlying the Upper Vermillion:Missouri aquifer. The Parker Centerville outwash blends with the Upper Vermillion:Missouri aquifer and becomes the Lower Vermillion: Missouri, so the line was drawn showing the Upper and Lower Vermillion:Missouri.

The state Geological Survey drilled two test holes, a north one and a south one. The north test hole shows that from zero to 30 there is sand and gravel, and from 54 to 154 there is sand and gravel. The sand and gravel in that upper interval is the Parker Centerville outwash. The sand and gravel in the lower interval is the Upper Vermillion:Missouri aquifer. The southern test hole showed sand from zero to 145 feet. All of that sand is the Lower Vermillion:Missouri aquifer.

Ms. Best asked if Mr. Buhler was involved with reviewing the Hansen application. Mr. Buhler said he was involved with reviewing the Hansen application, and Mr. Gary Peterson had raised some concerns regarding the availability of water for the Hansen application. The Hansen application is located less than a mile from the Peterson applications.

The Hansen application was filed on July 20, 2012, and when it was reviewed it was the only application from the Upper Vermillion:Missouri. While DENR's staff engineer, Adam Mathiowetz, questioned whether granting the permit would cause the withdrawal to exceed recharge in Upper Vermillion:Missouri based on overall data so he also looked at nearby observation wells and found that they were not trending downward. This conflicting data raised a flag but Mr. Mathiowetz's report, dated September 18, 2012, favored approval of the Hansen permit based on then nearby observation well data. The Mathiowetz report was provided to the chief engineer who recommended approval. The Hansen application was published, there were no intervenors, and on October 9, 2012, the permit was granted by the chief engineer under SDCL 46-2A-23.

Mr. Buhler stated that the data he compiled shows that several of the DENR observation wells are declining in this aquifer, and at this time it is not known whether the area of declining water levels is expanding. Mr. Buhler asked Joe Stonesifer, an engineer in the Water Rights Program, to take an independent look at the recharge/withdrawal analysis. Mr. Stonesifer reported back to Mr. Buhler that he encountered the same issues as Mr. Mathiowetz. Mr. Buhler then took over the review and conducted the analysis several ways.

Mr. Buhler stated that staff met with Tim Cowman and State Geologist, Derric Iles, SD Geological Survey, to discuss how the aquifer will be studied. Staff projects the study will be completed within a year.

Responding to questions from Mr. Rumpca regarding the red dots on Slide No. 43, Mr. Buhler stated that the Parker Centerville outwash overlies the Upper Vermillion:Missouri aquifer. There is 20 feet of glacial till between the two aquifers. At the red dot on the east, the Parker Centerville outwash is not present; that is simply the Upper Vermillion:Missouri aquifer. South of that line, the southern boundary of the Upper Vermillion:Missouri aquifer, everything would look like the eastern well, except it would be in the Lower Vermillion:Missouri aquifer. There is a trench that has been cut into the bedrock, so this trench has the Upper Vermillion:Missouri aquifer in it and on both sides of it is Niobrara. At this time there are no deferred water permit applications out of the Niobrara aquifer. Years ago one application for water out of the Niobrara was deferred. The water levels in the Niobrara are higher than the water levels in the Upper Vermillion:Missouri aquifer. There is a hydraulic connection between the two.

Mr. Rumpca said Mr. Buhler's presentation shows Nos. 7441-3 and 7442-3 are both marked as Mr. Peterson's wells, the one existing and the new one he is requesting. The following slide shows that they are not actually north at all from the Hansen well, but in fact the new proposed well No. 7441-3, is actually directly to the west of Mr. Hansen's well and the other well is actually south of there. Mr. Buhler said that is correct. Mr. Rumpca asked if Mr. Buhler is able to determine from this slide where the line is between the north and south part of the actual

aquifer. Mr. Buhler answered that he cannot determine the Upper and Lower Vermillion:Missouri aquifers just by looking at this slide.

Mr. Rumpca asked if Mr. Buhler knows how wide the actual line is. Mr. Buhler answered that there is no width assigned to the line. There is a line that Lynn Hedges, SD Geological Survey, put on the map and depending upon what scale you make the map, the line is different sizes.

Mr. Rumpca asked how Mr. Buhler makes the determination as to whether or not an applicant is in the Upper or Lower Vermillion:Missouri aquifer. Mr. Buhler answered that the proposed diversion point is placed on the map, then it is determined which side of the line it is on.

Earlier Mr. Rumpca brought up the fact that the location of the two wells was north of the Hansen well. Mr. Buhler stated that when he was putting all of the points on the map on the scale of the map he was using he simply let the computer plot the location and it plotted it in the center of the section. At the scale he was using, the center of the section worked. The difference between the center of the section and the southwest quarter of the section that Mr. Peterson is looking at moves it from north of the well to straight west of the well.

Mr. Rumpca asked if there are other observation wells within a mile or two radius of Mr. Peterson's proposed well. Mr. Buhler answered that the only observation wells are shown on Slide 45 and the nearest is the CL-80K well, which is about three and one half miles away. There are other wells used for irrigation. On Slide No. 54 the red dots are irrigation wells, the blue dot is the Hansen well, the yellow dots are commercial irrigation municipal future use, and rural water. The yellowish green color shows the area of declining water levels. The observation wells were measured after Mr. Mathiowetz completed his report and 15 out of 29 wells had the lowest water levels on record. Some of these observations have been in place since 1977.

Responding to questions from Mr. Rumpca, Mr. Buhler said since No. 7609-3 has been withdrawn, the only applications left in Clay County are Mr. Peterson's. The green line going east to west on Slide No. 15 is Highway 46 and is also the county line.

Regarding the regional flow net analysis formula shown on Slide No. 22, Mr. Buhler pointed out on Slide No. 10 where the eight miles in the flow net analysis formula was applied across the aquifer.

Mr. Buhler said the water in the aquifer is in transient storage in the sand and gravel in the aquifer; it is moving with a gradient of approximately four feet per mile.

Regarding Slide No. 29 Mr. Buhler said the observation well was installed in 1980 and compared with 2012. The linear trend line is shown because if you go to the next slide it gets confusing when you see all the pumping. Mr. Buhler said he is required to give an average, but he is not going to talk average water level in the aquifer. When referring to an average, that is average use (i.e. pumping) from the aquifer for the entire period of record.

Responding to questions from Mr. Rumpca regarding Application No. 7609-3, Mr. Buhler said the applicant withdrew that application and applied for a new permit from the Parker Centerville outwash. Slide No. 41 shows that from 0 to 30 feet is the Parker Centerville outwash and from 54 to 154 feet is the Upper Vermillion:Missouri aquifer. The two aquifers are not blended at this point. They are separate and distinct. On Slide No. 38, the blue color shows the Parker Centerville outwash. That goes from ground surface to 30 feet below ground surface. The hatched area on Slide No. 38 is the Upper Vermillion:Missouri aquifer. That aquifer does not begin until 54 feet below ground surface. The two aquifers haven't blended until the south side of the line. On the west edge of the Parker Centerville outwash you can drill a well into the Upper Vermillion:Missouri aquifer and see the Parker Centerville.

Mr. Rumpca asked if prior to the recommendation to defer all of these applications, was it the general practice of DENR to review each individual application and prepare a report on that individual application. Mr. Buhler answered that reason applications are reviewed individually is because the department has to determine whether the well will impair other rights as well as the availability of appropriated water. Availability of appropriated water is an aquifer-wide basis and impairment of existing rights is at a specific point. In this case, by lumping all of these applications together, the red flag came up when determining availability of water; staff never got to the point of determining whether existing rights would be impaired. Seven applications were submitted between September 26, 2012 and November 30, 2012, the report was completed on December 11, 2012, and the chief engineer's recommendation was made on December 18, 2012. Eleven applications were submitted between December 13, 2012 and January 22, 2013, the report was completed on February 4, 2013, and the chief engineer's recommendation was made on February 5, 2013. The Peterson's applications were received on September 26, 2012. The Hansen application was received on July 20, 2012, with the report was completed September 18, 2012, and the chief engineer's recommendation was made on September 18, 2012.

Mr. Hagen asked if there was a 2,000 acre-feet deficit per year, how long would it take to completely dry up the aquifer and how many gallons of water per acre feet of water are in the aquifer.

Mr. Buhler said there is 1.8 million feet of water in storage in Turner and Hutchinson Counties, 317,180 in Clay and Lincoln Counties, which totals 2.1 million acre feet of water in storage in the aquifer. At a 2,000 acre-foot deficit that would be 1,050 years to completely dewater the aquifer if there was no recharge.

Responding to questions about the observation wells from Mr. Hagen, Mr. Buhler said there are 29 wells at depths of 80 to 389 feet into the aquifer.

Mr. Stevens asked how reliable an observation well is when there are static water levels from a 180 foot well is only a few feet below the surface. Mr. Buhler stated that this is a confined aquifer. There is 100 and 150 feet of impermeable material that you need to drill through before you get to the water-bearing material. The water in the aquifer is under pressure causing the water to rise above where the sand and gravel was encountered and it does bring the water up to 20 feet below ground surface in places. That is an artesian pressure and that artesian pressure fluctuates with recharge and discharge.

Mr. Stevens ask if it is fair to say there is so much water in the aquifer that it is actually bubbling to the surface. Mr. Buhler answered that the recharge source is apparently higher than the aquifer and water is simply trying to seek its own level; it is not fair to say the aquifer is too full.

Responding to questions from Mr. McCarty regarding Slide No. 7, Mr. Buhler agreed that the map shows Swan Lake and Turkey Creek, and the Turkey Creek Watershed goes to the northwest.

Mr. McCarty said page 8 of Mr. Buhler's report includes a chart of the number of permits that have been issued from 1979 through 2011. He asked if in 1979 there were 56 permits specific to the Upper Vermillion:Missouri aquifer. Mr. Buhler said that is correct.

Mr. McCarty asked if in general over the course of the last 30 years there has only been a one or two permit increase each year. Mr. Buhler said from 2007 to 2008 the permits increased by seven.

Mr. McCarty said in 2011 there were 79 active irrigation permits in this aquifer and if you add 17 new applications the percentage of increase is significant. Is part of the reason the staff is considering all 17 of the applications together is that if 17 of these are granted the draw will be significant out of the aquifer in comparison to the 79 that are already there. Mr. Buhler answered that the reason the staff considered all 17 applications together is because the availability of unappropriated water had to be addressed for any and all of the applications.

Mr. McCarty asked when the calculation of the 7,900 acre-feet/year discharged shown on Slide No. 26 was done. Mr. Buhler answered this is average irrigation from 1979 through 2011, rural water system, municipal and commercial at last year's level.

Mr. McCarty asked of those different aspects for purposes of discharge, which water use is the majority of the pull. Mr. Buhler answered irrigation based on 79 permits.

Mr. McCarty said that 7,900 acre-feet which Mr. Buhler says results in a negative number between recharge and discharge and that 7,900 does not take into account the additional 17 permits that would be added if they were not deferred. He asked if Mr. Buhler had done a calculation to determine what the additional negative number would be if the 17 additional permits were added. Mr. Buhler answered he has not done that calculation.

Mr. McCarty asked if the Upper Vermillion:Missouri aquifer and the Lower Vermillion:Missouri are two completely separate aquifers where they don't flow into each other. Mr. Buhler said the Upper Vermillion:Missouri aquifer discharges to the Lower Vermillion:Missouri and the Niobrara flows into the Upper Vermillion:Missouri. The Parker Centerville outwash overlies the Upper Vermillion:Missouri and merges with the Lower Vermillion:Missouri. Mr. Buhler answered questions from the board members.

Ms. Best asked Mr. Buhler to draw the eight miles across the aquifer on a paper copy of Powerpoint Slide No. 10. The eight miles is the distance Mr. Buhler used in calculating in the

flow net analysis. Mr. Buhler said based on the potentiometric surface the flow of the aquifer all of the water would have had to flow through a cross sectional area at that point which works out to be eight miles. Regarding withdrawal and recharge, Mr. Buhler said the law says and the Hines decision says to look at average water use versus average annual recharge.

Ms. Best asked if Mr. Buhler attributes the declines in some of the observation wells to drought. Mr. Buhler answered there was a linear regression analysis done on each of the observation wells that showed an upward or downward trend.

Regarding Peterson Application No. 7442-3, Ms. Best said the position was raised that it was not asking for more water. Mr. Buhler said he is going to assume that the average application rate is six to 12 inches a year so if you figure 12 inches a year for irrigation of 40 acres they will use 40 acre-feet of water. He said by not increasing the pump rate yet adding acres they will be pumping more water because they will be pumping longer at that pump rate to cover the extra acres.

Ms. Best asked if the DENR has reviewed application in groups in the past. Mr. Buhler said they have. She asked Mr. Buhler if there any reason he would come up with a different result if the applications had been considered separately. Mr. Buhler answered no.

Mr. Rumpca called Adam Mathiowetz.

Responding to questions from Mr. Rumpca regarding Exhibit G.P. 2, Roger Hansen's water permit application (Nos. 7383-3 and 7384-3) and engineering report, Mr. Mathiowetz stated that he did a separate engineering report for Mr. Hansen's application in the Lower Vermillion: Missouri aquifer. The recommendation for that application was approval. Table 1 on page 15 of G.P. 2 is entitled "Irrigation water use from the Upper Vermillion: Missouri aquifer in Clay County (Water Rights 1990-2011)." The table lists the irrigation pumping as reported through annual irrigation questionnaires from the Upper Vermillion: Missouri aquifer in Clay County. The table does not include any other type of well in Clay County. Several of the observation wells are outside of Clay County.

Mr. Rumpca asked if there was a change in policy between approval of the Hansen permit in Clay County and the 17 new applications that are now looking at observation wells and well data that extends the entire Upper Vermillion: Missouri aquifer. Mr. Mathiowetz said he is not aware of any change in policy.

Mr. Rumpca asked if page 19 of Exhibit G.P. 2 under the paragraph "Existing Water Rights" states that there are three permits within one mile of Mr. Hansen's proposed location and three of those were in the Upper Vermillion: Missouri and three were in the Lower Vermillion: Missouri aquifer. Mr. Mathiowetz answered that is correct. Mr. Mathiowetz stated that Table 2 on page 19 of G.P. 2 is an explanation of those six water rights within one mile of the proposed well location.

Page 20 of G.P. 2 lists the conclusions. Mr. Rumpca asked Mr. Mathiowetz to explain Conclusion No. 3. - The observation well data does not support the recharge estimate from

Hedges (1985). Mr. Mathiowetz stated that the recharge estimate, which is on page 2 of his report (page 14 of G.P. 2) is calculated over the area of the aquifer in Clay County is 233.33 acre-feet per year. The next page states that average annual use for the Upper Vermillion: Missouri aquifer in Clay County is 456.4 acre-feet per year. Discharge is exceeding recharge based on that recharge estimate, but the hydrographs in the report show an upward trend in water levels in the aquifer. Mr. Mathiowetz said he reached Conclusion No. 3 because the observation well data, which is real data, does not support the estimate made by Mr. Hedges.

Mr. Rumpca asked if the observation wells Mr. Mathiowetz cites in his report show any negative impact or negative effect on the aquifer based on those observation wells. Mr. Mathiowetz stated that in general looking at the trend line the general water level in the aquifer in the observation wells listed in his report have shown an increase over the period of record. Whether it be from starting in 1977 or in 1980, from the day that well was installed and water levels were started being taken to the last reading Mr. Mathiowetz had when he wrote the report, the general trend line was an increase in water level.

Mr. Rumpca asked if a report had been started on Mr. Peterson's wells. Mr. Mathiowetz answered he is not aware if a report had been started prior to the influx of applications. Mr. Rumpca asked if a report were done for the Peterson applications, would it be close or near the Roger Hansen report. Mr. Mathiowetz said that would depend on the circumstances.

Mr. Mathiowetz answered questions from the board members regarding his report.

Gary Peterson was administered the oath by Carla Bachand and testified that he has been farming since 1976. The Peterson's moved to their farm 1984, purchased that farm in 1987, and started irrigating in 1997. Mr. Peterson said he had experience with irrigation prior to putting the irrigation on his farm. He said irrigation has been beneficial to his farm. Mr. Peterson said he rented land from the Mary Wrigg Trust originally, but he no longer farms that land. At this time Mr. Peterson rents two properties that are irrigated, the Larry Erickson land shown on G.P. Exhibit 5. The Larry Erickson property was referenced in the Roger Hansen report.

G.P. Exhibit 4 is an aerial photo. Mr. Peterson said this exhibit has circles on it. The smallest circle on the exhibit is what Mr. Peterson has a water permit for right now. Mr. Peterson said the permit is for 115 acres and the diversion rate is 735 gpm and two acre feet per year on each acre. Mr. Peterson bought 40 acres to the east of the original circle so he could expand the irrigator to reach north to south, east to west. Mr. Peterson said basically there are 160 acres of tillable ground east of the farmstead so a full length pivot can be used to irrigate those acres.

Mr. Peterson said his application was for 40 additional acres. The net gain is 18 acres that will be irrigated over the original 150; it will go from 115 to 133 acres. Mr. Peterson said he will not need any more water appropriated for this piece of ground. The water and diversion rate that is appropriated now is sufficient for expanding the system to cover 133 acres.

G.P. Exhibit 3, page 2, is a summary of irrigation questionnaires for Water Right No. 5982-3 Gary Peterson, 1997-2012. Mr. Peterson said he is using less water than what is actually appropriated to him. Mr. Peterson said in 1997, 320 acre feet was appropriated because his

original application as for 160 acres. The board gave him 2 acre feet per acre. When staff inspected his system, they determined that it would water 115 acres, so his appropriation was reduced to 230 acre feet per year in 2004. Mr. Peterson said the average appropriation of water for those 16 years is 269.375 acre feet. Mr. Peterson's average actual pumping over those 16 years is 46.355 acre feet. Mr. Peterson said this is the reason he does not need any more water on this water permit, he just needs it amended to include an additional 18 acres of land. He said there is plenty of water appropriated for that well. He is not going to change the well, he is not going to make it pump faster; the well will stay exactly the way it is now. Mr. Peterson said he is actually using about 20 percent of the water that is appropriated for that well.

Mr. Peterson said the acre feet of the water use reported is based on the engine hours on his John Deere diesel engine. Some of those hours are moving the machine dry because he does not have a parking lane that the machine can be parked on. For tillage operations it has to be moved so the field can be tilled where the irrigator was, so the water usage is a little bit over stated on his actual water pumped because he reads off engine hours versus watering hours.

Mr. Peterson's other application is for a new well the McMurchie land, which is shown on Exhibit G.P. 5. Mr. Peterson said he has wanted to irrigate this land for quite a while but the McMurchie brothers did not want to invest the money and Mr. Peterson did not want to invest money in land he did not own. In the fall of 2012, the McMurchie brothers came to Mr. Peterson and offered to sell the land to Mr. Peterson. This was about the same time Mr. Peterson applied for the water permit. Mr. Peterson has already purchased the irrigator for that land and the engine to run the pump.

G.P. Exhibit 1 is a timeline of events. Mr. Peterson stated that on July 20, 2012, Roger Hansen applied for a water permit on the 80 acres directly east of where Mr. Peterson is applying for a water permit for a new well. On September 10, 2012, Mr. Peterson started negotiations on purchasing the McMurchie property. On September 18, 2012, the DENR engineer recommended approval of the Roger Hansen water permit. On September 26, 2012, the DENR received Water Permit Application Nos. 7441-2 and 7442-3, Gary and Julie Peterson. On November 19, 2012, Ken Buhler held an informational meeting in Viborg regarding the DENR staff's concerns about the aquifer. At the meeting Mr. Peterson asked Mr. Buhler what date he was first aware of the concerns about the aquifer and Mr. Buhler did not give a specific date. After the meeting, Mr. Buhler called his office and told Mr. Peterson the date was November 19, 2012, is when he was first aware of a potential concern.

On November 26, 2012, Mr. Peterson called DENR to check on the status of his water permit applications and he was told to be patient. Mr. Peterson said the reason he called is he hadn't closed on the land purchase yet and he wanted to know the status of his permits. That date is 60 days after Mr. Peterson submitted his applications. On December 11, 2012, is the date of the engineering report. Mr. Peterson closed on the McMurchie land on December 14, 2012. On

December 18, 2012, Mr. Peterson again called DENR and was informed of the decision to recommend deferral of the water permits. Mr. Peterson received the notice regarding the deferral recommendation on December 21, 2012.

The public meeting in Viborg was held February 5, 2013.

Mr. Peterson said Greg Merrigan is the manager of the Clay County Rural Water System, which is located approximately five miles from Mr. Peterson's home. Mr. Peterson is a member of the Clay County Rural Water System. G.P. Exhibit 6 is the January 2013 issue of the Clay Rural Water System quarterly publication. Mr. Merrigan's comments in the manager's article states that the aquifer has an abundance of water. Mr. Peterson said Clay Rural Water System has monitoring wells of their own, and Mr. Merrigan told Mr. Peterson that he had no concerns regarding Mr. Peterson's water permit applications.

Mr. Peterson said when received the news that staff was planning to recommend deferral of his applications, he talked to Eric Gronlund on the telephone. Mr. Gronlund gave Mr. Peterson the names of engineering firms that Mr. Peterson could contact regarding getting his own engineering study done. Mr. Peterson said he thought about getting his own engineering study done, but then he stumbled on to the Roger Hansen permit report on the internet. It is 5,000 feet from where Mr. Peterson is applying for and it is in basically the same timeframe, so Mr. Peterson didn't feel there was a reason to spend more money on another engineering report.

Mr. Peterson said he is appearing before the board because his livelihood depends on these water permits.

Responding to questions from Mr. Best, Mr. Peterson said he became aware that Mr. Hansen was granted a permit when he started irrigating last summer. He also researched the permit on the internet and found that on September 18, 2012, the chief engineer had recommended approval of the application. Mr. Peterson said he assumed his permit would be granted because his neighbor's permit was granted.

Mr. Peterson answered questions from the board.

Mr. Freeman stated that the board would not work late into the evening. He asked any applicants that could not be here the next day 8:00 a.m. to provide testimony at this time.

Mr. McCarty said he may not be able to be here tomorrow. He asked if he would be allowed to submit a written closing argument via email. Mr. Freeman said that is acceptable.

Bruce Hagan was administered the oath by Carla Bachand and testified that he and his wife own the Bethel Trust and Cleland Trust land. Mr. Hagan said last summer he installed five test wells. In one well water was found at seven to 33 feet, in one well water was found at 229 to 257 feet, in one well water was found at 139 to 169 feet, and in another well water was found at 168 to 207 feet. At one of the wells granite was encountered at 207 feet. Mr. Hagan ordered equipment. Mr. Hagan said he has spent a lot of money applying for the permits and installing the test wells. Mr. Hagan stated that a lot of water runs out of the aquifer into the Missouri River. The 15-year study from 1985 to 2008 showed a surplus of water rather than a deficiency. Mr. Hagan said he wonders if there is some way that permits can be granted with certain limitations so if there is a problem that threatens the water for wells that the irrigators would have to modify their use of the water.

Responding to questions from Ms. Best, Mr. Hagan said the 1985 to 2008 study he referred to came from the testimony that Ken Buhler provided.

Donald Benson was administered the oath by Carla Bachand and testified that the Niobrara feeds into the aquifer where his well would be. He said no permits have been denied in the Niobrara. Mr. Benson said the Niobrara west of his house flows into the Turkey Ridge Creek many places, artesian wells, and Turkey Ridge Creek runs through Swan Lake. Mr. Benson said he has irrigated for 36 years on another farm five and one half miles west of Hurley and those wells are in the Turkey Ridge aquifer, which is a very shallow aquifer.

Michael Stevens was administered the oath by Carla Bachand and testified that on Water Permit Application No. 7600-3 he is working with his neighbor, Paul Shubeck. Shubeck has an 80-acre parcel that is currently permitted and he asked Mr. Stevens if he would like to irrigate with him. Mr. Stevens said he spent \$50,000 putting in drainage tile under the land and working with the electrical company. Mr. Stevens said he was not notified of any protest by February 25. He said he would like to be excluded from anything filed by Swan Lake.

Darrell Osborn was administered the oath by Carla Bachand and testified that since 15 out of 29 test wells were lower there were 14 out of the 29 that were higher. He did the math and the net decrease was 0.67 feet on the average. Mr. Osborn said if the wells are down in the area of the rural water wells, because of the drawdown you get from when you are running the wells and the rural water wells are running continuously you get a pretty significant drawdown and this could be leading to erroneous observation well data. He said to get an accurate reading on observation wells in that area, the rural water wells would have to be shut down for an extended period of time, and it is not possible to do that. The 14 out of 29 wells have actually increased so he questions how accurate the data is.

Jerome Hult was administered the oath by Carla Bachand and testified that he has a farm near Davis, SD. Mr. Hult said he applied for the irrigation permit last fall and purchased a used irrigator. After installing one tower he received the letter from the department on December 19, 2012, and quit working on it.

Mr. Hoyt asked staff to provide the board with the dates of each application. Mr. Bjork asked for a map that shows the locations of the second batch of applications.

Chairman Freeman declared a recess until the following morning.

MARCH 7, 2013:

Chairman Freeman called the meeting back to order at 8:00 a.m. A quorum was present.

CONTINUATION OF HEARING REGARDING APPLICATIONS FROM UPPER  
VERMILLION:MISSOURI AQUIFER

Rebuttal

Ms. Best called Ken Buhler.

Ms. Best offered the following exhibits:

DENR Exhibit 4, a list of the Upper Vermillion:Missouri aquifer applications being considered, the date they were filed, the date the report was completed, and the date the chief engineer issued his recommendation.

DENR Exhibit 5, a map showing the locations of the permit applications; the diversion points labeled in black were the first set of applications the department received and the diversion points labeled in red are the second set of applications the department received.

DENR Exhibit 6, a map of the Upper Vermillion:Missouri aquifer showing all of the proposed diversion points before the board today and all of the existing water permits and water rights from the aquifer color coded by use and showing the areas of declining water levels.

The exhibits were admitted into the record.

Responding to questions from Mr. Best, Mr. Buhler stated that the observation well readings accurately reflect the aquifer. The observation wells are being read every other week from May through October.

Mr. Buhler said the rural water system are not pumping continuously. He identified on Exhibit 6 the location of the rural water system wells (depicted by the blue dots).

Mr. Buhler answered questions from the board and Mr. Rumpca.

Ms. Best called Garland Erbele.

Responding to questions from Ms. Best, Mr. Erbele testified that the department received tremendous number of new water permit applications in the fall of 2012. In 2012, the department received 335 water permit applications and 172 permits were issued. There were a significant number of applications the staff was not able to process by the end of the year. That trend has continued into 2013. In January the department received 106 applications and from February through today, another 106 applications were received. Mr. Erbele stated that during the last two years, on average, the department processed 100 to 120 permits per year.

Mr. Erbele stated that Water Permit Application No. 7442-3 would constitute appropriation of an additional volume of water even if the diversion rate is the same.

He recommended deferral of all of the applications until further study is completed.

Mr. Erbele answered questions from Mr. Rumpca and the board members.

The board read the written closing statement submitted by Mr. McCarty, and Ms. Best and Mr. Rumpca provided oral closing statements.

Motion by Comes, seconded by Bjork, to go into executive session under the contested case provisions of SDCL Chapter 1-26 and SDCL 1-25-2 (3) for the purpose of deliberation and to consult with the board's legal counsel on the pending litigation. Motion carried.

Following executive session, Chairman Freeman requested board action.

Motion by Comes, seconded by Bjork, to defer the following Water Permit Applications: No. 7441-3, Gary or Julie Peterson; No. 7442-3, Gary or Julie Peterson; No. 7452-3, Jerome Hult; No. 7466-3, Bethel Hagen Trust; No. 7535-3, Donald D Benson; No. 7467-3, Cleland Hagen Trust; No. 7468-3, Cleland Hagen Trust; No. 7558-3, Cleland Hagen Trust; No. 7587-3, Paul Petersen; No. 7588-3, Paul Petersen; No. 7600-3, Michael D Stevens; No. 7601-3, Michael D Stevens; No. 7602-3, Michael D Stevens; No. 7603-3, Michael D Stevens; No. 7623-3, Darrell Osborn; No. 7633-3, Brad Farrar; and No. 7653-3, Jeremiah Welsh. Motion carried.

Ms. Best will prepare the Findings of Fact, Conclusions of Law and Final Decision.

TULARE: WESTERN SPINK/HITCHCOCK AQUIFER APPLICATIONS: Chairman Freeman recused himself from consideration of this matter. He turned the gavel over to Vice Chairman Chad Comes.

Mr. Comes opened the hearing at 10:45 a.m.

Jeff Hallem stated that prior to the hearing the board received the report dated January 30, 2013, done by Ken Buhler, the chief engineer's recommendation regarding each of the permit applications, the notice of hearing and the affidavits of publication, a prehearing brief dated March 1, 2013, from Diane Best, and the decision by the Water Management Board in the matter of water permit application from the Tulare aquifer dated March 11, 2008. Mr. Hallem said everything the board received is part of the official record.

#### Appearances

Diane Best represented the Department of Environment and Natural Resources, Water Rights Program.

Tim Bottum, attorney from Mitchell, represented Terry Wieting.

Ray Rylance, attorney from Watertown, represented Oscar, Inc., Peterson Brothers, and individual Petersons.

Ms. Best stated that Terry Wieting applied for a water permit and it was deferred in December 2012. She said the application should be heard today.

Wayne Binger and Marshall Brothers also applied for new permits from the same aquifer after Terry Wieting, but before Oscar Inc.

Ms. Best said Terry Wieting was already procedurally ahead of the other applicants.

Ms. Best said Oscar, Inc. intervened in the Binger and Marshall Brothers application and requested pursuant to SDCL 46-2A-5 that these applications be delayed until May, but nobody intervened in the Oscar, Inc. application.

Ms. Best stated that applications should be heard in the order in which they were received by the department, so the appropriate thing for the board to do is hear the Terry Wieting application today and defer the Oscar, Inc. application until the Marshall Brothers and Binger applications are heard in May.

Mr. Rylance stated that there has been no objection to the Oscar, Inc. application by anyone. The recommendation of the department is for approval and if the issue is because there will be a different priority date, Mr. Rylance said Oscar, Inc. will agree that, should the board grant permits to Binger and Marshall in the future, Oscar, Inc. will take the position in line according to the application date.

Mr. Hallem asked Mr. Rylance if there were enough water based on priority for some of the other applications but not for Oscar, Inc. in effect that by Mr. Rylance's stipulation Oscar, Inc. wouldn't have permit because there would be no water available.

Mr. Rylance said Oscar, Inc. will take the junior date because the current status of the law is when permits are granted they are done by the application date. He said there is no reason why Oscar, Inc. should have to hire him to come before the board again in another month.

Mr. Hallem said the board could make the decision that there was a certain amount of water available and based upon that there was enough water to issue Mr. Wieting's permit with a small amount of excess, that amount may not be enough for all of the remaining permits. He asked Mr. Rylance if he is saying that the board would grant a permit to Oscar, Inc. subject to availability of water. Mr. Hallem said the board could not make that final determination because we don't know what is going to happen to the Binger and Marshall application. Mr. Rylance stated that Oscar, Inc. did not intend to present any evidence today; they do not disagree with the engineer's report.

Ms. Best asked what happens if the Oscar, Inc. is issued a permit and in May there isn't enough water available for Binger and Marshall Brothers. Ms. Best said if Oscar, Inc. is going to

stipulate that there is sufficient water available for all of these permits to be granted, then that's one thing, but they are going to say there is not sufficient water available for Binger and Marshall Brothers in May, that's another thing.

Mr. Bottum said he has talked to Wayne Binger and Marshall Brothers. They are here today, and Mr. Bottum believes they would join Ms. Best's recommendation that these matters all be handled in the order that were received by the department. Whether or not availability of water is an issue, it seems unfair through procedural matters to allow anyone to jump in front the line.

Mr. Rylance said he would not stipulate that Marshall Brothers, Binger, and Wieting should get a permit over Oscar, Inc. Mr. Rylance said he has a different argument other than water availability, which will become clear once the hearing on the Wieting application takes place.

Mr. Rylance said Oscar, Inc. would agree to be deferred until the hearing on the Binger and Marshall Brothers' applications.

Motion by Hoyt, seconded by Bjork, to defer Water Permit Application No. 7620-3, Oscar, Inc. until the date set for hearing on the Binger and Marshall Brothers' applications. Motion carried.

Mr. Rylance stated that he was appearing today for Todd Wilkinson who had a family matter he needed to attend to. Mr. Rylance said he will be representing Oscar, Inc., Peterson Brothers, and the individual Petersons who filed an objection to the Wieting application.

Ms. Best said this matter was scheduled to be heard at the December 2012 Water Management Board meeting then it was deferred so the board would have received the petitions to intervene in their December board packet.

Ms. Best offered DENR Exhibit 1, the agency file; DENR Exhibit 2, Ken Buhler's vita; and DENR Exhibit 3, a hard copy of Mr. Buhler's Powerpoint presentation.

The exhibits were admitted into the record.

Ken Buhler presented his report on the application.

Water Permit Application No. 7373-3 proposes to appropriate 1.78 cfs from two wells approximately 75 feet deep, to be completed into the Tulare: Western Spink/Hitchcock aquifer to irrigate 160 acres.

Mr. Buhler stated that in 2002 the Water Management Board considered the Tulare:Western Spink/Hitchcock aquifer fully appropriated. The aquifer was fully developed in 2003 based on appropriations that were made. Currently, development is about the same since 2003. In 2007, there were permit applications that came before the Water Management Board. In 2011, six applications were received from the Tulare:Western Spink/Hitchcock aquifer and staff did another analysis of the aquifer. The Water Management Board approved permits in 2012 based on a new analysis of the aquifer done by the department. After the board approved those permits in 2012, three more applications were received; one from Terry Wieting and two from Riverside

Colony. Staff recommended deferral of the Terry Wieting application and recommended denial of the Riverside Colony application. At the time there was an issue with a water right that was scheduled for cancellation due to abandonment and how much, if any, water would revert back for public use resulting from that cancellation.

Mr. Buhler said when the staff recommended denial of the Riverside Colony applications, the applications were administratively withdrawn because the applicant did not contest the chief engineer's recommendation of denial and move to public notice to schedule a hearing before the board.

Mr. Buhler stated that in 2013, the new analysis is different from what staff presented during its Powerpoint presentation to the board in the fall of 2012. In between the time of the analysis for the board's consideration in 2012 and when the new application came in staff had done an indepth analysis of the Tulare East James aquifer. Mr. Buhler said comparing what was done on the Tulare East James with the Tulare:Western Spink/Hitchcock it turns out staff was too conservative in the way it looked at the Tulare:Western Spink/Hitchcock. Staff made two fundamental assumptions in its analysis of the Tulare:Western/Spink/Hitchcock aquifer that resulted in extremely diminished volume of water that could be appropriated from the aquifer. Mr. Buhler said in 2012 he essentially assumed 100 percent of the acres that were permitted were going to be irrigated each year. The Tulare East James and the Tulare Western Spink /Hitchcock analysis came at things from a different angle and the fact that not all of the acres are irrigated did not come out in this analysis although it did in the Tulare East James so Mr. Buhler had to make that correction. Mr. Buhler said a big part of that analysis was calculating how much recharge exceeded withdrawal based on the observation well data. Mr. Buhler used information from the Kuiper report to determine what the unconfined portion of the aquifer was and that was extremely contracted. It resulted in an overly conservative amount of water available in the aquifer.

Mr. Buhler said the Tulare:Western Spink/Hitchcock aquifer underlies approximately 263,000 acres. SDCL 46-2A-9 states that a permit to appropriate water may be issued only if there is reasonable probability that unappropriated water is available, 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. Mr. Buhler said staff looks at unappropriated water and whether unlawful impairment of existing rights will occur and leaves beneficial use and public interest to the board to determine. He said the issue with the Tulare:Western Spink/Hitchcock aquifer has always been in the availability of unappropriated water. SDCL 46-6-3.1 states that withdrawal cannot exceed recharge.

Mr. Buhler stated that in 2005 the Sixth Judicial Circuit Court in the matter of Hines vs. State of South Dakota Department of Environment and Natural Resources (the Hines decision) said if we are going to use average annual recharge which the statutes require, we need to use average annual withdrawal. In 2012 the First Judicial Circuit Court in the matter of Hanson County Dairy, the judge ruled SDCL 46-3.1 requires the comparison between annual withdrawal and annual recharge.

Mr. Buhler said staff looked at availability of water from the Tulare:Western Spink/Hitchcock aquifer in two ways: observation well data and by doing hydrologic budgets. Staff looked at water level trends in the aquifer, the impact of the existing appropriations from the aquifer, the potentiometric surface of the aquifer, and did a regional flow net analysis on the aquifer. Mr. Buhler discussed the hydrographs for the observation wells. All of the observation wells in the Tulare:Western Spink/Hitchcock aquifer show an upward trend in water levels. For the period of record, on an average, the water levels are trending upward 0.284 feet per year.

Mr. Buhler said based on the data staff could quantify how much recharge has exceeded discharge based on what the water level trends are in the unconfined portion of the aquifer. The average change of volume in the aquifer is simply the average water level change in the observation wells multiplied by the specific yield of the aquifer multiplied by the area of the unconfined portion of the aquifer. The department has five observation wells in the Tulare:Western Spink/Hitchcock aquifer that have remained under unconfined conditions throughout the entire period of record. Mr. Buhler stated that Table 1 in his report shows the water level change per year per observation well for the five observation wells from 2003 to 2012.

Figure 1 in Mr. Buhler's report is a map showing the areal extent of the Tulare: Western Spink/Hitchcock aquifer and the unconfined areas of the aquifer. Mr. Buhler stated that the observation well data indicates that the annual recharge to the aquifer exceeded discharge from the aquifer by an average of 3,640 acre-feet per year for the period since development has been static.

Observation well data documents that the development that has occurred from the Tulare: Western Spink/Hitchcock aquifer has had an inconsequential effect on the aquifer over the long term. The water level records for the observation wells document that climatic conditions greatly mask the temporal effects of well withdrawals. Therefore, recharge to and natural discharge from the Tulare: Western Spink/Hitchcock aquifer significantly exceeds pumping. Hydrographs document that unappropriated water is available from the aquifer to support these appropriations.

The potentiometric surface of the Tulare: Western Spink/Hitchcock aquifer was determined for two time periods based on the observation well measurements for October 1987 and October 2012. A map showing the two potentiometric surfaces is shown in Figure 8 in Mr. Buhler's report. Although there are some nuances in the potentiometric surfaces, the surface is essentially unchanged; indicating that discharge is not exceeding recharge and unappropriated water is available from the aquifer.

Mr. Buhler said the recharge potential of the Tulare: Western Spink/Hitchcock aquifer was evaluated by interpreting a regional flow net analysis based on the September 2012 water level data from the DENR-Water Rights' Observation Well Network.

The average hydraulic conductivity for the Tulare: Western Spink/Hitchcock aquifer was estimated based on the specific capacities of the 30 irrigation wells completed into the aquifer for which the data to allow these calculations was available. Transmissivity was calculated at each

well using the wells' specific capacity, and the transmissivity was divided by the aquifer thickness at the well to determine an average hydraulic conductivity for the aquifer. The average hydraulic conductivity was calculated to be 1,982 gallons per day per square foot. The average transmissivity of the Tulare: Western Spink/Hitchcock aquifer of a cross section through which all of the flow of the aquifer must flow was determined by multiplying the average thickness of the cross section (36.3 feet) times the average hydraulic conductivity for the aquifer (1,982 gallons per day per square foot) to be 71,950 gallons per day per foot.

The hydraulic gradient for the Tulare: Western Spink/Hitchcock aquifer was estimated to average 4.26 feet per mile based on data from the DENR-Water Rights' Observation Well Network.

The cross section length of the Tulare: Western Spink/Hitchcock aquifer was determined to be approximately 25 miles based on the current aquifer delineation.

In order to sustain this estimated volume of groundwater moving through the aquifer, the recharge rate in inches per acre per year based on an area of the aquifer of approximately 263,000 acres would be 0.39 inches. This recharge rate cannot be considered "average annual recharge" since it used only 2012 data, and likely can be viewed as a minimum recharge rate; however the estimate does show the reasonableness of the average annual recharge estimate from Kuiper.

The amount of unappropriated water that is available from the Tulare: Western Spink/Hitchcock aquifer was estimated by comparing the estimated average annual recharge rate to the average annual well withdrawal from 2003-2011. Since average annual recharge is estimated to be 18,192 ac-ft/yr and the average annual pumping was reported to be 12,286.8 ac-ft/yr, an average of 5,905 acre-feet of unappropriated water is available from the Tulare: Western Spink/Hitchcock aquifer based on this methodology.

The amount of unappropriated water that is available from the Tulare: Western Spink/Hitchcock aquifer was also estimated by comparing the maximum number of acres that could be irrigated from the aquifer based on the estimated average annual recharge and the average irrigation application rate, to the number of acres that are currently authorized for irrigation. The volume of water associated with the potential additional irrigable acres was converted to acre-feet per year based on the average irrigation application rate.

The maximum average annual irrigation withdrawal based on a recharge of 18,192 acre-feet per year and an application rate of 9.32 inches per year would allow for the irrigation of 23,423 acres. There are currently 23,648.8 acres authorized for irrigation from the aquifer with water rights/permits. Since 2003, the average percentage of authorized acres that have been irrigated annually ranged from a maximum of 85.58% to a minimum of 31.17% with an average of 69.02%. This irrigated to authorized percentage agrees fairly well with the same percentages calculated for Tulare: East James aquifer (i.e. Maximum=88.41%, Minimum=39.49%, Average=65.34%), for the fully developed time period for that aquifer (1979-2011). Since on average, only 69.02% of authorized acres are irrigated annually, the number of acres that can be expected to be irrigated under current authorization is 23,648.8 acres \*69.02% or 16,322.4 acres.

The difference between maximum allowable acres (23,423 acres) and expected irrigation acreage currently authorized (16,322.4 acres) shows that an additional 7,100 acres could be irrigated from the Tulare: Western Spink/Hitchcock aquifer. Assuming an average application rate of 9.32 inches per year applied to 7,100 acres equates to 5,514 ac-ft/yr.

The DENR-Water Rights Program observation well data indicates that unappropriated water is available from the Tulare: Western Spink/Hitchcock aquifer. Analysis of the observation well data shows that from 2003-2012, recharge to the Tulare: Western Spink/Hitchcock aquifer has exceeded discharge from the aquifer by an estimated 3,640 acre-feet per year. A comparison of the average annual pumpage reported from the aquifer from 2003-2011 with the estimated average annual recharge to the aquifer suggests that recharge exceeds pumping by 5,905 acre-feet. Comparing the number of acres that can be irrigated based on the average annual recharge rate suggests that recharge exceeds withdrawals from the aquifer by 5,514 ac-ft/yr.

Mr. Buhler's conclusions:

The best information currently available indicates the Tulare: Western Spink/Hitchcock aquifer underlies approximately 263,016 acres of Beadle, Spink, and Hand Counties.

The best information currently available identifies an average annual recharge rate to the Tulare: Western Spink/Hitchcock aquifer as 0.83 inches per year.

The volume of average annual recharge to the Tulare: Western Spink/Hitchcock aquifer based on an area of 263,016 acres and a recharge rate of 0.83 inches per year is approximately 18,192 acre-feet per year.

The average annual irrigation application rate for the Tulare: Western Spink/Hitchcock aquifer from 1979-2011 has been 9.32 inches per year.

The maximum average annual irrigation withdrawal based on a recharge of 18,192 acre-feet per year and an application rate of 9.32 inches per year would allow for the irrigation of 23,423 acres.

The best information available to determine the amount of unappropriated water available from the Tulare: Western Spink/Hitchcock aquifer is through analysis of observation well data.

The analysis of DENR-Water Rights' observation well data identifies that over the period of record of 2003- 2011, average annual recharge to the aquifer has exceeded the average annual withdrawals from the aquifer by approximately 3,640 ac-ft/yr acre-feet per year.

The observation well data indicates that another 4,686 acres could have been irrigated over the time period of 2003- 2011, at an average application rate of 9.32 inches per year.

Since 810 additional acres were authorized in 2012, the actual number of additional acres that can be irrigated from the Tulare: Western Spink/Hitchcock aquifer is 3,877 acres.

The permit applications described on pages 1-3 of the report propose to irrigate a total of 2,131 acres.

Additional irrigation withdrawals are not expected to impair existing users.

The Chief Engineer recommended approval of Application No. 7373-3 with the following qualifications:

1. The wells 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.
2. The wells authorized by Permit No. 7373-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump 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.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Mr. Buhler answered questions from Mr. Bottum regarding the slide he presented regarding the history of the applications that have been approved to date, and impairment of existing rights.

Mr. Buhler answered questions from Mr. Rylance regarding the size of the aquifer, the list of deferred applications, the Hines decision, and the applications that were denied in 2008.

There were no questions from the board.

Ms. Best offered DENR Exhibit 4, a copy of the 2008 Board of Water Management Findings of Fact, Conclusions of Law, and Final Decision in the matter of water permit applications from the Tulare Aquifer.

The exhibit was admitted into the record.

Terry Wieting was administered the oath by Stephanie Moen and testified that he farms about 2,100 acres. He has center pivots that irrigate corn and beans and he intends to irrigate corn if his permit is approved.

Mr. Bottum asked Mr. Wieting if he had any comments regarding whether this application would impair any existing rights. Mr. Wieting answered that the application would not impair any existing rights.

Mr. Rylance objected stating that Mr. Wieting is not qualified to answer that question.

Mr. Comes said the board would accept Mr. Wieting's answer as personal opinion.

Responding to questions from Mr. Bottum, Mr. Wieting stated that in his opinion his application meets the standard of having a beneficial use and is in the public interest.

Mr. Rylance offered Oscar, Inc. Exhibit 1, Annual Water Level change taken from Ken Buhler's April 25, 2012, report on the applications of Bixler Farms, Lee Gatzke, Jeff Gatzke, and Alan Gatzke.

The exhibit was admitted into the record.

Lenny Peterson was administered the oath by Stephanie Moen and testified that he holds several water permits and he has a financial interest in Oscar, Inc. Mr. Peterson said he filed an objection to the chief engineer's recommendation allowing additional appropriation from the Tulare:Western Spink/Hitchcock aquifer without consideration of previous applications for water permits – the deferred applications from 2007.

Mr. Peterson said in 2002 Oscar, Inc. applied for several permits; some were approved and some were denied. Mr. Peterson did some calculations using information from the five observation wells that showed that in 2007 water was available. Mr. Peterson said the Water Management Board should reconsider the deferred applications before approving any new permits.

Mr. Peterson answered questions from Ms. Best regarding Oscar, Inc. Exhibit 1 and the calculations he did with the observation well information and his knowledge of the applications on the deferred list that were denied.

Mr. Peterson answered questions from Mr. Bottum regarding water permits held by him and members of his family and applications on the deferred list.

Mr. Peterson answered questions from the board.

The parties provided closing arguments.

Motion by Hoyt, seconded by Bjork, to approve Water Permit Application No. 7373-3, Terry Wieting, subject to the qualifications set forth by the chief engineer. Motion carried.

Mr. Bottum will prepare the Findings of Fact and Conclusions of Law.

(NOTE: Days after the hearing concluded, Mr. Rylance waived findings.)

WATER PERMIT APPLICATION NO. 2691-2, CHAD KEHN: Chairman Freeman opened the hearing at 1:35 p.m.

#### Appearances

Diane Best represented the Department of Environment and Natural Resources.

Chad Kehn, applicant

James R. Krier, Claire and James C. Williams, intervenors

Jeff Hallem stated that prior to the hearing the board had received a report dated October 24, 2012, prepared by Adam Mathiowetz, the chief engineer's recommendation, intervention letters filed by James Krier, Tim Peppel, Joseph P. Rust, Tim Baily, and petitions in opposition to the application signed a number of people, the notice of hearing, and affidavit of publication.

Ms. Best offered DENR Exhibit 1, the agency file, and DENR Exhibit 2, a small version of the map Mr. Mathiowetz used during his presentation.

The exhibits were admitted into the record.

Adam Mathiowetz testified regarding his educational background and experience. He presented his report on the application.

Water Permit Application No. 2691-2 proposes to appropriate up to 360 ac-ft annually at a maximum diversion rate of 2.0 cfs from two wells to be completed into the Ogallala aquifer. The wells are expected to be approximately 100 feet deep for the irrigation of 180 acres in Gregory County. Mr. Mathiowetz pointed out on Exhibit 2 the location of the application.

The Ogallala aquifer is part of the High Plains aquifer. The High Plains aquifer is a massive aquifer that underlies eight states from South Dakota to Texas. The Ogallala aquifer consists primarily of fine to medium, poorly graded sandstone with some inter-bedded clay and siltstone. The Ogallala underlies approximately 193,280 acres and contains an estimated 1.9 million ac-ft of recoverable water in storage in Gregory County. Ground water flows from west to east in the aquifer and the aquifer is generally less than 50 feet thick and is under unconfined conditions in the area of the application. The Ogallala aquifer in the area of this application will likely only support low yield wells, less than 100 gallons per minute. This is due primarily to low transmissivity and narrow aquifer thickness in the area of this application.

Recharge to the aquifer occurs primarily through infiltration of precipitation. Kolm and Case estimated the recharge rate, 1.3 to 1.8 in/yr for this area, to be approximately eight percent of the annual precipitation. The recharge to the Ogallala aquifer in Gregory County ranges from 20,938.7 to 28,992 ac-ft/yr.

At the time of the staff analysis, there were 19 water rights/permits and two future use permits appropriating water from the Ogallala aquifer in Gregory County. Eleven of the water rights/permits were designated for municipal use, three water rights for rural water systems, and five water rights/permits for irrigation purposes. Water use by the non-irrigation permits is estimated to be 1,437.8 ac-ft annually. That estimate is based on pumping at the maximum allowed diversion rate for 14.4 hours (60 percent) of every day. A summary of water withdrawal from the Ogallala aquifer in Gregory County by irrigation from 1982 to 2011, as reported to the DENR-Water Rights Program through annual irrigation questionnaires, is shown in table 1 of Mr. Mathiowetz's report.

Future use permits, No. 1622-2 City of Gregory and No. 1660-2 City of Burke, reserve 365 and 396 ac-ft of water annually, respectively. Including full development of the future use permits the amount of water withdrawn from the Ogallala aquifer in Gregory County is still much less than the estimated average annual recharge. Therefore, there is a reasonable probability that unappropriated water is available from the Ogallala aquifer in Gregory County.

The DENR-Water Rights Program monitors eight observation wells completed into the Ogallala aquifer in Gregory County. Two of the observation wells are within five miles of the proposed well locations; GY-57B is 0.6 miles south and GY-57A is five miles northwest. Mr. Mathiowetz pointed out on DENR Exhibit 2 the locations of these two wells. The water levels rise during wet years and gradually decline during dry years. The two observation wells show the seasonal effects of pumping, but it does not appear to be significant over the period of record.

Observation well GY-57A has two significant drops in water level. Those drops are from the test pumping of the well by the DENR-Water Rights Program. GY-57A is a low yield well, but still appears to be representative of the water level in the aquifer and the general trend, as shown by the observation well, is a rise of water level. Therefore, there is a reasonable probability that there is unappropriated water available from the Ogallala aquifer and that this appropriation can be made without adversely impacting existing water rights.

Hydrographs for these two wells are included in Mr. Mathiowetz's report.

Mr. Mathiowetz stated that at the time he wrote his report, he was aware of 22 domestic wells within five miles, and four of those are within two miles of the proposed well locations. At these distances there is a reasonable probability that this appropriation can be made without adversely impacting existing water rights or domestic wells.

Mr. Mathiowetz concluded that this application proposes to appropriate 360 acre-feet annually for the irrigation of 180 acres at a maximum diversion rate of two cfs from two wells from the Ogallala aquifer. There is a reasonable probability that unappropriated water is available from the Ogallala aquifer to supply this proposed diversion based on observation well data and estimated recharge rates. It may not be possible to obtain a diversion rate of 2.0 cfs from the Ogallala aquifer at the proposed well locations due to low transmissivity and limited aquifer thickness. There is a reasonable probability that the diversion rate requested by this application can be made without adversely impacting existing water rights or domestic wells.

The chief engineer recommended approval of Application No. 2691-2 with the following qualifications:

1. The wells 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.

2. The wells authorized by Permit No. 2691-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump 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.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Responding to questions from Ms. Best, Mr. Mathiowetz stated that he became aware of more wells in the area after he had written his report. On February 5, 2013, Mr. Mathiowetz, Ken Buhler, Derric Iles, and Dragan Filipovic met with Mr. Krier, Mr. and Mrs. Williams, and Tim Peppel in Vermillion and asked them to indicate on a map wells they had or that they knew of that were also completed into this aquifer, based on depth. One of the wells shown on Mr. Mathiowetz's map was also moved to the correct location. These are shown on DENR Exhibit 2. This information did not change the recommendation for approval.

Mr. Mathiowetz explained how he came to the conclusion that the diversion rate requested by this application can be made without adversely impacting existing water rights or domestic wells.

Mr. Mathiowetz answered questions from Mr. Krier, Mr. and Mrs. Williams, and the board members regarding his analysis of the application.

Chad Kehn was administered the oath by Stephanie Moen. He offered Kehn Exhibit A, USGS report; and Kehn Exhibit B, 1976 SDGS report. The exhibits were admitted into the record.

Mr. Kehn testified regarding his water permit application. He noted that he believes Mr. Mathiowetz's report is accurate and he requested board approval of the water permit.

Mr. Kehn answered questions from Ms. Best, Mr. Krier, Mr. and Mrs. Williams.

James Krier was administered the oath by Stephanie Moen and testified that he is concerned about availability of water, potential drawdown of the aquifer, and in accuracies in Mr. Mathiowetz's report on domestic water wells.

Mr. Krier answered questions from Ms. Best and Mr. Kehn.

Claire Williams was administered the oath by Stephanie Moen and testified that she is concerned about the public benefit of the water permit application. Mrs. Moen said she does not believe the Williams wells are in the Ogallala aquifer. According to the state's report, the aquifer is the Dallas Fairfax aquifer.

Mrs. Williams answered questions from Mr. Best.

James Williams was administered the oath by Stephanie Moen and testified that in Gregory County there is no irrigation from this aquifer. Mr. William is concerned about the economic impact this permit will cause his farming operation.

Following rebuttal testimony by Mr. Buhler, the parties offered closing arguments.

Motion by Hoyt, seconded by Comes, to approve Water Permit Application No. 2691-2, Chad Kehn, subject to the qualifications set forth by the chief engineer. Motion carried. Holzbauer cast the only dissenting vote.

Ms. Best will prepare the Findings of Fact and Conclusions of Law.

CANCELLATION CONSIDERATIONS: Eric Gronlund reported that prior to the meeting the board received a table listing the proposed cancellations, the notices of cancellation, and the chief engineer's recommendations.

Nine water rights/permits were scheduled for cancellation. The owners were notified of the hearing and the reason for cancellation. The department received no comments or letters in response to the notices of cancellation.

The following water rights/permits were recommended for cancellation for the reasons listed:

Water Permit No. 1891-1 filed by the city of Faith; abandonment

Water Right No. 1293-2 filed by Tom Lillibridge; abandonment/forfeiture (Cancellation is for irrigation component only. Storage dam exists and is used domestic use)

Water Right No. 73-3 filed by Jackie Pazour Living Trust, abandonment/forfeiture (Cancellation is for irrigation component only. Storage dam exists and is used domestic use)

Water Right No. 2124-3 filed by Johanna Wallinga now owned by Justin Vande Weerd; abandonment/forfeiture

Water Right Nos. 4035-3 filed by Donald and Harold Evenson; abandonment/forfeiture

Water Permit No. 6399-3 filed by Keith and Kip Krull; non-construction

Water Permit No. 6471-3 filed by Marshall Brothers; non-construction

Water Permit No. 6846-3 filed by Ottetail Power Company; non-construction

Water Permit No. 7057-3 filed by Mill Valley LLC; abandonment

Motion by Holzbauer, seconded by Comes, to follow the chief engineer's recommendation for cancellation of the nine water rights/permits for the reasons listed. Motion carried.

WATER PERMIT APPLICATION NO. 7649-3, POET: Chairman Freeman opened the hearing at 3:25 p.m.

Appearances

Diane Best represented the Department of Environment and Natural Resources.

Vince Jones, Woods, Fuller, Schultz, and Smith, Sioux Falls, represented Northern Lights Ethanol, LLC dba Poet Biorefining-Big Stone.

There was no intervention in this matter.

Mr. Jones and Ms. Best offered opening statements.

Ms. Best offered DENR Exhibit 1, the agency file. The exhibit was admitted into the record.

Mr. Jones called Iona Branscum, senior environmental engineer, who was administered the oath by Stephanie Moen.

Ms. Branscum testified regarding her report entitled "Supplemental Information for Water Permit Application No. 7649-3, Northern Lights Ethanol, LLC dba POET Biorefining-Big Stone, Groundwater Wells from the Veblen Aquifer." This report is included with Mr. Buhler's report on the application.

Ken Buhler presented his report on the application.

Water Permit Application No. 7649-3 proposes to appropriate up to 2,000 acre-feet annually at a maximum diversion rate of 3.34 cubic feet of water per second from four wells completed into the Veblen aquifer. The wells are to be located in the SW $\frac{1}{4}$  Section 15, T121N-R46W and are expected to be less than 260 feet deep. Water is to be used for industrial use for a corn ethanol plant and a potential cellulosic ethanol expansion at the site.

Mr. Buhler stated that Iona J. Branscum, P.E. report titled "Supplemental Information for Water Permit Application No. 7649-3, Northern Lights Ethanol, LLC d.b.a. POET Biorefining-Big Stone, Groundwater Wells from the Veblen Aquifer" as part of this water permit application is a valid assessment for this application and the chief engineer should rely on it in developing his recommendation.

The chief engineer recommended approval of Application No. 7649-3 with the following qualifications:

1. The wells 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.

2. The wells authorized by Permit No. 7649-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump 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.
3. Water Permit No. 7649-3 authorizes a maximum annual withdrawal from the Veblen Aquifer of 2,000 acre feet of water.
4. Northern Lights Ethanol, LLC shall report to the Chief Engineer annually the amount of water withdrawn from the Veblen Aquifer.

Ms. Best and Mr. Jones offered closing statements.

Motion by Bjork, seconded by Dixon, to approve Water Permit Application No. 7649-3, POET, subject to the qualifications set forth by the chief engineer. Motion carried.

WATER PERMIT APPLICATION NO. 7456-3, LUCAS FAMILY INVESTMENTS:

Chairman Freeman opened the hearing at 4:05 p.m.

Appearances

Diane Best represented the Department of Environment and Natural Resources.

Bob and Linda Lucas, Lucas Family Investments, applicants, Irene, SD.

Ms. Best stated that Rodney and Stephan Anderson submitted a letter contesting the application, so it was scheduled to be heard by the board. The Anderson's have now withdrawn their opposition.

Adam Mathiowetz presented his report on the application.

Water Permit Application No. 7456-3 proposes to appropriate 240 ac-ft. of water annually at a maximum diversion rate of 1.80 cfs from one well to be completed into the Lower James Missouri aquifer. The well is expected to be 250 feet deep and the application proposes to irrigate 120 acres in Yankton County. The applicant is requesting a diversion rate greater than the statutory limit of 1.0 cfs per 70 acres.

The Lower James Missouri aquifer is composed of buried outwash (sand and gravel) that can generally be encountered under confined conditions in Yankton County. The Lower James Missouri aquifer underlies approximately 238 square miles of Yankton County and extends into Clay County to the east, Hutchinson County to the north, and west into Bon Homme County. The aquifer is hydraulically connected to the James River as well as the Missouri Elk Point aquifer. The Lower James Missouri aquifer underlies approximately 92,500 acres and contains an estimated 2.08 million ac-ft. of recoverable water in storage in Yankton County. The location of the well is near the eastern edge of the Lower James Missouri aquifer.

Mr. Mathiowetz performed an analysis on recharge versus discharge in the aquifer in Yankton County. Recharge greatly exceeds discharge by approximately four and one half times. The average annual recharge to the aquifer is estimated to be 11,562.5 ac-ft. in Yankton County. The estimated average annual discharge from the aquifer in Yankton County is 2,264.1 ac-ft.

All of the observation wells in the immediate area show that climatic effects on water level greatly mask any effects of pumping. The effects of well withdrawals are not evident during the period of record.

There is only one well authorized by appropriative rights, Water Right No. 4091-3 and Water Permit No. 6091-3, and three domestic wells, on record with the DENR-Water Rights program, within three miles of the proposed well location and none within one mile. Observation well YA-78C is within one mile of the well authorized by Water Right No. 4091-3, Water Permit No. 6091-3, and at least one domestic well. The hydrograph for observation well YA-78C does not show the seasonal effects of pumping. Therefore, drawdown from this proposed appropriation, if approved, should not create an adverse impact on existing appropriative or domestic users.

SDCL 46-5-6 states that the diversion rate for an irrigation appropriation cannot be in excess of one cfs per second for every 70 acres, or "the equivalent thereof." The statute does provide that the Water Management Board may allow a greater diversion if the method of irrigation so requires. Water Permit Application 7456-3 proposes to divert at a rate of 1.80 cfs to irrigate 120 acres, or the equivalent of 1.05 cfs per 70 acres. The applicant did not provide justification for the request in excess of the statutory limit.

The chief engineer is recommending approval of Water Permit Application No. 7456-3 for 1.71 cubic feet of water per second (770 gpm) with the following qualifications:

1. The well 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.
2. The well authorized by Permit No. 7456-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump 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.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Ms. Best offered DENR Exhibit 1, the agency file. The exhibit was admitted into the record.

Robert Lucas was administered the oath by Stephanie Moen and testified regarding his application. He stated that believes his application meets the four required criteria.

Mr. Lucas answered questions from Ms. Best and Mr. Hoyt.

Motion by Holzbauer, seconded by Comes, to approve Water Permit Application No. 7456-3, Lucas Family Investments, subject to the qualifications set forth by the chief engineer. Motion carried.

CONSIDER VIOLATIONS FOR FAILURE TO SUBMIT ANNUAL IRRIGATION QUESTIONNAIRE: Ron Duvall presented the report to the board on irrigation questionnaire violations.

On October 12, 2012, the Water Rights Program mailed 3,345 irrigation questionnaires to irrigators for reporting water use for 2012. The permit holders were given until December 3, 2012, 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 18, 2013, the Water Rights Program mailed 168 notices (involving 233 permits) to those irrigators who had not returned their irrigation questionnaires by the December 3, 2012, deadline. All of the notices were sent by "signature confirmation requested."

The January 18<sup>th</sup> notice advised the permit holders that the board could 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 violation.
- The permit(s) could be canceled for three violations, 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 7, 2013:

Suspend the following permits/rights for one year (effective April 7, 2013)

1921-1	Cabbage Patch River Ranch (Irrigation questionnaire received prior to April 7, 2013. No suspension occurred.)
1922-1	Cabbage Patch River Ranch (Irrigation questionnaire received prior to April 7, 2013. No suspension occurred.)
6168-3	Robert Hattum

Water Management Board  
March 6-7, 2013, Meeting Minutes

508A-1 Jeff and Jeril Kessel  
2954-3 Lane Tekrony (Statement)  
4084-3 Richard Will (Statement)

Suspend the following permits/rights for three years (effective April 7, 2013)

2943-3 Duane Rogers (Statement)  
2696-3A Donald Schmidt (Statement)  
4414-3 Donald Schmidt (Statement)  
3937-3 Wendell Schubloom

Cancel under Violation 3 (effective April 7, 2013)

672-2 Edward Patrick Henry

Amend the following permits/rights to include the mandatory irrigation questionnaire qualification (effective March 7, 2013)

2717-3A Brink Brothers  
2323A-3 Samuel D and Angela M Fousek  
953-1 Burnell and Helen C Gaskins  
996-1 Bruce Weyrich

Motion by Bjork, seconded by Comes, to accept the staff recommendations for suspension, cancellation, and amendment of the permits/rights. No suspension will occur if the irrigator returns the questionnaire by April 7, 2013. Motion carried.

CONSIDER DEFERRAL OF WATER PERMIT APPLICATIONS: Ms. Best stated that none of the applicants were present.

Ken Buhler presented his summaries on the applications.

Water Permit Application No. 7386-3, Brian J. Gatzke: Ms. Best offered DENR Exhibit 1, the agency file.

Water Permit Application No. 7386-3 proposes to appropriate 428 acre feet of water annually at a maximum diversion rate of 3.06 cubic feet of water per second from two wells to irrigate 214 acres. The proposed depth of the well is 200 feet.

Mr. Buhler said no test well information was submitted with this application. Review of the geology, hydrology, and the information in the area, there are only two aquifers Mr. Gatzke could be in – the Big Sioux aquifer or the Howard aquifer. Staff does not believe there is an aquifer at 200 feet.

Mr. Buhler concluded that information is not available to determine if unappropriated water is available for this proposed appropriation. Information is not available to determine if this

proposed appropriation would adversely impair existing users. An aquifer pump test should be conducted to allow evaluation of any "minor" aquifer that would be encountered at these proposed well sites.

The chief engineer recommended deferral of Application No. 7386-3 until an aquifer pump test is completed by the applicant to allow evaluation of the potential aquifer including the availability of unappropriated water and potential impacts to existing users from the aquifer which are criteria set forth in SDCL 46-2A-9 for when a water right permit may be issued.

Motion by Hoyt, seconded by Dixon, to defer Water Permit Application No. 7386-3, Brian Gatzke, until an aquifer pump test is completed. Motion carried.

Water Permit Application No. 7537-3 Bret Flihs: Ms. Best offered DENR Exhibit 1, the agency file. The exhibit was admitted into the record.

Water Permit Application No. 7537-3 proposes to appropriate up to 960 ac-ft annually at a maximum diversion rate of 6.6 cfs from up to three well fields, each comprised of 12 to 14 wells. The wells are expected to be approximately 60 feet deep and water will be used for the irrigation of 480 acres in Brown County.

Mr. Buhler stated that there has been fairly extensive test drilling in the area and there are no mapped glacial outwash aquifer identified. The proposed well site is within the study area for the Claremont City Study, and it was determined that this layer of sand probably would not produce enough water to satisfy the needs of the city of Claremont. No recharge estimates are available for this potential aquifer and no observation data is available.

Mr. Buhler concluded that information is not available to determine if unappropriated water is available for this proposed appropriation. Information is not available to determine if this proposed appropriation would adversely impair existing users. An aquifer pump test should be conducted to allow evaluation of any "minor" aquifer that would be encountered at these proposed well sites.

The chief engineer recommended deferral of Application No. 7537-3 until an aquifer pump test is completed by the applicant to allow evaluation of the potential aquifer including the availability of unappropriated water and potential impacts to existing users from the aquifer which are criteria set forth in SDCL 46-2A-9 for when a water right permit may be issued.

Motion by Bjork, seconded by Dixon, to defer Water Permit Application No. 7537-3, Bret Flihs, until an aquifer pump test is completed. Motion carried.

Water Permit Application No. 7541-3, Roger Schuelke: Ms. Best offered DENR Exhibit 1, the agency file. The exhibit was admitted into the record.

Water Permit Application No. 7541-3 proposes to appropriate up to 270 ac-ft/yr at a maximum diversion rate of 2.00 cfs from one well. The well is to be completed into the Granite wash and

is expected to be approximately 188 feet deep. It will be used to irrigate 135 acres in Grant County. The application proposes a diversion rate in excess of the statutory limit.

Mr. Buhler said the Granite Wash aquifer has been loosely defined by the USGS in a report by Hanson. Based on the USGS report, the area of this aquifer is 190 square miles but only 30 data points were used to delineate it. Mr. Buhler said there are questions about the actual areal extent of the aquifer. Recharge to the aquifer has not been quantified and there are no observation wells in the aquifer.

The chief engineer recommended deferral of Application No. 7541-3 until an aquifer pump test is completed by the applicant to allow evaluation of the potential aquifer including the availability of unappropriated water and potential impacts to existing users from the aquifer which are criteria set forth in SDCL 46-2A-9 for when a water right permit may be issued.

Motion by Holzbauer, seconded by Hoyt, to defer Water Permit Application No. 7541-3, Roger Schuelke until an aquifer pump test is completed. Motion carried.

Water Permit Application No. 7555-3, Craig Bass: Ms. Best offered DENR Exhibit 1, the agency file. The exhibit was admitted into the record.

Water Permit Application No. 7555-3 proposes to appropriate 470 ac-ft/yr at a maximum diversion rate of 1.78 cfs from one well proposed to be 88 feet deep to irrigate 235 acres in Hamlin County.

Mr. Buhler said the areal extend of the aquifer is not clear. Because recharge, discharge, and observation well data is not available, the probability of unappropriated water available from this outwash for the proposed appropriation cannot be evaluated. Sufficient information on the outwash characteristics is not currently available to determine the potential for adverse or unlawful impairment of existing users due to the development of the proposed diversion.

The chief engineer recommended deferral of Application No. 7555-3 until an aquifer pump test is completed by the applicant to allow evaluation of the potential aquifer including the availability of unappropriated water and potential impacts to existing users from the aquifer which are criteria set forth in SDCL 46-2A-9 for when a water right permit may be issued.

Motion by Hoyt, seconded by Bjork, to defer Water Permit Application No. 7555, Craig Bass until an aquifer pump test is completed. Motion carried.

Mr. Erbele handed out a graph showing the number of irrigation permits issued by year and the total irrigation applications received in 2012.

Mr. Erebele reported that the department received a letter from the Bureau of Reclamation asking the department to issue shut-off orders to junior water right holders upstream of the Angostura Reservoir on the Cheyenne River. The Bureau of Reclamation holds a 1941 water right for Angostura Reservoir providing them a senior right to an initial fill of the reservoir. Mr.

Water Management Board  
March 6-7, 2013, Meeting Minutes

Erbele stated that this week the department sent out 50 shut-off orders to the junior water right holders upstream of the reservoir.

Mr. Erbele announced that he will be leaving the department at the end of the month.

ADJOURN: Chairman Freeman declared the meeting adjourned.

A court reporter was present for the meeting and a transcript of the proceedings from March 6, 2013, may be obtained by contacting Carla Bachand, Capital Reporting Services, PO Box 903, Pierre, SD 57501, telephone number 605-224-7611. A transcript of the proceedings from March 7, 2013, may be obtained by contacting Stephanie Moen & Associates, PO Box 684, Mitchell, SD 57301, telephone number 605-995-0955.

The meeting was also digitally recorded and a copy of the recording is available on the department's website at <http://denr.sd.gov/boards/schedule.aspx>.

Approved this 1<sup>st</sup> day of May 2013.



Chairman, Water Management Board

  
Secretary, Water Management Board

# WATER MANAGEMENT BOARD MEETING

## March 6 & 7, 2013

**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
1213C-1	Michael R Even	Longmont CO	BU	no add'l	no add'l	Belle Fourche River	iq, 3 special
1932-1	Black Hills Fiberglass	Belle Fourche	BU	0.036 cfs	commercial	1 well-Inyan Kara Aquifer	wi, wcr
1933-1	Loughmiller Inc.	Keldron	CN	2.0 cfs	368 acres	Grand River	lf, iq
1934-1	Shirley Wood	Newell	BU	0.15 cfs	5 acres	Belle Fourche River	iq, 3 special
1935-1	Donald J Stange	Allen NE	BU	2.14 cfs	150 acres	Belle Fourche River	iq, 3 special
1936-1	Dean Tarter	Camp Crook	HR	1.1 cfs	55.99 acres	Little Missouri River	iq, 1 special
2577A-2	City of Box Elder	Box Elder	PE	0.67 cfs	municipal	1 well-Madison Aquifer	wi wcr, 2 special
2692-2	Steve Elshere Land Co.	Philip	HK	7.87 cfs	552 acres	springs & Straighthead Creek	lf, iq, 1 special
2693-2	Brad & Marlene Pisha	Tuthill	BT	1.93 cfs	150 acres	1 well-Ogallala Aquifer	wi, wcr, iq
2694-2	Pete Lien & Sons Inc.	Rapid City	PE	1.56 cfs	industrial	1 well-Madison Aquifer	wi, wcr, 3 special
2695-2	H & H Investments LLC	Rapid City	PE	0.04 cfs	commercial	1 well-Inyan Kara Aquifer	wi, wcr
2696-2	Jeff Johnson	Tuthill	BT	2.0 cfs	151 acres	1 well-Ogallala Aquifer	wi, wcr, iq
2697-2	Daniel Fanning	Martin	BT	4.44 cfs	320 acres	2 wells-Ogallala Aquifer	wi, wcr, iq
2698-2	Daniel Fanning	Martin	BT	2.22 cfs	160 acres	1 well-Ogallala Aquifer	wi, wcr, iq
2699-2	Platte Hutterian Brethren	Platte	BT	2.12 cfs	197 acres	1 well-Ogallala Aquifer	wi, wcr, iq
2700-2	Vernon & Marlys Walking	Crookston NE	TD	1.94 cfs	136 acres	2 wells-Ogallala Aquifer	wi, wcr, iq
6576A-3	Lee Kleinschmidt	Harold	HU	0.56 cfs	39 acres	1 well-Chapelle Aquifer	wi, iq
7411-3	Peterson Farms	Hitchcock	SP	1.93 cfs	135 acres	slough/lake	iq
7426-3	Spink Htin Brethren	Frankfort	SP	2.63 cfs	185 acres	James River	iq, 1 special
7439-3	Mielitz Bros	Bellingham MN	GT	1.14 cfs	80 acres	1 well-Veblen Aquifer	wi, wcr, iq
7440-3	Melvin Knutson	White	BG	no add'l	119 acres	1 well-Big Sioux:Aurora	wi, iq
7443-3	AssKickin Ranch LLC	Goodyear AZ	HU	no add'l	60 acres	1 well-Missouri:Pierre	wi, iq
7444-3	Jeb, Shane, Mitch Peterson	Hitchcock	SP	1.93 cfs	135 acres	James River	iq, 1 special
7445-3	Tracy Johnson	Bruce	BG	1.78 cfs	167 acres	2 wells-Big Sioux:Brookings	wi, wcr, iq
7446-3	Dale Tuchscherer	Milbank	GT	1.78 cfs	64 acres	1 well-Veblen	wi, wcr, iq, 1 special
7447-3	Michael F Hauck	Vermillion	CL	1.78 cfs	160 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7448-3	Robert Heckenlaible	Freeman	HT	6.67 cfs	560 acres	1 well-Niobrara Aquifer	wi, iq
7449-3	Scott Losing	Alpena	JE	1.78 cfs	80 acres	1 well-Warren:West James	wi, iq, 1 special
7450-3	Fischer Farms	Wagner	CM	3.56 cfs	450 acres	2 wells-Choteau West	wi, wcr, iq
7451-3	Seth Fischer	Wagner	CM	1.89 cfs	105 acres	1 well-Choteau West	wi, wcr, iq

7453-3	Berger Farms	Ortley	GT	2.0 cfs	140 acres	2 wells-Big Sioux:North	wi, wcr, iq
7454-3	Douglas G Bye	Vermillion	CL	1.78 cfs	170 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7455-3	Dan Mettler	Eureka	MP	1.78 cfs	160 acres	1 well-Spring Creek:McPherson	wi, wcr, iq
7457-3	Larry Schmidt	Parker	TU	2.22 cfs	207 acres	2 wells-Vermillion:West Fork	wi, wcr, iq
7458-3	Jim Bye	Gayville	YA	3.78 cfs	270 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7459-3	David G Sternhagen	Yankton	YA	1.78 cfs	113 acres	1 well-Lower James:Missouri	wi, iq, 1 special
7460-3	Martin Week & P Bancroft	Vermillion	CL	3.11 cfs	264 acres	2 wells-Missouri:Elk Point	wi, wcr, iq
7461-3	Glenn Bosse	Jefferson	UN	1.10 cfs	32 acres	1 well-Missouri:Elk Point	wi, wcr, iq, 1 special
7462-3	Chad Fritz	Raymond	CK	1.23 cfs	no add'l	1 well-Altamont Aquifer	wi, wcr, iq, 2 special
7463-3	John Moriarty	Brookings	BG	1.78 cfs	152 acres	1 well-Big Sioux:Aurora	wi, wcr, iq
7464-3	D A Olson	Meckling	CL	1.0 cfs	87 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7465-3	D A Olson	Meckling	CL	1.78 cfs	138 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7469-3	William Chenoweth	Springfield	BH	3.11 cfs	217 acres	1 well-Codell Aquifer	wi, wcr, iq
7470-3	Robert J Borchard	Mansfield	BN	no add'l	46 acres	1 well-Middle James Aquifer	wi, iq
7471-3	David Pierce	Wilmot	RB	3.56 cfs	320 acres	1 well-Revillo Aquifer	wi, wcr, iq
7472-3	Paul Bremer	Vermillion	CL	1.78 cfs	136 acres	1 well-Lower Vermillion:Miss	wi, wcr, iq
7473-3	Gregg Hanson	Elk Point	UN	1.78 cfs	145 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7474-3	Gwen Orr	Vermillion	CL	1.78 cfs	136 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7475-3	Douglas G Bye	Vermillion	CL	1.78 cfs	144.8 acres	1 well-Missouri Elk Point	wi, wcr, iq
7476-3	Thompson Hereford Ranch	Pukwana	BL	3.18 cfs	no add'l	1 well-Crow Creek Aquifer	wi, wcr, iq
7477-3	Chad Heckathorn	Elk Point	UN	1.78 cfs	118 acres	1 well-Lower Vermillion:Miss	wi, wcr, iq
7478-3	Lee Friesen	Olivet	HT	1.87 cfs	132 acres	1 well-Lower James:Missouri	wi, wcr, iq
7479-3	Glendale Httm Brethren	Frankfort	SP	3.56 cfs	320 acres	James River	iq, 1 special
7485-3	Jerome Poeschl	Yankton	YA	1.33 cfs	97.2 acres	1 well-Lower James Miss:Scotland	wi, wcr, iq
7486-3	Bottolfson Brothers	Vermillion	CL	no add'l	70 acres	1 well-Missouri:Elk Point	wi, iq
7487-3	Bottolfson Brothers	Vermillion	CL	1.56 cfs	140 acres	1 well-Lower Vermillion:Miss	wi, wcr, iq
7488-3	Bottolfson Brothers	Vermillion	CL	1.56 cfs	210 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7489-3	Dale G Williams	Estelline	HM	1.78 cfs	152 acres	1 well-Big Sioux:Brookings	wi, wcr, iq
7490-3	Claremont Httm Brethren	Castlewood	HM	1.78 cfs	136 acres	1 well-Big Sioux:Brookings	wi, wcr, iq
7491-3	Claremont Httm Brethren	Castlewood	HM	1.78 cfs	136 acres	1 well-Big Sioux:Brookings	wi, wcr, iq
7493-3	Franklin Orr	Vermillion	CL	1.78 cfs	84 acres	1 well-Missouri:Elk Point	wi, wcr, iq, 1 special
7494-3	Franklin Orr	Vermillion	CL	1.78 cfs	116 acres	1 well-Missouri:Elk Point	wi, wcr, iq, 1 special
7495-3	Dennis Herlyn	Parker	TU	1.11 cfs	160 acres	1 well-Niobrara Aquifer	wi, wcr, iq
7496-3	Jeff Donnay	Wilmot	RB	1.86 cfs	130 acres	1 well-Revillo Aquifer	wi, wcr, iq
7497-3	Larry Aderhold	Castlewood	HM	2.0 cfs	131 acres	1 well-Big Sioux:Brookings	wi, wcr, iq
7498-3	Dale Tushscherer	Milbank	GT	1.78 cfs	116 acres	1 well-Veblen Aquifer	wi, wcr, iq, 1 special

7499-3	Scott Carlson	Lake Preston	KG	1.11 cfs	120 acres	1 well-Vermillion East Fork	wi, wcr, iq
7500-3	Hillestad Farms	Volga	BG	1.78 cfs	144 acres	1 well-Big Sioux Brookings	wi, wcr, iq
7501-3	Paul Moriarty	Brookings	BG	1.78 cfs	152 acres	1 well-Howard Aquifer	wi, wcr, iq
7502-3	Howell Farms	Volga	BG	1.78 cfs	240 acres	2 wells-Big Sioux:Brookings	wi, wcr, iq
7503-3	Howell Farms	Volga	BG	1.78 cfs	140 acres	2 wells-Big Sioux:Brookings	wi, wcr, iq
7504-3	Steve Andrews	Beresford	CL	1.78 cfs	160 acres	1 well-Lower Vermillion:Miss	wi, wcr, iq
7505-3	Grassland Colony	Westport	MP	0.22 cfs	158 acres	Foot Creek	lf, iq, 1 special
7506-3	Larry or Steven Knutson	Estelline	HM	1.78 cfs	152 acres	1 well-Big Sioux:Brookings	wi, wcr, iq
7507-3	Shawn Vannorsdel	Freeman	TU	2.22 cfs	156 acres	1 well-Niobrara Aquifer	wi, wcr, iq
7508-3	Lynell Hofer	Freeman	HT	2.22 cfs	18 add'l ac	1 well-Lower James:Missouri	wi, wcr, iq, 1 special
7509-3	Lynell Hofer	Freeman	HT	0.22 cfs	no add'l	1 well-Lower James:Missouri	wi, iq
7510-3	Howard A Kathol	Gayville	CL	0.28 cfs	95 acres	1 well-Lower James:Missouri	wi, iwq
7511-3	Priscilla Johnson Family Trust	Logansport IN	CL	no add'l	70.5 acres	1 well-Missouri:Elk Point	wi, iq
7512-3	Greg Wirth	Viborg	TU	2.28 cfs	160 acres	2 wells-Niobrara	wi, wcr, iq
7513-3	Greg Wirth	Viborg	TU	1.74 cfs	122 acres	2 wells-Niobrara	wi, wcr, iq
7514-3	Greg Wirth	Viborg	TU	2.28 cfs	160 acres	2 wells-Niobrara	wi, wcr, iq
7515-3	Greg Wirth	Viborg	TU	2.28 cfs	160 acres	2 wells-Niobrara	wi, wcr, iq
7516-3	David Zubke	Waubay	GT	2.22 cfs	170 acres	1 well-Big Sioux:North	wi, wcr, iq
7517-3	Jerry Runia	Estelline	BG	1.78 cfs	140 acres	1 well-Big Sioux:Brookings	wi, wcr, iq
7518-3	Jerry Runia	Estelline	BG	1.78 cfs	205 acres	3 wells-Big Sioux:Brookings	wi, wcr, iq
7519-3	Michael Bottolfson	Vermillion	CL	1.56 cfs	101 acres	1 well-Missouri:Elk Point	wi, wcr, iq, 1 special
7521-3	John & Jacki Smith	Yankton	YA	1.44 cfs	101 acres	1 well-Lower James:Missouri	wi, wcr, iq
7522-3	John & Jacki Smith	Yankton	YA	1.33 cfs	94 acres	1 well-Lower James:Missouri	wi, wcr, iq
7523-3	Ben C Culver	Aurora	BG	2.0 cfs	152 acres	2 wells-Big Sioux:Unnamed	wi, wcr, iq
7524-3	Wayne A Heckenlaible	Utica	YA	2.0 cfs	120 acres	1 well-Lower James Miss:Scotland	wi, wcr, iq, 1 special
7525-3	Brad Jongeling	Estelline	HM	1.78 cfs	140 acres	2 wells-Big Sioux:Brookings	wi, wcr, iq
7526-3	Derrick Walter	Marion	HT	3.6 cfs	257 acres	2 wells-Niobrara	wi, wcr, iq
7527-3	Virgil & Eugene Mollet, Jr	Jefferson	UN	1.11 cfs	117.5 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7528-3	Justin VandeWeerd	Bruce	BG	1.8 cfs	126 acres	1 well-Big Sioux:N Deer Creek	wi, wcr, iq
7529-3	Rusty Dimberg	Ortonville MN	GT	0.89 cfs	36 acres	1 well-Veblen	wi, wcr, iq, 1 special
7530-3	Tyler L Ammann	Wilmot	RB	3.11 cfs	320 acres	1 well-Revillo	wi, wcr, iq
7531-3	Randy Hanson	Ponsford MN	HM	1.78 cfs	115 acres	1 well-Big Sioux:Brookings	wi, wcr, iq, 1 special
7532-3	Matthew P Lowe	Wilmot	GT	1.78 cfs	145 acres	1 well-Antelope Valley	wi, wcr, iq
7533-3	Chad or Rhonda Wosje	Volga	BG	0.89 cfs	37 acres	1 well-Big Sioux:South	wi, wcr, iq
7534-3	Joe/John Arthur	South Shore	GT	1.78 cfs	no add'l	1 well-Antelope Valley	wi, wcr, iq, 1 special
7536-3	Eugene Kleinjan	Bruce	BG	1.33 cfs	160 acres	1 well-Big Sioux:Brookings	wi, wcr, iq

7538-3	Ron Kulish	Lesterville	YA	1.78 cfs	260 acres	1 well-Lower James:Missouri	wi, wcr, iq
7539-3	Daniel L Hauck	Olivet	HT	2.0 cfs	190 acres	1 well-Lower James:Missouri	wi, wcr, iq
7542-3	RT Investments 2001 LLC	Huron	BD	1.38 cfs	132 acres	1 well-Floyd:East James	wi, wcr, iq
7543-3	Brian Kozak	Tyndall	BH	1.78 cfs	249 acres	1 well-Choteau:Tyndall	wi, wcr, iq
7544-3	Nelson Family Partnership	Yankton	YA	2.22 cfs	96 acres	1 well-Lower James:Missouri	wi, wcr, iq
7549-3	Eagle Venture LLC	Yankton	YA	1.93 cfs	60 acres	Missouri River	iq, 1 special
7550-3	Estelline Alumni Assoc.	Estelline	HM	0.10 cfs	3 acres	1 well-Big Sioux:Brookings	wi, wcr, iq, 1 special
7552-3	Dean Bosse	Elk Point	UN	0.61 cfs	49 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7553-3	John Freeburg	Gayville	CL	1.55 cfs	136 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7554-3	John L Gregg II	Yankton	YA	1.89 cfs	135 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7556-3	Tom Tveit	Pierre	HU	0.89 cfs	50 acres	1 well-Gray Goose	wi, wcr, iq, 1 special
7560-3	Jon Vaske	Elkton	BG	1.33 cfs	60 acres	1 well-Big Sioux:Aurora	wi, wcr, iq
7561-3	Jerry or Joyce Hansen	Beresford	UN	1.78 cfs	132 acres	1 well-Brule Creek	wi, wcr, iq
7463-3	Bernard Hall	Elk Point	UN	2.22 cfs	95 acres	1 well-Missouri:Elk Point	wi, wcr, iq, 1 special
7564-3	Daelyn E Dirksen	Conde	SP	1.67 cfs	120 acres	dugouts	iq, 1 special
7565-3	Helen Ryken	Gayville	YA	1.89 cfs	160 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7566-3	Daniel L Wallbuam Trust	Yankton	YA	2.22 cfs	160 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7569-3	Ed Van Beek	Pollock	CA	3.11 cfs	218 acres	Missouri River	iq
7576-3	Keith & Janice Howard	Dakota Dunes	UN	3.33 cfs	400 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7656-3	Robert Walloch	Yankton	YA	41 AF	FWP	runoff	If, 1 special

ATTENDANCE SHEET  
 WATER MANAGEMENT BOARD  
 Date March 7, 2013

NAME (PLEASE PRINT)

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF INTEREST

Jason Rumpca

103 N. 3<sup>rd</sup> St.

Berensford, SD 57004

water permit

Rep. Nancy Rasmussen

28639 468<sup>th</sup> Ave

Hurley, SD

UVM

DAVE OLSEN

18526 398 AVE

Hitchcock 57348

RAY RYAN

3 EAST KENIP W

WTN SD

T West Sp

REED BIXLER

39477 184<sup>th</sup> St

Hitchcock SD

Brent Kleinman

20188 401 Ave

Huron SD

T Eastern Spink water permit

Chad Koda

35632 298th

Bonesteel, SD

2691-2 water permit

Lenny Peterson

19111 Maple Ave

Hitchcock SD

water

John Anderson

29875 443 AVE

TRENT SD

water

Jerry Wieding

470 Beach Ave NE

Huron, SD

water

Tim Bottum

PO Box 1025

Mitchell SD

11

Wayne Binger

37923 183 ST

Tylar SD.

water

SCOTT BINGER

2301 12<sup>th</sup> Ave SE

ABERDEEN, SD

water

Shane Binger

37923 183<sup>rd</sup> St.

Tylar SD

water

Shay Marshall

19032 388th Ave

Hitchcock SD. 57348

water

ATTENDANCE SHEET  
WATER MANAGEMENT BOARD  
Date March 7, 2013

NAME (PLEASE PRINT)

Claire Peterson  
Claire Williams

MAILING ADDRESS

909-27th SW  
29667 353 Ave  
2691-2

CITY, STATE & ZIP

Huron SD 57350  
Herrick SD 57538

ITEM OF INTEREST

Fw-Spink  
Water  
2691-2

ATTENDANCE SHEET  
 WATER MANAGEMENT BOARD  
 Date March 7, 2013

NAME (PLEASE PRINT)

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF INTEREST

Danny Peterson

38984 189<sup>th</sup> St

Hitchcock SD 57348

Water

JAMES KEIGER 2691-2

35158 296<sup>th</sup> ST

HERICK SD 57538

Water

James C. Williams

29667 353<sup>rd</sup> Ave

HERICK, SD 57538

2691-2

Terry Marshall

Hitchcock S.D. 57348

LUCAS FAMILY INVESTMENT

29524 441<sup>st</sup> AVE

IROND SD 57087

745C-3

Quida Deves

29526 441<sup>st</sup> Ave

Irone, D. Del

57037 745C-3



ATTENDANCE SHEET  
 WATER MANAGEMENT BOARD  
 Date March 6, 2013

<u>NAME (PLEASE PRINT)</u>	<u>MAILING ADDRESS</u>	<u>CITY, STATE &amp; ZIP</u>	<u>ITEM OF INTEREST</u>
<u>Sylvia Lambert</u>	<u>P.O. Box 78</u>	<u>Interior, SD</u>	<u>Power Tech</u>
<u>GENA PARKHURST</u>	<u>PO Box 1914</u>	<u>Rapid City SD</u>	<u>Power Tech</u>
<u>MATT HICKS</u>	<u>DENR</u>		<u>Power Tech</u>
<u>Bill Markely</u>	<u>DENR</u>		<u>Power Tech</u>
<u>Tom Brandner</u>	<u>DENR</u>		<u>Power Tech</u>
<u>Bruce Kempelby</u>	<u>Dist 30</u>	<u>RE</u>	<u>Power Tech</u>
<u>Ronald Benson</u>	<u>45237 283rd St</u>	<u>Hurley</u>	<u>7535-3</u>
<u>Gary Peterson</u>	<u>45913 299th St</u>	<u>Centerville UVM</u>	<u>data Permits</u>
<u>Jason Rumpka</u>	<u>103 N 3rd St</u>	<u>Beresford, SD UVM</u>	<u>Water Permit Cases</u>
<u>Gary Andersen</u>	<u>#3</u>	<u>Centerville, SD</u>	<u>UVM</u>
<u>Harred Osborn</u>	<u>28838 463 Ave</u>	<u>Centerville SD</u>	<u>UVM</u>
<u>Mike Stevens</u>	<u>28916 458th Ave #2</u>	<u>Ubug SD</u>	<u>UVM</u>
<u>Jerome Fuld</u>	<u>45958 Hwy 18</u>	<u>Davis SD</u>	<u>UVM</u>
<u>Rep Nancy Kosmuma</u>	<u>28639 458th Ave</u>	<u>Hurley SD</u>	<u>UVM</u>

ATTENDANCE SHEET  
 WATER MANAGEMENT BOARD  
 Date March 6, 2013

NAME (PLEASE PRINT)

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF INTEREST

E. John Bruner	22289 412nd Ave PO Box 35	Winfred, SD 57076	Lake Thompson
Corey Coers	PO Box 385	De Smet SD 57231	Lake Thompson
Shelley Nelson	AG	Lake Preston SD 57249	Lake Thompson
<del>Forrester Giehl</del>		Pierre SD	
Morrill Nelson	628 3rd St NE Lake Preston	SD 57249	Lake Thomson
Bruce Ellison	70 Box 2508, Rapid City SD		PowerTech
Dick Clement	8910 Adams St	Abingere ND 58713	PowerTech
Waste'Win Young	PO Box D	FT Yates ND 58938	PowerTech
Paul Seamans	27693 24th St	Drops SD 58331	PowerTech
Martin Kammerer	22198 Elk Vale Rd	RC 57701	PowerTech
Mark Bockhiser	13850 Battle Ck. Rd	Hermosa 57744	PowerTech
Larry Mann	520 44th RC SD		PowerTech
Mary Jo Farrington	823 St. Francis, RC, SD	RC, 57701	PowerTech
Sally King	917 Wood <del>St</del>	Rapid City 57701	PowerTech

ATTENDANCE SHEET  
 WATER MANAGEMENT BOARD  
 Date March 6, 2013

NAME (PLEASE PRINT)

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF INTEREST

Heath Thompson	Box 621	Howard SD 57349	Lake Thompson
Daron K. Wethermer	Box 401	Howard SD 57349	Lake Thompson
Max Maim	018 State	Belle Fourche SD	Power Tech
John Mays	5575 PTC Parkway Suite 140	Greenwood Village CO	Power Tech
Waniya Locke	12484 1806 Wakpala S.D.		Power Tech
REBECCA LEAS	6509 Seminole Lane	Rapid City SD 57702	Power Tech
Rick Summerville	6509 Seminole Lane	Rapid City, SD 57702	Power Tech
Susan R. Henderson	11504 Hwy 431	Edgemont, SD 57125	Power Tech
Paul Lepisto	1115 S. Clearbrow	Pierre 57501	Power Tech
V. Wicks	SDPB - Vermillion		Power Tech
Hannah Albertus Baillan	DENR	Pierre	Power Tech
Dave Gullickson	Box 29 Brookings SD	57066 U N M	Dealer
BRUCE C. HAGEN	1300 W. MURPHY DR FSD	57105 U N M	FARMER

ATTENDANCE SHEET  
WATER MANAGEMENT BOARD  
Date March 6, 2013

NAME (PLEASE PRINT)

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF INTEREST

Richard Woodward

28746-462 Ave

Centerville, S. De K 57014

W U M

David Smith

45536 283 rd

Henry, N. D. 57076

CIV. M.