DENR
SOUTH DAKOTA

WATER MANAGEMENT BOARD
Meeting on October 7, 2020

Floyd Matthew Training Center
Joe Foss Bldg., 523 E Capitol Ave, Pierre SD

Due to COVID-19 and limited seating, any person(s) interested in speaking during the public comment period needs to contact the Department at (605) 773-3352 no later than 5:00 PM on Tuesday, October 6, 2020, if desiring to speak via remote connection.

Scheduled times are based on Central Time and are estimated start times.
Agenda items may be delayed due to prior scheduled items.
Live audio of the meeting is available at https://www.sd.net

October 7, 2020

10:00 AM Call to Order
Adopt Final Agenda
Conflicts Disclosures and Requests for State Board Waivers
Adopt July 8 - 9, 2020, Board Minutes
December 2 - 3, 2020 Meeting and Location
Status and Review of Water Rights Litigation
Administer Oath to Department of Environment and Natural Resources Staff

Update on DENR Activities

Public comment period in accordance with SDCL 1-25-1

Request to Amend Rules – Kelli Buscher and Pat Snyder
- Article 74:52 Surface Water Discharge Permits
- Article 74:51 Surface Water Quality

Cancellation Considerations – Ron Duvall

Future Use Reviews – Ron Duvall

10:15 AM Motions concerning Renewal of Ground Water Discharge Plan GWD 1-88, Wharf Resources' (USA), Inc. Ross Valley Waste Depository – Steven Blair

10:30 AM Five-year Review of Fully Appropriated Aquifers – John Farmer and Eric Gronlund
- Tulare East James aquifer
- Tulare Western Spink Hitchcock aquifer

11:00 AM Water Permit Application No. 8413-3, Ratio LLC – Timothy Magstadt

LUNCH

WATER MANAGEMENT BOARD
Meeting on October 7, 2020

1:00 PM Water Permit Application No. 8433-3, City of Lake Norden – Adam Mathiowetz

Consider Findings of Fact, Conclusions of Law, and Final Decision in the matters of:

- Water Permit Application No. 8409-3, Schley Farms & Schley Real Estate LLP
- Water Permit Application No. 2805-2, R & J LLC
- Water Permit Application No. 1992-1, Town of Buffalo

ADJOURN

Board members are reminded they are subject to SDCL 3–23-1 to 3-23-5 (Disclosure Laws) which address the disclosure of any conflicts of interest a member may have regarding contracts with the State of South Dakota. Board members should report any potential conflicts to the board and seek a waiver where appropriate.

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

WATER MANAGEMENT BOARD MEETING
October 7, 2020

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

Water Permit Applications to be Considered as Scheduled

No.	Name	Address	County	Amount	Use	Source	Qualifications
8413-3	Ratio LLC	DeSmet	HD	0.134 cfs	commercial	2 wells-Niobrara or Dakota Aquifer	wi, wcr, 5 special
8433-3	City of Lake Norden	Lake Norden	HM	2.11 cfs	municipal	3 wells-Prairie Coteau	deferral

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

1995-1	Black Hawk Water User Dist.	Black Hawk	MD	1,300 AF	future use	Madison Aquifer	3 special
1997-1	Bear Butte Valley Water Inc	Sturgis	MD	0.89 cfs	rws	1 well-Madison Aquifer	wi, 3 special
1998-1	Dakota Cable Solutions	Black Hawk	MD	0.11 cfs	com/industrial	1 well-Madison Aquifer	wi, 3 special
2812-2	Canyon Springs Sanitary Dist	Rapid City	PE	0.22 cfs	wds	1 well-Madison Aquifer	wi, wcr, 3 special
8427-3	L. G. Everist Inc	Sioux Falls	MA	3.56 cfs	commercial	pond/dugout	3 special
8429-3	Norman Thorstenson	Selby	CA	1.78 cfs	60 acres	1 well-Grand Aquifer	wi, wcr, iq, 1 special
8430-3	Laverne Neuharth	Eureka	MP	0.89 cfs	66 acres	1 well-Spring Creek McPherson	wi, iq
8431-3	Hillcrest Golf & Country Club	Yankton	YA	1.89 cfs	27 add'l ac	3 wells-Lower James:Missouri	wi, iq, 2 special
8432-3	City of Pierre	Pierre	HU	4480.6 AF	municipal	Missouri River	1 special
8434-3	Dahlerup Family Trust	Yankton	YA	no add'l	129 acres	1 well-Lower James:Missouri	wi, iq
8436-3	New Fashion Pork	Jackson MN	MR	0.06 cfs	commercial	1 well-Floyd:East James	wi, wcr, 4 special

Future Use Reviews

No.	Name	Address	County	Amount Remaining in Reserve	Use	Source	Qualifications
369-1	City of Belle Fourche	Belle Fourche	LA	2,478 AF	municipal	Spearfish Creek alluvium, Madison & Minnelusa	none
427-3	City of Mitchell	Mitchell	DN	5,765 AF	municipal	Firesteel Creek	none
747-3	City of Madison	Madison	LK	1,033 AF	municipal	Big-Sioux:Northern Skunk Ck	none
1289-3	City of Garretson	Garretson	MA	235 AF	municipal	Sioux Quartzite Aquifer	none
3142-3	City of Mitchell	Mitchell	DN	5,765 AF	municipal	Missouri River	none
4051-3	Town of Florence	Florence	CD	38 AF	municipal	Prairie Choteau Aquifer	none
4053B-3	Town of South Shore	South Shore	CD	192 AF	municipal	Antelope Valley Aquifer	none
5643-3	Kingbrook RWS	Arlington	KG	425 AF	rural water	Big-Sioux:Northern Skunk Ck	none
6705-3	TM RW District	Parker	TU	210 AF	rural water	Upper Vermillion:Missouri	none
7853-3	Sioux RWS	Watertown	CD	2,400 AF	rural water	Big Sioux:Brookings	none

The audio recording for this meeting is available on the South Dakota Boards and Commissions Portal at https://boardsandcommissions.sd.gov/Meetings.aspx?BoardID=106

MINUTES OF THE 225TH MEETING OF THE
WATER MANAGEMENT BOARD
FLOYD MATTHEW TRAINING CENTER
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA

JULY 8-9, 2020

CALL TO ORDER: Chairman Jim Hutmacher called the meeting to order at 8:30 a.m. Central Time. Board members present for the morning session of the meeting were Bjork (remotely), Freeman, Holzbauer, and Hutmacher. A quorum was present.

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

The following were present for the meeting:

Board Members: Jim Hutmacher, Rodney Freeman, Leo Holzbauer. Peggy Dixon and Bill Larson joined the meeting at 1:00 p.m. on July 8. Tim Bjork participated remotely. Chad Comes was absent.

Department of Environment and Natural Resources (DENR): Eric Gronlund, Ron Duvall, Adam Mathiowetz, Whitney Kilts, Water Rights Program.

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

Legislative Oversight Committee: Representative Mary Duvall.

Court Reporter
Jacqueline Weller, Black Hills Reporting

Water Permit Application No. 8409-3, Schley Farms/Schley Real Estate LLC
Brandon Smid, Helms & Associates
John Taylor, counsel for Schley Farms
Dusty Schley, applicant
Mike Gutenkauf, Clark Engineering
Kari Bartling, counsel for intervenor
Roger Rix, Brown County Mud Creek Watershed District

Water Permit Application No. 2805-2, R & J, LLC
Lon Buehner, intervenor
Mike Hickey, counsel for R & J, LLC

DRAFT

Juston Eisenbraun, applicant
Bill Hearne, intervenor

Water Permit Application No. 1992-1, Town of Buffalo
Dusty Ginsbach, counsel for Town of Buffalo
Ryan Smith, Town of Buffalo
John Taylor, counsel
Gary Johnson, Town of Buffalo
Deb Johnson, Town of Buffalo
Jody Johnson, Town of Buffalo

ANNUAL ELECTION OF OFFICERS: Motion by Freeman, seconded by Holzbauer, to elect Jim Hutmacher as chair, Tim Bjork as vice chair, and Leo Holzbauer as secretary. Motion carried unanimously.

ADOPT FINAL AGENDA: Mr. McVey stated that two motions for a continuance were filed in the matter of the permit hearing for the Town of Buffalo; one from John Harter and another from Mahamud Fitil. A third motion was filed by Elizabeth Lone Eagle, but it was connected to a hyperlink and the document could not be printed.

Mr. McVey noted that the board had issued an order dated June 17, 2020, which required anyone who had an agenda item to be present and to provide notice to DENR., Of the three parties who filed a Motion for Continuance, none filed notice that they intended to be present.

Motion by Freeman, seconded by Bjork, to adopt the agenda with the addition of consideration of the motions to continue the Town of Buffalo matter. Motion carried unanimously.

CONFLICT DISCLOSURES AND REQUESTS FOR STATE BOARD WAIVERS: None.

ADOPT MAY 6, 2020 BOARD MINUTES: Motion by Freeman, seconded by Holzbauer, to approve the minutes from the May 6, 2020, Water Management Board meeting. Motion carried unanimously.

ADOPT JUNE 11, 2020 BOARD MINUTES: Motion by Bjork, seconded by Freeman, to approve the minutes from the June 11, 2020, Water Management Board meeting. Motion carried unanimously.

OCTOBER 7-8, 2020 MEETING AND LOCATION: The next meeting is scheduled for October 7-8, 2020, in Pierre.

STATUS AND REVIEW OF WATER RIGHTS LITIGATION: Mr. McVey reported that DENR has approved a plan to commence the vegetation and sediment removal at Lake Thompson.

Mark Rath commented that two weeks ago he measured Red Lake water elevation, and there is a 10-foot difference from the level last year to now.

DRAFT

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

UPDATE ON DENR ACTIVITIES: Eric Gronlund reported that due to the Covid 19 pandemic, staff worked remotely from home for more than a month, then were slowly phased back into the office until the department was fully staffed.

Staff are performing limited field work, somewhat hampered by travel and whether over night stays will be allowed.

After being closed for approximately two months, the Foss Building is now open to the public.

Following the hearing for the TransCanada matter, the board approved the Findings of Fact, Conclusions of Law, and Final Decision. The Water Rights Program issued the permits, which were subject to the qualifications. TransCanada was required to submit design plans for the water withdrawal and metering of the water as well as for instream flow monitoring of the three surface water sources. TransCanada submitted those plans to the Water Rights Program. On June 16, 2020, the Water Rights Program approved the plans for the water withdrawal metering and the instream flow monitoring. The withdrawal metering and instream flow meters need to be installed and operational prior to making withdrawals.

High water levels on lakes continue to be an issue, and with staff receiving a number of phone calls. Mr. Rath began measuring lake levels.

Western South Dakota is largely in a drought condition, as well as some areas in eastern South Dakota.. The flows in the Cheyenne River and the White River have been down. The James River is decreasing slightly but has maintained a high flow. The Big Sioux River and the Vermillion River are also at high flow.

Responding to a question from Mr. Holzbauer regarding high lake levels at Lake Andes, Mr. Rath stated that several state agencies have been working with the tribe on the issue. The water levels dropped approximately five feet from the peak last fall when the water was causing issues at the White Stone community. U.S. Highway 18, which has since been built up, was under water at the time. The water level has gone up and down depending on precipitation. Currently, it is not to the point that it is impacting the community directly. Mr. Rath noted that the state is working on long-term solutions to the problem.

PUBLIC COMMENT PERIOD IN ACCORDANCE WITH SDCL 1-25-1: No one offered public comments.

CONSIDER MOTIONS FOR CONTINUANCE OF HEARING IN THE MATTER OF WATER PERMIT APPLICATION NO. 1992-1, TOWN OF BUFFALO: Mr. Freeman stated that Dakota Rural Action had submitted a Motion for Continuance earlier, and he denied that motion for reasons set forth in the order. These three Motions for Continuance practically mirror the motion submitted by Dakota Rural Action.

Motion by Freeman, seconded by Holzbauer, to deny Mr. Harder's motion for a continuance of the hearing for the reasons as set forth in the earlier order relating to Dakota Rural Action's motion. A roll call vote was taken, and the motion carried unanimously.

Motion by Freeman, seconded by Holzbauer, to deny Mahmud Fitil's motion for a continuance of the hearing for the reasons set forth in the earlier order relating to Dakota Rural Action's motion. A roll call vote was taken, and the motion carried unanimously.

Motion by Freeman, seconded by Holzbauer, to deny Elizabeth Lone Eagle's motion for a continuance of the hearing because it was not timely, and it was not properly filed and served on the parties. A roll call vote was taken, and the motion carried unanimously.

WATER PERMIT APPLICATION NO. 8409-3, SCHLEY FARMS/SCHLEY REAL ESTATE, LLC: Application No. 8409-3 proposes to impound 22 acre-feet (ac-ft) of water from Mud Creek, a tributary to the James River by constructing a low head dam (weir) with water impounded within the creek channel for irrigation. The site is located four miles east of Stratford, SD in Brown County.

Chairman Hutmacher opened the hearing by stating that this is a continuance of the hearing, which began on February 26, 2020.

Ann Mines Bailey, counsel for the Water Rights Program, stated that in February the following exhibits were offered and admitted into the record:

DENR Exhibit 1 – Administrative record for Application No. 8409-3
DENR Exhibit 2 – Curriculum vitae of Mark Rath
DENR Exhibit 3 – Area map

Ms. Mines Bailey stated that at the first hearing the board heard testimony from Mark Rath, engineer with the Water Rights Program. Mr. Rath testified that this application is seeking to impound 22 acre-feet of water from Mud Creek by constructing a low head dam, or weir, in the stream with water impounded within the creek channel for irrigation. Mud Creek is an intermittent stream, and it flows down to the James River. Mr. Rath testified that water would be available and that there are no other existing water rights on the stream.

When the hearing began on February 26, 2020, Jeanne Goodman was the chief engineer. Shortly after that, Ms. Goodman took a different position within the department, and Eric Gronlund was appointed as chief engineer. Mr. Gronlund has adopted Ms. Goodman's recommendation for approval of the permit application with qualifications. Ms. Mines Bailey noted that she did not intend to call Mr. Gronlund to testify.

John Taylor, counsel for Schley Farm/Schley Real Estate, LLC, stated that Dusty Schley, Schley Farms, and Mike Gutenkauf, DGR Engineering, will testify today. Mr. Taylor agreed with Ms. Mines Bailey's presentation of the background, and the applicant does not object to Mr. Gronlund's adoption of the recommendation for approval with qualifications.

Kari Bartling, counsel for the Brown County Mud Creek Watershed District also previously represented Garden Prairie Township and Timothy Fliehs, but they both deferred to Brown County Mud Creek Watershed District and did not appear today. Ms. Bartling stated that Roger Rix, Brown County Mud Creek Watershed District board member, and Brandon Smid, Helms & Associates, would be testifying today. Ms. Bartling stated that the petitioner agrees with the new chief engineer adopting Ms. Goodman' recommendation, and that it is not necessary for new chief engineer, Mr. Gronlund to testify today.

Mr. Taylor asked if Tim Fliehs and Garden Prairie Township had withdrawn their petitions in opposition of the application.

Ms. Bartling stated that Mr. Fliehs and Garden Prairie Township deferred their petitions to have Roger Rix testify because, with the Covid-19 situation, they wanted to keep the number of people attending the hearing small.

Mr. Taylor stated that Dusty Schley would testify to the use of water and how that use is a beneficial use, how the use of water is in the public interest of the state of South Dakota, his family's cattle, the farming operation, the reason he submitted the application, the general concept and design of the diversion works, and how the water will be placed to beneficial use.

Mr. Taylor stated that if the need arises, Mike Gutenkauf will testify as to some of the more technical aspects of the diversion works and the potential upstream effects from the point of impoundment and diversion.

Mr. Taylor called Dusty Schley, Stratford, SD, who was administered the oath by the court reporter.

Mr. Schley testified that he is a co-owner in Schley Farms, which raises cattle, operates a feedlot, and grows crops. The feedlot is permitted for 4,500 head of cattle, but there are usually between 2,500 and 3,500 head of cattle at the feedlot. Schley Farms also has approximately 100-200 pasture cattle and raises corn and beans.

Mr. Taylor offered Applicant Exhibit F, an aerial map of the feedlot and general area in which the project will be located. Chairman Hutmacher admitted the exhibit into the record.

Mr. Schley testified as to the location of the cattle operation and provided a general overview of the farm operation. On Exhibit F, to the left of where the map shows "weir" is the feedlot. Just north of that is the irrigation pivot system, which uses water from the creek (Water Permit No. 8042-3). The boxes to the right labeled "Schley" are quarters that the family owns and farms, both cropland and pastureland by the creek. Mud Creek is used for irrigating now, but it is not a very reliable source of water. In order to prolong the irrigation season, as well as provide a more reliable water source within the pasture, the new permit Mr. Schley has applied for will allow him to construct a low head dam, or weir, which will create a small reservoir and give the him more access to irrigation and cattle water. Mr. Schley stated that if the water permit is granted, it does not change from the current 72 acres of irrigation by the existing permit. Mr. Schley also intends to water cattle from the impounded water. At this time cattle are watered from the creek, which

isn't reliable for water late in the season. There is also a stock dam in the pasture. The quality of the water in the stock dam is not good by the end of the year. There is also a very reliable, but very small stock tank with a well. Mr. Schley said with this proposed project, he will hopefully have a larger reservoir with cleaner, more abundant water for his cattle throughout the season.

In response to questions from Mr. Taylor, Mr. Schley stated that he was present for the hearing on February 26, 2020. He listened to testimony from Mark Rath, and he reviewed the chief engineer's recommendation regarding the permit application.

DENR Exhibit 1 is the administrative file, which contains the permit application and Mr. Rath's report, and the recommendation with the qualifications. Mr. Taylor asked Mr. Schley stated if he agrees with the qualifications. Mr. Schley answered that he does agree to the qualifications.

Mr. Taylor asked what the purpose is of installing a weir dam, or a low head dam, at the proposed point beyond impounding water. Mr. Schley stated that the primary reasons are the irrigation and it is a better source of water for the cattle. Exhibit F shows that there is a bridge at 401st Avenue which used to be the Schley's access to the other side of the pasture. Approximately 10 years ago, the county closed that bridge, so now it is more difficult to get to the other side of the pasture. Installing the weir, will effectively make low water flow access to the other side. This will allow Mr. Schley to drive over it to get to the other side of the pasture to check the cattle.

Mr. Taylor offered Applicant Exhibit P, a photo of Mr. Schley's son and wife standing on small, similar type structure as the proposed weir. Chairman Hutmacher admitted the exhibit into the record.

Mr. Taylor asked Mr. Schley to explain to the board how the weir dam will work. Mr. Schley said the photo is a small representation of what he intends to install. There will be a spillway that can be driven over. The weir will be just under three feet tall. The main difference between Exhibit P and the proposed weir will be that the Schley project will be 90 feet wide. A low flow bypass mechanism will be installed in order to drain the reservoir if necessary. At this time, a culvert system with a gate or flap on one end is planned. Detailed plans and specifications have not been completed at this time. Mr. Schley plans to work with the engineer to finalize plans and specifications once the permit is approved.

Mr. Taylor asked if water behind the dam will impound water upstream onto the neighbor's property. Mr. Schley answered that it will impound water within the channel banks upstream from their property line. He has received verbal and written approval from the neighbors. Mr. Schley pointed out on Exhibit F how far upstream the water will be impounded. Mr. Schley stated that the purpose of the low head dam is it keeps water within the banks so this structure will be less than three feet high in a creek that has banks seven to eight feet high. When he says water will back up onto the neighbor's property, the water will all stay within the channel. Everything outlined in red on Exhibit F is within the scope of the project and written permission from the neighbors has been received. The dot that shows "end of project" is about 200 feet into Stange's property and is where the engineer determined the impoundment of water will end.

Mr. Taylor asked if, as part of the water permit application, Mr. Schley provided DENR with evidence of written permission from the landowners to store water within the channel if he built a dam. Mr. Schley stated that all written permissions were included with the application, which he submitted to DENR in August 2019.

Mr. Taylor asked Mr. Schley if he would alter the plans if a neighbor were to change his mind and no longer want water stored in the channel on his land. Mr. Schley said he wants to get along with his neighbors so he will accommodate his neighbors if they ask him to do so.

Mr. Taylor asked if, under normal flowing conditions in the spring, the static water level will change in the creek. Mr. Schley answered that the elevation of the surface of the water will change because of the project under certain circumstances, and in other cases it will have no effect. Mr. Schley's engineer conducted a hydrology study that tells specifically what the height of the water will be pre- and post-project. When the creek is about half full, there will be a pretty good impact directly down by the weir. The water will be approximately 18 inches higher when the creek is half full. Going farther upstream, the water is about an inch higher than it would be if the proposed weir wasn't installed. Once the creek is two-thirds full, there is no difference whether the structure is there or not, and if the creek is full, there is also no difference. Mr. Schley said the only time the structure will have an impact is when it is a very dry year and the creek is less than half full, and that impact is mainly on his own property, which is the whole point of the project because he needs water for cattle and irrigation.

Mr. Taylor asked Mr. Schley to identify the yellow box in the upper right corner of Exhibit F. Mr. Schley said that is Mr. Fliehs' property.

Mr. Taylor asked if the proposed project impacts Mr. Flieh's property. Mr. Schley answered that, according to the hydrology study done by the engineer, the project will not affect Mr. Fliehs' property.

Mr. Taylor asked if the proposed project impacts the Stange's property. Mr. Schley said the current hydrology study, which was done when the landowner gave him permission, indicates that the reservoir would go about 200 feet onto the Stange property. Looking at elevations provided by the watershed district, the water in the reservoir would increase three to six inches in the creek channel which is about eight feet in height. When the water is flowing, there would be a minor difference. When the creek is half full, on the border of Stange's and Rosso's property, it may be an inch higher. Once the creek is two-thirds full, there is no difference in the creek's water level, and once it's full there is also no difference.

Mr. Taylor asked Mr. Schley if he is familiar with the principle in South Dakota that the downstream neighbor can't be impaired. Mr. Schley answered that he is.

Mr. Taylor asked Mr. Schley if he understands that his upstream neighbors have an easement over his property for drainage, and if Mr. Schley were to impair the upstream neighbor's drainage, that is a criminal offense in South Dakota. Mr. Schley said he understood. He said he does not want to cause any damage upstream.

Mr. Taylor asked if there were any other entities that Mr. Schley worked with to obtain permission for the proposed project. Mr. Schley stated that he worked with DENR, the Army Corps of Engineers, the county zoning board, and a few other entities that may have a mild interest in it but didn't have permitting authority.

Mr. Taylor asked if it is Mr. Schley's understanding that Mud Creek Watershed District has permitting authority over the proposed project. Mr. Schley answered that they have no permitting authority, but he has talked to the district.

Mr. Taylor asked if it is Mr. Schley's understanding that Garden Prairie Township has permitting authority over the proposed project. Mr. Schley answered that the township has no permitting authority, but he has also talked to them.

Mr. Taylor asked if all the agencies Mr. Schley visited with agreed to the proposed project. Mr. Schley said he hasn't received any permits yet, but he has received approval letters from a number of organizations. Mr. Taylor asked why Mr. Schley hasn't received any permits. Mr. Schley said he hasn't received any other permits because Covid hit, and he is waiting for this DENR Water Permit to go through the process. Mr. Schley said other agencies want Mr. Schley to receive a water permit before considering approval of any other permits.

Mr. Taylor asked if Mr. Schley has received any additional letters of approval since the permit application was submitted in 2019. Mr. Schley's project goes under three county bridges, so he talked to the county and received approval from the county superintendent.

Mr. Taylor offered Applicant Exhibit C, a letter from Brown County Highway Department. Chairman Hutmacher admitted the exhibit into the record.

Mr. Taylor asked if Garden Creek Township indicated why they did not support Mr. Schley's project. Mr. Schley stated that according to the petition submitted to DENR, the township's concern is with damage to roads.

Mr. Taylor asked if the township indicated any conditions or adjustments to the project that could be made thereby, they would then support the project. Mr. Schley said he was only aware of the petition the township submitted to the state.

Mr. Taylor asked if the watershed district indicated anything to Mr. Schley about the project. Mr. Schley stated that he talked to Roger Rix and his son. Mr. Schley said before he spent the money for the hydrology report, he wanted to see what different entities require as far a permitting, and Mr. Rix sent a letter based on discussions the watershed district had at a board meeting regarding parameters.

Ms. Bartling objected. She said she believes that was a misstatement because that letter was not sent by the watershed district with any approval at all.

Mr. Schley stated that the letter says that it is Roger Rix's opinion, not the official position of the watershed district.

Chairman Hutmacher overruled the objection.

Mr. Taylor asked what the conditions were that Mr. Rix indicated the watershed would like to see made to the project. The first concern is the district would want to see the exact effects for the landowners and a way that every fall or when the season was over, the water could be drained from the reservoir. There is a fear of the reservoir icing up and causing ice dams the next spring. Mr. Taylor asked if Mr. Schley hired an engineer to examine the upstream impacts of that. Mr. Schley said he did hire an engineer who found there would be no damage to farmland or any property owners. Mr. Schley has incorporated in the design of the project a drainage mechanism to drain the reservoir as needed.

Mr. Taylor asked if, in Mr. Schley's opinion, there will be any impact to drainage along Mud Creek if the board were to grant the water permit and the dam is constructed. Mr. Schley answered that there will be no negative effects to drainage. According to the hydrology study, the weir will have no affect on cropland or pastureland. Mr. Schley said his end goal with building the dam and impounding the water is so he can use it for cattle and crops.

Ms. Mines Bailey had no questions.

Ms. Bartlett asked Mr. Schley asked what the letter from Roger Rix says about the position of the Brown County Mud Creek Watershed District. Mr. Schley answered that the letter says the correspondence is not an official position of the watershed district. In the letter, Mr. Rix said these concerns had been brought up in a past board meeting.

Referring to Applicant Exhibit F, the map, Ms. Bartling asked who Mr. Fliehs is and if he objected to the project. Mr. Schley answered that Tim Fliehs never gave approval for the project.

Ms. Bartling asked who Mr. Stange is and whether he gave Mr. Schley approval for the project. Mr. Schley answered that is Loyd Stange, and he originally gave approval for the project. Mr. Schley said he went forward with the hydrology report and the application based on Mr. Stange's approval. Mr. Schley said he did not receive a letter from Mr. Stange withdrawing his support of the project until the day before the hearing in February. Ms. Bartling asked if Mr. Schley is aware that Loyd Stange has now written a letter saying he does not support the project. Mr. Schley said he is aware.

Ms. Bartling asked if it is correct that since Mr. Schley already has an irrigation system in place, this project will be a supplemental irrigation system. Mr. Schley said he has one center pivot, and that will not change with this project. The current irrigation system is the only irrigation system set up on the property. Ms. Bartling said Mr. Schley testified that he has natural rain as part of it, he has this pivot system already in set up, and he is getting water from the creek for that. She asked if this dam would be a supplemental irrigation system. Mr. Schley said it will hold water. Ms. Bartling asked if it is correct that Mr. Schley testified that this project will prolong his irrigation season. Mr. Schley answered that water for the crop side is one of the three benefits. She asked how long it will prolong Mr. Schley's irrigation season. He stated that he does not know. It may not prolong the irrigation season. The watershed of the Mud Creek is very large. If

it rains 30 miles upstream, a day or two later enough water will come through that he can irrigate for a day or two until the creek goes dry again. With this project, Mr. Schley will be able to catch those rains and hopefully recharge the reservoir with 22 acre-feet of water every time there is a big storm upstream, even if the storm does not occur over his farm.

Ms. Bartling asked what other alternatives Mr. Schley has looked at as far as irrigation, and if he has considered building a reservoir on his land so he can pump water into the reservoir. Mr. Schley said Tim Fliehs came up with the idea of Mr. Schley digging a big hole to store water. Mr. Schley said that would be extremely expensive, and he is not in the mood of taking usable acres of pastureland out of production to dig a big hole when he is able to create this project, and with engineer documentation that he is not going to hurt anyone. He said it seems silly that he would take more land out of production and spend $100,000 digging a hole to hold water. If he dug a stock dam, the water from the storms in August and July that occur 30 miles upstream could not be collected. The stock dam would only fill up when it floods.

Referring to Applicant Exhibit P, the picture of what Mr. Schley is proposing, Ms. Bartling asked if that is sort of concrete structure. Mr. Schley said that is correct. Ms. Bartling referred to Applicant Exhibit A, the hydraulic analysis report, paragraph 4.0, Section 4.2.

Mr. Taylor objected to Ms. Bartling's line of questioning because the report has not been admitted as evidence, and the engineer has not yet testified. Chairman Hutmacher sustained the objection.

Ms. Bartling asked what will happen with the sediment that is in creek when the dam is built. Mr. Schley said he has not done any studies to say what will happen with the sediment. Ms. Bartling asked if Mr. Schley is aware that the Brown County Mud Creek Watershed District has spent a significant amount of money having an engineering analysis done, hiring and contracting with B&B Contracting to remove sediment from the Mud Creek. Mr. Schley said they have reminded him of that a couple of times. Ms. Bartling asked if Mr. Schley agrees that all of the money that came for doing that is from taxpayer money and Mr. Schley himself has even paid taxes to have that process done. Mr. Schley answered that he agrees.

Mr. Bjork asked if it would be a benefit to Mr. Schley to know what the sedimentation is going to be, otherwise he could be cleaning out the reservoir within the first year, or the first year it could be absolutely no benefit to Mr. Schley because it could flow right through the dam. Mr. Schley stated that he is not concerned about the sediment. In the 1920's and 1930's when everyone had cattle, people basically built the same structure as he is proposing to build. Google maps shows the remnants of those structures just downstream where they washed out. Upstream from where these dams were located, the elevation of the creek bottom is no different than where it is otherwise. The only place it is higher is just downstream of where the dam was from the remnants of the previous dam. If in the last 70-80 years there hasn't been a buildup of sediment from all the dams that occurred every mile in the creek, he is not concerned about his project now.

Mr. Holzbauer said it sounds like Mud Creek is a slow-moving creek, unless this ground is very erodible, the movement of sediment shouldn't be that heavy. He asked if that is a big problem in the area. Mr. Schley said this isn't like the Niobrara River where sand is flying down the river.

With the previous dams that were there for decades, he has not noticed a buildup of sediment upstream of the dams.

Mr. Holzbauer said he is concerned that a lot of money is being spent to remove sediment. Mr. Schley said just upstream of the weir, the watershed district would like to come in dredge part of his land, and that is from a previous dam that was put in years ago. Mr. Schley stated he believes that of the piece of ground that they want to dredge is not from sediment, but from someone doing a bad job of building the dam. When the dam washes out they go in and throw more dirt on the top and do that for a couple of decades until it builds up downstream. He believes the Mud Creek Watershed District is cleaning up areas like that. Mr. Schley said his structure would be riprapped.

Chairman Hutmacher asked if the creek banks are grassed or cut washout. Mr. Schley said it depends where you are on the creek. The first two quarters upstream of the weir is pasture, so there is some erosion from cattle traffic on the bank. Upstream from that, the creek the bank has cattails and vegetation and holds together better.

Chairman Hutmacher asked if Mr. Schley has looked or is concerned about wind erosion from the reservoir. Mr. Schley said there may be some wind erosion. He has talked to his engineer about doing some kind of riprap or geofabric. Mr. Schley stated he hasn't made any firm decision until he receives the permit.

Mr. Taylor called Mike Gutenkauf, Clark Engineering, who was administered the oath by the court reporter.

Mr. Taylor asked if Mr. Gutenkauf has conducted a personal examination of Mud Creek on Mr. Schley's property. Mr. Gutenkauf answered that he conducted the examination in the summer of 2019, and it took him 40 to 60 hours to complete the study.

Mr. Taylor asked if Mr. Gutenkauf is being compensated for appearing at the hearing. He answered that he is.

Responding to questions from Mr. Taylor, Mr. Gutenkauf stated that he is a member of the South Dakota Professional Engineering Society and the Association of State Floodplain Managers. He stated that in order to be a member of the South Dakota Professional Engineering Society a person has to be a professional engineer. To be a member of the Association of State Floodplain Managers a person has to be a certified floodplain manager. Mr. Gutenkauf said he obtained his floodplain manager certification by studying, taking an examination and practicing in the field. Mr. Gutenkauf said he has been qualified as an expert in the field of engineering for purposes of trial testimony approximately six to eight times throughout his career.

Mr. Taylor offered Applicant Exhibit G, the resume of Mike Gutenkauf. Chairman Hutmacher admitted the exhibit into the record.

Mr. Taylor said he had no additional questions as to the qualifications of Mr. Gutenkauf as an expert, and he moved pursuant to SDCL 19-19-702 to tender him as an expert in the field of

hydrology and floodplain drainage analysis. There were no objections by the parties. Chairman Hutmacher declared him an expert witness.

Mr. Taylor asked Mr. Gutenkauf if he read Mr. Schley's water permit application and DENR Engineer Mark Rath's report and the recommendation. Mr. Gutenkauf answered that he did.

Responding to questions from Mr. Taylor, Mr. Gutenkauf stated that he was present at the hearing on February 26, 2020, he heard Mr. Rath testify, and he agrees with Mr. Rath's conclusions regarding the availability of water within Mud Creek. Mr. Gutenkauf said he reviewed the chief engineer's recommendation regarding the water permit application and the proposed qualifications, specifically qualifications two and three. He agrees with the chief engineer's recommendations and proposed qualifications should the board grant the permit. Mr. Gutenkauf also listened to Dusty Schley's testimony. Mr. Schley obtained Mr. Gutenkauf's services to examine the drainage within Mud Creek and upstream from the point of diversion. Mr. Gutenkauf then conducted an analysis of the drainage within Mud Creek in the vicinity of the proposed point of diversion, and he wrote a report, dated February 11, 2020, about the analysis.

Mr. Taylor offered Applicant Exhibit A, Report of Hydraulic Analysis. Chairman Hutmacher admitted the exhibit into the record.

In response to questions from Mr. Taylor, Mr. Gutenkauf stated that the purpose of Mr. Schley's project is to impound water for irrigation purposes, livestock watering, and as a bridge for land access during certain times of the year. Mr. Gutenkauf said DENR Exhibit 3 is an accurate map of the general area of the proposed project. It shows the drainage basin of the Mud Creek watershed. Mr. Gutenkauf said he is not aware of additional models that are available detailing the Mud Creek watershed. FEMA has not published a study of the Mud Creek watershed, that he is aware of. If FEMA were to study the watershed region, they would be concerned with certain floodplain criteria and flood levels. In a flood study, a 100-year flood is also called a one percent flood; there is one percent annual chance of occurrence. FEMA might also study a 500-year flood, but primarily it is the 100-year flood that FEMA is concerned with. In a 100-year floodplain analysis for new construction, FEMA is most concerned with construction occurring within that 100-year floodplain. For example, in the city of Aberdeen there is a 100-year detailed flood study. There is floodplain in the fringes of the creek and the overbank areas, and there is a floodway, which is the channel that you want not to be unimpeded so the water can pass freely. In the case of a detailed study such as in the city of Aberdeen and other areas where there is a detailed study of the creek, you can't fill in the floodway unless you do an engineering analysis to prove that there is not any impact above or below the project in terms of any increasing the 100-year floodplain elevations. FEMA has not conducted a detailed flood study on the creek, and there is no defined 100-year flood elevation on the creek. To create or approximate a 100-year food elevation, cross-section information on the creek is needed with creek bottom and floodplain elevation information. With that information a hydraulic model is built to determine flows for given flood events to simulate the elevations of a 100-year flood at various cross-sections along the creek. Mr. Gutenkauf said he built a computer model when performing his analysis of Dusty Schley's project, and he determined that Mr. Schley's project would meet the criteria for a no-rise valuation.

Mr. Taylor asked Mr. Gutenkauf who has jurisdictional oversight of building permits within the Mud Creek Watershed. Mr. Gutenkauf said he believes Brown County Planning and Zoning is the entity that would issue a building permit and a floodplain development permit, which is also needed for this project.

Mr. Taylor asked Mr. Gutenkauf to explain what the overall general results from his no-rise analysis on Mr. Schley's proposed project. Mr. Gutenkauf said on page 8 of Applicant Exhibit A, the reports discusses several different results. The first paragraph below the tables on page 9 discusses static or ponded water conditions, and that would be the extent of the 22 acre-feet reservoir. The paragraph discusses how during that condition, when the water is not flowing and the dam is full, the water will pond to about 1,700 feet downstream of the quarter line between the northwest and northeast quarters of Section 4 in Garden Prairie Township.

Mr. Taylor asked Mr. Gutenkauf to apply these numbers to the map. Referring to Applicant Exhibit F, neighborhood map, Mr. Gutenkauf pointed out where the specific elevation lines are located on the map. The red dot marked as "End of Project" is where the 1,700 foot line is for static conditions Mr. Gutenkauf said he modeled the creek pre-project and post-project and analyzed several flood events to see what the effect of the project would be; a 2-year event, a 5-year event, a 10-year event, 25-year event, 50-event, and a 100-year event.

Mr. Taylor asked Mr. Gutenkauf if he agreed with Mark Rath's testimony that Mud Creek is an intermittent stream. Mr. Gutenkauf said he agreed that Mud Creek is an intermittent stream. Mr. Gutenkauf said the flows discussed in his report came from the same gaging station that Mr. Rath referenced in his report. For a 5-year event it is 262 cfs. The modeling results for a 5-year event show that water elevations are about two feet below the top of the channel banks. For this event there is zero water elevation impact due to the dam. Above the five-year event, it becomes repetitive; there is zero impact from flood events greater that the 5-year event.

Mr. Taylor asked Mr. Gutenkauf to identify Applicant Exhibit L, NE ¼ Section 7 5-year flood event images, Applicant Exhibit M, NE ¼ Section 7 10-year flood event images, Applicant N, NE ¼ Section 7 25-year flood event images, and Applicant O, NE ¼ Section 7 100-year flood event images.

Mr. Taylor offered Applicant Exhibits L, M, N, and O. Chairman Hutmacher admitted the exhibits into the record.

Responding to questions from Mr. Taylor, Mr. Gutenkauf said these images depict the NE ¼ of Section 7 and the flow of Mud Creek during a 5-year, 10-year, 25-year, and 100-year flood events for both pre-project and post-project conditions, presuming that the diversion works are installed. These are graphics of the digital elevation surface, which is a representation of the digital ground elevation, and is determined using a digital elevation model. Mr. Gutenkauf said he concluded from looking at these images that there is not a difference in water boundaries as a result of the proposed diversion works.

Mr. Taylor asked Mr. Gutenkauf to identify Applicant Exhibit H, NE ¼ Section 4 5-year flood event images, Applicant Exhibit I, NE ¼ Section 4 10-year flood event images, Applicant Exhibit

J, NE ¼ Section 4 25-year flood event images, and Applicant Exhibit K, NE ¼ Section 4 100-year flood event images.

Mr. Taylor offered Applicant Exhibits H, I, J, and K. Chairman Hutmacher admitted the exhibits into the record.

Referring to Applicant Exhibit F, neighborhood map, Mr. Gutenkauf pointed out which quarter section Application Exhibits H, I, J, and K are specific to. The quarter section is bounded by an orange square on the map. It includes the Fliehs property and a portion of the Stange property. The exhibits are similar to Applicant Exhibits L, M, N, and O in terms of what they show, pre- and post-project impacts of a 5-year, 10-year, 25-year, and 100-year flood event. Mr. Gutenkauf said he concluded, from looking at these images, that there is not a difference in water boundaries as a result of the proposed diversion works.

In response to questions from Mr. Taylor, Mr. Gutenkauf stated that if the board were to grant the permit and Mr. Schley constructed the project, with a normal rain event the creek will increase in elevation due to the project. For a 5-year flood event the creek will be about two feet below the top of the channel banks. For a 10-year flood event the channel banks would be full at 587 cfs and there is no impact pre- and post-project .

Mr. Taylor asked if Mr. Gutenkauf had any reasons to disagree with Mark Rath's conclusion that water is available in Mud Creek. Mr. Gutenkauf said he had no reason to disagree. The proposed project will not detrimentally impact upstream property owners. In the 2-year flood event, with the 50 cfs flow starting upstream of the dam, there is a bit of an impact; the water surface elevation does increase. There will be no impediment to drainage of upstream property because water will continue to flow over the top of the dam.

Mr. Gutenkauf recommended to the board that Mr. Schley's permit be granted.

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

Ms. Bartling said in Applicant Exhibit A, Section 8.1 states that the existing pre-project channel in the vicinity of the project is approximately bank-full during the 10-year event. She asked what that means. Mr. Gutenkauf answered that the channel is at the top of its banks during a 10-year event up 587 cfs. For instance, in a 25-year event, water spills out of the banks and into the overbank.

Ms. Bartling asked what happens to all the sediment accumulated from the fields when the creek floods. Mr. Gutenkauf stated that he did not study sediment as part of the analysis. Ms. Bartling stated your analysis is limited to the effects of the project if there is a flood, but it doesn't address the sediment and where it is going and whether it creates a flood situation upstream later on after a 5-year, 10-year, 25-year, or 100-year flood event. Mr. Gutenkauf said he did not analyze sediment impact. He analyzed water surface elevations only.

Ms. Bartling asked if there is no dam in place and there is a five-year flood event or 10-year event, there will be erosion causing sediment to into the creek, and if there is no dam in place, whether the water will flow so quickly it will flush the sediment out of that area.

Mr. Taylor objected stating that the question is in conjected form and a compound question. He said counsel is testifying and mischaracterizing Mr. Gutenkauf's prior testimony. Chairman Hutmacher sustained the objection.

Mr. Bartling asked if there is a 5-year, 10-year or 25-year event and there is erosion into the creek and there is no dam, is it correct that the sediment can freely flow downstream.

Mr. Taylor objected as to form. Chairman Hutmacher sustained the objection.

Ms. Bartling asked if there is a dam and sediment flows into the creek, where is the sediment going to back up if there is a dam. Mr. Gutenkauf said he would expect some accumulation upstream of the dam. Ms. Bartling ask if there is accumulation of sediment upstream of the dam, is there a possibility that there could be later flooding that Mr. Gutenkauf has not considered in him analysis. Mr. Gutenkauf answered that, supposing the creek bed increases, it could affect water elevations. Ms. Bartling asked if that could have an impact upstream. Mr. Gutenkauf said eventually that could happen. Ms. Bartling asked if it is correct that the increased sediment in the channel can't be predicated as to part of Mr. Gutenkauf's analysis. Mr. Gutenkauf said he did not study sediment accumulation. Ms. Bartling asked Mr. Gutenkauf if he testified that this in Zone A and that FEMA has not done a study on Mud Creek as to the defined 100-year flood elevation. Mr. Gutenkauf answered that is correct. Ms. Bartling asked if it is correct that the only way that we can guess what is going to happen is by a computer analysis. Mr. Gutenkauf said that is correct. She asked if the computer analysis takes into effect sediment that goes into the creek anytime there is a flood event. Mr. Gutenkauf answered that is correct. Ms. Bartling asked it is correct that there is no way to predict and there is no history to show what effect this sediment could have and if it might flood out other people upstream. Mr. Gutenkauf said he believes it could be studied, but he did not study it and he is not aware of any existing studies of sediment or sediment-affected flooding. Ms. Bartling asked if it is true that Mr. Gutenkauf has no way to prove that this is truly a no rise event because he doesn't know what the situation would be with respect to sediment.

Mr. Taylor objected stating it is argumentative. Chairman Hutmacher overruled the objection.

Mr. Gutenkauf stated that the study talks about a no rise and although a no rise isn't required, it would fulfil the needs of a no rise. That wasn't analyzed as part of the study and it is not typically included.

Ms. Bartling asked if the report indicates that the proposed dam is a simple earth berm-type structure with riprap or other means of erosion protection for the berm inslopes and berm top. Mr. Gutenkauf said that is correct. Ms. Bartling said Applicant Exhibit P was admitted during Dusty Schley's testimony and he testified that the exhibit is a photo of what his structure will look like, and that appears to be a concrete structure. Mr. Gutenkauf said it appears to be concrete.

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Ms. Bartling asked if the structure Mr. Schley is proposing is not the same structure that Mr. Gutenkauf did his analysis on. Mr. Gutenkauf said what is indicated there is what he had discussed with Mr. Schley previously. He said he is not sure that Mr. Schley has finalized plans for the dam, but it wouldn't change anything if it was a concrete structure or if it was an earthen dam with riprap on top. Practically speaking, there are differences, but in terms of a flood analysis, there is no difference. Ms. Bartling asked if it was an earthen dam and the creek was flowing very fast, there was a huge flood event, would there be the possibility that the dam could be washed out. Mr. Gutenkauf said any dam could wash out.

Ms. Bartling asked if a concrete dam could wash out. Mr. Gutenkauf answered that in the case of what Mr. Schley has proposed, the riprap or erosion protection would be designed to help prevent that. It's not going to absolutely prevent erosion because there is always a chance that there could be a biblical flood, and that could happen with concrete as well. Concrete is generally more resistant to erosion.

Ms. Bartling asked if there was a biblical event, would there be a greater chance that for an earthen berm to wash out and the water would flow more readily than if it was a concrete structure. Mr. Gutenkauf answered that there is more of a chance of it washing out if there is an earthen berm.

Ms. Bartling asked Mr. Gutenkauf if he is aware of the work the Brown County Mud Creek Watershed District is doing in this area. He answered that he is loosely familiar with the work that the watershed district is going in the area, and he has skimmed through the plans that Brandon Smid prepared. Ms. Bartling asked if Mr. Gutenkauf knows what those plans depict. Mr. Gutenkauf said the plans are for about 2,000 to 3,000 yards of sediment removal, beaver dams, and rip rapping existing dams. He said a couple thousand yards isn't a lot of sediment removal, but it's something. Ms. Bartling asked if Mr. Schley's project would have an impact on that. Mr. Gutenkauf said he does not know because he does not know the sediment removal project locations.

Mr. Bjork asked if, as this structure ages, is there potential for increased 10-25 year flood events on landowners upstream. Mr. Gutenkauf asked what degree of sediment accumulation Mr. Bjork is envisioning. Mr. Bjork said Mr. Gutenkauf testified that he did not study sediment, but if there is going to be accumulation in that channel, that will raise the bed of that channel over time, which means the floodplain is going to increase. Mr. Bjork said he is looking for Mr. Gutenkauf's expertise on potential or increased flooding as that structure ages and sediment accumulates. Mr. Gutenkauf said he believes it would be negligible in the case of those larger flood events. In a 2-year flood event there is an impact pre- and post-project for that 50 cfs flow in the channel. Mr. Gutenkauf said he would expect a greater impact on that event, but he wouldn't expect much impact for the larger flood events such as a 100-year flood event. Mr. Bjork asked if this structure would have a cumulative effect on upstream flooding. Mr. Gutenkauf answered that he doesn't anticipate any effect on upstream flooding from this structure. For the 2-year event, that 50 cfs flow in the channel, there is a slight impact, maybe ¾ inch or an inch, at the Fliehs property and it is contained within the channel. If there were sediment accumulation due to long-term aging and long-term sediment accumulation in the channel, there is a chance with a massive flood event that there would be an impact, but he wouldn't expect it for larger flood events. Due to the nature of the floodplain, a 100-year flood is quite wide on Mud Creek.

There were no other questions from the board.

Ms. Bartling called Brandon Smid, project engineer, Helms & Associates, who was administered the oath by the court reporter.

In response to questions from Ms. Bartling, Mr. Smid testified that he has a bachelor's degree in civil engineering and a professional engineer licensed in South Dakota and North Dakota. Mr. Smid said he has been a professional engineer for seven years.

Mr. Smid identified Petitioner's Exhibit 11 as his curriculum vitae. He testified that the majority of work he does is on water, sewer, and airport projects. Mr. Smid said he was hired by the Brown County Mud Creek Watershed District to do an analysis of the creek in 2016-2017.

Ms. Bartling offered Petitioner's Exhibit 11. Chairman Hutmacher admitted the exhibit into the record.

Ms. Bartling asked Mr. Smid why the Brown County Mud Creek Watershed District hired him. Mr. Smid stated that the original purpose for which he was hired was to survey the actual creek bottom. Surveyors took shots of the cross-section about every 200 feet for about 17 miles.

Ms. Bartling asked Mr. Smid if he came up with a plan for the watershed district in order to address the flooding. Mr. Smid answered that the district's main objective was to eliminate the sediment in the actual creek bottom, so Helms & Associates came up with removing quite a bit of the sediment along certain sections.

Mr. Smid identified Petitioner's Exhibit 17 as the Construction Plans for Mud Creek Sediment and Obstruction Removals.

Ms. Bartling offered Petitioner's Exhibit 17. The exhibit was admitted into the record.

Ms. Bartling asked if, during the process of developing this project, the Brown County Mud Creek Watershed District held several public meetings so that people could express their concerns about the plans so constituents could let Helms & Associates know what they wanted done or their thoughts. Mr. Smid said public meetings were held, but he did not attend the meetings. Bob Alcock, principal engineer with Helms & Associates, attended the pubic meetings.

Ms. Bartling asked if the process of bringing in the constituents occurred prior to this project proposal being completed, so the constituents could provide input that would have had an affect of construction plans. Mr. Smid answered yes.

Ms. Bartling asked if, as part of the process, Mr. Smid was also in contact with the Army Corps of Engineers. Mr. Smid answered yes.

Mr. Smid identified Petitioner's Exhibit 13, January 24, 2018, letter to Brandon Smid from Steve Naylor, Corps of Engineers.

Ms. Bartling offered Petitioner's Exhibit 13.

Mr. Taylor objected based on relevancy. He stated that the existence of the Mud Creek Watershed District is not in question. The jurisdiction of the Department of the Army Corps of Engineers oversight of Mud Creek drainage basin is not in question. The subject matter of the document is the Section 404 permit of the Clean Water Act. Mr. Taylor said we are not talking about water crossings, and none of those issues are in question. He moved to exclude Petitioner's Exhibit 13.

Chairman Hutmacher overruled Mr. Taylor's objection and admitted the exhibit into the record.

Ms. Bartling asked Mr. Smid to tell the board, in paragraph 2 of Exhibit 13, what specific instructions did the Army Corps of Engineers have for the project. Mr. Smid read paragraph 2 of Exhibit 13, "As described in submitted project plans, all materials dredged from Mud Creek would be removed from the project site by truck to be disposed of in an upland location. The project plans specify that dredged material will not be side cast into lands adjacent to Mud Creek which may contain wetland areas."

Ms. Bartling asked if one of the concerns the Army Corps of Engineers had was significant erosion and having that wash back into the river. Mr. Smid answered that is correct.

Ms. Bartling asked if the Army Corps of Engineers actually required, pursuant to what was in the specifications, that whatever was taken out of the creek couldn't just be put on the side of the creek bank, it had to actually be trucked away and put somewhere else so that it could not flow back into the creek. Mr. Smid said that is correct.

Ms. Bartling asked if erosion is a huge issue here. Mr. Smid said in certain areas it is.

Ms. Bartling asked how Mr. Smid was going to deal with those erosion issues with his project. Mr. Smid stated that a lot of the sediment that is in the channel will be removed and installing vegetative buffers along the edges of the creek.

Ms. Bartling asked if the dam project is put in place, what affect will it have on the Brown County Mud Creek Watershed District project. Mr. Smid answered that the district is trying to clean up the channel and return it back to a natural flow by taking out the sediment or any obstructions. If Mr. Schley installs the dam, he would be adding an obstruction into the creek bottom.

Ms. Bartling asked why the watershed district is spending money to take out all of these obstructions. Mr. Smid stated that the biggest reason is to increase flow.

Ms. Bartling asked if the increase flow is affecting many, many people upstream? Mr. Smid said it can.

Ms. Bartling asked if, by taking out the obstruction, the goal was to get the creek to flow the way it used to flow so that it doesn't flood all the way upstream. Mr. Smid answered yes.

Ms. Bartling asked if there are landowners that pay money in taxes to this watershed district for this project. Mr. Smid said that is correct. The project was funded by taxpayer dollars.

Ms. Smid identified Petitioner's Exhibit 16, Construction Specifications & Contract Documents for the project. Ms. Bartling asked if the sediment removal project was ultimately let for bids based on these specifications. Mr. Smid answered yes.

Ms. Bartling offered Petitioner's Exhibit 16. Mr. Taylor objected on the grounds of relevancy. Existence of the Mud Creek Watershed District nor the wetlands mitigation project that is ongoing is not in question. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Ms. Bartling asked if it is correct that, based on what was contained in Exhibit 16, there was a bid letting process and a bid was awarded. And if, so how much was the bid. Mr. Smid said that is correct, and the bid was about $185,000. The bid was awarded to B&B Contracting. Ms. Bartling asked if B&B Contracting performed some of the work on the premises. Mr. Smid stated that they have removed a number of the beaver dams, but because of the elevation of the water, they have not removed the sediment or installed the vegetative buffers. Ms. Bartling asked if a partial payment of $35,000 has already been made to B&B Contracting for the work they have done. Mr. Smid said that is correct. Ms. Bartling asked if that money came from Brown County Mud Creek Watershed District and ultimately from taxpayer money. Mr. Smid said that is correct.

Mr. Taylor asked Mr. Smid if it is a fair characterization to say that the Mud Creek sediment and obstruction removal project is a wetlands mitigation project. Mr. Smid answered yes.

Mr. Taylor said the letter Mr. Smid received from the Corps of Engineers references a Section 404 of the Clean Water Act. He asked if the mandate to remove dredged materials from Mud Creek is standard. Mr. Smid said that it is standard so any sediment that is taken out of the creek is going to an upland site.

Mr. Taylor asked Mr. Smid if, regarding Petitioner's Exhibit 16, any work has occurred on or upstream of Mr. Schley's property in that relative neighborhood. Mr. Smid said some work has occurred in that relative neighborhood, but the sediment removal hasn't occurred yet because of the water elevation is too high at this time.

Mr. Taylor asked if Mr. Smid or Helms & Associates have performed a sediment discharge analysis on Mud Creek. Mr. Smid answered that neither he nor Helms & Associates has conducted a sediment discharge analysis on Mud Creek. Mr. Taylor asked if Mr. Smid knows for certain the sediment load of the Mud Creek drainage and the rate at which sediment may discharge upstream of the proposed weir. Mr. Smid said he does not know.

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

Mr. Holzbauer asked if the taxpayer money for the project is coming from local taxpayers, Brown County, state or federal. Mr. Smid said he does not know for certain, but he would guess that the money comes from anyone in the Brown County Drainage District.

There were no other questions from the board.

Ms. Bartling called Roger Rix, Groton, SD, who was administered the oath by the court reporter.

Responding to questions from Ms. Bartling, Mr. Rix stated that he owns property within the Mud Creek Watershed District. It is not adjacent to Mud Creek, but is within the watershed.

Ms. Bartling asked if Mr. Rix was the driving force behind the formation of the Brown County Mud Creek Watershed District. Mr. Rix answered he was the initiator with a group of five individuals that took it upon themselves to try to improve the water flow within the area.

Mr. Rix identified Petitioner's Exhibit 18 as the Order of Creation of Brown County Mud Creek Watershed District filed with South Dakota Secretary of State on July 25, 2012.

Ms. Bartling offered Petitioner's Exhibit 18. Chairman Hutmacher admitted the exhibit into the record.

Ms. Bartling asked if the Brown County Mud Creek Watershed District is a political subdivision. Mr. Rix answered that is correct. It encompasses approximately 166,000 acres within Brown County, and the taxing district is just those acres. Mr. Bartling asked if, when the district was being formed, did that district have to be put to a public vote. Mr. Rix answered that it did, and it passed with over two-thirds majority and the district was formed. Ms. Bartling asked if it is correct that by creating this district, it allows the district board to levy taxes against the land within the district. Mr. Rix answered that is correct. Mr. Bartling asked if each year the Brown County Mud Creek Watershed District has a levy amount that they request. Mr. Rix said that is correct. The district has a budget hearing every year to secure funds and the district had enough to start the project. The bids were let two years ago to start the project. Bids were let on the first phase for about one-third of the way up the creek, and the district was hoping to continue the project, but the weather patterns changed, so the district has been unable to accomplish the mission at this point. Ms. Bartling asked if at the beginning when the district was formed, for the first year there was really no money. Mr. Rix said the district did not have money, but it secured funding from the state to help develop the general improvement plan within the district that was approved by the Department of Environment and Natural Resources (DENR). He said the district is trying to follow that plan, but the weather has to cooperate in order to allow the district to complete the mission. Ms. Bartling asked if DENR gave the district a $10,000 loan the first year. Mr. Rix answered yes. Ms. Bartling asked if the district also received money from the James River Water Development District, which is another political subdivision. Mr. Rix answered that the district received a grant from the water development district. Ms. Bartling asked if it is correct that the watershed district is no different than, for example, a school district, asking for money from the county auditor, having a mil levy, etc. and when people get their county tax statement, there is actually a spot on that statement that shows the levy amount that is going to the Brown County Mud Creek Watershed District. Mr. Rix answered that is correct.

Ms. Bartling asked if the watershed district hired Helms & Associates to perform an engineering analysis on the creek to help prevent flooding. Mr. Rix said the district did hire them. Ms.

Bartling asked what Helms & Associated recommended. Mr. Rix answered that Helms & Associates recommended removal of sedimentation and obstructions within the Mud Creek basin to improve the water flow.

Ms. Bartling asked if the watershed district held public meetings with constituents so they could comment on each part of the process. Mr. Rix said they did, and the district heard very little to no objection, in fact, all but a certain smaller area of the landowners signed a permit to allow the district to access their property to do surveys to find areas of concern.

Ms. Bartling asked if it is correct that all of the engineering fees that have been paid, which amount to $100,000, came from taxpayer funds and were paid by the Mud Creek Watershed District. Mr. Rix answered that is correct. Most of the funds came from the taxpayers, but there were some funds from the James River Water Development District. Ms. Bartling asked if the sediment removal bid had been awarded. Mr. Rix said the bid has been awarded for the first phase, and a small portion has been completed. Unfortunately, the district did not have the funds quick enough for the process. Mr. Rix believes if the district would have had funds a year earlier, the district could have gone into phase 2. Ms. Bartling asked if it is correct that part of the problem right now with finishing the sediment removal is the high water. Mr. Rix said that is correct.

Ms. Bartling asked if the watershed district is contractually bound to pay B&B Contracting approximately $185,994.08. Mr. Rix said that was the contract he signed. Ms. Bartling asked if the district has paid B&B $35,000 to date, using taxpayer money. Mr. Rix said that is correct.

Ms. Bartling asked if some of the constituents have come to the district very concerned about Mr. Schley putting a dam at the very end of where this project is. Mr. Rix said they have, and people are asking if this is doing exactly the opposite of the mission of the watershed district., In the district's opinion, it is. Ms. Bartling said Mr. Schley submitted a letter from Mr. Rix in the initial application. She asked Mr. Rix if he recalls writing the letter to Mr. Schley in the beginning of this situation. Mr. Rix said he did. He said the letter was written to give Mr. Schley an idea of what the watershed district's thoughts were, extrapolated mostly by his personal feelings, more than the district. Some board members had discussions with patrons within the watershed district, and over the course of conversations, concerns were brought up. Mr. Rix said in the letter he tried to relay to Mr. Schley what some of the concerns were. Mr. Rix said he tried very carefully to let Mr. Schley know that it was his own personal opinion and not an official position of the watershed district.

Ms. Bartling asked what the Brown County Mud Creek Watershed District's official position is. Mr. Rix stated that the district has a heightened concern of sedimentation above and below caused by this dam that goes against the mission of what the watershed district was formed. The watershed district is concerned that over time there will be continual sedimentation without the assurance that the sedimentation would be taken care of other than having to use taxpayer dollars again to clean it up. Ms. Bartling asked if it is in the public interest to be using taxpayer money to have to fix a problem that was already fixed.

Mr. Taylor objected to the question; it calls for a legal conclusion from Mr. Rix. Chairman Hutmacher sustained the objection.

Ms. Bartling asked Mr. Rix, as the chairman of the watershed district board, if he is concerned about the idea that there would be public money used on your project, then all that work being basically negated by Mr. Schley's project. Mr. Rix said the watershed district is bound by law to be stewards of the money that is collected from the taxpayer, and watershed district needs to be concerned about doing a project more than once and using the money the watershed district receives to be best of the district's ability.

In response to questions from Mr. Taylor, Mr. Rix stated that the district is a political subdivision of Brown County. The Mud Creek Watershed District does not have permitting authority with respect to any construction project.

Mr. Taylor asked if it is correct that Mr. Rix testified that the Brown County Mud Creek Watershed District is bound by law to be stewards of its resources. Mr. Rix said he may have overstepped his bounds in that he does not know the law, but he does understand that watershed district has an oath that the board members take regarding prudent use of the taxpayer's dollars. Mr. Taylor asked if the watershed district board members have a general obligation to make good decisions on behalf of the watershed district. Mr. Rix answer that is correct.

Mr. Taylor asked Mr. Rix if he is familiar with the statutory scheme that creates a watershed district. Mr. Rix answered said he was very versed in it 2012, but he has not looked at the statutes since. Mr. Taylor asked Mr. Rix if it would surprise him if the statutes required that a watershed district put water to beneficial use. Mr. Rix answered that it would not surprise him. Mr. Taylor asked Mr. Rix if he would be surprised if the statutory scheme required watershed districts to put water to it's maximum beneficial use. Mr. Rix said he cannot answer that. He said the Brown County Mud Creek Watershed District's mission was reviewed with DENR and the mission was approved within the DENR, and that involves improving the flow of water through the district.

Ms. Mines Bailey stated at the February hearing, a comment was made that the Brown County Mud Creek Watershed District had presented its plan to the Water Management Board. She asked Mr. Rix if, in fact, the plan was presented to the Board of Water and Natural Resources for approval. Mr. Rix said he would refer that question to the watershed district's attorney.

Ms. Bartling stated that the plan was approved by the Board of Water and Natural Resources on September 24, 2015.

Mr. Holzbauer asked if there is any possibility that this project might create more tax dollars. Mr. Rix answered that if it ends up causing more sedimentation that has to be cleaned out, yes it would. He said the prior surveys that have shown dams that have caused additional sedimentation before and after the dam, and he would anticipate there would be sedimentation that would need to be removed.

Mr. Holzbauer asked if this project is put in place, would it create more tax dollars for the county by making someone more money to pay taxes on. Mr. Rix said he does not know how it would.

He said he does not disagree that Mr. Schley might end up having 280 bushel corn instead of 220, but when you talk about the scope of 166,000 acres and the size of Brown County, the effect would be very minimal when it's only for a 40-acre pivot.

Mr. Bartling said how much someone makes on their crops doesn't make a difference when it comes to the Brown County Mud Creek Watershed District's levy. The levy is based solely on property taxation.

Mr. Holzbauer asked if this would raise the value of the property. Mr. Rix said he doubts it would raise the value of the property because it already classified as irrigated farm ground, so the property tax levy valuation would stay the same.

Mr. Holzbauer said he is just wondering if there is any positive effect on somebody improving their property to create more income and well-being for the area. Mr. Rix said he wouldn't feel comfortable assuming.

Rebuttal

Mr. Taylor called Mr. Schley who had previously been administered the oath. He asked Mr. Schley if he plans to drain the impoundment every year. Mr. Schley said as of now that is not written in the water right permit, but if the watershed district wants that, he does not have a problem doing so as long as his irrigation season is over and he no longer needs the water for the cattle.

Mr. Taylor asked if Mr. Schley would be willing to accept a condition in the permit that requires him to drain the impoundment seasonally. Mr. Schley said if it is written very flexibly without a particular date. He said last year he had cattle in the pasture until Thanksgiving. He said if he needs the water later in the season, he doesn't want the condition to require him to drain the impoundment by a specific date.

Mr. Taylor asked Mr. Schley if he would consider himself as a steward of his own property. Mr. Schley answered yes.

Mr. Taylor asked if Mr. Schley plans to regularly care for the upstream areas and inspect those upstream areas for any sedimentation that may occur. Mr. Schley said this bypass not only allows primary uses downstream to be able to get their water, but he can also drain the reservoir. He said if you look on the Exhibit F, Schley is listed on several of the quarters immediately upstream of the weir, and he no desire to damage his own property. The lowest elevation upstream of that weir takes place on one of the Schley properties, so if there would happen to be a sediment buildup, he can dredge the reservoir. He said that is in his personal best interest.

Ms. Bartling said Mr. Schley indicated he had his cattle in the pasture in November. She asked if Mr. Schley is aware that Tim Fliehs had expressed concern about an ice dam forming if this wasn't cleaned out in a timely fashion. Mr. Schley said he is aware. Mr. Bartling asked if that is a possibility if Mr. Schley is not required to drain the impoundment by a certain period of time of the year. Mr. Schley said he does not have a problem with draining the reservoir if he can wait

and drain it when he is done with it. Mr. Schley said he thinks the whole ice dam thing being a real issue is silly, but as long as the date he has to drain the impoundment is flexible, he will do it.

Mr. Bartling asked if Mr. Schley understands that the watershed district's constituents aren't looking for flexibility. They want to know that it is going to be drained so that there isn't an issue with an ice dam. Mr. Schley said it is fantastic that they have an issue with it, but he doesn't think it is an issue.

Chairman Hutmacher suggested that a condition could be that once there is two inches of ice on the pond, it has to be drained.

Mr. Schley stated that he is open to discussing how such a condition is worded. For instance, at one time it did ice up then it thawed out again and he kept the cattle out longer. He said if there is a warm fall and winter and grass is available, he wants to be able to utilize that pasture and water. If there is a reservoir of water and he opens that up, that water will start flowing and, unless the ice is super thick, it going to start breaking the ice up and flow out. Mr. Schley said his reservoir is not that big in the grand scheme of things. It's only one-third of the way up the whole creek bed. Mr. Schley said if he finds himself in a situation where there is actually water still left in the reservoir by the end of the season, there's probably still water in the rest of the creek system because he hasn't used it all for the cattle or irrigation, so if he opens it up it isn't going to matter because there is still water and ice in the system. He said the only situation where he could create an ice buildup would be where the reservoir is full and the creek is empty If the creek is empty, it is a dry season and he would use that water up anyway. Mr. Schley said he can't see very many situations where that would even matter. He said that is why he believes the ice dam is silly.

Chairman Hutmacher asked Mr. Schley how the small tank he testified about is fed. Mr. Schley said the tank is at the old farm site and fed with an artesian well. It is a very small tank. Chairman Hutmacher said in the fall of the year when the temperatures drop, the cattle don't drink as much water, and Mr. Schley could put another tank in for a couple of months to get by. Mr. Schley said he agreed that there are other options, but he doesn't believe it is necessary. Mr. Schley said he is open to other options, but he wants the use of the water to be flexible so he can utilize it.

Chairman Hutmacher requested closing arguments.

Ms. Mines Bailey stated that SDCL 46-2A-9 requires that the following factors be met before any water permit is granted: unappropriated water is available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights, and that the proposed use is a beneficial use and in the public interest. Mr. Schley would like to construct a low head dam with 22 acre-feet of water impounded in the creek channel for the purposes of running his irrigation pivot, which is already permitted. He is also looking to do livestock watering. Those uses have been deemed beneficial and in the public interest by the Water Management Board in the past. Mr. Rath testified that unappropriated water is available and that the project will not unlawfully impair any existing rights. Admittedly, there are some concerns about sedimentation. Ms. Mines Bailey said it is within the board's authority to make a decision. She stated that she has long stood before the board and urged them to consider public interest

within the confines of Title 46, which talks about the use of the water. She said the chief engineer does not have the authority to look at the water quality and sedimentation.

Ms. Mines Bailey said the chief engineer recommended approval of Water Permit No. 8409-3, Schley Farms/Schley Real Estate, LLC, with the following qualifications:

1. Water Permit No. 8409-3 authorizes an impoundment with a storage capacity of 22 acre-feet of water on Mud Creek.

2. The permit holder shall install a low flow bypass mechanism in the dam.

3. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed. The bypass during periods of low flow is only required to the extent that there is inflow upstream of the dam. The permit holder is not required to bypass stored water if there is not inflow into the dam.

Ms. Mines Bailey noted that the board may also add qualifications as it deems necessary to protect the public interest.

Mr. Taylor stated that everyone heard Mark Rath's testimony regarding the application and his analysis, the four factors of SDCL 46-2A-9, and his recommendation to the chief engineer to approve the permit. Jeanne Goodman recommended that the board approve the permit, and Eric Gronlund has adopted Ms. Goodman's recommendation. Mr. Rath addressed four key points. Water is available within Mud Creek and the diversion can be made without impairment of existing rights. Mr. Schley holds the other existing right on Mud Creek. It is clear that the proposed use of water is a beneficial use. Mr. Schley will use the water on the family farm for irrigation and cattle. Mr. Rath also said that, subject to any qualifications the board recommends to the chief engineer, the proposed use of the water is in the public interest of the state of South Dakota. Mr. Taylor said Mr. Schley provided testimony explaining how the water will be used. Mr. Taylor said he came into this process very late, and Mr. Schley had already contacted the appropriate agencies, talked to his neighbors and asked for permission before proceeding. Mr. Schley also talked to the watershed district and the township board in advance of submitting the permit application. He also had a professional engineer look at it and include some mechanism for bypass because of the ice dams. Mr. Taylor said the question isn't whether the impoundment, would cause a sediment load. DENR's counsel expressed that those issues are not within this board's purview. The issue for today is can the appropriation be made and is the use of the water within the public interest of the state of South Dakota. Mr. Taylor said clearly it is. A lot of time was spent talking about the upstream effects. Mr. Gutenkauf talked about the upper limit of the ponding and how that is affected during lower flow, uncommon rain events, those 2-year rain events. It has a negligible effect impact. Mr. Schley is aware of his obligation with respect to his neighbors, that is why he went and talked to them first. He does not want to harm his neighbors; he wants to get along with them. Mr. Taylor said Mr. Schley knows and will follow what the law for drainage is in South Dakota. South Dakota is a civil rules state and as recently as 2017 in Surat Farms LLC vs. the Brule County Board of Commissioners, the South Dakota Supreme Court affirmed that a downstream property owner can't impair drainage to the detriment of an upstream property owner. In the case of Carmody vs. Lake County Commissioners the South Dakota

Supreme Court affirmed the holding in Surat Farms LLC vs. Brule County Board of Commissioners. It is not the Water Management Board's job to look at the other ancillary issues, sediment loads, upstream drainage effects, the taxing district. All of those things are important, but the questions at the end of the day are is water available and can it be put to beneficial use. In his testimony, Mr. Gutenkauf explained that there is no increased risk of flooding within Mud Creek, the flow is generally protected, and it meets the no rise criteria that the Brown County zoning ordinance would require for construction within the flood plain.

Mr. Taylor, on behalf of Dusty Schley, Schley Realty, and Schley Farms, requested that the board grant the permit subject to any reasonable conditions it may impose.

Ms. Bartling stated that as indicated, SDCL 46-2A-9 provides for four elements. One is the reasonable probability that there is unappropriated water available for the applicant's proposed use. Ms. Bartling said the petitioner does not disagree that water is available.

Second is that the proposed diversion can be developed without unlawful impairment of existing rights. Ms. Bartling said she cannot agree that with this application that is the case. There are two landowners who have indicated they don't want this, and they feel that their rights are going to be impaired directly by the project and they are directly upstream; Mr. Fliehs and Mr. Stange. She said there are a slew of other landowners who voted to form a watershed district so they could pay taxpayer money to clean out the creek. That was the sole reason why this was done, and they have rights too. To allow a project that essentially negates the entire project that the watershed district is doing and negates the taxpayer money being spent is an impairment of the rights of the other people.

The fourth factor is that the proposed use is a beneficial use. Ms. Bartling said it may be beneficial to Mr. Schley, but it's not beneficial to any of the constituents. The petitioners are concerned because the watershed district is trying to increase the flow by removing the sediment and prevent the flooding that has been rampant in Brown County for the past 10 years. Right now, there are farmers in the area that have been unable to get into their fields because of the amount of water. Allowing somebody to dam up this area when there are all these farmers that are having to prevent plant, the timing is terrible for that. It is not a beneficial use.

The last element is whether the project is in the public interest. Ms. Bartling said it is absolutely not in the public interest. She said she understands one person trying to back up the water, but when Mr. Schley says he wants to have the ability to determine when he cleans the dam out, etc. that doesn't take into effect the other people upstream. It doesn't take in into effect the significant amount of the watershed district spent to do exactly the opposite of what his project going to do. That is not in the public interest. That is throwing taxpayer money away. Ms. Bartling said when Ms. Mines Bailey stated that water quality and sedimentation is not something the chief engineer looks, that is true. It is not and that is a problem because you're not looking at the forest for the trees. You're not looking at the whole public interest. In this situation, the public interest says you can't allow a project like this to go forward, when you've got the exact opposite being paid for by taxpayer money. That is why the constituents are so concerned and opposed to the project. It negates what the watershed district has worked on for years and spent hundreds of thousands of dollars on, and what the district is contractually obligated to complete.

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

Chairman Hutmacher requested board discussion.

Motion by Freeman, seconded by Holzbauer, to approve Water Permit No. 8409-3, Schley Farms/Schley Real Estate LLC, subject qualifications set forth by the chief engineer.

Mr. Freeman stated that the law requires the board to put to maximum beneficial use the waters of the state. In his judgement this type of operation is exactly the type of thing this board has considered a beneficial use for many years. Mr. Freeman said he understands the concerns regarding sediment, but the board does not have any evidence before them that shows that sediment will occur, that if sediment did occur, the amount of sediment, nor does the board have any evidence of the affects of sediment. Mr. Freeman said he believes the applicant knows his responsibility. The applicant's land will be most affected if there is any sediment build up, and his testimony makes it clear that he intends to rectify that if it does occur.

Mr. Holzbauer said for the last couple of years, South Dakota has had excessive rain. There are more years in the past that South Dakota has been short of water than having too much water. If there is water there, other people are going to benefit from this somewhere upstream. He said this is just one man trying to preserve and the use the water for South Dakota.

Mr. Bjork stated that he spent more than 20 years working with watersheds and one of the most serious problems with watersheds was sedimentation. It caused problems in streams, it caused problems in drainage areas, and it caused most of the problems that he had to deal with to the point where sedimentation dams would be built to try to protect lakes. Sediment is a problem in South Dakota, and it always has been a problem in South Dakota. Mr. Bjork said over the last couple of years there have been a lot of people trying to tell the board how to do their job. The definition of public interest is more and more narrowly defined as time goes on. Pretty soon it isn't going to exist. Right now, there is no definition of public interest out there. For someone to tell the board that they can't do this, or they can't consider that, is simply conjecture. He said the board doesn't know, unfortunately, how to define public interest, and again, over the last couple of years, somebody is trying to define it more narrowly, and that disturbs him. Mr. Bjork stated he believes the board has a little more leeway than what it is given credit for. Mr. Bjork said he will be voting no on the motion.

Chairman Hutmacher said he thought about trying to figure out how to amend it to empty it annually or to do something with sediment removal. The common sense part of him says that if it fills up with sediment this dam is not going to hold water for him to irrigate with anyway.

There being no further board discussion, Chairman Hutmacher requested a vote on the motion.

The motion carried with Freeman, Holzbauer, and Hutmacher voting aye and Bjork voting no.

DRAFT

Mr. Taylor will prepare proposed Findings of Fact and Conclusions of Law, which are due by September 10, 2020. Objections are due by September 25, 2020. The board will consider adoption of the Findings of Fact and Conclusions of Law on October 7, 2020.

Chairman Hutmacher closed the hearing.

WATER PERMIT APPLICATION NO. 1904B-1, DOUGLAS OTTEMA: Eric Gronlund stated that the board packet contained the report, the recommendation, and the Affidavit of Publication. There were no petitions to intervene in this matter.

Water Permit Application No. 1904B-1 proposes to amend Water Permit No. 1904A-1 to extend the length of time allowed to complete the construction of three small dry draw dams/dugouts. Water Permit No. 1904-1 authorized the appropriation of up to 6 acre/ft of water for the dams/dugouts to be used in a mining operation approximately 12 miles west of Lead/Deadwood, SD, in Lawrence County. Water to fill the dams/dugouts will be supplied primarily by snowmelt and runoff events. Water will be diverted from the dams/dugouts at a maximum instantaneous diversion rate of 0.167 cubic feet of water per second (cfs), which is less than 75 gallons per minute (gpm), to be used when processing ore. If snowmelt/runoff events are not supplying up to 6 acre-ft of water in the dams/dugouts, water in adjacent dry gulches will be diverted at a maximum instantaneous diversion rate of 0.167 cfs to maintain the water levels in the dams/dugouts.

The deadline to complete the works, based on the prior permit, was April 26, 2020. By that deadline, Mr. Ottema had only completed a dam with storage of approximately 0.5 acre-feet of water.

Mr. Gronlund said this application is requesting an extension of time. The statute that is applicable in this case is SDCL 46-5-26, which allows for an extension of time, but only due to engineering difficulties that could not have been reasonably anticipated, operation of law beyond the power of the applicant to avoid, or due to other exigent circumstances identified by the Water Management Board. Mr. Gronlund said issue in this case is exigent circumstances identified by the board. That is the reason this application was scheduled for a board hearing.

Mr. Gronlund said he started working with Mr. Ottema in 1998 when he filed a water permit. Mr. Gronlund went onsite in an area called Beartown. At that time, Mr. Ottema had plans for 15 acre-feet of water from 10 small dams and dugouts. He was planning to divert at a rate of 100 gpm for the actual processing of the ore. The date to complete construction on that project was February 2003, but Mr. Ottema never did do any construction, and that permit was cancelled in 2008 for non-construction.

In 2009, Mr. Ottema submitted Application No. 1904-1, which was approved for 6 acre-feet of water and diversion of 75 gpm. The project was to be completed by December 2014. It was past the date to complete construction of works when he told the department that only one small dam had been completed, so there wasn't the ability for an extension of time. Mr. Ottema said the reason it wasn't complete was due to problems dealing with the magnitude of the project as well as dealing with the U.S. Forest Service on permitting issues. SDCL 46-2A-8.1 allows for

reinstatement of a permit if it's within three years after date to complete construction. The department processed the application for reinstatement for Water Permit No. 1904A-1. That application was filed in January 2015. The date to complete construction on that was April 6, 2020. Mr. Ottema still hasn't done much work on the project, but he did file for an extension of time in March of 2020, so it was before the deadline to complete construction. The extension request was filed on the basis that Mr. Ottema is a full-time caregiver for his ailing wife. The department then processed the application for an extension.

Mr. Gronlund stated that this project has been going on for 22 years, and he has one small dam built.

This application is for small dams or dugouts located on the headwaters to Bear Gulch and Potato Creek, which is a tributary to Beaver Creek. Both of those are tributaries ultimately to the Red Water River, which flows into the Belle Fourche River. Mr. Gronlund said it did raise some concerns, initially, back in 1998 on whether the application would be able to be approved because the board in prior decisions, told the department to consider the Red Water, Spearfish Creek, and Belle Fourche River in that segment as a complex, and the board had a prior permit application that was denied for water from Spearfish Creek. Mr. Gronlund said Potato Creek and Beaver Creek actually over the outcrop of the Madison and Minnelusa. There is a 9 cfs loss zone before water would survive the threshold. The water otherwise goes into the groundwater at that location, for the most part. From that aspect, the department was able to recommend approval of the extension of time. The claim for extension of time is based on exigent circumstances due to Mr. Ottema needing to care for his ailing wife.
Mr. Gronlund said SDCL 46-5-26 states the board needs to make a finding of whether there are exigent circumstances. Mr. Gronlund said the department still believes that, based on the prior permits, there is unappropriated water, no other water rights are going to be adversely impacted, it is a beneficial use, and it is in the public interest.

The chief engineer recommended approval of Water Permit Application No. 1904B-1 with the following qualifications:

1. Water Permit Nos. 1904-1, 1904A-1 and 1904B-1, Douglas Ottema combined, authorize three dry draw dams/dugouts with a total combined storage capacity of six acre-feet of water and sufficient water annually to maintain the water level in the dams/dugouts.

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

3. Applicable provisions of Water Permit Nos. 1904-1 and 1904A-1 are incorporated into Water Permit No. 1904B-1.

In answer to a question from Chairman Hutmacher, Mr. Gronlund stated that the application filing fee for reinstatement is $100 plus publication costs. The licensing fee is still applicable in this case because the department has not yet done the licensing investigation.

Mr. Holzbauer asked if the issues with the U.S. Forest Service have been resolved. Mr. Gronlund said he can't speak to Mr. Ottema's issues with the U.S. Forest Service, but those were issues from back in 2012-2014, so hopefully the issues are resolved. Mr. Gronlund said about once every other year Mr. Ottema contacts him, and for several years he has talked about how he is having to be a caregiver for his wife, so that is not something that was contrived by any means.

Motion by Freeman, seconded by Holzbauer, to approve Water Permit Application No. 1904B-1, Douglas Ottema, with the qualifications set forth by the chief engineer. A roll call vote was taken, and the motion carried unanimously.

Chairman Hutmacher called a recess.

Chairman Hutmacher called the meeting back to order at 1:25 p.m. Board members present were Bjork (remotely), Dixon, Freeman, Holzbauer, Larson, and Hutmacher.

WATER PERMIT APPLICATION NO. 2805-2, R & J, LLC: Chairman Hutmacher opened the hearing.

Ann Mines Bailey, Assistant Attorney General, represented the Water Rights Program.

Michael Hickey, attorney from Rapid City, represented R & J, LLC.

Lon Buehner and Bill Hearne, both from Rapid City, were intervenors and appeared pro se.

Mr. McVey stated that included in the board packet were the report, the chief engineer's recommendation, letters in opposition dated January 28, 2020, and December 7, 2019 from Lon Buehner, letter in opposition dated December 12, 2019, from William Hearne, letter dated February 9, 2000, to Westley Parker from Eric Gronlund, Affidavit of Publication, Notice of Entry of Order and Scheduling for Hearing dated May 11, 2020, Amended Order on Chief Engineer's Motion for a Continuance dated May 7, 2020, Notice of Entry of Order dated June 18, 2020, and Order dated June 17, 2020.

Ms. Mines Bailey waived her opening statement.

She offered DENR Exhibit 1, the administrative record for Water Permit Application No. 2805-2, R & J, LLC. The administrative record contains the application, the report of the engineer, the recommendation of the chief engineer, the petitions to intervene, subsequent correspondence regarding this permit, and notices of publication. Ms. Mines Bailey noted that the parties were provided the opportunity to review the exhibit.

Chairman Hutmacher admitted the DENR Exhibit No. 1 into the record.

Ms. Mines Bailey called Adam Mathiowetz, who was administered the oath by the court reporter.

Responding to questions from Ms. Mines Bailey, Mr. Mathiowetz testified that he is employed with the Department of Environment and Natural Resources in the Water Rights Program and is

an Engineer III. He is responsible for reviewing groundwater permit applications, groundwater complaints regarding various issues, usually when it involves a well, reviewing well construction, licensing well drillers and water well pump installers, managing two full-time technicians who maintain the groundwater observation well network, managing the seasonal employees that measure the observation wells, and other tasks as assigned to him by the chief engineer, which includes being a technical expert as related to groundwater and wells.

Mr. Mathiowetz identified DENR Exhibit 2 as his curriculum vitae.

Ms. Mines Bailey offered DENR Exhibit 2. Chairman Hutmacher admitted the exhibit into the record.

In response to questions from Ms. Mines Bailey, Mr. Mathiowetz said his specialty is groundwater. He stated that he performed a technical review of Water Permit Application No. 2805-2 and prepared a report. Mr. Mathiowetz pointed out corrections to the report. On page 2, line 2, at the end of the first sentence and in Figure 1 it references "and a pending application." Mr. Mathiowetz stated that the pending application is No. 2572A-2, and the application was approved by the Water Management Board at its February 2020 meeting. Board approval of the permit does not change any of the analyses within the report. The addition would also affect the labeling for that application as shown on Table 1 on page 4 of the report.

Water Permit Application No. 2805-2 proposes to appropriate 4 acre-feet of water annually at a maximum instantaneous diversion rate of 0.044 cubic feet of water per second, which is 20 gallons per minute, from two proposed wells to be completed into the Crystalline Rock Aquifer for commercial use at a RV campground facility. The wells are to be in the NW ¼ SW ¼ Sec. 13-T1S-R6E in Pennington County. This site is located on the north side of Highway 16 near Rockerville, SD.

Mr. Mathiowetz stated that the scope of his review is the probability of unappropriated water being available and whether there would be an unlawful impairment of existing water rights. The standard for determining the availability of unappropriated water is SDCL 46-6-3.1, which states, "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems."

Mr. Mathiowetz stated that recharge is water entering an aquifer and a withdrawal is a deliberate removal of water from an aquifer.

Mr. Mathiowetz said the Crystalline Rock Aquifer is the crystalline that forms the central core of the Black Hills where water is stored in the solutions and fractures within that rock and where the aquifer is generally exposed at land surface. That is an approximate area of 574,000 acres in the Black Hills region. Because all of the water is stored in the fractures and faults that make up the

placement of where water can be stored, which is also called secondary porosity, it is unpredictable and discontinuous where these fractures and faulting are so while the entire extent is 574,000 acres, functionally it could be broken down into many smaller aquifers. Due to the highly unpredictable and discontinuous nature, it is very difficult to determine exact extents of these smaller aquifers. The aquifer receives recharge through direct infiltration of precipitation where the fractures can be found at the surface and from streamflow losses.

Ms. Mines Bailey asked if any studies have been done to calculate amount of recharge that the Crystalline Rock Aquifer receives. Mr. Mathiowetz studies have been done. One study estimated recharge to the aquifer at 3,600 acre-feet per year under the assumption that recharge to the aquifer had to be at least equal to estimated withdrawals to account for the fact that significant declines were not seen, although it was noted that, because the aquifer can also lose water to streams, the recharge must be greater than the estimated 3,600 acre-feet per year.

DENR maintains one observation well (CU-86A) in this aquifer. The observation well data is real data measurements taken by DENR seasonal employees and other full-time staff in the department that shows exactly what is happening in the aquifer at that well. The well would account for changes due to climatic conditions and pumping. The department is required by ARSD 74:02:05:07 to consider observation well data amongst other data when determining the availability of unappropriated water.

The hydrograph for observation well CU-86A is on page 5 of Mr. Mathiowetz's report. The hydrograph shows that the aquifer can and does receive recharge and that it has a large fluctuation of over 40 feet at the location of the observation well.

Withdrawals from this aquifer are for domestic purposes, commercial, industrial, municipal use, and housing developments. The estimated total withdrawal from the aquifer is 217.9 acre-feet per year.
Ms. Mines Bailey asked Mr. Mathiowetz to identify DENR Exhibit 4. Mr. Mathiowetz stated that Exhibit 4 is a map showing water permits and water rights near the area of Application No. 2805-2 as well as large fault locations. Mr. Mathiowetz said he created the map using ESRI ArcMap, DENR databases and published reports.

Ms. Mines Bailey offered DENR Exhibit 4. Chairman Hutmacher admitted the exhibit into the record.

Ms. Mines Bailey asked Mr. Mathiowetz to explain how the proposed sites of diversion were designated on DENR Exhibit 4. Mr. Mathiowetz stated that the proposed sites of diversion are the blue "W" inscribed inside of the yellow circles on the map. The dark lines on the map that are solid or dashed represent faults as marked in the Redden & DeWitt report. The red pentagons represent the locations of the water rights and permits on file with the DENR Water Rights Program.

Ms. Mines Bailey asked if Mr. Mathiowetz looked at withdrawals in the entire aquifer. Mr. Mathiowetz answered that he did not look at withdrawals in the entire aquifer; he looked at the area as designated with the dashed box around the outside of DENR Exhibit 4 and can also be

seen in Figure 1 in his report. Mr. Mathiowetz looked at that are because it is primarily bounded by faults of which water generally does not move perpendicularly across it.

Ms. Mines Bailey asked if Mr. Mathiowetz looked at recharge over the whole aquifer or only this portion of the aquifer. Mr. Mathiowetz said he looked at recharge over the entire aquifer. Due to the discontinuous nature of the fractures and faults as well as the distribution of precipitation within the Black Hills due to the Black Hills themselves creating their own effects, it is extremely difficult to nearly impossible to delineate an aquifer area over which to consider recharge, but also to then set a reasonable estimate to figure out exactly how much recharge would occur over a smaller area. It is a broad term estimate to show that the aquifer does receive recharge. Mr. Mathiowetz reiterated that water is typically not going to move perpendicularly cross the faults, and therefore, that acts essentially as a boundary. It is relatively unreasonable to look at this across the fault. Also, because of the physics of how water flows within the Crystalline Rock Aquifer, the unpredictable nature, and the limited extent of the fractures, looking at withdrawals 30 miles away would not be appropriate.

Ms. Mines Bailey asked Mr. Mathiowetz to explain how he determined estimated withdrawals of 217.9 acre-feet per year for this area. Mr. Mathiowetz stated that the 217.9 acre-feet of estimated annual withdrawal is based on assuming pumping at the permitted diversion rate for the water rights and permits at 60 percent of the time. The only exception to that is for Permit No. 2572-2. That permit holder is required to report annual pumping, and they have pumped a sufficient amount of time and have been consistent, so the average of what they reported is likely their long-term average pumping and they are not further developing. Ms. Mines Bailey asked why Mr. Mathiowetz used 60 percent for all permits but not Permit No. 2572-2. Mr. Mathiowetz answered that the 60 percent comes from a historical established best method to estimate water, when the Water Rights Program originally issued permits by diversion rate only. When the method was changed to quantifying them to an annual volume, communications with the various stakeholders, municipalities, and water systems were considered. It became relatively apparent that they were pumping approximately 60 percent of the time on some of the high-end users. That is a number the Water Rights Program has used to be conservative for an estimate where there is not reported pumping or an annual volume that they can't pump beyond. The board has previously accepted using 60 percent for an estimate.

Ms. Mines Bailey asked how many water rights are in the area of interest. Mr. Mathiowetz stated that there are 10. The closest is Water Right No. 2211-2 for Pine Haven Heritage Home. It is located approximately 0.17 miles (920 feet) west-southwest of the proposed well sites.

Mr. Mathiowetz identified DENR Exhibit 3, which is a map zoomed in to within a couple of miles of the applicant's proposed locations. The exhibit includes water rights and well completion reports on file with the Water Rights Program. He stated that he created Exhibit 3 using Water Rights Program databases and ESRI ArcMap.
Ms. Mines Bailey offered DENR Exhibit 3. Chairman Hutmacher admitted the exhibit into the record.

Responding to questions from Ms. Mines Bailey, Mr. Mathiowetz answered that the proposed well sites are designated with a blue "W" inside a yellow circle with a white box around it. The red

dots are water rights and permits on file with the Water Rights Program. The yellow triangles are the well completion reports for the wells on file with DENR. These wells are within approximately one mile of the proposed well locations. The yellow circles are the well completion reports for wells on file with DENR. These wells are further away than approximately one mile of the proposed well locations. All newly constructed domestic wells are required to be on file with the department. It is possible that there are other domestic wells in the area that the department is not aware of.

Mr. Mathiowetz stated that based on the information available, the proposed diversion can be developed without unlawful impairment to existing rights. Unlawful impairment is defined in ARSD 74:02:04:20(7). Mr. Mathiowetz said his opinion for unlawful impairment is based on the relatively limited diversion rate proposed by the applicant and limited amount of water to be withdrawn, the continued development of the Crystalline Rock Aquifer throughout the Black Hills without a significant history of complaints, and the fact that domestic users can pump to an equivalent of what the applicant is requesting.

Responding to questions from Ms. Mines Bailey, Mr. Mathiowetz said as a diversion rate is increased there is the ability to create a greater drawdown at greater distances through the physics of how well drawdown work. By having a relatively limited diversion rate and limited volume, there will also be less pumping for a shorter period of time. Both of those work together to reduce the potential for drawdown.

Ms. Mines Bailey asked Mr. Mathiowetz to describe what he understands are the concerns of the petitioners. Mr. Mathiowetz said there were concerns as to the availability of unappropriated water and the appropriateness of the area of interest that he considered in his report. There were concerns that development of the proposed wells would unlawfully impair their existing water rights. There were concerns regarding water quality, particularly nitrates, as it relates to septic issues and septic volumes for various users.

Responding to questions from Ms. Mines Bailey, Mr. Mathiowetz stated that septic issues are not part of the Water Rights Program's review process. Regarding the area of interest, Mr. Mathiowetz said he bounded the area of interest primarily to the east and the west using the largest known faults in the area since water does not typically move perpendicularly across the faults, therefore, they act as boundary conditions. He looked at the north and south boundaries by attempting to, as best as possible, place the applicant's wells in the center. When he noticed that there were permits just to the north of the boundary when he originally centralized the applicant's wells, he moved the boundary further north.

Ms. Mines Bailey asked Mr. Mathiowetz what an adequate well is. Mr. Mathiowetz responded that an adequate well is defined in ARSD 74:02:04:20(6) as a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.

Mr. Mathiowetz stated that a well must be adequate in order to qualify for protection under the law. In the Crystalline Rock Aquifer, having an adequate well does not necessarily mean the well will produce water. Because the fractures and faults can be encountered at various depths and they are unpredictable in discontinuous nature. With a well 200 feet deep the fracture that is supplying the well could be at 100 feet, but the inflow from that fracture may only be a half-gallon per hour so the well could easily be pumped dry. But, because there are over 200 feet of saturated thickness, the well would be adequate. As it applies to the Crystalline Rock Aquifer, some wells could be within 10 feet of each other and not share any fractures at all. There could also be wells that are a half-mile away that share a fracture and could interfere with each other.

Ms. Mines Bailey asked for Mr. Mathiowetz's overall opinion as to the potential for unlawful impairment should the water permit application be granted. Mr. Mathiowetz stated that, based on the information available, he believes that the proposed diversions can developed without unlawfully impairing existing users with adequate wells.

Mr. Mathiowetz stated that that the qualifications proposed by the chief engineer are to protect adequate well holders, both with appropriative and domestic rights as well as establish the limits that the applicant can use their water right as proposed. The chief engineer recommended approval of the application 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. 2805-2 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. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock aquifer.

4. Water Permit No. 2805-2 authorizes a total annual diversion of 4.0 acre-feet of water.

This concluded questioning by Ms. Mines Bailey.

In response to questions from Mr. Hickey, Mr. Mathiowetz stated that due to secondary porosity, there is significantly more flow in the Madison Aquifer as compared to the Crystalline Rock Aquifer. Secondary porosity is describing large separations such as solution cavities or fractures as compared to primary porosity, which when you look at sand is the space between sand particles. Secondary porosity would be a crack.

Mr. Hickey asked if, in this situation, there could be two wells, three feet apart that would not have any transmissivity between the two, and there could also be wells that are further apart where

there would be a fracture and they would have transmissivity between them. Mr. Mathiowetz answered that both of those scenarios are possible.

Mr. Hickey asked if the depth of a well is a factor. Mr. Mathiowetz stated that having a deeper well would give you a higher chance of encountering more fractures, therefore, having more fractures would create more potential to encounter a fracture that is encountered by another well.

Mr. Hickey stated that in his report, Mr. Mathiowetz indicated that several of the wells are in the neighborhood of 100 to 150 feet deep. He asked if that is significant. Mr. Mathiowetz answered that it can be significant. In some places the fractures can run deeper, and in other places they don't go as deep. Typically, there are fractures all through the depth, but in general, there are almost no fractures below 500 feet. In some places, that number is closer to 200 or 300 feet.

Mr. Hickey stated that in one of the petitions for intervention, there is mention that one of the intervenors has a well that only produces three gallons per minute. He asked Mr. Mathiowetz what that tells him. Mr. Mathiowetz answered that without further information it doesn't tell him specifics. It could be that they have encountered a limited fracture system and, therefore, that is all the well can produce within an approximate range. There could be issues within their water system, whether it be a pump or another limit. But without further information, it doesn't tell him anything.

Mr. Hickey said one of the qualifications requires that the well be constructed by a licensed well driller. He asked if Mr. Mathiowetz knows that the applicant plans to use Taylor Drilling, if the application is granted. Mr. Mathiowetz answered that he did not know that. Mr. Hickey asked if Taylor Drilling is a qualified well driller. Mr. Mathiowetz answered that Taylor Drilling is a licensed well driller.

Mr. Hickey asked if it is correct that there is a qualification that states the applicant must control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or adequate wells having prior water rights. Mr. Mathiowetz answered that is correct. Mr. Hickey asked what that qualification means. Mr. Mathiowetz stated that the qualification means that the applicant needs to control the withdrawals such that they don't unlawfully impair other users, which further means that if it is determined that the applicant has impaired other users, that situation needs to be dealt with. Mr. Hickey asked if that describes adequate domestic wells, which Mr. Mathiowetz described earlier and the ones having adequate wells with prior water rights are the one that are legally protected. Mr. Mathiowetz answered that is correct. Those would be the wells that are shown in Table 1 on page 4 of the report. The table shows the priority date for each well. Mr. Hickey asked if that includes all domestic wells including the ones not shown in Table 1. Mr. Mathiowetz answered that is correct. It includes all domestic wells that are adequate.

Mr. Hickey asked if there is a qualification that the applicant has to annually report to the chief engineer the amount of water withdrawn. Mr. Mathiowetz answered that is correct.

Mr. Hickey asked if there is a qualification that the applicant is limited to 4 acre-feet of water per year. Mr. Mathiowetz stated that is correct.

Mr. Hickey concluded his questioning of Mr. Mathiowetz.

Bill Hearne, intervenor, asked Mr. Mathiowetz how it is determined that an applicant is the cause of Mr. Hearne having less water after the applicant drills a well. Mr. Mathiowetz stated that during the course of an investigation and he was the engineer conducting the investigation, he would consider timing. He would talk to Mr. Hearne about what happened, determine if Mr. Hearne has looked at other issues such as the electrical system or a pump. He would also talk to the applicant and other nearby landowners. In this case, because there are several wells located nearby, Mr. Mathiowetz would ask questions of them and measure water levels in wells locally, if possible. After looking at that information, an evaluation would be made based on what is learned.

Mr. Hearne asked what would happen if it was found that everything was operating correctly and there is a still drop in water volume and similar things are happening in other adjacent wells. Mr. Mathiowetz said he would potentially look at other adjacent wells as well as Mr. Hearne's well. He stated that he would have to consider everything. You can't look at it isolated because by looking at everything you may find that the person with the issue, the issue was something that is not necessarily caused by whoever may be pumping. It might be that one of the fractures is starting to get plugged even though there isn't a whole lot of sediment in the fractures. A 60 year old well, for example, will eventually plug due to fine sediments. So, it cannot be looked at isolated. It has to be looked at in the broad scope in the context of as much information around it as possible.

Mr. Hearne asked if the determination is made that there is an impairment, what action does DENR take. Mr. Mathiowetz answered that he is not the chief engineer so he can not speak at to what the chief engineer would recommend.

Mr. Buehner said Mr. Mathiowetz indicated that the Crystalline Rock Aquifer is localized, associated with fracturing, and weathering, so it is not a regional aquifer like the Madison Formation. Mr. Mathiowetz stated that it is regional because it exists in a region, but it needs to be considered on both scales with the information available.

Responding to questions from Mr. Buehner, Mr. Mathiowetz stated that well logs across the entirety of the Crystalline Rock Aquifer indicate that there are well depths ranging from very shallow, or less than 100 feet, to several that are 500 feet deep throughout the Black Hills Region. There are several wells that are shallower, so people have found enough water for their uses from the shallower wells.

Mr. Buehner asked Mr. Mathiowetz to explain the difference between confined and unconfined conditions. Mr. Mathiowetz stated that unconfined conditions is where the water level in an aquifer is below the top of the physical aquifer materials. The more scientific way of saying it is that the static water level is atmospheric air pressure. A confined aquifer is when the water level in the closed system would be above the top of the physical aquifer materials.

Mr. Buehner asked if it is correct that there could be a confined aquifer at a deeper depth where the fractures are not open to atmospheric pressure. Mr. Mathiowetz said that is correct.

Mr. Buehner asked what the difference would be in long-term productivity of an unconfined versus a confined reservoir. Mr. Mathiowetz stated that confinement has no relation to productivity.

Mr. Buehner said in a confined reservoir the water is there and you drill the well and it starts to produce. In an unconfined reservoir you have the opportunity to reserve its recharge. Mr. Mathiowetz stated that most confined aquifers also have the availability for recharge, otherwise aquifers such as the Madison Aquifer could not be used outside of the outcrop. Most of Rapid City's wells wouldn't exist. A vast majority of confined aquifers also have a point at which it has a portion that is unconfined, and that is its recharge area.

Mr. Buehner asked if Mr. Mathiowetz is saying that the Madison Aquifer is confined reservoir, except by where it outcrops. Mr. Mathiowetz answered that large portion of the Madison Aquifer, since it is a regional aquifer underlying many states, is under confined conditions and is, therefore, confined in those areas. In the outcrop area where there is not overlying material or in the portions where the water level is not above the top of the formation, it is unconfined. Mr. Mathiowetz said this is an example of defining the difference between confined and unconfined aquifers.

Mr. Buehner asked if the recharge will replace the water produced in an unconfined reservoir. Mr. Mathiowetz answered that recharge tends to replace the water pumped from any aquifer, including an unconfined aquifer.

Mr. Buehner said his point is that a confined reservoir under pressure because of the overburden, it is not open to atmospheric pressure. Because of that when water is pumped the fractures tend to close, and you don't have the opportunity because it's not open to atmospheric pressure for recharge to refill those closed fractures in a confined reservoir. He asked if that is correct. Mr. Mathiowetz answered that is not correct. The fractures do not tend to close, at least not in any significant scale that would be able to be measured with any piece of equipment that he would use in the course of performing his duties.

Mr. Buehner said Mr. Mathiowetz stated that he looked at this area and he looked at the faults. Mr. Mathiowetz's report states that this application proposes to use these limited mapped faults and the actual areal extent of the aquifer may be even smaller. He asked if Mr. Mathiowetz took into account the topography when trying to understand the areal extent of this localized aquifer. Mr. Mathiowetz answered that he considered topography as best he could by looking to where there were streams to see if he could identify large alluvial deposits. Mr. Buehner asked if Mr. Mathiowetz looked a topographical map of the area. Mr. Mathiowetz stated that he did.

Mr. Buehner asked what formation this localized aquifer produces from. Mr. Mathiowetz answered that the proposed wells will be completed into the Metagraywacke, which is based on the Rockerville 7.5 Minute Series Geologic Quadrangle Map.

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Mr. Buehner asked if the formation is Precambrian and how thick the Precambrian is. Mr. Mathiowetz stated that Precambrian is a better term. The thickness of the Precambrian in this area is greater than 500 feet.

Mr. Buehner asked if DENR Exhibit 4 shows all of the water rights in the area. Mr. Mathiowetz answered that Exhibit 4 shows all water rights and permits that are completed into the Crystalline Aquifer in that area.

Mr. Buehner asked if Mr. Mathiowetz checked with other state departments to see whether there are commercial entities in this area. Mr. Mathiowetz stated that he did not. Mr. Buehner asked if Mr. Mathiowetz knows why the Gaslight Restaurant in downtown Rockerville is not shown with a water right. Mr. Mathiowetz answered that he does not know.

Mr. Buehner said on Exhibit 4 it shows the location for Permit No. 2224-2, and right across the road from that is an entity called Big Mountain Cabins. He asked if it has a water right. Mr. Mathiowetz said not that he is aware if a water right is held for Big Mountain Cabins. Mr. Buehner said six tenths of a mile northeast of Permit No. 2224-2 is an entity called Silver Mountain Resort and Cabins. He asked if that entity has a water right. Mr. Mathiowetz stated that both of those entities may have surface water rights, but he does not know.

Mr. Buehner asked if Mr. Mathiowetz has inspected any of these locations. Mr. Mathiowetz answered that he has not.

Regarding Table 1 in the report, Mr. Buehner asked if it is true to say that the appropriated water volumes for those permits are Mr. Mathiowetz's figures divided by 0.6. Mathiowetz stated that he converted the permitted diversion rate to acre-feet per year, then multiplied it by 0.6. Mr. Buehner said he wanted to focus on the properties in the Rockerville area. He asked when the property that holds Permit No. 2211-2, Pine Haven Heritage Home, was last inspected. Mr. Mathiowetz answered that he does not know. Mr. Buehner asked if Mr. Mathiowetz is aware that the Pine Haven Heritage Home has not been in operation for the last six years, and that this property has gone through at least four ownership changes in the last five years and is now part of Rockerville Lodge and Cabins. Mr. Mathiowetz answered that he is not. Mr. Buhner asked if Rockerville Lodge and Cabins is listed in Table 1 as having a water right. Mr. Mathiowetz answered no.

Mr. Buehner asked when the property that holds Permit No. 485-2 was last inspected. Mr. Mathiowetz answered that he does not know. Mr. Buhener asked if Mr. Mathiowetz is aware that the Rockerville Park tourist attractions in this area have been vacant for at least 17 years, and that those buildings were dilapidated and intentionally burned down by the Rockerville Volunteer Fire Department more than three years ago. Mr. Mathiowetz answered that he is not.

Mr. Buehner asked if Mr. Mathiowetz is aware that this permit is to be used in a planned unit development that has recently been approved by Pennington County. Mr. Mathiowetz answered that he is not.

Mr. Buehner stated that on DENR Exhibit 4, Permit No. 483-2, Rockerville Trading Post, and Permit No. 479-2, Rockerville Gold Town, Inc. are shown on the map with a red pentagon

between the two permits. He asked where Permit 483-2 is located. Mr. Mathiowetz answered that they are in the approximate same location, they may even be in the exact same location.

Mr. Buehner said those two wells are closer to the applicant's property than what Mr. Mathiowetz has shown on Exhibit 4.

Ms. Mines Bailey objected stating that is not in the evidence. Chairman Hutmacher sustained the objection.

Mr. Buehner asked if Mr. Mathiowetz reviewed the permits in detail with the files held by the Water Right Program. Mr. Mathiowetz said he did look through all of them. Mr. Buehner said on Permit 483-2, Rockerville Trading Post, the file shows that this water permit was transferred from Rockerville Trail Motel to the Rockerville Trading Post in September 1991. He asked if that means that the Rockerville Trail Motel no longer had a water permit after that point in time. Mr. Mathiowetz answered that the Rockerville Trail Motel could have been under that water right under a different name, but he does not know for certain. Mr. Buehner questioned if it is correct that there is no other name on the list with regard to existing water rights, so if the Rockerville Trail Motel was still in existence, you would expect it to show up on your table. Mr. Mathiowetz answered that they could have just changed their name. He does not know the ins and outs of that business. Mr. Buehner asked if Mr. Mathiowetz is aware that the Rockerville Trail Motel is today, part of Rockerville Lodge and Cabins. Mr. Mathiowetz said he is not aware of that.

Mr. Buhner asked if Mr. Mathiowetz for Figure 3 he looked at what the area and acreage is of the water rights in the Rockerville area cover. Mr. Mathiowetz said he did not measure the area as shown in Figure 3 of the report on page 7, nor did he measure the area over which the property that these water rights physically exist on since he did not have easy access in the mapping software he used to property boundaries for individual properties.

Mr. Buehner said in Figure 3, on Highway 16 there is a little turnoff on the right hand side of the figure. He asked what that turnoff displays. Mr. Mathiowetz answered that he does not know.

Mr. Buehner asked what happens to the rainfall that falls on top of the Crystalline Rock Aquifer. Mr. Mathiowetz answered that some will infiltrate into the fractures that at surface, some will run off into local streams and be either moved downstream in the stream itself or stored in the alluvium, the fine sand and gravel and silt next to the stream.

Mr. Buehner asked Mr. Mathiowetz to explain what evapotranspiration means. Mr. Mathiowetz said evapotranspiration is a combination the words evaporation and transpiration. Evaporation is the water at or near land surface that is evaporated through the processes that the sun does. Transpiration is the water that is exhaled by plants in their processes of living. Mr. Buehner asked if Mr. Mathiowetz remembers what percentage of rainfall Driscoll and Carter said applies to evapotranspiration. Mr. Mathiowetz said he does not recall. Mr. Buehner asked if Mr. Mathiowetz recalls what percentage of the annual precipitation Driscoll and Carter said typically goes to runoff. Mr. Mathiowetz said he does not recall. Mr. Buehner asked if Mr. Mathiowetz recalls the percentage of the precipitation that they say typically goes to recharge. Mr. Mathiowetz said he does not recall. Mr. Buehner asked if Mr. Mathiowetz recalls what Driscoll

and Carter say the definition of annual yield is. Mr. Mathiowetz said he does not recall their definition of annual yield.

Mr. Buehner said in the report, Mr. Mathiowetz says Driscoll and Carter determined that actual recharge must be greater than 3,600 acre-feet because there is some stream flow and that the exposed area of the Crystalline Rock is 574,000 acres. Mr. Buehner said 3,600 acre-feet sounds like a lot, but if you take 3,600 acre-feet divided by 574,000 acres is six thousandths of a foot multiplied times 12.

Ms. Mines Bailey objected. She said Mr. Buehner needs to ask a question rather than provide testimony. Chairman Hutmacher sustained the objection.

Mr. Buehner asked Mr. Mathiowetz what amount of recharge water it would be for 3,600 acre-feet over 574,000 acres. Mr. Mathiowetz said he could calculate it. Mr. Buehner asked Mr. Mathiowetz if he would have reason to disagree if Mr. Buehner told him it is six thousandths of an inch. Mr. Mathiowetz said he would not disagree, but he would not agree without calculating it himself.

Mr. Buehner said when Driscoll and Carter say it has to be much greater than that, if you're talking about a very, very small amount of water, that's really a statement a person can't argue with. Mr. Mathiowetz said he is not going to judge the USGS on the language they put in their reports.

Mr. Buehner asked how far the observation well is from the applicant's area. Mr. Mathiowetz answered that it is approximately 17.5 miles southwest of the applicant. Mr. Buehner asked if Mr. Mathiowetz believes it is appropriate to use an observation well 17 miles away given the unpredictability of the reservoir. Mr. Mathiowetz answered yes, because it is the only observation well available and he is required to consider observation wells and it shows that the aquifer can be recharged. Mr. Buehner asked if Mr. Mathiowetz is aware that in the report for Application No. 2211-2, located in the area, the engineer that prepared that report said the Division of Water Rights does not cite any observation wells in this area. Mr. Mathiowetz said he is aware. Mr. Buehner said in Application No. 2222-2, which again is in this area, the engineer that prepared the report said the Division of Water Rights does not cite any observation wells completed in the Precambrian Rock in this area. Mr. Mathiowetz said he is aware. Mr. Buehner said also for Application No. 2345-2, the Water Rights Program does not cite any observation wells completed in the Precambrian Rock in this area. Mr. Mathiowetz said he is aware. Mr. Buehner said he guesses Mr. Mathiowetz has a different opinion with regard to the pertinent aspect of a 17-mile away observation well compared to the other engineers. Mr. Mathiowetz said he does have a different opinion because of further information as well as further board decisions that have occurred since the time those engineers wrote their reports.

Mr. Buehner said DENR Exhibit 3, is a map that shows the domestic wells. He said in a recent report Mr. Mathiowetz mentioned the number of wells and a map of those wells was included in the original report, but Mr. Mathiowetz did not include it in this original report. He asked if there is a reason as to why those were not initially included. Mr. Mathiowetz answered that it would depend on what report Mr. Buehner is referencing. The well completion report database is

mapped to the nearest unit of location that is provided to the Water Rights Program by the well drillers, whether that is the center of the section, the center of a quarter, or the center of a quarter quarter. On the occasion that the Water Rights Program gets GPS coordinates There may have been other circumstances with the report Mr. Buehner is referencing that would have warranted including that map. Mr. Buehner said because they weren't included in Mr. Mathiowetz's original report, the recommendation from the chief engineer was made from a report where the domestic wells were not indicated in the report or quantified in the report.

Ms. Mines Bailey objected stating that is not in evidence. Chairman Hutmacher sustained the objection.

Mr. Buehner said his understanding of what he heard Mr. Mathiowetz say is that the septic issue really isn't pertinent to the water rights discussion and review. He asked if that is true. Mr. Mathiowetz said that is not accurate. Mr. Mathiowetz said he reviews the availability of unappropriated water and the potential for unlawful impairment of existing water rights in terms of the potential for adverse impact, as he is bound by the rules and laws. Mr. Buehner asked if that would include adverse impact as a result of septic contamination. Mr. Mathiowetz answered no. Mr. Buehner asked if Mr. Mathiowetz reviews the potential for negative impact of the applicant's water right on a septic system. Mr. Mathiowetz said he does not. Mr. Buehner asked Mr. Mathiowetz to explain why in the application form supplemental information he asks for the type of system for septic disposal as well as the capacity. Mr. Mathiowetz said there is a setback requirement in the South Dakota Well Construction Standards for new well construction that for his purposes that is the consideration. He said he does not know if there are other needs, whether historical in the Water Rights Program or other people that require that information.

Mr. Buehner said he believes he heard Mr. Mathiowetz say that the fracture plug due to fine sediment. Mr. Mathiowetz said it can, and if he said it will plug, that was an accidental misstatement. It is possible that it can. Mr. Buehner said the example Mr. Mathiowetz quoted where there is a well with a half-gallon per hour because it encountered fractures at 100 feet and a well of this kind does not produce. He asked how Mr. Mathiowetz can tell that that is not a result of a lack of recharge. Mr. Mathiowetz answered that there are wells that are isolated and act in that way. These wells have an inflow rate of a half-gallon per hour, and that is the nature of the formation the wells are completed into.

This concluded questioning by Mr. Buehner.

Responding to a question from Mr. Hickey, Mr. Mathiowetz stated that none of the questions asked of him today changed any of his opinions as contained in his report.

Mr. Hickey had no other questions.

Mr. Holzbauer asked if earthquakes potentially influence the fractures and whether they become filled in. Mr. Mathiowetz answered that he has not spent any time studying whether that is possible, but it is possible that earthquakes could potentially have influences on the fractures. He said he does not know much about earthquakes.

Mr. Holzbauer asked if there is such a thing as DNA on water. Mr. Mathiowetz answered no to DNA, but said water with the same source has similar ions. A STIP diagram analysis can be done to analyze the cations and anions to generate a shape, and if they have the same source, the shapes may be the same and the magnitudes might be different. For one well the shape might be bigger, but the general shape is the same. There are various dating processes to determine how old the water is based on various radionuclides.

Mr. Holzbauer said his concern is that one person using water is affecting another person using water, and we don't know if it's the same water or not.

Mathiowetz said it is potentially very hard to determine chemically if it is the same water without spending more time determining exactly where the water came through, or following the molecular path to a point.

Responding to a question from Mr. Bjork, Mr. Mathiowetz said there are definitions within the South Dakota Well Construction Standards for setback distances between septic systems and wells. Mr. Bjork asked if those are not maintained, could it be considered an adverse impact. Mr. Mathiowetz answered that the well construction would be in violation and would need to be plugged and replaced with either a proper well or a variance for well construction would need to be obtained.

There were no other questions of Mr. Mathiowetz by board members.

Ms. Mines Bailey called Eric Gronlund, chief engineer, who was previously administered the oath.

Responding to questions from Ms. Mines Bailey, Mr. Gronlund testified that he has been the chief engineer for approximately 4.5 months. Prior to being appointed chief engineer, Mr. Gronlund was an engineering manager with the Water Rights Program for about a year and a half. Before that, Mr. Gronlund was an engineer III with a Bachelor of Science in agricultural engineering from SDSU and he is a registered professional engineer. Prior to being appointed chief engineer, Mr. Gronlund said he basically handled the day to day processing of water permit applications within the state of South Dakota. This included assisting individuals calling the Water Rights Program and helping them through the application process, making sure the application is complete once it is submitted, the distribution of the application to staff for review, assisting with the technical reviews, reviewing the staff reports, drafting the recommendations, the publication process, and if petitions are filed, noticing and scheduling hearing before the Water Management Board.

Mr. Mines Bailey asked Mr. Gronlund to provide a brief description of the permitting and licensing process. Mr. Gronlund said once an application is filed, under South Dakota law, the Water Rights Program is required to review the application and make a recommendation within 60 days. Once the recommendation is made, there is the public notice process. If the application is a standard application and doesn't get contested, it is commonly approved based on the recommendation. The Water Management Board is provided with a table of the uncontested water permits that are approved. Once contested, an application goes before the Water Management Board for hearing. If the application is approved by the board, it becomes a permit. Once a water permit is approved, based on the statutes, there is a five-year period to complete construction of

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works. When a permit is issued, a cover letter and notice of completion of works is provided to the permit holder. When a permit holder completes the project an investigation is conducted, and ultimately the water permit is licensed to represent the level of development at that time. The investigation varies greatly, depending on staff resources. Generally, after the five years, the project goes on a list for someone to do the licensing investigation. The Water Rights Program has hired four seasonal retired engineers to conduct the licensing investigations.

Ms. Mines Bailey asked if, other than the licensing investigation, does staff visit all of the water permits holders. Mr. Gronlund said staff does not routinely contact water right holders that have been licensed unless there is a complaint of some other reason. There are instances where a water right holder of a license has another permit, and if staff is on-site, they will inquire about the other water right.

Ms. Mines Bailey asked what happens when someone sells their property and transfers the permit. Mr. Gronlund said there is a statute that requires a notice of transfer of ownership to be filed with the Water Rights Program if there is a conveyance of a water permit. It is common that when a piece of property goes up for sale, the realtor or title company contacts the Water Rights Program. However, it also often gets overlooked.

Responding to questions from Ms. Mines Bailey, Mr. Gronlund stated that he reviewed Water Permit Application No. 2805-2 in his prior capacity of engineering manager. He, as chief engineer, has reviewed the application, the report written by Mr. Mathiowetz, and the recommendations of former chief engineer Jeanne Goodman. Mr. Gronlund said he agrees with Mr. Goodman's recommendations. He believes this is a beneficial use and it is in the public interest. Mr. Gronlund discussed the following four 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. 2805-2 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. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock aquifer.

4. Water Permit No. 2805-2 authorizes a total annual diversion of 4.0 acre-feet of water.

Mr. Gronlund stated that he has reviewed the petitions submitted by Mr. Buehner and Mr. Hearne, and he believes they had concerns about Mr. Mathiowetz's report and the approach he took with the report. Their deep-rooted concerns are the impact to the domestic wells in the area and the septic tank issues. The septic tank issues are not within the chief engineer's authority or part of the Water Rights Program review for this permit. Regarding Mr. Buehner and Mr. Hearne's

concerns about the impact to domestic wells, Mr. Gronlund stated that the Precambrian Rock is a unique situation. It is not what we are used to with some of the glacial aquifers in the east river portion of South Dakota, or the Madison aquifer. This is a situation where there are domestic wells or other wells out in the Precambrian Rock that meet the adequate well definition but aren't necessarily a reliable source of water.

Ms. Mines Bailey asked if the application were granted and R & J, LLC completes the well into the Crystalline Rock Aquifer and Mr. Buehner or Mr. Hearne feel that it is impairing their wells, what would that process entail. Mr. Gronlund said they would initially need to contact the Water Rights Program and file a complaint, which would result in the Water Rights Program doing an investigation. The investigation involves staff from the Water Rights Program visiting on-site and talking with the individuals and looking at the well construction of the wells in question and the wells in the area.

Mr. Gronlund said the investigation first involves a desktop look by a staff person. There are approximately 1,600 observation wells throughout the state in the various aquifers in the state. That is one of the first steps, besides well construction that the Water Rights Program would take in investigating that complaint.

Mr. Gronlund said this would be a little different situation because the one observation well in the Crystalline Rock Aquifer is 17.5 miles away from the application, and likely isn't necessarily representative of what's happening in that local area. The Crystalline Rock Aquifer does react to climatic conditions and its water levels vary, more so with the climatic conditions with rising and falling water levels. The observation well probably isn't as much of a benefit to the Water Rights Program in this case. This would be somewhat of a unique investigation as far as needing to look at the well construction and needing to go on-site. It might involve having R&J pump their well after everything has sat for a while, put a tape measure down it to see if, when they start pumping, that domestic well water level goes down. That would be unusual for an investigation, but that might be a situation where it needs to occur.

Ms. Mines Bailey asked what Mr. Gronlund's recommendation is regarding this application. Mr. Gronlund stated that his recommendation remains for approval with the four qualifications, with emphasis on qualification No. 1, the well interference qualification.

Mr. Hickey asked if there is a requirement that if someone has a water permit that is no longer used, they have to notify DENR to report that it is no longer is use. Mr. Gronlund stated that he is not aware of any statute that requires notification.

Mr. Buehner said in the file for No. 479-2, Mr. Gronlund had authored a letter to Mr. Westly Parker discussing the potential water right need for the Gaslight Restaurant. He asked if that was ever resolved. Mr. Gronlund said he believes that letter is dated 2000, and to his knowledge, no response was received to the letter to Mr. Parker. Mr. Buehner asked if Mr. Gronlund knew where the Gaslight restaurant is currently getting their water from. Mr. Gronlund answered no.

Mr. Buehner asked if Mr. Gronlund is aware of the planned unit development recently approved by Pennington County in the Rockerville area. Mr. Gronlund said he believes Brittney Molitor,

Pennington County Planning and Zoning, the Water Rights Program regarding a planned unit development (PUD) in this area. Mr. Buehner asked if the developer of the PUD, which offsets the R&J acreage, contacted the Water Rights Program find out the status of the water rights they were looking at developing the property on. Mr. Gronlund said he believes Mr. Eisenbraun may have called him at some point through the application process. Mr. Buehner asked if Mr. Gronlund recalls sending an email advising them that have a 70 gallon per minute from Water Right No. 479-2 and No. 485-2. Mr. Gronlund said he does not recall. Mr. Buehner asked if the Gaslight and area of this PUD are all under these two initial water rights, and the Gaslight was discussing with Mr. Gronlund back in 2000 the potential transfer of rights of whether they needed a new water right, the Gaslight has been carved out and is operating as a separate entity, and one of those wells that are under this initial water right have also been carved out by, but yet that original 70 gallons per minute Mr. Gronlund has indicated applies to this smaller acreage for this PUD.
Ms. Mines Bailey objected as to relevance, compound question, and facts not in evidence. Chairman Hutmacher sustained the objection.

Mr. Buehner asked if Brittney Molitor, since late last year, had a discussion with Mr. Gronlund with regard to the situation where Pennington County approves construction permits without a required water right for commercial entities. Mr. Gronlund answered if he had that discussion with Ms. Molitor, he does not recall it.

Mr. Buehner asked Mr. Gronlund to explain why Big Mountain Cabins, Silver Mountain Resort & Cabins, as well as the Gaslight do not show up with a valid water right today. Mr. Gronlund answered that he could speculate, but he does not know for a fact.

This concluded questioning by Mr. Buehner.

There were no board questions of Mr. Gronlund.

Mr. Hickey called Juston Eisenbraun who was administered the oath by the court reporter.

In answer to questions from Mr. Hickey, Mr. Eisenbraun stated that he lives in Quinn, South Dakota. He is a rancher and an insurance agent. Mr. Eisenbraun said he is a member of R & J, LLC with Robert Wentz, Sioux Falls, who owns two packaged liquor stores. R& J LLC is a limited liability company that is currently in good standing. Mr. Eisenbraun said he completed and submitted the water permit application to DENR. R & J, LLC intends to construct an 86-unit campground and 15 cabins, a store, and shower house. The campground will be open from May 1 until the end of October. KTM Engineering, Rapid City, designed the plans.

Mr. Hickey offered Applicant Exhibit 100, a copy of the diagram for the proposed campground. Chairman Hutmacher admitted the exhibit into the record.

Responding to questions from Mr. Hickey, Mr. Eisenbraun stated that Exhibit 100 describes the concept of the project. The proposed project is located at Rockerville. There is 1580 feet of highway frontage. The 86 campsites will have water, sewer, and electricity. R & J, LLC is hoping to be approved to use water from the two wells. The wells will be drilled by Taylor

Drilling, Rapid City. Taylor Drilling recommended two wells because it is not known if the wells will produce four gallons per minute or 20 gallons per minute. Mr. Eisenbraun said the projected amount of use for the campground is four acre-feet of water per year. He said if the first well is drilled and it produces 20 gallons per minute, a second well would probably not be drilled, but R & J, LLC would go with whatever Taylor Drilling's recommendation is. Under the concept, a storage reservoir is planned. The purpose of the reservoir is to equalize the water so there is not a huge draw at one time. Having the reservoir would allow R & J, LLC some flexibility as to when the wells would be pumped, and R & J, LLC would be willing to pump the wells in the evening or at night so as not to impair other users.

Mr. Eisenbraun said he believes Taylor Drilling is aware of the setback requirements and will comply with those requirements.

For the first year, there will be 86 RV hookups, 15 cabins, an office/store, a laundry facility, and shower house. In the future a pool will be constructed, along with a bath house and a pavilion. R & J, LLC has approached Pennington County with respect to obtaining the necessary conditional use permits. The planning and zoning board approved the proposal. The county commission is waiting for the outcome of the permit application before it makes a decision on the proposal.

This will be a seasonal operation that is open from May 1 until October 30 each year. It is anticipated that the peak period will be June 15 through August 15.

Mr. Hickey asked Mr. Eisenbraun if R & J, LLC agrees with the recommendation and the qualifications of the chief engineer. Mr. Eisenbraun said it is his opinion that the proposed operation is in the public interest, the proposed use is a beneficial use, and there is water available, and there will be no unlawful impairment of existing rights.

Mr. Hearne had no questions of Mr. Eisenbraun.

Mr. Buehner said on Applicant Exhibit 100, it shows one potential well area, but the application was for two wells. He asked where the second well will be located. Mr. Eisenbraun answered that the second well, if needed, will be between the shower house and the road. The well shown on Exhibit 100 will be drilled first.

Mr. Buehner asked Mr. Eisenbraun how long R & J, LLC has owned this property. Mr. Eisenbraun said R & J, LLC has owned the property since April or May 2019. Mr. Buehner asked if the previous owner of the property talked to Mr. Eisenbraun about the well or the flow capacity of the well at the neighboring motel. Mr. Eisenbraun answered they did not. Mr. Buehner asked if Mr. Eisenbraun is aware of the large planned unit development the county has approved directly south of the proposed campground along Highway 16, and what that development is going to consist of. Mr. Eisenbraun said he is aware of the planned unit development, and he does not know what the development will consist of. Mr. Buehner asked if Mr. Eisenbraun attended a meeting at the Gaslight where the developer discussed his plans, and what he said he was told his water rights were for that area. Mr. Eisenbraun said he did attend the meeting, but he does not recall what the developer said he was told his water rights were for that area. Mr. Buehner asked if it is true that R & J, LLC needs a water right permit to proceed with the conditional use permit

request, and that there is a long list of other things that must be approved before R & J, LLC can go in with the request. Mr. Eisenbraun said that it is true that a water right permit is needed to proceed with the conditional use permit, and the only other permit needed is a septic permit. Mr. Buehner said R & J, LLC is not just waiting for a water permit, and if they do get this water permit, is it true that per Pennington County Ordinance 306 this whole process starts over with notification of the neighbors, and then the county will decide whether or not to approve the conditional use permit. Mr. Eisenbraun answered yes.

This concluded questioning by Mr. Buehner.

Ms. Mines Bailey asked Mr. Eisenbraun if he understands that if R & J, LLC is granted a permit that does not necessarily mean that they will find water when the well is drilled, that domestic use takes priority of R & J, LLC's use, and the qualification the chief engineer is recommending. Mr. Eisenbraun answered yes, he understands, and he agrees to abide by the qualifications. Ms. Mines Bailey asked if there is a plan for an alternate water source in the event that adequate water for the campground is not found in either of the two proposed wells. Mr. Eisenbraun stated that there is not a plan for an alternative water source. If adequate water is not found, the campground probably will not be built.

Ms. Mines Bailey said there are concerns about the septic system. She asked if R & J, LLC has started working on the septic system permitting. Ms. Eisenbraun said the engineering firm is working on that. An application has not yet been submitted to DENR.

This concluded questioning by Ms. Mines Bailey.

Mr. Larson asked why the 20,000-gallon reservoir is included the plan. Mr. Eisenbraun said R & J, LLC is thinking it's probably not going to get a 20 gallon per minute well, so the reservoir will be needed to serve the users. Mr. Larson asked if R & J, LLC will be able to pump water into the reservoir at night when others are not using their wells, and how many days will the 20,000-gallon reservoir will cover the needs for the campground. Mr. Eisenbraun said R & J, LLC is willing to pump at night, and the reservoir is enough capacity for two days use.

Mr. Bjork asked if Mr. Eisenbraun is concerned with the close proximity of the well, the septic tank, and the reservoir. Mr. Eisenbraun answered that there is more than 300 feet between each of those three facilities.

This concluded questions from the board members.

Mr. Hickey had no further witnesses.

Bill Hearne was administered the oath by the court reporter and testified that he lives at 23762 Pine Haven Drive and is an adjacent landowner to the subject property. Mr. Hearne said most of his career has been in owning private businesses, but he has a BS in engineering, a Master of Science in economics, and a Master of Science in business administration. Mr. Hearne stated that he taught for two years in the Graduate School of Business at the University of South Dakota and also taught classes at the School of Mines.

Mr. Hearne offered Exhibit 300. Chairman Hutmacher admitted the exhibit into the record.

Mr. Hearne stated that Exhibit 300 shows the subject property and the location of the Hearne well on property 50206, a commercial motel next to Mr. Hearne's home, and two wells located nearby that serve the community. Mr. Hearne stated that this area is fragile as far as water production and the ability to process septic because of the unusual rock formation. It is dramatically different than a mile down the road on the other side of the nonconformity where it is mostly sandstone and limestone. Mr. Hearne said in his area there are cracks and no water voids, and there are a lot of issues that relate to that. He stated that when he moved into his home 11 years ago, the commercial property and motel were vacant. When the water was tested at the time, the volume and quality was good. Over the years, that motel was renovated. The person that renovated the motel had one bed per room About two years ago, the motel changed hands again, and it went from one bed per room to two beds per room. Mr. Hearne said that amount of increase in activity dramatically changed the effect on his home, and it happened almost instantly. Mr. Hearne said his well volume dropped from four to six gallons per minute to three gallons per minute and stayed at that level. The biggest concern is the nitrate levels in the water. The motel is currently operating at about 200 percent of the permitted capacity on septic, and the nitrate level has just exploded. Mr. Hearne said his well is the closest well to the motel. The nitrate level in his well is running 11 ppm to 13 ppm, and the federal guideline for nitrates is 10 ppm. Mr. Hearne said he had to install a reverse osmosis system in his home to try to deal with that. He said because of that unpredictable nature of how the water flows in this area, it is unknown where that effluent will go. Mr. Hearne said in this case, it comes to his well. He said in his case, a business causes a detriment that somebody else has to spend money to mitigate. The process of getting regulatory agencies to deal with that has been totally ineffective. Initially, when he went to the county they said that is not their issue, but it is a DENR issue. Mr. Hearne submitted the data to DENR. After several months DENR said it is not their issue, but it is a county issue, so he sent it back to the county. Mr. Hearne said he has worked with the county for over a year, and, as far as he knows, they have done nothing even though that facility is operating substantially over their permitted capacity. Mr. Hearne said his concern is that once someone gets a permit, they can do whatever they want to do. His experience is that the regulatory agencies either choose not to do anything or just look the other way. He said he is concerned that as more commercial development occurs in this fragile and unpredictable area, on the septic side, the nitrate level is going to go up. His expectation is that the two community wells will exceed the 10 ppm, just like his well has.

Mr. Hearne said if this permit is granted, he has a high expectation that there will be impairment issues of other wells because that water will turn into septic, which is then going to contaminate other wells. Nobody really knows where that goes because of the unpredictable nature of the area. So, in granting this permit it would be creating a mess that somehow would have to be cleaned after the fact. The size of this development dwarfs anything else in the area. The motel is about equal to the entire subdivision as far as usage goes, and this proposed development will be double or triple of what the motel is. He said in orders of magnitude it is more volume and more septic production. Mr. Hearne said he has already seen the effect, and the neighbors are also going to have the effect, and his guess is that his will get worse.

Mr. Buehner asked Mr. Hearne if he recently installed a cistron. Mr. Hearne answered that he was concerned that his well was pumping three gallons per minutes. If he is washing his motorcycle with a spray washer and his wife takes a shower, she runs out of water, so he installed the cistron for backup capacity. Mr. Buehner asked how deep of a hole was dug for the citron. Mr. Hearne said the installer of the cistron wanted the hole to be eight feet deep, but it was extremely difficult digging, but finally got it seven feet deep.

This concluded questions from Mr. Buehner.

Responding to questions from Mr. Hickey, Mr. Hearne stated that the well was there when he bought the home, and he has been there about 11 years. An application for well construction was filed by the previous owner, and the well was permitted. The well is 75 feet deep. Mr. Hearne said he does not know what the water saturation level is. He asked the company that installed the cistron to do a review of the well, and they didn't find any problems. Mr. Hearne said he does not know the motel well's depth or the gallons per minute for that well. Mr. Hearne said his well is about 250 to 300 yards away from the proposed septic system shown on Exhibit 100.

Mr. Hickey asked if Mr. Hearne has visited with Mr. Eisenbraun about the nature of the septic system that he is contemplating. Mr. Hearne answered that he has talked to Mr. Eisenbraun briefly, but he did not get a good understanding of the septic system at all, and he would like to know more. Mr. Hickey asked if Mr. Hearne would like the engineer who develops the plans for the septic system to share it with him. Mr. Hearne answered that he would like to see it.

This concluded questions by Mr. Hickey.

Ms. Mines Bailey asked Mr. Hearne which letter on DENR Exhibit 3 represents his well. He answered that his well is listed under the prior owner, Norton, and labeled with the letter "F" on the exhibit. Ms. Mines Bailey asked what the depth of the pump is in Mr. Hearne's well. He answered that it is 75 feet.

This concluded questions by Ms. Mines Bailey.

Chairman Hutmacher asked what the motel has for a septic system. Mr. Hearne said it is a mound system, and there are two of them. About 10 years ago, the county required the motel to double the capacity, so the motel had the old septic system taken out and installed two systems and they alternate usage of the two systems.

There were no other questions from board members.

Lon Buehner was administered the oath by the court reporter and testified that he lives at 23734 Pine Haven Drive, Rapid City, South Dakota. Mr. Buehner graduated from South Dakota School of Mines in 1974 with a mining engineering degree. With the mining engineering degree, he had fairly extensive schooling in geology. Upon graduation, he went to work for Amoco, which is a major oil company, and he worked there for 28 years. From 1977 to 1978 Mr. Buehner attended a year-long petrophysics training program at the research center, that was taught by research experts. Petrophysics is the part of geology that deals with the study of rocks. Mr. Buehner said

for his career he was on the production site of the business. He was involved in completing wells, repairing wells, predicting performance of wells, predicting performance of reservoirs, and identifying economic opportunities to enhance recovery. He worked on oil wells, gas wells, water wells with electric pumps, including numerous reservoirs that contain natural fractures. Mr. Buehner said in his career he functioned as an expert witness on many occasions with oil and gas commissions as well as an expert witness in some litigation matters. He retired in 2002 and moved into the Rockerville area is 2003.

Mr. Buehner offered Exhibit 200, three photos he personally took and a copy of a postcard of the old Rockerville Gold Town tourist attraction. Chairman Hutmacher admitted the exhibit into the record.

Mr. Buehner said the picture in the upper left corner of Exhibit 200 is a postcard of Rockerville Gold Town. He said he would speculate that this was probably the late 1950's, and the water rights for these properties are dated 1958. The picture on the upper right and the two pictures on the lower part of the exhibit are pictures Mr. Buehner took in the spring of 2020 of the two water rights that pertain to the heart of Rockerville, Rockerville Gold Town, Rockerville Park. All that is left of Rockerville Gold Town today are the foundations of the buildings. The upper right corner photo shows the construction that has started on the Rockerville PUD. The lower left photo represents the Rockerville Park. The cement slab shown in the picture used to be the restrooms, which were torn down in the last 17 years. In the lower left picture, there is a pipe that is sticking up above a bent fence post. That is one of the wells that the PUD will be using under their 70 gallon per minute water right.

Mr. Buehner said if you look at the staff report, there is a large amount of estimated water being used in the Rockerville Park and in the Gold Town. Mr. Buehner said that water use cannot be valid because of the lack of development that exists.

Mr. Buehner offered Exhibit 201 from the Pennington County records, and is a page from the May 5, 2020, meeting agenda packet for the Rockerville Gold Town PUD, which has been approved by Pennington County.

Ms. Mines Bailey objected based on relevancy and hearsay. Mr. Hickey joined in the objection.

Mr. Buehner said the reason the exhibit is relevant is because this property is in the area of interest and it represents two of the water rights that have been discussed in the testimony.

Chairman Hutmacher sustained the objection, and the exhibit was not admitted into the record.

Mr. Buehner asked if he can talk about the approved PUD without the exhibit. Chairman Hutmacher said Mr. Buehner could talk about the PUD.

Mr. Buehner stated that the PUD in the Rockerville area that has recently been approved by Pennington County consists of 100 townhomes, with 50 of the units being one bedroom and 50 of the units being two bedrooms. In addition, they have approval for two, three-story apartment buildings as well as substantial commercial lots that they plan on selling and developing. Mr.

Buehner said there is a lot of development that is going to occur immediately offsetting the applicant's property. Water rights that already exist, water rights that they have been told equate to 70 gallons per minute.

Mr. Buehner offered Exhibit 202, which is a map that he prepared showing the location of the proposed RV park. This map represents area wells that are in the South Dakota well completion database in the 4 section area surrounding the applicant's property. Mr. Buehner said he plotted the locations, and in his subdivision where he knew exactly where the well was located, he noted the exact location.

Mr. Hickey objected to the exhibit on the basis of relevancy. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner said the point he wanted to make is that there are a lot of domestic wells in the area. The aquifer doesn't know if it's a commercial well or a domestic well. The reality is when you start to look at the estimated use of the existing water rights, particularly when you take a look at Exhibit 200 where very little properties exist, but we're seeing a large allocation of water for those properties. Mr. Buehner said it is important to recognize that the number of domestic wells does have an impact on the water in the area.

Mr. Buehner offered Exhibit 203, which is a copy of a USGS topographic map of the area that he accessed online.

Mr. Hickey objected based on relevancy. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner said the applicant's property is just north of where the map shows Rockerville, north of Highway 16. He said with this exhibit you can see the dramatic drop off in elevation to the northwest, north, and east down into Spring Creek. It is about 600 feet. Mr. Buehner said his interpretation of this exhibit is that the localized aquifer is quite small. This area is located on a fairly flat, but elevated area compared to Spring Creek. He said there won't be an opportunity to get water down in Spring Creek up into the aquifer, and with that degree of relief, the fracture intensity is diminished, if not totally gone and, if anything, the Rockerville area is going to lose precipitation through runoff and into Spring Creek.

Mr. Buehner offered Exhibit 204 is a copy of a page from the DENR staff engineer's referenced study, Hydraulic Conditions and Budgets for the Black Hills of South Dakota.

Mr. Hickey objected on the basis of relevancy. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner said the pink color in the middle of Exhibit 204 represents the Precambrian in the Crystalline core area of the Black Hills. The outcrop of the other formations circles the Black Hills. The Black Hills were created from an uplift and through erosion and in the center of the Black Hills is the inner Crystalline Rock.

Mr. Buehner offered Exhibit 205, which is a picture he took of a sign that exists at the turnout that he pointed out earlier in his cross examination.

Ms. Mines Bailey objected based on hearsay and relevancy. Mr. Hickey joined in the objection. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner offered Exhibit 206, which is a copy of the geologic map of the Rockerville Quadrangle showing the geology in the area. Mr. Buehner said he downloaded it from the internet.

Mr. Hickey objected based on relevancy. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner said this map represents the geologic units that are present on the surface in the Rockerville Quadrangle. There is yellow dot one-third of the way down from the top left side that shows Rockerville and there is a cross-section that goes very close to Rockerville. That is shown in the upper cross-section at the bottom of the page. The brown represents the Precambrian reservoir. The white is also Precambrian shown below the blue formations. This shows the Madison Formation and other formations dipping to the east. The Precambrian formation underneath that actually is a confining reservoir because the water does not leave those upper formations. There is extremely thick Precambrian Rock where Rockerville sits. That is the rock that fractures are being produced from either weathering or fractures near the surface.

Mr. Buehner offered Exhibit 207, which is a blowup of that same Exhibit 206. It just shows the Rockerville area.

Mr. Hickey objected based on relevancy. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner stated that Exhibit 207 shows the Rockerville area. The yellow around Rockerville represents a surface of thin gravel deposit. The light tan or brownish color represents the Precambrian Rock. Less than a mile to the east there is a blunt shift in the geology to where you get into the Madison Formation.

Mr. Buehner said referring back to the thick Precambrian Formation that he showed earlier, water is being produced from the same formation that the septic effluent is being put in. There is a dramatic change in geology over a very short distance.

Mr. Buehner offered Exhibit 208, which is a photograph he took of a road cut one mile east of the applicant's property.

Chairman Hutmacher admitted the exhibit into the record.

Mr. Buehner stated that this photo is a road cut, which is explained on the sign in the turnout area just to the west. This is the Madison Formation, a prolific water producer that Rapid City and other areas get their water from. The property owners just above this road cut are the Hoffmans.

The Hoffman well was listed in the staff report as a Crystalline Rock Aquifer well. Mr. Buehner said with the high rate of 100 gallons per minute that they achieved, along with the description of cuttings, it is his opinion that it probably is more of a Madison Aquifer producer than a Crystalline Rock Aquifer producer. This rock has porosity and permeability that water can flow through, unlike the Crystalline core.

Mr. Buehner offered Exhibit 209, which is a photo he took of another road cut in the heart of the downtown Rockerville area.

Chairman Hutmacher asked Mr. Buehner to provide testimony regarding the water permit application. Mr. Buehner said the geology is very important from the standpoint of understanding the water production.

Chairman Hutmacher admitted the exhibit into the record.

Mr. Buehner stated that Exhibit 209 is a photo he took of another road cut. It is less than a mile from the previous exhibit. This shows the Precambrian Rock that the wells in the area produce out of. It is more fractured near the surface then below the surface, but it is a different type rock and different geology.

Mr. Buehner offered Exhibit 211, which is an open hole completion schematic. He said the reason he went through the geology is that it is important to understand that when producing from natural fractures versus producing from the rock itself, the storage capacity is diminished, and the predictability becomes an issue. Mr. Buehner said Exhibit 211 is an open hole schematic to help understand how the wells produce water.

Ms. Mines Bailey objected on the basis of relevancy. Mr. Hickey joined in the objection and added that it invades the province of the board. Chairman Hutmacher sustained the objection and did not admit the exhibit into the record.

Mr. Buehner stated that almost all of the wells in the area are such that a small amount of casing is set in place, then the hole is drilled, and it is completed open hole. The reason that is done is because when there are fractures that are producing the water, you want to have as much exposure to the reservoir as is possible. Sometimes water is encountered at a fairly high level and sometimes it is deeper. Mr. Buehner said that homeowners in the subdivision that are operating with cistrons with one gallon per minute flow restrictors because of the lack of water from their wells. He said he recently had a well drilled and encountered two gallons per minute at about 100 feet. A lot of wells in this area are drilled to 100 to 200 feet because that is where the first fracture zone is encountered, according to the drilling reports. A well was drilled to a depth of 650 feet, and below 100 feet no incremental water was found. The reason they know there wasn't any incremental water is because the well was drilled with air, it is air lifted, so they are able to determine whether or not any incremental water was picked up. Mr. Buehner said you can't assume once you get below the initial fracture zone that more water will be encountered. That is why there is some variance with regard to well depths in the area.

Mr. Buehner stated that his Exhibits 214 through 217 are already included DENR Exhibit 1, the administrative file. Those are copies of invoices from Howie Construction that discuss the performance of wells in the area when the well servicing company was called because people were not getting water from their wells. This started in 2003. The two wells that his subdivision drilled and are currently hooked up to cistrons and one gallon per minute flow restrictors were 120 feet deep and 160 feet deep and they initially were air lifted when they were drilled. One well was 10 to 15 gallons per minute and the second well was 15 gallons per minute. In a matter of a few years, rainfall dropped off dramatically. The subdivision called the well servicing company thinking there was a pump problem, a shale problem, or that shale was sloughing in. It was learned that none of that had occurred. The well servicing company tested the pump and it ran fine. Mr. Buehner read the descriptions of the problems with the wells. He said the subdivision has had a difficult time meeting its water needs even though there is not really much water being produced in the area. There are a fair number of domestic wells. The use in the subdivision is approximately 5,000 gallons per day. There is a report on a water permit for the Golden Hills Subdivision, and they estimated their use at 3,500 gallons per day. The two subdivisions are using 8,500 gallons per day compared to the 10,000 gallons per day that the applicant is going to be using. Mr. Buehner said this does not include the Gaslight, which has been operating for 20 years; hopefully it will get a permit for the water they are using.

Mr. Buehner offered Exhibit 219, which is a copy of a page that the staff engineer, who wrote the report on the application, referenced regarding the Hydrologic Conditions and Budgets for the Black Hills of South Dakota authored by Dan Driscoll and Janet Carter.

Ms. Mines Bailey objected as to hearsay. Mr. Buehner said this report is publicly available, and he got a copy of it from the internet.

Mr. Hickey joined in Mines Bailey objection and due to lack of foundation.

Chairman Hutmacher sustained the motion, and the exhibit was not admitted.

Mr. Buehner stated that the report that the staff engineer referenced, as well as other publications, states that the average precipitation in the Rockerville area or in the core area of the Hills is 18.61 inches of water, and the report also states that they did a pan evaporation study near Pactola, and they determined that 30 inches of water evaporated from that pan during the summer. Mr. Buehner said evapotranspiration or evaporation itself eats up the lions share of the annual precipitation. It is important to understand what happens with the annual precipitation because that is where the recharge to the aquifer comes from. That same report that the staff engineer references states that evapotranspiration is estimated to be 91 percent of the annual precipitation, leaving about nine percent for runoff and recharge.

Mr. Buehner offered Exhibit 221, which is page 59 of the Hydrologic Conditions and Budgets for the Black Hills of South Dakota authored by Dan Driscoll and Janet Carter that the staff engineer referenced and used in his report.

Mr. Hickey objected on the basis of relevance and lack of foundation. Chairman Hutmacher overruled the objection and admitted the exhibit into the record.

Mr. Buehner said this exhibit is a map of the estimated annual yield and contours for the average annual recharge in inches for the Black Hills. The white area in the middle is the Crystalline Rock core of the Black Hills. They have colored and highlighted the Madison and Minnelusa Formations. Rockerville is located in the central area of the core on the right-hand side. Mr. Buehner stated that what the authors, Driscoll and Carter, are saying is they are estimating annual recharge in this area of the Hills to be no more than two inches of water per year.

Mr. Buehner offered Exhibit 222, which is a table he prepared for four permitted areas in the Rockerville area, the water that has been allocated by existing permits, and the acres for each of those properties.

Ms. Mines Bailey objected as to relevance, foundation, and hearsay. Mr. Hickey joined in the objection. Chairman Hutmacher sustained the objection, and the exhibit was not admitted into the record.

Mr. Buehner offered Exhibit 223, an exhibit he prepared summarizing the water for the permits, the annual precipitation, and the published recharge.

Ms. Mines Bailey objected as to relevance, foundation, and hearsay. Mr. Hickey objected as to relevance, foundation, hearsay, and it is also cumulative to his testimony. Chairman Hutmacher sustained the objections, and the exhibit was not admitted into the record.

Mr. Buehner said the water rights that are in place represent recharge over a 1,400-acre area.

Mr. Buehner offered Exhibit 224, which shows the same well database map that he entered earlier with a circle that represents a radius that gets you to 1,400 acres.

Ms. Mines Bailey objected as to relevance. Mr. Hickey objected as to relevance and it is cumulative to Exhibit 202. Chairman Hutmacher sustained the objection, and the exhibit was not admitted into the record.

Mr. Buehner stated that it is his opinion that with the amount of allocated water that is in existence, there is no water available. It hasn't been a problem until now because there was little to no development in the Rockerville area. He said the planned unit development is now being constructed, and in the median of the highway, they are building a city; two apartment buildings, 100 townhomes, a restaurant that is using water without a permit, and a motel. Because of the water that has been allocated to the existing properties, and when comparing that allocation to the two inches of recharge, the numbers show that there is no unallocated water available.

Mr. Buehner offered Exhibit 225, the cover sheet of the Golden Hills Homes drinking water report. It is one of the water rights listed in the area of interest, and Exhibit 226, the Golden hills Homes drinking water report.

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Ms. Mines Bailey objected to Exhibit 226 on the grounds of relevance and hearsay. Mr. Hickey objected to Exhibits 225 and 226 on the grounds of relevance and hearsay. Chairman Hutmacher sustained the objections, and the exhibits were not admitted into the record.

Mr. Buehner read the following from the report. "We serve more than 47 customers an average of 3,525 gallons of water per day. Our water is groundwater that we produce from local wells. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Golden Hills Homes public water supply system is high." Mr. Buehner stated that this is a water quality report that is concluding that the susceptibility is high. He said it is his opinion that not only is there is not unallocated water available, but it is not in the public's best interest. If there is a situation where the plan unit development is up and running with a water right permit, the Gaslight needs help because it doesn't have a permit, and if there is not sufficient water to meet the applicant's needs, Mr. Buehner said he doesn't want to see a situation where existing commercial properties are shutdown. He said he is also deeply concerned with regard to septic because with the Precambrian fractured reservoir, water is being produced from a relatively shallow depth, and that is the same zone that the septic is being put in. The state has recognized that in this area, it is highly susceptible to contamination.

Mr. Hearne had no questions of Mr. Buehner.

Ms. Mines Bailey asked Mr. Buehner if he has a well completion report on file for his domestic well. Mr. Buehner said he doesn't own the well. He is on a shared well that has a filed a well completion report on record. Ms. Mines Bailey asked which well it is. Mr. Buehner said the well is not shown on an exhibit. He said there were about 50 wells that he pulled completion reports and the wells shown on DENR's exhibit shows substantially less wells than that. Ms. Mines Bailey asked what name Mr. Buehner's well is listed under. Mr. Buehner answered that it is an Earl Stratmeyer well. The location is not where DENR Exhibit 3 shows it is. In response to a question from Mr. Mines Bailey, Mr. Buehner said the well is not shown on DENR Exhibit 3 as D, and of the Es, or either of the Ns. He said his two shared wells are on lots that are adjacent to the applicant and within 500 to 700 feet of the proposed wells. They are not shown on the exhibit. Mr. Mines Bailey asked if the wells are listed on the key. Mr. Buehner said his Exhibit 213 was taken from the South Dakota well completion report and has the date of April 3, 1996, on the bottom of the page, and there is no such well listed on the key in DENR Exhibit 3.

Ms. Mines Bailey asked Mr. Buehner what the depth of his well is and at what depth the pump is set. He answered that the well is 160 feet deep, and the pump is set at the bottom of the well.

Ms. Mines Bailey asked Mr. Buehner if he is aware that recharge to an aquifer can go outside of a property line where the well may be located. Mr. Buehner answered that he believes that could happen. Ms. Mines Bailey asked if the static water level of Mr. Buehner's well was measured during the dry times. Mr. Buehner said it was not.

This concluded Ms. Mines Bailey's questions for Mr. Buehner.

Mr. Hearne, Mr. Hickey, and the board members had no questions of Mr. Buehner.

None of the parties called rebuttal witnesses.

Chairman Hutmacher requested closing remarks.

Ms. Mines Bailey stated that the South Dakota Legislature has imposed statutes that require that water be put to the maximum beneficial in the state. SDCL 46-2A-9 which sets for the four factors that must be met before any permit can be granted. Those four factors are 1) there has to be availability of unappropriated water, 2) it has to be demonstrated that there will not be unlawful impairment of existing rights, 3) it has to be a beneficial use, and 4) in the public interest. With regard to the availability of unappropriated water, the board heard testimony from Adam Mathiowetz, an expert engineer with years of experience and education in hydrology and geology. The best information available about the Crystalline Rock Aquifer is that there is, at a minimum, 3,600 acre-feet of recharge to this aquifer every year. Mr. Mathiowetz also testified regarding the best information available and it just isn't set up so it can be calculated on a smaller, more local scale. In looking at this, Mr. Mathiowetz also evaluated the withdrawal, and said it was most appropriate to look at a smaller area of withdrawals because of the fault lines that exist. Because of the natural constrictions on the water, he looked at that limited area and said that there is a total water use of approximately 217 acre-feet per year. Based on that, Mr. Mathiowetz concluded that there is unappropriated water available. Mr. Mathiowetz looked at the potential for unlawful impairment, and he testified that there is clear evidence that this aquifer is unpredictable, that there is no uniformity to the fractures within this aquifer. Mr. Mathiowetz testified that, given the fact that there is a lack of significant history of complaints in this aquifer or even this portion of the aquifer, and given the relatively low diversion rate and the low volume requested by the applicant, that it was his expert opinion that it was unlikely to cause unlawful impairment. The third fact is beneficial use, which is defined by statute as beneficial to the appropriator. Mr. Eisenbraun testified to that, expressing the benefit of his campground and business venture. The board also heard the chief engineer testify to the fact that this is the type of use that has been found to be beneficial by the Water Management Board historically. The fourth factor is public interest. The board heard chief engineer Gronlund testify that this use has been found to be in the public interest in the past. Overall, as this board knows, anytime someone sinks a well, they are not guaranteed water, and that a permit doesn't equal water, but in this matter the four factors have been met. There has been evidence presented meeting all of the factors for granting a water permit.

Ms. Mines Bailey stated that the chief engineer recommended approval of Water Permit Application No. 2805-2 with the qualification that have been proposed. She noted that the board may add other qualifications as it deems necessary.

Mr. Hickey said he would join in the argument of the state, and that the applicant accepts the qualifications and condition as outlined in the chief engineer's recommendation. It is in the public interest, the evidence shows that there is available water based upon reasonable probability, there is no unlawful impairment to adequate wells in the area, be it domestic or otherwise permitted, and it is in the public interest. He requested that the board approve the application.

Mr. Buehner stated that there is no unallocated water. He said you can't be using water if properties don't exist or buildings don't exist in the Rockerville area. That will change with the planned unit development where a city of 300 people is in the process of being built. He said he

puts a lot of faith in Dan Driscoll and Janet Carter. They have published a lot of information, and when they estimate two inches of recharge, he believes that because his wells indicate that, or the wells wouldn't be on cistrons with one gallon per minute flow restrictors. Mr. Buehner said when you take wells that go from 10 to 15 gallons per minute, and in a matter of a few years they are on a one gallon per minute flow restrict and barely getting by with water, that tells him that the recharge is very limited. He encouraged the board and staff to take a hard look at water rights in this area because there are properties that have been operating, in some cases for decades, without a valid water right. Mr. Buehner said he has a concern with public interest on things like the Gaslight. The Gaslight is highly regarded by the community people in the area. It is the only restaurant outside of Rapid City unless you go to Keystone. Mr. Buehner said if there is a water production problem, he or someone in the community will be notifying the state. It is going to be very difficult for them to see where the problem is. The Gaslight has been using potentially thousands of gallons a day, and they don't even have a water right permit, so there is going to be serious consideration in shutting the Gaslight down. That type of action is not in the public interest. Mr. Hearne commented during his testimony that the nitrate level in his water exceeds the 10 parts per million. Mr. Buehner said he did not get into it in this discussion, although he had furnished it with the information that is part of Exhibit 1. Mr. Buehner said he has filed formal complaints with DENR on the septic issues with the amount of septic effluent be disposed of versus what is permitted. The DENR elected to send the complaint to the county. Mr. Buehner said his community has not heard one word in a year, so if this application is approved, he will file the complaint and will again hope that the staff and the board recognize the situation. He said his calculations show there is no unallocated water available and he does not believe it is in the public's best interest to go ahead with additional water knowing that a city of 300 is being built right next door. There are domestic wells in the area that are barely getting by, and septic systems that may be causing the water to be unsafe to drink.

Chairman Hutmacher requested board discussion and board action.

Mr. Freeman said he believes the staff engineer testified that water is available, and the other factors have been met. There was no other expert testimony to the contrary. Qualification No. 1 offers protection on the water use. He appreciates the septic issue concerns, but the Water Management Board does not have jurisdiction of those issues.

Motion by Freeman, seconded by Larson, to approve Water Permit No. 2805-2, R & J, LLC, subject to the qualifications set forth by the chief engineer. A roll call vote was taken, and the motion carried unanimously.

Ms. Mines Bailey will prepare proposed Findings of Fact and Conclusions of Law, which are due by September 10, 2020. Objections and alternative findings are due by September 25, 2020.

Chairman Hutmacher closed the hearing and declared a recess until 8:30 am on July 9, 2020.

JULY 9, 2020

Chairman Hutmacher called the meeting back to order at 8:35 a.m.

Board members present were Bjork (remotely), Dixon, Freeman, Holzbauer, Larson, and Hutmacher. Comes was absent.

WATER PERMIT APPLICATION NO. 1992-1, TOWN OF BUFFALO: Chairman Hutmacher opened the hearing.

Mr. McVey stated that included in the board packet were the report on the application, recommendation of the chief engineer, petitions in opposition, Affidavits of Publication, notices of the scheduled hearing, motions filed by the parties, and a variety of Orders from the prehearing chairman.

July 8, 2020 Trisha Etringer submitted a Motion for Continuance, and Dakota Rural Action submitted an Objection, Response, and Motion for Reconsideration in response to an Order from the prehearing chairman denying Dakota Rural Action's earlier Motion of a Continuance. These two documents were not included in the board packet.

Mr. McVey stated that the Motion for Continuance filed by Ms. Etringer is identical to the motions the board acted on the prior day of the meeting.

Motion by Freeman, seconded by Larson, to deny Ms. Etringer's motion for a continuance of the hearing for the reasons as set forth in the earlier order relating to Dakota Rural Action's motion. A roll call vote was taken, and the motion carried unanimously.

Mr. McVey stated that Dakota Rural Action filed a motion for reconsideration of the prior Motion for Continuance filed by Dakota Rural Action and denied by the prehearing chairman on July 2, 2020. Mr. McVey said this motion did not contain any new information.

Motion by Freeman, seconded by Holzbauer, to deny Dakota Rural Action's Objection, Response, and Motion for Reconsideration. A roll call vote was taken, and the motion carried unanimously.

Chairman Hutmacher requested appearances.

Ann Mines Bailey, Assistant Attorney General, represented the Water Rights Program.

Dusty Ginsbach, attorney, represented the town of Buffalo.

Ms. Mines Bailey offered Exhibit 1, the administrative record for Water Permit Application No. 1992-1, town of Buffalo. It contains the application, the report, the recommendation, the petitions to intervene, notice of publication, and all subsequent filings by the parties. Chairman Hutmacher admitted Exhibit 1 into the record.

Ms. Mines Bailey called Whitney Kilts who was administered the oath by the court reporter.

In response to questions from Ms. Mines Bailey, Ms. Kilts testified that she has been natural resources engineer with the Department of Environment and Natural Resources Water Rights Program for about five years.

Ms. Mines Bailey asked Ms. Kilts to identify Exhibit 2. Ms. Kilts said Exhibit 2 is a copy of her curriculum vitae. The curriculum vitae was prepared by Ms. Kilts and it is up to date.

Ms. Mines Bailey offered Exhibit 2. Chairman Hutmacher admitted the exhibit into the record.

Ms. Mines Bailey asked Ms. Kilts to explain what her job entails. Ms. Kilts said she prepares technical reports for the chief engineer on assigned groundwater permit applications, provides testimony to the Water Management Board on contested applications, responds to inquiries from the public and other state and federal agencies on aquifer, dam, water well, and basic water rights information questions. Ms. Kilts also co-directs the daily activities of the seasonal observation well technicians, and she helps perform data management in quality control and quality assurance on the observation well network program. Ms. Kilts does water permit licensing inspections and dam safety inspections, assists in the review of plans and specifications for the Dam Safety Program as well as other activities as assigned.

Responding to questions from Ms. Mines Bailey, Ms. Kilts stated that she is familiar with Water Permit Application No. 1992-1. She prepared the report to the chief engineer on Water Permit Application No. 1992-1. The scope of her review was to determine if unappropriated water was available in the aquifer for the proposed diversion by the application and to see if there was potential for unlawful impacts to existing rights as a result of the application.

Ms. Kilts said in the last paragraph on page 7 of the report, "City of Buffalo" should be changed to "town of Buffalo.". Ms. Kilts noted that the pending application that was referred to under *Withdrawals* on page 5 was granted after the report was finalized.

Ms. Mines Bailey asked Ms. Kilts to present her report.

Ms. Kilts stated that Water Permit Application No. 1992-1 by the Town of Buffalo proposes to appropriate up to 82 acre-feet of water annually at a maximum instantaneous diversion rate 0.19 cubic feet per second (cfs) from the Hell Creek aquifer for municipal use. The diversion point is one existing well (280 feet deep) located on the southeast edge of Buffalo, SD.

The Hell Creek Aquifer exists within the saturated, permeable, and porous portions of the Hell Creek Formation which is part of the Cretaceous aged deposits that underlie portions of South Dakota, North Dakota, Wyoming, Montana, and Canada. The formation is comprised of shale interbedded with carbonaceous shale, bentonitic silty shale, siltstone, sandstone, and claystone-pebble conglomerate.

Ms. Mines Bailey asked if the aquifer is confined or unconfined. Ms. Kilts answered that it varies depending on the location. Based on the well completion report submitted with Application No. 1992-1, the well was completed under confined conditions. A study by Allen and others in 1985 estimated that for the South Dakota portion of the aquifer, water in storage was in excess of 82,000,000 acre-feet.

The Water Rights Program monitors one observation well completed into the Hell Creek aquifer.

In reviewing the application, Ms. Kilts said she looked at whether unappropriated water was available for the requested diversion made by the application and potential for unlawful impairment to existing rights. For determining the availability of unappropriated water, the Water Rights Program uses the best information available to determine if there a reasonable probability that the appropriation could be made without average annual withdrawals from the aquifer exceeding average estimated annual recharge to the groundwater source.

Responding to questions from Ms. Mines Bailey, Ms. Kilts said recharge is water that enters the aquifer and a withdrawal is an artificial means of extracting water from the aquifer. The Hell Creek Aquifer receives recharge through infiltration and precipitation, streamflow, and infiltration, and groundwater flow. In determining the estimated recharge, Ms. Kilts used the 1985 report by Hedges and Burch, which used base flow regression analysis in two locations in South Dakota to determine an order of magnitude for recharge. The estimates that resulted from the analysis were 0.25 and 0.29 inches per year. When those amounts are applied over the area of the aquifer in South Dakota, that results in an estimated average annual recharge to the Hell Creek Aquifer in South Dakota of approximately 112,306 to 130,275 acre-feet per year. The Hedges and Burch study is the best information available about recharge to the Hell Creek Aquifer in South Dakota.

There are 12 water rights/permits on file with the Water Rights Program appropriating water from the aquifer, and there are also domestic and livestock withdrawals from wells in the aquifer. Ms. Kilts used the information in the Water Rights Program database to estimate the appropriative withdrawals from the aquifer to be less than 806 acre-feet per year. Based on how the Water Rights Program has historically done estimations, for those permits limited by a diversion rate, Ms. Kilts said she estimated 60 percent of full-time pumping. The exception was Water Permit No. 1963-1. For that permit Ms. Kilts estimated full use since it's both for irrigation and non-irrigation use and it was a relatively new permit so there was no long period of record for irrigation use.

Ms. Kilts stated that observation well HR-86F, which is the Hell Creek Aquifer observation well, is located about 3.9 miles to the southeast of the well site for this application. The Water Rights Program's online publicly available observation well database will automatically generate hydrographs. Ms. Kilts used that database to generate the hydrograph for HR-86F.

Ms. Mines Bailey offered Exhibit 4, the hydrograph for Hell Creek observation well HR-86F. Chairman Hutmacher admitted the exhibit into the record.

In response to questions from Mr. Mines Bailey, Ms. Kilts stated that the period of record for the information on Exhibit 4 is from 1986 to 2019. The period of record is important because the longer the period of record, the better idea the Water Rights Program has of how the aquifer responds, either climatically or with any withdrawals in the aquifer. The hydrograph shows that the water levels in the aquifer have been fairly stable over the period of record, and there has even been a slight increase in the water level, which would indicate there is more water in storage in the aquifer. Additionally, the observation well data shows that the well responds to climatic conditions, recharging during wet periods and a gradual decline during dry periods.

Ms. Kilts stated that the best information available indicates that unappropriated water is available in the Hell Creek Aquifer for the diversion proposed by Water Permit Application No. 1992-1, town of Buffalo.

Ms. Kilts stated the Exhibit 5 is a map of the vicinity of Buffalo. The map specifically shows domestic and stock wells in the area of the proposed diversion point that are on file with the Water Rights Program. The map also shows approximate locations of Buffalo water rights/permits and other Hell Creek Aquifer water rights/permits, and the location of the Hell Creek observation well. Ms. Kilts created this map using the ESRI ArcMap program and information from the Water Right database, the observation well database, and the well completion report database.

Ms. Mines Bailey offered Exhibit 5. Chairman Hutmacher admitted the exhibit into the record.

Ms. Mines Bailey asked Ms. Kilts to describe the different designations shown on Exhibit 5. Ms. Kilts stated that the yellow star shows the approximately location of the well that Application No. 1992-1 proposes to use. The red triangles in the area of the star are the other water rights and permits for Buffalo. The blue diamond is the location of the Hell Creek observation well. The red circles indicate other Hell Creek water rights/permit within the extent of the map. The green circles are domestic and stock wells that are on file with the Water Rights Program.

Ms. Kilts stated that within South Dakota the Water Rights Program has 12 water rights/permits on file for the Hell Creek Aquifer. The closest water rights to the proposed diversion point are the other water rights held by Buffalo. The closest ones not belonging to the applicant are Nos. 1963-1 and 1963A-1, which are located approximately eight miles west of the well site for this application. The Water Rights Program has on file six domestic wells within a mile of the application. It is possible that there are other domestic wells in the area. The closest domestic well on file with the Water Rights Program is the Penn Well, which is about one-tenth of a mile away from the well site for this application.

Responding to questions from Ms. Mines Bailey, Ms. Kilts stated that unlawful impairment is a direct result of pumping from the appropriation if there is a reduction of needed water supply in adequate domestic wells or in adequate wells having prior water rights. Part of what the Water Rights Program uses to determine that is how an adversely impacted domestic well is defined, which is a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or if the aquifer is less than 20 feet, as near to the bottom of the aquifer as is practical, and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient for the well owner's needs.

Ms. Kilts stated that based on the best available information, there is a reasonable probability that there will not be an unlawful impact to existing rights, should this application be granted. That is based on the fact that there is not a history of complaints associated with the pumping from Buffalo's existing water rights and that no impacts are being seen on the observation well from withdrawals from the aquifer.

Ms. Mines Bailey asked how artesian head pressure factors in. Ms. Kilts explained that to get to the point where there is an adversely impacted domestic well, the water level would need to

decrease to a point that is below the top of the aquifer. Artesian head pressure drives the water level to be above the top of the aquifer. Based on the well completion report submitted with the application, there is approximately 170 feet of artesian head pressure that would have to be depleted before a water level even reached to top of the aquifer.

Ms. Mines Bailey asked Ms. Kilts to explain there being no impact on the observation well. Ms. Kilts stated that the hydrograph for the observation well shows it is dominated by climatic conditions and no characteristics of pumping impacts are shown the hydrograph.

Ms. Mines Bailey asked how close water rights are to the observation well. Ms. Kilts stated that the city of Buffalo's other water rights are four to four and a half miles from the observation well.They have been pumping for a while, and no impacts on the existing wells have been seen in the observation well data. Ms. Kilts said it would be in the applicant's best interest, since they have other wells in close proximity, to manage pumping from this well so as not to impact their other wells.

Ms. Mines Bailey asked Ms. Kilts if she would expect to see any impact to Mr. Wilson's permits, which are eight miles away from this well. Ms. Kilts stated that she believes Ms. Mines Bailey is talking about Permit Nos. 1963-1 and 1963A-1, which are indicated on Exhibit 5. Since impacts are not seen on the observation well, which is four miles away, Ms. Kilts said she would not expect to see impacts to Mr. Wilson's wells at a distance of eight miles away. Impacts of drawdown due to pumping will decrease the further away you get from the pumping well.

Ms. Mines Bailey asked Ms. Kilts if she reviewed the petitions in opposition of the application. Ms. Kilts said she read the petitions. The petitions expressed a number of concerns and several of the concerns are related to public interest issues. There are also concerns that the applicant did not indicate on the application that they may potentially supply water to TC Energy. There was also a statement that they believe that this application, if granted, would unlawfully impact existing rights, however, there was not an explanation as to how that would occur as a result of the application.

Ms. Mines Bailey asked Ms. Kilts if her review encompasses any of the petitioners' concerns regarding the potential sale of water to TC Energy or any of the other public interest concerns expressed. Ms. Kilts said it does not because she did not look at public interest when preparing her report. Ms. Mines Bailey asked if Ms. Kilts had a response to their concerns regarding the impact on existing rights. Ms. Kilts stated that based on how you look at whether there is an unlawful impact to existing rights, the best information available would indicate that there is a reasonable probability that existing water rights would not be unlawfully impacted. She noted that the chief engineer does have a proposed qualification that addresses unforeseen, unexpected issues.

Ms. Mines Bailey asked if the town of Buffalo expressed in their application why they are seeking a new water permit. Ms. Kilts stated that the application indicated the town of Buffalo that they would like to drill a deeper well to see if they could get better water quality and to start to retire two other existing wells.

Ms. Mines Bailey asked if it is common to retire a well. Ms. Kilts stated that based what is in the water permit files on some of the ages of Buffalo's other wells, it would not be a surprise that they may need to replace some of the wells.

This concluded questioning by Ms. Mines Bailey.

Mr. Ginsbach asked Ms. Kilts if she has an opinion in her report as to the recoverable acre-feet of water in Harding County. Ms. Kilts answered that on page 3, of the report in Table 1 the estimated recoverable water in the Hell Creek Aquifer is broken down by South Dakota county. For Harding County, the estimated recoverable water is in excess of 28,000,000 acre-feet.

Mr. Ginsbach asked how many acre-feet per year the town of Buffalo is requesting to withdraw for this permit. Ms. Kilts stated that the town of Buffalo requested withdraw of up to 82 acre-feet of water annually.

Responding to a question from Mr. Ginsbach, Ms. Kilts stated based on the best information available, average annual recharge to the aquifer exceeds estimated average annual withdrawals in South Dakota. Ms. Kilts stated the average annual recharge, based on her analysis, is in excess of estimated average annual withdrawals by a great amount.

Mr. Ginsbach asked if it is very unlikely that 82 acre-feet per year withdrawn under this permit is going to exceed the resource of 28,515,200 acre-feet. Ms. Kilts answered yes.

Mr. Ginsbach asked if the discharge of the Penn well is monitored. Ms. Kilts stated that, to her knowledge, the Penn well is not monitored. Mr. Ginsbach asked if, in theory, there could be no discharge out of the Penn well. Ms. Kilts answered if the well is not being used, yes. Mr. Ginsbach asked if Ms. Kilts has any recollection as to when DENR was given notice of the Penn well's use. Ms. Kilts answered she is not sure what date the department received the well completion report for the Penn well.

Mr. Ginsbach asked if it is common that when a domestic well is abandoned, DENR receives that information. Ms. Kilts stated that an abandoned well should be plugged, and a plugging report for the well should be submitted to the department. The other possibility is that the owner of the well may think at some time in the future they may use the well; it could be temporarily abandoned and kept with out being plugged, and the department would not receive notice of that.

Mr. Ginsbach asked if anyone with the state follows up on those domestic wells to see if they have been plugged. Ms. Kilts answered that when the Water Rights Program receives well completion reports, well plugging reports, well rehab report, that information is entered into the well completion report database. A well completion report and a well plugging report are not matched up and placed in the same file. The Water Rights Program does not routinely contact domestic well owners to ask what the status of their well is.

Mr. Ginsbach asked if there is any portion in the state of South Dakota where the Hell Creek formation is unconfined. Ms. Kilts answered yes. Mr. Ginsbach asked if it is in Harding County. Ms. Kilts stated that there are likely areas in Harding where the aquifer is unconfined.

Mr. Ginsbach asked if there is any interplay between the Hell Creek Aquifer and any other aquifer. Ms. Kilts answered that there is potential that at some locations there may be interplay between the Hell Creek Aquifer and Fox Hills, however, those locations are not well mapped.

This concluded questioning by Mr. Ginsbach.

There were no questions from the board members.

Ms. Mines Bailey called Eric Gronlund, who had previously been administered the oath.

Mr. Gronlund testified that he is employed by the Department of Environment and Natural Resources in the Water Rights Program as the chief engineer.

Mr. Gronlund identified Exhibit 3 as his curriculum vitae.

Ms. Mines Bailey offered Exhibit 3. Chairman Hutmacher admitted the exhibit into the record.

In response to questions from Ms. Mines Bailey, Mr. Gronlund stated that he has been the chief engineer for four and one half months. Before becoming chief engineer, Mr. Gronlund said he has worked in various positions in the Water Rights Program since 1990. Mr. Gronlund has been employed at the Department of Environment and Natural Resources since 1984. Prior to becoming chief engineer, Mr. Gronlund was an engineering manager performing the day to day administration of the water permitting process, which starts at the time someone inquires about an application, the review of the application, the assigning of the application to a staff person and helping them with the technical review, drafting the recommendation for consistency purposes, going through the public notice process, and if contested, the scheduling of the matter before the Water Management Board.

Mr. Gronlund stated that he has been involved with Application No. 1992-1 since it was first submitted. He has reviewed the report authored by Whitney Kilts.

Mr. Gronlund stated that he reviewed the recommendation issued by former chief engineer, Jeanne Goodman, and he concurs with and adopts the recommendation.

Mr. Gronlund said he believes this is a beneficial use. He said he believes it is in the public interest because the past board decisions have consistently been that water being used for municipal purposes, for the inhabitants of municipalities, is a beneficial use and in the public interest.

Mr. Gronlund said he concurred with the former chief engineer's recommendation of approval of the application 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. 1992-1 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. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Hell Creek aquifer.

4. Water Permit No. 1992-1 authorizes a total annual diversion of 82 acre-feet of water.

Ms. Mines Bailey asked if Mr. Gronlund reviewed the petitions that were filed in opposition to the application. Mr. Gronlund answered that he has reviewed the petitions. Ms. Mines Bailey asked Mr. Gronlund what his understanding is regarding the petitioners' concerns. Mr. Gronlund stated that he concurs with what Ms. Kilts said earlier, but he believes the real concern is that the town of Buffalo would be providing construction water to TransCanada. The town of Buffalo is seeking an appropriation for municipal use. Municipal use includes industry, institutional, commercial, municipal, and irrigation.

Ms. Mines Bailey asked if it is common or uncommon to sell water for construction or road projects. Ms. Gronlund said he believes that is a very common practice. Ms. Mines Bailey asked if the town of Buffalo provided any description as to why they were seeking an additional water permit. Mr. Gronlund stated that according to the application, the town of Buffalo would like to drill a deeper well to see if they can get better water and start to retire two other existing wells.

There were no questions from Mr. Ginsbach or the board members.

Ms. Mines Bailey rested.

Mr. Ginsbach called Ryan Smith, waste and water superintendent, town of Buffalo, who was administered the oath by the court reporter.

Responding to questions from Mr. Ginsbach, Mr. Smith testified that he completed the application for Permit No. 1992-1. The water will be used for municipal use because it is his understanding the municipal use includes the sale of water to homes. Mr. Smith said he reviewed the 1999 applications for the town of Buffalo for a new well, and that is where the use on this application came from.

Responding to questions from Mr. Ginsbach, Mr. Smith stated that the town of Buffalo has a description for the wells that are not related to the permit number. The 1999 well is referred to as Well 7, and the new well for No. 1992-1 will be Well 8. The town of Buffalo has four operating wells; Well 3, 4, 5, and 7. Well 1 is retired, Wells 2 and 6 are plugged but have water rights that the town is planning to retire.

In response to questions from Mr. Ginsbach, Mr. Smith stated that he was involved in the siting of the test hole for this application. The test hole is located on the southeast side of town directly north and northeast of the baseball fields and northeast of the golf course. The rodeo arena and the football field are also in the vicinity of the test hole. The airport road is near the test hole, and the airport is located 1,500 feet from the test hole. A map showing the location of the test hole was included in the permit application. The town of Buffalo does not own the property on which the test hole is located; it is owned by the Chamber of Commerce/Buffalo Commercial Club. The Harding County Chamber of Commerce also owns the football field, baseball fields, and rodeo arena. Harding County owns the airport and property to the south of Airport Road. The town of Buffalo owns the water tower and the land around the water tower. The county and Heath Page own property near the water tower.

Responding to questions from Mr. Ginsbach, Mr. Smith said he contacted the Harding County Chamber of Commerce to discuss the location and timing of the test hole. After that there was discussion regarding setting up committees for the negotiation for the piece of property that the well was going to sit on. The town of Buffalo reached an agreement with the Chamber of Commerce regarding the use of their property. Mr. Smith said he was not involved in the negotiations, other than offering his opinion. He said his opinion was that originally the Chamber of Commerce was asking for quite a bit, but when the committees were together and negotiations took place, he believed it was a fair compromise between the town and the Buffalo Commercial Club.

Mr. Smith identified Exhibit A, the license to use premises between the town of Buffalo and the Harding County Chamber of Commerce.

Mr. Smith offered Exhibit A. Chairman Hutmacher admitted the exhibit into the record.

Responding to questions from Ms. Ginsbach, Mr. Smith stated that Exhibit A is entitled "License to Use Premises." The parties are the town of Buffalo and the Buffalo Commercial Club. The Harding County Chamber of Commerce and Buffalo Commercial Club support the community by sponsoring community functions. The Harding County School District uses the football field for games, practices, and community events. The football field is irrigated. The town of Buffalo supplies water for irrigation from its distribution system, which is treated by chlorine injection.

Mr. Ginsbach asked if water for construction is treated. Mr. Smith said some is and some isn't. He said most of the Well 7 water is sent to a bulk tank, and that is untreated and sold as non-potable water. If water from a hydrant or a house is used, then it is treated. Well 8 is synonymous with Permit No. 1992-1. The water coming from Permit No.1992-1, if approved, will be treated, but water for bulk sales will not be treated. Well 8 will be connected to the city distribution system, and there would temporarily be a separate line for bulk water sales. That line could be turned into a special line for irrigation systems, which would be near the baseball fields, the golf course, and possibly the football field. Mr. Smith stated that the town of Buffalo commonly sells water for construction, to private individuals, corporations, and state entities.

Mr. Ginsbach asked Mr. Smith how long he has worked for the town of Buffalo and to name the companies that have purchased water from the town of Buffalo. Mr. Smith stated that he has worked for the town of Buffalo for two years. Recently water has been sold to Olson Construction, Ace in the Hole Construction, Keller Drilling, and a company constructing the road for DOT.

Mr. Ginsbach asked if selling bulk water is profitable to the town of Buffalo. Mr. Smith stated that the town makes enough money to keep the well running. Mr. Smith said the money goes directly to the general fund and is in no way tied to his compensation. For bulk water from Well 7 the town charges $10 per 1,000 gallons.

Responding to questions from Mr. Ginsbach, Mr. Smith said he has lived in Buffalo just over two years. He also lived there from 1990 to 1995. Before that he lived in Pennington County and Montana. Mr. Smith said his family and extended family lives in Buffalo. He is married and his wife lives in Buffalo. He said his wife was not born there but grew up in Buffalo. Mr. Smith said he frequently went back to Buffalo between 1995 and 2017.

In response to questions from Mr. Ginsbach. Mr. Smith stated that the license agreement states that water will be available for multiple uses, including recreation, fire suppression, construction, and drinking water. The last page of the license agreement is signed by Gary Johnson, president of the town of Buffalo board and Sam Olson, president of the Harding County Chamber of Commerce. Mr. Smith said the price the town was going to sell the water for in this contract was $7.00 per 1,000 gallons. Of that, the Harding County Chamber of Commerce will receive $5.00 per 1,000 gallons of water that the town sells as construction sales relating to projects where the cumulative construction sales will be greater than 500,000 gallons.

This concluded questions by Mr. Ginsbach.

Responding to questions from Ms. Mines Bailey, Mr. Smith stated that Water Permit No. 1691-1 (Well 7) is in operation, for Water Permit No. 1178B-1 (Wells 4 and 5) the two wells are active, Water Permit No. 278-1 (Well 3) is active, Water Permit No. 1163-1 (Well 6) is inactive and plugged, and Water Permit No. 1178A-1 (Well 2) is inactive. The two wells that the town plans on retiring are Well 2 and 6. Well 5, which is active at this time, will be retired in the future.

This concluded questioning by Ms. Mines Bailey.

Mr. Ginsbach asked if retiring a well encompasses giving up the water right. Mr. Smith said as far as he knows it does not. Mr. Ginsbach asked if the town would keep the priority water right to reserve future use for the town of Buffalo. Mr. Smith said that would be up to the town board.

There were no questions from the board.

Chairman Hutmacher requested closing statements.

Ms. Mines Bailey stated that the overriding policy of the state of South Dakota is that we are to put water to maximum beneficial use. There was testimony today that the town of Buffalo

requested 82 acre-feet of water for municipal use. There was testimony that the city would like to water a football field and provide water to its residents as well as sell water for municipal purposes for construction. SDCL 46-2A-9 states that a permit to appropriate water may be issued only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights, that the proposed use is a beneficial use and in the public interest. The board heard testimony today from Ms. Kilts that unappropriated water is available in the Hell Creek Aquifer. This is a vast resource with very low use. There was testimony that the likelihood of unlawful impairment is quite low. There are no impacts being seen to the observation well located within four miles of the proposed diversion site. There was testimony that if effects aren't going to be felt four miles away, they are not going to be felt eight miles, 80 miles or 100 miles away. There was testimony from Mr. Gronlund that he adopts the recommendation of the former chief engineer and that this is consistent with the board's past rulings that this is a beneficial use and in the public interest. He testified as to municipal use and what it encompasses. Ms. Mines Bailey said it is the recommendation of the chief engineer that this application be granted. This clearly meets the requirements of SDCL 46-2A-9. Providing water to people is a beneficial use and in the public interest. Ms. Mines Bailey said the chief engineer requests that the board grant this application with qualifications.

Mr. Ginsbach stated that the water is available, and it will be put to a beneficial use in the public interest. He said based on the intervenor's concerns about the end user of the water, a decision not to grant this application is going to have effects across all of South Dakota and all of its municipalities, which regularly supply construction water to third parties.

Chairman Hutmacher stated that there were no intervenors present for this hearing.

Chairman Hutmacher requested board discussion and/or action.

Motion by Freeman, seconded by Larson, to approve Water Permit Application No. 1992-1, town of Buffalo, subject to the qualifications set forth by the chief engineer. A roll call vote was taken, and the motion carried unanimously.

Ms. Mines Bailey will prepare proposed Findings of Fact and Conclusions of Law, which are due by September 3, 2020. Objections or alternative findings are due by September 18, 2020. The board will consider adoption of the Findings of Fact and Conclusions of Law on October 7, 2020.

Chairman Hutmacher closed the hearing.

Chairman Hutmacher stated that on the previous day of the meeting board amended the agenda to include the three motions for a continuance of the hearing for Water Permit Application No. 1992-1. Those are still included on the agenda, but the board also needs amend the agenda to include approval of a prehearing chair and alternate prehearing chair. He asked the board to rescind the motion from the previous day which approved the agenda.

Motion by Freeman, seconded by Bjork, to rescind the motion to approve the amended agenda from the previous day of the meeting. A roll call vote was taken, and the motion carried with Bjork, Freeman, Holzbauer, Larson, and Hutmacher voting aye. Dixon abstained.

Chairman Hutmacher requested a motion to approve the agenda as amended to also include appointment of a prehearing chair and alternate prehearing chair.

Motion by Bjork, seconded by Freeman, to approve the agenda as amended to include appointment of a prehearing chair and alternate prehearing chair. A roll call vote was taken, and the motion carried unanimously.

Motion by Bjork, seconded by Holzbauer, to appoint Freeman as prehearing chair and Larson as alternate prehearing chair. A roll call vote was taken, and the motion carried unanimously.

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

A court reporter was present for the hearings, and a transcript of the proceedings may be obtained by contacting Jacqueline K. Perli Reporting, Inc., dba Black Hills Reporting, 1601 Mt. Rushmore Road, #3280, Rapid City, SD 57701, telephone number (605) 721-2600.

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

Approved this ___ day of October 2020.

_____
Water Management Board

DRAFT

WATER MANAGEMENT BOARD MEETING
JULY 8-9, 2020

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
1904B-1	Douglas Ottema	Whitewood	LA	0.167 cfs	industrial	3 dry draw dams/dugouts	lf, 2 special
1992-1	Town of Buffalo	Buffalo	HR	0.19 cfs	municipal	1 well-Hell Creek Aquifer	wi, wcr, 2 special
2805-2	R & J LLC	Wall	PE	0.044 cfs	commercial	2 wells-Crystalline Rock	wi, wcr, 2 special
8409-3	Schley Farms/Schley Real Estate LLC	Stratford	BN	22 AF	72 acres	Mud Creek trib of James River	lf, 2 special

DRAFT

CANCELLATIONS – October 7, 2020

Number	Original Owner	Present Owner(s) & Other Persons Notified	County	Amount C.F.S.	Use	Reason	Source	Date Notified	Letters
DIVISION I WATER RIGHT AND VESTED WATER RIGHT									
RT 1163-1	Town of Buffalo	Same (% Deb Johnson, Finance Officer & Ryan Smith, PWD)	HR	0.07	MUN	A/F	Ground water – Hell Creek Aquifer (Well #6)	8-24-2020	
VR 1178A-1	Town of Buffalo	Same (% Deb Johnson, Finance Officer & Ryan Smith, PWD)	HR	0.14	MUN	A/F	Ground water – Hell Creek Aquifer (Well #2)	8-24-2020	
DIVISION II WATER PERMIT AND WATER RIGHT									
PE 1343-2	Maurice Fite	Maurice Fite & Jim Wheeler	JA	0.70	IRR	A	Little Buffalo Creek	9-1-2020	
RT 1905-2	Black Hills Jellystone RV Park	Black Hills Power Inc (% Scott A Buchholz)	PE	0.06	COM	A	Ground water Minnelusa Aquifer	8-25-2020	
DIVISION III WATER PERMITS AND WATER RIGHTS									
RT 1910B-3	Arthur Kneen	Lowell Wormstadt	SA	0.32	IRR	A/F	Redstone Creek	8-24-2020	
RT 1961C-3	Yankton Missouri River KOA	Same (% Don Starzl)	YA	0.24	IRR	A/F	Ground water Missouri Elk Point Aquifer	8-24-2020	
RT 2698-3	John Collins	Josh Spilde	BG	0.94	IRR	A/F	Ground water Big Sioux Aurora Aquifer	8-24-2020	
RT 2982A-3	David Simons	Same	HD	0.66	IRR	A/F	Ground water Tulare Hand Aquifer	8-24-2020	
RT 4354-3	City of Mitchell	Same (% Kyle Croce, PWD; Michelle Bathke, FO; Bob Everson, Mayor)	DN	29.0	MUN	A	James River	8-25-2020	
PE 4441-3	Steve Sayler	Same	YA	0.71	IRR	A/F	Prairie Creek	8-24-2020	
RT 4790-3	Henry J Niemann	Collin Niemann	DU	1.80	IRR	A/F	Ground water Pleistocene Unknown Aquifer	8-24-2020	
PE 7008A-3	Roger Hanson	Roger Hanson & Milan Hanson	YA	1.78	IRR	NC	Ground water Lower James Missouri Aquifer	8-24-2020	

ABBREVIATIONS			PAGE 1
N/C = NON-CONSTRUCTION	**A/F = ABANDONMENT OR FORFEITURE**	**A = ABANDONMENT**	**F = FORFEITURE**
FL = WATER RIGHT FILING	**VR = VESTED WATER RIGHT**	**PE = WATER PERMIT**	**RT = WATER RIGHT**
IRR = IRRIGATION	**GEO = GEOTHERMAL**	**COM = COMMERCIAL**	**MUN = MUNICIPAL**
INS = INSTITUTIONAL	**GWR = GROUND WATER REMEDIATION**	**DOM = DOMESTIC**	**IND = INDUSTRIAL**

CANCELLATIONS – October 7, 2020

Number	Original Owner	Present Owner(s) & Other Persons Notified	County	Amount C.F.S.	Use	Reason	Source	Date Notified	Letters
PE 7009A-3	Roger Hanson	Roger Hanson & LaRue Hanson	YA	1.78	IRR	NC	Ground water Missouri Elk Point Aquifer	8-24-2020	
PE 7456-3	Lucas Family Investments	Same (% Robert Lucas)	YA	1.71	IRR	NC	Ground water Lower James Missouri Aquifer	8-25-2020	
PE 7650-3	Mark or Nancy Lueck	Same	CD	1.71	IRR	NC	Ground water Big Sioux North Aquifer	8-25-2020	
PE 7651-3	Mark or Nancy Lueck	Same	CD	1.71	IRR	NC	Ground water Big Sioux North Aquifer	8-25-2020	
PE 7654-3	Darren Deckert	Same	HT	2.44	IRR	NC	Ground water Niobrara Aquifer	8-25-2020	
PE 8139-3	Joe Pechous	Same	BH	1.56	IRR	NC	Ground water Lower James Missouri Scotland Aquifer	8-25-2020	
PE 8234-3	Berg Farms LLC	Same (% Luke Berg)	GT	0.09	COM	A	Ground water Revillo Aquifer	8-25-2020	
PE 8356-3	City of Sioux Falls	Same (% Mark Cotter, PWD; Andrew Berg)	MA	0.333	GEO	A	Ground water Sioux Quartzite	8-25-2020	

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DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

August 24, 2020

NOTICE OF CANCELLATION

TO: Deb Johnson, Finance Officer, Town of Buffalo, PO Box 82, Buffalo SD 57220
Ryan Smith, Public Works Supt, Town of Buffalo, PO Box 82, Buffalo SD 57220

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 1163-1 and Vested Water Right No. 1178A-1

Water Right No. 1163-1, with a priority date of October 21, 1977, authorizes diversion of 0.07 cfs from ground water (Well #6) for municipal purposes. Vested Water Right No. 1178A-1, with a priority date of January 1, 1949, authorizes diversion of 0.14 cfs from ground water (Well #2) for municipal purposes. Both wells were drilled into the Hell Creek Aquifer. In January 2020, DENR became aware those two wells were no longer in use. At the July, Water Management Board meeting Mr. Smith testified Well #2 was inactive and Well #6 had been plugged. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 1163-1 and Vested Water Right No. 1178A-1 due to abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Right No. 1163-1 and Vested Water Right No. 1178A-1 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 1163-1 and Vested Water Right No. 1178A-1 based upon facts presented at the public hearing. Our records show the Town of Buffalo to be the owner of property covered by these rights. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER
FOR WATER RIGHT NO. 1163-1 & VESTED WATER RIGHT NO. 1178A-1
TOWN OF BUFFALO

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 1163-1 and Vested Water Right No. 1178A-1.

The Chief Engineer is recommending cancellation of the above water right and vested water right due to abandonment and/or forfeiture.

In January 2020, DENR became aware Well #2 described in No. 1178A-1 and Well #6 described in No. 1163-1 were no longer in use. The Public Works Superintendent testified at the July 2020 Water Management Board meeting that Well #2 was inactive and Well #6 had been plugged.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24. 2020

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
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August 24, 2020

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Ryan Smith, Public Works Supt, Town of Buffalo, PO Box 82, Buffalo SD 57220

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 1163-1 and Vested Water Right No. 1178A-1

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The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 1163-1 and Vested Water Right No. 1178A-1 based upon facts presented at the public hearing. Our records show the Town of Buffalo to be the owner of property covered by these rights. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER
FOR WATER RIGHT NO. 1163-1 & VESTED WATER RIGHT NO. 1178A-1
TOWN OF BUFFALO

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 1163-1 and Vested Water Right No. 1178A-1.

The Chief Engineer is recommending cancellation of the above water right and vested water right due to abandonment and/or forfeiture.

In January 2020, DENR became aware Well #2 described in No. 1178A-1 and Well #6 described in No. 1163-1 were no longer in use. The Public Works Superintendent testified at the July 2020 Water Management Board meeting that Well #2 was inactive and Well #6 had been plugged.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24. 2020

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September 1, 2020

NOTICE OF CANCELLATION

TO: Maurice Fite, 24306 Fairview Rd, Philip SD 57567
Jim & Sonny Wheeler, 24202 Fairview Rd, Philip SD 57567

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 1343-2

Water Permit No. 1343-2 authorizes diversion of water from Little Buffalo Creek in Jackson County to irrigate 49 acres in portions of Section 6 and Section 7, T2S, R20E. A staff engineer with our program was in the area conducting a licensing investigation in late 2018. The investigation found the acreage in Section 7, owned by Maurice Fite, was not developed for irrigation. A series of level terraces were installed in the late 1970's on the land described in Section 6, now owned by Jim and Sonny Wheeler, but have since been farmed over and have very little if any capacity. Mr. Wheeler has indicated he does not intend to irrigate and does not wish to maintain the water permit.

Based on the intent of the landowners involved, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 1343-2 due to abandonment.

The Water Management Board will consider cancellation of Water Permit No. 1343-2 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 1343-2 based upon facts presented at the public hearing. Our records show Maurice Fite and Jim & Sonny Wheeler to be the owners of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 11, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 1343-2, MAURICE FITE

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 1343-2. The land described in the permit is owned by Maurice Fite and Jim & Sonny Wheeler.

The Chief Engineer is recommending cancellation of the above water permit due to abandonment.

The land described in the permit located in Section 7, T2S, R20E was not developed for irrigation. The land in Section 6, T2S, R20E was once irrigated by a series of level terraces installed in the drainage area. The terraces have been farmed over and have very little, if any capacity. Mr. Wheeler has indicated the system was not worth trying to use or maintain due to lack of water. He requested cancellation of the water permit.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
September 1, 2020

Note:

Cancellation of the permit effectively removes authorization for water to be spread on the area in Section 6, T2S, R20E. In order to allow any flow to run through what system is left, the flap gate on the corrugated metal drainpipe will need to be removed.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Scott A Buchholz, Black Hills Power Inc., 7001 Mt Rushmore Rd, Rapid City SD 57702

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 1905-2

Water Right No. 1905-2, listed under the Black Hills Jellystone RV Park, authorized diversion of 0.06 cfs from ground water (Minnelusa Aquifer) to be used for commercial purposes. In October 2019 an application was filed by Black Hills Power Inc to use the existing well for site irrigation. Submission of the application included a request to cancel No. 1905-2 since the well was no longer used for its original purpose. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 1905-2 due to abandonment.

The Water Management Board will consider cancellation of Water Right No. 1905-2 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 1905-2 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water right. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 1905-2, BLACK HILLS JELLYSTONE RV PARK

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 1905-2, now owned by Black Hills Power Inc.

The Chief Engineer is recommending cancellation of the above water right due to abandonment.

Upon development of the Black Hills Corporation site, the well described in Water Right No. 1905-2 was replumbed to be used as a secondary source of water for site irrigation. The company requested No. 1905-2 be cancelled since it will no longer be used for commercial purposes.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

NOTE: Black Hills Corporation obtained Water Permit No. 2806-2 to cover irrigation use from the well described in No. 1905-2. Cancellation consideration of Water Right No 1905-2 does not affect Water Permit No. 2806-2.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Lowell Wormstadt, 41370 Hwy 34, Artesian SD 57314

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 1910B-3

Ownership of land described in Water Right No. 1910-3, originally held by Arthur Kneen was divided in February 2020 to reflect separate ownership. No. 1910B-3 describes land you own in the N ½ NW ¼ Section 30, T107N, R59W. In January 2020, Genny McMath with our program spoke with you concerning the portion of the water right with land you own. During the conversation, you indicated you did not irrigate and did not wish to maintain the water right. Based on your intent, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 1910B-3 due to abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Right No. 1910B-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 1910B-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water right. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 1910B-3, LOWELL WORMSTADT

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 1910B-3.

The Chief Engineer is recommending cancellation of the above water right due to abandonment and/or forfeiture.

The originating Water Right No. 1910-3 was divided and reissued to reflect separate ownership. No. 1910B-3 describes diversion of water from Redstone Creek to irrigate 30 acres in the N ½ NW ¼ Section 30, T107N, R59W. In a January 30, 2020 phone conversation with Genny McMath, Mr. Wormstadt confirmed he owned the land but did not irrigate and did not wish to maintain the water right.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water right does not prohibit a new application for this project in the future.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Don Starzl, Yankton Missouri River KOA, 807 Bill Baggs Rd, Yankton SD 57078

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 1961C-3

Water Right No. 1961C-3 authorizes diversion of water from the Missouri Elk Point Aquifer to irrigate 17 acres in the NE ¼ NE ¼ Section 17, T93N, R55W in Yankton County. In a January 14, 2020 phone conversation with Genny McMath in our program, you indicated nothing is set up to irrigate and there was no intent to do so. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 1961C-3 for abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Right No. 1961C-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 1961C-3 based upon facts presented at the public hearing. Our records show the Yankton Missouri River KOA to be the owner of property covered by this water right. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 1961C-3, YANKTON MISSOURI RIVER KOA

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 1961C-3.

The Chief Engineer is recommending cancellation of the above water right due to abandonment and/or forfeiture.

In January 2020, the manager of the Yankton Missouri River KOA confirmed none of the area is being irrigated and there is no intent to irrigate.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water right does not prohibit a new application for this project in the future.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Josh Spilde, 45444 206th St, Arlington SD 57212

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 2698-3

Water Right No. 2698-3 authorizes diversion of ground water from the Big Sioux Aurora Aquifer to irrigate 66 acres in the S ½ NW ¼ Section 2, T109N, R49W, Brookings County. In June 2020, Genny McMath with our program, spoke with you about the water right. You confirmed ownership of the land and indicated you purchased it for development purposes and had no intent to irrigate. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right N0. 2698-3 due to abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Right No. 2698-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 2698-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water right. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 2698-3, JOHN COLLINS

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 2698-3, now owned by Josh Spilde.

The Chief Engineer is recommending cancellation of the above water right due to abandonment and/or forfeiture.

The land has been in the Conservation Reserve Program for many years. Prior to mailing out an irrigation questionnaire this fall, the new owner of the property was contacted. Mr. Spilde indicated he purchased the property for development purposes and confirmed he did not intend to irrigate.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water right does not prohibit a new application for this project in the future.

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August 24, 2020

NOTICE OF CANCELLATION

TO: David Simons, 37011 188th St, St Lawrence SD 57373

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 2982A-3

Water Right No. 2982A-3 authorizes diversion of water from two wells into the Tulare Hand Aquifer to irrigate 135.5 acres in the SW ¼ Section 1, T113N, R67W in Hand County. On July 22, 2020, Genny McMath with our program spoke with you about the water right. You confirmed you have not irrigated the acreage for quite a long time due to an inadequate water supply. It is our understanding you do not intend to irrigate and are looking to sell the equipment. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 2982A-3 due to abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Right No. 2982A-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 2982A-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water right. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 2982A-3, DAVID SIMONS

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 2982A-3.

The Chief Engineer is recommending cancellation of the above water right due to abandonment and/or forfeiture.

The water right holder indicated the land has not been irrigated in many years due to an inadequate water supply and the wells have been capped. In a July 22, 2020 phone conversation with Genny McMath, Mr. Simons stated he did not intend to irrigate in the future and would be selling his equipment.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water right does not prohibit a new application for this project in the future.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Steven Sayler, 43151 288th St, Menno SD 57045

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 4441-3

Water Permit No. 4441-3 authorizes diversion of water from Prairie Creek to irrigate 49.6 acres in portions of the N ½ Section 7, T96N, R57W, Yankton County. In July 2020 Keith DeJong with our program spoke with you about the water permit. It is our understanding you purchased the land nine years ago and have never irrigated and do not intend too. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 4441-3 due to abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Permit No. 4441-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 4441-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMTI NO. 4441-3, STEVEN SAYLER

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 4441-3.

The Chief Engineer is recommending cancellation of the above water permit due to abandonment and/or forfeiture.

A staff engineer viewed the property and found no evidence of irrigation equipment. On July 29, 2020, Mr. Sayler was contacted to find out if irrigation was taking place. The permit holder confirmed the land he purchased nine years ago has not been irrigated and he did not intend to irrigate. He also indicated to his knowledge; the previous owner had not irrigated for several years.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water permit does not prohibit a new application for this project in the future.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Collin Niemann, 47776 180th St, Clear Lake SD 57226

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program



SUBJECT: Cancellation of Water Right No. 4790-3

Water Right No. 4790-3 authorizes diversion of ground water from the Pleistocene Unknown Aquifer to irrigate the NE ¼ Section 13, T115N, R49W. Our records show the land was in CRP through 2019 and recently you were contacted concerning the water right. It is our understanding you do not intend to irrigate. However, the existing well will be used to fill water tanks for livestock as needed. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 4790-3 for irrigation due to abandonment and/or forfeiture.

The Water Management Board will consider cancellation of Water Right No. 4790-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Right No. 4790-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water right. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 4790-3, HENRY J NIEMANN

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 4790-3, now owned by Collin Niemann.

The Chief Engineer is recommending cancellation of the above water right due to abandonment and/or forfeiture.

The land described in the water right was in the Conservation Reserve Program through 2019. Prior to mailing the 2020 irrigation questionnaire, Henry Niemann was contacted concerning his intent towards the water right. Mr. Niemann indicated Collin Niemann now owned the land. He also indicated the irrigation system had been removed and the land is used for pasture only.

On July 29, 2020, Collin Niemann was contacted concerning the water right. Mr. Niemann indicated he does not intend to irrigate and would use the existing well to fill water tanks for livestock as needed.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Notes:

- Cancellation of the water right does not prohibit a new application for this project in the future.
- The use of water from the well for filling livestock tanks is a domestic use and can be done without having a water permit in place.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Roger D Hanson, 2808 E Orchard Place #202, Sioux Falls SD 57103
LaRue Hanson, 211 E 26th St, Yankton SD 57078
Milan Hanson, 615 E 72nd St., Kansas City MO 64131-1613

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit Nos. 7008A-3 and 7009A-3

Water Permit No. 7008A-3 authorized diversion of ground water from the Lower James Missouri Aquifer to irrigate the NW ¼ Section 30, T94N, R54W. Water Permit No. 7009A-3 authorized diversion of ground water from the Missouri Elk Point Aquifer to irrigate portions of the SE ¼ Section 19, T94N, R54W. Recently a staff engineer with our program contacted each of you concerning the existence of an irrigation system for the above described permits. It is our understanding the irrigation systems were not constructed and there are no plans to irrigate. The date for completion of works, as specified in both permits, expired on December 1, 2019. With the construction date now past, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit Nos. 7008A-3 and 7009A-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit Nos. 7008A-3 & 7009A-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit Nos. 7008A-3 and 7009A-3 based upon facts presented at the public hearing. Our records show Roger Hanson and Milan Hanson to be the owners of property covered by Water Permit No. 7008A-3 and Roger Hanson and LaRue Hanson as owners of land described in Water Permit No. 7009A-3. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a

statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMTI NO. 7008A-3 & 7009A-3, ROGER D HANSON

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning the following:

- Water Permit No. 7008A-3, Roger D Hanson and Milan Hanson;
- Water Permit No. 7009A-3, Roger D Hanson and LaRue Hanson

The Chief Engineer is recommending cancellation of the above water permits due to non-construction.

Water Permit Nos. 7008A-3 and 7009A-3 were approved on December 1, 2014 with a date for completion of works of December 1, 2019. A staff engineer contacted the owners of the property and found the wells had not been drilled and the irrigation systems were not constructed. None of the landowners were interested in the water permits and were agreeable to cancellation.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water permits does not prohibit new applications for these projects in the future.

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August 24, 2020

NOTICE OF CANCELLATION

TO: Roger D Hanson, 2808 E Orchard Place #202, Sioux Falls SD 57103
LaRue Hanson, 211 E 26th St, Yankton SD 57078
Milan Hanson, 615 E 72nd St., Kansas City MO 64131-1613

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit Nos. 7008A-3 and 7009A-3

Water Permit No. 7008A-3 authorized diversion of ground water from the Lower James Missouri Aquifer to irrigate the NW ¼ Section 30, T94N, R54W. Water Permit No. 7009A-3 authorized diversion of ground water from the Missouri Elk Point Aquifer to irrigate portions of the SE ¼ Section 19, T94N, R54W. Recently a staff engineer with our program contacted each of you concerning the existence of an irrigation system for the above described permits. It is our understanding the irrigation systems were not constructed and there are no plans to irrigate. The date for completion of works, as specified in both permits, expired on December 1, 2019. With the construction date now past, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit Nos. 7008A-3 and 7009A-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit Nos. 7008A-3 & 7009A-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit Nos. 7008A-3 and 7009A-3 based upon facts presented at the public hearing. Our records show Roger Hanson and Milan Hanson to be the owners of property covered by Water Permit No. 7008A-3 and Roger Hanson and LaRue Hanson as owners of land described in Water Permit No. 7009A-3. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a

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The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 4, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMTI NO. 7008A-3 & 7009A-3, ROGER D HANSON

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning the following:

- Water Permit No. 7008A-3, Roger D Hanson and Milan Hanson;
- Water Permit No. 7009A-3, Roger D Hanson and LaRue Hanson

The Chief Engineer is recommending cancellation of the above water permits due to non-construction.

Water Permit Nos. 7008A-3 and 7009A-3 were approved on December 1, 2014 with a date for completion of works of December 1, 2019. A staff engineer contacted the owners of the property and found the wells had not been drilled and the irrigation systems were not constructed. None of the landowners were interested in the water permits and were agreeable to cancellation.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 24, 2020

Note:

Cancellation of the water permits does not prohibit new applications for these projects in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Robert Lucas, Lucas Family Investments LLC, 29526 441st Ave, Irene SD 57037

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 7456-3

Water Permit No. 7456-3 authorizes diversion of ground water from one well into the Lower James Missouri Aquifer to irrigate the SE ¼ Section 31, T96N, R55W. On November 12, 2019, a staff engineer contacted you about the existence of a water use system. You confirmed the pivot system had not been developed. It is our understanding the well driller, after three test wells, could not find enough water to put in an adequate irrigation well. The time limit for completion of works, as specified in the permit, expired on March 7, 2018. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 7456-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit No. 7456-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 7456-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 7456-3. LUCAS FAMILY INVESTMENTS, LLC

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 7456-3.

The Chief Engineer is recommending cancellation of the above water permit due to non-construction.

The permit holder was contacted in November 2019 to find out if an irrigation system had been constructed. After drilling three test wells, the well driller could not find enough water to put in an adequate irrigation well. The time limit for completion of works as specified in the water permit, expired on March 7, 2018.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permit does not prohibit a new application for this project in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Mark or Nancy Lueck, 46087 158th St, South Shore SD 57263

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit Nos. 7650-3 and 7651-3

Water Permit No.7650-3 authorizes irrigation of the NE ¼ Section 29, T118N, R53W and Water Permit No. 7651-3 authorizes irrigation of the NE ¼ Section 4, T117N, R53W. Both permits authorize a well in the approximate center of each of the above described quarters. In November 2019, you contacted our program with reference to the 2019 irrigation questionnaires. It is our understanding the you do not irrigate and have not put up irrigation systems under either permit. The time limit for completion of works, as described in the permits, expired on April 15, 2018. Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit Nos. 7650-3 and 7651-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit Nos. 7650-3 & 7651-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit Nos. 7650-3 and 7651-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permits. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NOS. 7650-3 AND 7651-3, MARK OR NANCY LUECK

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Nos. 7650-3 and 7651-3.

The Chief Engineer is recommending cancellation of the above water permits due to non-construction.

The time limit for completion of works under each of the water permits expired on April 15, 2018. Mr. Lueck confirmed during a November 21, 2019 phone conversation with Genny McMath that he does not irrigate and has not developed the irrigation systems.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permits does not prohibit new applications for the projects in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Mark or Nancy Lueck, 46087 158th St, South Shore SD 57263

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit Nos. 7650-3 and 7651-3

Water Permit No.7650-3 authorizes irrigation of the NE ¼ Section 29, T118N, R53W and Water Permit No. 7651-3 authorizes irrigation of the NE ¼ Section 4, T117N, R53W. Both permits authorize a well in the approximate center of each of the above described quarters. In November 2019, you contacted our program with reference to the 2019 irrigation questionnaires. It is our understanding the you do not irrigate and have not put up irrigation systems under either permit. The time limit for completion of works, as described in the permits, expired on April 15, 2018. Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit Nos. 7650-3 and 7651-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit Nos. 7650-3 & 7651-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit Nos. 7650-3 and 7651-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permits. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NOS. 7650-3 AND 7651-3, MARK OR NANCY LUECK

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Nos. 7650-3 and 7651-3.

The Chief Engineer is recommending cancellation of the above water permits due to non-construction.

The time limit for completion of works under each of the water permits expired on April 15, 2018. Mr. Lueck confirmed during a November 21, 2019 phone conversation with Genny McMath that he does not irrigate and has not developed the irrigation systems.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permits does not prohibit new applications for the projects in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Darren Deckert, 27389 431st Ave, Freeman SD 57029

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 7654-3

Water Permit No. 7654-3 authorizes diversion of ground water from a well completed into the Niobrara Aquifer to irrigate 209 acres located in portions of the S ½ Section 3, T99N, R57W. In January 2020 you confirmed the irrigation system has not been constructed. The time limit for completion of works, as stated in the water permit, expired on April 8, 2018. Since the date for construction has passed, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 7654-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit No. 7654-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 7654-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 7654-3, DARREN DECKERT

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 7654-3.

The Chief Engineer is recommending cancellation of the above water permit due to non-construction.

The 2018 irrigation questionnaire indicated the system had not been constructed. In January 2020 the permit holder was contacted concerning submission of the 2019 irrigation questionnaire. The permit holder confirmed the situation was the same as the previous year with no system being constructed. The time limit for completion of works expired on April 8, 2018.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permit does not prohibit a new application for this project in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Michelle Bathke, Finance Officer, City of Mitchell, 612 N Main, Mitchell SD 57301
Bob Everson, Mayor, City of Mitchell, 612 N Main, Mitchell SD 57301
Kyle Croce, Public Works Director, City of Mitchell, 612 N Main, Mitchell SD 57301

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Right No. 4354-3

Water Right No. 4354-3 authorizes diversion of 29.0 cubic feet of water per second from the James River to supplement water supplies in Lake Mitchell. On January 8, 2020, the wastewater superintendent, Jon Vermeulen, notified our Program power had been cut to the James River pump station. He confirmed the city would no longer be using the river to fill the lake. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Right No. 4354-3 due to abandonment.

The Water Management Board will consider cancellation of Water Right No. 4354-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 4354-3 based upon facts presented at the public hearing. Our records show the city to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER RIGHT NO. 4354-3, CITY OF MITCHELL

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Right No. 4354-3.

The Chief Engineer is recommending cancellation of the above water right due to abandonment.

Water Right No. 4354-3 authorizes diversion of water from the James River to augment water supplies in Lake Mitchell. Information supplied by the wastewater superintendent indicates power was cut to the James River pump station. The city no longer intends to use James River water to supplement Lake Mitchell.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

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August 25, 2020

NOTICE OF CANCELLATION

TO: Joe Pechous, 30440 426th Ave, Tabor SD 57063

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 8139-3

Water Permit No. 8139-3 authorizes diversion of ground water from a well to be completed into the Lower James Missouri Scotland Aquifer to irrigate the SE ¼ Section 3, T94N, R58W. On June 9, 2020, a staff engineer with our program contacted you prior to conducting a licensing investigation. During the phone conversation you indicated the well had not been drilled and no system has been constructed. The time limit for completion of works expired on June 8, 2020. The Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 8139-3 due to non-construction.

The Water Management Board will consider cancellation of Water Permit No. 8139-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 8139-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

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Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 8139-3, JOE PECHOUS

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 8139-3.

The Chief Engineer is recommending cancellation of the above water permit due to non-construction.

The date for completion of works as specified in the permit expired on June 8, 2020. On June 9, 2020, the permit holder was contacted concerning the irrigation system authorized under the water permit. Mr. Pechous indicated the well has not been drilled or an irrigation system constructed. Currently he was working on a gravel pit on the property and when it became large enough, Mr. Pechous indicated he may apply for a water permit to irrigate from the gravel pit.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permit does not prohibit a new application for this project in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Luke Berg, Berg Farms LLC, 2676 Edgewater Dr., Gary SD 57237

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 8284-3

Water Permit No. 8284-3 authorizes diversion of up to 39 acre feet of water annually from two wells to be completed into the Revillo Aquifer for commercial use in a swine confinement facility. On February 28, 2020 we received notification from you the wells have not been drilled and you no longer intended to proceed with the project. You actually have until March 7, 2023 to complete the project but based on your intent not to develop, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit due to abandonment.

The Water Management Board will consider cancellation of Water Permit No. 8284-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 8284-3 based upon facts presented at the public hearing. Our records show you to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

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RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 8284-3, BERG FARMS LLC

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 8284-3.

The Chief Engineer is recommending cancellation of the above water permit due to abandonment.

The water permit contains a qualification for annual reporting to the Chief Engineer the amount of water withdrawn from the Revillo Aquifer. Upon reporting for calendar year 2019, the permit holder indicated the wells have not been drilled and they no longer intend to develop the project.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permit does not prohibit a new application for this project in the future.

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August 25, 2020

NOTICE OF CANCELLATION

TO: Mark Cotter, Public Works Director, City of Sioux Falls, PO Box 7402, Sioux Falls SD 57117-7402

Andrew Berg, City of Sioux Falls, 1017 E Chambers St., Sioux Falls SD 57104

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Cancellation of Water Permit No. 8356-3

Water Permit No. 8356-3 authorizes diversion of 0.333 cfs from four wells completed into the Sioux Quartzite. The wells were used for geothermal purposes in the city administration building located at 231 N Dakota Avenue. In March 2020, in response to a request to submit annual water use records for the permit, Andrew Berg notified our program the City did not pump water from the wells in 2019. He also indicated the system has been shut down and will not be used again. The City is working with a contractor to plug or cap the wells. Based on the city's intent to discontinue use of the wells for geothermal purposes, the Chief Engineer of the Water Rights Program is recommending cancellation of Water Permit No. 8356-3 due to abandonment.

The Water Management Board will consider cancellation of Water Permit No. 8356-3 at **10:00 am, Wednesday, October 7, 2020** (Central Time) in the Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD *(the agenda time is an estimate and the actual time of hearing may be later).*

The recommendation of the Chief Engineer is not final or binding upon the Board. The Board is authorized to 1) cancel, 2) cancel portions of, 3) delay action on, or 4) take no action on Water Permit No. 8356-3 based upon facts presented at the public hearing. Our records show the city to be the owner of property covered by this water permit. If you wish to oppose the cancellation and if you intend to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, you must file a written petition with the Chief Engineer by September 25, 2020. The petition may be informal, but it must include a statement describing the reasons for your opposition to the cancellation, and your signature and mailing address or your legal counsel if legal counsel is obtained.

The hearing will be conducted pursuant to the provisions of SDCL 46-1-1 thru 46-1-10, 46-1-14 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-5-36, 46-5-37, 46-5-37.1; 46-2A-1 thru 46-2A-8; and Board Rules ARSD 74:02:01:36 thru 74:02:01:41. These are contested cases pursuant to procedures contained in SDCL 1-26.

This hearing is an adversarial proceeding. Any party has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The time of the hearing will be automatically extended for at least twenty days upon your written request to the Chief Engineer after a petition has been filed to oppose the cancellation. If an extension is requested, the hearing on the cancellation will be continued until the next regular Board Meeting. Any request for extension must be filed with the Chief Engineer by September 25, 2020.

Prior to September 25, 2020, contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) if assistance is needed with the following: 1) further information on the proposed cancellation; 2) to assure access to the meeting room for the handicapped; or 3) to obtain an interpreter for the hearing impaired.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If you choose to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program, 523 E. Capitol Avenue, Pierre SD) by September 7, 2020.

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER

FOR WATER PERMIT NO. 8356-3, CITY OF SIOUX FALLS

Pursuant to SDCL 46-2A-2 and 46-5-37.1, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit No. 8356-3.

The Chief Engineer is recommending cancellation of the above water due to abandonment.

The water permit authorizes diversion of water from four wells into the Sioux Quartzite to be used for geothermal use at the new city administration building. Upon reporting annual water use for calendar year 2019, Andrew Berg notified the program the city had shut down the system and are working towards getting the wells plugged or capped.

Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
August 25, 2020

Note:

Cancellation of the water permit does not prohibit a new application for this project in the future.

CITY OF BELLE FOURCHE

ENGINEERING DEPARTMENT

511 6TH AVENUE
BELLE FOURCHE, SD 57717
PHONE: (605) 892-3006
FAX: (605) 723-0897
WWW.BELLEFOURCHE.ORG

RECEIVED
AUG 05 2020
WATER RIGHTS PROGRAM

July 31, 2020

Department of Environment and Natural Resources
PMB 2020
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Ms. Karen Schlaak,

This correspondence is in response to your letter dated July 15, 2020 regarding the seven year review of Future Use Water Permit No. 369-1 for the City of Belle Fourche. The city would like to retain the Future Use Permit to allow for continued expansion and growth of our community. Listed below are pumping records for the past five (5) years:

2015 1,217.6 acre – ft annually
2016 1,268.3 acre – ft annually
2017 1,063.7 acre – ft annually
2018 980.4 acre – ft annually
2019 984.3 acre – ft annually

If you have any questions regarding the information provided please contact me at 892-3006.

Sincerely,

Steve Nafus
Interim City Engineer

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DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 369-1, City of Belle Fourche

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 369-1, City of Belle Fourche, 511 6th Ave, Belle Fourche SD 57717.

The Chief Engineer is recommending that Future Use Permit No. 369-1 REMAIN in EFFECT for 2,478 acre-feet (AF) annually [1,238 AF from the Spearfish Creek alluvium, 620 AF from the Minnelusa Aquifer and 620 AF from the Madison Aquifer] because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 369-1, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 369-1, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 369-1 is subject to payment of the $265.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 7, 2020

RECEIVED
AUG 2 7 2020
WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA:
COUNTY OF LAWRENCE:

Letitia Lister of said County and State being first duly sworn, on her oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Letitia Lister, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and that I, Letitia Lister, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Notice Of Hearing To Review Future Use Water Permit No. 369-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive and consecutive weeks, the first publication being made on the 19th day of Aug, 2020, and the last publication on the _____ day of _____, _____, that the full amount of fees charged for publishing same, to-wit: The sum of $42.97, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Subscribed and sworn to before me this 24th day of Aug, 2020

Notary Public, Butte County, South Dakota
My commission expires: 3-21-2023

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 369-1

Notice is given that the Water Management Board will review Future Use Permit No. 369-1 held by the City of Belle Fourche, c/o Steve Nafus, Interim City Engineer, 511 6th Ave, Belle Fourche SD 57717 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 369-1. This permit was approved in 1959 and currently reserves 2,478 acre-feet (AF) of water annually (1,238 AF from the Spearfish Creek alluvium, 620 AF from the Minnelusa Aquifer and 620 AF from the Madison Aquifer). The future use area is located in the SW 1/4 NE 1/4, N 1/2 SE 1/4 and SE 1/4 SE 1/4 Section 28-T7N-R2E. he water is reserved for municipal use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 369-1 REMAIN in EFFECT for a total of 2,478 AF of water annually (1,238 AF from the Spearfish Creek alluvium, 620 AF from the Minnelusa Aquifer and 620 AF from the Madison Aquifer) because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 369-1 at 10:00 am CST, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 369-1 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 31, 2020.

Published once at the total approximate cost of $44.81.

#240
Aug 19

City of Mitchell | **Public Works**
612 North Main Street | Mitchell, SD 57301
Phone: 605-995-8433 | Fax: 605-995-8410
CityOfMitchell.org

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WATER RIGHTS
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Mitchell
SOUTH DAKOTA
Outside expectations

February 7, 2020

Karen Schlaak
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre SD 57501

RE: Future Use Water Permits No. 427-3 and No. 3142-3

Dear Mrs. Schlaak:

The City of Mitchell would like to retain Future Use Water Permit No. 427-3 (from Firesteel Creek) and Future Use Water Permit No. 3142-3 (from the Missouri River).

Future Use Water Permit No. 427-3 (from Firesteel Creek) is the City of Mitchell backup water source that is used for Emergency use if B-Y Rural Water cannot meet the City of Mitchell water needs. No water has been used from Permit No. 427-3 in the past three years.

Future Use Water Permit No. 3142-3 (from the Missouri River) is currently being looked at as one of several options in a second source study for water to the City of Mitchell. Future source study shows that the City of Mitchell will need 5.4 MGD/Day. No water has been used from Permit No. 3142-3.

Again, the City of Mitchell would like to retain Future Use Water Permit No. 427-3 (from Firesteel Creek) and Future Use Permit No. 3142-3 (from the Missouri River). Please let me know if there are any questions or concerns.

Sincerely,

Jon Vermeulen
Utilities Superintendent
City of Mitchell
612 North Main
Mitchell, SD 57301

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 427-3, City of Mitchell SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 427-3, City of Mitchell, 612 N Main, Mitchell SD 57301.

The Chief Engineer is recommending that Future Use Permit No. 427-3 REMAIN in EFFECT for 5,765 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 427-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 427-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 427-3 is subject to payment of the $545.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 3142-3, City of Mitchell SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 3142-3, City of Mitchell, 612 N Main, Mitchell SD 57301.

The Chief Engineer is recommending that Future Use Permit No. 3142-3 REMAIN in EFFECT for 5,765 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 3142-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 3142-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 3142-3 is subject to payment of the $545.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

SD Affidavit No. **2852298**

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA
ss.
COUNTY OF DAVISON

Nicole Riegert, of said county, being first duly sworn, on oath, states as follows:

1. I am the designated agent of the *Mitchell Republic*, a daily newspaper published in the city of Mitchell, in said County of Davison, and State of South Da-kota; I have full and personal knowledge of the facts herein stated; that said newspaper is a legal newspa-per as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Davison and State of South Dakota, for at least one year next prior to the first publication of the attached public notice.

2. The newspaper listed on the exhibit published the advertisement of: ***Legal Notice; (1) time: August 12, 2020,*** as required by law or ordinance.

3. That the full amount of the fee charged for the publication of the attached public notice insures to the sole benefit of the publisher or publishers; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever, that the fees charged for the publication thereof are: $45.06

Subscribed and sworn to before me this 12th day of August, 2020.

Nicole Riegert
Legals Clerk

Annette Kroger
Notary Public
My Commission Expires: May 15, 2026

ANNETTE KROGER
Seal
Notary Public
South Dakota

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NOS. 427-3 and 3142-3

Notice is given that the Water Management Board will review Future Use Permit Nos. 427-3 and 3142-3 held by the City of Mitchell, c/o Jon Vermeulen, Utilities Supt., 612 N Main, Mitchell SD 57301 for progress made in the development of the water reserved by the permits and future plans for development of the water reserved.

Permit No. 427-3 was approved in 1960 and currently reserves 5,765 acre-feet of water from Firesteel Creek located in the NE 1/4 SE 1/4 Section 9-T103N-R60W to be used for municipal use.

Permit No. 3142-3 was approved in 1976 and currently reserves 5,765 acre-feet of water from the Missouri River between points in the SW 1/4 Section 30-T104N-R71W (Brule County) and in the NE 1/4 Section 16-T106N-R71W (Buffalo County) to be used for municipal use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit Nos. 427-3 and 3142-3 each REMAIN in EFFECT for 5,765 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit Nos. 427-3 and 3142-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permits to remain in effect, 2) amend the permits by adding qualifications, 3) cancel the permits for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permits, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit Nos. 427-3 and 3124-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendations, further information on these permits, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permits. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020. Published one time at the approximate cost of $45.06.

(Aug. 12, 2020)

2852298

RECEIVED
AUG 24 2020
WATER RIGHTS PROGRAM

RECEIVED
AUG 2 4 2020
WATER RIGHTS
PROGRAM

Proof Of Publication

Huron Plainsman
49 3rd Street SE
Huron, SD 57350
605-353-7402

Legal Notice Number: 395

I, McKendzie Castillo, being duly sworn on oath say that the Plainsman is a daily paper published at Huron, Beadle County South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-tow consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am a Legal Advertising Coordinator of said newspaper and know that facts herein state. The annexed notice headed: 0395 WATER RIGHTS-CITY OF MITCHELL, was published for one day, in said newspaper and not in any supplement of the said newspaper, the publication was on 8/12/20. That the full amount of the fee charged for the publishing $47.41 insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whom so ever.

Subscribed and sworn to me before this date 8/19/20.

Notary Public, South Dakota

My Term Expires 03/11/2022

F. P. 08-12-20

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NOS. 427-3 and 3142-3

Notice is given that the Water Management Board will review Future Use Permit Nos. 427-3 and 3142-3 held by the City of Mitchell, c/o Jon Vermeulen, Utilities Supt., 612 N Main, Mitchell SD 57301 for progress made in the development of the water reserved by the permits and future plans for development of the water reserved.

Permit No. 427-3 was approved in 1980 and currently reserves 5,765 acre-feet of water from Firesteel Creek located in the NE 1/4 SE 1/4 Section 9-T103N-R60W to be used for municipal use.

Permit No. 3142-3 was approved in 1976 and currently reserves 5,765 acre-feet of water from the Missouri River between points in the SW 1/4 Section 30-T104N-R7W (Brule County) and in the NE 1/4 Section 16-T105N-R7W (Buffalo County) to be used for municipal use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit Nos 427-3 and 3142-3 each REMAIN in EFFECT for 5,765 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit Nos. 427-3 and 3142-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permits to remain in effect, 2) amend the permits by adding qualifications, 3) cancel the permits for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permits, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit Nos. 427-3 and 3124-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendations, further information on these permits, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permits. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

No. 0395 (adv.)

Published one time at the total approximate cost of $47.41.

RECEIVED
AUG 2 4 2020
WATER RIGHTS PROGRAM

RECEIVED
AUG 17 2020
WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION

State of South Dakota

ss.

County of Brule

Debi Ruiz of said county, being first duly sworn, on oath, says: That she is the publisher of *Central Dakota Times*, a weekly newspaper, published in the City of Chamberlain, in said County of Brule and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Brule and State of South Dakota, for at least one year next prior to the first publication of the attached public notice and that the Notice of Hearing To Review Future Use Water Permit Nos. 427-3 and 3142-3 a printed copy of which, taken from the paper in which the same was published and which is hereto attached and made a part of this affidavit, was published in said newspaper for one successive week(s) to wit:

August 12, 2020; _____, 20____;
_____, 20____; _____, 20____;
_____, 20____; _____, 20____;

That the full amount of the fee charged for the publication of the attached public notice inures to the sole benefit of the publisher or publishers; that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

$40.66.

Signed: Debi Ruiz

Subscribed and sworn to before me this 13th day of August, 2020.

Janet L Petrak

Notary Public In and For The County of Brule, South Dakota

JANET L. PETRAK
Notary Public
SEAL
South Dakota

My commission expires June 5, 2022.

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NOS. 427-3 AND 3142-3

Notice is given that the Water Management Board will review Future Use Permit Nos. 427-3 and 3142-3 held by the City of Mitchell, c/o Jon Vermeulen, Utilities Superintendent, 612 North Main, Mitchell, SD 57301 for progress made in the development of the water reserved by the permits and future plans for development of the water reserved.

Permit No. 427-3 was approved in 1960 and currently reserves 5,765 acre-feet of water from Firesteel Creek located in the NE 1/4 SE 1/4 Section 9-T103N-R60W to be used for municipal use.

Permit No. 3142-3 was approved in 1976 and currently reserves 5,765 acre-feet of water from the Missouri River between points in the SW 1/4 Section 30-T104N-R71W (Brule County) and in the NE 1/4 Section 16-T106N-R71W (Buffalo County) to be used for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Program recommends that Permit Nos. 427-3 and 3142-3 each REMAIN in EFFECT for 5,765 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit Nos. 427-3 and 3142-3 at 10 a.m. Oct. 7, 2020, Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the board and the board is authorized to 1) allow the permits to remain in effect, 2) amend the permits by adding qualifications, 3) cancel the permits for no development or no planned future development or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a board decision and who intends to participate in the hearing before the board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by Sept. 28, 2020. The Chief Engineer's address is "Water Rights Program," Joe Foss Building, 523 East Capitol Avenue, Pierre, SD 57501 (605-773-3352) and the permit holder's mailing address is given above. The petition may be informal but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permits and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit Nos. 427-3 and 3124-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 through 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the board may be appealed to the circuit court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendations, further information on these permits, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605-773-3352) by Sept. 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the future use permits. The request for a delay must be filed with the Chief Engineer by Sept. 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 East Capitol Avenue, Pierre, SD) by Aug. 24, 2020.

(Published one week, August 12, 2020, at a total approximate cost of $40.66.)

(August 12)

RECEIVED
JUL 27 2020
WATER RIGHTS
PROGRAM

MADISON South Dakota
Municipal Utilites Department

Physical Address & Deliveries: 435 S. Highland Ave.
Madison, SD 57042

Mail & Billing Address: 116 W. Center St.
Madison, SD 57042

July 23, 2020

Karen Schlaak, Environmental Scientist
SDDENR, Water Rights Program
523 E. Capitol
Pierre, SD 57501-3182

RE: Future Water Use Permit NO 747-3

Ms. Schlaak:

The City of Madison is planning to retain the future water use permit. The City feels there exists a reasonable need to reserve the subject 1033 acre-feet. With the continued growth and economic development, we feel is it in our best interest to retain Permit No. 747-3.

If there is a need for more information, please contact me at 605-256-7527.

Sincerely,

Rick Nighbert
Water Superintendent

RN/re

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 747-3, City of Madison SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 747-3, City of Madison, 116 W Center St, Madison SD 57042.

The Chief Engineer is recommending that Future Use Permit No. 747-3 REMAIN in EFFECT for 1,033 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 747-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 747-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 747-3 is subject to payment of the $145.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

RECEIVED
AUG 17 2020
WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA }
} ss.
County of Lake }

Joanne Wheeler of the City of Madison, County of Lake, State of South Dakota, being first duly sworn on oath, deposes and says:

The Madison Daily Leader is a daily legal newspaper of general circulation, printed and published in the City of Madison, in said County of Lake, by Hunter Publishing, Inc., Jon M. Hunter, publisher, and has been such legal newspaper during the times hereinafter mentioned; that the said Madison Daily Leader has been in existence as such legal newspaper for more than one year prior to the publication of the notice hereunto attached, and has during all of said time had, and how has, more than 200 bona fide subscribers; that the undersigned, the affiant, is the Secretary of the said newspaper, in charge of the advertising department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed

City of Madison

Notice of Hearing-Water Permit No. 747-3

printed copy of which hereunto attached, was printed and published in the said newspaper for One successive weeks, once each week and on the same day of the week, on the following dates, to-wit:

On Wednesday, the 12th day of August, 20 20;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;

That $ 43.50 being the full amount of the fees for publication of the attached notice inures solely for the benefit of the publisher of the said newspaper; that no arrangement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.

Joanne Wheeler

Subscribed and sworn to before me this 13th day of August, 20 20

ANN L. KOCH
NOTARY PUBLIC
SOUTH DAKOTA

Ann L. Koch

Notary Public, Lake County, South Dakota
Exp. 11-14-25

Wednesday, Aug. 12

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 747-3

Notice is given that the Water Management Board will review Future Use Permit No. 747-3 held by the City of Madison, c/o Rick Nighbert, Water Supt, 116 W Center St, Madison SD 57042 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 747-3. This permit was approved in 1960 and currently reserves 1,033 acre-feet from groundwater (Big Sioux-Northern Skunk Creek Aquifer) located in Sections 11, 12, 13, 14, T106N-R53W and Sections 7, 8, 17, 18 and W 1/2 Sections 9 and 16, T106N-R52W for municipal use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 747-3 REMAIN in EFFECT for 1,033 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 747-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and

Public .....
Notary .....
Receiv .....

over

In ..... Court

County of .....

mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 747-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the total approximate cost of $43.50

AFFIDAVIT OF PUBLICATION

Filed in the office of ..... on the

..... day of .....

20 .....

.....

.....

Attorneys for .....

.....

CITY OF GARRETSON
A MUNICIPAL CORPORATION

RECEIVED
FEB 18 2020
WATER RIGHTS PROGRAM

City Hall/Finance Officer
605/594-6721
Utility Superintendent
605/594-6723
E-mail: city@alliancecom.net
Website: garretsonsd.com

February 14, 2020

Karen Schlaak
Water Rights Program

Dear Water Rights Program:

The City of Garretson is requesting to retain it's 235 acre-feet of water in reserve for the future use permit. Some of the reasons for retaining this water right are:

1. The availability to have a second source of water for our community is very important to the City of Garretson.

2. Having this supply of water for the City of Garretson can be a very good source of revenue, being a small community and trying to keep Main Street healthy we would discourage losing our existing reserved water supply.

3. If the City of Garretson should encounter a natural weather disaster that would take our water tower entirely out of service we can just turn on our own water supply.

4. The future of Minnehaha County's growth is now moving east and along with the continued growth of Brandon to the south of us it is very important that we maintain our existing water rights.

5. The City of Garretson's industrial park is just beginning to become a great asset to our community with 6 structures now connected to our infrastructure with the last service requesting a max of 325 gallons water per minute. This business is very important to our community and another need for us to maintain our water rights.

The City of Garretson has used an average of 31,266,000 gallons of water per year for the last three years. The City can pump 25% of this amount of our own water each year and stay in compliance with EPA regulations.

Thank you for your continued consideration in our request to maintain our existing water rights as it is very important to our community as we continue to grow and plan for the future.

Sincerely,

Craig Nussbaum
Utility Superintendent
City of Garretson
craig@alliancecom.net

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 1289-3, City of Garretson SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 1289-3, City of Garretson, c/o Craig Nussbaum, Utility Supt., PO Box 370, Garretson SD 57030.

The Chief Engineer is recommending that Future Use Permit No. 1289-3 REMAIN in EFFECT for 235 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 1289-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 1289-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 1289-3 is subject to payment of the $75.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

Argus Leader

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

CITY OF GARRETSON
705 N MAIN ST
GARRETSON, SD 57030

Account No.: SFA-0000000690
Ad No.: 0004316255
PO #: 1289-3
Lines : 157
Ad Total: $98.92
This is not an invoice
# of Affidavits 1

Account No.: SFA-0000000690
Ad No.: 0004316255

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA

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

Wednesday, August 12, 2020

Sworn to and subscribed before me this 12 day of August, 2020.

Legal Clerk

Notary Public, State of Wisconsin, County of Brown

9-19-21

My Commission expires

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 1289-3

Notice is given that the Water Management Board will review Future Use Permit No. 1289-3 held by the City of Garretson, c/o Craig Nussbaum, Utilities Supt, PO Box 370, Garretson SD 57030 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 1289-3. This permit was approved 1967 and currently reserves 235 acre-feet from the Sioux Quartzite Aquifer located in Sections 17 and 20; all in T103N-R47W for municipal use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 1289-3 REMAIN in EFFECT for 235 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 1289-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 1289-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020.

The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020. Published once at the approximate cost of $98.92

4316255 August 12, 2020

August 26,2020

RECEIVED
AUG 3 1 2020
WATER RIGHTS
PROGRAM

Patrick Callan
Town of Florence
PO Box 137
Florence SD 57235

Karen Schlaak
Water Rights Program

Dear Karen Schlaak,

In response to your letter dated July 15, 2020 concerning the seven year review of Future Use Water Permit No 4051-3 held by the Town of Florence: yes, we want to retain the permit.

While we do not use the water in our distribution system, we need it for a backup for the Fire Department in the event of a fire. If we have a fire it wouldn't take long for the storage tank to be drained. It is also used by crews working in the area that require water for their machinery.

Recent use of the water source:

2018	1500 gallons
2019	2000 gallons
2020	20,000 gallons

Sincerely,

Patrick S Callan

Patrick S Callan
Mayor
Town of Florence
(605) 758-8696

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 4051-3, Town of Florence SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 4051-3, Town of Florence, c/o Patrick S Callan, Mayor, PO Box 137, Florence SD 57235.

The Chief Engineer is recommending that Future Use Permit No. 4051-3 REMAIN in EFFECT for 38 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 4051-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 4051-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 4051-3 is subject to payment of the $50.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the town after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 31, 2020

RECEIVED

SEP 16 2020

WATER RIGHTS PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Codington)

I, Jackie Wettestad

certify that the attached printed Notice was taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was published

in the newspaper on the following date:

September 10, 2020

Cost of Printing #58.37

Jackie Wettestad
(Signature)

Office Manager
(Title)

9-10-2020
(Date Signed)

FLORENCE

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 4051-3

Notice is given that the Water Management Board will review Future Use Permit No. 4051-3 held by the Town of Florence, Patrick S Callan, Mayor, PO Box 137, Florence SD 57235 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 4051-3. This permit was approved in 1977 and currently reserves 38 acre-feet of water annually from the Prairie Choteau Aquifer located in the S 1/2 Section 4-T118N-R54W for municipal use by the town. Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 4051-3 REMAIN in EFFECT for 38 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest. The Water Management Board will conduct the hearing to review Future Use Permit No. 4051-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD. The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition. The hearing to review Future Use Permit No. 4051-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26. This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020. According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by September 21, 2020.

Published once at the approximate cost of $59.30

58.37 (September 10, 2020)

town of south shore
post office box 57 • south shore, south dakota 57263-0057

RECEIVED
FEB 18 2020
WATER RIGHTS
PROGRAM

February 6, 2020

Karen Schlaak, Environmental Scientist
Water Rights Program
PMB 2020 – Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Ms. Schlaak:

It is the intention of the Town of South Shore to retain Future Use Water Permit #40538-3, which was issued in 1977.

The Town Board of South Shore is aware that the issue is to retain a reservation of water for future development and does not involve our current wells.

Our well currently pumps between 40 – 60 gallons of water per minute, supplying our residents with city water.

Thank you.

Sincerely,

Charles Werner, Water Superintendent
Town of South Shore
PO Box 57
South Shore SD 57263
townsouthshore@sstel.net
605-756-4130

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT
NO. 4053B-3, Town of South Shore SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 4053B-3, Town of South Shore, PO Box 57, South Shore SD 57263.

The Chief Engineer is recommending that Future Use Permit No. 4053B-3 REMAIN in EFFECT for 192 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 4053B-3, 2) the town has demonstrated a reasonable need for the water reserved by Permit No. 4053B-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 4053B-3 is subject to payment of the $75.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Codington)

I, Jackie Wettestad

certify that the attached printed Notice was taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was published

in the newspaper on the following date:

August 12, 2020

Cost of Printing $64.30

Jackie Wettestad
(Signature)

Office Manager
(Title)

8-12-2020
(Date Signed)

RECEIVED
AUG 14 2020
WATER RIGHTS PROGRAM

SOUTH SHORE

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 4053B-3

Notice is given that the Water Management Board will review Future Use Permit No. 4053B-3 held by the Town of South Shore, Charles Werner, Water Supt., PO Box 57, South Shore SD 57263 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 4053B-3. This permit was approved 1977 and currently reserves 192 acre-feet from the Antelope Valley Aquifer located within the town limits of South Shore (portions of the SW 1/4 Section 14, SE 1/4 Section 15 and NE 1/4 Section 22; all in T119N-R51W) for municipal use. Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 4053B-3 REMAIN in EFFECT for 192 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest. The Water Management Board will conduct the hearing to review Future Use Permit No. 4053B-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD. The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 20202. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition. The hearing to review Future Use Permit No. 4053B-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26. This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020. According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the approximate cost of $59.30.

64.30 (August 12, 2020)

Kingbrook
Rural Water System, Inc.

PO Box 299 • 302 E. Ash St. • Arlington, SD 57212 • Phone 605-983-5074 • 1-800-605-5279 • Fax 605-983-5636 • office@kingbrookruralwater.com

RECEIVED
APR 22 2020
WATER RIGHTS PROGRAM

April 21, 2020

Ms. Karen Schlaak (Water Rights Program)
Department of Environment & Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

Dear Ms. Schlaak,

In response to your letter dated April 7, 2020 letter requesting information regarding our intention for future use permit 5643-3, Kingbrook Rural Water System, Inc., desires to maintain the permit based on current trends and projected future needs of our water system.
Kingbrook is continuing to serve critical health needs of rural residents and communities by providing safe drinking water.

Since our last letter dated May 30, 2013, Kingbrook Rural Water Systems has continued expanding its footprint and water usage has increased significantly as you can see below in our annual usage starting in 2014:

- 2014 – 210 million gallons
- 2015 – 209 million gallons
- 2016 – 216 million gallons
- 2017 – 237 million gallons
- 2018 – 236 million gallons
- 2019 – 217 million gallons – very wet year as you know

We are continuing to expand our infrastructure to accommodate new and existing customer base and requests for new service from dairy and animal confinement operations.

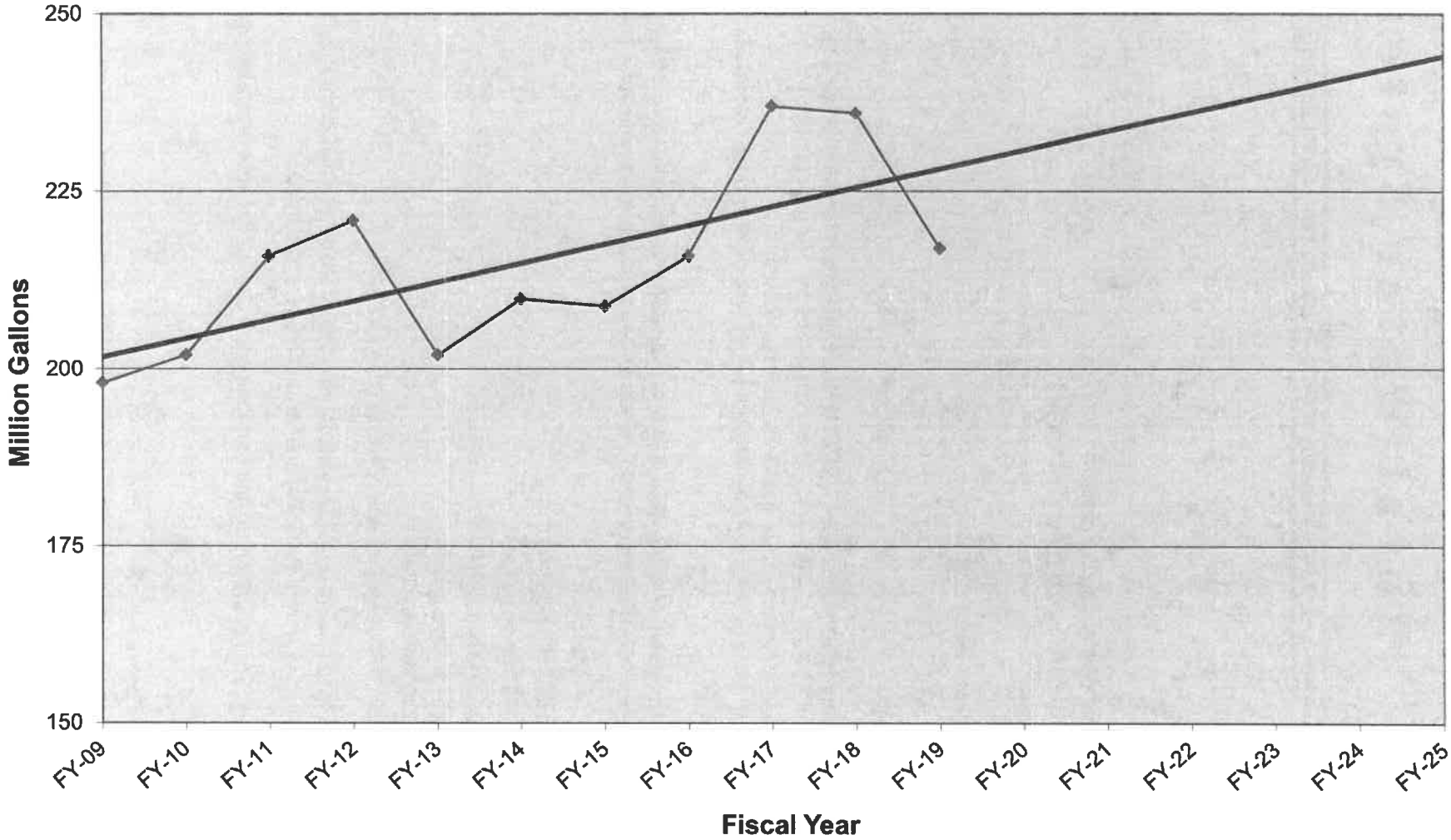
We are requesting your approval to maintain the permit and ask for your favorable consideration.

Sincerely,

Erin Hayes

Erin Hayes
General Manager KBRW

Kingbrook Rural Water
Chester Treatment Plant Wellfield Water Production



DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT
NO. 5643-3, Kingbrook Rural Water System

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 5643-3, Kingbrook Rural Water System, Erin Hayes, Manager, PO Box 299, Arlington SD 57212.

The Chief Engineer is recommending that Future Use Permit No. 5643-3 REMAIN in EFFECT for 425 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 5643-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 5643-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 5643-3 is subject to payment of the $95.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

AFFIDAVIT OF PUBLICATION

State of South Dakota

County of Sanborn

RECEIVED
SEP 08 2020 ss
WATER RIGHTS PROGRAM

Carrie Howard of said county, being, first duly sworn, on oath, says: That she is the publisher of the Sanborn Weekly, a weekly newspaper, published in the City of Woonsocket, in said County of Sanborn, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Sanborn and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that the

Notice of Hearing to Review
Future Water Use
Permit No. 5643-3

a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for 1 successive week(s) to wit:

Aug. 13, 20 20 , 20 , 20
, 20 , 20
, 20 , 20
, 20 , 20

That was full amount of the fee charged for publication of the attached public notice insures to the sole benefit of the publisher; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whosoever; that the fees charged for the publication thereof are: $ 42.25

Signed: Carrie Howard

Subscribed and sworn before me this 3 day of Sept, 2020.

Tina Weber

Notary public in and for the County of Sanborn, South Dakota

My Commission expires Feb 8, 2025.

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 5643-3

Notice is given that the Water Management Board will review Future Use Permit No. 5643-3 held by the Kingbrook Rural Water System, Erin Hayes, Manager, PO Box 299, Arlington, SD 57212 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 5643-3. This permit was approved 1992 and currently reserves 425 acre-feet from the Big Sioux:Northern Skunk Creek Aquifer located in S 1/2 SW 1/4, SE 1/4 NE 1/4 Section 8; S.1/2 NW 1/4, N 1/2 SW 1/4 Section 9; NE 1/4 NE 1/4 Section 17; all in T105N-R51W. The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 5643-3 REMAIN in EFFECT for 425 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 5643-3 at 10:00 a.m., October 7, 2020, Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program," Joe Foss Building, 523 E Capitol Ave, Pierre, SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 5643-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing to see a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre, SD) by August 24, 2020.

Published once at the approximate cost of $45.00.

SJ52-1tb

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA, County of Miner: ss.

Carla Poulson of said County and State, being duly sworn, on her oath says: That the Miner County Pioneer is a legal newspaper of general circulation, printed and published in Howard, said County and State, by Carla Poulson, and has been such newspaper during the time hereinafter mentioned: and that I, Carla Poulson the undersigned, am publisher of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all the facts stated in this affidavit, and that the advertisement or notice headed

Notice of Hearing
Permit No. 5643-3

A printed copy of which is hereunto attached, was printed and published in the regular and entire issue of said newspaper and not in a supplement, once each week for 1 successive weeks, the first publication being made on the 13 day of Aug 2020.

And the last publication on the ..... day of ..... 20.....

The first publication being made on the ..... day of ..... 20.....

The second publication being made on the ..... day of ..... 20.....

The third publication being made on the ..... day of ..... 20.....

The fourth publication being made on the ..... day of ..... 20.....

The fifth publication being made on the ..... day of ..... 20.....

That said newspaper is a legal newspaper, and has a bona fide circulation of more than two hundred copies weekly, and has been published within the County of Miner, for more than fifty-two successive weeks next prior to the first publication of said notice, and is printed in on office maintained in Howard, South Dakota, the place of publication of said newspaper. That the full amount of fees for publication of the annexed notice is $ 40.37 and insures solely to the benefit of said publisher; that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any person whomever.

CR

Subscribed and sworn to me this 30 day of Aug 20 20

My commission expires the 10 day of Oct 20 25

HEATHER M. POULSON
NOTARY PUBLIC
SOUTH DAKOTA
SEAL

RECEIVED
SEP 04 2020
WATER RIGHTS PROGRAM

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 5643-3

Notice is given that the Water Management Board will review Future Use Permit No. 5643-3 held by the Kingbrook Rural Water System, Erin Hayes, Manager, PO Box 299, Arlington SD 57212 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 5643-3. This permit was approved 1992 and currently reserves 425 acre-feet from the Big Sioux:Northern Skunk Creek Aquifer located in S 1/2 SW 1/4, SE 1/4 NE 1/4 Section 8; S 1/2 NW 1/4, N 1/2 SW 1/4 Section 9; NE 1/4 NE 1/4 Section 17; all in T105N-R51W. The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 5643-3 REMAIN in EFFECT for 425 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 5643-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 5643-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the approximate cost of $40.37

(Aug 18)

Affidavit of Publication

STATE OF SOUTH DAKOTA)
:SS
COUNTY OF McCOOK:)

The undersigned, being first duly sworn, on his oath says: THE MONTROSE HERALD is a weekly newspaper of general circulation, printed and published in the City of Montrose, McCook County, South Dakota, by MATT ANDERSON and has been such a newspaper during the times hereinafter mentioned: that is has a bona fide circulation of more than 200 copies weekly; that is has been published within said county of McCook in the English language and admitted to the United States mail under the second class mailing privilege for more than one year next prior to the publication of the notice hereinafter mentioned, and has been printed during such period and at the present time in part in an office maintained at the said place of a publication: that I, the undersigned, am either the publisher@ or an employee of the said publisher@ of said newspaper and have personal knowledge of all the facts stated in the affidavit: that the advertisement headed

Notice of Hearing to Review Future Use Water Permit No. 5643-3

a printed copy of which is hereto attached, was printed and published in the said newspaper for one (1) successive weeks; that said notice was published in the issues of said paper on the dates as follows, to wit:

The first publication be made on 8/14/2020

The second publication on _____

The third publication on _____

The fourth publication on _____

that 54.61 Being the full amount of the fee for publication of the annexed notice, insured solely to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof have been made with any other person whosever, and that said newspaper is a local newspaper under the law of the state of South Dakota.

Matt Anderson

Subscribed and sworn to before me this 31

day of August 2020

Donna M Diede

Notary Public, South Dakota

DONNA M. DIEDE
NOTARY PUBLIC SEAL
STATE OF SOUTH DAKOTA

My commission expires 2/10/2022

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 5643-3

Notice is given that the Water Management Board will review Future Use Permit No. 5643-3 held by the Kingbrook Rural Water System, Erin Hayes, Manager, PO Box 299, Arlington SD 57212 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 5643-3. This permit was approved 1992 and currently reserves 425 acre-feet from the Big Sioux:Northern Skunk Creek Aquifer located in S 1/2 SW 1/4, SE 1/4 NE 1/4 Section 8; S 1/2 NW 1/4, N 1/2 SW 1/4 Section 9; NE 1/4 NE 1/4 Section 17; all in T105N-R51W. The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 5643-3 REMAIN in EFFECT for 425 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 5643-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 5643-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

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Published once at the approximate cost of $54.61.

MO0814-1

RECEIVED
SEP 04 2020
WATER RIGHTS PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF MOODY) SS

MARY LYNN HEADRICK, of said county, being first duly sworn on oath says that she is the bookkeeper of the Moody County Enterprise, a weekly newspaper printed and published in said county of Moody and State of South Dakota, and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least 200 copies weekly, and has been published within said county for 52 consecutive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the advertisement headed:

Notice of Hearing to Review Future Water Use Permit #5643-3

a printed copy of which, taken from the newspaper in which the same was published, is attached to this sheet and is made a part of this affidavit, was published in said newspaper at least once in each week for 1 successful weeks, on the day of each week on which said newspaper was regularly published, to wit:

8-12-2020

that the full amount of the fee charged for the publication of said Notice inures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any person, and that no part thereof has been agreed to be paid to any person whomsoever, and that the fees charged for the publication thereof are

$ 44.84

M L Headrick bookkeeper

Subscribed and sworn to before me this

13 day of August AD 2020

Notary Public, County Moody, South Dakota

ROGER W JANSSEN
NOTARY PUBLIC
SOUTH DAKOTA
SEAL

My commission expires 2-16-24

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 5643-3

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This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

RECEIVED
AUG 3 1 2020
WATER RIGHTS PROGRAM

County of

AFFIDAVIT OF PUBLICATION

Filed in the office of

on the ____ day of

, 20__

Attorney for

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the cost of $44.84

Argus Leader

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

KINGBROOK RURAL WATER SYSTEM
302 E ASH ST
ARLINGTON, SD 57212

Account No.: SFA-078492
Ad No.: 0004316081
PO #: 5643-3
Lines : 162
Ad Total: $101.76
This is not an invoice
# of Affidavits1

Account No.: SFA-078492
Ad No.: 0004316081

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA

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

Wednesday, August 12, 2020

Sworn to and subscribed before me this 12 day of August, 2020.

Legal Clerk

Notary Public, State of Wisconsin, County of Brown

9-19-21

My Commission expires

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 5643-3

Notice is given that the Water Management Board will review Future Use Permit No. 5643-3 held by the Kingbrook Rural Water System, Erin Hayes, Manager, PO Box 299, Arlington SD 57212 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 5643-3. This permit was approved 1992 and currently reserves 425 acre-feet from the Big Sioux:Northern Skunk Creek Aquifer located in S 1/2 SW 1/4, SE 1/4 NE 1/4 Section 8; S 1/2 NW 1/4, N 1/2 SW 1/4 Section 9; NE 1/4 NE 1/4 Section 17; all in T105N-R51W. The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 5643-3 REMAIN in EFFECT for 425 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 5643-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

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Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020.

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According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020. Published once at the approximate cost of $101.76.

4316081 August 12, 2020

RECEIVED
AUG 24 2020
WATER RIGHTS
PROGRAM

Proof Of Publication

Huron Plainsman
49 3rd Street SE
Huron, SD 57350
605-353-7402

Legal Notice Number: 394

I, McKendzie Castillo, being duly sworn on oath say that the Plainsman is a daily paper published at Huron, Beadle County South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-tow consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am a Legal Advertising Coordinator of said newspaper and know that facts herein state. The annexed notice headed: 0394 WATER RIGHTS-KINGBROOK, was published for one day, in said newspaper and not in any supplement of the said newspaper, the publication was on 8/12/20. That the full amount of the fee charged for the publishing $44.51 insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whom so ever.

Subscribed and sworn to me before this date 8/19/20.

Notary Public, South Dakota

My Term Expires 03/11/2022

F. P. 08-12-20

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No. 0394 (adv.)

Published one time at the total approximate cost of $44.51.

RECEIVED
AUG 24 2020
WATER RIGHTS PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA,

SS.

County of Brookings

Kenneth Reiste, being first duly sworn, on oath says that he is the publisher of the Arlington Sun, a weekly newspaper published in Arlington, said County of Kingsbury and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said county for fifty-one successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Kingbrook Rural Water

, a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this affidavit, was published in said newspaper at least once in each week for One successive weeks, on the day of each week on which said newspaper was regularly published to wit:

8-13 , 20 20 ; , 20

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that the full amount of the fees for the publication of the annexed notice is $ 42.59

Subscribed and sworn to before me this 13 day of August , 20 20 .

Marjorie M. Hoff

Notary Public

County of Brookings, South Dakota

My Commission Expires
August 18, 2021

MARJORIE M. HOFF NOTARY PUBLIC SEAL STATE OF SOUTH DAKOTA

Legal 3752 1xAS 8-13

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Published once at the approximate cost of $56.24.

RECEIVED
AUG 20 2020
WATER RIGHTS PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA
SS
County of Kingsbury

OFFICE OF REGISTER OF DEEDS

I hereby certify that the within Instrument was filed in this office for record on the _____ day of _____ A.D., 20_____, at _____ o'clock _____ .M., and was duly recorded in Book _____ of _____ on page _____

_____
Register of Deeds
Deputy

By _____

Affidavit of Publication

RECEIVED
AUG 17 2020
WATER RIGHTS PROGRAM

State of South Dakota

ss

County of Brookings

Katherine Foiles of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

Leg#966Aplication 5643-3 - Water Use Permit

same was published, is hereto attached marked Exhibit said newspaper for 1 times, to-wit:

August 12, 2020

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

Forty-Seven Dollars and Seventy-Three Cents $47.73

AARON JORENBY
NOTARY PUBLIC
SOUTH DAKOTA
SEAL SEAL

Kim Foiles

31 day of August 2020

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires February 22, 2026

Legal 966 1X
8/12

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Published 1X at the total approximate cost of $47.73.

RECEIVED
AUG 17 2020
WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA } } ss.
County of Lake }

Joanne Wheeler of the City of Madison, County of Lake, State of South Dakota, being first duly sworn on oath, deposes and says:

The Madison Daily Leader is a daily legal newspaper of general circulation, printed and published in the City of Madison, in said County of Lake, by Hunter Publishing, Inc., Jon M. Hunter, publisher, and has been such legal newspaper during the times hereinafter mentioned; that the said Madison Daily Leader has been in existence as such legal newspaper for more than one year prior to the publication of the notice hereunto attached, and has during all of said time had, and how has, more than 200 bona fide subscribers; that the undersigned, the affiant, is the Secretary of the said newspaper, in charge of the advertising department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed

Kingbrook Rural Water System

Notice of Hearing-Water Permit No. 5643-3

printed copy of which hereunto attached, was printed and published in the said newspaper for One successive weeks, once each week and on the same day of the week, on the following dates, to-wit:

On Wednesday, the 12th day of August, 20 20;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;
On ....., the ..... day of ....., 20.....;

That $ 4416 being the full amount of the fees for publication of the attached notice inures solely for the benefit of the publisher of the said newspaper; that no arrangement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.

Joanne Wheeler

Subscribed and sworn to before me this 13th day of August, 20 20

ANN L. KOCH
NOTARY PUBLIC
SOUTH DAKOTA
SEAL SEAL

Ann L. Koch
Notary Public, Lake County, South Dakota
Exp. 11-14-25

Wednesday, Aug. 12

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In ..... Court

County of .....

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AFFIDAVIT OF PUBLICATION

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Filed in the office of .....

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..... day of .....

20 .....

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Attorneys for .....

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Published once at the total approximate cost of $44.60.

8-12-1t

Affidavit of Publication

State of South Dakota

§

County of Clark

William J. Krikac of said county, being first duly sworn, on oath says that he is the publisher of the ***Clark County Courier***, a weekly newspaper printed and published in Clark in said County of Clark and has a full and personal knowledge of all the facts therein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Kingbrook Rural Water System - Water Permit No. 5643-3 -

a printed copy of which taken from the paper in which same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once in each week for

One

successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

August 12, 2020

that the full amount of the fees for the publication of the annexed notice is **$44.60**

William J. Krikac

Subscribed and sworn to before me this

RECEIVED
AUG 17 2020
WATER RIGHTS PROGRAM

12th day of August, 2020

Notary Public
Clark County, South Dakota

My Commission expires: 06/04/2025

RECEIVED
AUG 14 2020
WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Hamlin)

I, LeAnne Dutek

certify that the attached printed Notice was taken from the Hamlin County Herald Enterprise

printed and published in Hayti

County of Hamlin and state of South Dakota. The notice was published in the newspaper on the following date:

Aug. 12, 2020

Cost of Printing $41.45

LeAnne Dutek
(Signature)

Owner
(Title)

8-12-2020
(Date Signed)

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 5643-3

Notice is given that the Water Management Board will review Future Use Permit No. 5643-3 held by the Kingbrook Rural Water System, Erin Hayes, Manager, PO Box 299, Arlington SD 57212 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 5643-3. This permit was approved 1992 and currently reserves 425 acre-feet from the Big Sioux:Northern Skunk Creek Aquifer located in S 1/2 SW 1/4, SE 1/4 NE 1/4 Section 8; S 1/2 NW 1/4, N 1/2 SW 1/4 Section 9; NE 1/4 NE 1/4 Section 17; all in T105N-R51W. The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 5643-3 REMAIN in EFFECT for 425 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 5643-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 5643-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published Aug. 12, 2020, at total cost of $41.45.

TM Rural Water District
Box 445, Parker, South Dakota 57053 • Phone (605) 297-3334 • Fax (605) 297-3332

May 15, 2020

Karen Schlaak
Department of Environment and Natural Resources
PMB 2020
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Karen,

Please accept this letter as TM Rural Water District's official reply regarding future use permit 6705-3 for groundwater reserved in the Upper Vermillion Missouri Aquifer. TM Rural Water District wishes to retain this permit and included with this cover letter is our reasonable need and estimate of future needs.

If you have any questions, please contact the TM office at 297-3334.

Sincerely,

Jay Jorgensen
Manager, TM Rural Water District
TM Rural Water District

Summary Of Existing And Future Demands

The pumping records and the water billing records provided by the District were used as a basis for the water demand projections for the TM Rural Water District System. The water pumping records used represent data for 1998 thru 2018. According to this data, the average daily flow in 2017 was 2.089 MGD and a single day peak of 3.381 MGD in 2018.

Summary of Pumping Records

Year	Annual Average Water Demand (MGD)	Maximum Monthly Water Demand (MGD)	Maximum Daily Water Demand (MGD)
1998	0.650	0.770	1.160
1999	0.670	0.810	1.040
2000	0.687	0.827	1.161
2001	0.687	0.821	1.036
2002	0.727	0.945	1.143
2003	0.782	0.965	1.255
2004	0.679	0.822	1.171
2005	0.716	1.000	1.261
2006	0.825	1.140	1.396
2007	0.710	1.030	1.360
2008	1.620	2.218	2.373
2009	1.394	2.190	2.462
2010	1.740	2.072	2.664
2011	1.658	2.039	2.624
2012	1.931	2.585	2.869
2013	1.831	2.265	2.749
2014	1.826	2.092	2.597
2015	1.847	2.227	2.909
2016	1.973	2.378	2.697
2017	2.089	2.605	2.697
2018	1.912	2.355	3.381

The District's water loss hovers between 5 and 8% and we continue to work diligently to reduce this percentage.

Projections of Future Water Demands

Since 2010 the District has added 190 rural users making a grand total of 1614 metered connections. Although new users have been added to the system at an average of 25 new connections per year, much of the increase in water consumption has been and continues to be attributed to both the NuGen Ethanol Plant and the agricultural sector for use in spraying crops during the growing season and livestock production.

TM predicts that the existing agricultural sector will continue to grow with regards to water usage.

TM continues to see requests coming in for large CAFOs wanting to set up inside the District's boundaries which include dairies, cattle feed lots, egg laying facilities and swine facilities and we are hesitant to forfeit any Future Use Permits that we currently hold. Just one of these large CAFO facilities would require TM to utilize existing Future Use Permits.

Projected future demands based on the increases that we have seen over the last 10 years would look as follows.

Projected Future Demands			
2027	2.558	2.992	3.472
2037	3.027	3.379	4.035
2047	3.496	3.766	4.598

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 6705-3, TM Rural Water District

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 6705-3, TM Rural Water District, c/o Jay Jorgensen, PO Box 445, Parker SD 57053.

The Chief Engineer is recommending that Future Use Permit No. 6705-3 REMAIN in EFFECT for 210 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 6705-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 6705-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 6705-3 is subject to payment of the $75.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA, County of Miner: ss.

Carla Poulson of said County and State, being duly sworn, on her oath says: That the Miner County Pioneer is a legal newspaper of general circulation, printed and published in Howard, said County and State, by Carla Poulson, and has been such newspaper during the time hereinafter mentioned: and that I, Carla Poulson the undersigned, am publisher of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all the facts stated in this affidavit, and that the advertisement or notice headed

Notice of Hearing

Permit No 6705-3

A printed copy of which is hereunto attached, was printed and published in the regular and entire issue of said newspaper and not in a supplement, once each week for ....1..... successive weeks, the first publication being made on the .....13.. day of ....Aug.. 2020

And the last publication on the ..... day of ..... 20.....

The first publication being made on the ..... day of ..... 20.....

The second publication being made on the ..... day of ..... 20.....

The third publication being made on the ..... day of ..... 20.....

The fourth publication being made on the ..... day of ..... 20.....

The fifth publication being made on the ..... day of ..... 20.....

That said newspaper is a legal newspaper, and has a bona fide circulation of more than two hundred copies weekly, and has been published within the County of Miner, for more than fifty-two successive weeks next prior to the first publication of said notice, and is printed in on office maintained in Howard, South Dakota, the place of publication of said newspaper. That the full amount of fees for publication of the annexed notice is $ ..37.67 and insures solely to the benefit of said publisher; that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any person whomever.

CR

Subscribed and sworn to me this ....30 day of ....Aug..... 2020

[signature]

My commission expires the ....10.... day of ....Oct.... 2025

HEATHER M. POULSON
SEAL NOTARY PUBLIC SOUTH DAKOTA SEAL

RECEIVED
SEP 04 2020
WATER RIGHTS PROGRAM

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 6705-3

Notice is given that the Water Management Board will review Future Use Permit No. 6705-3 held by TM Rural Water District, c/o Jay Jorgensen, Box 445, Parker SD 57053for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 6705-3. This permit was approved 2006 and currently reserves 210 acre-feet from the Upper Vermillion:Missouri Aquifer located in portions of Sections 13, 14, 23, 24, 25, 26, 35 and 36; T101N-R55W (McCook County) Sections 18, 19, 20, 29, 30, 31 and 32; T101N-R54W (McCook County) Sections 7, 8, 9, 16, 17, 18, 19, 20, 29 and 30; T100N-R55W (Turner County) The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 6705-3 REMAIN in EFFECT for 210 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 6705-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

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Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the approximate cost of $37.67.

(August 13, 2020)

Affidavit of Publication

STATE OF SOUTH DAKOTA)
:SS
COUNTY OF McCOOK:)

The undersigned, being first duly sworn, on his oath says: THE CANISTOTA CLIPPER is a weekly newspaper of general circulation, printed and published in the City of Canistota, McCook County, South Dakota, by MATT ANDERSON and has been such a newspaper during the times hereinafter mentioned: that is has a bona fide circulation of more than 200 copies weekly; that is has been published within said county of McCook in the English language and admitted to the United States mail under the second class mailing privilege for more than one year next prior to the publication of the notice hereinafter mentioned, and has been printed during such period and at the present time in part in an office maintained at the said place of a publication: that I, the undersigned, am either the publisher@ or an employee of the said publisher@ of said newspaper and have personal knowledge of all the facts stated in the affidavit: that the advertisement headed

Notice of Hearing to Review Future Use Water Permit No. 6705-3

a printed copy of which is hereto attached, was printed and published in the said newspaper for one (1) successive weeks; that said notice was published in the issues of said paper on the dates as follows, to wit:

The first publication be made on 8/13/2020

The second publication on _____

The third publication on _____

The fourth publication on _____

that 54.61 Being the full amount of the fee for publication of the annexed notice, insured solely to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof have been made with any other person whosever, and that said newspaper is a local newspaper under the law of the state of South Dakota.

Matt Anderson

Subscribed and sworn to before me this 31

day of August 2020

Donna M Diede

Notary Public, South Dakota

DONNA M. DIEDE
NOTARY PUBLIC SEAL
STATE OF SOUTH DAKOTA

My commission expires 2/10/2022

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 6705-3

Notice is given that the Water Management Board will review Future Use Permit No. 6705-3 held by TM Rural Water District, c/o Jay Jorgensen, Box 445, Parker SD 57053for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 6705-3. This permit was approved 2006 and currently reserves 210 acre-feet from the Upper Vermillion:Missouri Aquifer located in portions of Sections 13; 14, 23, 24, 25, 26, 35 and 36; T101N-R55W (McCook County) Sections 18, 19, 20, 29, 30, 31 and 32; T101N-R54W (McCook County) Sections 7, 8, 9, 16, 17, 18, 19, 20, 29 and 30; T100N-R55W (Turner County) The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 6705-3 REMAIN in EFFECT for 210 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 6705-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

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The hearing to review Future Use Permit No. 6705-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

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Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the approximate cost of $54.61.

C0814-1

RECEIVED
SEP 04 2020
WATER RIGHTS PROGRAM

RECEIVED
AUG 3 1 2020
WATER RIGHTS PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Turner)

I, Dawn Rye

certify that the attached printed Notice was taken from the The New Era

printed and published in The New Era

County of Turner and

state of South Dakota. The notice was published

in the newspaper on the following date:

Aug. 13, 2020

Cost of Printing $55.44

(Signature)

Office manager
(Title)

8/27/2020
(Date Signed)

August 27 2020

Paul R Harms

My Commission expires

PAUL R. HARMS
SEAL NOTARY PUBLIC SEAL
SOUTH DAKOTA

April 24
2024

Notice of hearing to review future use water permit No. 6705-3

Notice is given that the Water Management Board will review Future Use Permit No. 6705-3 held by TM Rural Water District, c/o Jay Jorgensen, Box 445, Parker SD 57053for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 6705-3. This permit was approved 2006 and currently reserves 210 acre-feet from the Upper Vermillion: Missouri Aquifer located in portions of Sections 13, 14, 23, 24, 25, 26, 35 and 36; T101N-R55W (McCook County) Sections 18, 19, 20, 29, 30, 31 and 32; T101N-R54W (McCook County) Sections 7, 8, 9, 16, 17, 18, 19, 20, 29 and 30; T100N-R55W (Turner County) The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 6705-3 REMAIN in EFFECT for 210 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

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Published once at the approximate cost of $55.44

(N0813-3)

Argus Leader

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

Account No.: SFA-078111
Ad No.: 0004316116
PO #: 6705-3
Lines : 165
Ad Total: $103.46
This is not an invoice
# of Affidavits 1

TM RURAL WATER
110 N MAIN AVE
PARKER, SD 57053

Account No.: SFA-078111
Ad No.: 0004316116

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA

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

Thursday, August 13, 2020

Sworn to and subscribed before me this 13 day of August, 2020.

Legal Clerk

Notary Public, State of Wisconsin, County of Brown

9-19-21
My Commission expires

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 6705-3

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4316116 August 13, 2020

AFFIDAVIT OF PUBLICATION

RECEIVED
AUG 14 2020
WATER RIGHTS
PROGRAM

County of Hutchinson)

) ss.

State of South Dakota)

Jeremy Waltner, of said county and state, being duly sworn, on his oath, deposes and says: That the Freeman Courier is a weekly newspaper of general circulation and a legal newspaper as required by law, printed and published in the town of Freeman in said county and state by Jeremy Waltner, and has been such newspaper during the time hereinafter mentioned: That I, Jeremy Waltner, the undersigned, am publisher of said newspaper in charge of the advertising department thereof, and have personal knowledge of all the facts stated in this affidavit, and that the advertisement headed Water Permit

a printed copy of which is hereto attached, was printed and published in the said newspaper for one successive issues to-wit:

The first publication on:
August 13, 2020

the second publication on:

and the third publication on:

That the full amount of the fees charged for publishing the same to-wit: The sum of $42.71 insures solely to the benefit of the publisher of the Freeman Courier, that no agreement or understanding for any division thereof has been made with any other person whomsoever, and the amount of $42.71 is the rate for publishing legal notices.

Subscribed and sworn to before me this 13th day of August 2020.

Notary Public
Commission expires: 10/9/2024

Publication fee:	$42.71
Notary fee:	
Total:	$42.71

TM RURAL WATER DISTRICT

Notice of Hearing to Review Future Use Water Permit No. 6705-3

Notice is given that the Water Management Board will review Future Use Permit No. 6705-3 held by TM Rural Water District, c/o Jay Jorgensen, Box 445, Parker, SD 57053 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 6705-3. This permit was approved 2006 and currently reserves 210 acre-feet from the Upper Vermillion: Missouri Aquifer located in portions of Sections 13, 14, 23, 24, 25, 26, 35 and 36; T101N-R55W (McCook County) Sections 18, 19, 20, 29, 30, 31 and 32; T101N-R54W (McCook County) Sections 7, 8, 9, 16, 17, 18, 19, 20, 29 and 30; T100N-R55W (Turner County). The water is reserved for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 6705-3 REMAIN in EFFECT for 210 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 6705-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre, SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre, SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 6705-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Printed once at a cost of $42.71

1-20FC

RECEIVED
MAY 07 2020
WATER RIGHTS
PROGRAM

DGR ENGINEERING

May 5, 2020

Karen Schlaak
South Dakota DENR
Joe Foss Building
523 E Capitol Avenue
Pierre, SD 57501

RE: Sioux Rural Water System
Review of Future Use Water Permit No. 7853-3

Dear Ms. Schlaak,

On behalf of Sioux Rural Water System, DGR Engineering requests that 2,400 acre-feet remain reserved under Future Use Water Permit No. 7853-3. Sioux RWS has experienced steady growth in number of customers since its founding and that growth trend is expected to continue. A chart is attached which shows the number of customer connections by year since 2000. The chart also shows the amount of water which is pumped from both water treatment plants. The Castlewood wellfield where water is reserved under Permit No. 7853-3 is Sioux RWS's primary water source for both water treatment plants.

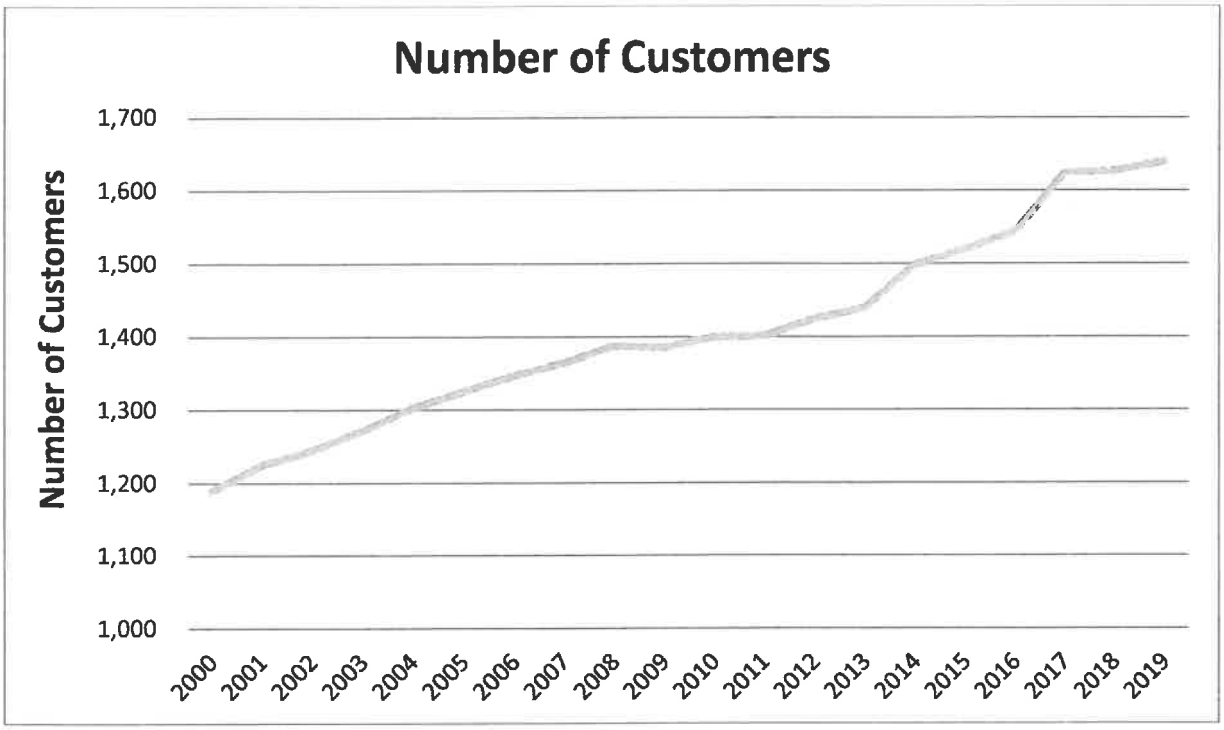
The attached chart shows that the water demands vary based on weather patterns, but the trend has been a steady increase since 2000. 2018 and 2019 were cool, wet years, but demands still exceeded all but six of the previous eighteen years. Expansion projects for both of Sioux RWS's treatment plants are currently being designed to meet increasing demand. Sioux RWS has seen growth and expects to continue to see growth in several usage categories. Livestock operations continue to grow in Sioux RWS's service territory which is the primary source of demand growth. Notably, Sioux RWS has received water service requests from prospective dairy facilities which could significantly increase system water demands. Additionally, Sioux RWS serves the area around the City of Watertown. As Watertown continues to grow, Sioux RWS will see demands from new customers around Watertown and especially around the lakes. The Cities of Castlewood and Estelline may also begin purchasing water from Sioux RWS in the future. Water withdrawal from the Castlewood wellfield is projected to reach up to 4,000 acre-feet per year in the next 50-100 years.

Sincerely,
DGR Engineering

Peter C. Baudhuin, P.E.

Attachment: Growth Charts
Cc: Heath Thompson, Manager, Sioux Rural Water System

DGR Engineering — 1302 South Union Street — P.O. Box 511 — Rock Rapids, IA 51246
phone: 712.472.2531 — fax: 712.472.2710 — dgr.com


Number of Customers
Number of Customers
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
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2011
2012
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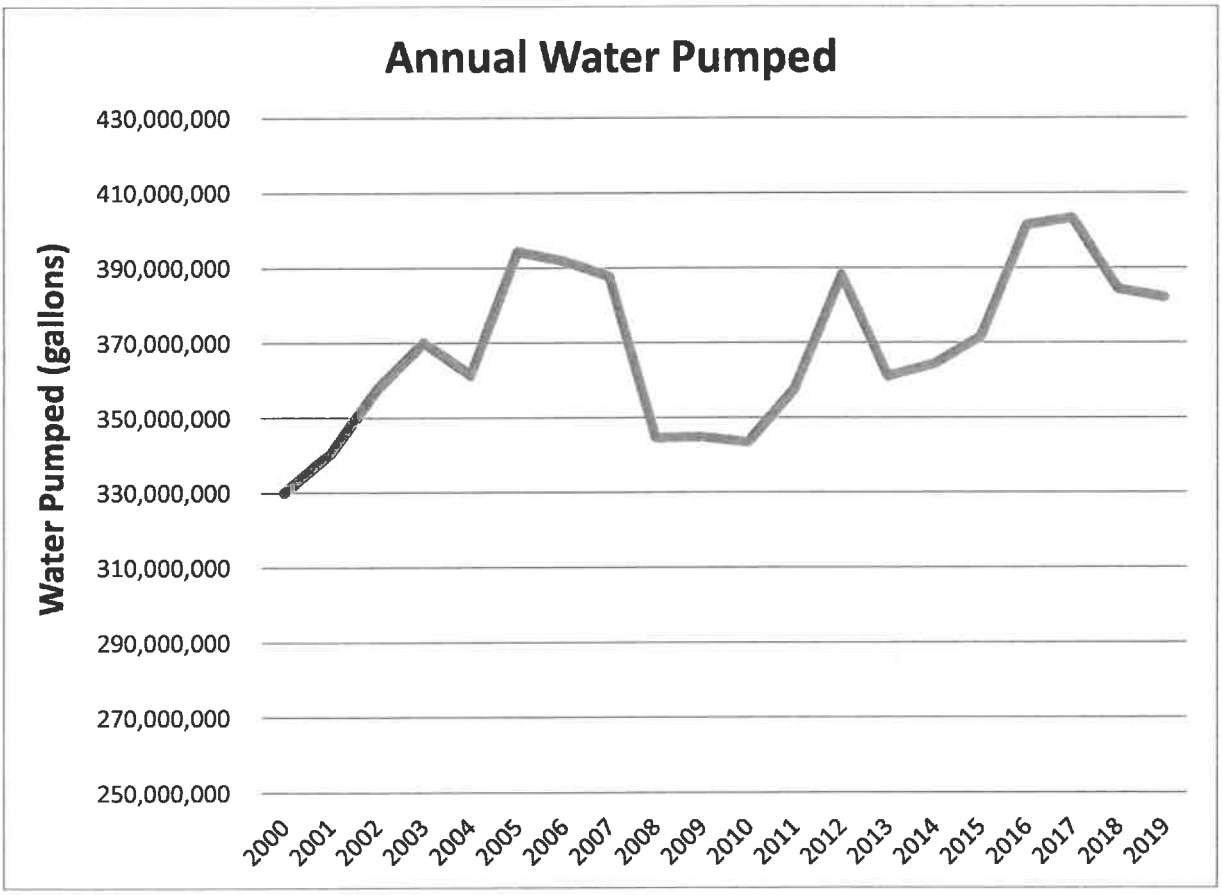
2018
2019


Annual Water Pumped
Water Pumped (gallons)
430,000,000
410,000,000
390,000,000
370,000,000
350,000,000
330,000,000
310,000,000
290,000,000
270,000,000
250,000,000
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DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR FUTURE USE WATER PERMIT NO. 7853-3, Sioux Rural Water System

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Future Use Water Permit No. 7853-3, Sioux Rural Water System, 45703 176th St, Watertown SD 57201.

The Chief Engineer is recommending that Future Use Permit No. 7853-3 REMAIN in EFFECT for 2,400 acre-feet annually because 1) there is reasonable probability that there may be development of the water reserved under Permit No. 7853-3, 2) the city has demonstrated a reasonable need for the water reserved by Permit No. 7853-3, 3) the proposed use will be a beneficial use and 4) it is in the public interest.

Maintaining the effectiveness of Future Use Permit No. 7853-3 is subject to payment of the $255.00 fee pursuant to SDCL 46-2-13(2) within 60 days of notice to the city after the Board hearing.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 4, 2020

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 7853-3

Notice is given that the Water Management Board will review Future Use Permit No. 7853-3 held by Sioux Rural Water System, Heath Thompson, Manager, 45703 176th St, Watertown SD 57201 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 7853-3. This permit was approved 2013 and currently reserves 2,400 acre-feet from the Big Sioux: Brookings Aquifer located in SW 1/4 Section 34-T115N-R52W and the NW 1/4 NE 1/4 and NE 1/4 NW 1/4 Section 3-T114N-R52W for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 7853-3 REMAIN in EFFECT for 2,400 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 7853-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition.

The hearing to review Future Use Permit No. 7853-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26.

This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the total approximate cost of $43.90.

8-12-1t

Affidavit of Publication

State of South Dakota

§

County of Clark

William J. Krikac of said county, being first duly sworn, on oath says that he is the publisher of the ***Clark County Courier***, a weekly newspaper printed and published in Clark in said County of Clark and has a full and personal knowledge of all the facts therein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Sioux Rural Water System -Water Permit No. 7853-3-

a printed copy of which taken from the paper in which same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once in each week for

One

successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

August 12, 2020

that the full amount of the fees for the publication of the annexed notice is **$43.90**

William J. Krikac

RECEIVED

Subscribed and sworn to before me this AUG 17 2020

WATER RIGHTS PROGRAM

12th day of August, 2020

Notary Public
Clark County, South Dakota

My Commission expires: 06/04/2025

Form 8

RECEIVED
AUG 14 2020
WATER RIGHTS PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Codington)

I, Jackie Wettestad

certify that the attached printed Notice was taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was published

in the newspaper on the following date:

August 12, 2020

Cost of Printing $65.78

Jackie Wettestad
(Signature)

Office Manager
(Title)

8-12-20
(Date Signed)

SIOUX RURAL WATER SYSTEM

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 7853-3

Notice is given that the Water Management Board will review Future Use Permit No. 7853-3 held by Sioux Rural Water System, Heath Thompson, Manager, 45703 176th St; Watertown SD 57201 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 7853-3. This permit was approved 2013 and currently reserves 2,400 acre-feet from the Big Sioux:Brookings Aquifer located in SW 1/4 Section 34-T115N-R52W and the NW 1/4 NE 1/4 and NE 1/4 NW 1/4 Section 3-T114N-R52W for rural water system use. Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 7853-3 REMAIN in EFFECT for 2,400 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest. The Water Management Board will conduct the hearing to review Future Use Permit No. 7853-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD. The recommendation of the Chief Engineer is notfinal or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the permit owner and the Chief Engineer by September 28, 2020. The Chief Engineer's address is "Water Rights Program", Joe Foss Building, 523 E Capitol Ave, Pierre SD 57501 (605 773-3352) and the permit holder's mailing address is given above. The petition may be informal, but it must include a statement describing the petitioner's interest in the future use permit, the reasons for petitioner's opposition to or support of continuing the future use permit, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The permit owner need not file a petition. The hearing to review Future Use Permit No. 7853-3 will be conducted pursuant to the provisions of SDCL 46-1-14, 46-2-5, 46-2-9, 46-2-11, 46-5-38.1; Board Rules ARSD 74:02:01:25.01 thru 74:02:01:25.03 and contested case procedures contained in SDCL 1-26. This hearing is an adversary proceeding. The permit owner or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Any person wishing a copy of the Chief Engineer's recommendation, further information on this permit; to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020. According to SDCL 1-26-18.3, parties to a contested case may use the Office of Hearing Examiners to conduct a hearing if either a property right is being terminated or the dollar amount in controversy exceeds $2,500.00. If any party chooses to use the Office of Hearing Examiners rather than the hearing procedure described above, then you need to notify the Chief Engineer (Water Rights Program 523 E Capitol Ave, Pierre SD) by August 24, 2020.

Published once at the approximate cost of $60.78.
65.78 (August 12, 2020)

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA
COUNTY OF DEUEL

Ken Reiste being first duly sworn, on oath says: That he is publisher of the Clear Lake Courier, a weekly newspaper, published in the City of Clear Lake, Deuel County, South Dakota; that he has full and personal knowledge of all facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Deuel and State of South Dakota, for at lease one year next prior to the first publication of the attached public notice, and that

Notice Of Hearing
Future Use Water Permit 7853-3
Sioux Rural Water System

a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for **one** successive week(s) to wit:

August 12,2020

That the full amount of the fee charged for publication of the attached public notice insures to the sole benefit of the publisher; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are **$43.94**

Ken Reiste

Ken Reiste

Subscribed and sworn to before me

this 12 day of August, 2020

Debra J Huber

Notary Public, South Dakota

My commission expires: 9/26/2024

DEBRA J. HUBER
NOTARY PUBLIC
SOUTH DAKOTA

Public notice

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 7853-3

Notice is given that the Water Management Board will review Future Use Permit No. 7853-3 held by Sioux Rural Water System, Heath Thompson, Manager, 45703 176th St, Watertown SD 57201 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 7853-3. This permit was approved 2013 and currently reserves 2,400 acre-feet from the Big Sioux:Brookings Aquifer located in SW 1/4 Section 34-T115N-R52W and the NW 1/4 NE 1/4 and NE 1/4 NW 1/4 Section 3-T114N-R52W for rural water system use.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Program recommends that Permit No. 7853-3 REMAIN in EFFECT for 2,400 acre-feet annually because 1) the reserved water may be developed, 2) there is need for the reserved water 3) the proposed use will be a beneficial use and 4) it is in the public interest.

The Water Management Board will conduct the hearing to review Future Use Permit No. 7853-3 at 10:00 am, October 7, 2020, Floyd Matthew Training Center, Joe Foss Bldg, 523 E Capitol, Pierre SD.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) allow the permit to remain in effect, 2) amend the permit by adding qualifications, 3) cancel the permit for no development or no planned future development, or 4) take no action after it reaches a conclusion based upon facts presented at the public hearing.

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The hearing to review Future tion, further information on this permit, to assure access to the hearing by the handicapped or obtain an interpreter for the hearing impaired may contact Ron Duvall, Water Rights Program, (605 773-3352) by September 28, 2020. The time of the hearing will be automatically delayed for at least 20 days upon written request of the permit owner or any person who has filed a petition to oppose or support continuance of the Future Use Permit. The request for a delay must be filed with the Chief Engineer by September 28, 2020.

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AUG 14 2020
WATER RIGHTS PROGRAM

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Tabor closed it
added a run in t

RECEIVED
AUG 14 2020
WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Hamlin)

I, LeeAnne Dufek

certify that the attached printed Notice was taken from the Hamlin County Herald Enterprise printed and published in Hayti County of Hamlin and state of South Dakota. The notice was published in the newspaper on the following date:

Aug. 12, 2020

Cost of Printing $41.11

LeeAnne Dufek
(Signature)

Owner
(Title)

8-12-2020
(Date Signed)

NOTICE OF HEARING TO REVIEW FUTURE USE WATER PERMIT NO. 7853-3

Notice is given that the Water Management Board will review Future Use Permit No. 7853-3 held by Sioux Rural Water System, Heath Thompson, Manager, 45703 176th St, Watertown SD 57201 for progress made in the development of the water reserved by the Permit and future plans for development of the water reserved by Permit No. 7853-3. This permit was approved 2013 and currently reserves 2,400 acre-feet from the Big Sioux:Brookings Aquifer located in SW 1/4 Section 34-T115N-R52W and the NW 1/4 NE 1/4 and NE 1/4 NW 1/4 Section 3-T114N-R52W for rural water system use.

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Published Aug. 12, 2020, at total cost of $41.11.

RECEIVED

SEP 11 2020

WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA}

§

COUNTY OF BROWN}

Mary Vance being duly sworn, on his/her oath says: That the AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, by the Aberdeen News Company, a corporation, and has been such a newspaper during the times hereinafter mentioned; That affiant is an employee and principal clerk of said publisher and has personal knowledge of all facts stated in this affidavit; That the advertisement headed:

Legal #880262

Notice of Hearing

a printed copy of which is hereunto attached, was printed and published in the regular and entire issue of said newspaper, and not in a supplement thereof, once each Day for 1 successive Day.

The first publication being made on the 9th day of Sept, 2020.
The second publication being made on the _____ day of _____, 2020.
The third publication being made on the _____ day of _____, 2020.
The fourth publication being made on the _____ day of _____, 2020.
The fifth publication being made on the _____ day of _____, 2020.
The sixth publication being made on the _____ day of _____, 2020;

That said newspaper is a legal newspaper published five days or more each week; with a bona fide circulation of more than two hundred copies daily; published in the English language within the said county of Brown for more than one year prior to the first publication of said notice; and printed in whole in an office maintained at the place of publication of said newspaper; That the whole amount of the fee paid for the publication of the annexed notice is $46.75, which insures solely to the benefit of said publisher; That no agreement or understanding for a division thereof had been made with any other person; and That no part thereof has been agreed to be paid to any person whomsoever.

Mary Vance

Subscribed and sworn to before me this 9th day of Sept, 2020.

Daily Circulation 8000

Notary Public, Brown County, SD.

SEAL

My commission expires March 20, 2025

LORI M. SALERANO NOTARY PUBLIC STATE OF SOUTH DAKOTA

(No. 880262)
(September 9, 2020 - 1T)

Notice of Hearing Regarding Five-Year Review to Determine the Availability of Unappropriated Water in the Tulare East James Aquifer

The Water Management Board (Board) previously determined that the average annual withdrawal of water from the Tulare East James aquifer is equal to the average estimated annual recharge and deemed the aquifer fully appropriated. A map showing the approximate boundary of the aquifer; a copy of a public notice; and a report prepared for the Board to review will be available for public viewing on September 17, 2020, at https://denr.sd.gov/ap.

Pursuant to statute, the Board held a hearing for the purpose of accepting applications for potential future appropriations from the aquifer and a creation of a priority list. That hearing was held on May 7, 2015. Fourteen applications were prioritized by the Board and are being held for possible future action.

Pursuant to SDCL 46-2A-7.5, the Board is required to hold a public hearing reviewing the groundwater source, all permits appropriating water from that source, and all held applications at least once every five years to determine whether unappropriated water has become available for use. The five-year review is scheduled for 10:30 AM (Central Time), on Wednesday, October 7, 2020, at the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD. The Board is authorized to 1) determine that additional water is available for appropriation, 2) determine that no additional water is available for appropriation, or 3) defer action for further study. The hearing time is an estimate and may be delayed due to prior items on the agenda. Pursuant to SDCL 46-2-9, 46-2-11, and 46-2A-7.5, the Board has legal authority and jurisdiction to conduct this hearing.

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

Questions regarding the hearing may be directed to Ron Duvall, Water Rights Program at (605) 773-3352 or ron.duvall@state.sd.us.

Published once at the approximate total cost of $46.75.

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SEP 18 2020

WATER RIGHTS PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA,
County of Spink: ss.

I, *Stacy Carroll*, being duly sworn on oath, say that THE REDFIELD PRESS is a weekly newspaper as defined in Sec. 65.0508 South Dakota Code 1939, as amended by Chapter 298 of the Session of Laws of 1939, printed and published in the English language in the City of Redfield, in said County and State, by THE REDFIELD PRESS. I, *Stacy Carroll*, am Legal Advertising Coordinator of said newspaper and know the facts herein state. The annexed notice headed:

#3877 NOTICE OF HEARING

was printed and published in said newspaper in 1 issue, to wit: The first publication being made on SEPTEMBER 9th 2020. That the full amount of the fee charged for publishing TWENTY-ONE and 90./100 Dollars, insures to the benefit of the publisher of THE REDFIELD PRESS, that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever.

Stacy Carroll

Subscribed and sworn to before me this 9th day of SEPTEMBER 2020

Kayla Understock

Notary Public, South Dakota

KAYLA UNDERSTOCK
SEAL NOTARY PUBLIC SEAL
SOUTH DAKOTA

My commission expires 09/26/2024

Notice of Hearing

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Published one time at the total approximate cost of $21.90. (Sept. 9)

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Proof Of Publication

Huron Plainsman
49 3rd Street SE
Huron, SD 57350
605-353-7402

Legal Notice Number: 0452

I, McKendzie Castillo, being duly sworn on oath say that the Plainsman is a daily paper published at Huron, Beadle County South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-tow consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am a Legal Advertising Coordinator of said newspaper and know that facts herein state. The annexed notice headed: SD ENVIRONMENTAL & NATURAL- NOTICE OF HEARING - JAMES AQUIFER, was published for one day, in said newspaper and not in any supplement of the said newspaper, the publication was on 9/9/20. That the full amount of the fee charged for the publishing $26.12 insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whom so ever.

McKendzie Castillo

Subscribed and sworn to me before this date 9/22/20.

Notary Public, South Dakota

My Term Expires 03/11/2022

F. P. 09-09-20

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No. 0452 (adv.)

Published one time at the total approximate cost of $26.12.

AFFIDAVIT OF PUBLICATION
The Miller Press

STATE OF SOUTH DAKOTA)
)SS
County of Hand)

Michael G. Caviness of said county being first duly sworn, on oath, says that he is the publisher of *The Miller Press*, a weekly newspaper published in Miller, said County of Hand by Hand County Publishing Co., Inc. and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has been published within said County for fifty weeks next prior to the publication of the notice, herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Report for the Tulare East James Aquifer to be reviewed

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 1 successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

9/5 20 20; ____ 20____

____ 20____; ____ 20____

____ 20____; ____ 20____

that the full amount of the fees for the publication of the annexed notice is

$ [redacted] 24.00

Michael G. Caviness, Publisher

Subscribed and sworn to before me this 21 day of Sept 2020

Janet L. Kittelson, Notary Public
My Commission expires: 7-25-26

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SEP 2 3 2020
WATER RIGHTS PROGRAM

Report for the Tulare East James Aquifer to be reviewed

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Published Sept. 5, 2020 at approximate cost of $24.00

First Report on the Five Year Review of Water Availability
East James Management Unit of the Tulare Aquifer
September 17, 2020

The Water Management Board deemed the East James management unit of the Tulare aquifer as fully appropriated in 2013. In 2014, the South Dakota Legislature provided a process for administering fully appropriated aquifers by placing into law SDCL 46-2A-7 through 46-2A-7.7. These laws provide a process to 1) notice a determination that a groundwater source is fully appropriated; 2) accept and hold applications for future consideration; 3) create a priority list for future appropriations if unappropriated water becomes available; and 4) conduct a review at least once every five years to determine whether unappropriated water is available. At the time of this report, there are 14 applications to appropriate water on hold for this aquifer management unit and they total 26.27 cubic feet per second (cfs) for the irrigation of 1,893 acres. This report is an assessment of the availability of unappropriated water in the East James management unit of the Tulare aquifer to satisfy the five-year review requirements for fully appropriated aquifers.

AQUIFER: East James management unit of the Tulare aquifer (T:EJ)

HYDROGEOLOGY

The Tulare aquifer is a Quaternary aged system of interconnected sand and gravel layers that were deposited as outwash by meltwater from receding glaciers (Howells and Stephens, 1968). The East James management unit of the Tulare aquifer is a buried aquifer generally lying immediately above the bedrock (basal) (Hedges et al., 1982). The glacial deposits that created the Tulare aquifer were deposited on top of an existing erosional surface that had exposed the Cretaceous aged Pierre Shale, Niobrara Formation, and in the buried deeply incised bedrock valleys, the Codell Sandstone member of the Carlisle Shale (Howells and Stephens, 1968). Hedges et al. (1982) identified 23,200 acres of Tulare: East James aquifer in Beadle County and over 100,700 acres of Tulare: East James aquifer in Spink County. The specific yield of the aquifer was estimated to be 0.15 by Hedges et al. (1982) and the aquifer was estimated to contain over 608,000 acre-feet of recoverable water in storage. Goodman (2006) refined the estimated areal extent of the Tulare: East James aquifer by using the areal extent calculated for Spink County by Goodman (1984) and the areal extent calculated for Beadle County by Hedges et al. (1982). Buhler (2012) further refined the estimated areal extent of the Tulare: East James aquifer to 123,578 acres.

Using the aquifer area estimated by Buhler (2012), 123,578 acres, and an estimated average saturated thickness of 37 feet (Hamilton and Howells, 1996), the estimated amount of recoverable water in storage is approximately 686,000 acre-feet. Buhler's (2012) analysis also determined that approximately 22,477 acres of the Tulare: East James aquifer were under unconfined conditions in September 2011, showing that at that time, the Tulare: East James aquifer was generally under confined conditions. Hedges et al. (1982) had found that the aquifer was more unconfined than confined and classified the aquifer as generally being unconfined. The static water level in the Tulare: East James aquifer has ranged from 50 feet below ground surface to rising above ground surface (Water Rights, 2020b). In the southern portion of the Tulare: East James aquifer, the direction of groundwater flow is generally from the east to the west, towards the James River. In the northern portion of the Tulare: East James aquifer, the direction of groundwater flow is generally towards Timber Creek and towards the James River.

South Dakota Codified Law 46-2A-9
Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest.

WATER AVAILABILITY

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "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."

The availability of unappropriated water from the Tulare: East James aquifer was last evaluated in 2012 and was based upon observation well data and through consideration of a hydrologic budget for the aquifer (Buhler, 2012). This report will reevaluate the availability of unappropriated water from the Tulare: East James aquifer based upon additional years of observation well data and the development of a hydrologic budget for the aquifer.

Observation Well Data

In determining the availability of unappropriated water, South Dakota Administrative Rule 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer. The analysis of observation well data provides a means of assessing the aquifer and provides the best reasonably available information to evaluate the balance between withdrawals from and recharge to the Tulare: East James aquifer.

The Water Rights Program monitors 33 observation wells completed in the Tulare: East James aquifer (Water Rights, 2020b). Hydrographs for four of these observation wells are shown in Figures 2-5, and hydrographs for all 33 are included in Appendix B. The four selected hydrographs are representative of the Tulare: East James aquifer and show that the aquifer readily responds to climatic conditions, with rising water levels during wet years and declining water levels during dry years.

The response of the aquifer as recorded by the observation well measurements can provide insight into the balance of withdrawals to recharge for an aquifer. If discharge (natural and from well withdrawals) from an aquifer is exceeding the recharge to an aquifer, a steady, continual decline of the water level or artesian pressure is expected. In observation wells that show the influence of well withdrawals, a seasonal decline should be observed followed by a return to the pre-pumping water level. If the withdrawals across the entirety of the aquifer are unevenly distributed, the configuration of the potentiometric surface may change to show the effect of these withdrawals. The effects of climate can mask some of these signals for how the aquifer responds to pumping.

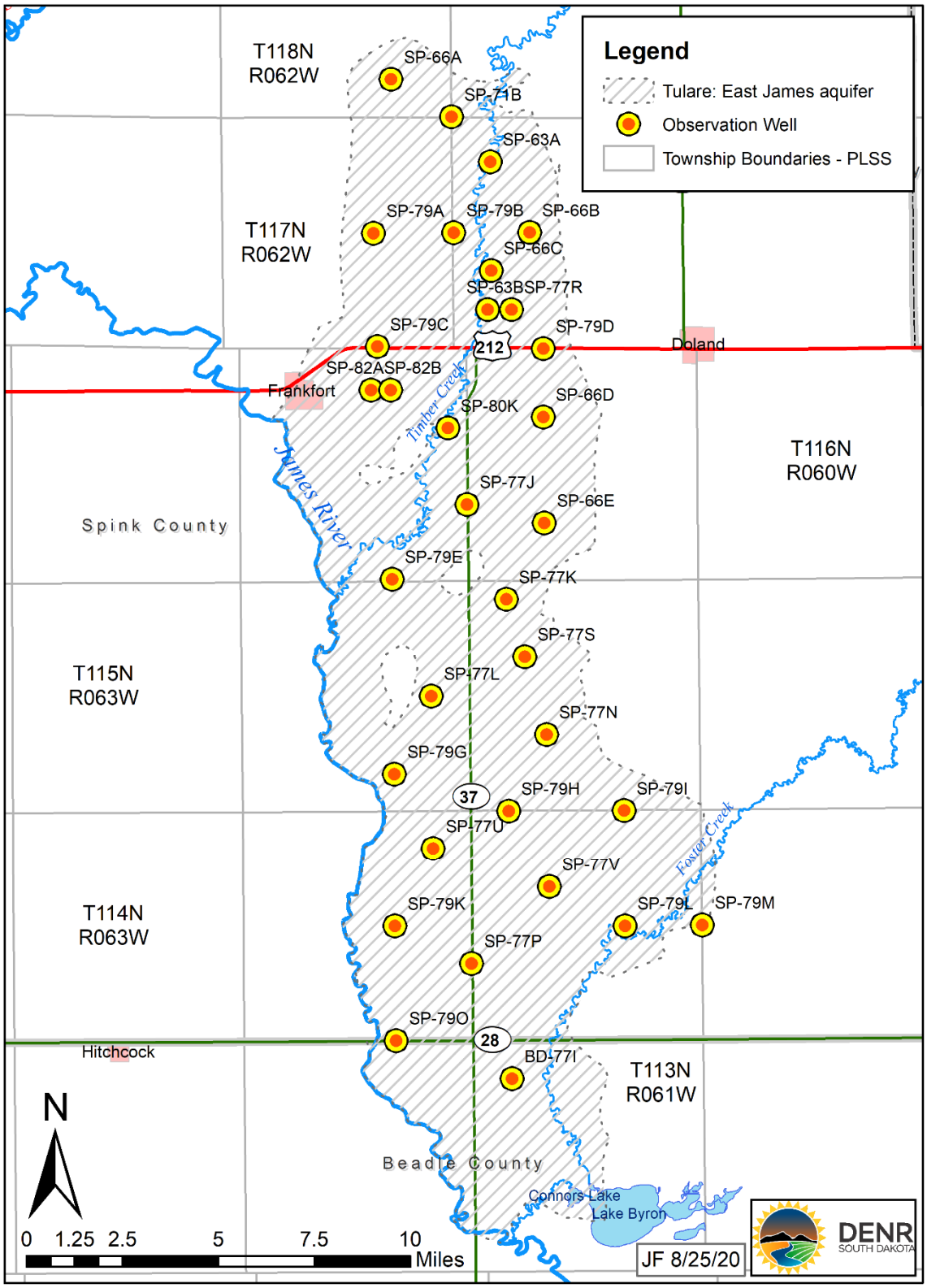

Figure 1. Map of the East James management unit of the Tulare Aquifer showing the location of observation wells in the Tulare: East James aquifer (Modified from Buhler, 2012; Water Rights, 2020c)

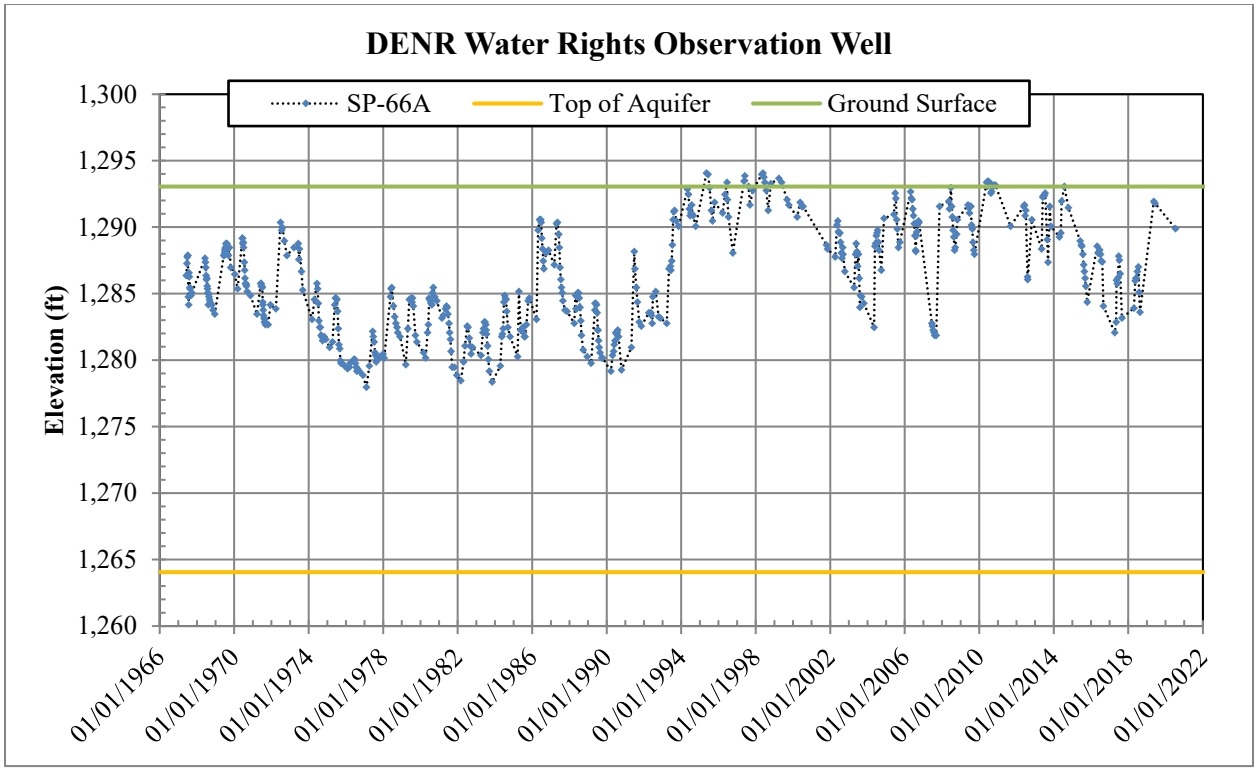

Figure 2. Hydrograph of DENR-Water Rights' observation well SP-66A. (see Figure 1 for location)

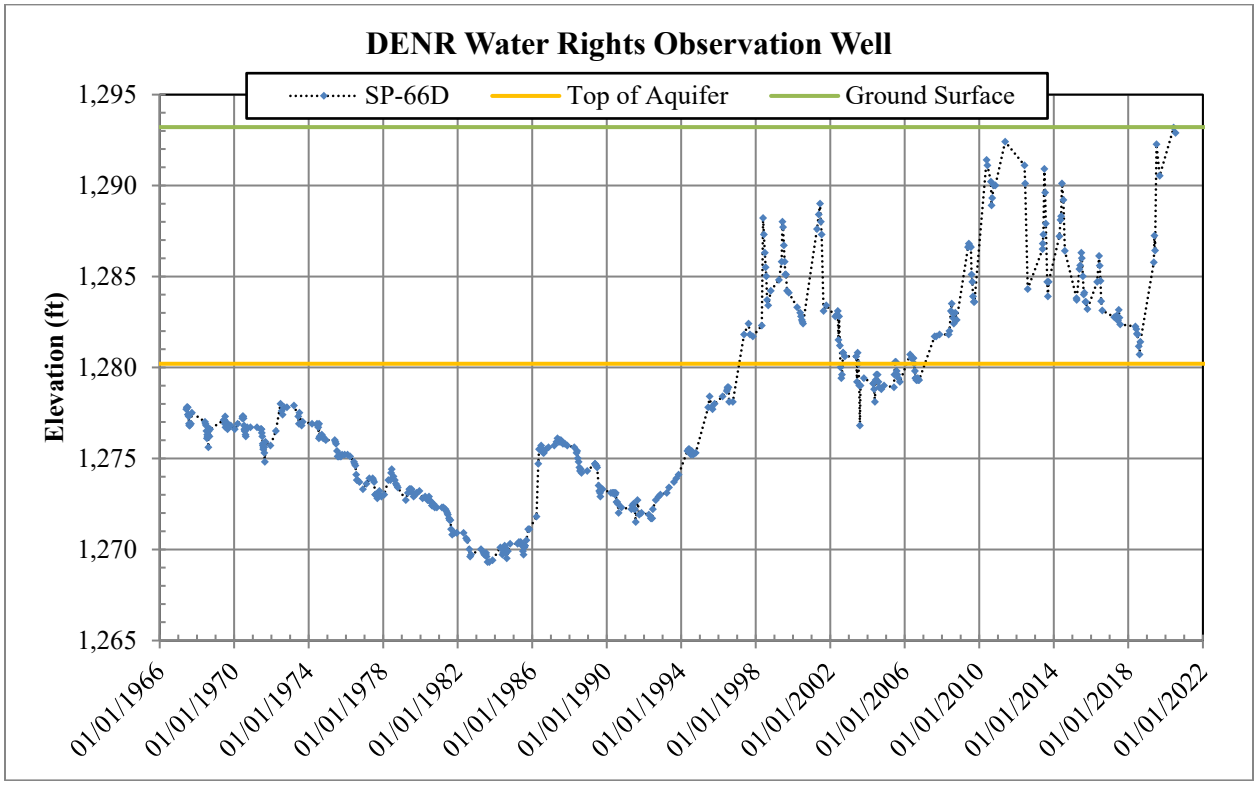

Figure 3. Hydrograph of DENR-Water Rights' observation well SP-66D (see Figure 1 for location)

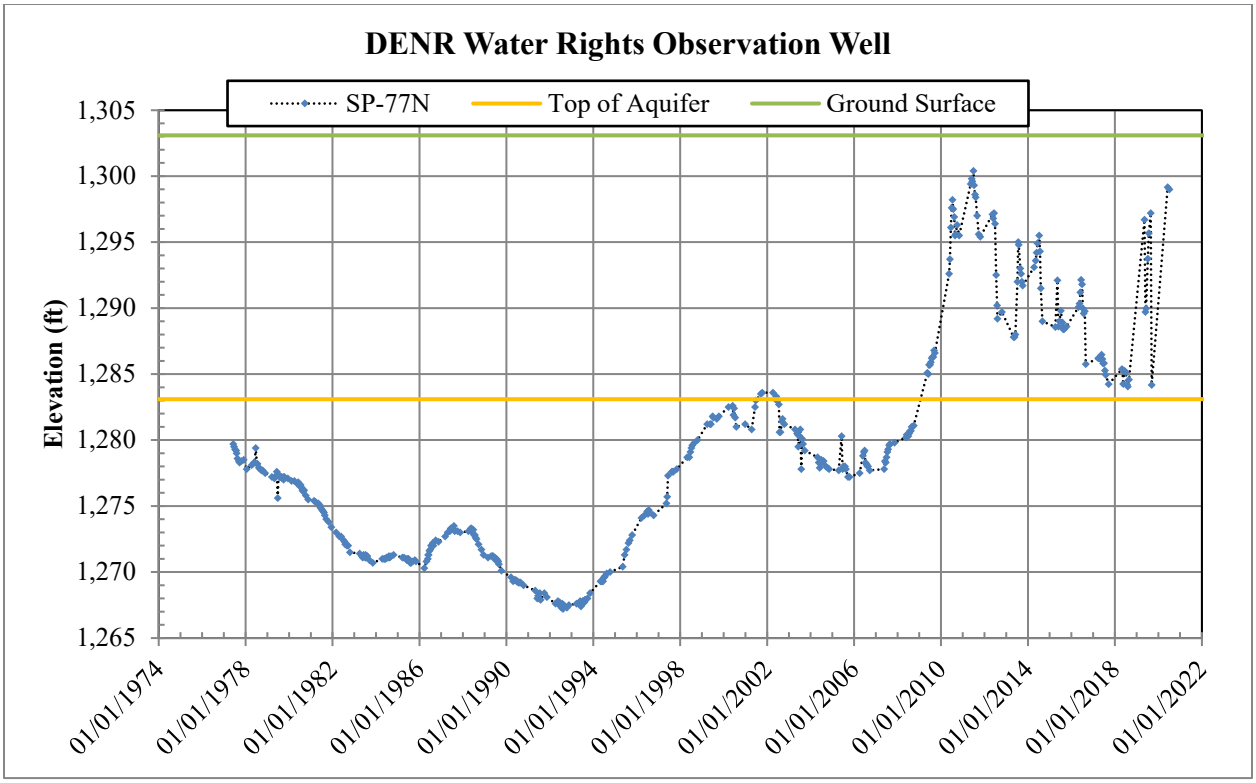

Figure 4. Hydrograph of DENR-Water Rights' observation well SP-77N (see Figure 1 for location)

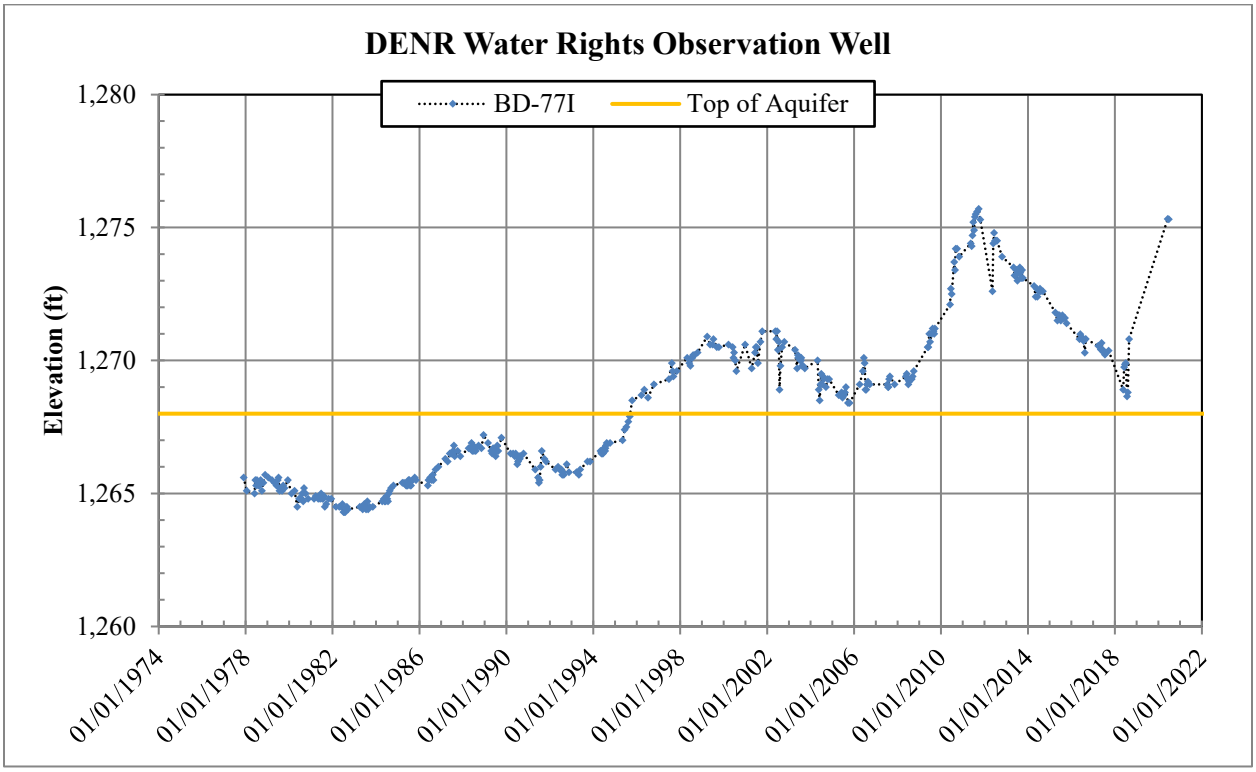

Figure 5. Hydrograph of DENR-Water Rights' observation well BD-77I, ground surface elevation estimated at 1,296 ft NGVD29 (see Figure 1 for location)

Observation well water level trends:
When the discharge (natural and from well withdrawals) exceeds the recharge of an aquifer, a declining water level is an indicator. Conversely, a rising water level in an aquifer is an indicator that the recharge is exceeding the discharge (natural and well withdrawals) of an aquifer. An equation for this relationship is:

$$\Delta S = R - D$$

Where: ΔS = change in the volume of water in storage in the aquifer
R= Recharge
D= Discharge

The observation well data for the Tulare: East James aquifer has documented upward trending water levels throughout the aquifer (Water Rights, 2020b). The average slope of linear trend lines for the 32 observation well hydrographs over each well's period of record (up to the end of 2019) has been +0.000637 feet per day (+0.233 feet per year). Observation Well SP-63A was removed from this analysis due to the well no longer accurately showing the water level in the aquifer. Buhler's analysis (2012) refined the period of analysis to encompass 1980 through July 2, 2012 and excluded observation wells SP-82A and SP-82B due to not having a complete set of data. That analysis found the average slope of the linear trend line for all observation well hydrographs to be +0.0008844 feet per day (+0.323 feet per year). In the time since Buhler's analysis up to the end of 2019, the average slope of the linear trend line for the 32 observation well hydrographs has been -0.001123 feet per day (-0.410 feet per year). The time period of 1980 through 2019 saw an average slope of +0.000762 feet per day (+0.278 feet per year). The 1980 through 2019 time period trendline analysis included 30 observation wells and excluded observation wells SP-63A, SP-82A, and SP-82B. This type of analysis does not account for any errors introduced by including data from observation wells that are influenced by well withdrawals and the year to year variability of those withdrawals or an observation well changing between unconfined and confined behaviors. Observation wells that are under unconfined conditions show the change in storage within the aquifer, while observation wells that are under confined conditions show the change in hydrostatic pressure.

Over the period of record, the upward trend of the water levels indicates recharge to the Tulare: East James aquifer has likely been greater than the total of the discharges from the aquifer. However, given the decrease in the average slope of the linear trend line since Buhler's analysis (July 3, 2012 through 2019), the reduction in trendline slope from the previous trendline analysis, and appropriations that have started placing water to beneficial use since then, the observation well water level trend is indicating that discharge may have exceeded the recharge of the aquifer over the July 2012 through 2019 time period.

Quantifying the change in volume of water stored in the Tulare: East James aquifer is possible through analysis of observation wells that have remained unconfined throughout their period of record. The response of the aquifer when an observation well is under confined conditions is only reflective of the head pressure at that location and does not directly show changes in the volume of water in the aquifer. The hydrographs for observation wells SP-66D, SP-77N, and BD-77I as shown in Figures 3, 4, and 5, visually show how the observed water level changes between unconfined and confined conditions. Observation well SP-77N was under unconfined conditions between 1977 and 2009, and then transitioned to confined conditions when the water level started rising above the top of the aquifer in 2009.

Continuing the methodology used by Buhler (2012), the same seven observation wells were used to analyze the Tulare: East James aquifer. These wells were chosen by Buhler because they are located in portions of the aquifer that remained unconfined for their entire period of record and the wells were determined to accurately reflect aquifer conditions. The time period used for this updated analysis was 1980-2019 to allow each observation well to have the same number of water years on record. The water year runs from October 1 to September 30 and the values used in this analysis are interpolated values for October 1 that were obtained using the two adjacent readings on the observation well hydrograph, unless a reading was recorded on October 1. For example, the 1980 water year water level change is the interpolated Oct. 1, 1980, reading minus the interpolated Oct. 1, 1979, reading. The results of the analysis are shown in Table 1.

Buhler (2012) analyzed the average annual water level change from 1980-2011. Buhler's (2012) analysis showed an increase in average annual water level of 0.31 feet per year. This increase indicated that the annual recharge to the aquifer exceeded discharge by an average of 1,045 acre-feet per year for the period of 1980-2011 (Buhler, 2012). In the time since Buhler's report (2012), the average annual water level change has seen a decline of 0.19 feet per year (2012-2019), resulting in the average annual water level change being lowered to show an increase of 0.21 feet per year from 1980 to 2019. Assuming the same area of unconfined aquifer and specific yield as Buhler's report (2012), the average annual change in volume has been reduced to 708 acre-feet per year. The average annual change in volume over the period of record (40 years) has been reduced by 337 acre-feet in a period of 8 years, which is a relatively quick change for the entire period of record. This method of estimating a volume of water is approximate as the unconfined area of the aquifer is not static and changes as the elevation of the water changes. This method also assumes that all variables relating to the use of the water are static and does not take into consideration any recent changes that would affect the use of water going into the future.

Over the period of record, the observation well data indicates that the average annual recharge to the aquifer has exceeded the average annual discharge from the aquifer. In the time since Buhler's report (2012), the observation well data indicates that the average annual recharge to the aquifer has been insufficient to supply the average annual discharge from the aquifer. These two conclusions differ and suggest that additional data is needed to determine if the most recent set of appropriations from the Tulare: East James aquifer brought the aquifer up to being fully appropriated, or if there is additional unappropriated water available from the aquifer.

Table 1. Water Level change in feet by water year for select unconfined observation wells with averages calculated for specific time periods (Water Rights, 2020b)

Water Year	SP-77J	SP-77P	SP-79G	SP-79H	SP-79K	SP-79O	SP-80K	Average
1980	-0.4	-0.3	-2.0	-0.8	-0.5	-0.1	-0.7	-0.7
1981	-1.0	-0.4	-1.2	-1.0	-0.3	-0.3	-1.0	-0.7
1982	-0.8	-0.5	0.4	-0.6	-0.3	0.3	-1.4	-0.4
1983	-0.7	0.0	0.9	-0.3	0.0	0.2	-0.9	-0.1
1984	0.7	0.7	1.4	0.8	0.7	0.8	-0.2	0.7
1985	0.4	0.0	-0.4	0.1	-0.1	-0.5	-0.1	-0.1
1986	1.6	0.6	2.1	1.7	1.1	1.0	1.0	1.3
1987	0.5	0.2	-0.5	0.1	-0.4	-0.7	0.5	0.0
1988	-0.7	-0.1	-1.6	-0.6	-0.2	-0.2	-0.4	-0.6
1989	-0.9	-0.2	-0.6	-0.6	-0.2	0.0	-1.1	-0.5
1990	-0.9	-0.4	-0.4	-0.4	-0.4	-0.3	-1.1	-0.5
1991	-0.5	-0.2	0.6	-0.2	-0.1	0.1	-0.7	-0.1
1992	-0.4	-0.4	-0.2	-0.2	-0.1	-0.2	0.1	-0.2
1993	0.5	0.3	2.1	0.6	0.5	1.3	1.4	1.0
1994	0.4	0.4	1.1	1.3	0.4	-0.2	-0.2	0.5
1995	1.5	1.7	1.5	1.6	2.4	1.1	1.3	1.6
1996	1.1	1.1	-0.7	0.4	-0.5	-0.6	0.5	0.2
1997	1.9	1.6	2.8	2.1	1.9	1.0	2.1	1.9
1998	1.8	0.8	-0.4	0.9	0.2	-0.7	1.5	0.6
1999	1.9	0.5	0.0	0.9	0.2	-0.3	0.7	0.6
2000	-0.7	-0.7	-1.1	-0.2	-0.9	-1.5	0.0	-0.7
2001	1.6	1.8	1.2	1.6	2.2	1.9	0.5	1.5
2002	-1.1	-0.1	-1.6	-0.8	-1.0	-1.0	-0.5	-0.9
2003	-1.1	-0.8	-2.0	-1.5	-0.8	-0.3	-0.6	-1.0
2004	-0.8	-0.8	-0.1	-0.9	-0.6	-0.2	-0.2	-0.5
2005	-0.4	-0.6	0.1	-0.9	-0.2	0.1	-0.5	-0.3
2006	-0.4	0.6	0.3	1.1	0.4	0.1	-0.2	0.3
2007	0.4	0.4	1.7	1.5	0.8	0.7	0.8	0.9
2008	0.2	0.2	0.2	0.7	-0.2	-0.2	0.6	0.2
2009	1.0	1.5	2.7	1.9	1.3	0.5	0.5	1.4
2010	2.6	3.8	2.5	4.9	4.2	1.4	2.0	3.1
2011	3.4	2.3	1.5	1.9	1.0	-0.1	1.4	1.6
2012	-0.1	-0.7	-3.6	-3.4	-2.3	-1.2	-1.1	-1.8
2013	1.0	-1.1	0.2	1.0	-0.4	0.0	0.9	0.2
2014	1.9	-0.8	-0.8	-0.6	-1.0	-0.6	0.4	-0.2
2015	-0.7	-1.3	-0.3	-2.0	-0.9	-0.2	-0.3	-0.8
2016	-0.5	-0.9	-1.3	-1.1	-0.6	0.0	-1.0	-0.8
2017	-1.0	-0.7	0.4	-1.1	-0.6	-0.1	0.3	-0.4
2018	-0.4	-0.6	-0.7	-0.5	0.2	0.0	-1.2	-0.5
2019	2.3	2.1	3.5	3.7	4.3	1.5	1.9	2.8
Average from 1980-2019	*0.34*	*0.22*	*0.19*	*0.28*	*0.23*	*0.06*	*0.13*	*0.21*
Average from 1980-2011, time period of Buhler (2012)	*0.34*	*0.40*	*0.32*	*0.47*	*0.33*	*0.10*	*0.17*	*0.30*
Average from 1986-2005, time period of Goodman (2006)	*0.27*	*0.24*	*0.11*	*0.25*	*0.18*	*0.01*	*0.23*	*0.18*
Average from 2006-2019	*0.69*	*0.33*	*0.44*	*0.56*	*0.45*	*0.13*	*0.36*	*0.42*
Average from 2012-2019	*0.30*	*-0.51*	*-0.34*	*-0.50*	*-0.16*	*-0.08*	*-0.01*	*-0.19*
Average from 2015-2018	*-0.68*	*-0.88*	*-0.51*	*-1.18*	*-0.47*	*-0.07*	*-0.52*	*-0.62*
Average from 2015-2019	*-0.08*	*-0.29*	*0.29*	*-0.21*	*0.49*	*0.24*	*-0.03*	*0.06*

Potentiometric Surface:

The potentiometric surface of an aquifer is a snapshot of the water level in the aquifer at a selected time. The potentiometric surface will show high water levels as a result of wetter periods of time and lower water levels during drier times and/or increased periods of withdrawals. An analysis of the potentiometric surface does not provide a clear indication of whether there is unappropriated water available or how much may be available. The potentiometric surface data can show whether there are significant stressors on the aquifer, in other words, if the recharge is able to keep up with the withdrawals from the aquifer. These stressors would show up as a significant change in the general shape/configuration of the potentiometric surface. If there are areas of the aquifer that are showing signs of stress, it is an indicator that the aquifer is over-appropriated. The stressors may be caused by very significant increases in withdrawals in an area over a short period of time, or may be more subtle, such as a slight increase in the withdrawals that cumulatively over the course of 10, 15, 20 years exceed the recharge to the local area. The potentiometric surface of the aquifer would be able to show these stressors because the area that is being stressed is creating a steeper hill for the groundwater to flow down.

The potentiometric surface of the Tulare: East James aquifer was estimated from observation well data for three time periods (Magstadt, 2020). These time periods are May 1981, May 2012, and June 2020. These dates were chosen for comparison of the configuration of the potentiometric surface with the potentiometric surfaces calculated by Buhler (2012). Maps showing the contour lines for these potentiometric surfaces are shown in Figure 6.

The potentiometric surface contours shown in Figure 6 show that water levels were generally lower in May 1981 than they were in May 2012. The potentiometric surface contours also show that the water levels were similar in May 2012 and June 2020. The potentiometric surface contour lines generally follow the same shapes for all three dates, indicating that the configuration of the potentiometric surface has not changed significantly over time. The configuration of the potentiometric surface of the aquifer over time is showing that the well withdrawals have not been affecting the general direction of groundwater flow, indicating that the aquifer has not been stressed by withdrawals. It is unknown what the pre-development configuration of the potentiometric surface was.

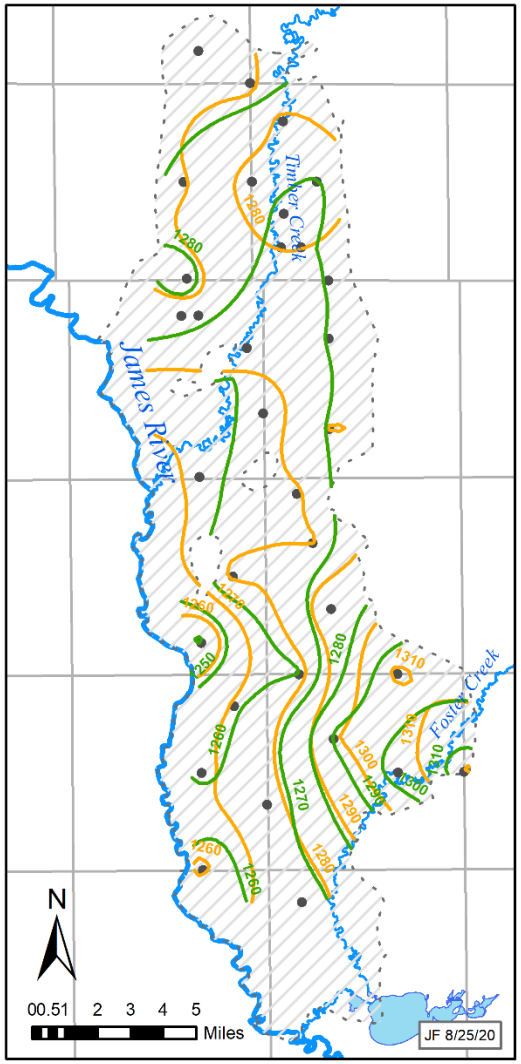

Figure 6a. Potentiometric surface contours of the Tulare: East James aquifer for May 1981 (Green) and May 2012 (Yellow)

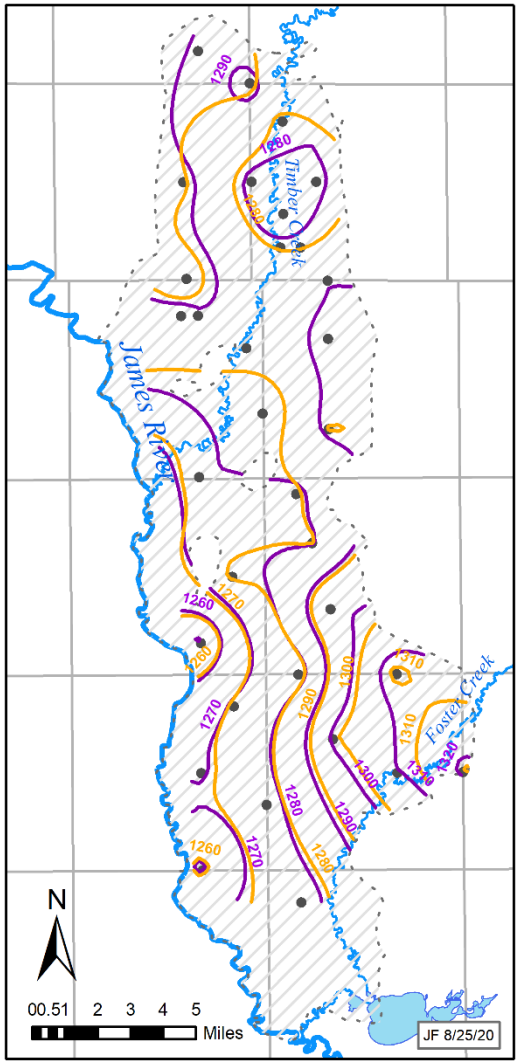

Figure 6b. Potentiometric surface contours of the Tulare: East James aquifer for May 2012 (Yellow) and June 2020 (Purple)

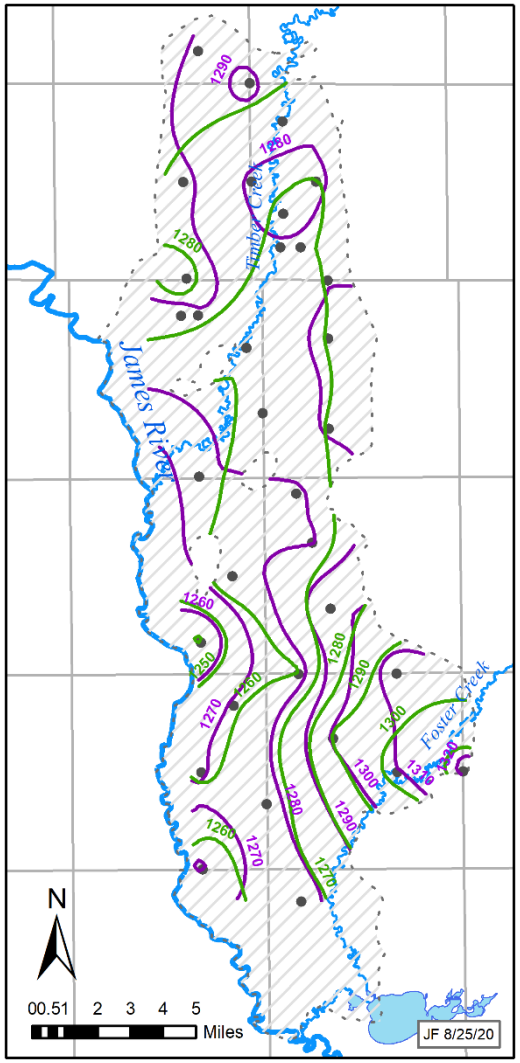

Figure 6c. Potentiometric surface contours of the Tulare: East James aquifer for May 1981 (Green) and June 2020 (Purple)

Hydrologic Budget

Recharge

Recharge to the Tulare: East James aquifer occurs primarily through infiltration of precipitation where the aquifer is at or near the surface. Recharge from precipitation varies by season, by year, and by location (Hamilton and Howells, 1996). Recharge could also occur from rivers and streams if they are hydraulically connected to the aquifer and if the potentiometric surface of the aquifer was lower than the stage of streams and rivers. Previous reports indicate that Timber Creek and its tributaries provide recharge to the Tulare: East James aquifer (Goodman, 1984; Buhler, 2012); however, in the area of Timber Creek the potentiometric surface slopes towards Timber Creek. The slope direction of the potentiometric surface could indicate that any recharge occurring from Timber Creek is minimal and that it primarily functions as a place of discharge from the aquifer.

Recharge Estimates:

Previous Estimates:

Recharge to the Tulare: East James has been estimated through a variety of methods. Hedges et al. (1985) used data from 18 observation wells to determine the recharge rate to the unconfined portion of the Tulare: East James is 2.5 inches per year. A regional flow-net analysis of the Tulare: East James aquifer was also performed by Hedges et al. (1985) and found the estimated recharge rate was 0.72 inches per year. It is unknown what the confined and unconfined areas were for these analyses. Buhler (2012) estimated the confined and unconfined areas for his analysis, the estimated unconfined area is 22,477 acres and the estimated confined area is 101,101 acres. Using the areas as determined by Buhler (2012) would result in the observation well analysis by Hedges et al. (1985) to have an estimated average annual recharge of 4,683 acre-feet and the regional flow-net analysis by Hedges et al. (1985) would produce an estimated average annual recharge of 7,415 acre-feet.

A numerical groundwater flow model (Kuiper, 1984) estimated that the average recharge to the Tulare: East James is 0.76 inches per year. Applying this recharge rate across the 167 square miles of the model results in an estimated recharge rate of 6,800 acre-ft per year (Kuiper, 1984). This model used cells that measured 1 mile by 1 mile and compared the response of the aquifer in the model to observation well data from 1968 to 1978 and irrigation questionnaire data from 1978. Estimated recharge in the model was varied throughout the model domain, including 37 square miles where there was no calculated recharge to the aquifer. These 37 square miles are concentrated in T115N-R61W, T115N-R62W, T114N-R61W, and T114N-R62W. The model domain did not include Beadle County, and 13 square miles along the James River were included in both model areas A (Tulare: Western Spink Hitchcock) and B (Tulare: East James).

In previous Water Management Board decisions, the Water Management Board has relied upon the 0.76 inches of recharge per year calculated from Kuiper's (1984) results. While this recharge rate has been applied over the entirety of Tulare: East James aquifer, resulting in an estimated average annual recharge of 7,950 acre-feet per year (Goodman, 2003), the modeled recharge rate is not reflective of the current area of the aquifer. The boundaries that were used in the development of the model are not consistent with the currently accepted boundaries of the Tulare: East James aquifer. After the model was developed, aquifer boundaries were delineated in this area by Hedges et al. (1982). Subsequently, a portion of the model is currently identified

as being part of the Altamont aquifer or not part of an identified aquifer (Hedges et al., 1982). If the 16 square miles and associated recharge of the Altamont aquifer and the area not identified as an aquifer within the model boundary are removed by simply subtracting the cells, the recharge rate within the remainder of the model becomes 0.738 inches per year. It is also unknown what the estimated recharge rates are outside of the model boundary and depending upon the characteristics of the aquifer in those areas, the recharge rate could range from 0 to over an inch per year. There are approximately 48 square miles of the Tulare: East James aquifer that were not included within the boundaries of Kuiper's model. It is not clear if the removal or addition of the various portions of the management unit as currently mapped compared to the modeled area would have affected the estimated recharge rate found to best fit the observation well data used by Kuiper (1984). As each cell in the model had several input values, changing the extent of the model and adding or removing cells would result in the adjustment of values in other cells to best fit the model output to the observed water elevation data. It is unknown if the estimated average recharge rate would increase or decrease to account for a change in the model extent.

It is unknown how the addition of 48 square miles of recharge to the model and the removal from the model of 16 square miles of recharge that are not part of the aquifer would affect the modeled behavior of the aquifer at the observation wells and how the modeled recharge to the aquifer would change.

Buhler (2012) performed a simple regional flow net analysis. This analysis was used to confirm the reasonableness of the average annual recharge estimate from Kuiper (1984). This simple regional flow net analysis is only applicable to the year 2011 and does not provide an estimated average annual recharge rate. The simple regional flow net analysis estimated the recharge rate for 2011 was 0.80 inches per year and showed that Kuiper's average annual recharge estimate was reasonable (Buhler, 2012).

Given the uncertainty involved with applying Kuiper's estimated average annual recharge to the entirety of the Tulare: East James aquifer, it is difficult to determine the estimated average annual recharge to the entire aquifer. The 6,800 acre-feet of recharge per year as calculated by Kuiper (1984) is the best information reasonably available for quantifying the estimated average annual recharge to the Tulare: East James aquifer.

Discharge

Discharge from the Tulare: East James aquifer occurs through well withdrawals, evapotranspiration from areas where the aquifer is near the land surface, outflow to the James River, and possible outflow to Timber Creek and its tributaries.

Domestic water use:

Buhler (2012) identified 55 domestic water supply wells on file with the DENR-Water Rights Program that appear to be completed into the Tulare: East James aquifer. In the time since 2012, four domestic wells have been completed into the Tulare: East James aquifer (Water Rights, 2020d). The volume of water used by domestic wells was estimated based upon the average rural use for the rural water system in the area (Buhler, 2012). The 2012 estimated domestic use was 7,000 gallons per month per tap per month, which equated to an estimated average annual use from domestic wells of 14 acre-feet per year (Buhler, 2012). The addition of 4 domestic wells raises the estimated average annual use by domestic wells to approximately 15 acre-feet

per year. The actual quantity of water these domestic wells withdraw is unknown; this is the best available and reasonable estimate of domestic water use from the Tulare: East James aquifer.

Appropriative water use:
As of June 17, 2020, there is a total of 94 Licensed or Permitted Water Rights appropriating water from the Tulare: East James aquifer (Water Rights, 2020c). The appropriative water use from the Tulare: East James aquifer is used entirely for irrigation of crops. Figure 7 shows how the number of acres authorized for irrigation at the start of each irrigation season (April 1) has changed from 1979 to 2020 and the reported irrigation data for 1979 and 1983 through 2019. The irrigation questionnaires from 1980 through 1982 could not be located, so those years were not included in any calculations. Authorized acres are the acres approved to be irrigated under an existing water right, and the status of the water right could be permitted or licensed. Irrigated acres are the acres indicated as irrigated on the irrigation questionnaire by the irrigator. The annual irrigation summaries have the reported use for the 1980-1982 time period; however the number of acres that were irrigated are not included on the summaries, and it is impossible to investigate any anomalous data.

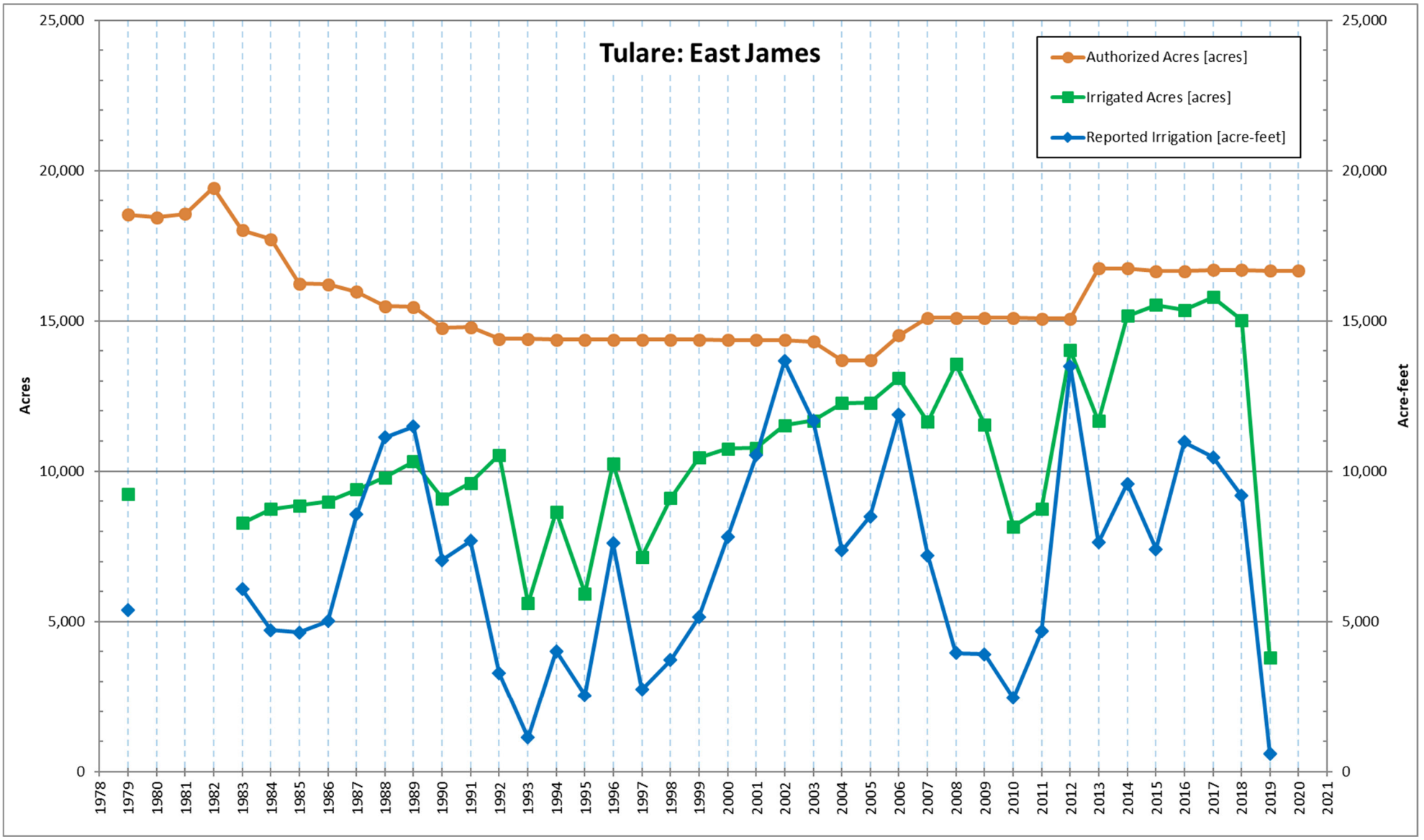

Figure 7. Acres authorized for Irrigation, Irrigated Acres and Reported Irrigation from the Tulare: East James aquifer (Water Rights, 2020c)

Table 2. Irrigation development from the Tulare: East James aquifer (* data not available), (modified from Buhler, 2012; Mathiowetz, 2012; Water Rights, 2020a; Water Rights, 2020c)

Year	Permits with Acres	Authorized Acres [acres]	Irrigated Acres [acres]	Utilization Rate (Irrigated Acres/Authorized Acres Percentage)	Reported Irrigation [acre-feet]	Average Application Rate for Irrigated Acres [inches]
1979	89	18,529.7	9,231.00	49.82	5,388.25	7.00
1980	91	18,436.7	*	*	*	*
1981	94	18,552.7	*	*	*	*
1982	99	19,420.7	*	*	*	*
1983	95	18,014.7	8,281.50	45.97	6,078.64	8.81
1984	91	17,711.7	8,740.00	49.35	4,718.44	6.48
1985	86	16,245.9	8,863.00	54.56	4,638.54	6.28
1986	86	16,212.7	8,993.00	55.47	5,009.57	6.68
1987	84	15,972.7	9,385.00	58.76	8,565.77	10.95
1988	81	15,492.7	9,793.50	63.21	11,130.45	13.64
1989	81	15,468.7	10,317.80	66.70	11,491.67	13.37
1990	78	14,759.0	9,094.00	61.62	7,041.01	9.29
1991	79	14,787.0	9,612.60	65.01	7,676.99	9.58
1992	78	14,403.0	10,540.80	73.18	3,277.58	3.73
1993	78	14,403.0	5,614.00	38.98	1,122.85	2.40
1994	77	14,375.0	8,647.00	60.15	4,013.98	5.57
1995	77	14,375.0	5,928.00	41.24	2,537.21	5.14
1996	77	14,375.0	10,252.00	71.32	7,602.08	8.90
1997	77	14,375.0	7,150.00	49.74	2,736.47	4.59
1998	77	14,375.0	9,110.80	63.38	3,717.80	4.90
1999	77	14,375.0	10,454.80	72.73	5,136.78	5.90
2000	77	14,369.0	10,745.80	74.78	7,807.48	8.72
2001	77	14,369.0	10,772.00	74.97	10,529.00	11.73
2002	77	14,369.0	11,528.80	80.23	13,668.09	14.23
2003	75	14,313.0	11,678.80	81.60	11,666.06	11.99
2004	75	13,688.0	12,259.00	89.56	7,372.58	7.22
2005	75	13,685.0	12,273.40	89.69	8,491.16	8.30
2006	80	14,523.0	13,096.80	90.18	11,889.10	10.89
2007	83	15,099.0	11,648.40	77.15	7,204.13	7.42
2008	83	15,099.0	13,555.00	89.77	3,948.88	3.50
2009	82	15,099.0	11,547.30	76.48	3,908.42	4.06
2010	82	15,099.0	8,161.20	54.05	2,449.76	3.60
2011	82	15,071.0	8,753.00	58.08	4,675.06	6.41
2012	82	15,071.0	14,030.70	93.10	13,494.16	11.54
2013	92	16,812.0	11,666.40	69.67	7,626.45	7.84
2014	93	16,812.0	15,160.11	90.53	9,580.27	7.58
2015	90	16,727.0	15,532.40	93.23	7,407.94	5.72
2016	90	16,727.0	15,363.10	92.21	10,971.52	8.57
2017	91	16,699.0	15,792.00	94.57	10,463.75	7.95
2018	91	16,699.0	15,017.30	89.93	9,179.74	7.34
2019	90	16,674.0	3,809.00	22.84	603.47	1.90
2020	90	16,674.0	*	*	*	*
MAX.		*19,420.70*	*15,792.00*	*94.57*	*13,668.09*	*14.23*
MIN.		*13,685.00*	*3,809.00*	*22.84*	*603.47*	*1.90*
AVE.		*15,674.74*	*10,589.46*	*69.01*	*6,968.98*	*7.62*

Using the available reported pumping data from 1979 through 2019 and the estimated annual domestic use, the total well withdrawal from the aquifer is expected to average less than 7,000 acre-feet/year. This total withdrawal from the Tulare: East James aquifer due to pumping is around 1.02% of the estimated recoverable water in storage in the aquifer (7,000 acre-feet pumped per year versus 685,857 acre-feet of recoverable water in storage).

In light of the recent development that occurred as a result of appropriations made in 2012, it is no longer appropriate to consider the entire period of record for determining the estimated average annual withdrawals. Table 3 shows the averages of Table 2 for many different periods of time to include data for comparison from previous reports and methodologies, the effect of a dry year (2012) and the effect of a very wet year (2019). The time periods that have the break between the years of 1979 and 1983 are effectively continuous time periods for all columns, except for the average authorized acres, as demonstrated in the first two rows of data.

Table 3. Averages of data in Table 2 for select time periods.

Period	Average Authorized Acres [acres]	Average Irrigated Acres [acres]	Average Utilization Rate	Average Reported Irrigation [acre-feet]	Average Application Rate for Irrigated Acres [inches]
1979-2019	15,647.1	10,589.5	69.0	6,969.0	7.62
1979, 1983-2019	15,398.0	10,589.5	69.0	6,969.0	7.62
1979-2011	15,437.7	9,867.6	65.9	6,516.5	7.71
1979, 1983-2012	15,100.2	10,001.9	66.8	6,741.5	7.83
1979, 1983-2018	15,367.1	10,772.7	70.3	7,141.0	7.78
1986-2005	14,627.1	9,707.6	66.6	7,029.7	8.34
2000-2019	15,350.2	12,119.5	79.1	8,146.9	7.83
2012-2018	16,506.7	14,651.7	88.8	9,817.7	8.08
2012-2019	16,527.6	13,296.4	80.6	8,665.9	7.31
2013-2018	16,746.0	14,755.2	88.1	9,204.9	7.50
2013-2019	16,735.7	13,191.5	78.8	7,976.2	6.70
2015-2018	16,713.0	15,426.2	92.3	9,505.7	7.39
2015-2019	16,705.2	13,102.8	78.4	7,725.3	6.30

Examination of the average application rate for the time period of Buhler's (2012) report, 1979-2011, shows that the average application rate has been adjusted slightly from Buhler's calculated 7.68 inches to 7.71 inches. This is due to corrections of the underlying water right and irrigation questionnaire data, either from data entry errors, missing irrigation questionnaire data that was not included in Buhler's (2012) dataset, and from resolving instances where the irrigator submitted data for multiple permits and some values were double counted or not counted at all. The application rate could still change slightly due to corrections in the water right data, locating missing irrigation questionnaire files, identifying when systems were constructed, considering suspensions, and upon further review of the irrigation questionnaires that cover several pivots and/or have been amended, incorporated, or reissued.

In the time since Buhler's report (2012), the average application rate has varied due to climatic conditions. The time period of 2012-2018 has an average application rate of 8.08 inches, but with the wet year of 2019, the average application rate dropped to 7.31 inches for the time period of 2012-2019. The year of 2012 was dry and saw a high average application rate, the effect of this can be seen by comparing the average application rates between the time periods of 1979-2011 and 1979, 1983-2012; 2012-2018 and 2013-2018; and 2012-2019 and 2013-2019. For the entire period of record, 1979 through 2019, the average application rate has been 7.62 inches.

In Buhler's (2012) report, the average annual withdrawals were calculated by averaging the irrigation questionnaire summary reports for the years 1979-2011 and adding the estimated domestic use. Table 4 shows the data from the irrigation questionnaire summary reports. The data from the irrigation questionnaire summary reports is currently the best information reasonably available to determine how much water has been used by irrigation from an aquifer. These summaries have never been revised to reflect updated data or to correct water sources. There are minor differences between the values in Table 2 and Table 4 for the number of permits and the reported irrigation due to more recent data being represented in Table 2.

Table 4. Annual Summary of Reported Irrigation from the Tulare: East James aquifer (Water Rights, 1980-2020)

Year	Number of Permits Reported	Reported Irrigation [acre-feet]
1979	81	5,321.00
1980	82	7,348.00
1981	92	12,935.00
1982	80	6,873.68
1983	82	5,951.32
1984	81	4,236.80
1985	79	4,251.00
1986	80	4,940.00
1987	76	8,481.00
1988	75	11,106.20
1989	76	11,281.50
1990	75	6,928.00
1991	76	7,890.10
1992	76	3,224.40
1993	75	1,089.00
1994	76	3,897.29
1995	75	2,932.31
1996	75	7,389.13
1997	75	2,676.00
1998	75	3,475.85
1999	75	5,011.51
2000	75	7,690.37

2001	77	10,287.41
2002	78	13,668.09
2003	75	11,864.48
2004	77	7,372.58
2005	79	8,491.16
2006	84	11,746.21
2007	86	7,204.13
2008	85	3,900.71
2009	87	3,908.42
2010	88	2,414.41
2011	87	4,675.06
2012	88	13,441.82
2013	99	7,717.08
2014	94	9,837.12
2015	93	7,489.18
2016	92	11,048.27
2017	93	10,506.72
2018	93	9,210.26
2019	92	603.47
MAX.		*13,668.09*
MIN.		*603.47*
AVE.		*7,080.88*

Balance of Recharge to Discharge

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court of South Dakota ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from an aquifer (Hines v. Department of Environment and Natural Resources, 2005). This ruling resulted in additional water being appropriated from the Tulare: East James aquifer even though the Water Management Board had previously recognized that water use exceeded the estimated average annual recharge.

The first set of new appropriations were permitted in 2006 and were based upon an average annual recharge of 7,950 acre-feet per year and the average use for the previous 20 years (1986-2005) of 6,981 acre-feet per year (Goodman, 2006). The 20-year period used in this calculation was chosen based upon the end date of the allowed construction period of a permit (5 years are allowed for construction) and when the previously approved water rights were permitted. The average irrigation application rate over the previous 20 years had been calculated as 8.2 inches per year. It was determined that an additional 969 acre-feet per year were available for appropriation, and that based upon the average irrigation application rate, 1,420 acres per year could have been irrigated during the previous 20 years. Water right permits were issued for the irrigation of an additional 1,411 acres, including the water right permit approved by the Sixth Judicial Circuit Court of South Dakota.

The second set of new appropriations were permitted in 2012 and were based upon an average annual recharge of 7,950 acre-feet per year and the average annual use over the entire period of record (1979-2011) of 6,700 acre-feet per year as reported in the annual irrigation summaries (Buhler, 2012). The average irrigation application rate over the period of 1979-2011 was calculated as 7.68 inches per year, excluding the years of 1980-1982 due to missing data (Buhler, 2012). It was determined that an additional 1,761 acres could have been irrigated over the period of record. Water right permits were issued for the irrigation of 1,759 acres.

There is no mention in Buhler's 2012 report of how the recently developed permits that were approved in 2006 affected the average annual use over the entire period of record or if the use due to the recent permits would be accurately reflected in a calculation for the entire period of record. Table 5 shows the permits that have been approved since 2005 for the irrigation of "new" acres, acres that were not previously authorized under an existing water right, and when they placed their appropriated water to beneficial use.

Table 5. Water right permits approving new acres since 2005 (Water Rights, 2020c)

Permit No.	Year Approved	Year water placed to beneficial use
6431-3	2005	2012
6655-3	2006	2006
6656-3	2006	2006
6676-3	2006	2007
6711-3	2006	2007
6712-3	2006	2009
6713-3	2006	2013
7295-3	2012	2013
7316-3	2012	2013
7348-3	2012	2014
7364-3	2012	2014
7365-3	2012	2014
7366-3	2012	2014
7367-3	2012	2014
7368-3	2012	2015
7369-3	2012	2015
7370-3	2012	2014

If the same methodology is used as Goodman's report (2006), the estimated average annual use since the time that the most recent permits placed their water to beneficial use (2015-2019) would be 7,725 acre-feet per year. Given the short period of time since the last appropriations were approved in 2012, anomalously wet or dry years can skew the analysis of short time periods. One such anomalous year is the wet year of 2019, as evidenced in Table 2 by having the smallest amount of reported irrigation, the fewest irrigated acres, and the lowest application rate over the period of record. Excluding 2019, the estimated average annual use for irrigation over 2015-2018 is 9,506 acre-feet per year. The estimated average annual recharge from

Kuiper's report (1984) that was applied over the entirety of the Tulare: East James aquifer is 7,950 acre-feet per year. Depending upon whether the wet year of 2019 is included in this balance, the volume of water available for appropriation ranges from 225 acre-feet per year, to being over-appropriated by 1,556 acre-feet per year.

If the same methodology is used as Buhler's report (2012), the estimated average annual use over the entire period of record would be 7,081 acre-feet per year. The estimated average annual recharge from Kuiper's report (1984) that was applied over the entirety of the Tulare: East James aquifer is 7,950 acre-feet per year. This would suggest that there are 869 acre-feet per year that could be appropriated. This volume of water, however, is not available for appropriation as this volume of water was already accounted for in Buhler's 2012 report and is merely showing that there has not been enough time elapsed to properly reflect the usage by new appropriations in the average annual calculations. In the time since Buhler's report, 2012-2019, the average annual reported use is 8,666 acre-feet per year.

A metric other than the total withdrawals over the entire period of record should be utilized to prevent over-appropriation of water from the Tulare: East James aquifer as a result of the 5-year reviews. For example, using Buhler's (2012) methodology repeatedly, if the existing data from 1979-2019 is used, and the years of 2020 through 2024 (5 years) pump an average of 10,000 acre-feet per year, the estimated average annual use over the entire period would rise to 7,398 acre-feet per year. At the end of that 5-year period, there would be an additional 551 acre-feet of water which could be appropriated as a result of the 5-year review because the estimated average annual use is still below the estimated average annual recharge of 7,950 acre-feet. If the next 5-year period pumps an average of 10,500 acre-feet per year, the estimated average annual use over the entire period would rise to 7,702 acre-feet per year. At the end of this 5-year period, there would be an additional 248 acre-feet of water which could be appropriated. If the next 5-year period pumps an average of 10,750 acre-feet per year, the estimated average annual use over the entire period of record would rise to 7,974 acre-feet per year. By the end of this 5-year period, the aquifer would be over-appropriated, and no additional acre-feet were appropriated. After an additional 5 years averaging 10,750 acre-feet of withdrawals per year, the estimated average annual use over the entire period of record would continue rising to 8,202 acre-feet per year. Repeated use of this methodology will result in the aquifer being over-appropriated in the future.

Figure 7 shows the number of irrigated acres approaching the number of authorized acres, indicating that irrigation practices have changed in the area of the Tulare: East James aquifer. These changes may be due to climate, modern farming practices, crop prices, the production of ethanol, and the consolidation, relocation, and transference of irrigation water rights. Appendix A contains an approximate timeline of events regarding Water Rights in the Tulare: East James aquifer, including the amending and transferring of acres to other lands.

Use of the average application rate and the utilization of acres would be a better determination of the estimated average annual use when the number of authorized acres has not remained constant. The application rate is the reported use divided by the number of irrigated acres and the utilization of acres is the number of irrigated acres divided by the number of authorized acres. The average application rate would account for factors regarding the climate over time, allowing for consideration of both dry and wet periods. The average utilization of acres would

account for factors regarding farming practices, this could be looked at on a shorter period to allow for recent changes to be in effect.

As of the beginning of the 2020 irrigation season, there are 16,674 acres authorized for irrigation. Applying the average application rate (1979, 1983-2019) of 7.62 inches over the authorized acres results in an estimated average annual use of 10,588 acre-feet of water. While it is impossible for the average percentage of irrigated acres to authorized acres to ever reach 100% over the entire period of record, 6 out of the 8 years (2012-2019) since Buhler's (2012) report have exceeded 89% utilization of authorized acres with the maximum utilization reaching 94.6% in 2017. The utilization rate of authorized acres and the estimated average annual use using the average application rate of 7.62 inches for authorized acres is calculated in Table 6.

Table 6. Utilization Rate of Authorized Acres and Estimated Average Annual Use calculated using 16,674 authorized acres and the application rate of 7.62 inches

Average Utilization Rate of Authorized Acres	Estimated Average Annual Use [acre-feet per year]
100%	10,588
65.9% (1979-2011)	6,977
69% (1979-2019)	7,306
79% (2000-2019)	8,365
89% (exceeded by 6 out of 8 previous years)	9,423
94.6% (2017)	10,016
92.3% (2015-2018)	9,773
78.4% (2015-2019)	8,301

Kuiper's model estimated the recharge to the aquifer to best simulate the observed observation well hydrographs over the period of 1968 to 1978. It is unknown how well this model fits the last 42 years of observation well data. Kuiper's model estimated the average annual recharge to the Tulare: East James aquifer to be 6,800 acre-feet per year, within the boundaries of the model. Given the currently identified boundaries of the Tulare: East James aquifer and the mismatch to the model boundaries, it is impossible to assume that a spatially variable recharge rate can be averaged out across the model area and then applied to areas outside of the model boundaries to include the entire aquifer area. In the past Water Management Board decisions regarding the Tulare: East James aquifer, the average annual recharge rate of Kuiper's model has been improperly applied over the entirety of the Tulare: East James aquifer. The estimated average annual recharge is unknown for the currently identified boundaries of the Tulare: East James aquifer; however the 6,800 acre-feet as modeled by Kuiper (1984) is the best reasonably available estimate of the average annual recharge to the Tulare: East James aquifer.

Given the uncertainties involved with the estimated average annual recharge model, the recharge to the Tulare: East James aquifer is likely to exceed the 6,800 acre-feet as calculated by Kuiper (1984), however it is unknown by how much. It is unknown if the estimated average annual recharge rate of 7,950 acre-feet per year as used in past reports is above or below the actual recharge rate. Using the average application rate of 7.62 inches over the period of record and the current authorized acreage, the estimated average annual use for irrigation withdrawals using the

average utilization rate for the time period of 2015-2019 is 8,301 acre-feet per year. Excluding the abnormally wet year of 2019, the average utilization rate for the time period of 2015-2018 likely better reflects the expected usage of the Tulare: East James for the current authorized acreage. The estimated average annual use for irrigation withdrawals from the Tulare: East James aquifer for the time period of 2015-2018 is 9,773 acre-feet per year. The estimated average annual use for domestic use is 15 acre-feet per year. Whether or not the abnormally wet year of 2019 is used to estimate the average annual use, the estimated average annual use exceeds both of the estimated average annual recharge estimates. Based upon the estimated average annual use exceeding the estimated average annual recharge, there is no unappropriated water available from the Tulare: East James aquifer.

CONCLUSIONS

1. The Tulare: East James aquifer is a glacial outwash aquifer that is generally found under confined conditions and buried under a layer of glacial till.

2. The best information currently available indicates that the Tulare: East James aquifer underlies approximately 123,578 acres of Spink and Beadle Counties.

3. The SD DENR-Water Rights Program observation well data documents that over the period of record the potentiometric surface of the Tulare: East James aquifer has averaged an upward trend.

4. The SD DENR-Water Rights Program observation well data documents that in the time period since Buhler's analysis, the potentiometric surface of the Tulare: East James aquifer has averaged a downward trend.

5. The SD DENR-Water Rights Program observation well data documents that over the period of record the configuration of the potentiometric surface of the Tulare: East James aquifer has not changed significantly with time or increased development. The elevation of the potentiometric surface has changed throughout time, however the direction of groundwater flow has not been significantly affected by withdrawals.

6. The estimated average annual recharge to the Tulare: East James aquifer was estimated as 6,800 acre-feet per year by Kuiper's model. The estimated average annual recharge is likely to exceed this number due to additional area in Beadle County that was not accounted for by Kuiper, however it is unknown by how much.

7. Kuiper's recharge rate was based upon 11 years of observation well data between 1968 and 1978. 15 observation wells have been drilled into the Tulare: East James aquifer since 1978 and there are 42 additional years of observation well data since 1978.

8. It is improper to assume the spatially variable recharge rate found in Kuiper's model can be averaged across the model domain and then applied to areas outside of the model. The current best estimated average annual recharge to the Tulare: East James aquifer is 6,800 acre-feet per year.

9. The Tulare: East James aquifer currently has 94 permitted or licensed water rights appropriating water. These 94 water rights currently authorize the irrigation of 16,674 acres.

10. All water right permits approved since 2005 have placed their water to beneficial use as of the 2015 irrigation season.

11. Excluding the anomalously wet year of 2019, the authorized acres saw a utilization rate of 92.3% over the years of 2015-2018. Including the anomalously wet year of 2019, the authorized acres saw a utilization rate of 78.4% over the years of 2015-2019.

12. The application rate on irrigated acres over the period of record (1979,1983-2019) is 7.62 inches.

13. Assuming current irrigation trends continue, the estimated average annual use from the Tulare: East James aquifer is 9,773 acre-feet per year at 92.3% utilization of authorized acres. At 78.4% utilization of authorized acres, the estimated average annual use from the Tulare: East James aquifer is 8,301 acre-feet per year.

14. Based upon the downward trend observed in the observation well analysis since Buhler's analysis (2012-2019) and the hydrologic budget showing that the estimated average annual withdrawal exceeds the estimated average annual recharge, there is not a reasonable probability that unappropriated water is available from the Tulare: East James aquifer.



John Farmer
SD DENR – Water Rights Program

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Appendix A: Approximate Timeline of Water Right Activity in the East James Management Unit of the Tulare Aquifer since the year 2000.

Date	Water Right	Action	Water Right Status	Change in Authorized Acres
02/22/2000	1033A-3	Result of Licensing Inspection	LC	-6
03/07/2001	3391-3	Denied due to approval of 6242-3 (same piece of land)	DN	
03/07/2001	4376-3	Incorporated into Water Right 6242-3, 0 acres remain	IL	
03/07/2001	6242-3	Permit approved by WMB, denied the deferred application 3391-3 and transferred 138 of 138 acres from Water Right 4376-3	PE	0
01/02/2002	6287-3	Date Received, Recommended for Denial, Denied by WMB 5-01-02	DN	
02/25/2002	6242-3	Incorporated into Water Right 6242A-3, 0 acres remain	IL	
02/25/2002	6242A-3	Water Right 6242-3 amended, moved 138 of 138 acres	PE	
09/25/2002	4612-3	Incorporated into Water Right 4612A-3, 0 acres remain	IL	
09/25/2002	4612A-3	Water Right 4612-3 amended, moved 132 of 132 acres	PE	
12/04/2002	970-3	Portion Cancelled by WMB for forfeiture, License Reissued for 132 acres	LC	-180
03/05/2003	6341-3	Permit approved by WMB, additional diversion point, no additional acres	PE	0
03/13/2003	3490-3	Incorporated into Water Right 5280-3	IL	
03/13/2003	3490-3A	Incorporated into Water Right 5280-3	IL	
03/13/2003	4772-3	Incorporated into Water Right 5280-3	IL	
03/13/2003	5280-3	Result of Licensing Inspection, Incorporated 3490-3, 3490-3A, 4772-3	LC	-56
05/07/2003	2729-3	Incorporated into Water Right 2729A-3, 0 acres remain once 2729A-3 system is used	IL	
05/07/2003	2729A-3	Water Right 2729-3 amended, moved 120 of 120 acres	PE	
10/07/2003	6445-3	Date Received, Recommended for Denial, Denied by WMB 7-07-04	DN	
12/03/2003	3466-3	Cancelled by WMB for forfeiture	CA	-91
12/03/2003	4586-3	100 acres transferred to 6382-3, License reissued	LC	0
12/03/2003	6382-3	Permit approved by WMB, moved 100 acres from 4586-3	PE	0
03/03/2004	1504-3	Incorporated into Water Rights 1504A-3 and 1504B-3, 218 acres remain	IL	
03/03/2004	1504A-3	Water Right 1504-3 amended, moved 16 of 370 acres	PE	

03/03/2004	1504B-3	Water Right 1504-3 amended, moved 136 of 370 acres	PE	
03/03/2004	3467-3	Cancelled by WMB for forfeiture	CA	-136
05/12/2004	1504-3	Remaining 218 acres cancelled by WMB	CA	-218
06/28/2004	3268-3	Incorporated into Water Right 3268A-3, 3 acres remain	IL	
06/28/2004	3268A-3	Water Right 3268-3 amended, moved 110 of 113 acres	PE	
06/07/2005	6431-3	Approved by 6th Judicial Circuit Court (Hines vs. SD DENR)	PE	91
06/20/2005	3268A-3	Incorporated into Water Right 3268B-3, 0 acres remain	IL	
06/20/2005	3268B-3	Water Right 3268A-3 amended, moved 113 of 113 acres	PE	
09/30/2005	4612A-3	Result of Licensing Inspection	LC	0
12/07/2005	4586-3	Incorporated into Water Right 4586A-3, 0 acres remain	IL	
12/07/2005	4586A-3	Water Right 4586-3 amended, moved 264 of 264 acres	PE	
04/07/2006	6715-3	Date Received, Recommended for Denial, Denied by WMB 10-11-06	DN	
04/24/2006	6728-3	Date Received, Recommended for Denial, Denied by WMB 10-11-06	DN	
05/03/2006	4586B-3	Date Received, Recommended for Denial, Withdrawn 8-25-06	WI	
05/30/2006	6720-3	Date Received, Recommended for Denial, Withdrawn 8-25-06	WI	
07/12/2006	6655-3	Permit approved by WMB	PE	160
07/12/2006	6656-3	Permit approved by WMB	LC	320
07/12/2006	6675-3	Permit approved by WMB, additional diversion rate, no change in acres due to same acres as 6382-3	LC	0
07/12/2006	6676-3	Permit approved by WMB	LC	264
08/25/2006	6721-3	Date Received, Recommended for Denial, Withdrawn 8-25-06	WI	
09/25/2006	3268B-3	Incorporated into Water Right 3268C-3, 0 acres remain	IL	
09/25/2006	3268C-3	Water Right 3268B-3 amended, moved 113 of 113 acres	PE	
10/11/2006	6711-3	Permit approved by WMB, amended by 6711A-3 prior to issuance	PE	304
10/11/2006	6712-3	Permit approved by WMB	PE	136
10/11/2006	6713-3	Permit approved by WMB	PE	136
03/08/2007	6831-3	Date Received, Recommended for Denial, Withdrawn 5-31-07	WI	
03/26/2007	4195-3	Incorporated into Water Right 4195A-3, 0 acres remain	IL	
03/26/2007	4195A-3	Water Right 4195-3 amended, moved 272 of 272 acres	PE	
04/30/2007	6711A-3	Water Right 6711-3 amended, moved 304 of 304 acres	PE	

05/16/2008	4753-3	Incorporated into Water Right 6341-3, 0 acres remain	IL	
05/16/2008	6341-3	Result of Licensing Inspection, Incorporated 4753-3	LC	0
04/27/2009	6712-3	Incorporated into Water Right 6712A-3, 0 acres remain	IL	
04/27/2009	6712A-3	Water Right 6712-3 amended, moved 136 of 136 acres	PE	
06/08/2009	3175-3	Incorporated into Water Right 3175A-3, 0 acres remain	IL	
06/08/2009	3175A-3	Water Right 3175-3 amended, , moved 132 of 132 acres	PE	
05/28/2010	6431-3	Incorporated into Water Right 6431A-3, 0 acres remain	IL	
05/28/2010	6431A-3	Water Right 6431-3 amended, moved 91 of 91 acres	PE	
06/01/2010	2208-3	Incorporated into Water Right 2208A-3, 28 acres remain with no diversion rate	IL	
06/01/2010	2208A-3	Water Right 2208-3 amended, moved 132 of 160 acres	PE	
05/09/2011	6713-3	Cancelled by WMB upon approval of 7235-3, authorized acres stayed the same	CA	-136
05/09/2011	7235-3	Permit approved by WMB, qualification canceled Water Right 6713-3 at the same time	PE	136
06/11/2012	1724-3	Incorporated into Water Right 1724A-3, 0 acres remain	IL	
06/11/2012	1724A-3	Water Right 1724-3 amended, moved 128 of 128 acres	PE	
10/25/2012	7480-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
10/25/2012	7481-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
10/25/2012	7482-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
10/25/2012	7483-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
10/25/2012	7484-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
12/06/2012	7295-3	Permit approved by WMB	PE	120
12/06/2012	7316-3	Permit approved by WMB	PE	272
12/06/2012	7348-3	Permit approved by WMB	PE	440
12/06/2012	7364-3	Permit approved by WMB	PE	135
12/06/2012	7365-3	Permit approved by WMB	PE	132
12/06/2012	7366-3	Permit approved by WMB	PE	132
12/06/2012	7367-3	Permit approved by WMB	PE	132
12/06/2012	7368-3	Permit approved by WMB	PE	132
12/06/2012	7369-3	Permit approved by WMB	PE	132
12/06/2012	7370-3	Permit approved by WMB	PE	132
12/06/2012	7545-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	

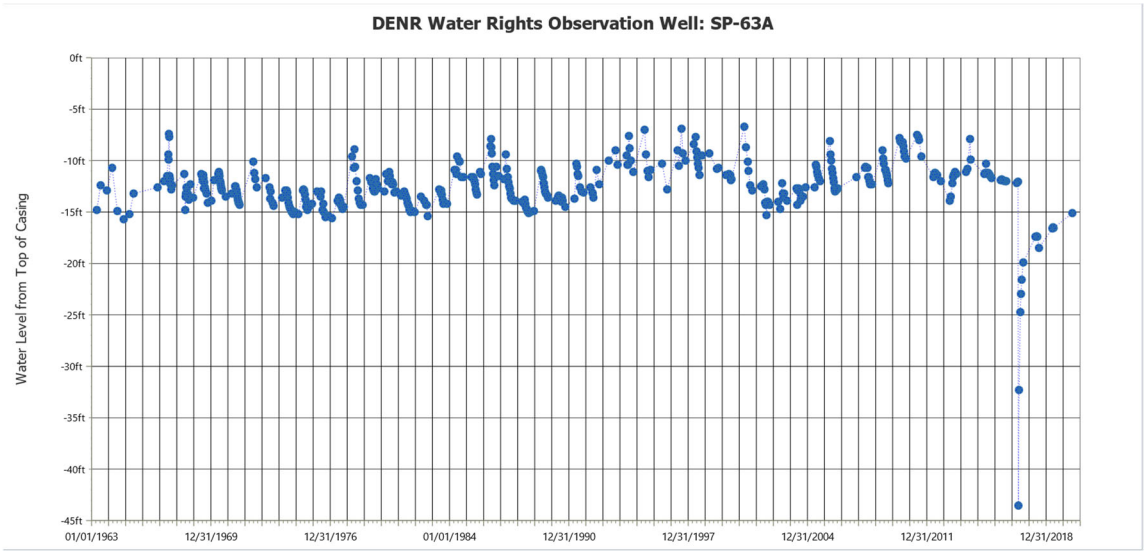
12/06/2012	7546-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
12/06/2012	7547-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
12/06/2012	7548-3	Date Received, Recommended for Denial, Withdrawn 1-30-13	WI	
01/11/2013	7641-3	Date Received, Recommended for Denial, Withdrawn 4-12-13	WI	
02/08/2013	7728-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7729-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7760-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7761-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7762-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7763-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7764-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7766-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/08/2013	7875-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7876-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7877-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7879-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7880-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7881-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7882-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7883-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/08/2013	7884-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/09/2013	7878-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
02/25/2013	7747-3	Date Received, Recommended for Denial, Denied by WMB 10-03-13	DN	
02/28/2013	7730-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/28/2013	7765-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
02/28/2013	7767-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	
03/11/2013	1201-3	Incorporated into Water Right 1201A-3, remaining 18 acres cancelled upon IL	IL	-18
03/11/2013	1201A-3	Water Right 1201-3 amended, moved 122 of 140 acres	PE	
03/26/2013	7810-3	Date Received, Recommended for Denial, Withdrawn 6-13-13	WI	
04/11/2013	7826-3	Date Received, Recommended for Denial, Withdrawn 5-17-13	WI	

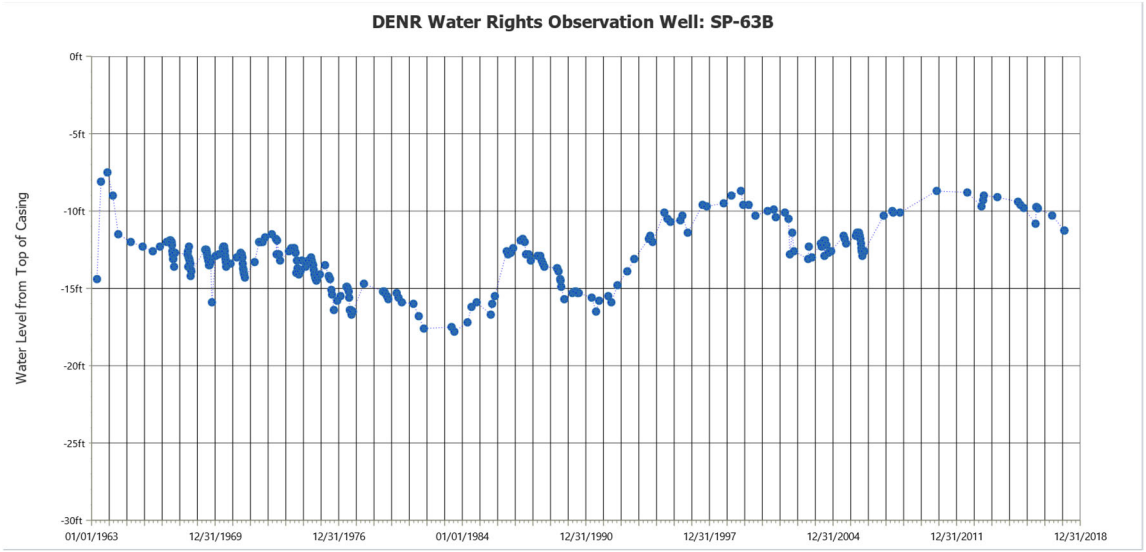
04/15/2013	4586A-3	Incorporated into Water Right 4586C-3, 132 acres remain	PE	
04/15/2013	4586C-3	Water Right 4586A-3 amended, moved 132 of 264 acres	PE	
06/03/2013	7235-3	Incorporated into Water Right 7235A-3, 0 acres remain	IL	
06/03/2013	7235A-3	Water Right 7235-3 amended, moved 136 of 136 acres	PE	
09/13/2013	7903-3	Date Received, Recommended for Denial, Withdrawn 12-13-13	WI	
12/16/2013	7934-3	Date Received, Recommended for Denial, Withdrawn 3-04-14	WI	
04/18/2014	8003-3	Date Received, Recommended for Denial, Withdrawn 7-08-14	WI	
06/27/2014	8032-3	Date Received, Recommended for Denial, Denied by WMB 7-08-15	DN	
07/07/2014	1504A-3	Result of Licensing Inspection, Incorporated all 120 acres of Water Right 2729A-3	LC	0
07/07/2014	2729A-3	Incorporated into Water Right 1504A-3, 0 acres remain	IL	
07/07/2014	6242A-3	Result of Licensing Inspection	LC	0
09/04/2014	6382-3	Incorporated into Water Right 6675-3, 0 acres remain	IL	
09/04/2014	6675-3	Result of Licensing Inspection, Incorporated 6382-3	LC	0
09/04/2014	6676-3	Result of Licensing Inspection	LC	0
09/24/2014	1504B-3	Result of Licensing Inspection	LC	0
09/24/2014	6656-3	Result of Licensing Inspection	LC	-50
09/24/2014	6711A-3	Result of Licensing Inspection	LC	-34
09/24/2014	6712A-3	Result of Licensing Inspection	LC	-1
10/22/2014	2729-3	Cancelled by WMB upon use of the system approved by 2729A-3	CA	0
02/25/2015	8082-3	Number 14 of 14 in the Random Selection Priority List	HD	
02/25/2015	8086-3	Number 5 of 14 in the Random Selection Priority List	HD	
02/25/2015	8087-3	Number 7 of 14 in the Random Selection Priority List	HD	
02/25/2015	8088-3	Number 1 of 14 in the Random Selection Priority List	HD	
02/25/2015	8089-3	Number 10 of 14 in the Random Selection Priority List	HD	
02/25/2015	8090-3	Number 2 of 14 in the Random Selection Priority List	HD	
02/25/2015	8112-3	Number 4 of 14 in the Random Selection Priority List	HD	
02/25/2015	8113-3	Number 8 of 14 in the Random Selection Priority List	HD	
02/25/2015	8114-3	Number 11 of 14 in the Random Selection Priority List	HD	
02/25/2015	8115-3	Number 12 of 14 in the Random Selection Priority List	HD	
02/25/2015	8116-3	Number 3 of 14 in the Random Selection Priority List	HD	

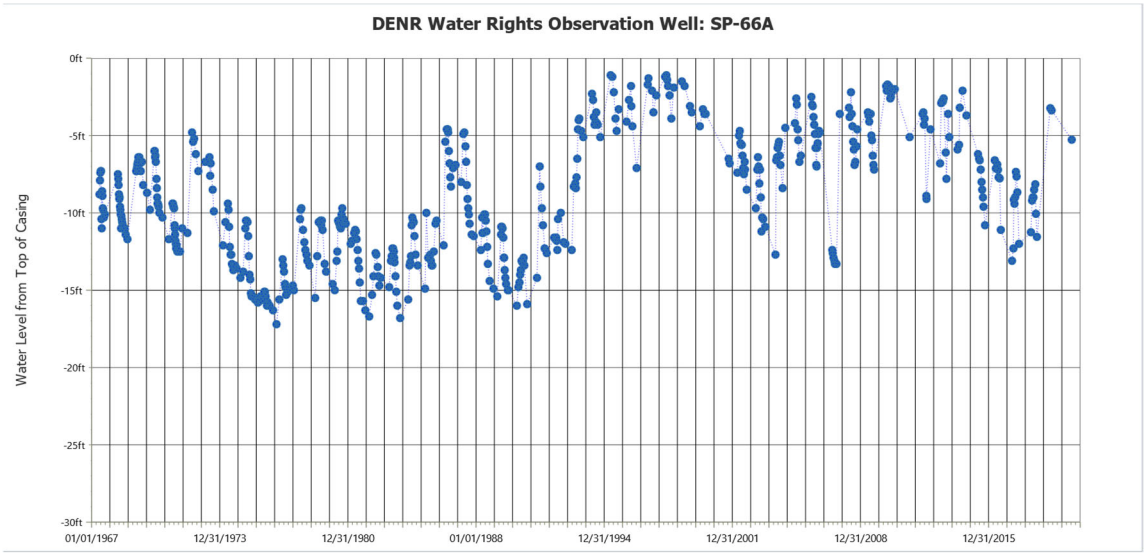
02/25/2015	8117-3	Number 6 of 14 in the Random Selection Priority List	HD	
02/25/2015	8119-3	Number 9 of 14 in the Random Selection Priority List	HD	
02/25/2015	8140-3	Number 13 of 14 in the Random Selection Priority List	HD	
05/07/2015	3268C-3	Incorporated into Water Right 7369A-3, 0 acres remain	IL	
05/07/2015	6431A-3	Incorporated into Water Right 7369B-3, 0 acres remain	IL	
05/07/2015	7368-3	Incorporated into Water Right 7369C-3, 0 acres remain	IL	
05/07/2015	7369-3	Incorporated into Water Right 7369A-3, 7369B-3, 7369C-3, 0 acres remain	IL	
05/07/2015	7369A-3	Water Right 7369-3 amended, moved 45 of 132 acres, Incorporated Water Right 3268C-3 (113 acres)	PE	0
05/07/2015	7369B-3	Water Right 7369-3 amended, moved 61 of 132 acres, Incorporated Water Right 6431A-3 (91 acres)	PE	0
05/07/2015	7369C-3	Water Right 7369-3 amended, moved 26 of 132 acres, Incorporated Water Right 7368-3 (132 acres)	PE	0
10/14/2015	7369-3	Remaining diversion rate cancelled by WMB, all acres and partial diversion rate had been transferred to other permits	CA	0
02/23/2016	7364-3	Result of Licensing Inspection	LC	0
02/24/2016	1201A-3	Result of Licensing Inspection	LC	0
02/24/2016	1724A-3	Result of Licensing Inspection	LC	0
07/22/2016	4195A-3	Result of Licensing Inspection	LC	0
08/17/2016	4586A-3	Incorporated into Water Right 4586C-3, 0 acres remain	IL	
08/17/2016	4586C-3	Result of Licensing Inspection, Incorporated 4586-3 and 4586A-3	LC	0
10/11/2016	6655-3	Result of Licensing Inspection	LC	-28
10/11/2016	7316-3	Result of Licensing Inspection	LC	0
05/08/2017	7348-3	Transferred 66 of 440 acres to 7348A-3, 374 acres remain	PE	0
05/08/2017	7348A-3	Water Right 7348-3 amended, moved 66 of 440 acres	PE	
06/21/2017	1722-3	Ownership Change, 160 acres to 1722A-3 and 80 acres to 1722B-3	OC	
06/21/2017	1722A-3	Ownership Change, took 160 acres of 240 acres	LC	
06/21/2017	1722B-3	Ownership Change, took 80 acres of 240 acres	LC	
01/28/2019	1358-3	Incorporated into Water Right 1358B-3, 25 acres remain	IL	
01/28/2019	1358B-3	Water Right 1358-3 amended, moved 135 of 160 acres	PE	

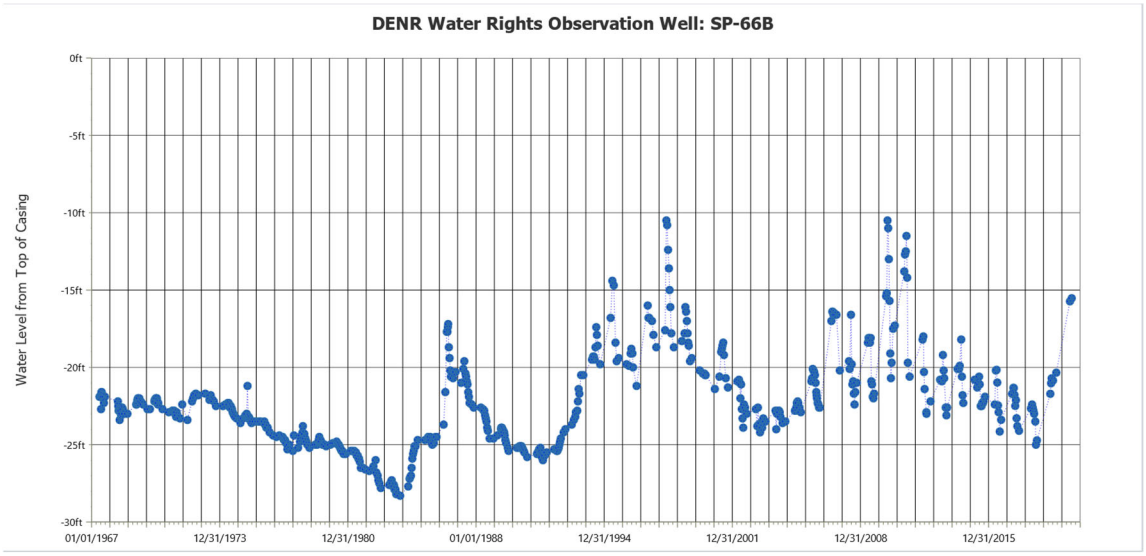
05/08/2019	1358-3	Remaining 25 acres cancelled by WMB	CA	-25
05/22/2019	2208A-3	Result of Licensing Inspection, Incorporated 2208-3 (28 acres remained), 3175-3 (0 acres), 3175A-3 (132 acres)	LC	-28
05/22/2019	3175A-3	Incorporated into Water Right 2208A-3, 0 acres remain	IL	
02/24/2020	7295-3	Result of Licensing Inspection	LC	0
02/28/2020	7348-3	Result of Licensing Inspection	LC	0
02/28/2020	7348A-3	Result of Licensing Inspection	LC	0
03/03/2020	7367-3	Result of Licensing Inspection	LC	0

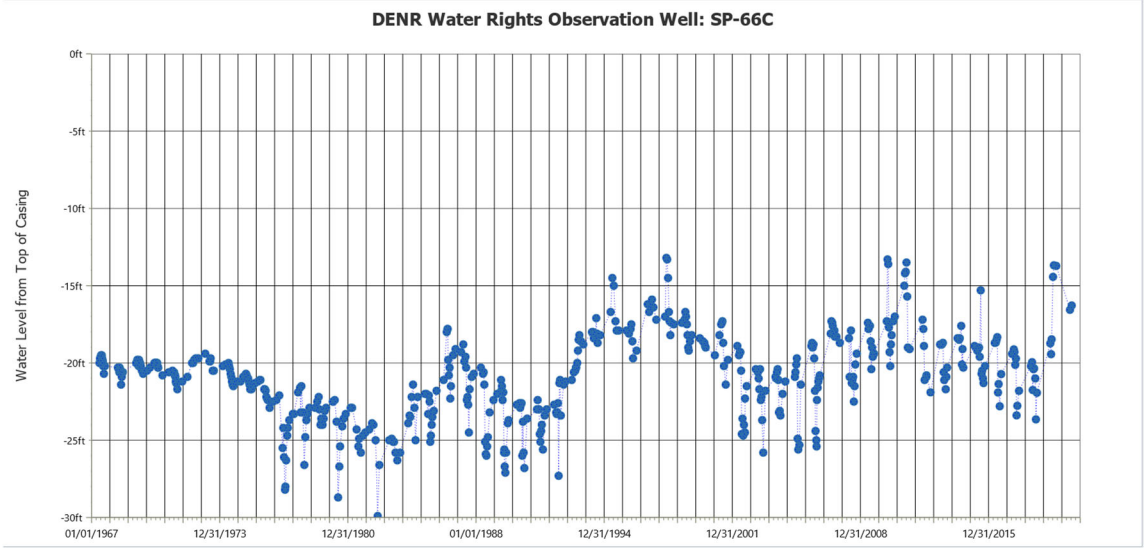
Appendix B: SD DENR-Water Rights Program Tulare: East James aquifer observation well hydrographs (Water Rights, 2020b).

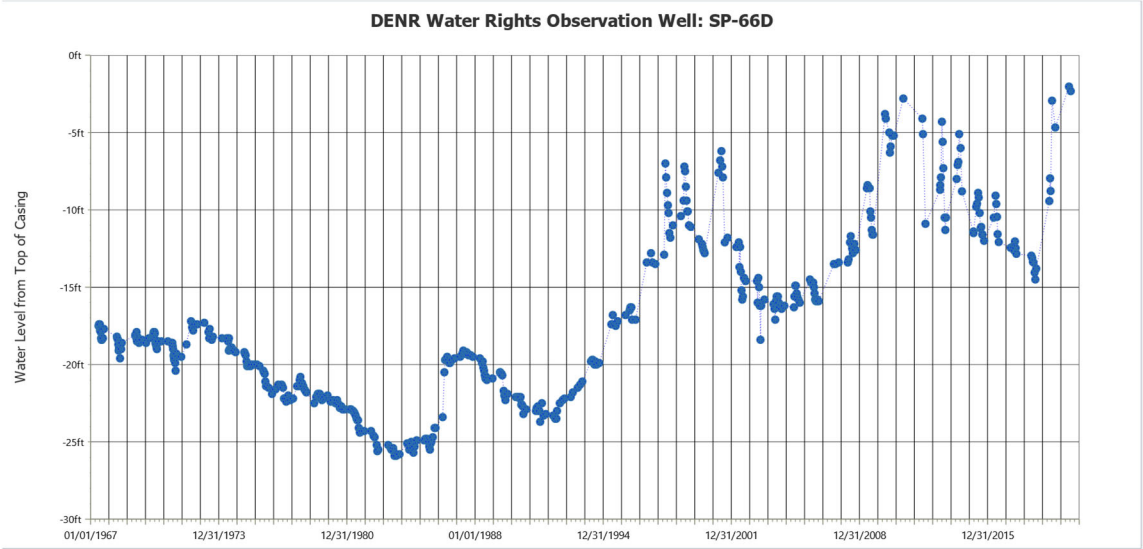


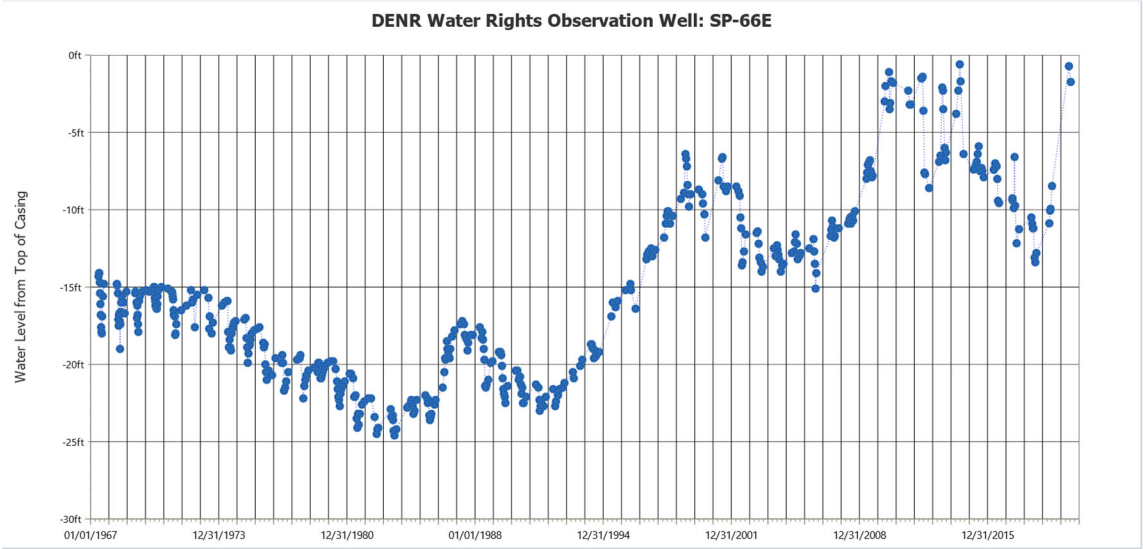


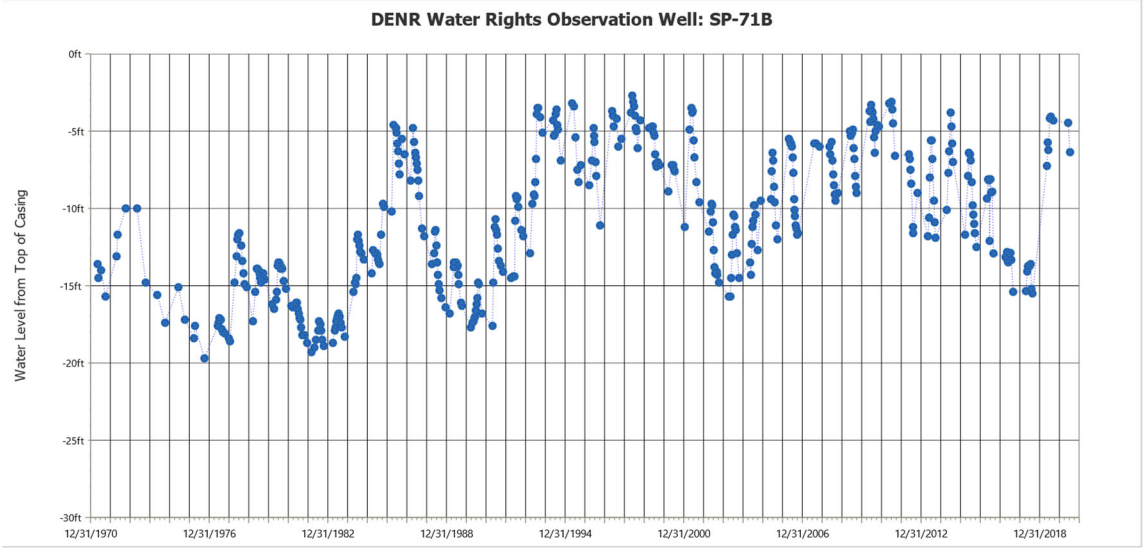

DENR Water Rights Observation Well: SP-66A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1967
12/31/1973
12/31/1980
01/01/1988
12/31/1994
12/31/2001
12/31/2008
12/31/2015

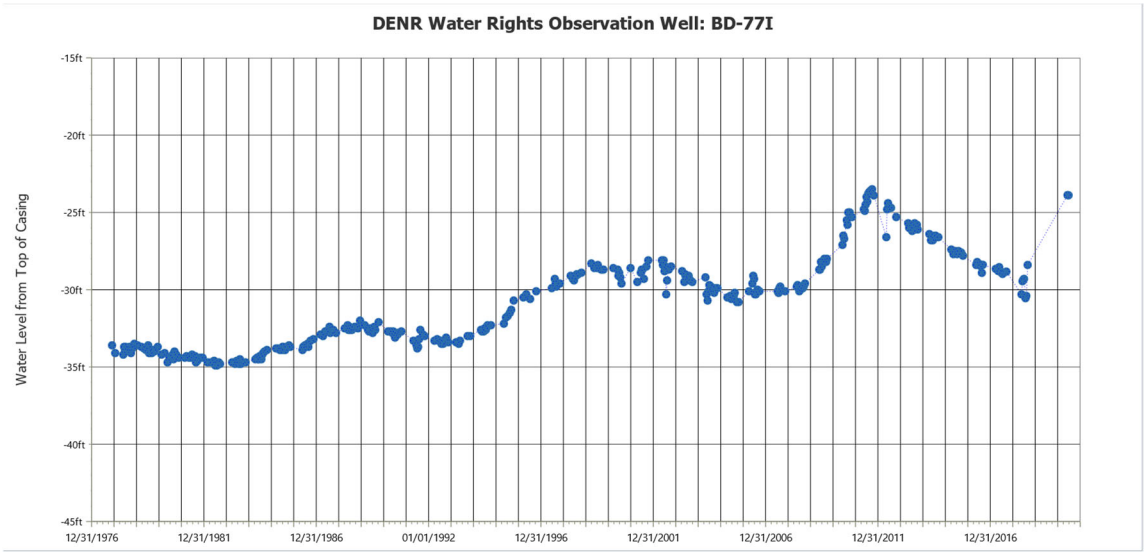

DENR Water Rights Observation Well: SP-66B
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1967
12/31/1973
12/31/1980
01/01/1988
12/31/1994
12/31/2001
12/31/2008
12/31/2015

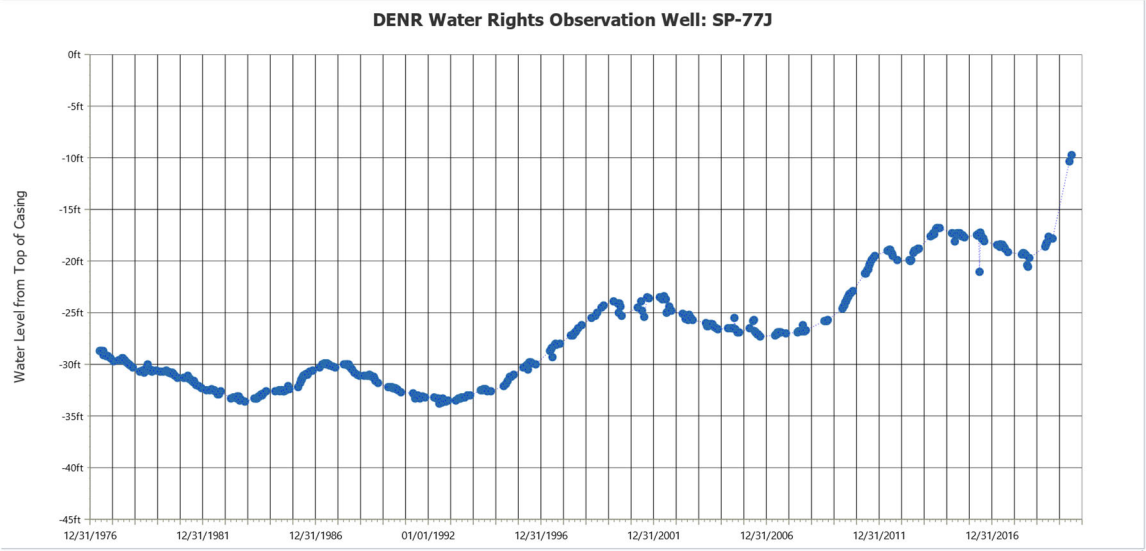

DENR Water Rights Observation Well: SP-66C
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1967
12/31/1973
12/31/1980
01/01/1988
12/31/1994
12/31/2001
12/31/2008
12/31/2015

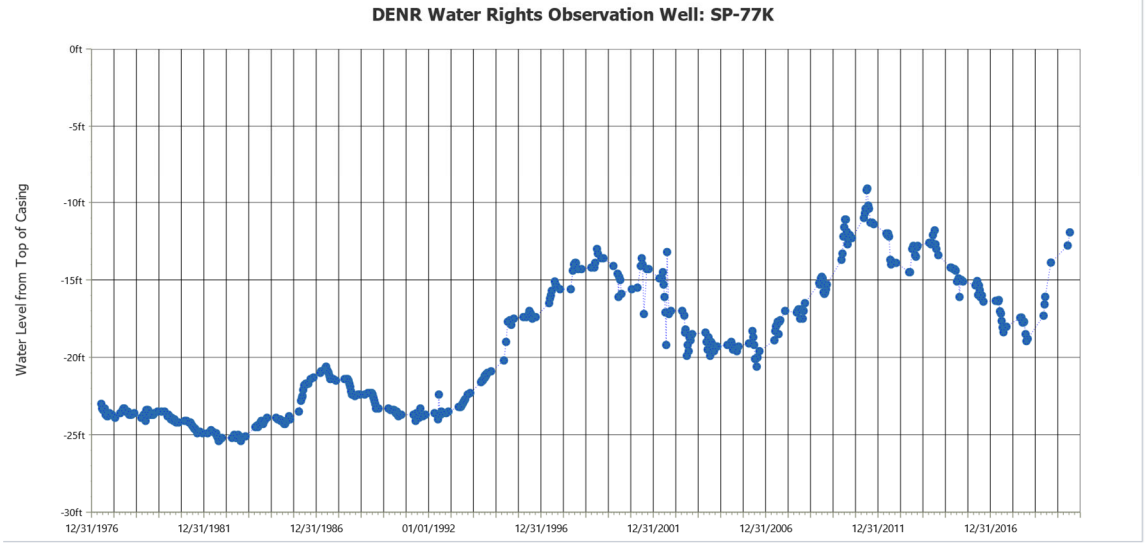

DENR Water Rights Observation Well: SP-66D
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1967
12/31/1973
12/31/1980
01/01/1988
12/31/1994
12/31/2001
12/31/2008
12/31/2015

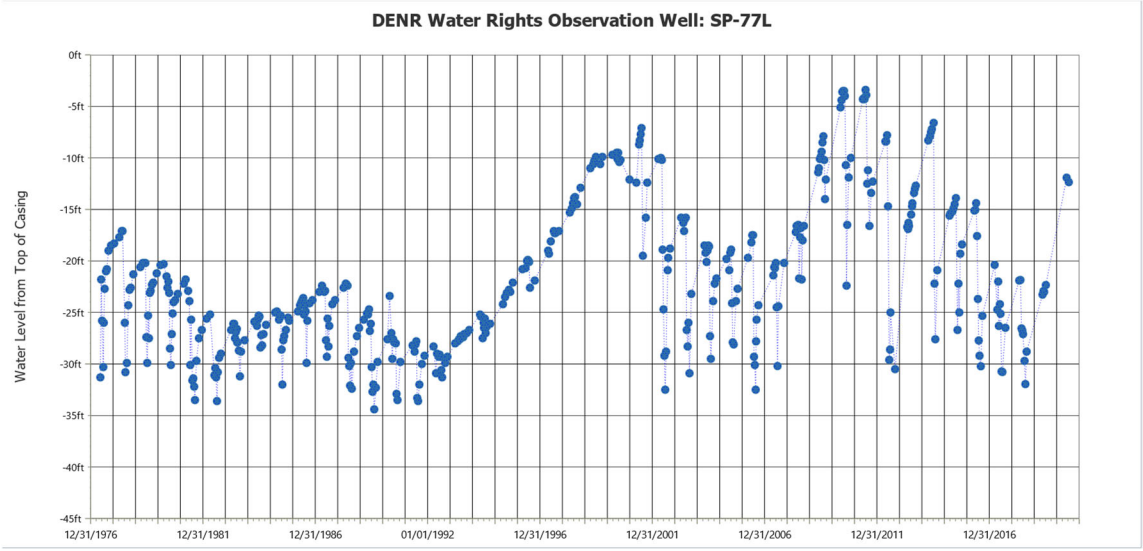

DENR Water Rights Observation Well: SP-66E
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1967
12/31/1973
12/31/1980
01/01/1988
12/31/1994
12/31/2001
12/31/2008
12/31/2015

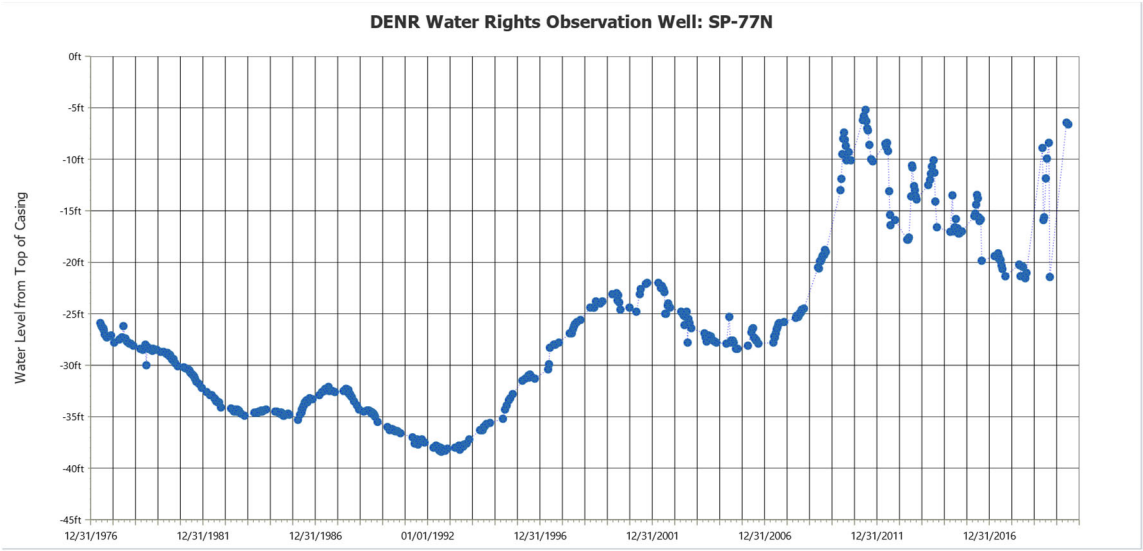

DENR Water Rights Observation Well: SP-71B
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1970
12/31/1976
12/31/1982
12/31/1988
12/31/1994
12/31/2000
12/31/2006
12/31/2012
12/31/2018

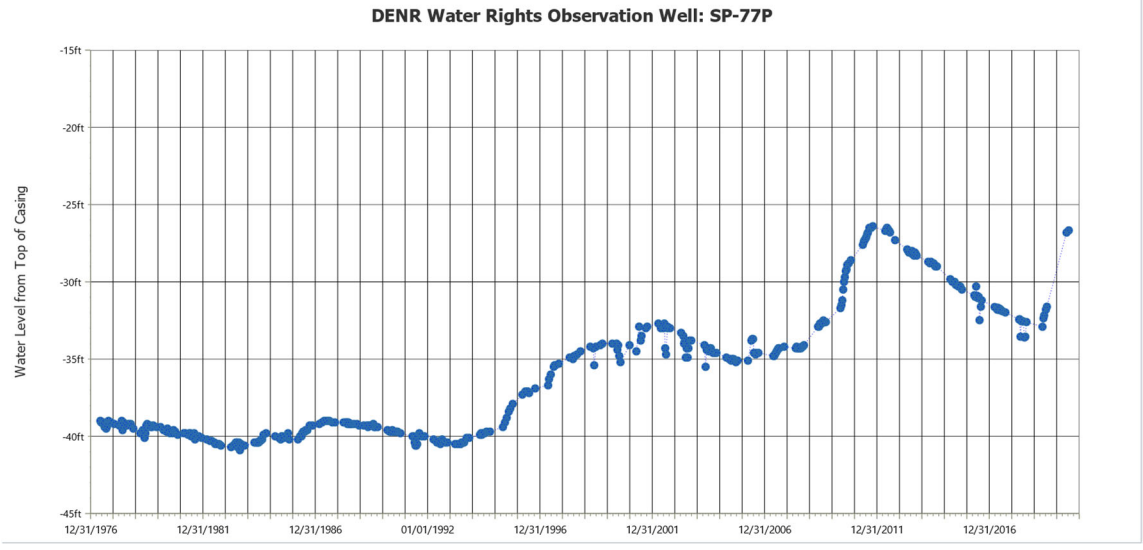

DENR Water Rights Observation Well: BD-77I
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

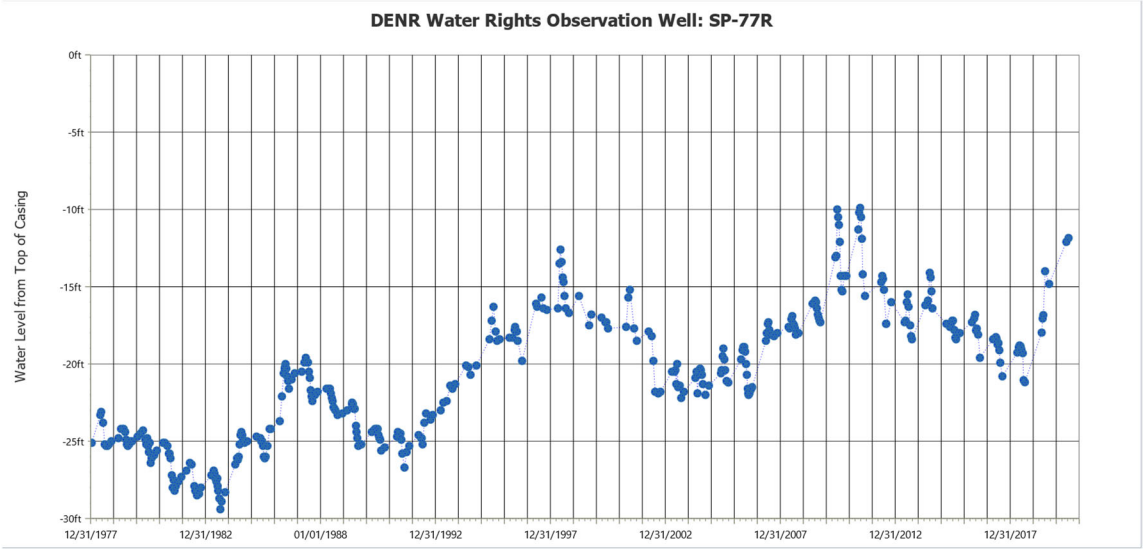

DENR Water Rights Observation Well: SP-77J
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

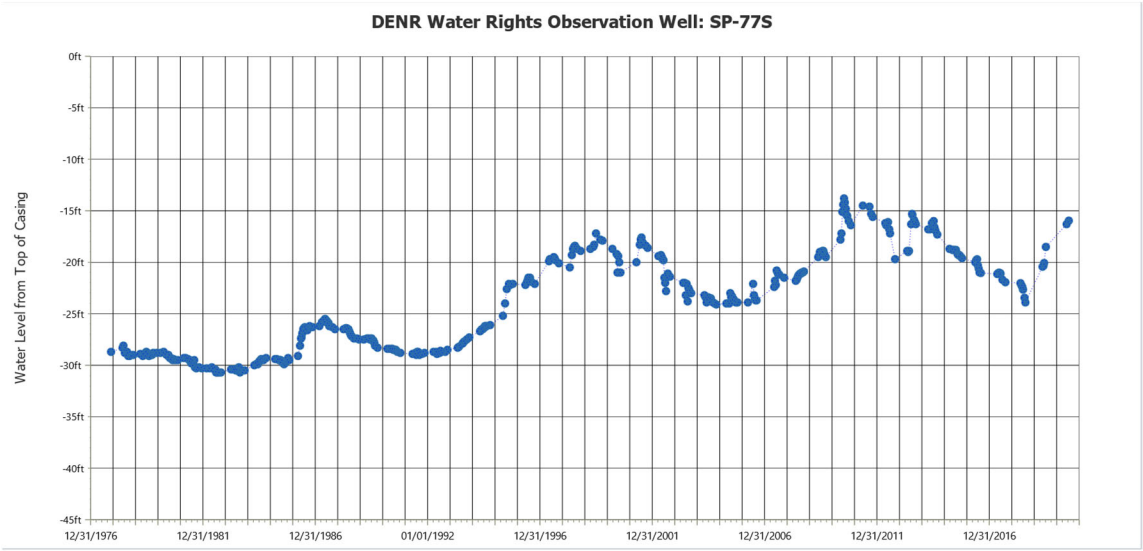

DENR Water Rights Observation Well: SP-77K
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

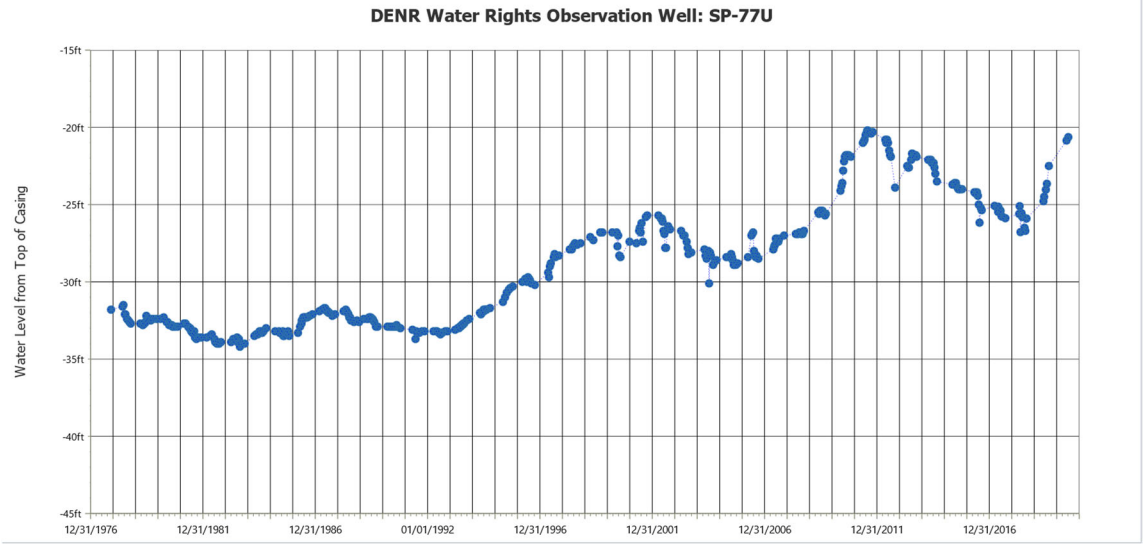

DENR Water Rights Observation Well: SP-77L
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

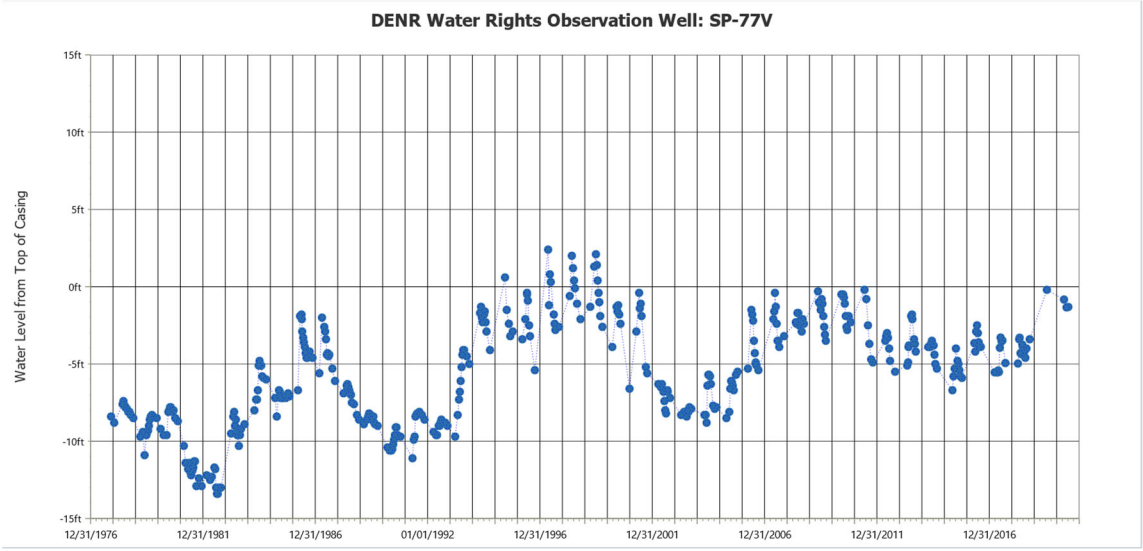

DENR Water Rights Observation Well: SP-77N
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

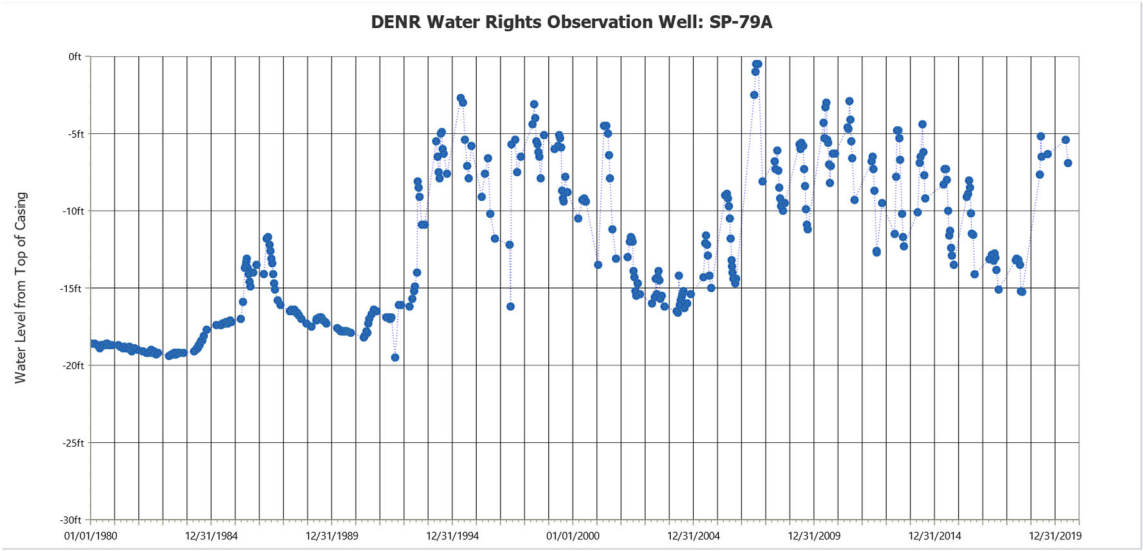

DENR Water Rights Observation Well: SP-77P
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

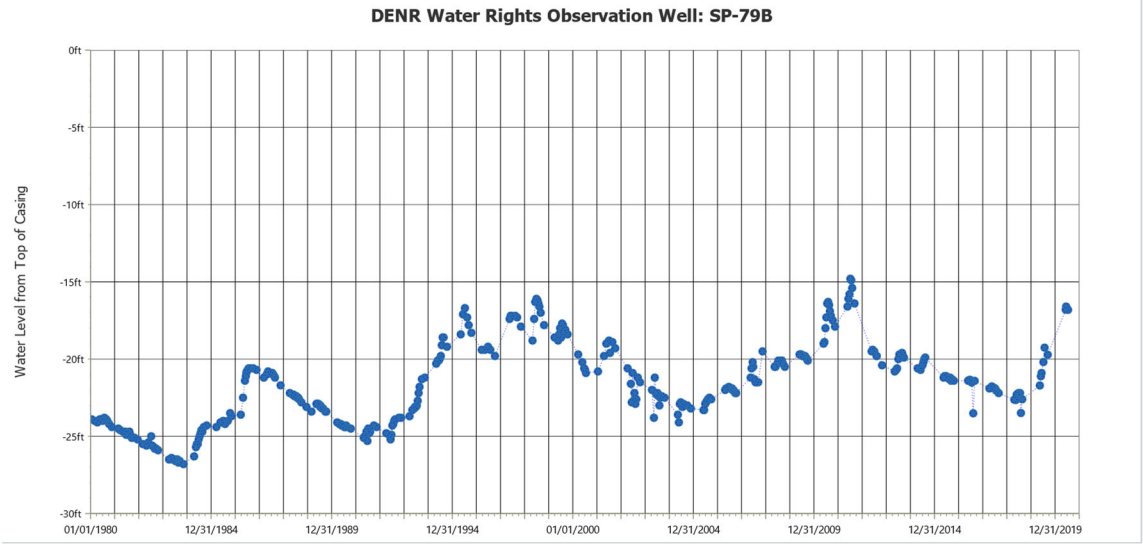

DENR Water Rights Observation Well: SP-77R
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1977
12/31/1982
01/01/1988
12/31/1992
12/31/1997
12/31/2002
12/31/2007
12/31/2012
12/31/2017

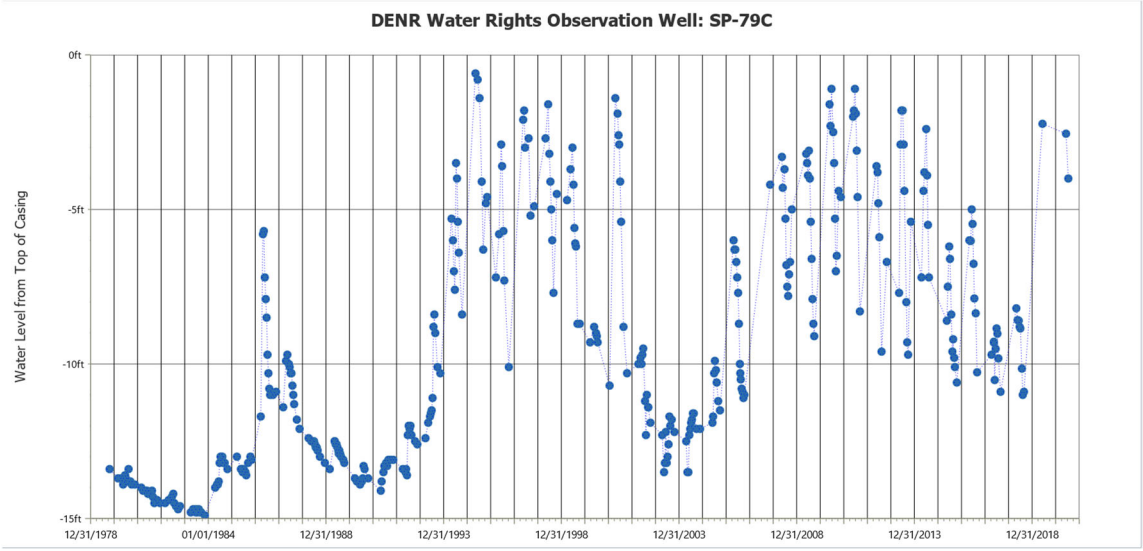

DENR Water Rights Observation Well: SP-77S
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

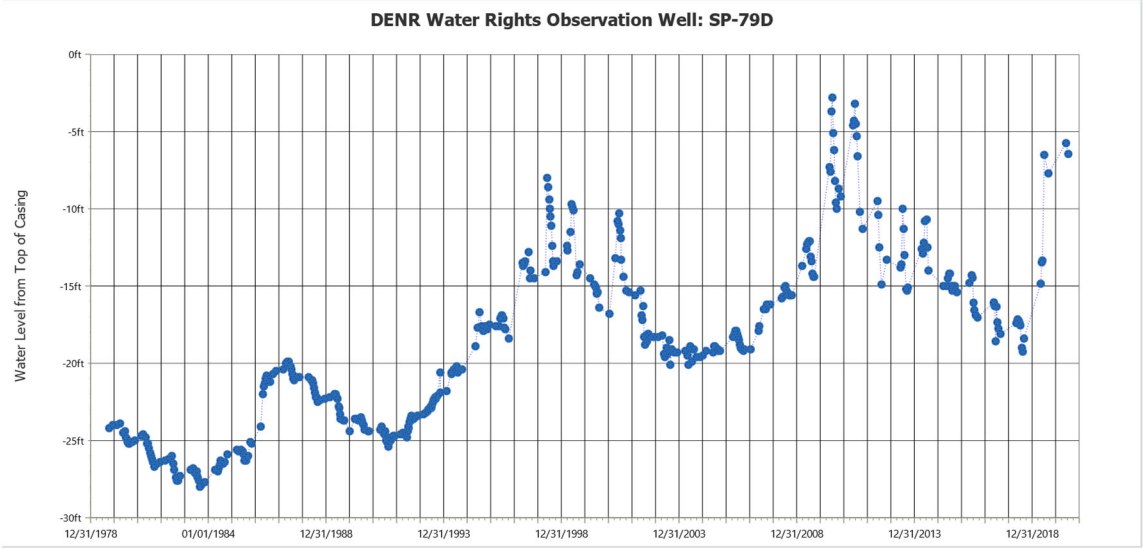

DENR Water Rights Observation Well: SP-77U
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

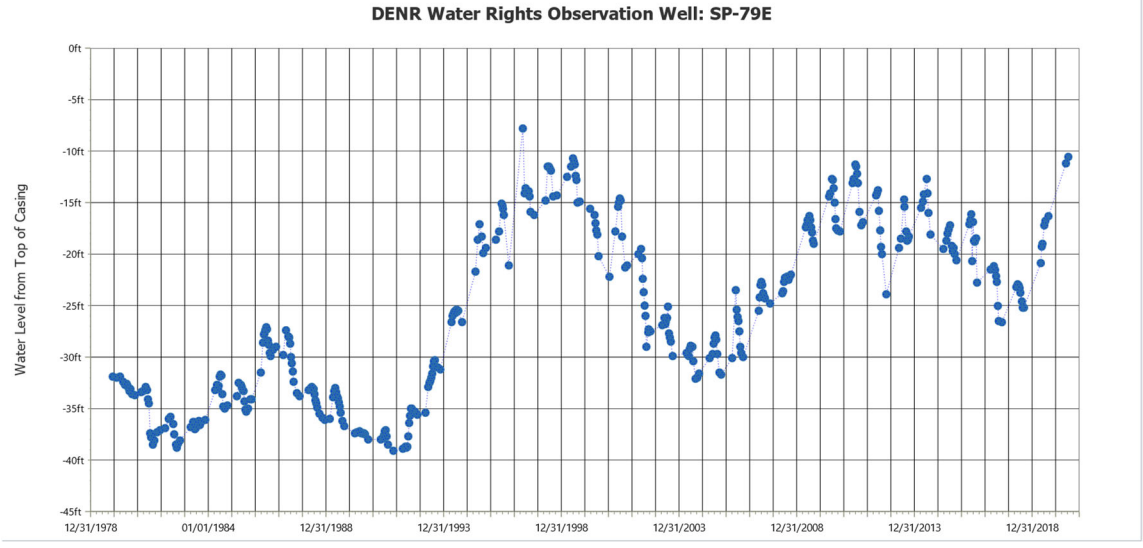

DENR Water Rights Observation Well: SP-77V
Water Level from Top of Casing
15ft
10ft
5ft
0ft
-5ft
-10ft
-15ft
12/31/1976
12/31/1981
12/31/1986
01/01/1992
12/31/1996
12/31/2001
12/31/2006
12/31/2011
12/31/2016

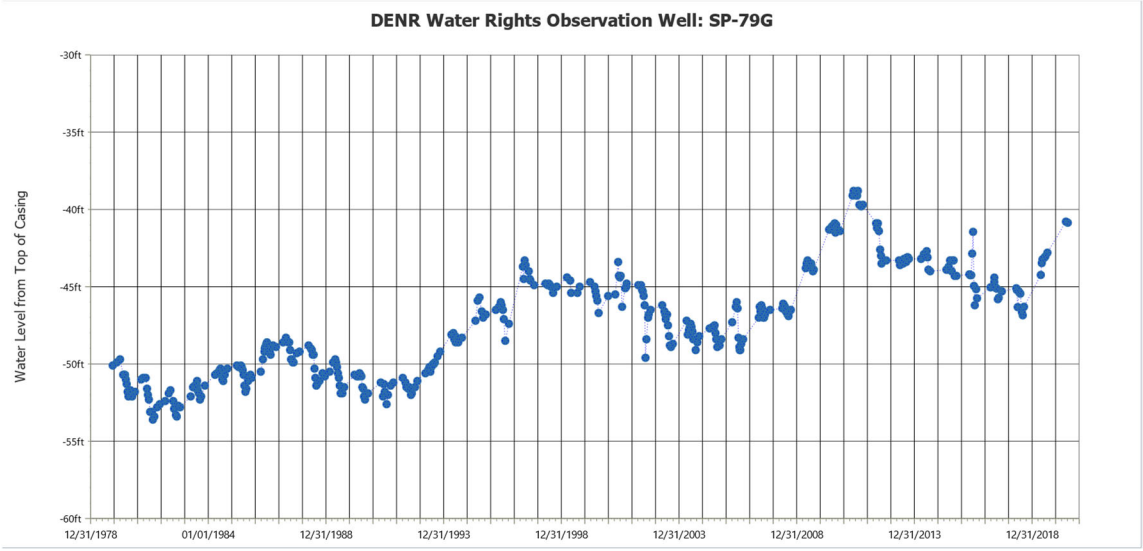

DENR Water Rights Observation Well: SP-79A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1980
12/31/1984
12/31/1989
12/31/1994
01/01/2000
12/31/2004
12/31/2009
12/31/2014
12/31/2019

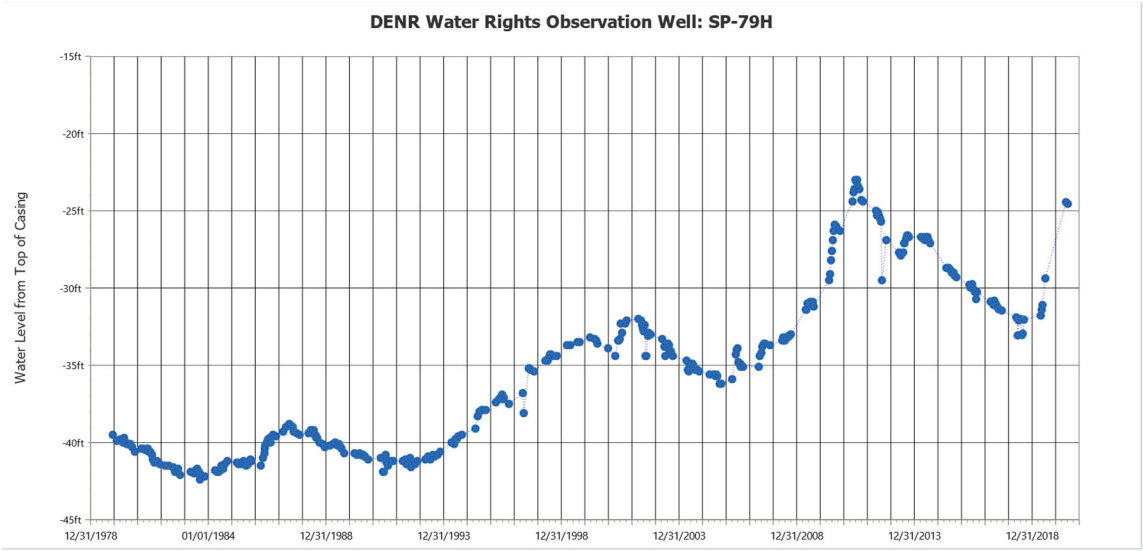

DENR Water Rights Observation Well: SP-79B
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
01/01/1980
12/31/1984
12/31/1989
12/31/1994
01/01/2000
12/31/2004
12/31/2009
12/31/2014
12/31/2019

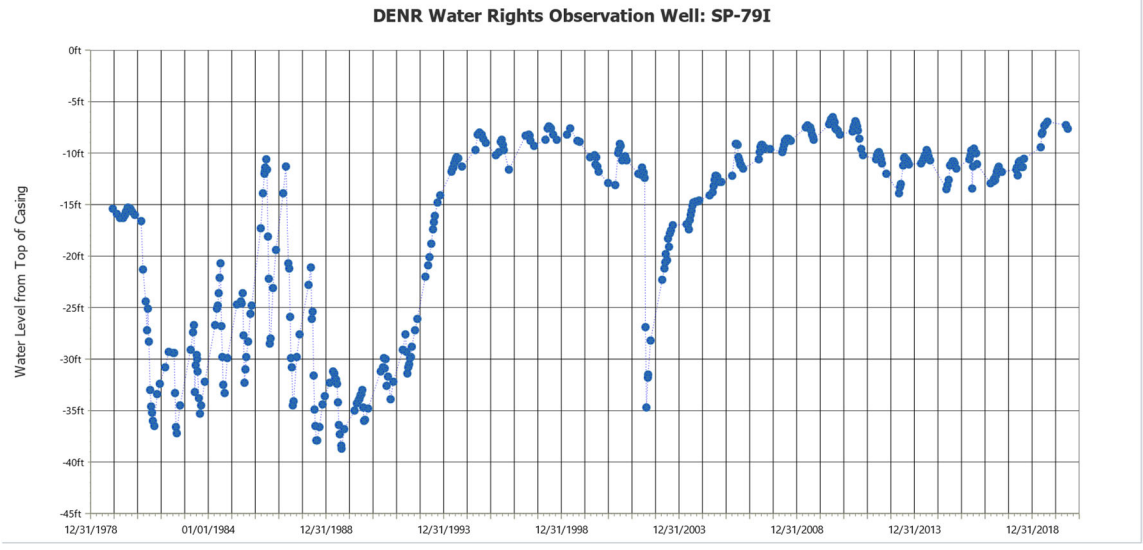

DENR Water Rights Observation Well: SP-79C
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018

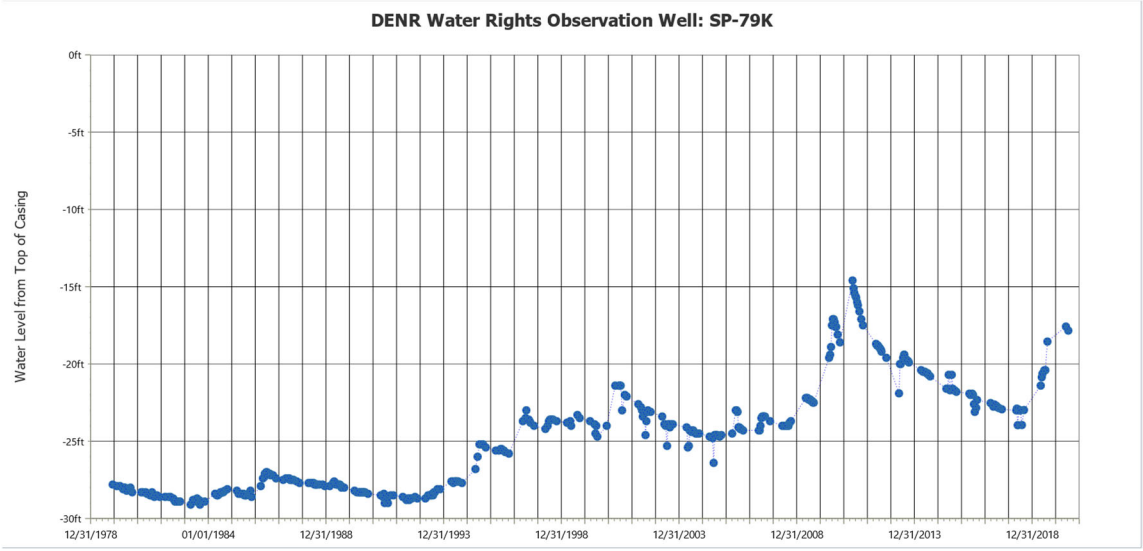

DENR Water Rights Observation Well: SP-79D
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018

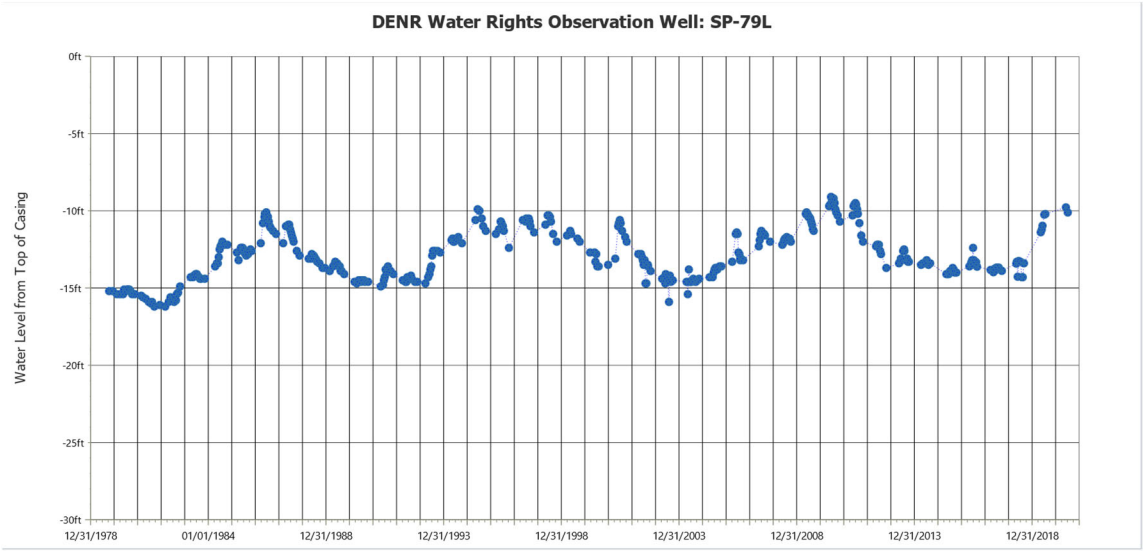

DENR Water Rights Observation Well: SP-79E
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018

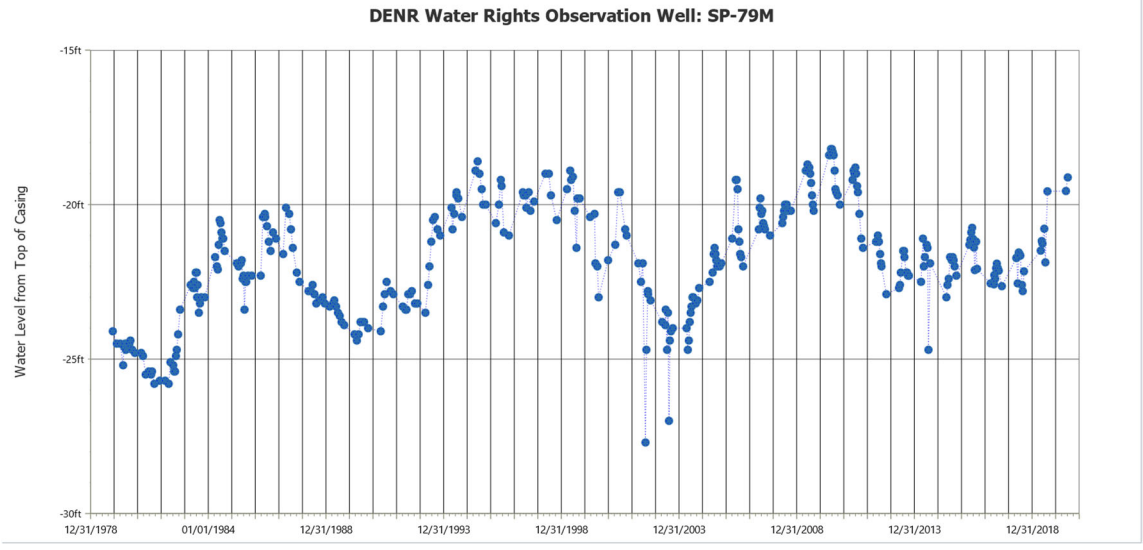

DENR Water Rights Observation Well: SP-79G
Water Level from Top of Casing
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018


DENR Water Rights Observation Well: SP-79H
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018


DENR Water Rights Observation Well: SP-79I
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018


DENR Water Rights Observation Well: SP-79K
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018


DENR Water Rights Observation Well: SP-79L
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018


DENR Water Rights Observation Well: SP-79M
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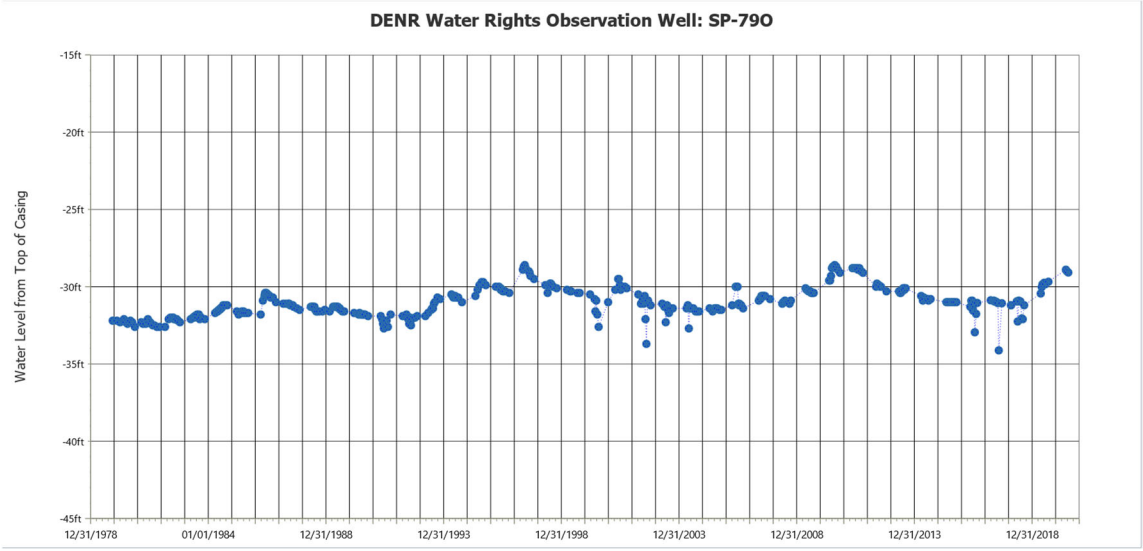
-15ft
-20ft
-25ft
-30ft
12/31/1978
01/01/1984
12/31/1988
12/31/1993
12/31/1998
12/31/2003
12/31/2008
12/31/2013
12/31/2018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Water Level from Top of Casing
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-25ft
-30ft
-35ft
-40ft
-45ft
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01/01/1984
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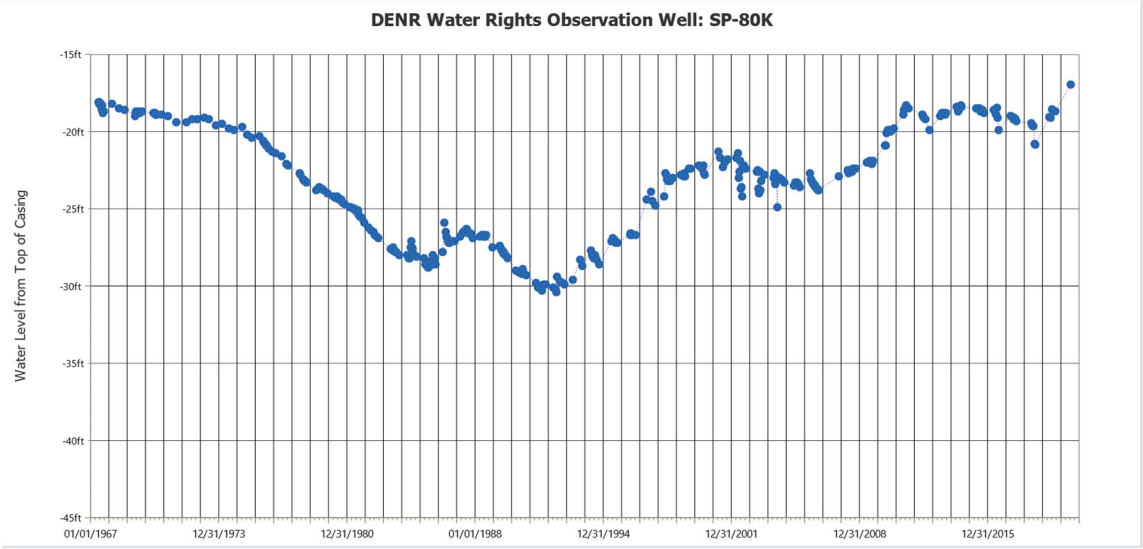
12/31/2008
12/31/2013
12/31/2018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Water Level from Top of Casing
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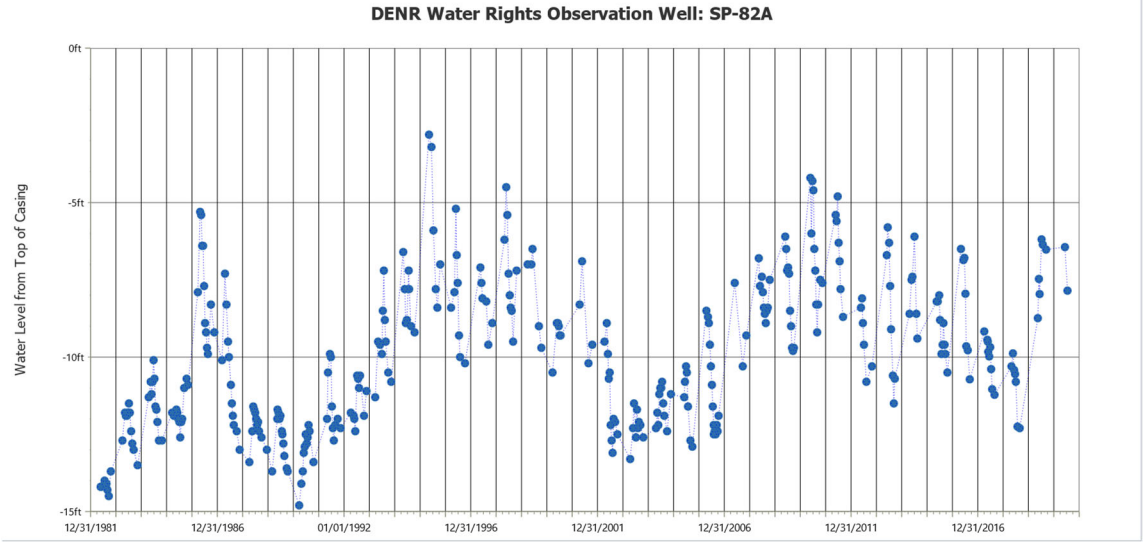
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
01/01/1967
12/31/1973
12/31/1980
01/01/1988
12/31/1994
12/31/2001
12/31/2008
12/31/2015


DENR Water Rights Observation Well: SP-82A
Water Level from Top of Casing
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-10ft
-15ft
12/31/1981
12/31/1986
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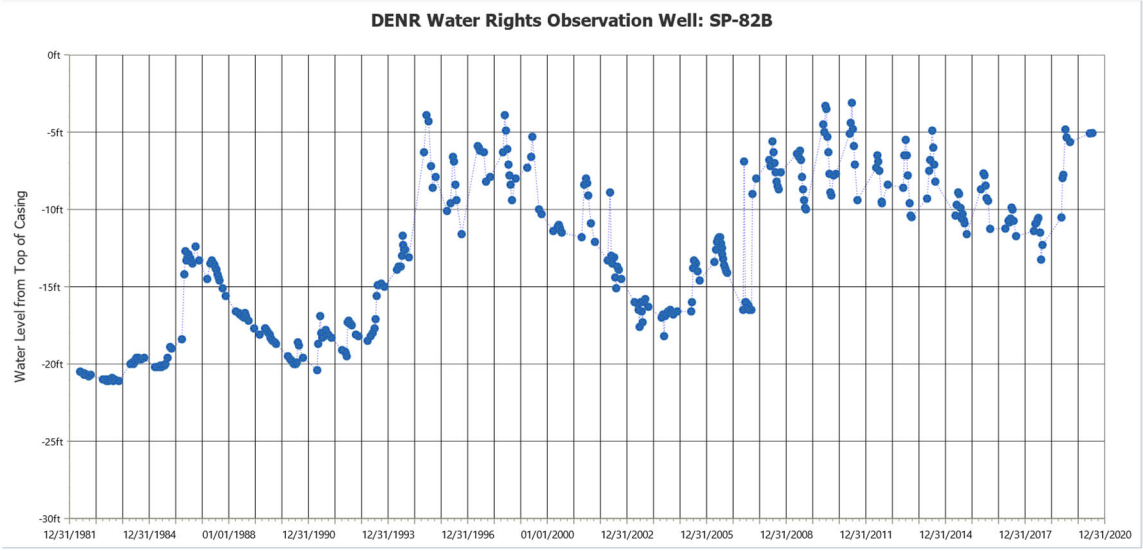
12/31/2011
12/31/2016


DENR Water Rights Observation Well: SP-82B
Water Level from Top of Casing
0ft
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-10ft
-15ft
-20ft
-25ft
-30ft
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12/31/1984
01/01/1988
12/31/1990
12/31/1993
12/31/1996
01/01/2000
12/31/2002
12/31/2005
12/31/2008
12/31/2011
12/31/2014
12/31/2017
12/31/2020

AFFIDAVIT OF PUBLICATION

RECEIVED

SEP 11 2020

WATER RIGHTS PROGRAM

STATE OF SOUTH DAKOTA} §

COUNTY OF BROWN}

Mary Vance being duly sworn, on his/her oath says: That the AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, by the Aberdeen News Company, a corporation, and has been such a newspaper during the times hereinafter mentioned; That affiant is an employee and principal clerk of said publisher and has personal knowledge of all facts stated in this affidavit; That the advertisement headed:

Legal #880256

Notice of Hearing

a printed copy of which is hereunto attached, was printed and published in the regular and entire issue of said newspaper, and not in a supplement thereof, once each Day for 1 successive Day.

The first publication being made on the 9th day of Sept, 2020.
The second publication being made on the _____ day of _____, 2020.
The third publication being made on the _____ day of _____, 2020.
The fourth publication being made on the _____ day of _____, 2020.
The fifth publication being made on the _____ day of _____, 2020.
The sixth publication being made on the _____ day of _____,2020;

That said newspaper is a legal newspaper published five days or more each week; with a bona fide circulation of more than two hundred copies daily; published in the English language within the said county of Brown for more than one year prior to the first publication of said notice; and printed in whole in an office maintained at the place of publication of said newspaper; That the whole amount of the fee paid for the publication of the annexed notice is $ 47.40, which insures solely to the benefit of said publisher; That no agreement or understanding for a division thereof had been made with any other person; and That no part thereof has been agreed to be paid to any person whomsoever.

Mary Vance

Subscribed and sworn to before me this 9th day of Sept, 2020.

Daily Circulation 8000

Notary Public, Brown County, SD.

SEAL

My commission expires March 20, 2025

LORI M. SALFRANK NOTARY PUBLIC STATE OF SOUTH DAKOTA Seal

(No. 880256)
(September 9, 2020 - 1T)

Notice of Hearing Regarding Five-Year Review to Determine the Availability of Unappropriated Water in the Tulare Western Spink Hitchcock Aquifer

The Water Management Board (Board) previously determined that the average annual withdrawal of water from the Tulare Western Spink Hitchcock aquifer is equal to the average estimated annual recharge and deemed the aquifer fully appropriated. A map showing the approximate boundary of the aquifer; a copy of a public notice; and a report prepared for the Board to review will be available for public viewing on September 17, 2020, at https://denr.sd.gov/ap.

Pursuant to statute, the Board held a hearing for the purpose of accepting applications for potential future appropriations from the aquifer and a creation of a priority list. That hearing was held on May 7, 2015. Twenty-eight applications were prioritized by the Board and are being held for possible future action.

Pursuant to SDCL 46-2A-7.5, the Board is required to hold a public hearing reviewing the groundwater source, all permits appropriating water from that source, and all held applications at least once every five years to determine whether unappropriated water has become available for use. The five-year review is scheduled for 10:30 AM (Central Time), on Wednesday, October 7, 2020, at the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD. The Board is authorized to 1) determine that additional water is available for appropriation, 2) determine that no additional water is available for appropriation, or 3) defer action for further study. The hearing time is an estimate and may be delayed due to prior items on the agenda. Pursuant to SDCL 46-2-9, 46-2-11, and 46-2A-7.5, the Board has legal authority and jurisdiction to conduct this hearing.

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

Questions regarding the hearing may be directed to Ron Duvall, Water Rights Program at (605) 773-3352 or ron.duvall@state.sd.us.

Published once at the approximate total cost of $47.40.

RECEIVED

SEP 18 2020

WATER RIGHTS PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA,
County of Spink: ss.

I, *Stacy Carroll*, being duly sworn on oath, say that THE REDFIELD PRESS is a weekly newspaper as defined in Sec. 65.0508 South Dakota Code 1939, as amended by Chapter 298 of the Session of Laws of 1939, printed and published in the English language in the City of Redfield, in said County and State, by THE REDFIELD PRESS. I, *Stacy Carroll*, am Legal Advertising Coordinator of said newspaper and know the facts herein state. The annexed notice headed:

#3878 NOTICE OF HEARING

was printed and published in said newspaper in 1 issue, to wit: The first publication being made on SEPTEMBER 9th 2020. That the full amount of the fee charged for publishing TWENTY-TWO and 20./100 Dollars, insures to the benefit of the publisher of THE REDFIELD PRESS, that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever.

Stacy Carroll

Subscribed and sworn to before me this 9th day of SEPTEMBER 2020

Kayla Understock

Notary Public, South Dakota

KAYLA UNDERSTOCK
SEAL NOTARY PUBLIC SEAL
SOUTH DAKOTA

My commission expires 09/26/2024

Notice of Hearing

#3878

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Published one time at the total approximate cost of $22.20. (Sept. 9)

RECEIVED
SEP 2 2 2020
WATER RIGHTS
PROGRAM

Proof Of Publication

Huron Plainsman
49 3rd Street SE
Huron, SD 57350
605-353-7402

Legal Notice Number: 0448

I, McKendzie Castillo, being duly sworn on oath say that the Plainsman is a daily paper published at Huron, Beadle County South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-tow consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am a Legal Advertising Coordinator of said newspaper and know that facts herein state. The annexed notice headed: SD ENVIRONMENTAL & NATURAL- NOTICE OF HEARING - HITCHCOCK AQUIFER, was published for one day, in said newspaper and not in any supplement of the said newspaper, the publication was on 9/9/20. That the full amount of the fee charged for the publishing $ 27.09 insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whom so ever.

McKendzie Castillo

Subscribed and sworn to me before this date 9/22/20.

Notary Public, South Dakota

My Term Expires 03/11/2022

F. P. 09-09-20

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Questions regarding the hearing may be directed to Ron Duvall, Water Rights Program at (605) 773-3352 or ron.duvall@state.sd.us.

No. 0448 (adv.)

Published one time at the total approximate cost of $27.09.

AFFIDAVIT OF PUBLICATION
The Miller Press

STATE OF SOUTH DAKOTA)
)SS
County of Hand)

Michael G. Caviness of said county being first duly sworn, on oath, says that he is the publisher of *The Miller Press*, a weekly newspaper published in Miller, said County of Hand by Hand County Publishing Co., Inc. and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has been published within said County for fifty weeks next prior to the publication of the notice, herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Tulare Western Spink Hitchcock Aquifer report to be reviewed

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 1 successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

9/5 20 20; _____ 20___

_____ 20___; _____ 20___

_____ 20___; _____ 20___

that the full amount of the fees for the publication of the annexed notice is

$ 24.67

Michael G. Caviness, Publisher

Subscribed and sworn to before me this 21st day of Sept, 2020

Janet L. Kittelson, Notary Public
My Commission expires: 7-25-26

RECEIVED
SEP 2 3 2020
WATER RIGHTS PROGRAM

Tulare Western Spink Hitchcock Aquifer report to be reviewed

Notice of Hearing Regarding Five-Year Review to Determine the Availability of Unappropriated Water in the Tulare Western Spink Hitchcock Aquifer

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Questions regarding the hearing may be directed to Ron Duvall, Water Rights Program at (605) 773-3352 or ron.duvall@state.sd.us. Published Sept. 5, 2020 at approximate cost of $24.67

First Report on the Five Year Review of Water Availability
Western Spink Hitchcock Management Unit of the Tulare Aquifer
September 17, 2020

The Water Management Board deemed the Western Spink Hitchcock management unit of the Tulare aquifer as fully appropriated in 2013. In 2014, the South Dakota Legislature provided a process for administering fully appropriated aquifers by placing into law SDCL 46-2A-7 through 46-2A-7.7. These laws provide a process to 1.) notice a determination that a groundwater source is fully appropriated; 2.) accept and hold applications for future consideration; 3.) create a priority list for future appropriations if unappropriated water becomes available; and 4.) conduct a review at least once every five years to determine whether unappropriated water is available. At the time of this report, there are 28 applications to appropriate water on hold for this aquifer management unit and they total 72.79 cubic feet per second (cfs) for the irrigation of 5,374 acres. This report is an assessment of the availability of unappropriated water in the Western Spink Hitchcock management unit of the Tulare aquifer to satisfy the five-year review requirements for fully appropriated aquifers.

AQUIFER: Western Spink Hitchcock management unit of the Tulare aquifer (T:WSH)

HYDROGEOLOGY

The Tulare aquifer is a Quaternary aged system of interconnected sand and gravel layers that were deposited as outwash by meltwater from receding glaciers (Howells and Stephens, 1968). The Western Spink Hitchcock management unit of the Tulare aquifer is a buried aquifer generally lying immediately above the bedrock (basal) (Hedges et al., 1982). The glacial deposits that created the Tulare aquifer were deposited on top of an existing erosional surface that had exposed the Cretaceous aged Pierre Shale, Niobrara Formation, and in the buried deeply incised bedrock valleys, the Codell Sandstone member of the Carlisle Shale (Howells and Stephens, 1968). The areal extent of the Western Spink Hitchcock management unit has undergone several revisions and they are described in detail by Buhler (Buhler, 2012a). The current areal extent has been delineated as covering an area of 263,016 acres (Buhler, 2012a). Buhler (2013) later notes that this areal extent may have been optimistic. This review did not investigate revising the boundaries of the Tulare: Western Spink Hitchcock management unit, however, there have been over 100 additional test holes or wells drilled within the boundaries of the management unit since 2012 (Water Rights, 2020d).

Buhler's (2013) analysis determined that approximately 76,978 acres of the Tulare: Western Spink Hitchcock aquifer were under unconfined conditions in October 2012, and showed that at that time, the majority of the Tulare: Western Spink Hitchcock aquifer was under confined conditions. The static water level in the Tulare: Western Spink Hitchcock aquifer has ranged from 63 feet below ground surface to rising above ground surface (Water Rights, 2020b). The direction of groundwater flow in the Tulare: Western Spink Hitchcock management unit is generally from the west to the east, towards the James River.

South Dakota Codified Law 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant's proposed

use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest.

WATER AVAILABILITY

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "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."

The availability of unappropriated water from the Tulare: Western Spink Hitchcock aquifer was last evaluated in 2013 and was based upon observation well data and through consideration of a hydrologic budget for the aquifer (Buhler, 2013). This report will reevaluate the availability of unappropriated water from the Tulare: Western Spink Hitchcock aquifer based upon additional years of observation well data and the development of a hydrologic budget for the aquifer.

Observation Well Data

In determining the availability of unappropriated water, South Dakota Administrative Rule 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer. The analysis of observation well data provides a means of assessing the aquifer and provides the best reasonably available information to evaluate the balance between withdrawals from and recharge to the Tulare: Western Spink Hitchcock aquifer.

The Water Rights Program monitors 50 observation wells completed in the Tulare: Western Spink Hitchcock aquifer (Water Rights, 2020b). Hydrographs for five of these observation wells are shown in Figures 2-6 and hydrographs for all 50 are included in Appendix B. The five selected hydrographs are representative of the Tulare: Western Spink Hitchcock aquifer and show that the aquifer readily responds to climatic conditions, with rising water levels during wet years and declining water levels during dry years.

The response of the aquifer as recorded by the observation well measurements can provide insight into the balance of withdrawals to recharge for an aquifer. If discharge (natural and from well withdrawals) from an aquifer is exceeding the recharge to an aquifer, a steady, continual decline of the water level or artesian pressure is expected. In observation wells that show the influence of well withdrawals, a seasonal decline should be observed followed by a return to the pre-pumping water level. If the withdrawals across the entirety of the aquifer are unevenly distributed, the configuration of the potentiometric surface may change to show the effect of these withdrawals. The effects of climate can mask some of these signals for how the aquifer responds to pumping.

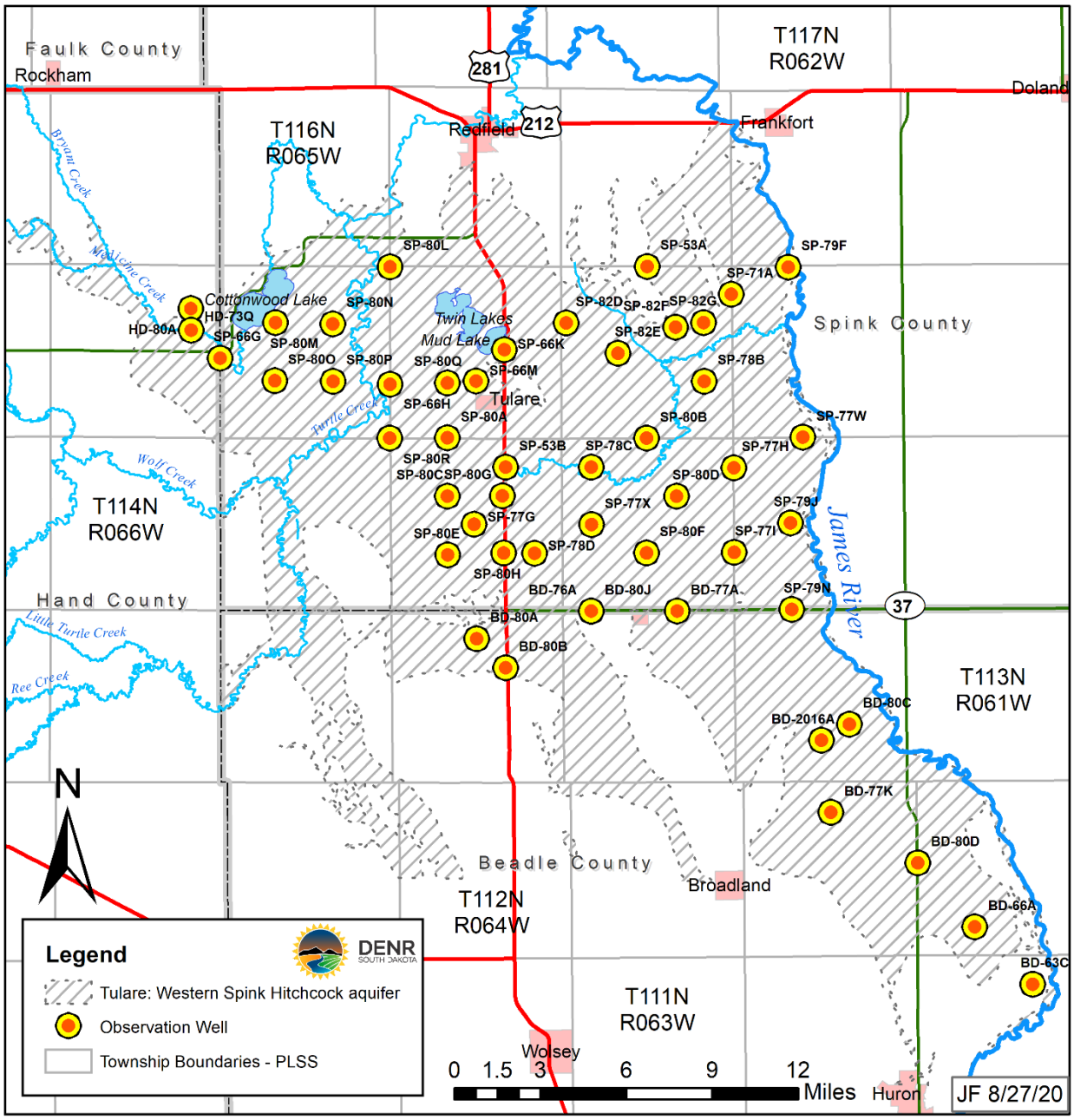

Figure 1. Map of the Western Spink Hitchcock management unit of the Tulare Aquifer showing the location of observation wells in the Tulare: Western Spink Hitchcock aquifer (Modified from Buhler, 2012a; Water Rights, 2020b)

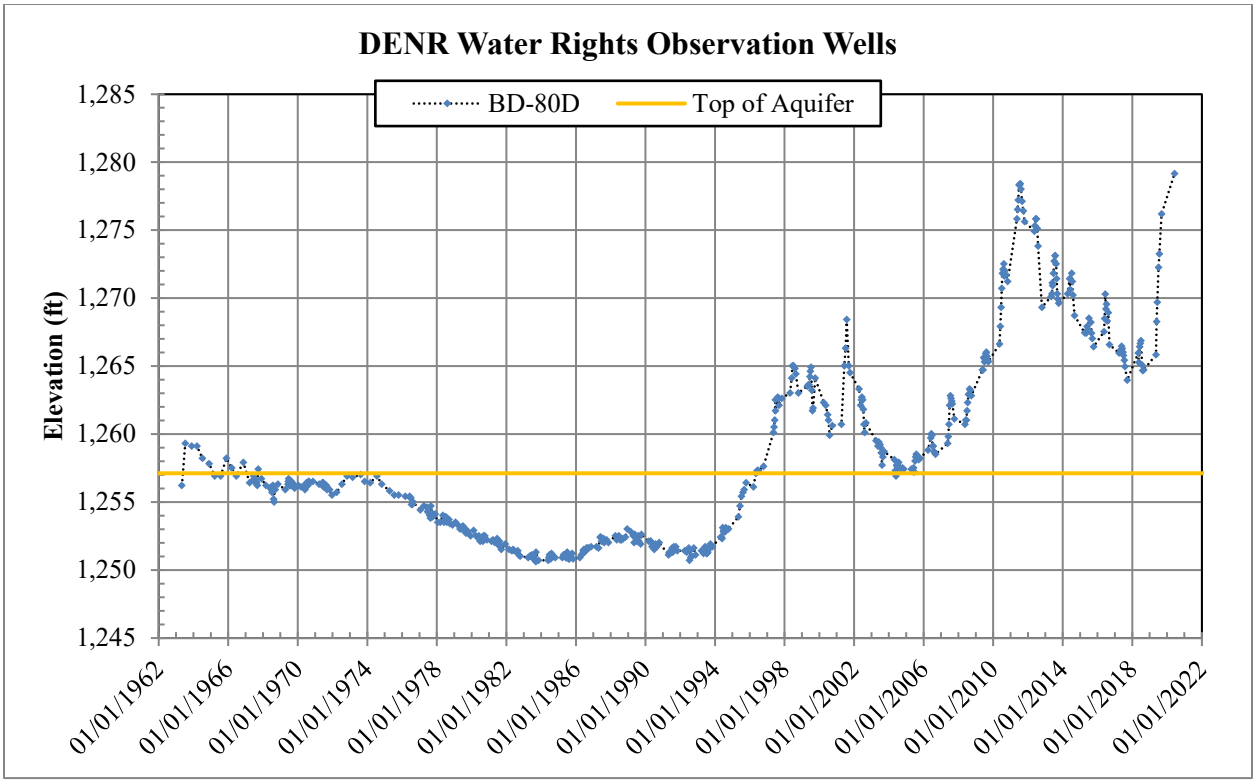

Figure 2. Hydrograph of DENR-Water Rights' observation well BD-80D (see Figure 1 for location). Ground surface elevation is approximately 1292 ft.

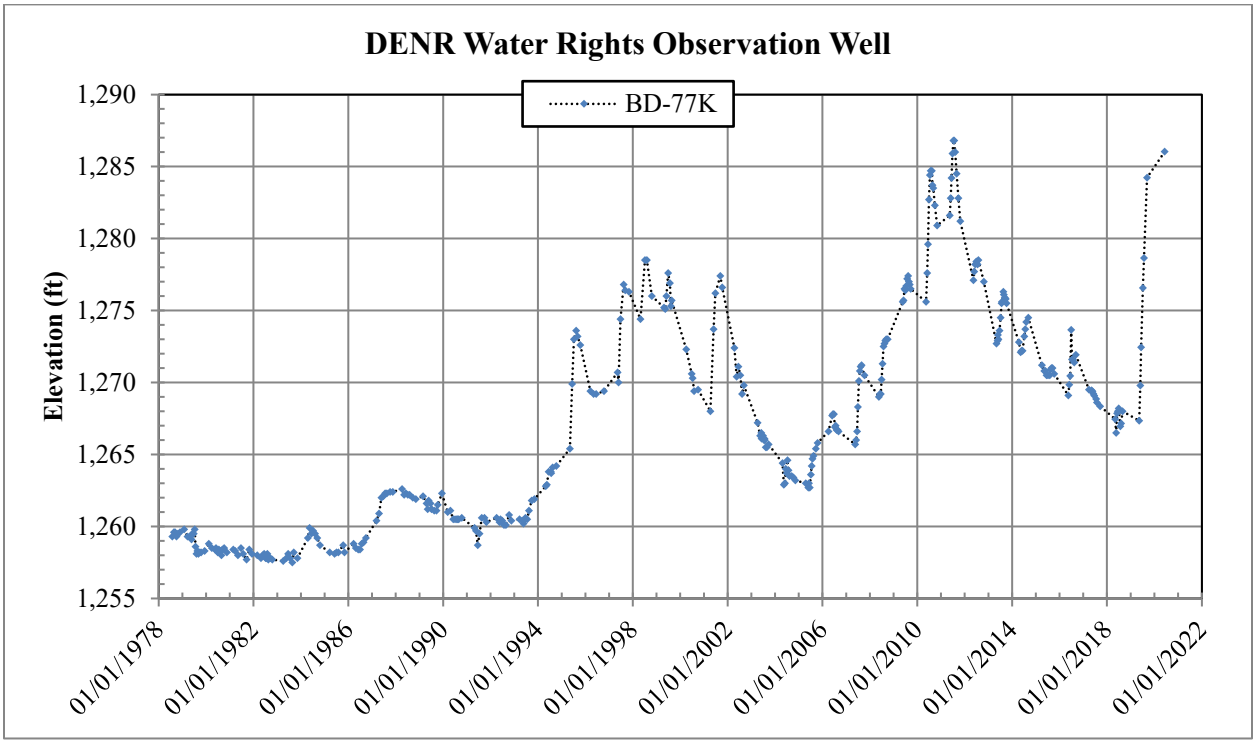

Figure 3. Hydrograph of DENR-Water Rights' observation well BD-77K (see Figure 1 for location). Top of aquifer elevation is approximately 1239 ft, ground surface elevation is approximately 1313 ft.

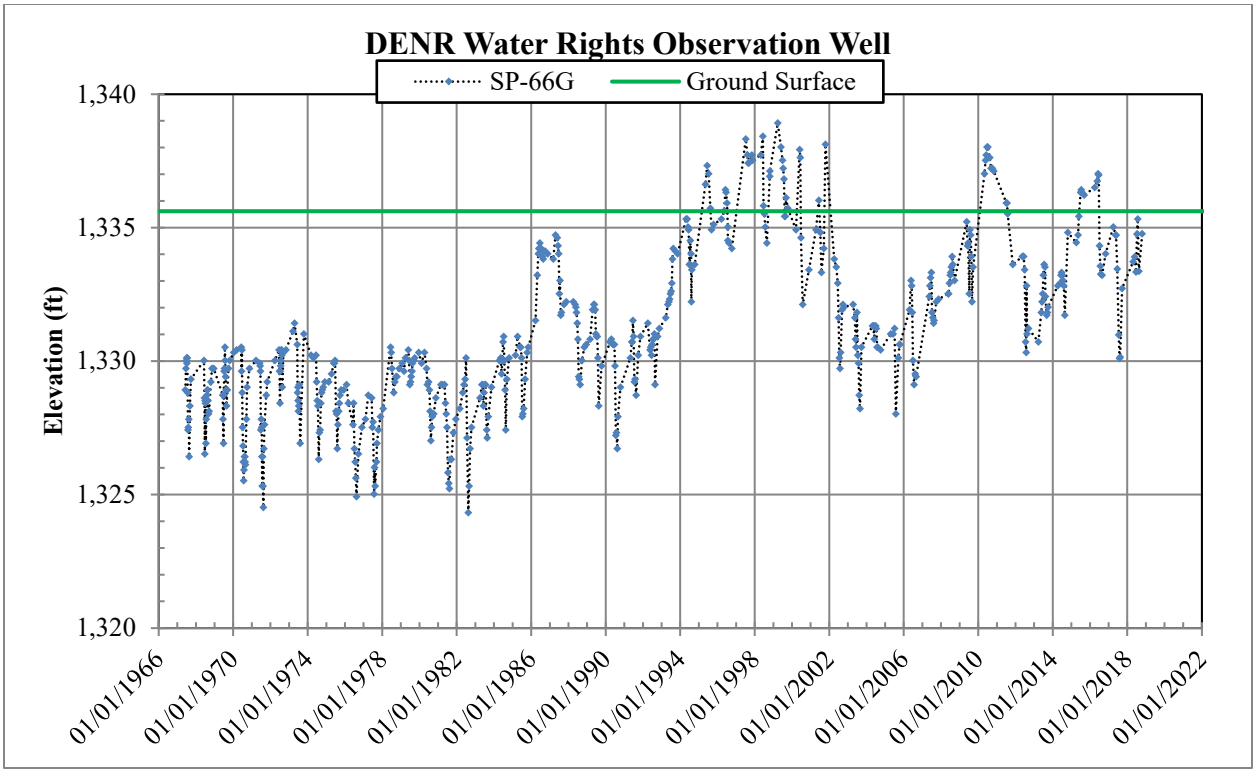

Figure 4. Hydrograph of DENR-Water Rights' observation well SP-66G (see Figure 1 for location). Top of aquifer elevation is approximately 1264 ft.

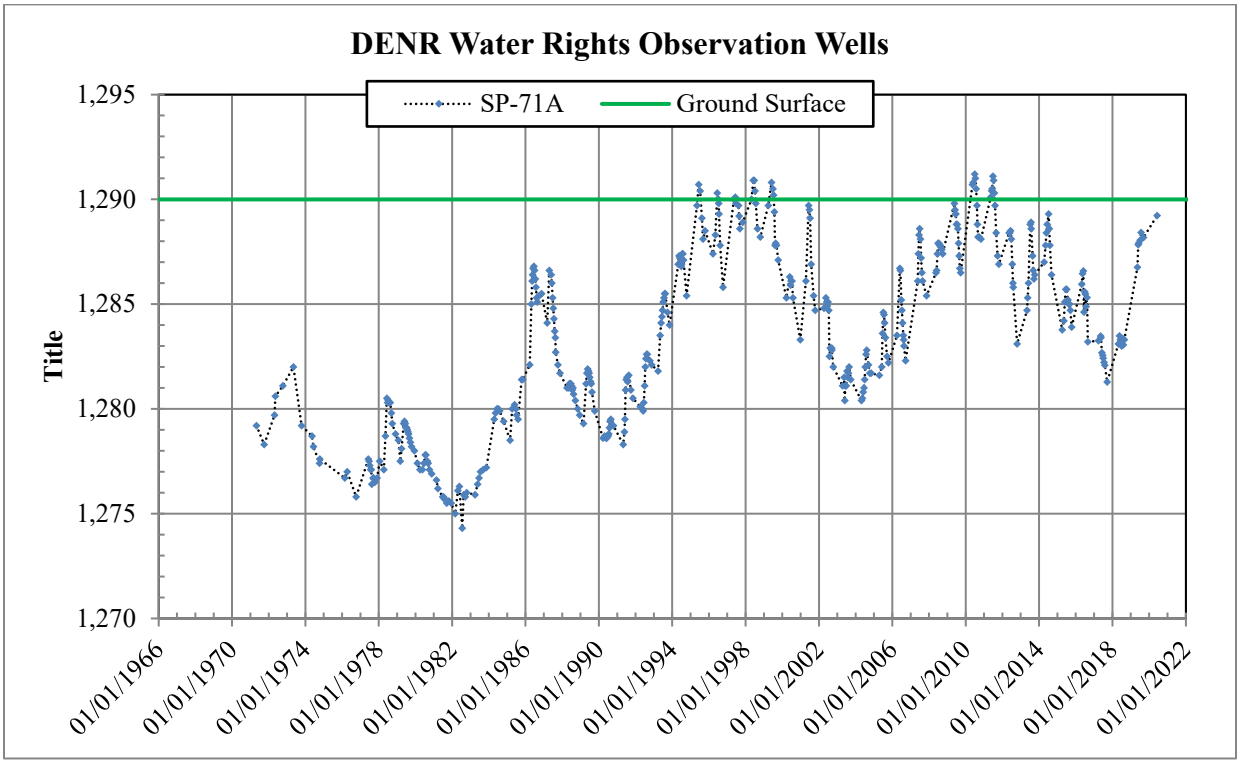

Figure 5. Hydrograph of DENR-Water Rights' observation well SP-71A (see Figure 1 for location). Top of aquifer elevation is approximately 1245 ft.

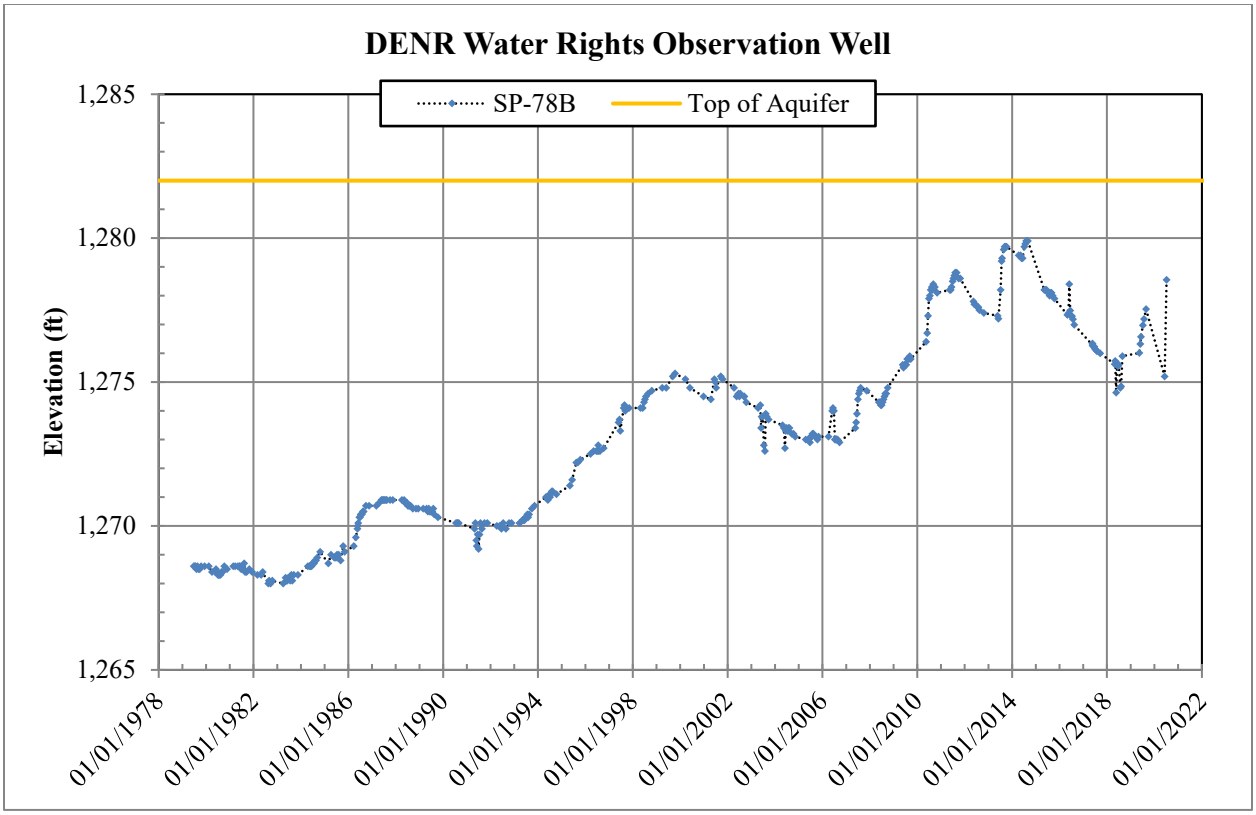

Figure 6. Hydrograph of DENR-Water Rights' observation well SP-78B (see Figure 1 for location). Ground surface elevation is approximately 1296 ft.

Observation well water level trends:
When the discharge (natural and from well withdrawals) exceeds the recharge of an aquifer, a declining water level is an indicator. Conversely, a rising water level in an aquifer is an indicator that the recharge is exceeding the discharge (natural and well withdrawals) of an aquifer. An equation for this relationship is:

$$\Delta S = R - D$$

Where: ΔS = change in the volume of water in storage in the aquifer
R= Recharge
D= Discharge

The observation well data for the Tulare: Western Spink Hitchcock aquifer has documented upward trending water levels throughout the aquifer (Water Rights, 2020b). The average slope of linear trend lines for the 48 observation well hydrographs from the initial measurement in 1983 up to the last measurement of 2019 has been +0.000571 feet per day (+0.209 feet per year). Observation well BD-80B was removed from this analysis due to the well having several periods of missing data and observation well BD-2016A was removed due to having a short period of record. Buhler's analysis (2013) refined the period of analysis to encompass January 2003 through October 2012 due to no additional appropriations being made over this time period. This time period did not account for the time it took for the appropriations approved in 2002 to place water to beneficial use. All permitted and licensed water rights had placed water to beneficial use starting with the 2008 irrigation season. Analysis of the observation wells over the January 2003 through October 2012 period found the average slope of the linear trend line for

the 48 observation well hydrographs to be +0.003607 feet per day (+1.317 feet per year). Including the time prior to Buhler's analysis, 1983 through October 2012, the average slope of the linear trend line for the 48 observation well hydrographs was found to be +0.000751 feet per day (+0.274 feet per year). In the time since Buhler's analysis up to the end of 2019 (November 2012 through 2019), the average slope of the linear trend line for the 48 observation well hydrographs has been -0.001187 feet per day (-0.433 feet per year). This type of analysis does not account for any errors introduced by including data from observation wells that are influenced by well withdrawals and the year to year variability of those withdrawals or an observation well changing between unconfined and confined behaviors. Observation wells that are under unconfined conditions show the change in storage within the aquifer, while observation wells that are under confined conditions show the change in hydrostatic pressure.

Over the period of record, the upward trend of the water levels indicates recharge to the Tulare: Western Spink Hitchcock aquifer has been greater than the total of the discharges from the aquifer. However, given the decrease in the average slope of the linear trend line since Buhler's analysis (November 2012-end of 2019), consideration of appropriations that have started placing water to beneficial use since November 2012, and the decrease in the long term average slope from the period of 1983 through October 2012 (+0.274 feet per year) to the period of 1983 through 2019 (+0.209 feet per year), the observation well water level trend is indicating that discharge may have exceeded the recharge of the aquifer over the November 2012 through 2019 time period.

Quantifying the change in volume of water stored in the Tulare: Western Spink Hitchcock aquifer is possible through analysis of observation wells that have remained unconfined throughout their period of record. The response of the aquifer when an observation well is under confined conditions is only reflective of the head pressure at that location and does not directly show changes in the volume of water in the aquifer. The hydrograph for observation well BD-80D as shown in Figure 2, visually shows how the observed water level changes between unconfined and confined conditions. The aquifer at observation well BD-80D was under unconfined conditions between 1966 and 1996, and then transitioned to confined conditions when the water level started rising above the top of the aquifer in 1997.

Continuing the methodology used by Buhler (2013), the same five observation wells were used to analyze the Tulare: Western Spink Hitchcock aquifer. These wells were chosen by Buhler because they are located in portions of the aquifer that remained unconfined for their entire period of record and the wells were determined to accurately reflect aquifer conditions. The time period used for this updated analysis was 1983-2019 to allow each observation well to have the same number of water years on record. The water year runs from October 1st through September 30th and the values used in this analysis are interpolated values for October 1st that were obtained using the two adjacent readings on the observation well hydrograph, unless a reading was recorded on October 1st. For example, the 1983 water year water level change is the interpolated Oct. 1, 1983 reading minus the interpolated Oct. 1, 1982 reading. The results of the analysis are shown in Table 1.

Buhler (2012a) analyzed the average annual water level change from 1983-2011. Buhler's (2012a) analysis showed an increase in average annual water level of 0.34 feet per year. However, Buhler's 2012 analysis and his subsequent 2013 analysis omitted the last month for

water year 2011 by only factoring in observation well readings from October 2010 through August 2011. The following water year, water year 2012, was calculated correctly from October 1, 2011 to October 1, 2012. The consequence of omitting September 2011 in these calculations is that there are unaccounted for drops in the observation well hydrographs of 3.5 feet for SP-79F, 0.2 ft for SP-78B, 1.2 ft for SP-80B, 1.1 ft for SP-82E, and 1.2 ft for SP-82G. Including September 2011 in the calculations for the annual water level change for 2011 reduces the average annual water level change in Buhler's 2012 analysis from 0.34 feet per year to 0.30 feet per year and for Buhler's 2013 analysis from 0.3152 feet per year to 0.21 feet per year. Buhler's 2013 analysis determined that by using the 0.3152 feet per year of average annual water level change over an unconfined area of 76,978 acres, the recharge exceeded the discharge by an average of 3,640 acre-feet per year. The availability of 3,640 acre-feet per year of unappropriated water applied at an application rate of 9.32 inches would allow the irrigation of 4,686 acres (Buhler, 2013). The Water Management Board approved permits authorizing the irrigation of 4,706 acres. If water year 2011 had included the observation well readings of September 2011, the amount of unappropriated water available would have been reduced by 1,215 acre-feet per year, to 2,425 acre-feet per year. This volume of unappropriated water would have only allowed the irrigation of an additional 3,122 acres, a reduction of 1,564 acres from Buhler's analysis (Buhler, 2013).

In the time since Buhler's report (2013), the average annual water level change has been an increase of 0.47 feet per year (2013-2019), resulting in the long-term average annual water level change being raised from +0.22 feet per year (1983-2012) to + 0.27 feet per year from 1983 to 2019. Given the short period of time since the last appropriations were approved in 2013, anomalously wet or dry years can skew the analysis of short time periods. One such anomalous year is the wet year of 2019, as evidenced in Table 2 by having the smallest amount of reported irrigation, the fewest irrigated acres, and the lowest application rate over the period of record. Excluding the anomalously wet year of 2019, the period of 2013-2018 saw a decrease of 0.02 feet per year, and the long-term period of 1983-2018 saw the average annual water level change lowered to +0.18 feet per year.

This method of estimating a volume of water is approximate as the unconfined area of the aquifer is not static and changes as the elevation of the water changes. This method also assumes that all variables relating to the use of the water are static and does not take into consideration any recent changes that would affect the use of water going into the future. Over the period of record, the observation well data indicates that the average annual recharge to the aquifer has exceeded the average annual discharge from the aquifer. This increase in annual water level change prior to Buhler's report was accounted for in Buhler's report (2013) and appropriations resulting from the report. In the time since Buhler's report and excluding the anomalously wet year of 2019 (2013-2018), the observation well data indicates that the average annual recharge to the aquifer has been nearly adequate to supply the average annual discharge from the aquifer with an average decline of 0.02 feet per year. This small decline, coupled with the time it took for approved appropriations to place their water to beneficial use (Table 5), suggests that additional data from future years is needed to determine if the appropriations made in 2013 from the Tulare: Western Spink Hitchcock aquifer brought the aquifer up to being fully appropriated. Based upon the existing data, the observation well analysis does not show that unappropriated water is available from the Tulare: Western Spink Hitchcock aquifer.

Table 1. Water Level change in feet by water year for select unconfined observation wells with averages calculated for specific time periods (Water Rights, 2020b)

Water Year	**SP-79F**	**SP-78B**	**SP-80B**	**SP-82E**	**SP-82G**	**Average**
1983	0.60	0.26	0.24	0.81	-0.42	0.30
1984	0.98	0.70	0.65	1.01	0.36	0.74
1985	0.73	0.13	0.31	0.10	-0.14	0.23
1986	1.76	1.57	2.14	4.80	1.94	2.44
1987	-2.96	0.20	0.41	-3.69	0.12	-1.18
1988	-0.63	-0.30	-0.41	-1.20	-0.74	-0.66
1989	0.25	-0.28	-0.18	-0.23	-0.33	-0.16
1990	0.40	-0.24	-0.42	0.53	-0.59	-0.06
1991	0.27	0.03	0.10	0.20	0.13	0.15
1992	0.38	-0.05	-0.08	1.62	0.13	0.40
1993	1.50	0.56	0.69	1.46	0.47	0.94
1994	-0.29	0.51	0.79	0.62	0.94	0.51
1995	1.40	1.14	1.76	1.31	3.44	1.81
1996	-1.56	0.42	0.84	-2.31	0.03	-0.52
1997	1.64	1.35	1.94	3.15	3.66	2.35
1998	1.14	0.62	0.80	-0.20	-0.15	0.44
1999	-2.06	0.60	0.45	-1.98	-1.34	-0.87
2000	-1.92	-0.64	-2.29	-1.82	-2.50	-1.84
2001	1.64	0.53	1.70	0.76	1.09	1.14
2002	-1.90	-0.76	-1.76	-1.85	-1.97	-1.65
2003	-0.40	-0.70	-1.14	-0.82	-0.90	-0.79
2004	0.68	-0.49	-0.75	0.50	-0.66	-0.15
2005	-0.14	-0.14	0.22	1.48	0.32	0.35
2006	0.13	-0.13	0.01	-1.25	0.45	-0.16
2007	1.69	1.83	2.26	2.85	2.07	2.14
2008	0.49	0.05	0.38	1.09	1.13	0.63
2009	0.35	1.03	0.99	-0.10	0.67	0.59
2010	0.90	2.46	1.67	0.48	1.42	1.38
2011	0.32	0.32	1.03	-0.69	-0.70	0.05
2012	-2.71	-1.17	-2.34	-1.75	-1.87	-1.97
2013	3.69	2.27	2.69	5.61	2.98	3.45
2014	-3.56	0.00	-1.41	-3.96	-1.35	-2.06
2015	-0.65	-1.75	-0.91	-0.01	-1.35	-0.93
2016	-0.40	-1.08	-0.51	-1.36	-0.80	-0.83
2017	-0.17	-0.89	-1.25	-0.65	-0.87	-0.77
2018	1.65	-0.06	0.36	1.70	1.31	0.99
2019	2.59	1.32	4.90	3.74	4.72	3.45
Average from 1983-2019, period of record	*0.16*	*0.25*	*0.37*	*0.27*	*0.29*	*0.27*
Average from 1983-2011, time period of Buhler (2012a)	*0.19*	*0.36*	*0.43*	*0.23*	*0.27*	*0.30*
Average from 1983-2012	*0.09*	*0.31*	*0.33*	*0.16*	*0.20*	*0.22*
Average from 1983-2018	*0.09*	*0.22*	*0.25*	*0.17*	*0.17*	*0.18*
Average from 2003-2012, time period of Buhler (2013)	*0.13*	*0.30*	*0.23*	*0.18*	*0.19*	*0.21*
Average from 2003-2018, time period of Buhler (2013) through 2018	*0.12*	*0.10*	*0.08*	*0.19*	*0.12*	*0.12*
Average from 2003-2019	*0.26*	*0.17*	*0.36*	*0.40*	*0.39*	*0.32*
Average from 2012-2018, time period since Buhler (2012a)	*-0.31*	*-0.38*	*-0.48*	*-0.06*	*-0.28*	*-0.30*
Average from 2012-2019	*0.06*	*-0.17*	*0.19*	*0.42*	*0.35*	*0.17*
Average from 2013-2018, time period since Buhler (2013)	*0.09*	*-0.25*	*-0.17*	*0.22*	*-0.01*	*-0.02*
Average from 2013-2019	*0.45*	*-0.03*	*0.55*	*0.72*	*0.66*	*0.47*

Potentiometric Surface:

The potentiometric surface of an aquifer is a snapshot of the water level in the aquifer at a selected time. The potentiometric surface will show higher water levels as a result of wetter periods of time and lower water levels during drier times and/or increased periods of withdrawals. An analysis of the potentiometric surface does not provide a clear indication of whether there is unappropriated water available or how much may be available. The potentiometric surface data can show whether there are significant stressors on the aquifer, in other words, if the recharge is able to keep up with the withdrawals from the aquifer. These stressors would show up as a significant change in the general shape/configuration of the potentiometric surface. If there are areas of the aquifer that are showing signs of stress, it is an indicator that the aquifer is over-appropriated. The stressors may be caused by very significant increases in withdrawals in an area over a short period of time, or may be more subtle, such as a slight increase in the withdrawals that cumulatively over the course of 10, 15, 20 years exceed the recharge to the local area. The potentiometric surface of the aquifer would be able to show these stressors because the area that is being stressed is creating a steeper hill for the groundwater to flow down.

The potentiometric surface of the Tulare: Western Spink Hitchcock aquifer was estimated from observation well data for three time periods (Magstadt, 2020). These time periods are May 1988, May 2013, and June 2020. These dates were chosen for comparison of the configuration of the potentiometric surface with the potentiometric surfaces calculated by Buhler (2013). Maps showing the contour lines for these potentiometric surfaces are shown in Figures 6-8.

The potentiometric surface contours shown in Figure 6 show that water levels were generally lower in May 1988 than they were in May 2013. The potentiometric surface contours also show that the water levels were similar in May 2013 and June 2020. The potentiometric surface contour lines generally follow the same shapes for all three dates, indicating that the configuration of the potentiometric surface has not changed significantly over time. The configuration of the potentiometric surface of the aquifer over time is showing that the well withdrawals have not been affecting the general direction of groundwater flow, indicating that the aquifer has not been significantly stressed by withdrawals. The pre-development configuration of the potentiometric surface is unknown.

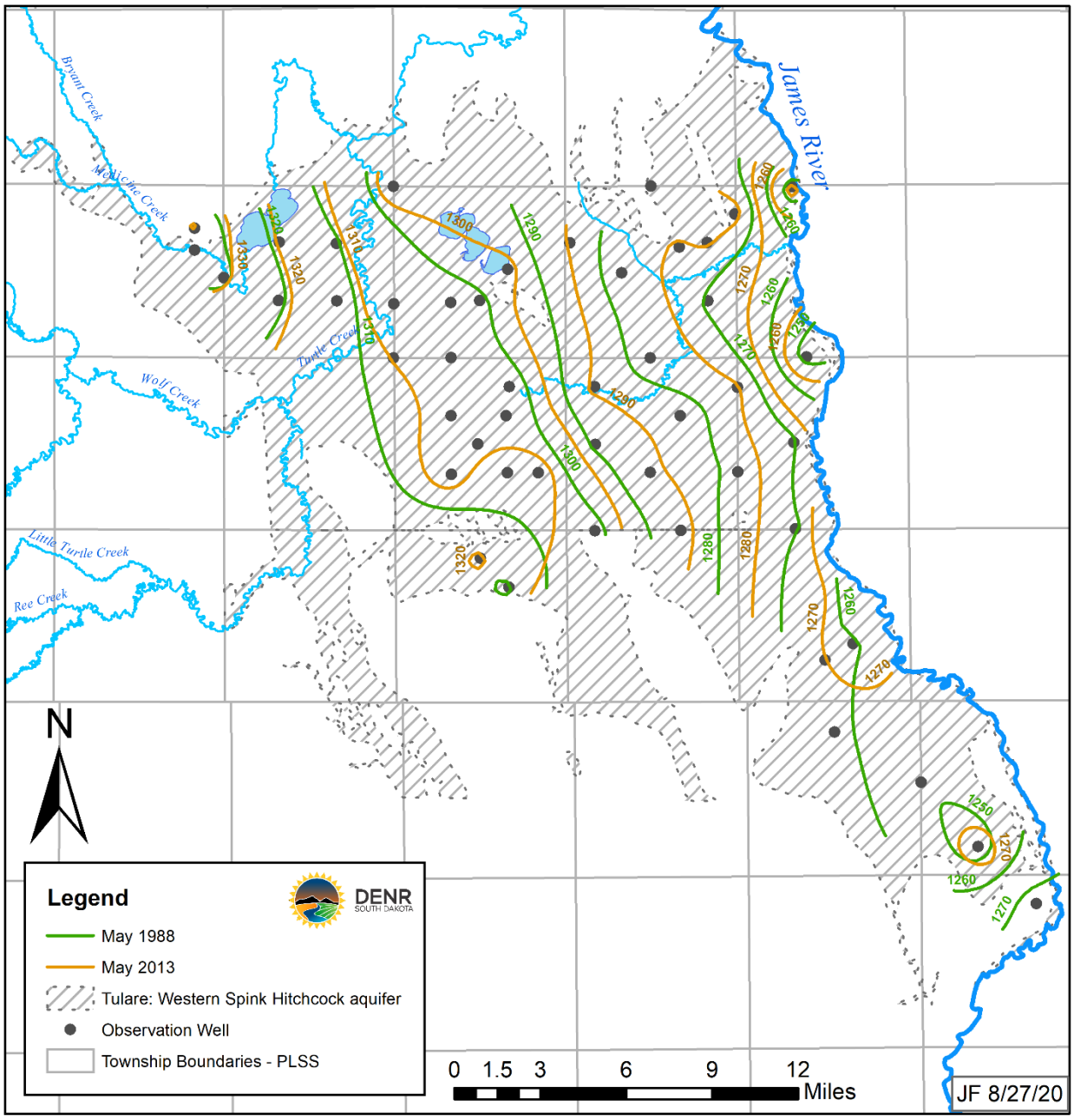

Figure 6. Potentiometric surface contours of the Tulare: Western Spink Hitchcock aquifer for May 1988 (Green) and May 2013 (Yellow)

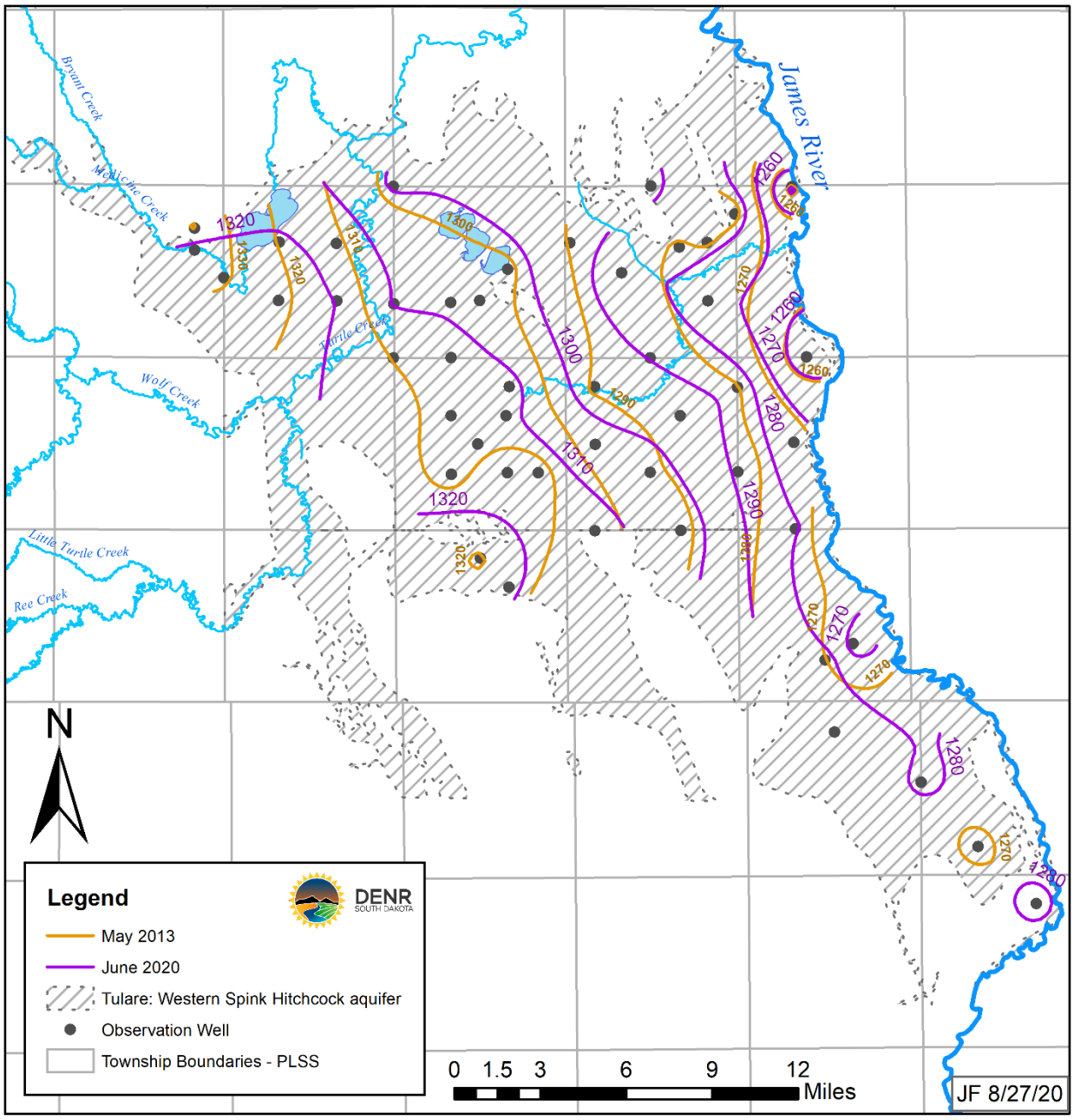

Figure 7. Potentiometric surface contours of the Tulare: Western Spink Hitchcock aquifer for May 2013 (Yellow) and June 2020 (Purple)

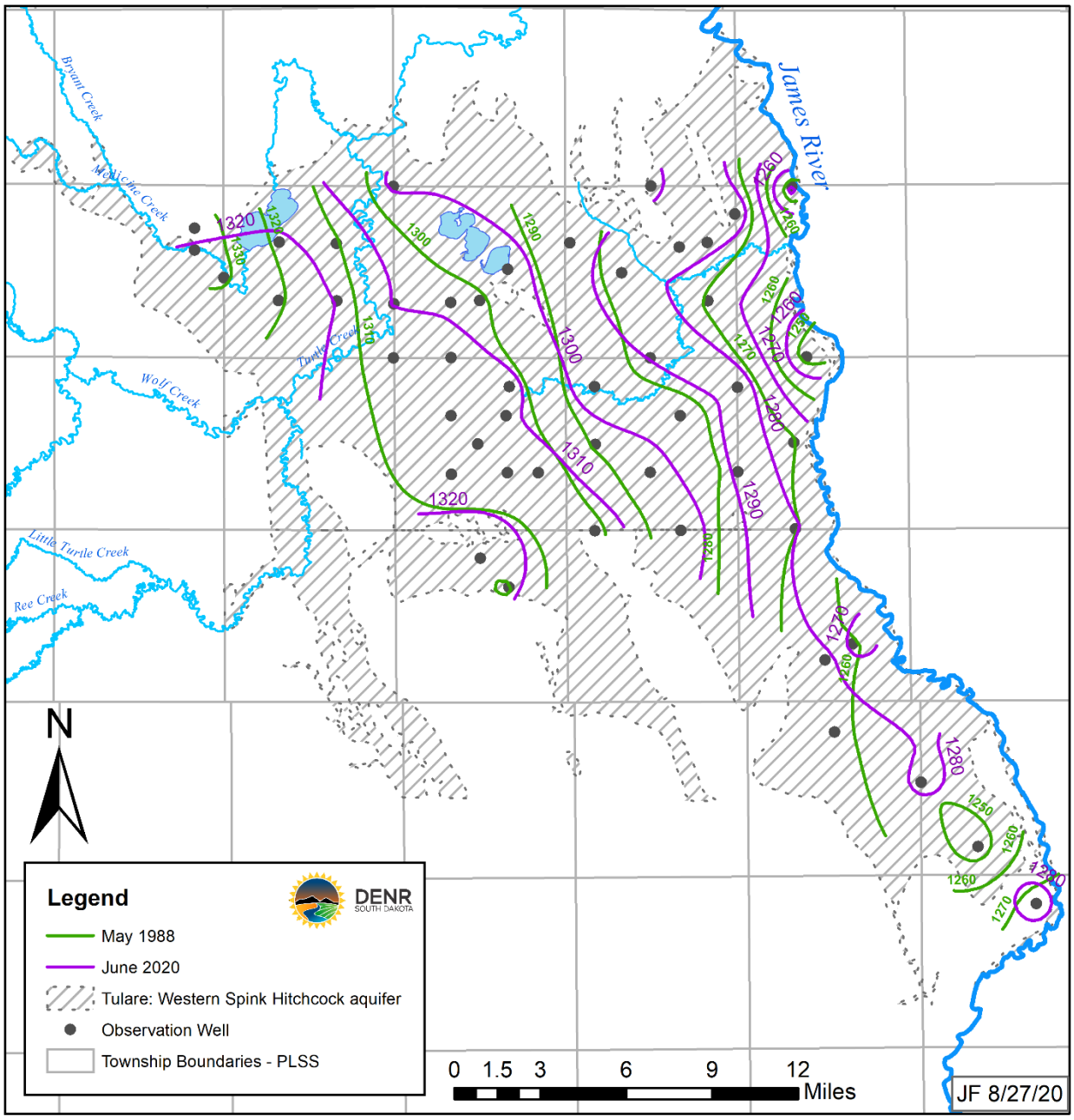

Figure 8. Potentiometric surface contours of the Tulare: Western Spink Hitchcock aquifer for May 1988 (Green) and June 2020 (Purple)

The observation well analysis provides a quantitative analysis based upon measured observations of the aquifer for the determination of the availability of unappropriated water. The annual water level change for the period of 2012-2018 shows that the water level has declined 0.02 feet per year on average. The increase in the annual water level change over the period of 1983-2011 was already accounted for in appropriations made in 2011 and 2012. The observation well analysis does not show that unappropriated water is available from the Tulare: Western Spink Hitchcock aquifer

Hydrologic Budget

Recharge

Recharge to the Tulare: Western Spink Hitchcock aquifer occurs primarily through infiltration of precipitation where the aquifer is at or near the surface. Recharge from precipitation varies by season, by year, and by location (Hamilton and Howells, 1996). Recharge could also occur from rivers and streams if they are hydraulically connected to the aquifer and if the potentiometric surface of the aquifer was lower than the stage of streams and rivers.

Recharge Estimates:

Previous Estimates:

Recharge to the Tulare: Western Spink Hitchcock has been estimated through a variety of methods. Prior to 2002 the Western Spink and Hitchcock management units were considered separately, and the recharge studies may account for one or both management units. Hedges et al. (1985) used data from 17 observation wells to determine the recharge rate to the unconfined portion of the Tulare: Hitchcock is 2.0 inches per year. A regional flow-net analysis of the Tulare: Hitchcock aquifer was also performed by Hedges et al. (1985) and found the estimated recharge rate to the aquifer was 0.24 inches per year. It is unknown what the confined and unconfined areas were for these analyses.

A numerical groundwater flow model (Kuiper, 1984) estimated that the average recharge rate to the Tulare: Western Spink Hitchcock is 0.83 inches per year. Applying the estimated average recharge rate of 0.83 inches across the 527 square miles (337,280 acres) of the model, results in an estimated average annual recharge rate of 23,000 acre-feet per year (Kuiper, 1984). This model used cells that measured 1 mile by 1 mile and compared the response of the aquifer in the model to observation well data from 1968 to 1978 and irrigation questionnaire data from 1978. Estimated recharge in the model was varied throughout the model domain, including 37 square miles around Twin and Mud lakes where the recharge to the aquifer was estimated as being higher than the rest of the model. The model domain did include Beadle, Hand, and Spink Counties and 13 square miles along the James River were included in both model areas A (Tulare: Western Spink Hitchcock) and B (Tulare: East James).

In previous Water Management Board decisions, the Water Management Board has relied upon the 0.83 inches of recharge per year from Kuiper's (1984) results. This recharge rate has been applied over the entirety of Tulare: Western Spink Hitchcock aquifer (263,016 acres), resulting in an estimated average annual recharge of 18,192 acre-feet per year (Buhler, 2012a). There are differences between the modeled area and the area currently delineated as the Tulare: Western Spink Hitchcock aquifer, it is unknown if the modeled recharge rate is reflective of the current area of the aquifer. The boundaries that were used in the development of the model are mostly

consistent with the currently accepted boundaries of the Tulare: Western Spink Hitchcock aquifer, however there are several areas where the model extends the aquifer boundaries to the north and south. The difference in area between Kuiper's model (1984) and Buhler's delineation (2012a) is approximately 74,264 acres (~116 square miles). Most of this extra area, the area not included in Buhler's (2012a) delineation, in Kuiper's model was estimated as having an average recharge rate of 0.8 inches per year, and approximately 1 square mile was estimated as having an average recharge rate of 1.2 inches per year. A simple subtraction of the extra cells from Kuiper's model does not affect the estimated average recharge rate of 0.83 inches per year. It is not clear if a reduction in the area of the model would have affected the estimated recharge rates that Kuiper found to be a best fit for the model area. As part of the modeling process, Kuiper was able to adjust the estimated recharge rate for each cell in order to best fit the model output to the observed water levels in the observation wells that data was available for. As each cell in the model had several input values, changing the extent of the model and adding or removing cells would result in the adjustment of values in other cells to best fit the model output to the observed water elevation data. To account for a change in the model extent, it is unknown if the estimated average recharge rate would increase, stay the same, or decrease.

Buhler (2013) performed a simple regional flow net analysis. This analysis was used to confirm the reasonableness of the average annual recharge estimate from Kuiper (1984). This simple regional flow net analysis is only applicable to the year 2012 and does not provide an estimated average annual recharge rate. The simple regional flow net analysis estimated the recharge rate for 2012 was 0.39 inches per year and showed that Kuiper's average annual recharge estimate was reasonable (Buhler, 2013).

Given the uncertainty involved with applying Kuiper's estimated average annual recharge to the current extent of the Tulare: Western Spink Hitchcock aquifer, it is difficult to determine the estimated average annual recharge to aquifer. The 18,192 acre-feet of recharge per year as calculated by Buhler (2012a) is the best information reasonably available for quantifying the estimated average annual recharge to the Tulare: Western Spink Hitchcock aquifer.

Discharge

Discharge from the Tulare: Western Spink Hitchcock aquifer occurs through well withdrawals, evapotranspiration from areas where the aquifer is near the land surface, outflow to the James River, and possible outflow to other surface waters.

Domestic water use:

There are currently 216 domestic water supply wells on file with the DENR-Water Rights Program that appear to be completed into the Tulare: Western Spink Hitchcock aquifer (Water Rights, 2020d). The volume of water used by domestic wells has not been estimated previously for this management unit, however the use can be estimated using the average rural use for the rural water system in the area as done for the Tulare: East James aquifer (Buhler, 2012b). The 2012 estimated domestic use was 7,000 gallons per tap per month, which equates to an estimated average annual use from domestic wells of 56 acre-feet per year. The actual quantity of water these domestic wells withdraw is unknown; this is the best available and reasonable estimate of domestic water use from the Tulare: Western Spink Hitchcock aquifer.

Appropriative water use:

As of June 17, 2020, there is a total of 159 Licensed or Permitted Water Rights appropriating water from the Tulare: Western Spink Hitchcock aquifer (Water Rights, 2020c). The appropriative water use from the Tulare: Western Spink Hitchcock aquifer is entirely for the irrigation of crops, except for two water rights for commercial use. The total diversion rate for the two commercial use water rights is 0.134 cubic feet per second (60 gallons per minute). If these two water rights were to pump 60% of the year at their maximum diversion rate, they would withdraw 58.1 acre-feet from the aquifer. The estimate of 60% pumping time is commonly used by the Water Rights Program and has been previously accepted by the Water Management Board (Water Rights, 2020c). The remaining 157 water rights are for irrigation. Figure 9 shows how the number of acres authorized for irrigation at the start of each irrigation season (April 1) has changed from 1979 to 2020 and the reported irrigation data for 1979 and 1983 through 2019. The irrigation questionnaires from 1980 through 1982 could not be located, so those years were not included in any calculations. Authorized acres are the acres approved to be irrigated under an existing water right, and the status of the water right could be permitted or licensed. Irrigated acres are the acres indicated as irrigated on the irrigation questionnaire by the irrigator. The annual irrigation summaries have the reported use for the 1980-1982 time period, however the number of acres that were irrigated are not included on the summaries, and it is impossible to investigate any anomalous data.

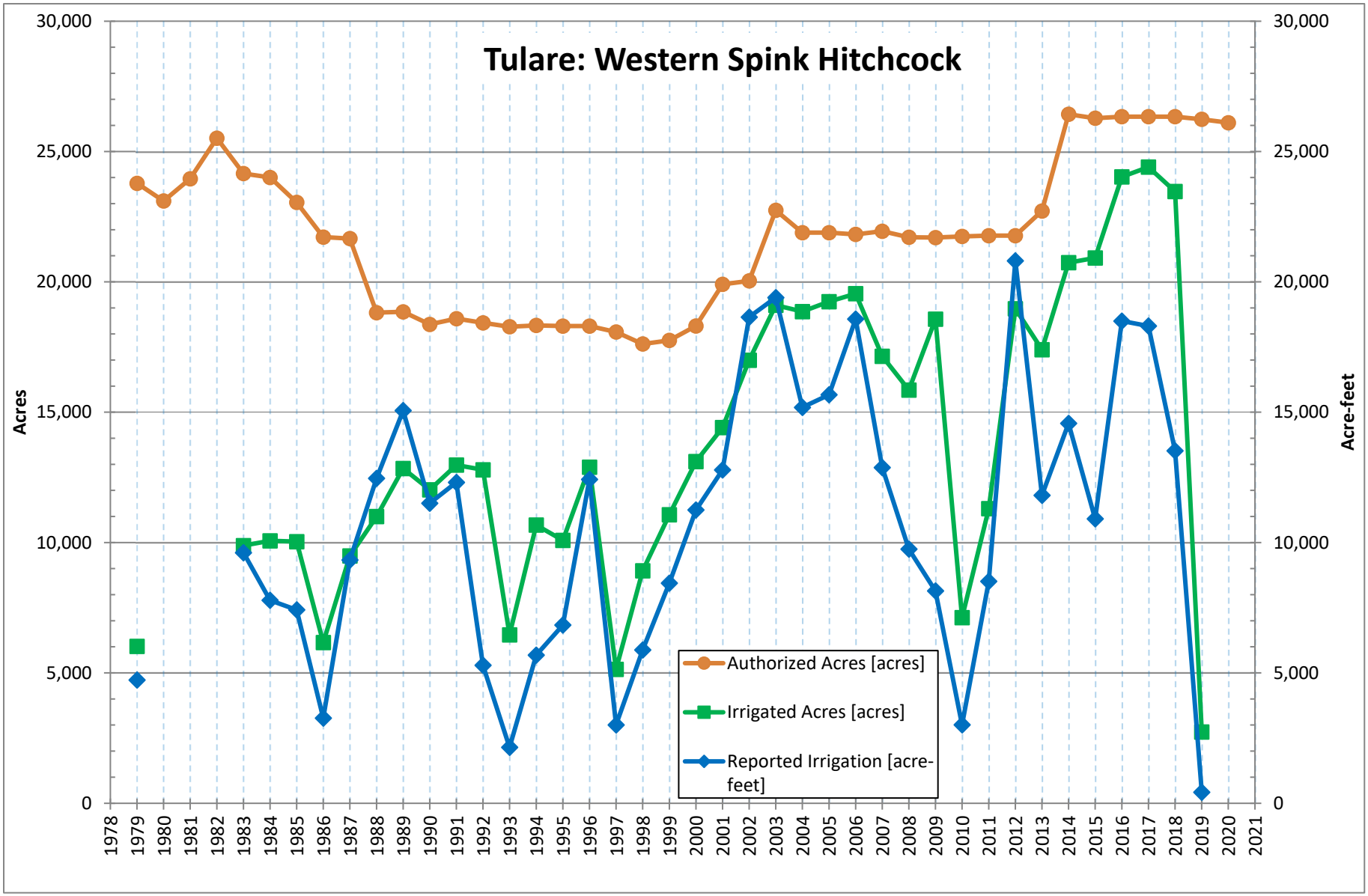

Figure 9. Acres authorized for Irrigation, Irrigated Acres and Reported Irrigation from the Tulare: Western Spink Hitchcock aquifer (Water Rights, 2020c)

Table 2. Irrigation development from the Tulare: Western Spink Hitchcock aquifer (* data not available), (modified from Buhler, 2012a; Mathiowetz, 2012; Water Rights, 2020a; Water Rights, 2020c)

Year	Permits with Acres	Authorized Acres [acres]	Irrigated Acres [acres]	Utilization Rate (Irrigated Acres/Authorized Acres Percentage)	Reported Irrigation [acre-feet]	Average Application Rate for Irrigated Acres [inches]
1979	132	23,781.00	6,018.00	25.31	4,728.50	9.43
1980	132	23,103.00	*	*	*	*
1981	138	23,955.00	*	*	*	*
1982	149	25,513.00	*	*	*	*
1983	144	24,154.00	9,883.00	40.92	9,611.81	11.67
1984	144	24,006.00	10,067.50	41.94	7,785.91	9.28
1985	138	23,047.10	10,033.50	43.53	7,419.24	8.87
1986	135	21,716.30	6,164.00	28.38	3,264.98	6.36
1987	134	21,659.60	9,487.00	43.80	9,329.14	11.80
1988	121	18,817.60	10,997.00	58.44	12,462.92	13.60
1989	119	18,851.60	12,842.20	68.12	15,061.79	14.07
1990	115	18,367.70	12,024.20	65.46	11,509.49	11.49
1991	115	18,589.60	12,972.80	69.79	12,307.90	11.38
1992	115	18,428.60	12,791.50	69.41	5,291.67	4.96
1993	116	18,279.60	6,728.00	36.81	2,200.30	3.92
1994	115	18,329.60	10,671.00	58.22	5,684.41	6.39
1995	112	18,303.60	10,085.00	55.10	6,833.56	8.13
1996	113	18,303.60	12,891.00	70.43	12,422.89	11.56
1997	110	18,076.60	5,136.00	28.41	3,005.00	7.02
1998	109	17,619.60	8,916.00	50.60	5,878.45	7.91
1999	110	17,755.60	11,068.90	62.34	8,444.64	9.15
2000	114	18,307.60	13,107.10	71.59	11,250.15	10.30
2001	126	19,905.60	13,287.00	66.75	12,786.81	11.55
2002	126	20,037.60	16,995.57	84.82	18,649.47	13.17
2003	138	22,745.00	19,103.77	83.99	19,397.25	12.18
2004	132	21,886.30	18,860.77	86.18	15,185.22	9.66
2005	132	21,886.30	19,240.26	87.91	15,669.49	9.77
2006	132	21,821.30	19,546.26	89.57	18,572.88	11.40
2007	133	21,943.30	17,145.50	78.14	12,878.64	9.01
2008	135	21,709.30	15,849.66	73.01	9,748.11	7.38
2009	132	21,697.90	17,169.60	79.13	8,143.49	5.69
2010	133	21,742.90	7,118.40	32.74	3,007.90	5.07
2011	133	21,771.90	11,300.50	51.90	8,512.07	9.04
2012	133	21,771.90	18,969.00	87.13	20,808.37	13.16
2013	139	22,717.90	17,399.20	76.59	11,811.93	8.15
2014	163	26,429.90	20,735.30	78.45	14,570.73	8.43
2015	161	26,277.90	20,917.70	79.60	10,910.11	6.26
2016	162	26,336.90	24,028.50	91.24	18,496.81	9.24
2017	163	26,335.90	24,404.00	92.66	18,305.35	9.00
2018	163	26,335.90	23,467.70	89.11	13,519.08	6.91
2019	162	26,234.90	2,732.40	10.42	421.52	1.85
2020	159	26,104.90	*	*	*	*
MAX.		*26,429.90*	*24,404.00*	*92.66*	*20,808.37*	*14.07*
MIN.		*17,619.60*	*2,732.40*	*10.42*	*421.52*	*1.85*
AVE.		*21,672.06*	*13,688.28*	*63.37*	*10,681.26*	*9.06*

Using the available reported pumping data from 1979 through 2019, the estimated annual domestic use, and the estimated commercial use, the total well withdrawal from the aquifer is expected to average less than 10,800 acre-feet/year. This total withdrawal from the Tulare: Western Spink Hitchcock aquifer due to pumping is around 0.89% of the estimated recoverable water in storage in the aquifer (10,800 acre-feet pumped per year versus 1,212,330+ acre-feet of recoverable water in storage (Hedges et al., 1982)).

In light of the considerable development that occurred as a result of appropriations made in 2012 and 2013, it is no longer appropriate to consider the entire period of record for determining the estimated average annual withdrawals. Table 3 shows the averages of Table 2 for many different periods of time to include data for comparison from previous reports and methodologies, the effect of a dry year (2012) and the effect of a very wet year (2019). The time periods that have the break between the years of 1979 and 1983 are effectively continuous time periods for all columns, except for the average authorized acres, as demonstrated in the first two rows of data.

Table 3. Averages of data in Table 2 for select time periods.

Period	Average Authorized Acres [acres]	Average Irrigated Acres [acres]	Average Utilization Rate	Average Reported Irrigation [acre-feet]	Average Application Rate for Irrigated Acres [inches]
1979-2019	21,672.06	13,688.28	63.37	10,681.26	9.06
1979, 1983-2019	21,473.25	13,688.28	63.37	10,681.26	9.06
1979-2011	20,791.31	12,250.03	60.09	9,901.47	9.38
1979, 1983-2012	20,494.01	12,466.77	60.96	10,253.30	9.50
1979, 1983-2018	21,344.56	13,984.39	64.80	10,958.55	9.25
2003-2011	21,911.58	16,148.30	73.62	12,346.12	8.80
2003-2018	23,338.16	18,453.51	78.58	13,721.09	8.77
2003-2019	23,508.55	17,528.74	74.57	12,938.76	8.37
2012-2018	25,172.33	21,417.34	84.97	15,488.91	8.74
2012-2019	25,305.15	19,081.73	75.65	13,605.49	7.88
2013-2018	25,739.07	21,825.40	84.61	14,602.34	8.00
2013-2019	25,809.90	19,097.83	74.01	12,576.50	7.12
2014-2018	26,343.30	22,710.64	86.21	15,160.42	7.97
2014-2019	26,325.23	19,380.93	73.58	12,703.93	6.95
2015-2018	26,321.65	23,204.48	88.15	15,307.84	7.85
2015-2019	26,304.30	19,110.06	72.61	12,330.57	6.65

Examination of the average application rate for the time period of Buhler's (2013) report, 1979-2011, shows that the average application rate has been adjusted slightly from Buhler's calculated 9.32 inches to 9.38 inches. This is due to corrections of the underlying water right and irrigation questionnaire data, either from data entry errors, missing irrigation questionnaire data that was not included in Buhler's (2012a) dataset, and resolving instances where the irrigator submitted

data for multiple permits and some values were double counted or not counted at all. The application rate could still change slightly due to corrections in the water right data, locating missing irrigation questionnaire files, identifying when systems were constructed, considering suspensions, and upon further review of the irrigation questionnaires that cover several pivots and/or have been amended, incorporated, or reissued.

In the time since Buhler's report (2012a), the average application rate has varied due to climatic conditions. The time period of 2012-2018 has an average application rate of 8.74 inches, but with the wet year of 2019, the average application rate dropped to 7.88 inches for the time period of 2012-2019. The year of 2012 was dry and saw a high average application rate, the effect of this can be seen by comparing the average application rates between the time periods of 1979-2011 and 1979, 1983-2012; 2012-2018 and 2013-2018; and 2012-2019 and 2013-2019. For the entire period of record, 1979 through 2019, the average application rate has been 9.06 inches.

In Buhler's (2012a) report, the average annual withdrawals were calculated by averaging the irrigation questionnaire summary reports for the years 1979-2011 and adding the estimated domestic use. Table 4 shows the data from the irrigation questionnaire summary reports. The data from the irrigation questionnaire summary reports is currently the best information reasonably available to easily determine how much water has been used by irrigation from an aquifer. These summaries have never been revised to reflect updated data or to correct water sources. There are minor differences between the values in Table 2 and Table 4 for the number of permits and the reported irrigation due to more recent data being represented in Table 2.

Table 4. Annual Summary of Reported Irrigation from the Tulare: Western Spink Hitchcock aquifer (Water Rights, 1980-2020)

Year	Number of Permits Reported	Reported Irrigation [acre-feet]
1979	133	5,265.00
1980	134	6,676.00
1981	148	10,255.00
1982	111	6,116.30
1983	116	9,057.14
1984	130	8,255.50
1985	136	7,617.80
1986	136	3,528.00
1987	118	9,524.00
1988	121	13,351.90
1989	118	14,981.20
1990	118	11,801.00
1991	117	12,403.50
1992	114	5,390.00
1993	115	2,255.40
1994	115	5,849.66
1995	114	6,567.52

1996	115	12,596.67
1997	113	3,065.00
1998	112	6,180.06
1999	114	8,633.58
2000	122	11,273.48
2001	118	12,302.56
2002	121	18,649.47
2003	131	19,397.25
2004	129	15,185.22
2005	129	15,669.49
2006	129	18,572.88
2007	130	12,552.56
2008	129	9,655.30
2009	129	8,261.53
2010	130	2,959.35
2011	130	8,512.07
2012	134	20,861.78
2013	149	11,671.04
2014	158	14,934.34
2015	162	10,910.11
2016	162	18,496.81
2017	162	18,305.35
2018	162	13,519.08
2019	159	421.52
MAX		*20,861.78*
MIN		*421.52*
AVE		*10,523.94*

Balance of Recharge to Discharge

At the December 4th, 2002 meeting of the South Dakota Water Management Board, the Western Spink management unit and Hitchcock management unit were combined into a single management unit of the Tulare aquifer. The Tulare: Western Spink Hitchcock management unit was estimated as underlying 288,700 acres, containing 1.212 million acre-feet of recoverable water in storage, and 19,960 acre-feet of annual recharge (Goodman, 2002). Based upon the maximum water use and undeveloped permits, 3,400 acre-ft of water was found to be available. Assuming an application rate of 16 inches, 11 water right permits were issued for the irrigation of 2,654.4 acres as a result of combining management units. The remaining applications were deferred for a period of five years.

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court of South Dakota ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from an aquifer (Hines, Phillip W. v. Department of Environment and Natural Resources, 2005).

At the December 7, 2007 meeting of the South Dakota Water Management Board, the board heard testimony regarding a report on 33 deferred and 4 new water permit applications from the Tulare: Western Spink Hitchcock aquifer management unit (Goodman, 2007). This report used the previous five years of data, 2002-2006, and determined that the reported water use over the 5 years averaged 17,495 acre-feet per year. However, there was "not reported or undeveloped acreage" that were then accounted for by estimating their water use (Goodman, 2007). This estimation brought the estimated average annual use to 19,927 acre-feet per year. The estimated average annual recharge rate was 19,960 acre-feet per year. The 37 water permit applications were denied, and the aquifer management unit was declared fully appropriated.

A set of six new water permit applications were to be brought before the South Dakota Water Management Board on May 2, 2012 in response to the applicants contesting the Chief Engineer's recommendation of denial. As part of this process, a staff engineer reevaluated the availability of unappropriated water. The areal extent of the Tulare: Western Spink Hitchcock aquifer management unit was revised to be 263,016 acres (Buhler, 2012a). The recharge rate as determined by Kuiper (1984) was applied over this areal extent to determine that the estimated average annual recharge is 18,192 acre-feet per year. The average application rate on irrigated acres was 9.32 inches for the period of 1979 through 2011, excluding 1980-1982 due to a lack of data. Applying 18,192 acre-feet of water at a rate of 9.32 inches would allow the irrigation of 23,423 acres. At the time of the report there were 22,838.8 acres authorized for irrigation, the hydrologic budget showed that an additional 584.2 acres could be irrigated without exceeding the average annual recharge. The observation well analysis as calculated by Buhler (2012a) over the years of 1983 to 2011 showed an average rise of 0.34 feet in the unconfined portions of the management unit. The unconfined area was estimated to be 11,149 acres, using a specific yield for the aquifer of 0.15, results in the average annual recharge exceeding average annual withdrawals by 569 acre-feet which, applied at a rate of 9.32 inches allows the irrigation of an additional 733 acres. The applicants entered a stipulation with the Chief Engineer and the Chief Engineer approved 5 of the 6 applications for 810 acres of irrigation. As discussed earlier in the report, the 2011 water year was calculated for only a partial year, if the entire year was used in the calculation, the average observation well rise would change from 0.34 feet per year to 0.30 feet per year. This would reduce the amount recharge exceeds withdrawals from 569 acre-feet per year to 502 acre-feet per year and would have allowed the irrigation of 646 acres.

After a review was conducted on the Tulare: East James aquifer management unit (Buhler, 2012b), it was realized that the previous analysis on the Tulare: Western Spink Hitchcock aquifer management unit was overly conservative (Buhler, 2013). The recharge to acres method that Buhler used in the 2012 and 2013 reports calculated the number of acres that could be irrigated given the total amount of recharge. The difference in the recharge to acres method between the 2012 and 2013 reports is that the 2013 report factors in the number of acres that were irrigated vs the number of acres that were authorized for irrigation, or the utilization rate. The 2012 report assumed 100% of the acres were being irrigated every year, resulting in an additional 584.4 acres that could be irrigated. The 2013 report calculated that on average 69.02% of acres were utilized over the 2003 to 2011 period. The estimated average annual recharge was 18,192 acre-feet per year, which would allow the irrigation of 23,423 acres. At the time of Buhler's report there were 23,648.8 acres authorized for irrigation, applying the utilization rate of 69.02%, Buhler calculated that the expected irrigation acreage would be 16,322.4 acres and that an additional

7,100 acres could be irrigated annually. The Water Management Board did not want to speculate on the future usage of any recently approved acres and did not find the recharge to acres method useful (SD Water Management Board, 2013).

Buhler (2013) delineated a new unconfined area of the aquifer using 3D representations of the October 2012 potentiometric surface and the top of the aquifer. This resulted in an increase in the unconfined area from 11,149 acres to 76,978 acres. The observation well analysis was also recalculated to only include water years that were considered fully developed (water year 2003 through water year 2012). This observation well analysis still included the partial calculation of the water year 2011. The period of water year 2003 to water year 2012 is a period when no additional acres were permitted, it was not a period of being fully developed as the water right permits issued in 2002 were still constructing their systems and placing water to beneficial use. Of the 11 water right permits issued in 2002, the last permits to first place their water to beneficial use occurred during the 2008 irrigation season. The observation well analysis as calculated in Buhler's report (2013) for the period of 2003 to 2012 produced an average rise of 0.3152 feet per year. If the complete water year for 2011 is used in the calculations, the average rise from 2003 to 2012 changes to 0.21 feet per year. If the fully developed period of 2008 through 2012 was used for the calculations, the average rise would be 0.14 feet per year. Using a specific yield of 0.15, the average annual exceedance of recharge to withdrawals would change from 3,640 acre-feet to 2,425 acre-feet for the 0.21 feet per year rise, and 1,617 acre-feet for the 0.14 feet per year rise. Using the average irrigation application rate of 9.32 inches per year, Buhler's report (2013) showed that an additional 4,686 acres could have been irrigated. The number of additional acres that could have been irrigated is reduced to 3,122 acres for the 0.21 feet per year rise, and 2,081 acres for the 0.14 feet per year rise. 810 acres should be subtracted from these estimates as there were 5 water right applications for a total of 810 acres approved for irrigation in 2012. Twelve water right applications were approved to irrigate 2,131 acres on May 2, 2013 and 11 water right applications were approved to irrigate 1,765 acres on July 11, 2013, for a total of 4,706 acres of irrigation approved in 2012 and 2013.

There is no mention in Buhler's 2013 report of how the recently developed permits that were approved in 2002 affected the average annual use over the period of 2003-2011 or if the withdrawals due to the recent permits would be accurately reflected in a calculation for that period. Table 5 shows the permits that have been approved since 2002 for the irrigation of "new" acres, acres that were not previously authorized under an existing water right, and when they placed their appropriated water to beneficial use.

Table 5. Water right permits approving new acres since 2002 (Water Rights, 2020c)

Permit No.	Year Approved	Year water placed to beneficial use
6330-3	2002	2008
6331-3	2002	2007
6332-3	2002	2003
6333-3	2002	2008
6334-3	2002	2003
6336-3	2002	2003
6337-3	2002	2003

6338-3	2002	2006
6339-3	2002	2003
6340-3	2002	2006
6343-3	2002	2003
7289-3	2012	2013
7290-3	2012	2013
7291-3	2012	2013
7292-3	2012	2013
7293-3	2012	2013
7391-3	2012	2014
7373-3	2013	2013
7551-3	2013	2014
7570-3	2013	2016
7571-3	2013	2015
7572-3	2013	2015
7573-3	2013	2015
7574-3	2013	2014
7575-3	2013	2016
7620-3	2013	2016
7637-3	2013	2013
7638-3	2013	2017
7639-3	2013	2014
7640-3	2013	2013
7685-3	2013	2014
7716-3	2013	2018
7717-3	2013	2014
7718-3	2013	2014
7719-3	2013	2013
7720-3	2013	2014
7721-3	2013	2017
7722-3	2013	2014
7723-3	2013	2014
7724-3	2013	2016
7725-3	2013	2015

A metric other than the total withdrawals over the entire period of record should be utilized to prevent over-appropriation of water from the Tulare: Western Spink Hitchcock aquifer as a result of the 5-year reviews. For example, using Buhler's (2012b) hydrologic budget methodology repeatedly, if the existing data from 1979-2019 is used, with the average withdrawal of 10,681 acre-feet per year, and the years of 2020 through 2024 (5 years) pump an average of 15,000 acre-feet per year, the estimated average annual use over the entire period would rise to 11,183 acre-feet per year. At the end of that 5-year period, there would be an additional 7,000 acre-feet of water which could be appropriated as a result of the 5-year review because the estimated average

annual use is still below the estimated average annual recharge of 18,192 acre-feet. If the next 5-year period pumps an average of 20,000 acre-feet per year, the estimated average annual use over the entire period would rise to 12,101 acre-feet per year. At the end of this 5-year period, there would be an additional 6,000 acre-feet of water which could be appropriated. If the next 5-year period pumps an average of 25,000 acre-feet per year, the estimated average annual use over the entire period of record would rise to 13,318 acre-feet per year. If withdrawals continued to average 25,000 acre-feet per year with no additional appropriations, it would take fewer than 50 years for the average annual withdrawal over the entire period of record, to exceed the average annual recharge to the aquifer. By the time the average annual withdrawals reach the average annual recharge, the aquifer will be well over-appropriated, and the average annual withdrawals will continue to increase into the future. Repeated use of this methodology will result in the aquifer being over-appropriated in the future.

Figure 9 shows the number of irrigated acres approaching the number of authorized acres, indicating that irrigation practices have changed in the area of the Tulare: Western Spink Hitchcock aquifer. These changes may be due to climate, modern farming practices, crop prices, the production of ethanol, and the consolidation, relocation, and transference of irrigation water rights. Appendix A contains an approximate timeline of events regarding Water Rights in the Tulare: Western Spink Hitchcock aquifer, including the amending and transferring of acres to other lands.

Use of the average application rate and the utilization of acres would be a better determination of the estimated average annual use when the number of authorized acres has not remained constant. The application rate is the reported use divided by the number of irrigated acres and the utilization of acres is the number of irrigated acres divided by the number of authorized acres. The average application rate would account for factors regarding the climate over time, allowing for consideration of both dry and wet periods. The average utilization of acres would account for factors regarding farming practices, this could be looked at on a shorter period to allow for recent changes to be in effect.

As of the beginning of the 2020 irrigation season, there are 26,104.9 acres authorized for irrigation. Applying the average application rate (1979, 1983-2019) of 9.06 inches over the authorized acres results in an estimated average annual use of 19,709 acre-feet of water. While it is impossible for the average percentage of irrigated acres to authorized acres to ever reach 100% over the entire period of record, 4 out of the 8 years (2012-2019) since Buhler's (2013) report have exceeded 87% utilization of authorized acres with the maximum utilization reaching 92.7% in 2017. The utilization rate of authorized acres and the estimated average annual use using the average application rate of 9.06 inches for authorized acres is calculated in Table 6.

Table 6. Utilization Rate of Authorized Acres and Estimated Average Annual Use calculated using 26,104.9 authorized acres and the application rate of 9.06 inches

Average Utilization Rate of Authorized Acres	Estimated Average Annual Use [acre-feet per year]
100%	19,709
60.1% (1979-2011)	11,845
63.4% (1979-2019)	12,496

73.6% (2003-2011)	14,506
87% (exceeded by 4 out of 8 previous years)	17,147
92.7% (2017)	18,270
85% (2012-2018)	16,753
75.6% (2012-2019)	14,900
88.2% (2015-2018)	17,384
72.6% (2015-2019)	14,309

Kuiper's model estimated the recharge to the aquifer to best simulate the observed observation well hydrographs over the period of 1968 to 1978. It is unknown how well this model fits the last 42 years of observation well data. Kuiper's model estimated the average annual recharge to the Tulare: Western Spink Hitchcock aquifer to be 23,000 acre-feet per year, within the boundaries of the model. Given the currently identified boundaries of the Tulare: Western Spink Hitchcock aquifer and the mismatch to the model boundaries, it is improper to assume that a spatially variable recharge rate can be averaged out across the model area and then applied to a significantly reduced aquifer area. The estimated average annual recharge is unknown for the currently identified boundaries of the Tulare: Western Spink Hitchcock aquifer, and while improper, use of the 0.83 inches per year of recharge as calculated from Kuiper's model across the entire area of the aquifer (263,016 acres) is the best reasonably available estimate of the average annual recharge to the Tulare: Western Spink Hitchcock aquifer. The estimated average annual recharge to the Tulare: Western Spink Hitchcock aquifer is 18,192 acre-feet per year.

Given the uncertainties involved with the estimated average annual recharge model, it is unknown if the estimated average annual recharge rate of 18,192 acre-feet per year as used in past reports is above or below the actual recharge rate. Using the average application rate of 9.06 inches over the period of record and the current authorized acreage, the estimated average annual use for irrigation withdrawals using the average utilization rate (72.6%) for the time period of 2015-2019 is 14,309 acre-feet per year. Excluding the abnormally wet year of 2019, the average utilization rate for the time period of 2015-2018 better reflects the expected usage of the Tulare: Western Spink Hitchcock for the current authorized acreage. Assuming recent irrigation practices continue, the best reasonable estimated withdrawals from irrigation use is the 17,384 acre-feet per year as calculated using the utilization rate from 2015-2018 of 88.2%, the total of 26,104.9 authorized acres, and the average application rate of 9.06 inches on irrigated acres over the period of record. However, during the time period of 2015-2019, permitted appropriations were still being constructed and placed to beneficial use.

With the continual increase in placing water to beneficial use through 2018, it is currently unknown what an average utilization rate may be over a longer period, and it may be more appropriate to estimate the usage from irrigated acres at full utilization. In addition to the new appropriations placing their water to beneficial use, there has been ongoing transferring and moving of acres and diversion points across the management unit (see Appendix A), resulting in existing appropriations being placed to better use. If the authorized acres were fully utilized, with an application rate of 9.06 inches, the estimated average annual use for irrigation is 19,709 acre-feet per year.

The hydrologic budget provides a quantitative approach to the availability of unappropriated water. Within the hydrologic budget, the estimated average annual use for domestic use is 56 acre-feet per year, and the estimated average annual use for commercial use is 58 acre-feet per year. The hydrologic budget also estimates that the estimated average annual use from irrigation is 17,384 acre-feet per year assuming current irrigation trends continue, or 19,709 acre-feet per year assuming that all acres are fully utilized. If the current irrigation trend (2015-2018 time period) continues, the hydrologic budget estimates that there is an average of 17,498 acre-feet of water used per year. If the current irrigation trend does not continue and authorized acres continue to see increasing use, assuming full use of the authorized acres would result in the hydrologic budget estimating that the average annual use is 19,823 acre-feet of water per year. The estimated average annual recharge is 18,192 acre-feet per year. If current irrigation trends continue, there were would be 694 acre-feet of water available for appropriation from the hydrologic budget. If current irrigation trends do not continue and there is an increase in the usage of the authorized acres, the maximum estimated average annual use is the full utilization of authorized acres and would exceed the estimated average annual recharge by 1,631 acre-feet per year. In order for the recently developed systems and recently moved systems to be properly reflected in application rate and utilization rate data, it would be reasonable to estimate the average annual use by assuming full utilization of the authorized acres. Based upon the full utilization of acres for irrigation, the hydrologic budget shows that there is no unappropriated water available from the Tulare: Western Spink Hitchcock aquifer.

CONCLUSIONS

1. The Tulare: Western Spink Hitchcock aquifer is a glacial outwash aquifer that is generally found under confined conditions and buried under a layer of glacial till.

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

3. The SD DENR-Water Rights Program observation well data documents that over the period of 1983 through 2018, the water level in the unconfined portions of the Tulare: Western Spink Hitchcock aquifer has increased an average of 0.18 feet per year.

4. Appropriations made in 2012 and 2013 relied upon the water level increase in the unconfined portions of the Tulare: Western Spink Hitchcock aquifer. There is no water available for appropriation from the 0.18 feet per year rise calculated over the period of 1983-2018 as it was already accounted for in prior appropriations.

5. The SD DENR-Water Rights Program observation well data documents that over the period of 2013 through 2018, the water level in the unconfined portions of the Tulare: Western Spink Hitchcock aquifer has decreased an average of 0.02 feet per year.

6. The SD DENR-Water Rights Program observation well data documents that over the period of record the configuration of the potentiometric surface of the Tulare: Western Spink Hitchcock aquifer has not changed significantly with time or increased development. The elevation of the potentiometric surface has changed throughout time,

however the direction of groundwater flow has not been significantly affected by withdrawals.

7. The estimated average annual recharge to the Tulare: Western Spink Hitchcock aquifer was estimated as 23,000 acre-feet per year by Kuiper's model. The estimated average annual recharge is 18,192 acre-feet per year due to a reduction in the areal extent of the aquifer since the development of Kuiper's model.

8. Kuiper's recharge rate was based upon 11 years of observation well data between 1968 and 1978. Thirty-two observation wells have been drilled into the Tulare: Western Spink Hitchcock aquifer since 1978 and there are 42 additional years of observation well data since 1978.

9. It is improper to assume the spatially variable recharge rate found in Kuiper's model can be averaged across the model domain and then applied to a significantly reduced area. Although it is unknown what the effects of a reduced area are, the current best estimated average annual recharge to the Tulare: Western Spink Hitchcock aquifer is 18,192 acre-feet per year.

10. The Tulare: Western Spink Hitchcock aquifer currently has 159 permitted or licensed water rights appropriating water. Of these, 157 water rights currently authorize the irrigation of 26,104.9 acres. The other 2 water rights are for commercial use for 0.096 cubic feet per second of water.

11. All water right permits approved since 2012 have placed their water to beneficial use as of the 2018 irrigation season.

12. There is one water year over the period of record that would show the balance of recharge to withdrawals from the observation well data at the current level of appropriations, and that year (water year 2019) was an anomalously wet year.

13. The continued moving of authorized acres and diversion points to other lands is increasing the usage of authorized acres over time by placing water to a better beneficial use.

14. Excluding the anomalously wet year of 2019, the authorized acres saw a utilization rate of 88.2% over the years of 2015-2018. Including the anomalously wet year of 2019, the authorized acres saw a utilization rate of 72.6% over the years of 2015-2019.

15. The application rate on irrigated acres over the period of record (1979,1983-2019) is 9.06 inches.

16. Assuming current irrigation trends continue, the estimated average annual use from the Tulare: Western Spink Hitchcock aquifer is 17,384 acre-feet per year at 88.2% utilization of authorized acres.

17. If all acres that are authorized for irrigation (26,104.9 acres) apply the average application rate of 9.06 inches, the estimated average annual use from the Tulare: Western Spink Hitchcock aquifer is 19,709 acre-feet per year.

18. Based upon the downward trend observed in the observation well analysis over the time period of 2013-2018, the hydrologic budget, and the lack of a stable period of development, there is not a reasonable probability that unappropriated water is available from the Tulare: Western Spink Hitchcock aquifer.



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Appendix A: Approximate Timeline of Water Right Activity in the Western Spink Hitchcock Management Unit of the Tulare Aquifer since the year 2000.

Date	Water Right	Action	Water Right Status	Change in Authorized Acres
02/14/2000	6159-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	132
02/21/2000	6160-3	Permit approved by Chief Engineer for Tulare: Western Spink	PE	160
03/20/2000	6175-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	160
04/17/2000	6184-3	Permit approved by Chief Engineer for Tulare: Western Spink	PE	135
06/05/2000	2428A-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	0
06/05/2000	2428-3	Incorporated into Water Right permit 2428A-3	IP	0
06/05/2000	6193-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	90
07/17/2000	6196-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	160
07/31/2000	6200-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	160
07/31/2000	6201-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	480
01/02/2001	6234-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	135
02/12/2001	6238-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	130
02/12/2001	6239-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	260
02/12/2001	6240-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	132
08/13/2001	5798-3	Result of Licensing (160 to 132 acres)	LC	-28
08/13/2001	5771-3	Incorporated into Water Right 6184-3	IL	0
08/13/2001	6184-3	Result of Licensing (135 acres + Inc. 5771-3 135 acres to 270 acres)	LC	0
08/13/2001	2428A-3	Result of Licensing (136 to 136 acres)	LC	0
03/18/2002	6288-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	160
05/31/2002	4912B-3	Water Right 4912A-3 was divided, 4912B-3 took 136 of the 301 acres	LC	0
06/04/2002	6312-3	Permit approved by Chief Engineer for Tulare: Hitchcock	PE	160
07/26/2002	6344-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
07/26/2002	6345-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
07/26/2002	6346-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
07/26/2002	6347-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
07/29/2002	6348-3	Date Received, Deferred by WMB, Withdrawn due to approval of 6339A-3 on 3-5-03	WI	
08/07/2002	6351-3	Date Received, Recommended for Denial, Withdrawn 11-12-02	WI	
08/08/2002	6352-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
08/08/2002	6353-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
09/19/2002	6359-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
09/19/2002	6360-3	Date Received, WMB Deferred at 12-4-02 meeting, WMB Denied at 12-6-07 meeting	DN	
09/19/2002	6361-3	Date Received, WMB Deferred at 12-4-02 meeting, withdrawn upon approval of 472A-3	WI	

12/04/2002		Board combines Tulare: Hitchcock and Tulare: Western Spink management units		
12/04/2002	6330-3	Permit approved by WMB	PE	157
12/04/2002	6331-3	Permit approved by WMB	PE	157
12/04/2002	6332-3	Permit approved by WMB	PE	153
12/04/2002	6333-3	Permit approved by WMB	PE	320
12/04/2002	6334-3	Permit approved by WMB	PE	267.4
12/04/2002	6336-3	Permit approved by WMB	PE	160
12/04/2002	6337-3	Permit approved by WMB	PE	320
12/04/2002	6338-3	Permit approved by WMB	PE	320
12/04/2002	6339-3	Permit approved by WMB	PE	320
12/04/2002	6340-3	Permit approved by WMB	PE	160
12/04/2002	6343-3	Permit approved by WMB	PE	320
12/05/2002	6374-3	Date Received, WMB Deferred at 3-5-03 meeting, WMB Denied at 12-6-07 meeting	DN	
03/05/2003	6339A-3	Permit approved by Chief Engineer - takes 160 acres from 6339-3	PE	0
03/05/2003	6339-3	Divided, Water Permit 6339A-3 took 160 acres, 6339B-3 is remaining 160 acres	PE	0
03/10/2003	6334A-3	Permit approved to move the location of 133.7 out of 267.4 acres of permit 6334-3	PE	0
03/10/2003	6334-3	Divided, Water Permit 6334A-3 took 133.7 acres, remaining portion permitted as 6334B-3	PE	0
03/13/2003	2471B-3	Licensed, incorporated 2471-3 and 2471A-3 (202 to 202 acres)	LC	0
03/13/2003	2471-3	Incorporated into Water Right 2471B-3	IL	0
03/13/2003	2471A-3	Incorporated into Water Right 2471B-3	IL	0
09/11/2003	386-3	Divided, Water Right 386A-3 took 42.1 acres, 386B-3 took 118.8 acres	OC	0
09/11/2003	386A-3	Ownership Change, took 42.1 acres from 386-3	LC	0
09/11/2003	386B-3	Ownership Change, took 118.8 acres from 386-3	LC	0
09/11/2003	386A-3	Incorporated into Water Right 4167-3	IL	0
09/11/2003	4167-3	Water Right License 4167-3 reissued to incorporate 386A-3	LC	-42.1
12/03/2003	2568-3	Cancelled by WMB for abandonment/forfeiture	CA	-136
12/03/2003	4146-3	Cancelled by WMB for abandonment/forfeiture	CA	-130
12/03/2003	4147-3	Cancelled by WMB for abandonment/forfeiture	CA	-130
12/03/2003	4545-3	Cancelled by WMB for abandonment/forfeiture	CA	-79
12/03/2003	4546-3	Cancelled by WMB for abandonment/forfeiture	CA	-227
12/03/2003	4260-3	Cancelled by WMB for abandonment/forfeiture	CA	-126.8
12/03/2003	386B-3	Cancelled by WMB for abandonment/forfeiture	CA	-118.8
12/29/2003	6159-3	Result of Licensing (132 to 128 acres)	LC	-4
01/16/2004	6334C-3	Date Received, Withdrawn 3-3-04	WI	
01/20/2004	6460-3	Date Received, WMB Deferred at 5/12/04 meeting, WMB Denied at 12-6-07 meeting	DN	
01/20/2004	6461-3	Date Received, WMB Deferred at 5/12/04 meeting, WMB Denied at 12-6-07 meeting	DN	
01/20/2004	6462-3	Date Received, WMB Deferred at 5/12/04 meeting, WMB Denied at 12-6-07 meeting	DN	
01/20/2004	6463-3	Date Received, WMB Deferred at 5/12/04 meeting, WMB Denied at 12-6-07 meeting	DN	

03/03/2004	6201A-3	Permit approved by Chief Engineer - takes 84 acres from 6201-3 and 51 acres from 6343-3	PE	0
03/03/2004	6343-3	Permit Reissued for 269 of 320 acres, 6201A-3 severed 51 acres	PE	0
03/03/2004	6201-3	Permit reissued due to 6201A-3 taking 84 acres	PE	0
03/03/2004	6343-3	Permit reissued due to 6201-3 taking 51 acres	PE	0
02/14/2005	6594-3	Date Received, WMB Deferred at 7/6/05 meeting, WMB Denied at 12-6-07 meeting	DN	
09/12/2005	6660-3	Date Received, WMB Deferred at 12/7/05 meeting, WMB Denied at 12-6-07 meeting	DN	
09/12/2005	6661-3	Date Received, WMB Deferred at 12/7/05 meeting, WMB Denied at 12-6-07 meeting	DN	
09/30/2005	6196-3	Result of Licensing (160 to 136 acres)	LC	-24
09/30/2005	6200-3	Result of Licensing (160 to 136 acres)	LC	-24
09/30/2005	6332-3	Result of Licensing (153 to 136 acres)	LC	-17
11/07/2005	6668-3	Date Received, WMB Deferred at 3/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
11/07/2005	6669-3	Date Received, WMB Deferred at 3/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
11/07/2005	6670-3	Date Received, WMB Deferred at 3/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
11/07/2005	6671-3	Date Received, WMB Deferred at 3/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
01/27/2006	6687-3	Date Received, WMB Deferred at 5/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
01/27/2006	6688-3	Date Received, WMB Deferred at 5/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
01/27/2006	6689-3	Date Received, WMB Deferred at 5/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
02/03/2006	6911-3	Date Received, Withdrawn prior to Chief Engineer's recommendation	WI	
02/09/2006	6693-3	Date Received, WMB Deferred at 5/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
02/09/2006	6694-3	Date Received, WMB Deferred at 5/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
02/09/2006	6695-3	Date Received, WMB Deferred at 5/3/06 meeting, WMB Denied at 12-6-07 meeting	DN	
07/12/2006	6338A-3	Permit approved by Chief Engineer - takes 56 acres from 6338-3, 28 acres each from 6339A-3, 6339B-3, 6340-3	PE	-70
07/12/2006	6338-3	Permit reissued due to 6338A-3 taking 56 of 320 acres	PE	0
07/12/2006	6339A-3	Permit reissued due to 6338A-3 taking 28 of 160 acres	PE	0
07/12/2006	6339B-3	Permit reissued due to 6338A-3 taking 28 of 160 acres	PE	0
07/12/2006	6340-3	Permit reissued due to 6338A-3 taking 28 of 160 acres	PE	0
11/13/2006	6776-3	Date Received, WMB Deferred at 3/7/07 meeting, WMB Denied at 12-6-07 meeting	DN	
01/22/2007	6764-3	Permit approved by Chief Engineer - takes 24 acres from 6336-3 and 28 acres from 6337-3	PE	0
01/22/2007	6336-3	Permit Reissued for 136 of 160 acres, 6764-3 severed 24 acres	PE	0
01/22/2007	6337-3	Permit Reissued for 292 of 320 acres, 6764-3 severed 28 acres	PE	0
01/22/2007	2485-3	Water Right permit 6764-3 authorized moving 130 of 130 acres	LC	0
02/27/2007	6829-3	Date Received, WMB Deferred at 7/11/07 meeting, WMB Denied at 12-6-07 meeting	DN	
02/27/2007	6830-3	Date Received, WMB Deferred at 7/11/07 meeting, WMB Denied at 12-6-07 meeting	DN	
02/27/2007	6841-3	Date Received, WMB Deferred at 7/11/07 meeting, WMB Denied at 12-6-07 meeting	DN	
02/27/2007	6842-3	Date Received, WMB Deferred at 7/11/07 meeting, WMB Denied at 12-6-07 meeting	DN	
03/07/2007	472A-3	Permit approved by Chief Engineer, amended 472-3 and moved all acres	PE	0
03/07/2007	472-3	Incorporated into Water Right 472A-3	IP	0
05/14/2007	6330A-3	Permit approved by Chief Engineer - moved 157 of 157 acres of 6330-3 to new land	PE	0

05/14/2007	3065B-3	Permit approved by Chief Engineer, amended 3065A-3 and moved all acres	PE	0
05/14/2007	6330-3	Amended by Water Right permit 6330A-3	IP	0
06/07/2007	6863-3	Date Received, WMB Denied at 12-6-07 meeting	DN	
06/07/2007	6864-3	Date Received, WMB Denied at 12-6-07 meeting	DN	
06/11/2007	6865-3	Date Received, WMB Denied at 12-6-07 meeting	DN	
06/11/2007	6866-3	Date Received, WMB Denied at 12-6-07 meeting	DN	
07/02/2007	6312A-3	Permit approved by Chief Engineer, took diversion authority for 28 acres from 6312-3, 56 acres from 6333-3, 25 acres from 6331-3	PE	-109
07/02/2007	6312-3	Reissued Permit for 132 of 160 acres, 28 acres went to 6312A-3	PE	0
07/02/2007	6333-3	Reissued Permit for 264 of 320 acres, 56 acres + div rate went to 6312A-3	PE	0
07/02/2007	6331A-3	Permit approved by Chief Engineer, took 132 of 157 acres from 6331-3	PE	0
07/02/2007	6331-3	Divided, Water Permit 6331A-3 took 132 acres, Water Permit 6312A-3 took 25 acres	IL	0
08/01/2007	6240-3	Result of Licensing (132 to 132 acres)	LC	0
08/03/2007	6234-3	Result of Licensing (135 to 134 acres)	LC	-1
08/03/2007	6238-3	Result of Licensing (130 to 130 acres)	LC	0
08/03/2007	6239-3	Result of Licensing (260 to 260 acres)	LC	0
10/09/2007	6288-3	Result of Licensing (160 to 136 acres)	LC	-24
10/29/2007	6333A-3	Permit approved by Chief Engineer - took 100 acres from 6333-3	PE	0
10/29/2007	6333B-3	Permit approved by Chief Engineer - took 134 acres from 6333-3	PE	0
10/29/2007	6333-3	Divided, Water Permit 6333A-3 took 100 acres, 6333B-3 took 134 acres, 30 acres left with no div?	IP	-30
10/30/2007	6160-3	Result of Licensing (160 to 136 acres)	LC	-24
10/30/2007	6336-3	Result of Licensing (136 to 136 acres)	LC	0
11/05/2007	6175-3	Result of Licensing (160 to 136 acres)	LC	-24
11/13/2006	6777-3	Date Received, WMB Deferred at 3/7/07 meeting, WMB Denied at 12-6-07 meeting	DN	
12/06/2007		WMB hearing on 33 deferred applications, all denied		
01/23/2008	6312-3	Result of Licensing (132 of 132 acres)	LC	0
01/24/2008	6142-3	Result of Licensing (100 + 140 (4897-3) to 240 acres)	LC	0
01/24/2008	6337-3	Result of Licensing (292 to 272 acres)	LC	-20
01/24/2008	6331A-3	Result of Licensing (132 of 132 acres)	LC	0
01/24/2008	4897-3	Incorporated into Water Right 6142-3	IL	
01/28/2008	6338-3	Result of Licensing (264 to 264 acres)	LC	0
01/28/2008	6339B-3	Result of Licensing (132 to 132 acres)	LC	0
01/28/2008	6340-3	Result of Licensing (132 to 132 acres)	LC	0
01/28/2008	6339A-3	Result of Licensing (132 to 132 acres)	LC	0
01/28/2008	6338A-3	Result of Licensing (70 to 68 acres)	LC	-2
04/08/2008	6108-3	Result of Licensing (136 + 168 (2569-3) to 304 acres)	LC	0
04/08/2008	2569-3	Incorporated into Water Right 6108-3	IL	0
05/16/2008	6201-3	Result of Licensing (396 to 396 acres)	LC	0
05/16/2008	6334B-3	Result of Licensing (133.7 to 132 acres)	LC	-1.7

05/16/2008	6343-3	Result of Licensing (269 to 264 acres)	LC	-5
05/16/2008	6334A-3	Result of Licensing (133.7 to 132 acres)	LC	-1.7
05/16/2008	6201A-3	Result of Licensing (135 to 132 acres)	LC	-3
05/16/2008	2485-3	Incorporated into Water Right licene 6764-3, 130 of 130 acres	IL	0
05/16/2008	6764-3	Result of Licensing, incorporates 130 acres from 2485-3 and 90 acres from 6193-3	LC	0
05/16/2008	6193-3	Incorporated into Water Right 6764-3	IL	0
06/12/2008	6333B-3	Result of Licensing (134 of 134 acres)	LC	0
10/30/2008	3065B-3	Result of Licensing (130 to 130 acres)	LC	0
10/30/2008	3065A-3	Amended by Water Right 3065B-3, 130 of 130 acres moved	IP	0
11/23/2009	7126-3	Permit approved by Chief Engineer - transferred 45 of 130 acres from 3054A-3	PE	0
11/23/2009	3054A-3	Reissued License for 85 of 130 acres due to approval of 7126-3	LC	0
04/27/2010	7198-3	Date Received, WMB Denied at 12-1-10 meeting	DN	
03/22/2011	4622A-3	Permit approved by Chief Engineer, took 101 acres from 4622-3 and 29 acres from 1523-3	PE	0
03/22/2011	4622-3	Amended by Water Right permit 4622A-3, 101 of 101 acres + diversion transferred	LC	0
03/22/2011	1523-3	29 acres taken by Water Right permit 4622A-3, Water Right license reissued for 131 acres	LC	0
07/12/2011	7863-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
10/05/2011	4622-3	Cancelled due to 4622A-3 taking all acres and diversion	CA	0
12/15/2011	7288-3	Date Received, Withdrawn due to stipulation with Chief Engineer	WI	
04/16/2012	6201B-3	Permit Approved by Chief Engineer, transferred all acres and diversion to other land	PE	0
04/16/2012	6201A-3	Incorporated into Water Right 6201B-3	IP	0
06/29/2012	7378-3	Date received, Chief Engineer recommended denial, withdrawn 9-27-12	WI	
06/29/2012	7379-3	Date received, Chief Engineer recommended denial, withdrawn 9-27-12	WI	
07/11/2012	7289-3	Permit approved by WMB	PE	270
07/11/2012	7290-3	Permit approved by WMB	PE	135
07/11/2012	7291-3	Permit approved by WMB	PE	135
07/11/2012	7292-3	Permit approved by WMB	PE	135
07/11/2012	7293-3	Permit approved by WMB	PE	135
08/23/2012	7390-3	Date received, withdrawn 8-7-13	WI	
10/09/2012	7126A-3	Permit approved by Chief Engineer - transferred acres back to their original location	PE	0
10/09/2012	7391-3	Permit approved by Chief Engineer, additional source (spring + drain tile) on acres covered by 6201B-3	PE	136
10/09/2012	7126-3	Cancelled by approval of 7126A-3, 45 of 45 acres were moved	CA	0
12/06/2012	282-3	Cancelled by WMB for abandonment/forfeiture	CA	-160
02/08/2013	7726-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/08/2013	7752-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/08/2013	7753-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/08/2013	7754-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/08/2013	7755-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/08/2013	7756-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	

02/08/2013	7757-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/08/2013	7759-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/10/2013	7727-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/11/2013	7731-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/11/2013	7732-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/15/2013	7733-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/15/2013	7734-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/15/2013	7736-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/19/2013	7737-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7738-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7739-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7740-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7741-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7742-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7743-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7744-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7745-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/19/2013	7746-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/28/2013	7751-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
02/28/2013	7758-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
03/07/2013	7373-3	Permit approved by WMB	PE	160
03/13/2013	7790-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
03/19/2013	7799-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
04/09/2013	7822-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
04/09/2013	7823-3	Date received, recommended for denial, withdrawn 6-13-13	WI	
05/02/2013	7551-3	Permit approved by WMB, additional acres on 470A-3	PE	90
05/02/2013	7637-3	Permit approved by WMB	PE	135
05/02/2013	7638-3	Permit approved by WMB	PE	135
05/02/2013	7639-3	Permit approved by WMB	PE	135
05/02/2013	7570-3	Permit approved by WMB	PE	280
05/02/2013	7571-3	Permit approved by WMB	PE	160
05/02/2013	7572-3	Permit approved by WMB	PE	140
05/02/2013	7573-3	Permit approved by WMB	PE	160
05/02/2013	7574-3	Permit approved by WMB	PE	160
05/02/2013	7575-3	Permit approved by WMB	PE	280
05/02/2013	7575A-3	Permit approved by Chief Engineer, half of 7575-3	PE	0
05/02/2013	7575B-3	Permit approved by Chief Engineer, half of 7575-3	PE	0
05/02/2013	7640-3	Permit approved by WMB	PE	160

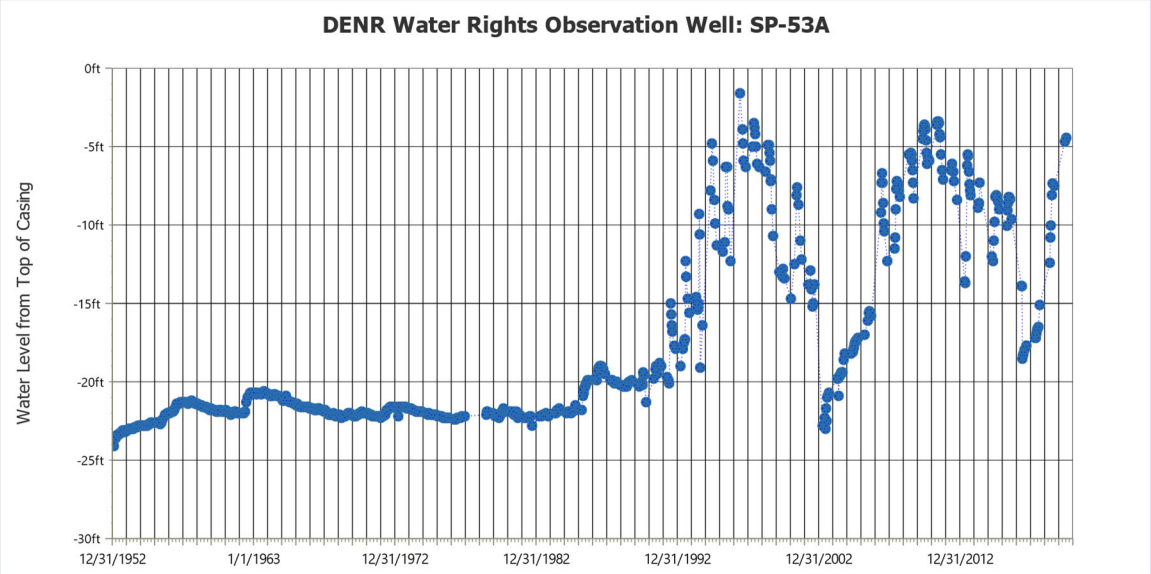
05/02/2013	7620-3	Permit approved by WMB	PE	136
05/02/2013	7575-3	Divided, 140 acres to 7575A-3, 140 acres to 7575B-3	OC	0
07/11/2013	7685-3	Permit approved by WMB	PE	75
07/11/2013	7716-3	Permit approved by WMB	PE	160
07/11/2013	7717-3	Permit approved by WMB	PE	135
07/11/2013	7718-3	Permit approved by WMB	PE	135
07/11/2013	7719-3	Permit approved by WMB	PE	135
07/11/2013	7720-3	Permit approved by WMB	PE	135
07/11/2013	7721-3	Permit approved by WMB	PE	100
07/11/2013	7722-3	Permit approved by WMB	PE	155
07/11/2013	7723-3	Permit approved by WMB	PE	300
07/11/2013	7724-3	Permit approved by WMB	PE	300
07/11/2013	7725-3	Permit approved by WMB	PE	135
07/11/2013	7725-3	7725-3 divided into approved and denied portions, 7725A-3 and 7725B-3	OC	0
07/11/2013	7725A-3	Approved portion of 7725-3	IP	0
07/11/2013	7858-3	Date received, WMB Denied at May 6-7 2015 meeting, 10-30-15 6th Judicial Court dismissed the appeal	DN	
07/11/2013	7859-3	Date received, WMB Denied at May 6-7 2015 meeting, 10-30-15 6th Judicial Court dismissed the appeal	DN	
07/11/2013	7860-3	Date received, WMB Denied at May 6-7 2015 meeting, 10-30-15 6th Judicial Court dismissed the appeal	DN	
07/11/2013	7861-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7864-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7865-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7866-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7867-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7868-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7869-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7870-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7871-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/12/2013	7872-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
07/23/2013	7885-3	Date received, recommended for denial, withdrawn 10-10-13	WI	
09/05/2013	7894-3	Date received, WMB Denied at May 6-7 2015 meeting, 10-30-15 6th Judicial Court dismissed the appeal	DN	
11/01/2013	7920-3	Date received, recommended for denial, withdrawn 1-24-14	WI	
11/01/2013	7979-3	Date received, recommended for denial, withdrawn 5-15-14	WI	
02/08/2014	7725B-3	Denied portion of 7725-3	DN	0
02/15/2014	7735-3	Date received, WMB Denied at 10-3-13 meeting, 8-21-14 6th Judicial Court affirmed the denial	DN	
02/21/2014	4794A-3	Date Received, Withdrawn 3-3-14	WI	

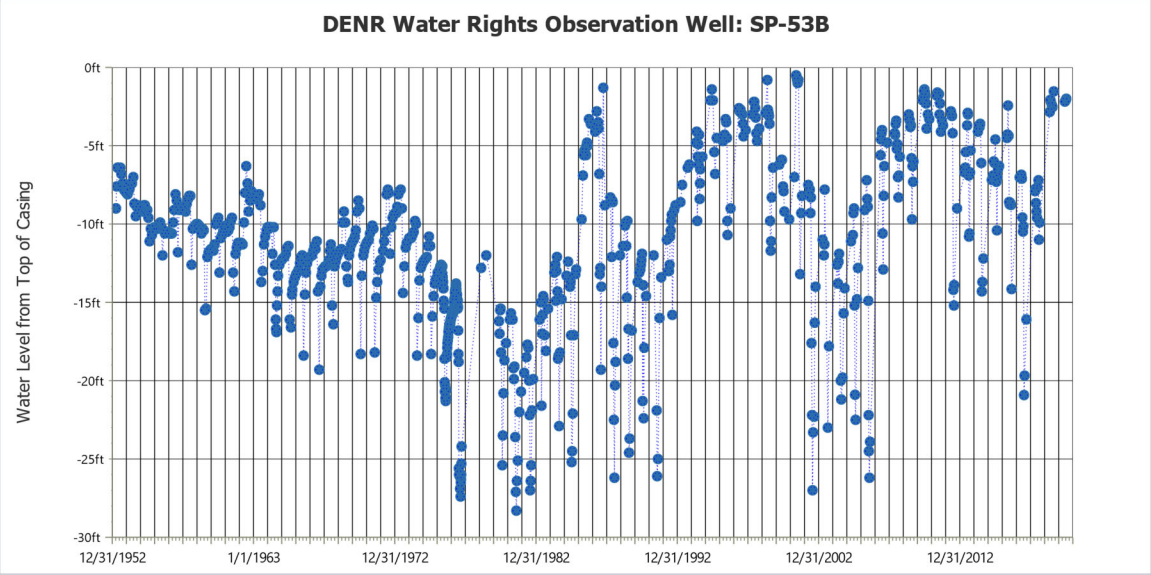
02/21/2014	7721A-3	Date received, withdrawn 3-3-14	WI	
04/28/2014	8013-3	Date received, WMB Denied at 10-22-14 meeting	DN	
05/07/2014	4134A-3	Permit approved by WMB, took 128 of 128 acres from 4134-3	PE	0
05/07/2014	4134-3	Incorporated into Water Right 4134A-3	IP	
05/27/2014	7718A-3	Permit approved by Chief Engineer, amends 7718-3 by moving acres and diversion	PE	0
05/27/2014	7718-3	Amended by Water Right 7718A-3	IP	0
06/30/2014	8034-3	Date Received, Recommended for Denial, Withdrawn 9-16-14	WI	
07/10/2014	4134-3	Cancelled due to 4134A-3 taking all acres and diversion	CA	0
08/25/2014	3321A-3	Permit approved by Chief Engineer, moved acres of 3321-3	PE	0
08/25/2014	3321-3	Incorporated into Water Right 3321A-3	LC	0
09/02/2014	782A-3	Permit approved by Chief Engineer, amends 782-3 by moving acres and diversion	PE	0
09/02/2014	782-3	Amended by 782A-3	IP	0
10/14/2014	7725C-3	Permit approved by Chief Engineer, amends 7725A-3 by moving acres and diversion	PE	0
10/14/2014	7725A-3	Incorporated into Water Right 7725C-3	IP	0
10/22/2014	1613-3	Cancelled by WMB for abandonment/forfeiture	CA	-130
12/24/2014	6201-3	Ownership Change into Water Right 6201C-3 and 6201D-3	OC	0
12/24/2014	6201C-3	Ownership Change, took 264 of 396 acres from 6201-3	LC	0
12/24/2014	6201D-3	Ownership Change, took 132 of 396 acres from 6201-3	LC	0
01/12/2015	3053A-3	Permit approved by Chief Engineer, took 130 of 152 acres of 3053-3	PE	-22
01/12/2015	3053-3	Amended by Water Right 3053A-3, transferred the irrigated acres (152? of 152 acres)	IP	0
02/25/2015	8083-3	Number 24 of 28 in the Random Selection Priority List	HD	
02/25/2015	8084-3	Number 10 of 28 in the Random Selection Priority List	HD	
02/25/2015	8085-3	Number 4 of 28 in the Random Selection Priority List	HD	
02/25/2015	8099-3	Number 13 of 28 in the Random Selection Priority List	HD	
02/25/2015	8100-3	Number 19 of 28 in the Random Selection Priority List	HD	
02/25/2015	8101-3	Number 2 of 28 in the Random Selection Priority List	HD	
02/25/2015	8102-3	Number 16 of 28 in the Random Selection Priority List	HD	
02/25/2015	8103-3	Number 9 of 28 in the Random Selection Priority List	HD	
02/25/2015	8104-3	Number 27 of 28 in the Random Selection Priority List	HD	
02/25/2015	8105-3	Number 11 of 28 in the Random Selection Priority List	HD	
02/25/2015	8106-3	Number 8 of 28 in the Random Selection Priority List	HD	
02/25/2015	8107-3	Number 22 of 28 in the Random Selection Priority List	HD	
02/25/2015	8108-3	Number 17 of 28 in the Random Selection Priority List	HD	
02/25/2015	8109-3	Number 25 of 28 in the Random Selection Priority List	HD	
02/25/2015	8110-3	Number 18 of 28 in the Random Selection Priority List	HD	
02/25/2015	8111-3	Number 14 of 28 in the Random Selection Priority List	HD	
02/25/2015	8120-3	Number 5 of 28 in the Random Selection Priority List	HD	
02/25/2015	8121-3	Number 20 of 28 in the Random Selection Priority List	HD	

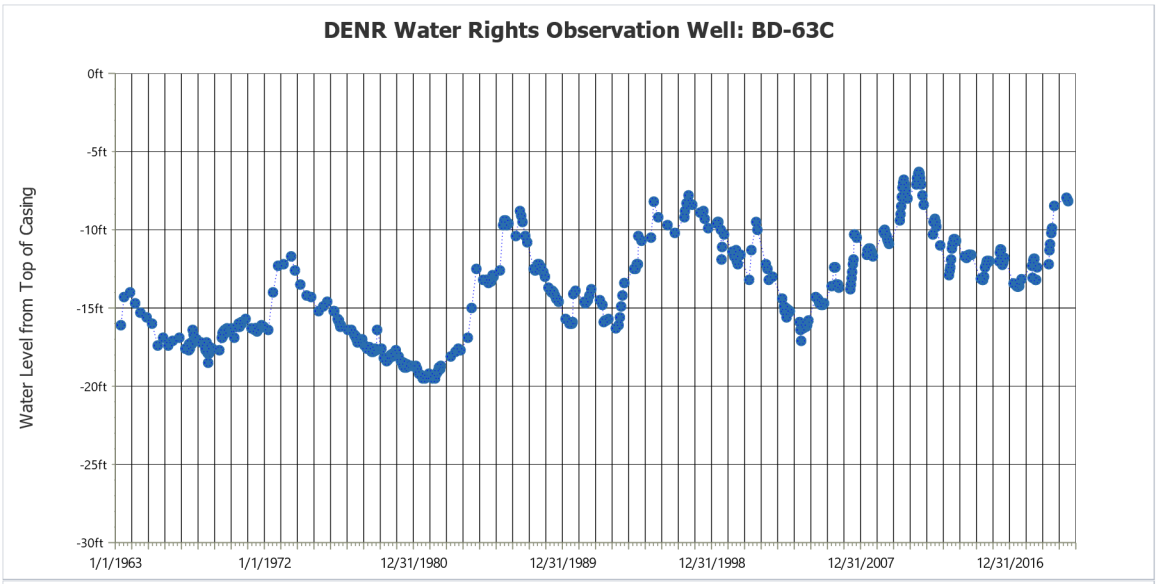
02/25/2015	8122-3	Number 23 of 28 in the Random Selection Priority List	HD	
02/25/2015	8128-3	Number 1 of 28 in the Random Selection Priority List	HD	
02/25/2015	8129-3	Number 12 of 28 in the Random Selection Priority List	HD	
02/25/2015	8130-3	Number 21 of 28 in the Random Selection Priority List	HD	
02/25/2015	8131-3	Number 6 of 28 in the Random Selection Priority List	HD	
02/25/2015	8132-3	Number 28 of 28 in the Random Selection Priority List	HD	
02/25/2015	8133-3	Number 15 of 28 in the Random Selection Priority List	HD	
02/25/2015	8135-3	Number 26 of 28 in the Random Selection Priority List	HD	
02/25/2015	8137-3	Number 3 of 28 in the Random Selection Priority List	HD	
02/25/2015	8138-3	Number 7 of 28 in the Random Selection Priority List	HD	
03/25/2015	7570A-3	Date received, permit was issued but later deemed invalid	WI	
05/07/2015	2078A-3	Permit approved by Chief Engineer, moved 132 of 924 acres of Water Right License 2078-3	PE	0
07/06/2015	7571A-3	Permit approved by Chief Engineer, amends 7571-3 by moving acres and diversion	PE	0
07/06/2015	7571-3	Amended by Water Right 7571A-3, transferred acres and diversion to other land	IP	0
07/27/2015	4794B-3	Permit approved by Chief Engineer, moved 28 acres of 4794-3, incorporated 4794-3	PE	0
07/27/2015	7573A-3	Permit approved by Chief Engineer, took 24 acres from 7573-3 and incorporated 4723-3A	PE	0
07/27/2015	7573-3	Reissued Permit for 136 of 160 acres, 7573A-3 transferred 24 acres	PE	0
07/27/2015	4794C-3	Permit approved by Chief Engineer, took 20 acres from 4794-3 and incorporated 104 acres of 3317A-3	PE	0
07/27/2015	4723-3A	Incorporated into Water Right 7573A-3	IP	0
07/27/2015	4794-3	Amended, 4794B-3 moved 28 acres, 4794C-3 transferred 20 acres	IP	0
07/27/2015	3317A-3	Incorporated into Water Right 4794C-3	IP	0
08/31/2015	7620A-3	Permit approved by Chief Engineer, took 72 acres from 7620-3	PE	0
08/31/2015	7620B-3	Permit approved by Chief Engineer, took 64 acres from 7620-3	PE	0
08/31/2015	7620-3	Divided, 72 acres to 7620A-3, 64 acres to 7620B-3	IP	0
09/08/2015	7572A-3	Date received, withdrawn	WI	
11/09/2015	7572B-3	Permit approved by Chief Engineer, amends 7572-3 by moving acres and diversion	PE	0
11/09/2015	7572-3	Amended by Water Right 7572B-3, transferred acres and diversion to other land	IP	0
02/01/2016	7293-3	Result of Licensing (135 to 135 acres)	LC	0
02/01/2016	7373-3	Result of Licensing (160 to 152 acres)	LC	-8
02/24/2016	4794C-3	Result of Licensing (124 to 124 acres)	LC	0
03/03/2016	3243-3	Cancelled by WMB for abandonment/forfeiture	CA	-89
06/29/2016	7292-3	Result of Licensing (135 + 132 (6339B-3) to 266 acres)	LC	-1
06/29/2016	6339B-3	Incorporated all 132 acres into Water Right 7292-3	IL	0
06/29/2016	7292-3	Divided, 133 acres to 7292A-3, 133 acres to 7292B-3	IL	0
06/29/2016	7292A-3	Took 133 of 266 acres from 7292-3	LC	0
06/29/2016	7292B-3	Took 133 of 266 acres from 7292-3	LC	0
09/06/2016	7685-3	Result of Licensing (75 to 75 acres)	LC	0
09/12/2016	7289-3	Result of Licensing (270 to 270 acres)	LC	0

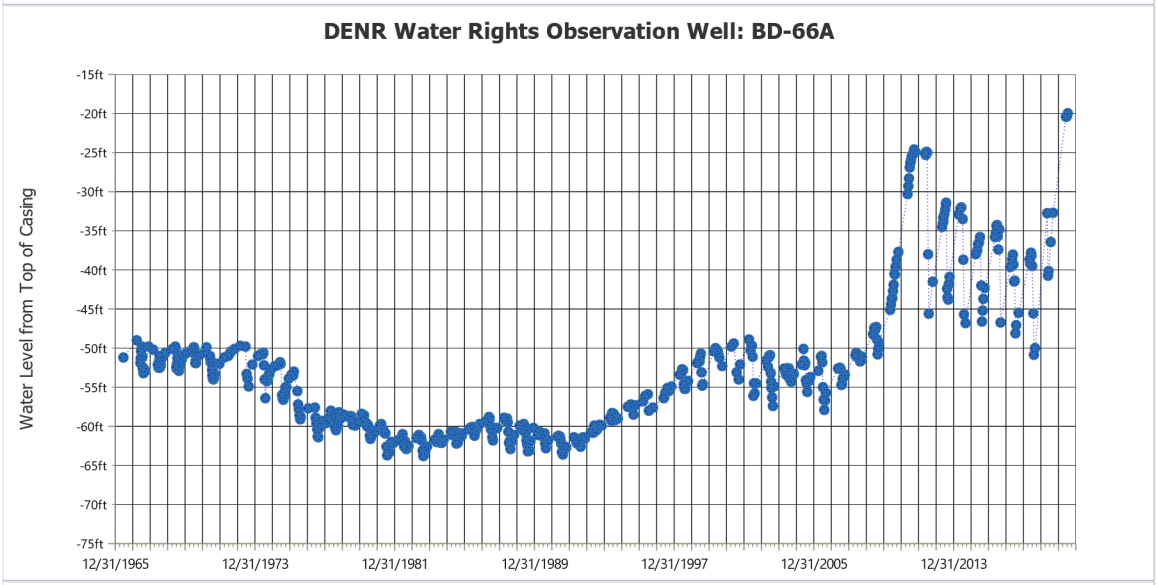
09/12/2016	6343A-3	Ownership Change, took 132 of 264 acres from 6343-3	LC	0
09/12/2016	6343B-3	Ownership Change, took 132 of 264 acres from 6343-3	LC	0
09/12/2016	6343-3	Ownership Change, 132 acres to 6343A-3 and 132 acres to 6343B-3	OC	0
10/11/2016	7718A-3	Result of Licensing (135 to 135 acres)	LC	0
10/24/2016	4134A-3	Result of licensing (128 to 128 acres)	LC	0
06/18/2018	7723A-3	Date received, withdrawn 7-17-18	WI	
12/20/2018	7639-3	Result of Licensing (135 to 135 acres)	LC	0
12/20/2018	4794B-3	Result of Licensing (244 + 135 (7719-3) to 278 acres)	LC	-101
12/20/2018	7719-3	Incorporated into Water Right 4794B-3	IL	0
05/22/2019	4622A-3	Result of Licensing (130 to 130 acres)	LC	0
06/27/2019	3321A-3	Result of Licensing (120 to 120 acres)	LC	0
06/27/2019	2078A-3	Result of Licensing (132 to 132 acres)	LC	0
06/27/2019	2078-3	License reissued for 792 acres	LC	0
01/08/2020	7570-3	Result of Licensing (280 to 259 acres)	LC	-21
01/08/2020	7571A-3	Result of Licensing (160 + 135 (7717-3) to 270 acres)	LC	-25
01/08/2020	7717-3	Incorporated into Water Right 7571A-3	IL	0
02/24/2020	7290-3	Result of Licensing (135 to 135 acres)	LC	0
02/24/2020	7291-3	Result of Licensing (135 to 135 acres)	LC	0
02/24/2020	7573-3	Result of Licensing (136 to 134 acres)	LC	-2
02/24/2020	7574-3	Result of Licensing (160 + 140 (7575A-3) to 268 acres)	LC	-32
02/24/2020	7575B-3	Result of Licensing (140 to 134 acres)	LC	-6
02/24/2020	7725C-3	Result of Licensing (135 to 135 acres)	LC	0
02/24/2020	7573A-3	Result of Licensing (160 to 156 acres)	LC	-4
02/24/2020	7572B-3	Result of Licensing (140 to 135 acres)	LC	-5
02/24/2020	7575A-3	Result of Licensing, Incorporated into Water Right 7574-3	IL	0
03/09/2020	7637-3	Result of Licensing (135 to 135 acres)	LC	0
03/09/2020	7720-3	Result of Licensing (135 to 135 acres)	LC	0
03/13/2020	7640-3	Result of Licensing (160 to 158 acres)	LC	-2
03/25/2020	7551-3	Result of Licensing (90 + 136 (470A-3) to 219 acres)	LC	-7
03/25/2020	782A-3	Result of Licensing (160 to 136 acres)	LC	-24
03/25/2020	470A-3	Incorporated into Water Right 7551-3	IL	0
03/25/2020	472A-3	Result of Licensing (160 to 140 acres)	LC	-20
05/26/2020	6333A-3	Result of Licensing (100 + 157 (6330A-3) to 215 acres)	LC	-42
05/26/2020	7723-3	Result of Licensing (300 + 155 (7722-3) to 405 acres)	LC	-50
05/26/2020	6330A-3	Incorporated into Water Right 6333A-3	IL	0
05/26/2020	7722-3	Incorporated into Water Right 7723-3	IL	0
06/01/2020	7724-3	Result of Licensing (300 to 300 acres)	LC	0
09/09/2020	7716-3	Result of Licensing (160 to 135 acres)	LC	-25

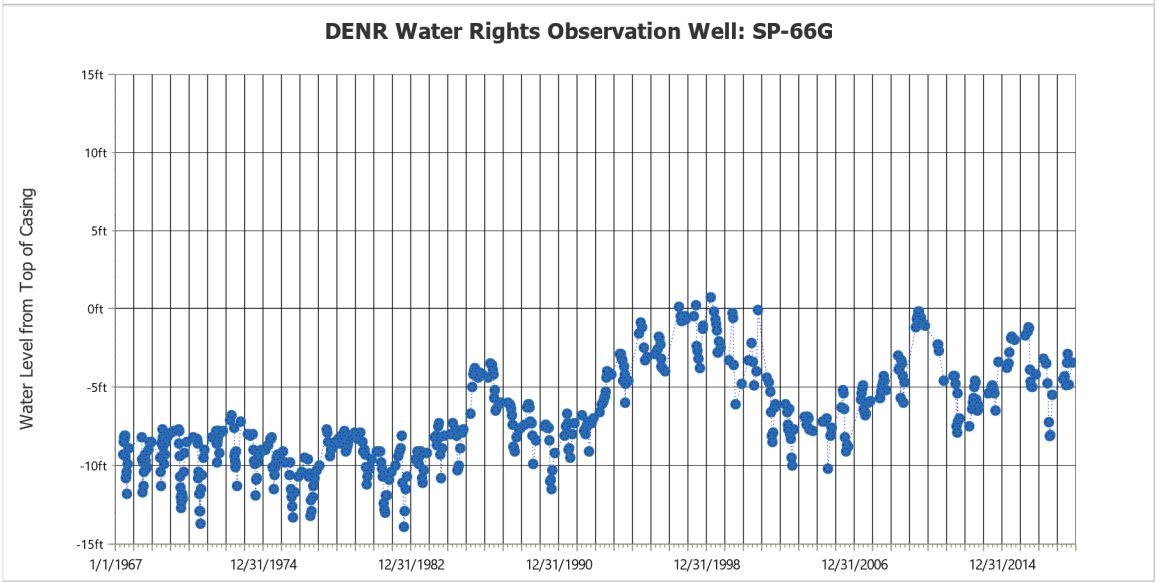
Appendix B: SD DENR-Water Rights Program Tulare: Western Spink Hitchcock aquifer observation well hydrographs (Water Rights, 2020b).

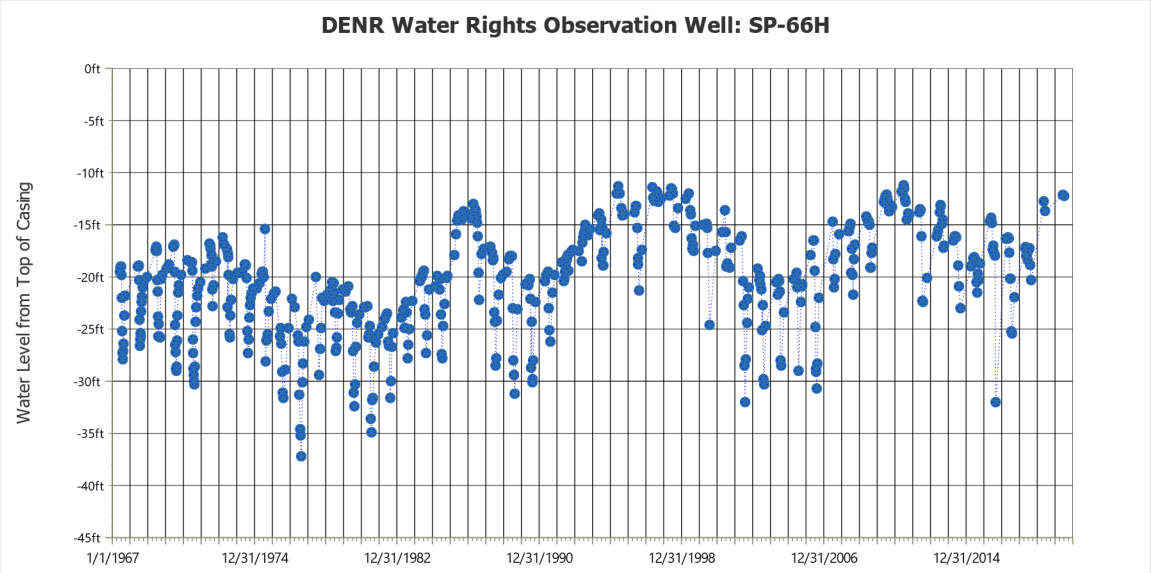


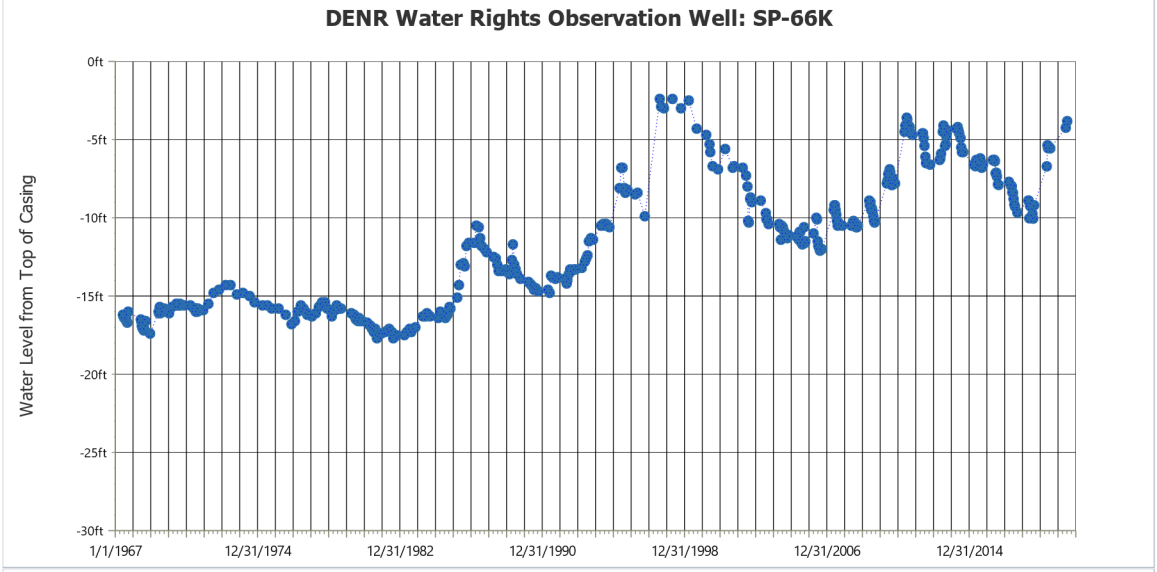


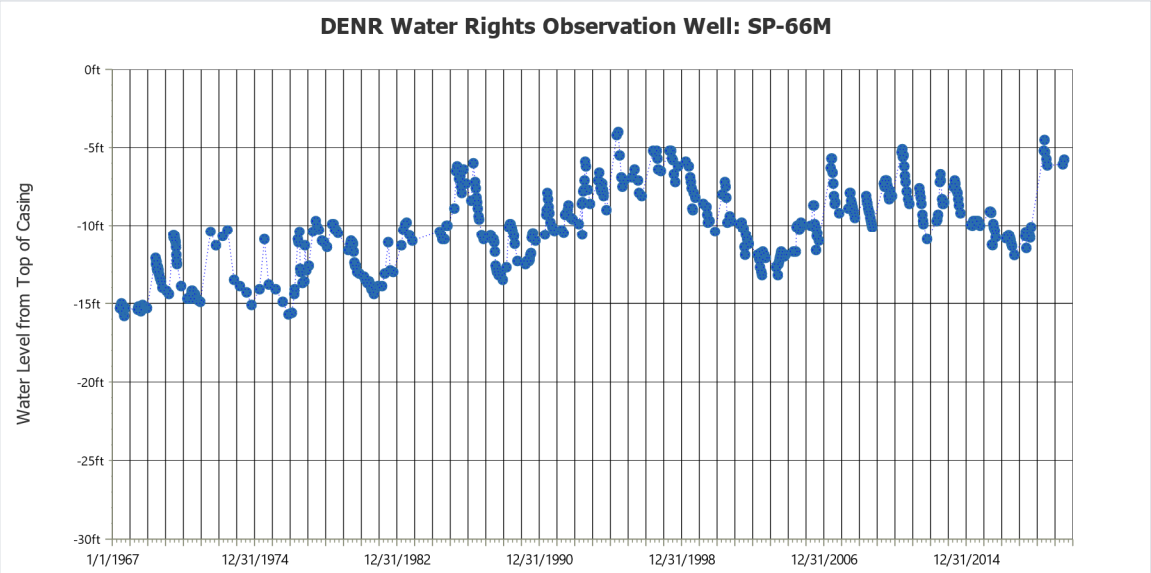

DENR Water Rights Observation Well: BD-63C
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1963
1/1/1972
12/31/1980
12/31/1989
12/31/1998
12/31/2007
12/31/2016

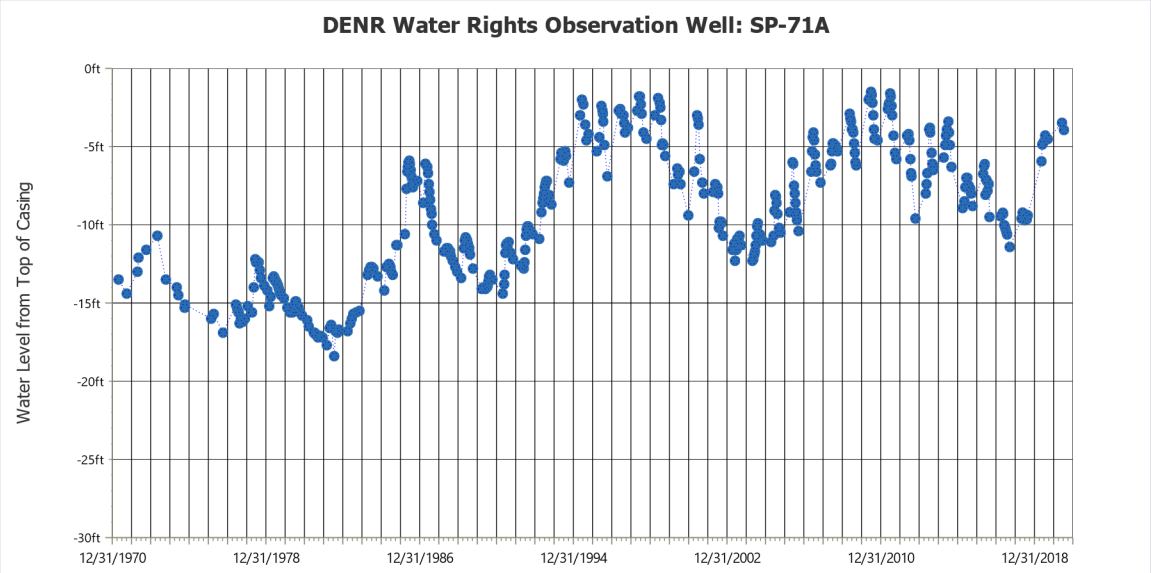

DENR Water Rights Observation Well: BD-66A
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
-65ft
-70ft
-75ft
12/31/1965
12/31/1973
12/31/1981
12/31/1989
12/31/1997
12/31/2005
12/31/2013

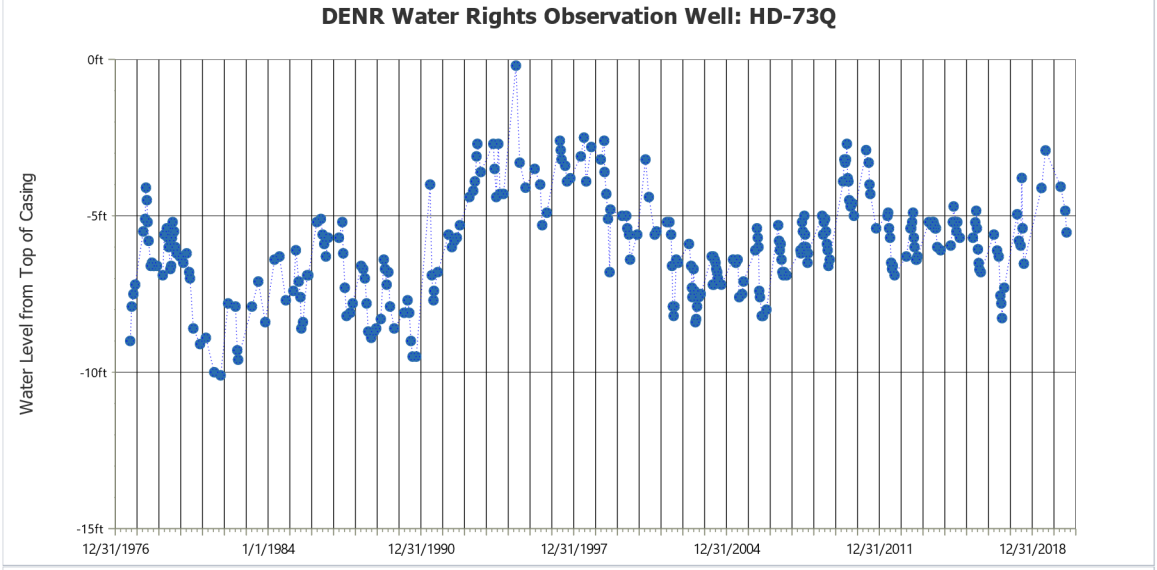

DENR Water Rights Observation Well: SP-66G
Water Level from Top of Casing
15ft
10ft
5ft
0ft
-5ft
-10ft
-15ft
1/1/1967
12/31/1974
12/31/1982
12/31/1990
12/31/1998
12/31/2006
12/31/2014

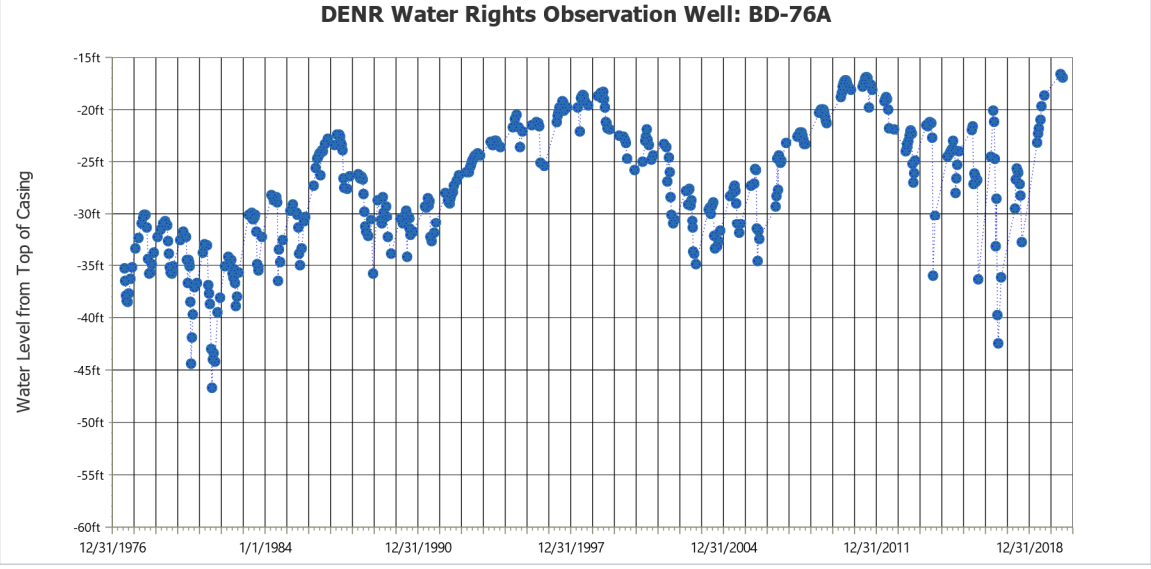

DENR Water Rights Observation Well: SP-66H
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
1/1/1967
12/31/1974
12/31/1982
12/31/1990
12/31/1998
12/31/2006
12/31/2014

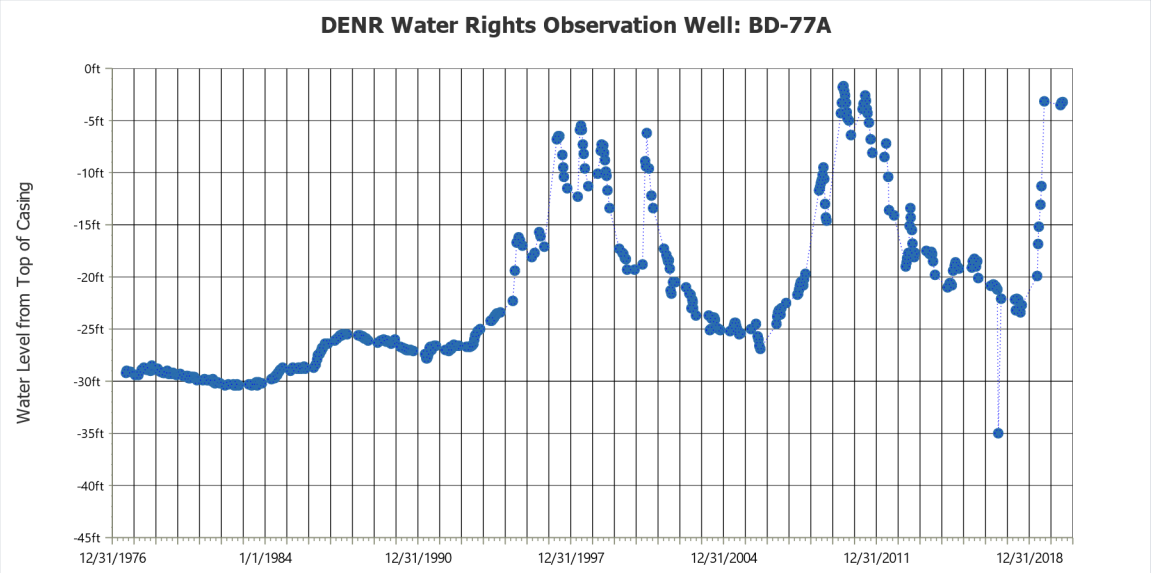

DENR Water Rights Observation Well: SP-66K
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1967
12/31/1974
12/31/1982
12/31/1990
12/31/1998
12/31/2006
12/31/2014

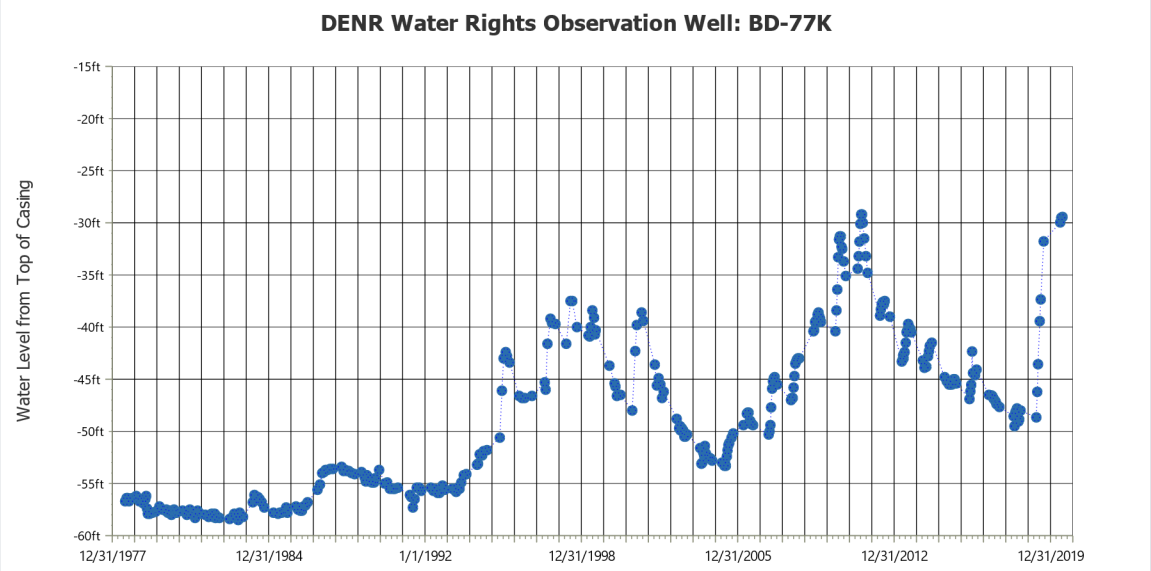

DENR Water Rights Observation Well: SP-66M
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1967
12/31/1974
12/31/1982
12/31/1990
12/31/1998
12/31/2006
12/31/2014

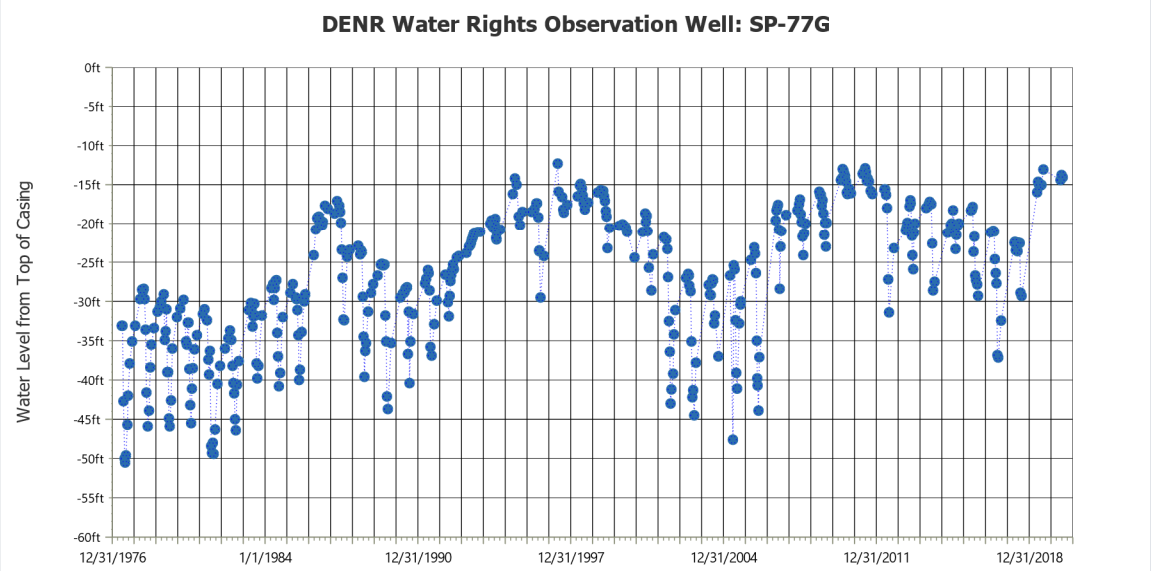

DENR Water Rights Observation Well: SP-71A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1970
12/31/1978
12/31/1986
12/31/1994
12/31/2002
12/31/2010
12/31/2018

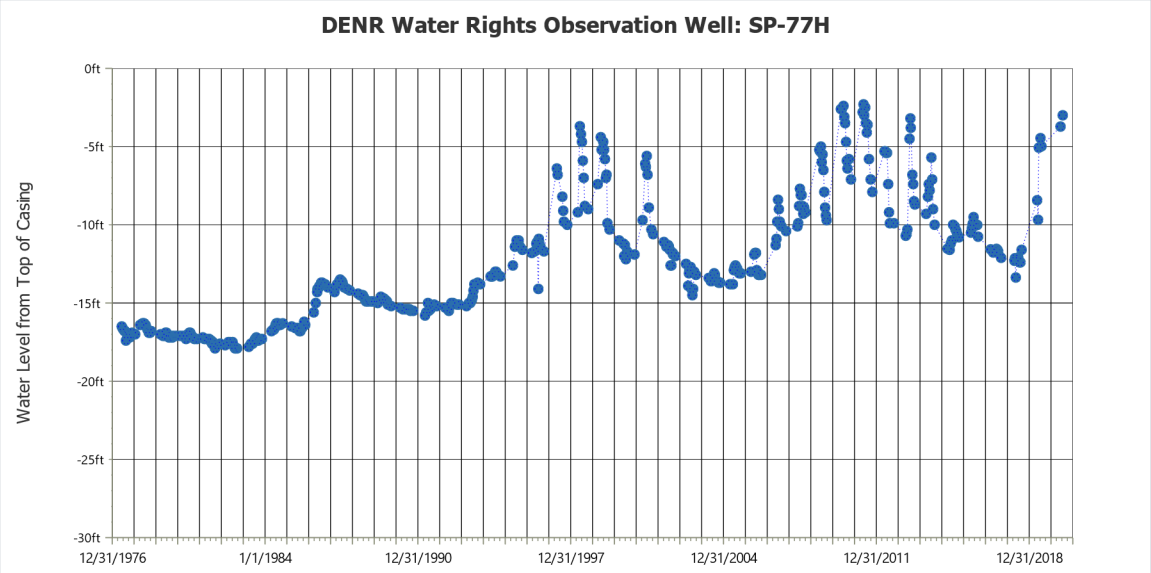

DENR Water Rights Observation Well: HD-73Q
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

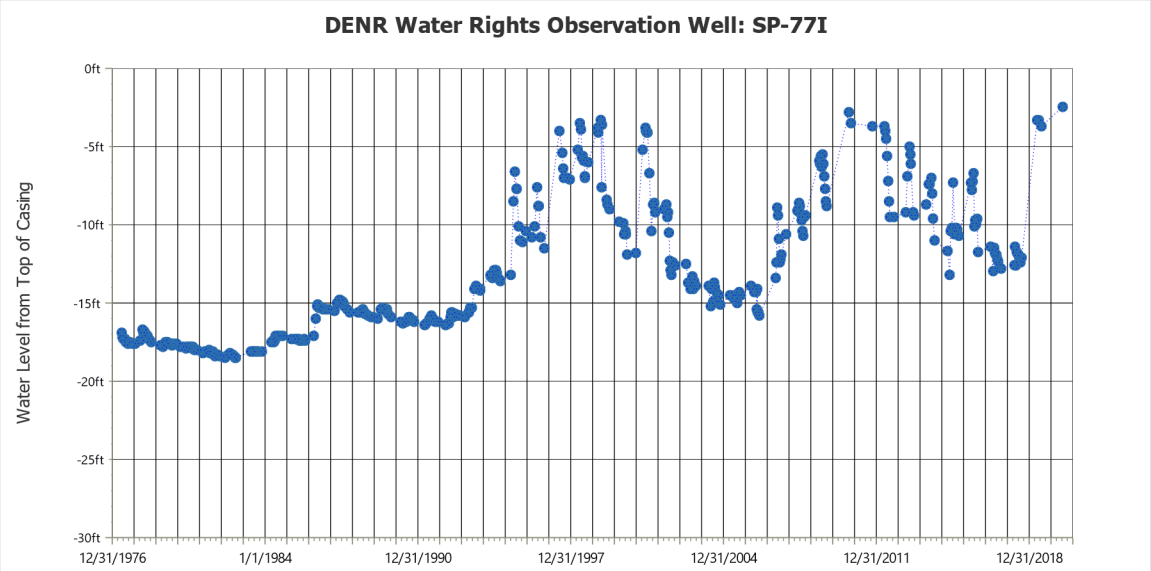

DENR Water Rights Observation Well: BD-76A
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

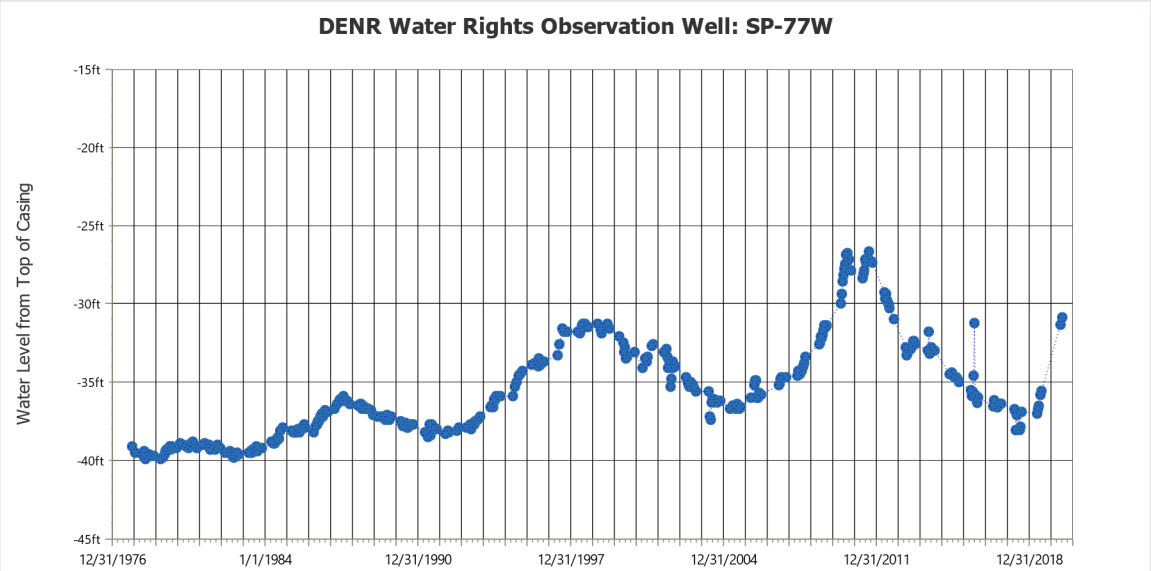

DENR Water Rights Observation Well: BD-77A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

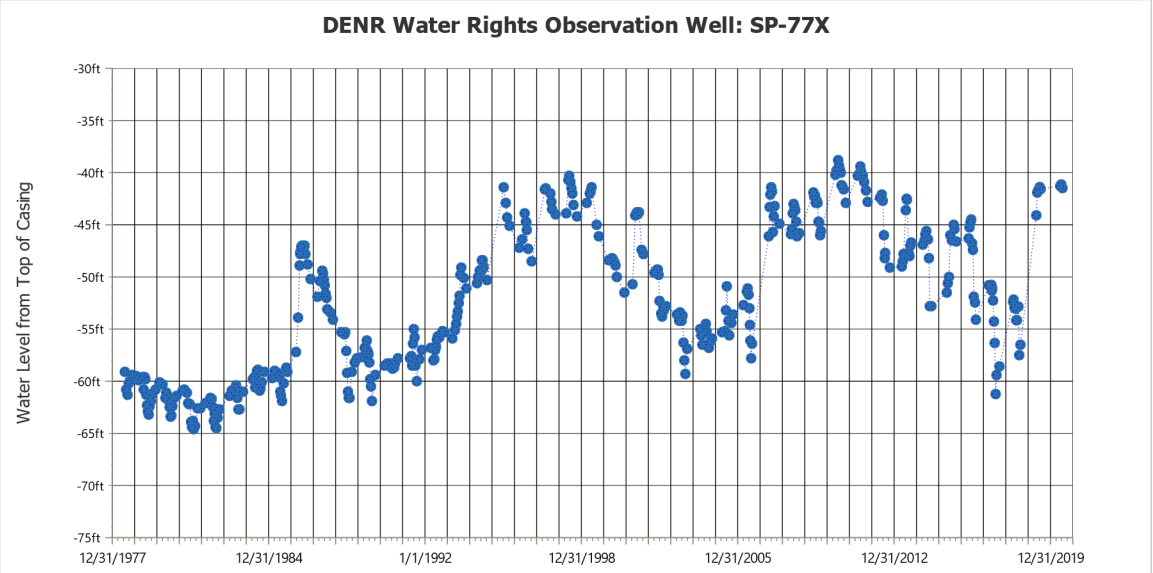

DENR Water Rights Observation Well: BD-77K
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
12/31/1977
12/31/1984
1/1/1992
12/31/1998
12/31/2005
12/31/2012
12/31/2019

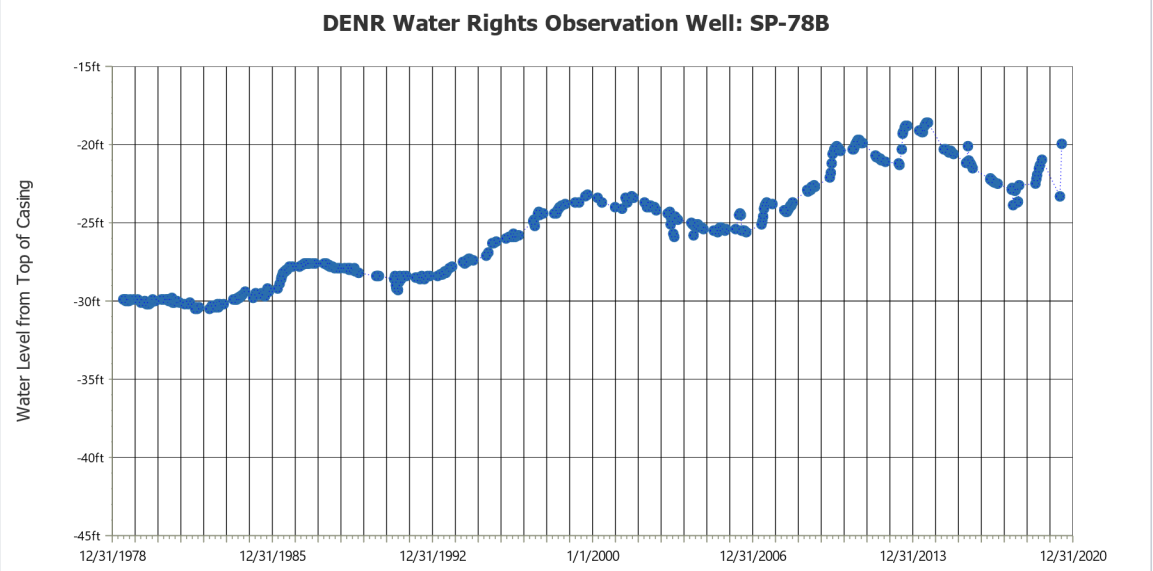

DENR Water Rights Observation Well: SP-77G
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

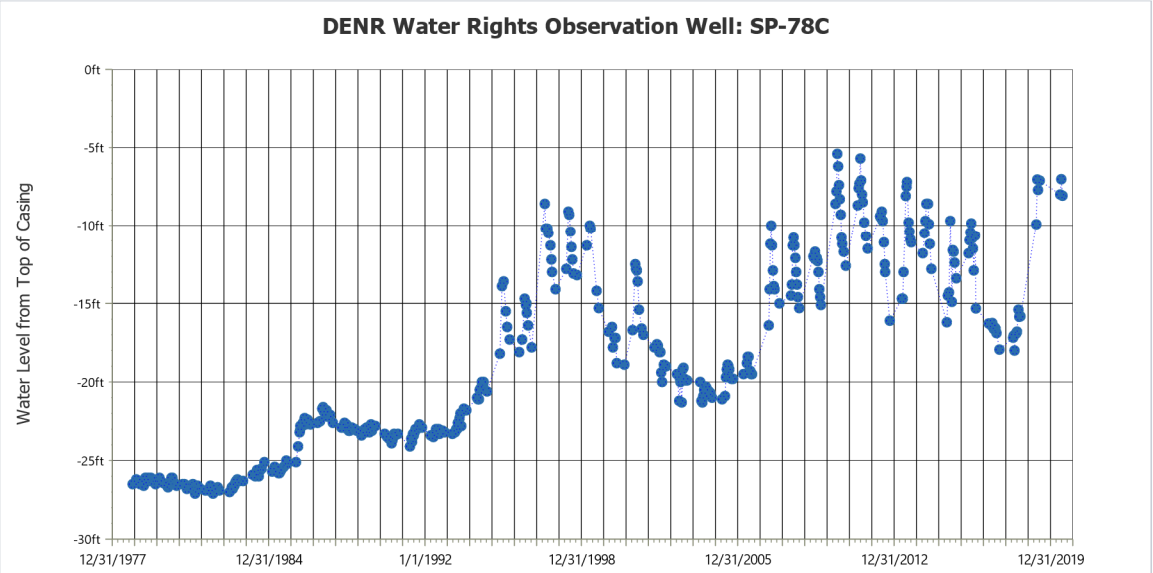

DENR Water Rights Observation Well: SP-77H
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

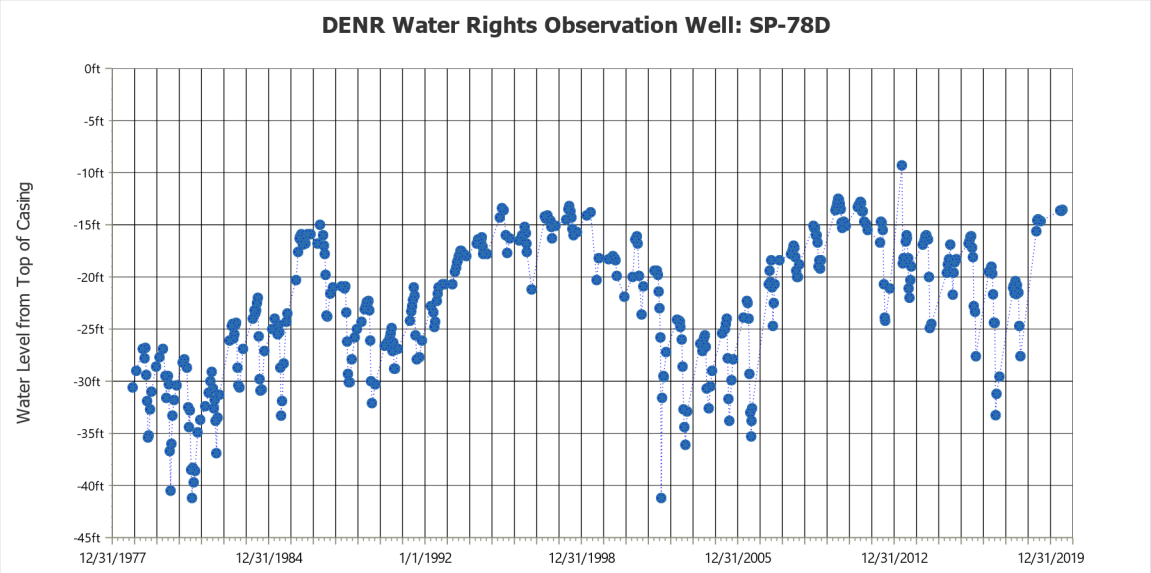

DENR Water Rights Observation Well: SP-77I
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

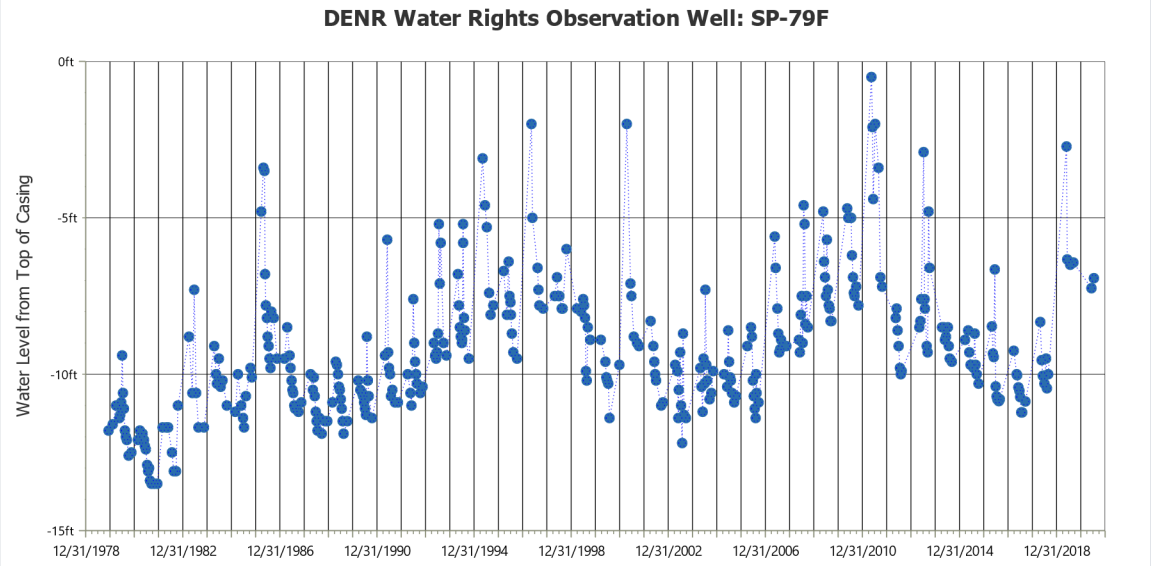

DENR Water Rights Observation Well: SP-77W
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1976
1/1/1984
12/31/1990
12/31/1997
12/31/2004
12/31/2011
12/31/2018

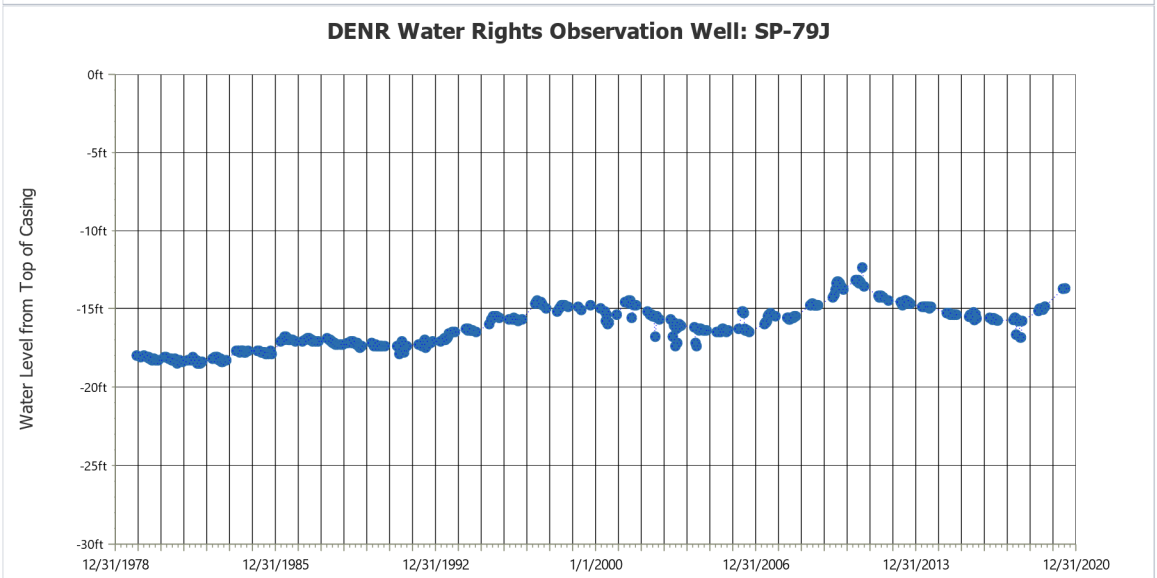

DENR Water Rights Observation Well: SP-77X
Water Level from Top of Casing
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
-65ft
-70ft
-75ft
12/31/1977
12/31/1984
1/1/1992
12/31/1998
12/31/2005
12/31/2012
12/31/2019

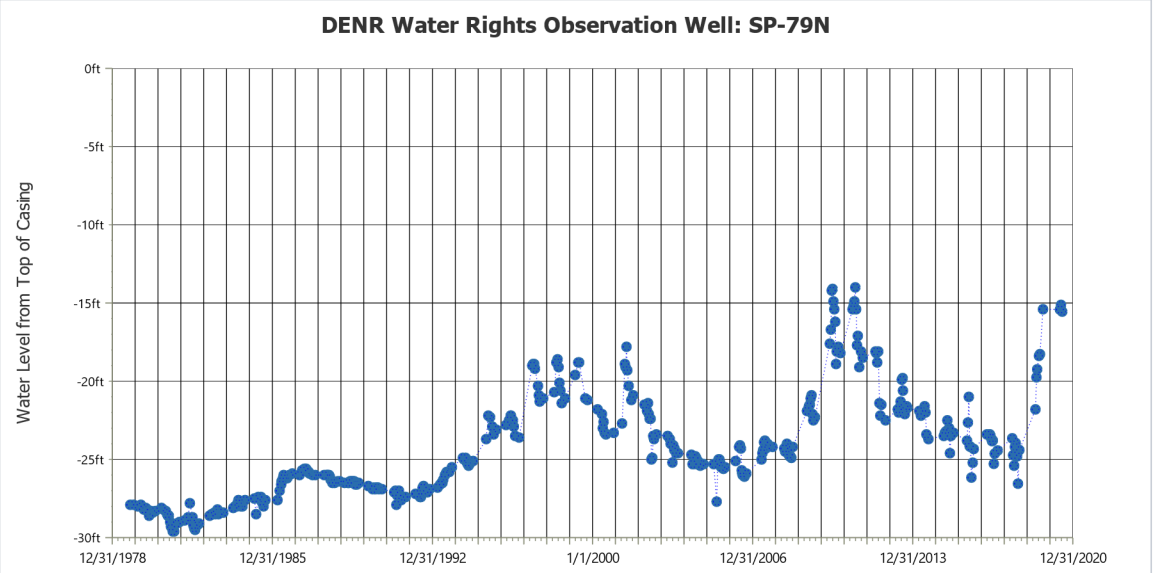

DENR Water Rights Observation Well: SP-78B
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1978
12/31/1985
12/31/1992
1/1/2000
12/31/2006
12/31/2013
12/31/2020

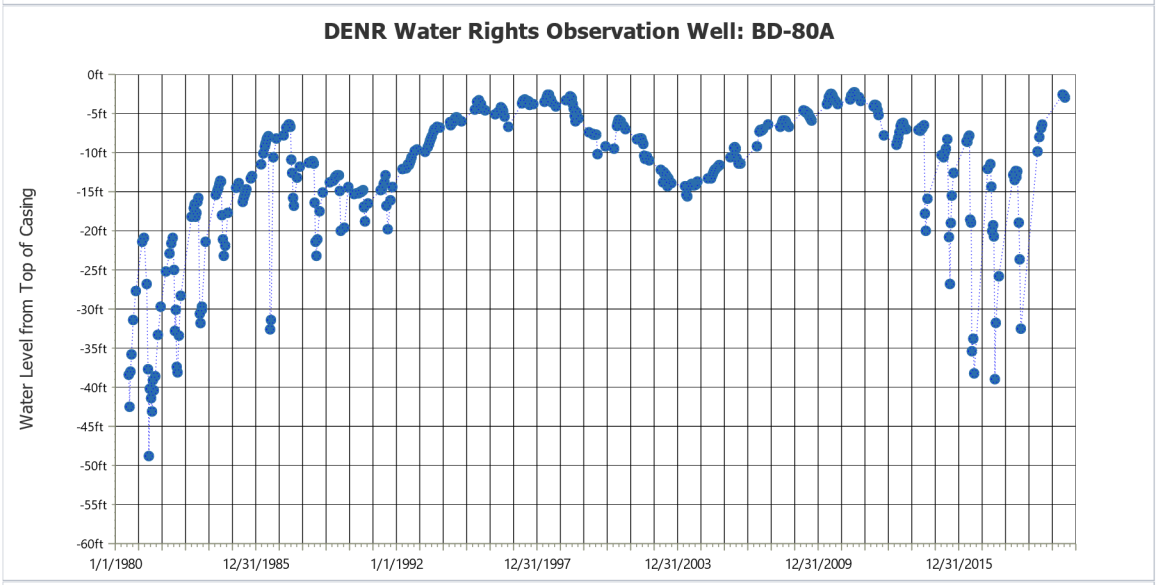

DENR Water Rights Observation Well: SP-78C
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1977
12/31/1984
1/1/1992
12/31/1998
12/31/2005
12/31/2012
12/31/2019

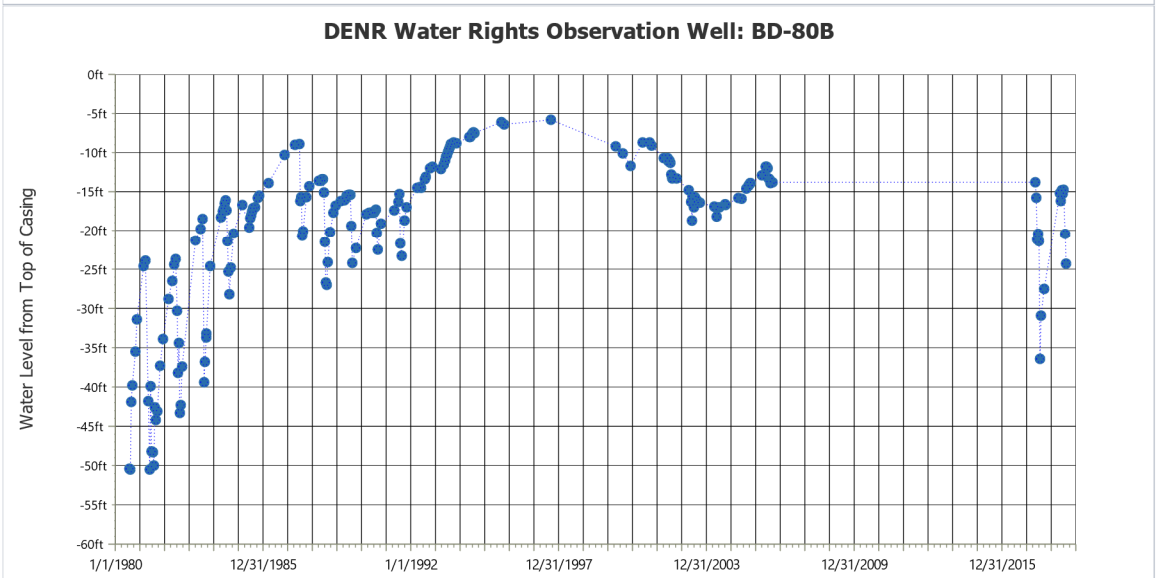

DENR Water Rights Observation Well: SP-78D
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
12/31/1977
12/31/1984
1/1/1992
12/31/1998
12/31/2005
12/31/2012
12/31/2019

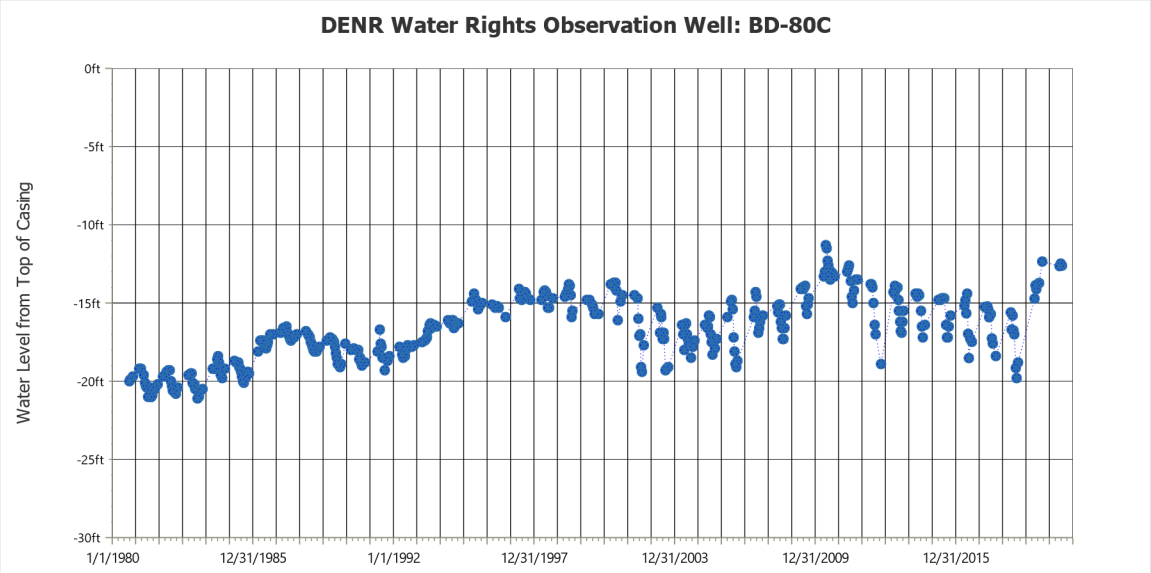

DENR Water Rights Observation Well: SP-79F
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
12/31/1978
12/31/1982
12/31/1986
12/31/1990
12/31/1994
12/31/1998
12/31/2002
12/31/2006
12/31/2010
12/31/2014
12/31/2018

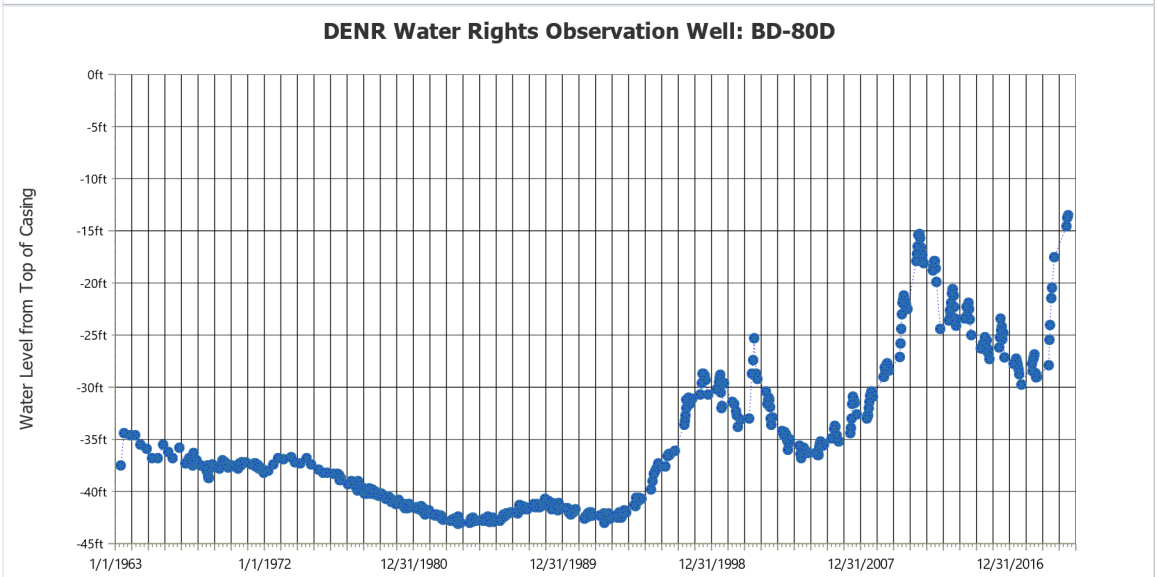

DENR Water Rights Observation Well: SP-79J
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1978
12/31/1985
12/31/1992
1/1/2000
12/31/2006
12/31/2013
12/31/2020

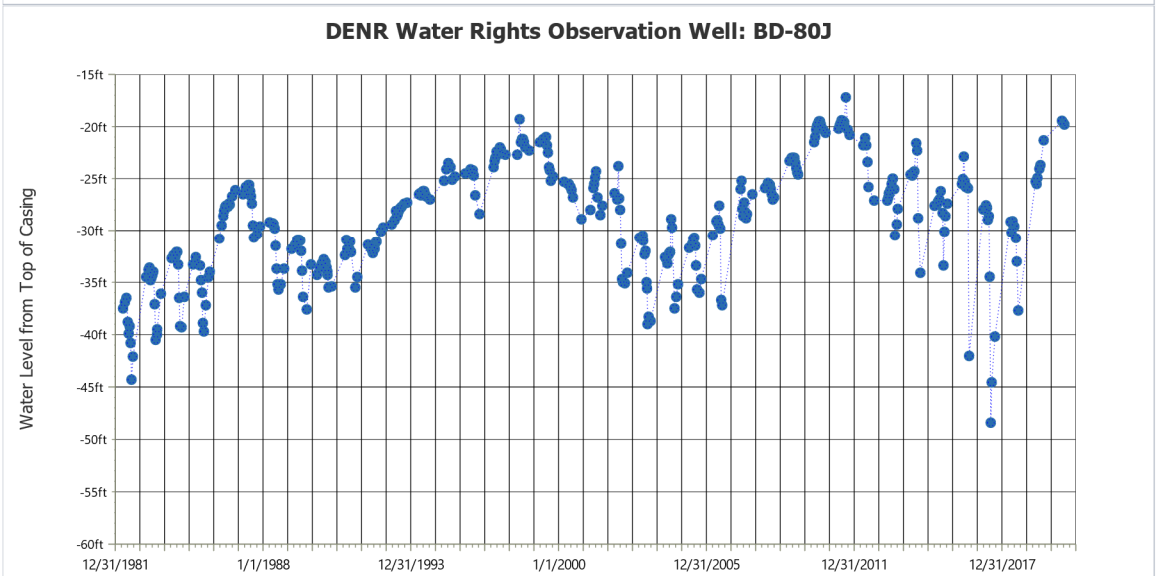

DENR Water Rights Observation Well: SP-79N
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1978
12/31/1985
12/31/1992
1/1/2000
12/31/2006
12/31/2013
12/31/2020

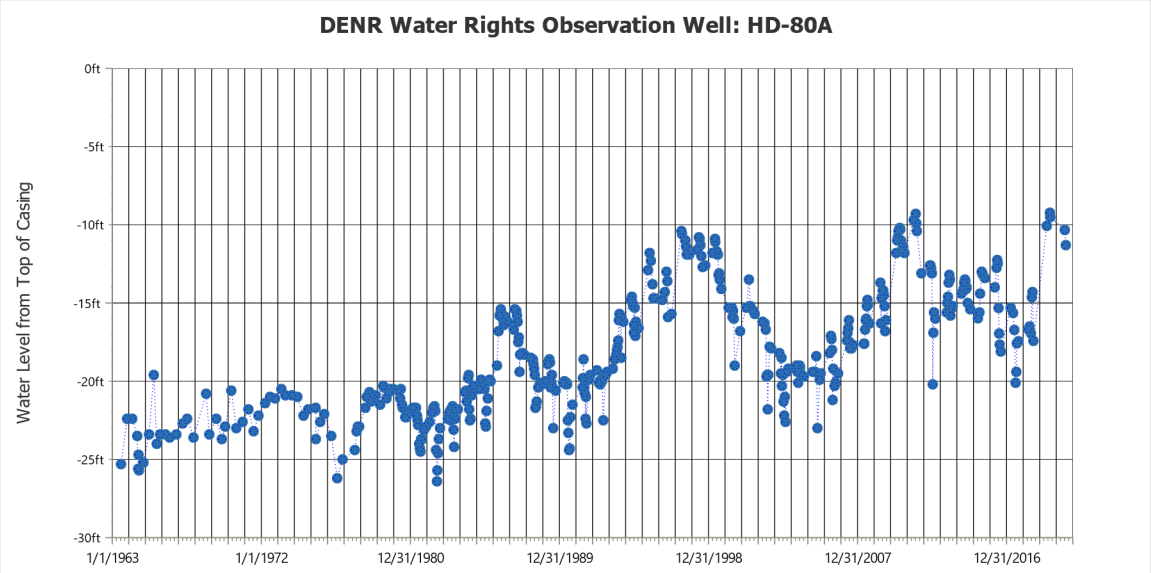

DENR Water Rights Observation Well: BD-80A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

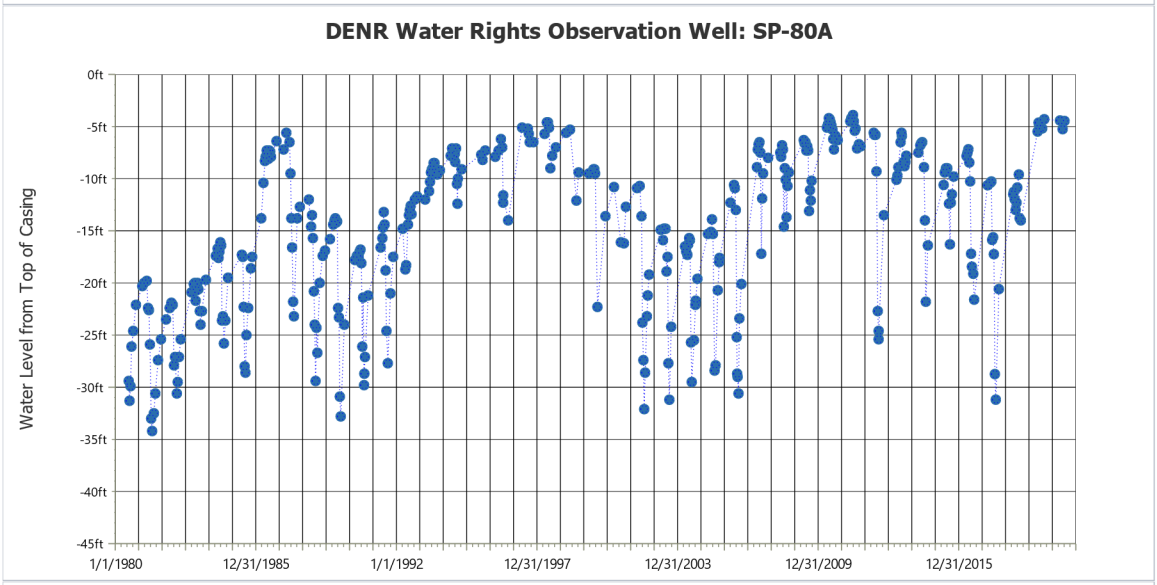

DENR Water Rights Observation Well: BD-80B
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

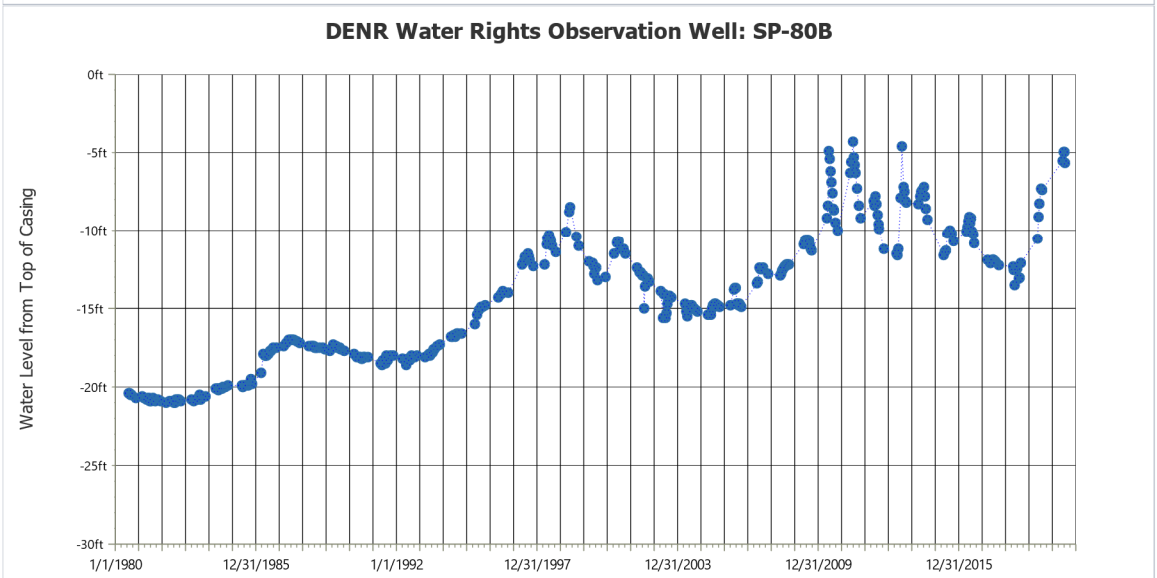

DENR Water Rights Observation Well: BD-80C
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

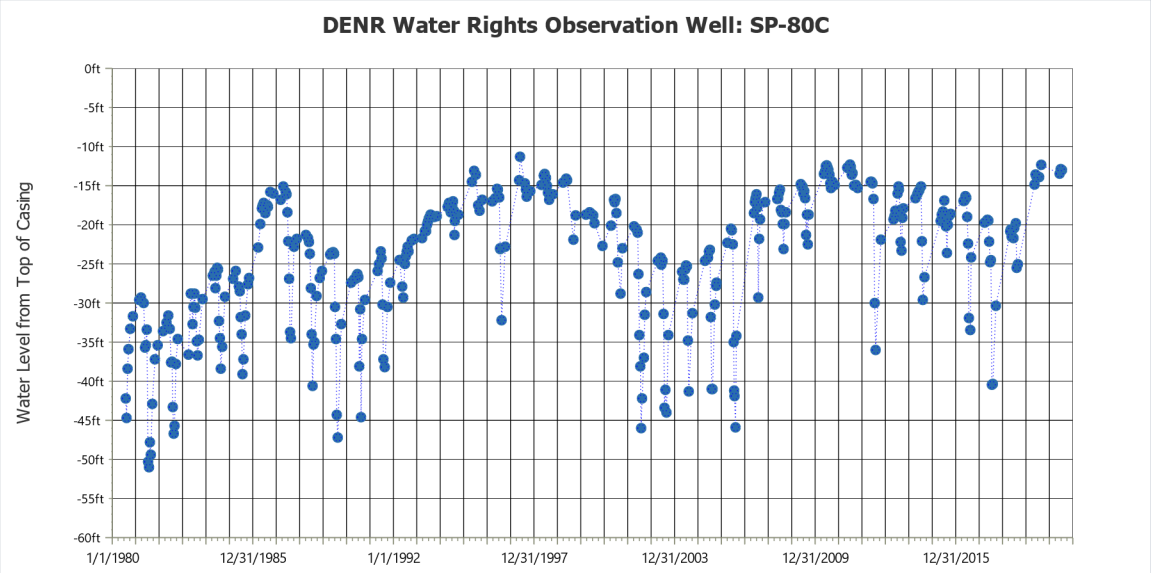

DENR Water Rights Observation Well: BD-80D
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
1/1/1963
1/1/1972
12/31/1980
12/31/1989
12/31/1998
12/31/2007
12/31/2016

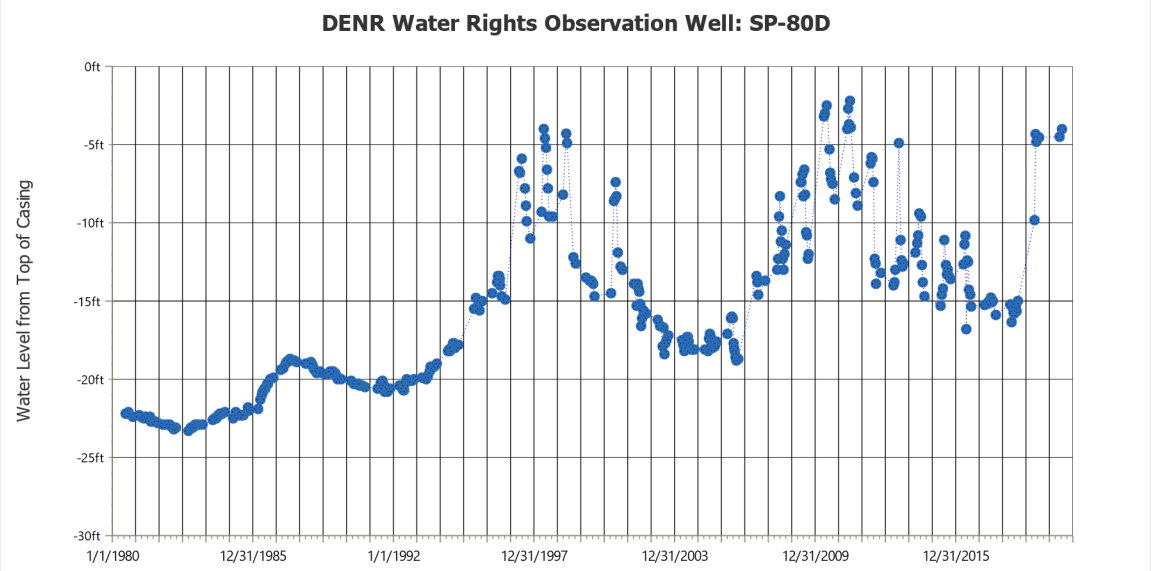

DENR Water Rights Observation Well: BD-80J
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
12/31/1981
1/1/1988
12/31/1993
1/1/2000
12/31/2005
12/31/2011
12/31/2017

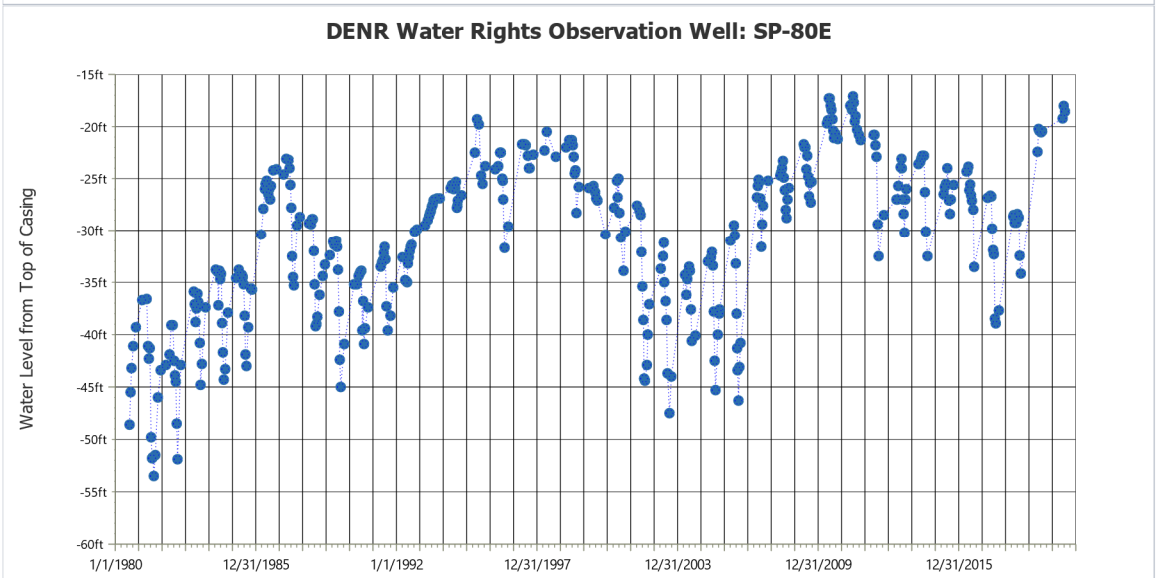

DENR Water Rights Observation Well: HD-80A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1963
1/1/1972
12/31/1980
12/31/1989
12/31/1998
12/31/2007
12/31/2016

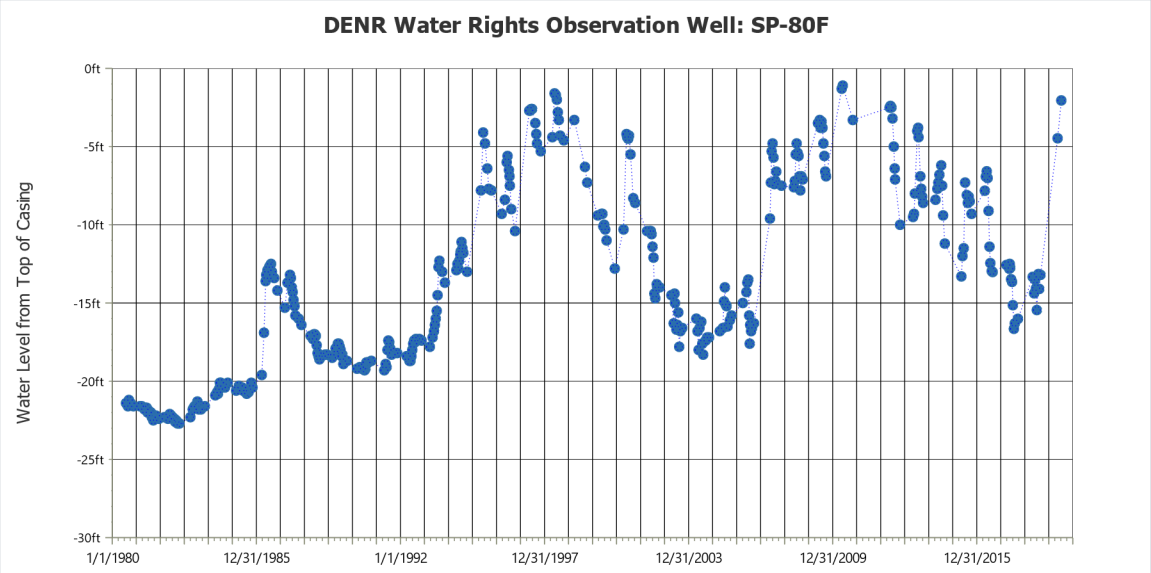

DENR Water Rights Observation Well: SP-80A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

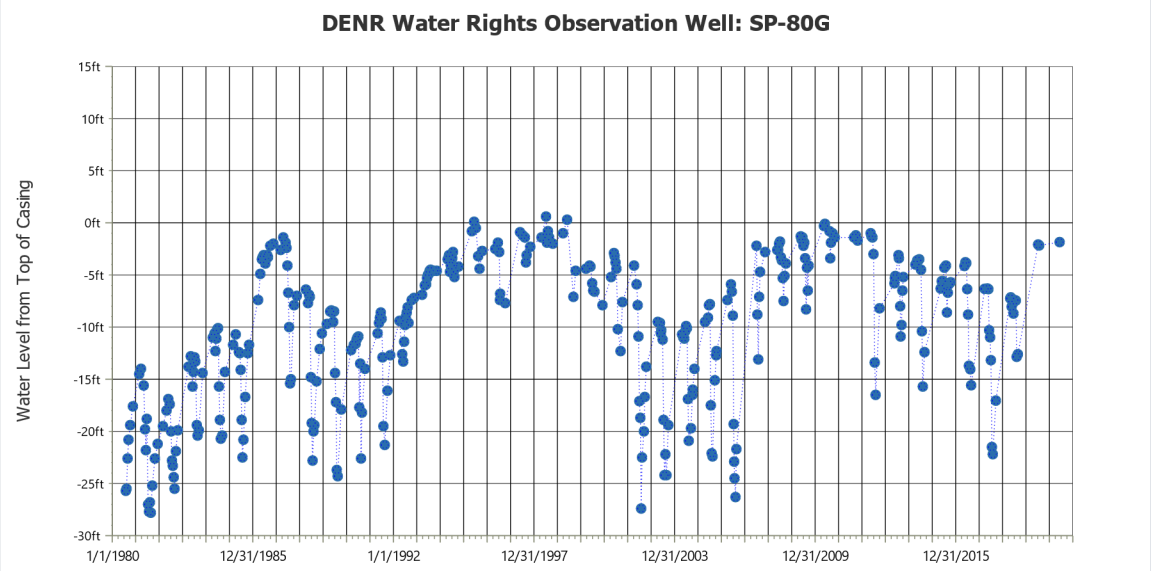

DENR Water Rights Observation Well: SP-80B
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

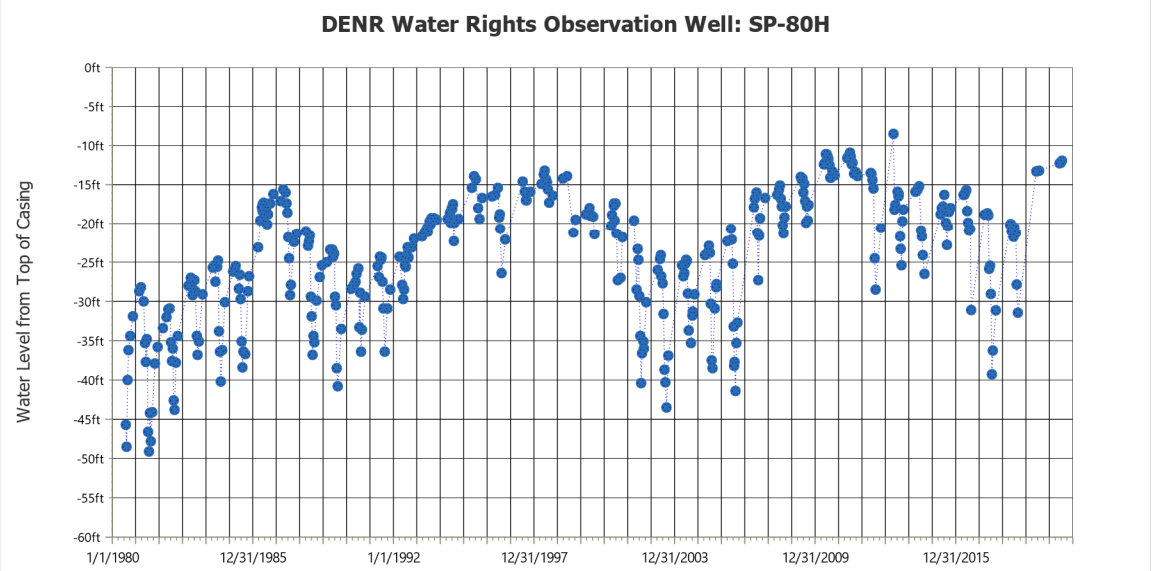

DENR Water Rights Observation Well: SP-80C
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

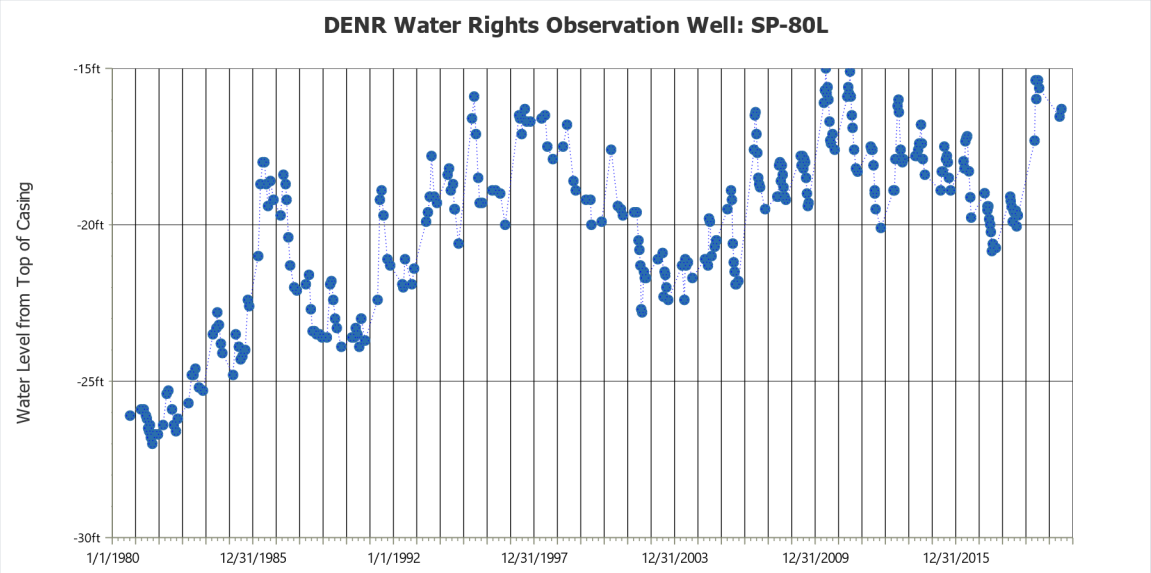

DENR Water Rights Observation Well: SP-80D
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

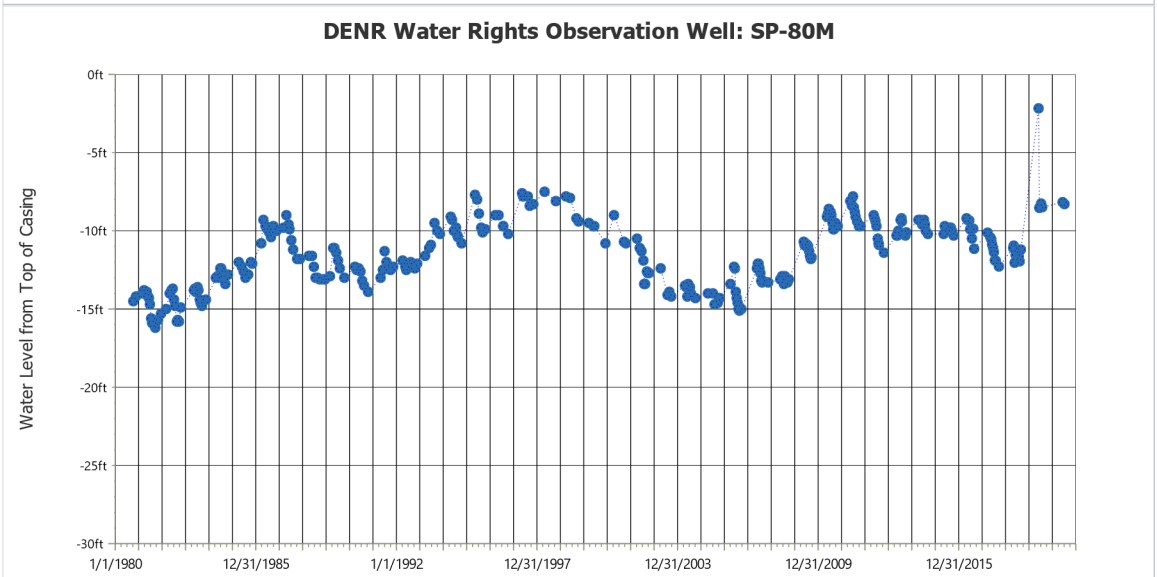

DENR Water Rights Observation Well: SP-80E
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

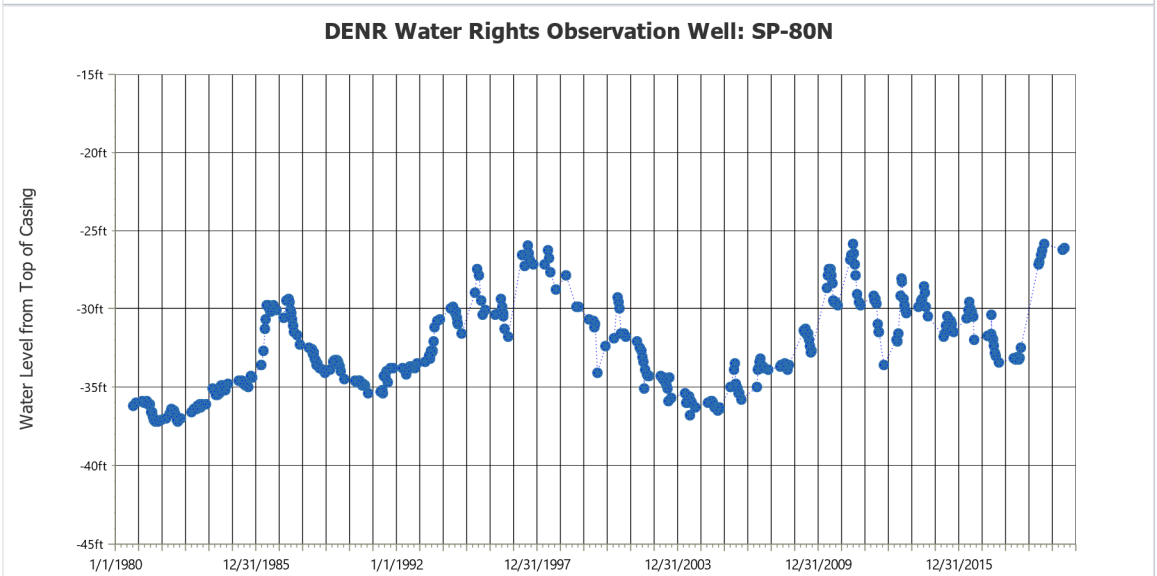

DENR Water Rights Observation Well: SP-80F
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

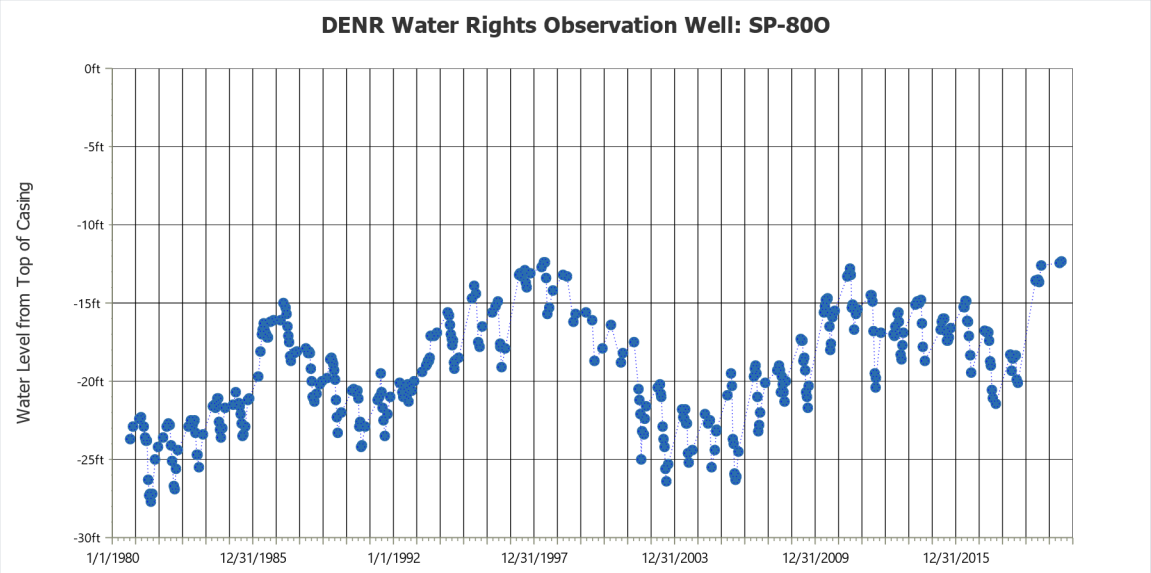

DENR Water Rights Observation Well: SP-80G
Water Level from Top of Casing
15ft
10ft
5ft
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

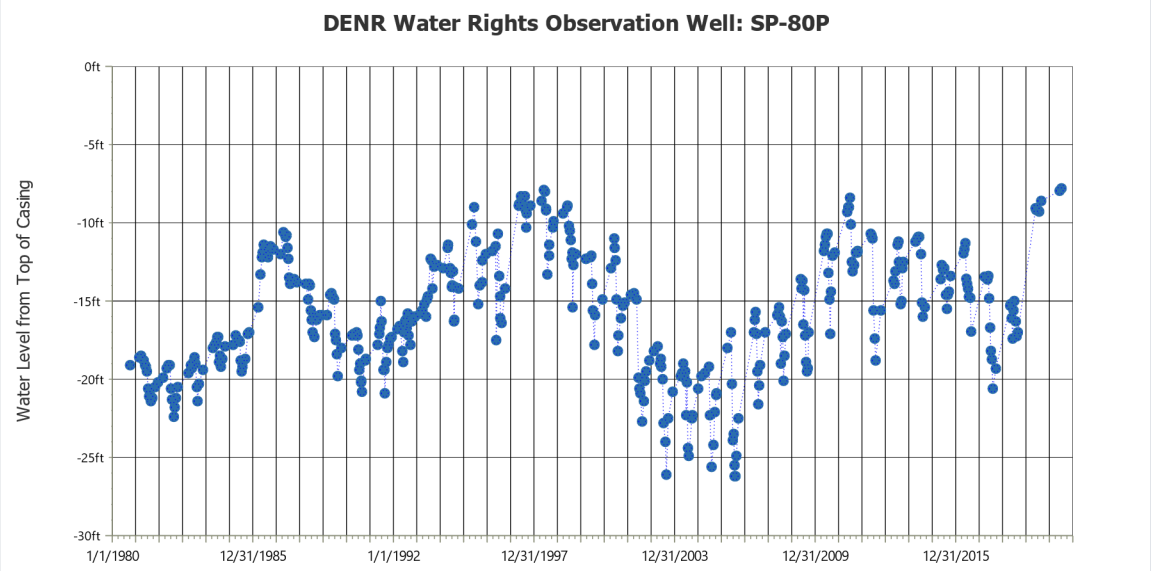

DENR Water Rights Observation Well: SP-80H
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

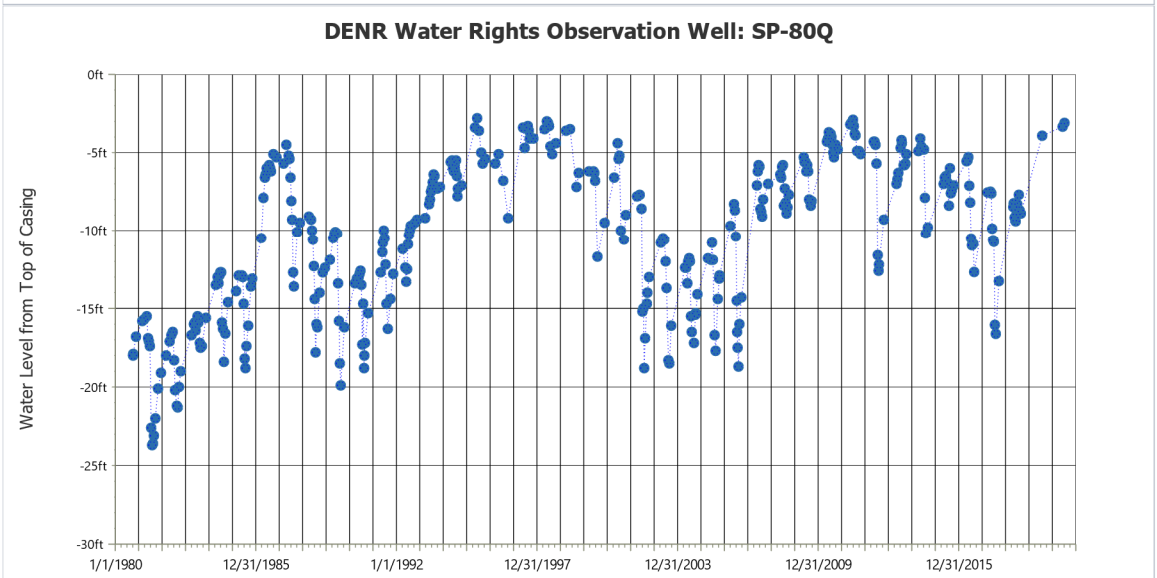

DENR Water Rights Observation Well: SP-80L
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

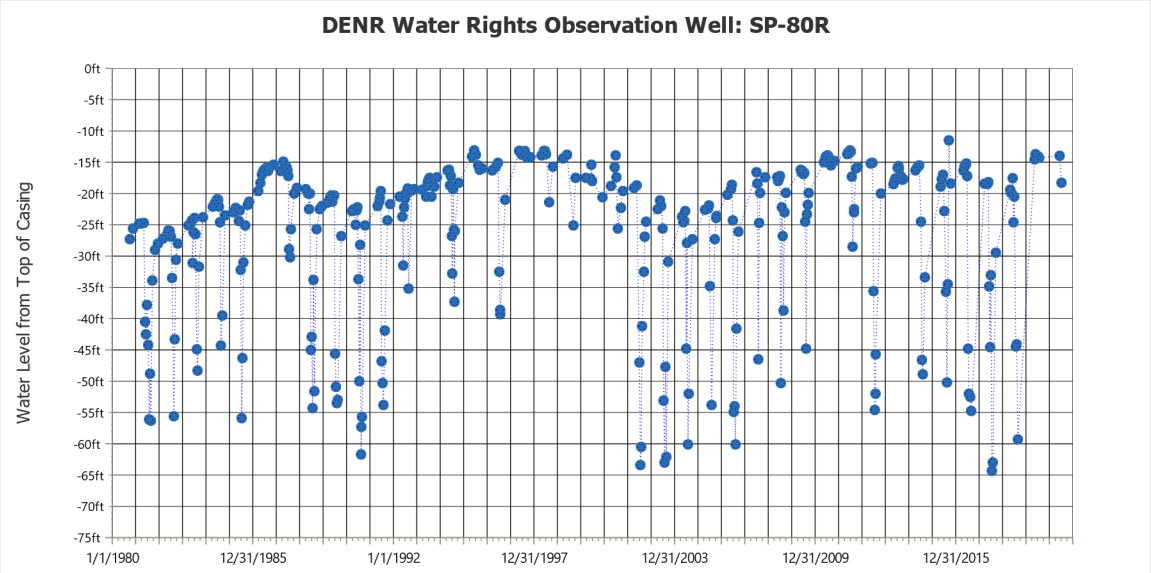

DENR Water Rights Observation Well: SP-80M
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

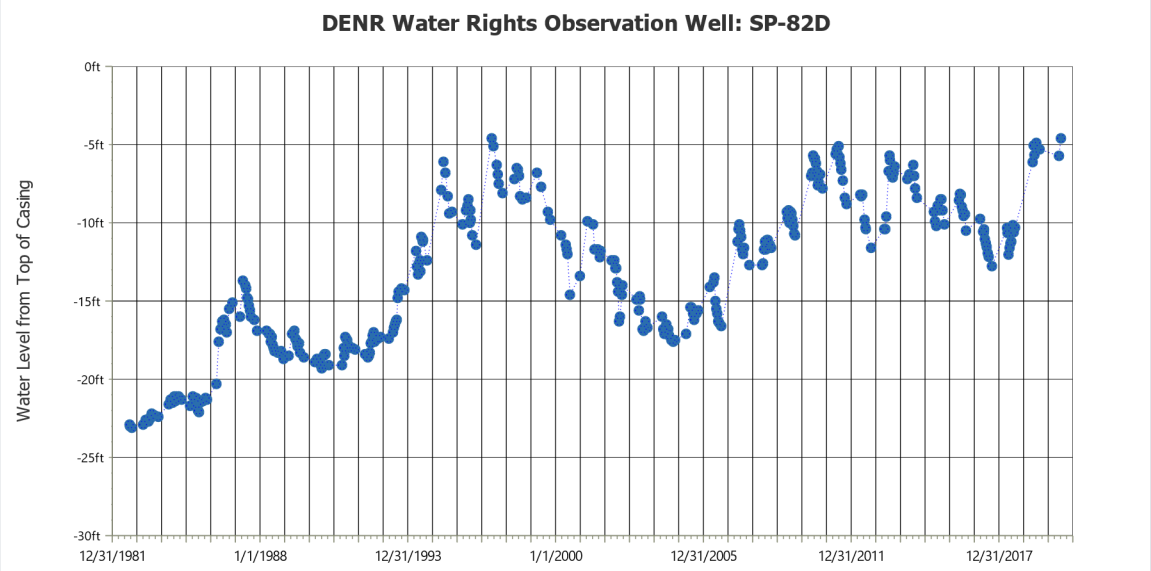

DENR Water Rights Observation Well: SP-80N
Water Level from Top of Casing
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

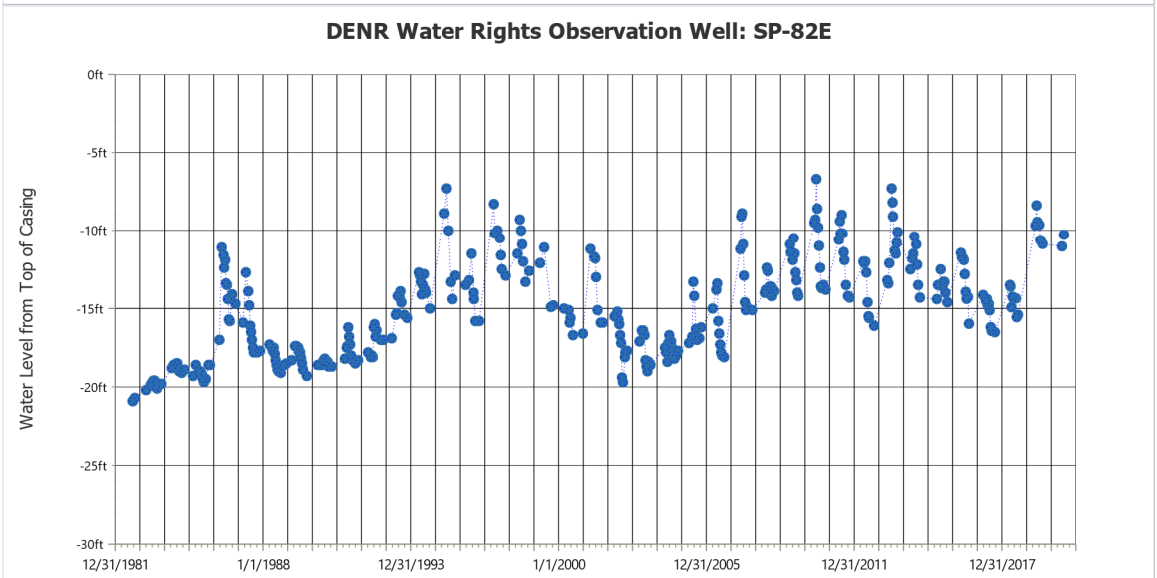

DENR Water Rights Observation Well: SP-80O
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

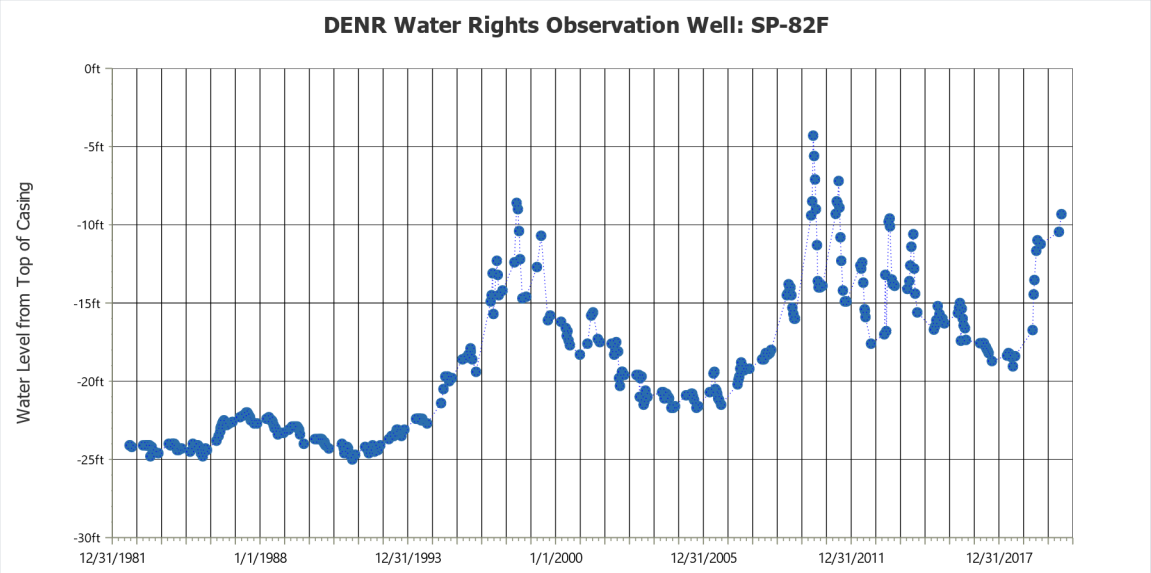

DENR Water Rights Observation Well: SP-80P
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

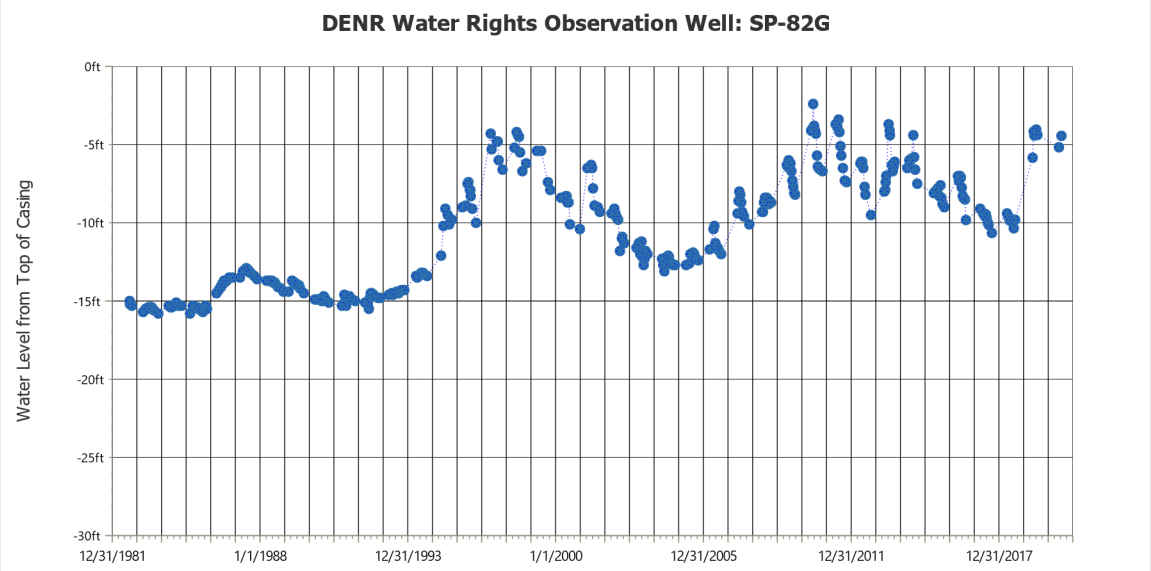

DENR Water Rights Observation Well: SP-80Q
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015

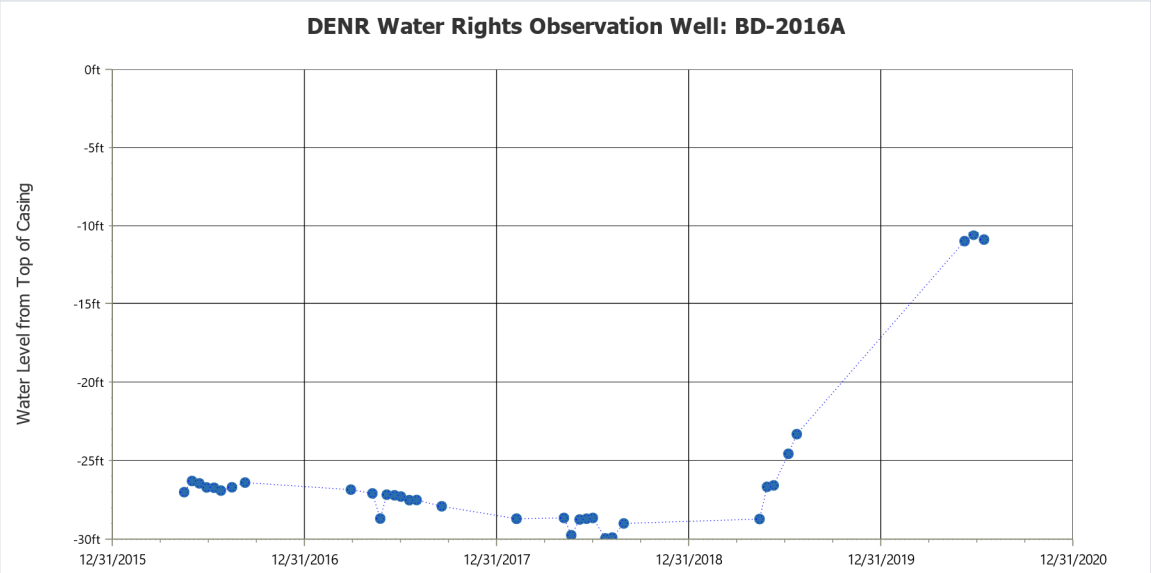

DENR Water Rights Observation Well: SP-80R
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
-35ft
-40ft
-45ft
-50ft
-55ft
-60ft
-65ft
-70ft
-75ft
1/1/1980
12/31/1985
1/1/1992
12/31/1997
12/31/2003
12/31/2009
12/31/2015


DENR Water Rights Observation Well: SP-82D
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1981
1/1/1988
12/31/1993
1/1/2000
12/31/2005
12/31/2011
12/31/2017


DENR Water Rights Observation Well: SP-82E
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1981
1/1/1988
12/31/1993
1/1/2000
12/31/2005
12/31/2011
12/31/2017


DENR Water Rights Observation Well: SP-82F
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1981
1/1/1988
12/31/1993
1/1/2000
12/31/2005
12/31/2011
12/31/2017


DENR Water Rights Observation Well: SP-82G
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/1981
1/1/1988
12/31/1993
1/1/2000
12/31/2005
12/31/2011
12/31/2017


DENR Water Rights Observation Well: BD-2016A
Water Level from Top of Casing
0ft
-5ft
-10ft
-15ft
-20ft
-25ft
-30ft
12/31/2015
12/31/2016
12/31/2017
12/31/2018
12/31/2019
12/31/2020

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION NO. 8413-3, Ratio LLC

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8413-3, Ratio LLC, c/o Kirk Aughenbaugh, 43204 US Hwy 14, DeSmet SD 57231.

The Chief Engineer is recommending APPROVAL of Application No. 8413-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and, 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 8413-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

2. The well authorized by Water Permit No. 8413-3 shall be constructed into a single aquifer, either the Niobrara aquifer or Dakota aquifer, but not both. At the time of the licensing, the final water right be issued for the developed water source.

3. The well authorized by Permit No. 8413-3 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.

4. Water Permit No. 8413-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-36.2 or 34A-2-112 or 34A-2-124 for concentrated animal feeding operations.

5. Water Permit No. 8413-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:

   a) Chapter 74:54:01 Ground Water Quality Standards,
   b) Chapter 74:54:02 Ground Water Discharge Permit,
   c) Chapter 74:51:01 Surface Water Quality Standards,
   d) Chapter 74:51:02 Uses Assigned to Lakes,

(continued)

e) Chapter 74:51:03 Uses Assigned to Streams, and
f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

6. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the aquifer.

7. Water Permit No. 8413-3 authorizes a total annual diversion of 77 acre feet of water from the aquifer.

See report on application for additional information.

Eric S Gronlund

Eric Gronlund, Chief Engineer
April 28, 2020

REPORT ON PERMIT APPLICATION NO. 8413-3
Ratio LLC
April 28, 2020

Ratio LLC has filed Water Permit Application No. 8413-3 for commercial use of 77 acre-feet of water annually at a maximum instantaneous rate of 0.134 cubic feet per second (cfs) from two wells to be completed into the Niobrara aquifer (325-350 feet deep) or the Dakota aquifer (1,300–1,500 feet deep) located in the SE ¼ NW ¼ Section 32 for use in a swine production facility to be located in the E ½ NW ¼ Section 32; all in T111N-R67W. This site is located approximately 10 miles southeast of Miller SD.

Aquifer: Niobrara (NBRR) or Dakota (DKOT)

South Dakota Codified Law 46-2A-9

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

Water Availability

SDCL 46-6-3.1 is considered when evaluating the probability of unappropriated water from an aquifer and states "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems." The Niobrara aquifer is not older or lower than the Greenhorn Formation; however, the Dakota is older and lower than the Greenhorn Formation. This application, however, is not for a water distribution system. Therefore, recharge and withdrawal rates must be considered.

NIOBRARA AQUIFER

Niobrara Aquifer Hydrogeology

The Niobrara formation is composed of argillaceous chalk, marl, and shale with thin, laterally continuous bentonite beds, chalky carbonaceous shale, minor sand, and small concretions (Martin, Sawyer, Fahrenbach, Tomhave, & Schulz, 2004). Saturated areas in the Niobrara formation are known as the Niobrara aquifer. These saturated areas occur where there is sufficient fracturing and development of solution cavities. The Pierre shale overlies the Niobrara formation except where the Pierre Shale has been eroded or where the Niobrara formation outcrops (Fahrenbach, et al., 2010). Locally, the Niobrara formation is known as "chalk rock" and is extensive throughout South Dakota (Hedges, Burch, Iles, Barari, & Schoon, 1982). In

Hand County, the areal extent of the aquifer is estimated to be approximately 210,000 acres based on Rich's first occurrence of aquifer materials in Hand County, South Dakota, and lithologic logs for Hand County (Rich, 2013; South Dakota Geological Survey, 2020). The thickness of the Niobrara formation varies from 20 to 110 feet, with an average of 100 feet (South Dakota Geological Survey, 2020). The Niobrara aquifer is generally under confined conditions (South Dakota Geological Survey, 2020; Water Rights, 2020a; Water Rights, 2020b; Water Rights, 2020c).

Niobrara Aquifer Hydrologic Budget

Recharge

Recharge to the Niobrara aquifer occurs through infiltration of snowmelt and precipitation and inflow from the Dakota and Codell aquifers. Hedges and others (1985) also stated that East of the Missouri River,

> "The Niobrara Formation, Codell Sandstone, Inyan Kara Group, and Madison Group have such high storage and low use that it is unlikely that use is approaching or exceeding recharge. Furthermore, there is no evidence of significant head loss in any of these aquifers over the years that would suggest that use is exceeding recharge."

Discharge

Discharge from the Niobrara aquifer occurs through evapotranspiration in areas where the aquifer is near land surface, groundwater outflow to other aquifers, and through well withdrawals (Water Rights, 2020a). Currently, there are a total of 83 water rights/permits appropriating water from the Niobrara aquifer (Water Rights, 2020a). All current non-irrigation water rights/permits appropriating water from the Niobrara aquifer are summarized in Table 1. The amount of water that can be expected to be withdrawn can be estimated by assuming water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and those limited by an annual volume will use the entire permitted volume annually.

There are some municipalities that are served by rural water systems (Table 2), as such, the wells for these municipal water rights are maintained for standby use only. Therefore, the water use for these rights have been set to zero in Table 1 as the usage for them is reflected in the rural water systems permits/rights they are served by.

Table 1: Summary of expected use of non-irrigation water rights/permits from the Niobrara aquifer (Water Rights, 2020a)

Use Type	No. of Water Rights/Permits	Permitted Diversion Rate (cfs)	Permitted Volume (ac-ft)	Expected Annual Use (ac-ft)
MUN	11	1.280	N/A	556
IND	1	0.134	N/A	58
INS	5	0.567	N/A	246
COM	9	0.584	460	714
FWP	1	0.170	N/A	74
GEO	1	0.110	N/A	48
Total	**28**	**2.845**	**460**	**1,696**

MUN = Municipal, IND = Industrial, INS = Institutional, COM = Commercial, FWP = Fish and Wildlife Propagation, GEO = Geothermal

Table 2: Municipalities served full time by rural water systems (DENR, 2020).

Permit No	Name	Status	Use Type	Licensed Diversion Rate (cfs)	Served By
810-3	City Of Freeman	LC	MUN	1.260	B-Y RWS
5239-3	City Of Freeman	LC	MUN	0.330	B-Y RWS
1229-3	Town Of Irene	LC	MUN	0.560	B-Y RWS
1062-3	City Of Scotland	LC	MUN	0.580	B-Y RWS
5356-3	Town Of Tabor	LC	MUN	0.400	B-Y RWS
4121A-3	City Of White Lake	LC	MUN	0.130	AURORA-BRULE RWS

There are 55 water rights/permits for irrigation currently authorized to appropriate water from the Niobrara aquifer. Permit Application No. 8416-3 is pending review and, if approved, will use 1.56 cfs to irrigate 116 acres. Assuming full appropriation, Permit Application No. 8416-3 will use 232 ac-ft/yr. Annual irrigation questionnaires provide reported pumpage data and are more accurate than assuming full appropriation. For example, assuming full appropriation for all irrigation rights/permits from 1979 to 2018 would result in an estimated 9,644 ac-ft/yr, whereas using reported pumpage for the same timeframe would result in 1,259 ac-ft/yr. Irrigation water permits for the Niobrara aquifer rose dramatically starting in 2012 (Figure 1). Estimating the water usage from 1979 to 2018 would not properly reflect the current state of the aquifer and the existing irrigation infrastructure currently in place. Calculating the average use over the last ten years (2009-2018) would be a more accurate representation of the current irrigation usage. Using the reported pumping data for the years 2009 to 2018, the estimated average annual withdrawals for irrigation rights/permits is 2,020 ac-ft/yr.

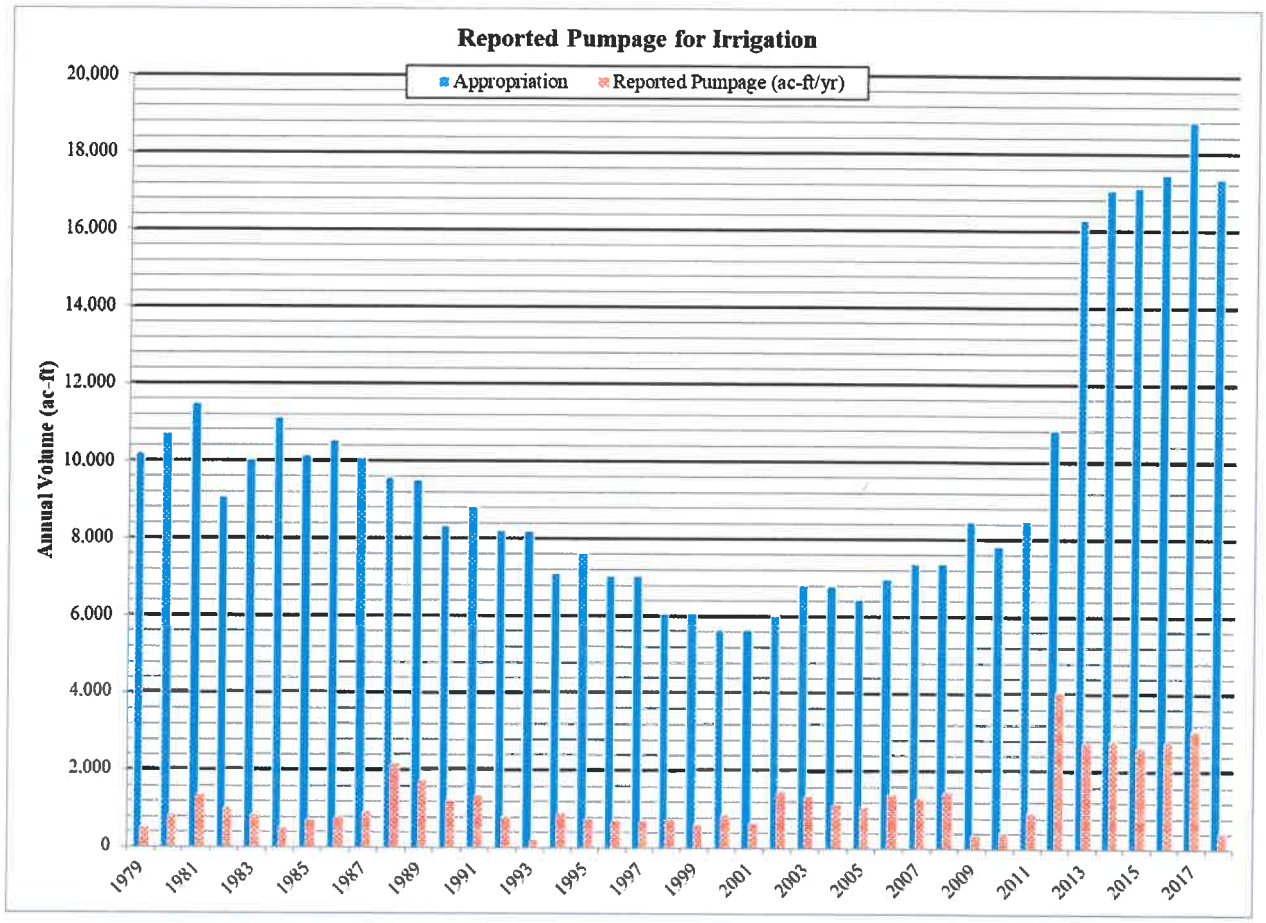


Figure 1: Historical Irrigation questionnaire data from the Niobrara aquifer in South Dakota (Water Rights, 2020d)

Hydrologic budget summary

Without an estimated average annual recharge rate, there is no way to compare the recharge and discharge rates directly. It is unlikely that the Niobrara aquifer is approaching or exceeding recharge due to the high storage and low use. The estimated withdrawals from the Niobrara aquifer are 232 ac-ft/yr from pending applications assuming full appropriation, 1,696 ac-ft/yr from non-irrigation users, and 2,020 ac-ft/yr from crop irrigation. Therefore the total estimated average annual withdrawal from the Niobrara aquifer is 3,948 ac-ft/yr.

Niobrara Aquifer Observation Well Data

In determining the availability of unappropriated water for a permit application Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer.

The DENR-Water Rights Program monitors 57 observation wells completed into the Niobrara aquifer (Water Rights, 2020c). Observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The nearest observation wells that can be used for

analysis are SA-79B (36 miles southeast), and SA-67E (43 miles southeast). The hydrographs for these wells are shown in Figure 2.

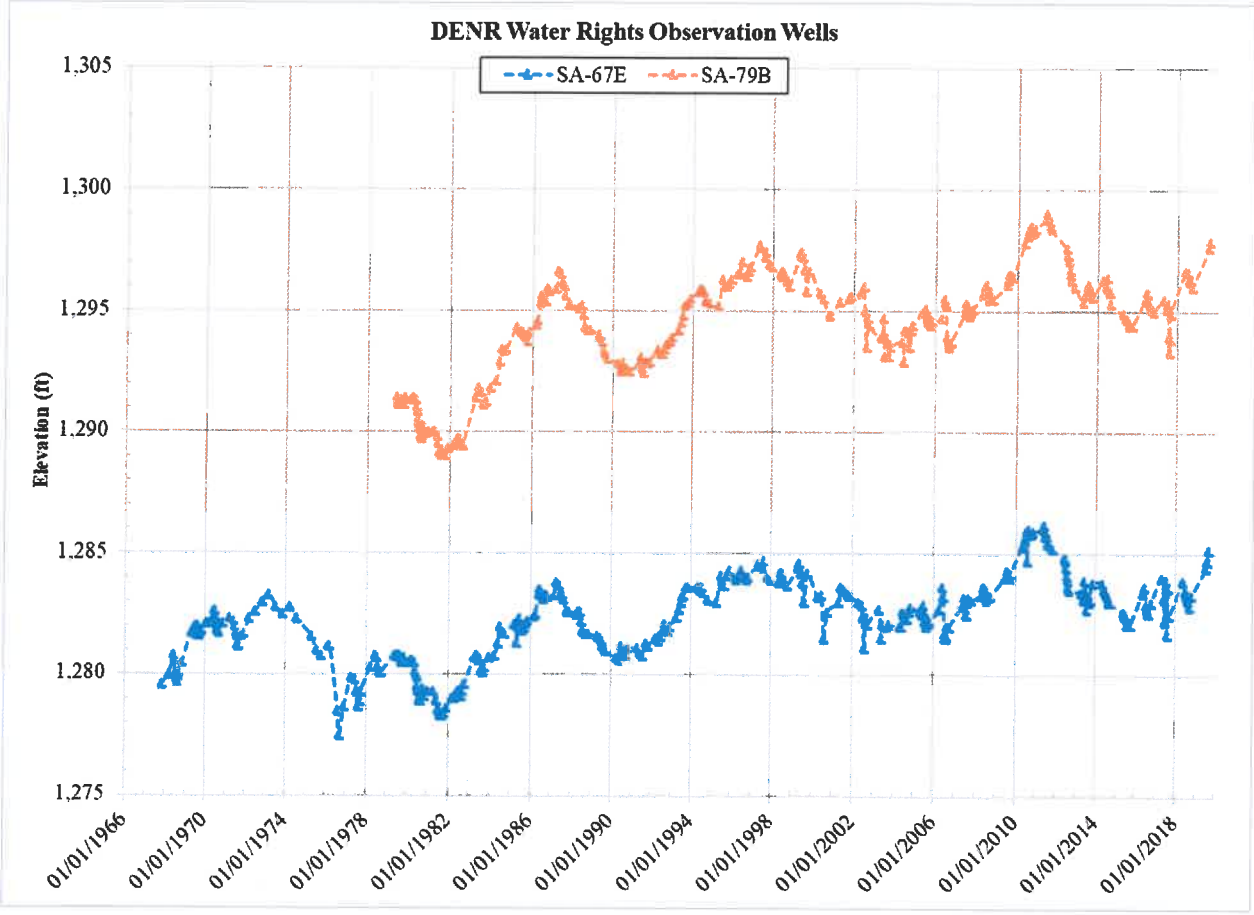


Figure 2: Hydrographs for observation wells SA-79B, and SA-67E (Water Rights, 2020c).

These observation well hydrographs are representative of the Niobrara aquifer. The water levels in the observation wells show that the amount of recharge to and natural discharge from the aquifer greatly exceeds pumping with the aquifer returning to pre-pumping conditions after spring recharge. Therefore, recharge to, and natural discharge from the Niobrara aquifer can be captured for pumping, and the hydrographs document that unappropriated water is available for this proposed appropriation.

Niobrara Aquifer Existing Water Rights

Currently, there are 83 water rights/permits appropriating water from the Niobrara aquifer (Water Rights, 2020a). There are 3 diversion points approximately 5 miles to the southwest for water right 5111A-3 held by Sunshine Bible Academy for the appropriation of 0.04 cfs of water from the Niobrara aquifer (Figure 3). The nearest water right/permit completed into the Niobrara aquifer other than water right 5111A-3 is approximately 32 miles to the east of the proposed diversion point. There are a number of domestic wells on file with the SD DENR Water Rights Program in the area of the proposed well site that appear to be completed into the Niobrara aquifer (Water Rights, 2020b).

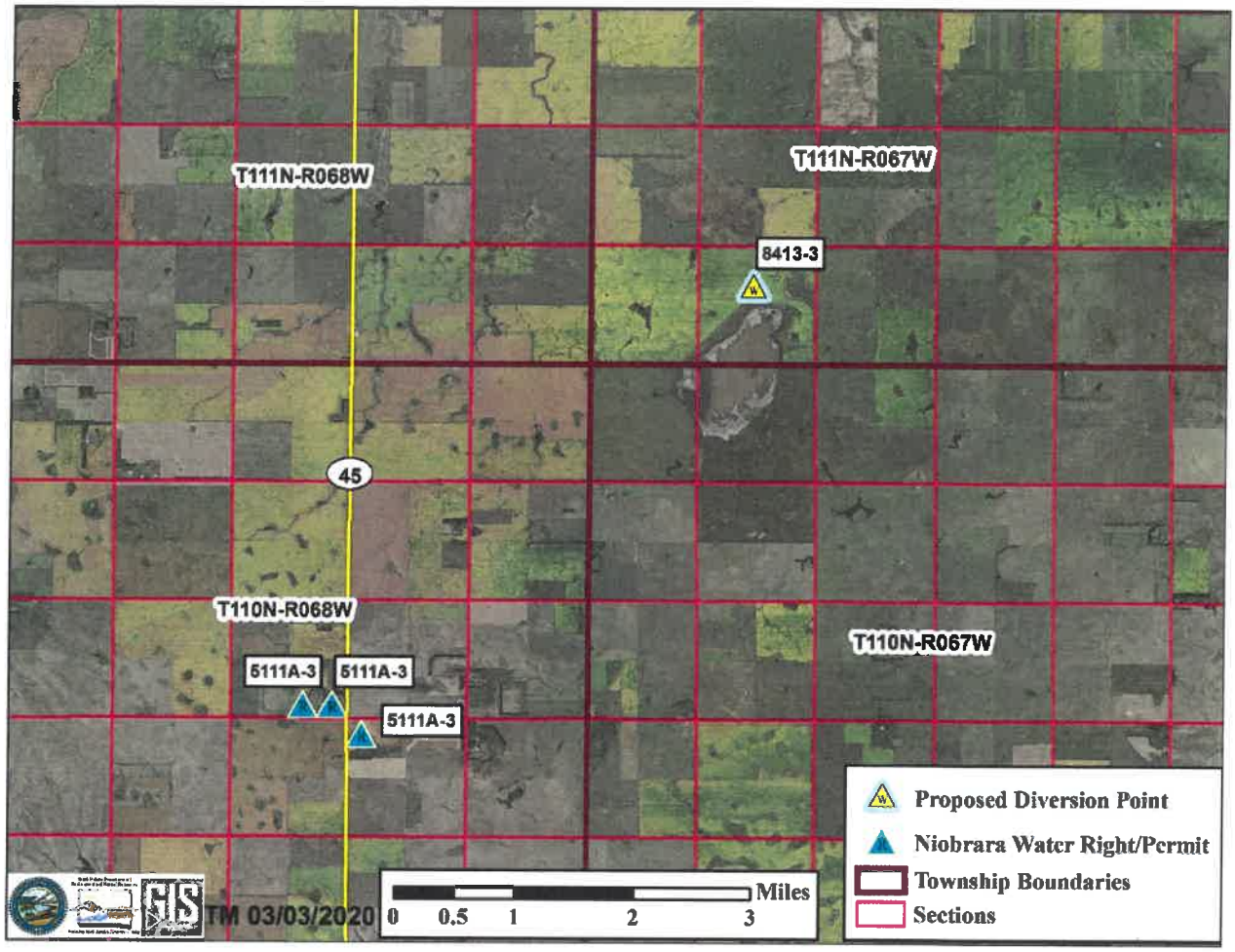


Figure 3: Map showing the proposed diversion point, and nearby water rights/permits completed into the Niobrara aquifer (Water Rights, 2020a).

The Niobrara aquifer is confined in this area, so drawdown from pumping the aquifer can extend over a fairly large area. Observation well data can provide insight into how the aquifer reacts to local pumping. Observation wells SA-79B and SA-67E are located within 3 miles of one or more existing water rights/permits. The hydraulic head for observation well SA-79B over the period of record has varied by approximately 9 feet and approximately 10 feet for observation well SA-67E. At the lowest recorded water level on record out of both wells, there was approximately 100 feet of artesian head pressure remaining (Water Rights, 2020c). Saturated thickness of the Niobrara aquifer in this area varies between 25 to 100 feet (Water Rights, 2020a; Water Rights, 2020b; South Dakota Geological Survey, 2020). This would allow sufficient saturated thickness for a pump to be placed 20 feet below the top of the aquifer. An adequate well should not be adversely impacted by pumping at this proposed diversion rate.

An adequate well has been defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) as:

> "A well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the

pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet."

SDCL 46-6-6.1 does not protect artesian head pressure as a means of delivery. In the past, the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur (Water Rights, 1995). Given the artesian head pressure of the Niobrara aquiferthe nearest water right being approximately 5 miles to the southwestand the lack of well interference complaints in the area; any well interference from drawdown created by pumping this proposed diversion is not expected to cause an adverse impact (Water Rights, 2020e). Therefore, there is a reasonable probability that any interference created by pumping for this proposed appropriation will not be unlawful.

DAKOTA AQUIFER

Dakota Aquifer Hydrogeology

The Dakota Formation is composed of light-brown to reddish-brown, fine-to-medium grained friable quartz, minor feldspar sandstone with interbeds of gray to dark-gray shale, thin discontinuous beds of lignite, gray silty clay with siderite pellets, medium-to coarse-grained quartz sandstone with thin shaly intervals (less than 5 feet) (Hedges, Burch, Iles, Barari, & Schoon, 1982).

The areal extent and recoverable water of the Dakota aquifer in Hand County, SD was estimated by Hedges, Burch, Iles, Barari, & Schoon (1982) to be 912,640 acres and 22,245,600 acre-feet respectively. In the vicinity of these water rights, the potentiometric surface of the Dakota aquifer is expected to be approximately 270 to 330 feet below grade with a general direction of groundwater movement to the east and a minimum aquifer thickness of 200 and a maximum of 320 feet in Hand and Hyde Counties (Water Rights, 2020a; Water Rights, 2020c; Koch, 1980).

Dakota Aquifer Hydrologic Budget

Recharge

Recharge to the Dakota aquifer occurs through the infiltration of precipitation in areas of the Black Hills where the Newcastle Sandstone outcrops, leakage through confining layers (likely through fractures), and by upward leakage from deeper aquifers (Koch, 1980; Bredehoeft, Neuzil, & Milly, 1983). The Dakota aquifer in South Dakota has been studied extensively due to the large amounts of water discharged through flowing wells, and where the recharge is occurring to support such discharges (Bredehoeft, Neuzil, & Milly, 1983).

Leakage from confining layers contribute to the recharge of the Dakota aquifer; however, the extent of that recharge is not well known. For this reason, models have been used for numerical simulations of groundwater flow to provide estimates of the amount of leakage that is occurring through confining layers. These models have indicated that most of the water released from storage has come from the confining layers (Bredehoeft, Neuzil, & Milly, 1983). Bredehoeft, Neuzil, & Milly (1983) calibrated a multidimensional computer model to match the potentiometric surface mapped by Darton (1909). Bredehoeft's, Neuzil's, & Milly's (1983) steady-state model estimated the natural recharge to the Dakota aquifer, before large scale well development, from leakage of confining layers to be 78.3 cfs or approximately 56,700 ac-ft/yr.

The assumptions made for this model include steady-state conditions (unrealistic to real-world conditions); the confining layers are idealized (many diverse lithologic units not accounted for); and single values are used for hydraulic parameters (these values vary in the real world).

Recharge to the Dakota aquifer in its entirety has not been quantified; however, leakage from confining layers has been estimated by Bredehoeft's, Neuzil's, & Milly's (1983) model. While some of the assumptions associated with this estimate are not real-world conditions, they do provide a range to one of the larger factors impacting recharge within the Dakota aquifer. Due to the assumptions, the variability of the Dakota aquifer, and the surrounding lithology in terms of hydraulic parameters and many other unknown factors, this estimate cannot be used as an exact value for water management purposes.

Discharge

Discharge from the Dakota aquifer occurs through leakage to confining layers, outflow where the Dakota aquifer outcrops, uncontrolled flowing wells, outflow to adjacent aquifers, and well withdrawals (Koch, 1980; Bredehoeft, Neuzil, & Milly, 1983). Currently, there are a total of 238 water rights/permits appropriating water from the Dakota aquifer, 2 pending applications, and 5 future use permits that still have water reserved (Table 3) (Water Rights, 2020a). Water Permit Application No. 8421-3, if approved, will use 78.5 ac-ft/yr at a maximum instantaneous rate of 0.48 cfs and Water Permit Application No. 8423-3 if approved, will use up to 126 ac-ft/year at a maximum instantaneous rate of 0.33 cfs.

Table 3: Future use permits with remaining water reserved from the Dakota aquifer (Water Rights, 2020a)

Permit No.	Name	Reserved Water (ac-ft)
1262C-3, 5219-3	City Of Canton	1,849
4817-3	South Lincoln RWS	1,448
5155-3	Lincoln County RWS	440
8400-3	City Of Harrisburg	500
Total		**4,237**
RWS = Rural Water System		

All current non-irrigation water rights/permits appropriating water from the Dakota aquifer are summarized in Table 4. The amount of water that can be expected to be withdrawn can be estimated by assuming water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and those limited by an annual volume will use the entire permitted volume annually. There are some municipalities that are served by rural water systems, as such, the wells for these municipal water rights/permits are maintained for standby use only (DENR, 2020). Therefore, the water use for these rights have been set to zero in Table 4 as the usage for them is reflected in the rural water systems permits/rights they are served by. There are 6 non-irrigation water rights/permits that are required to report annual usage (Table 5). For these water rights/permits, the average annual reported usage was used for the expected annual use in table 4.

Table 4: Summary of expected use from non-irrigation water rights/permits from the Dakota aquifer (Water Rights, 2020a)

Use Type	No. of Water Rights/Permits	Permitted Diversion Rate (cfs)	Permitted Volume (ac-ft)	Expected Annual Use (ac-ft)
REC	2	0.450	N/A	195
MUN	89	10.414	3,274	7,798
IND	6	0.844	160	527
INS	2	1.340	N/A	582
DOM	11	1.753	N/A	761
RWS	6*	2.200*	2,005*	896*
COM	92	11.073	589	5,399
FWP	4	2.783	N/A	1,209
SHD	7	3.330	N/A	1,446
GEO	2	2.330	N/A	1,012
Total	**221**	**34.317**	**4,023**	**19,825**

REC = Recreation, MUN = Municipal, IND = Industrial, INS = Institutional, DOM = Domestic, RWS = Rural Water System, COM = Commercial, FWP = Fish and Wildlife Propagation, SHD = Suburban Housing Development, GEO = Geothermal, * See reported usage in table 5

Table 5: Water rights/permits required to report usage from the Dakota aquifer (Water Rights, 2020f).

	South Lincoln RWS	**Clay RWS**	**Lincoln County RWS**
	5647-3, 6300-3, 6490-3, 6778A-3	5997B-3	5156-3
2003	725		
2004	904		
2005	769		
2006	863	72	
2007	860	126	
2008	863	124	0
2009	773	119	0
2010	775	122	0
2011	785	116	0
2012	865	186	0
2013	765	155	0
2014	739	148	0
2015	711.5	141	0
2016	640	163	0
2017	643	201	0
2018	503	170	0
Max	904	201	0
Min	503	72	0
Avg	**755**	**141**	**0**

There are 17 water rights/permits for irrigation currently authorized to appropriate water from the Dakota aquifer. Irrigation water rights/permits that are required to report their annual usage are illustrated in Figure 4. Annual irrigation questioners provide reported pumpage data and are more accurate than assuming full appropriation. For example, assuming full appropriation for all irrigation rights/permits from 1979 to 2018 would result in an estimated 1,453 ac-ft/yr, whereas using reported pumpage for the same timeframe would result in an estimated 147.78 ac-ft/yr. Estimating the water usage from 1979 to 2018 would not properly reflect the current state of the aquifer and the existing irrigation infrastructure currently in place. Calculating the average use over the last 10 years (2009-2018) would be a more accurate representation of the current irrigation usage. Using the reported pumping data for the years 2009 to 2018, the estimated average annual withdrawals for irrigation rights/permits is 201.25 ac-ft/yr.

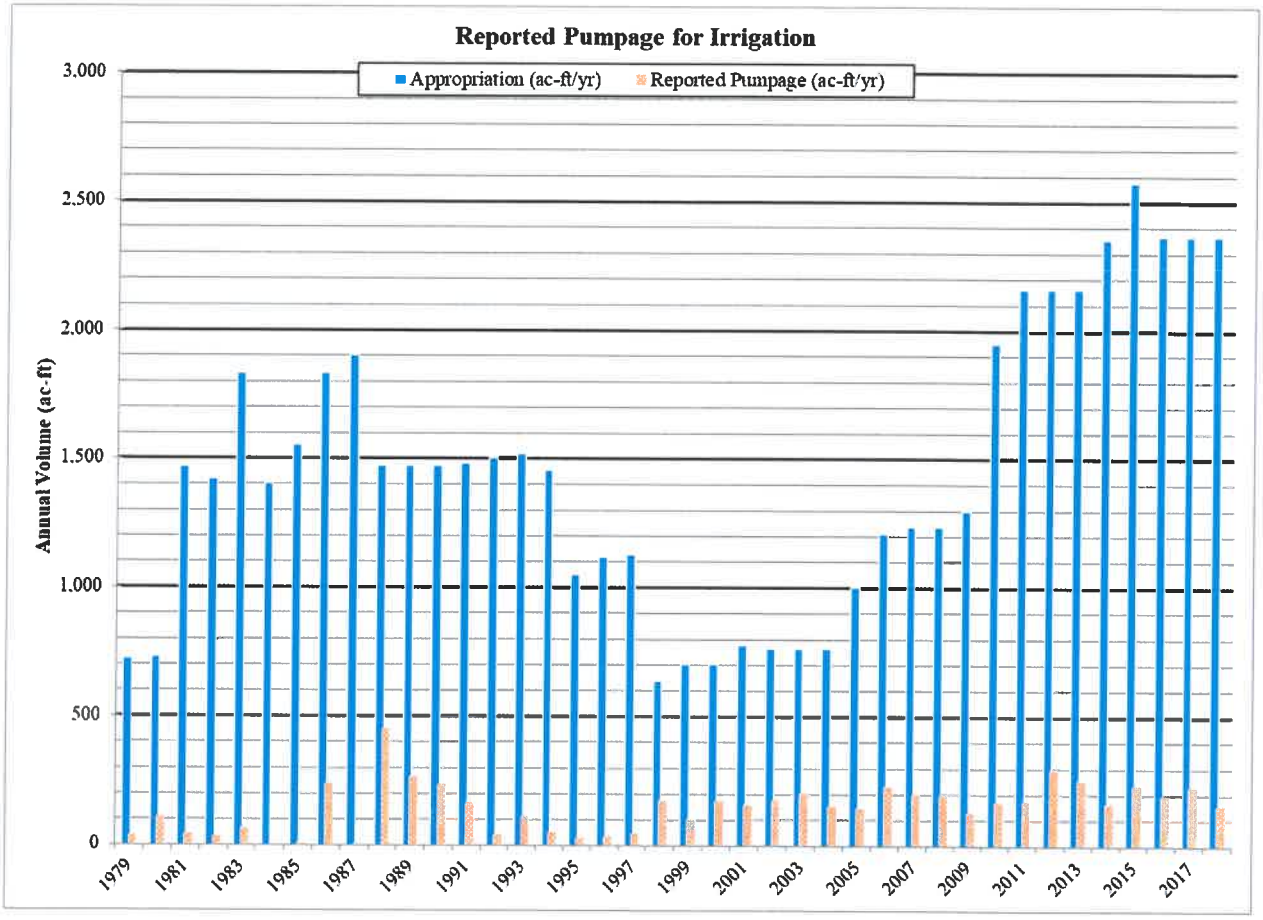


Figure 4: Historical Irrigation questionnaire data from the Dakota aquifer in South Dakota (Water Rights, 2020d)

Hydrologic budget summary

Without a reliable recharge rate, there is no way to compare the recharge and discharge rates directly. Bredehoeft (1983) used modeling to estimate the recharge occurring to the Dakota aquifer from leakage of confining layers to be approximately 56,700 ac-ft/yr; however, due to the assumptions made, there is no way to tell if this estimate is high or low. It is unlikely that the Dakota aquifer is approaching or exceeding recharge due to the high storage. The estimated withdrawals from the Dakota aquifer are 19,825 ac-ft/yr from non-irrigation users, 201.25 ac-ft/yr

from irrigation, 222 ac-ft/yr from pending applications, and 4,237 ac-ft/yr from future use permits with remaining water reserved. Therefore the total estimated average annual withdrawal from the Dakota aquifer is 24,485.25 ac-ft/yr

Dakota Aquifer Observation Well Data

In determining the availability of unappropriated water for a permit application Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer.

The DENR-Water Rights Program monitors 46 observation wells completed into the Dakota aquifer (Water Rights, 2020c). Observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The nearest observation well that can be used for analysis is HD-87A (8.5 miles southeast) (Figure 5). Over the period of record observation well, HD-87A has had a decline in hydraulic head of approximately 22 feet (Water Rights, 2020c).

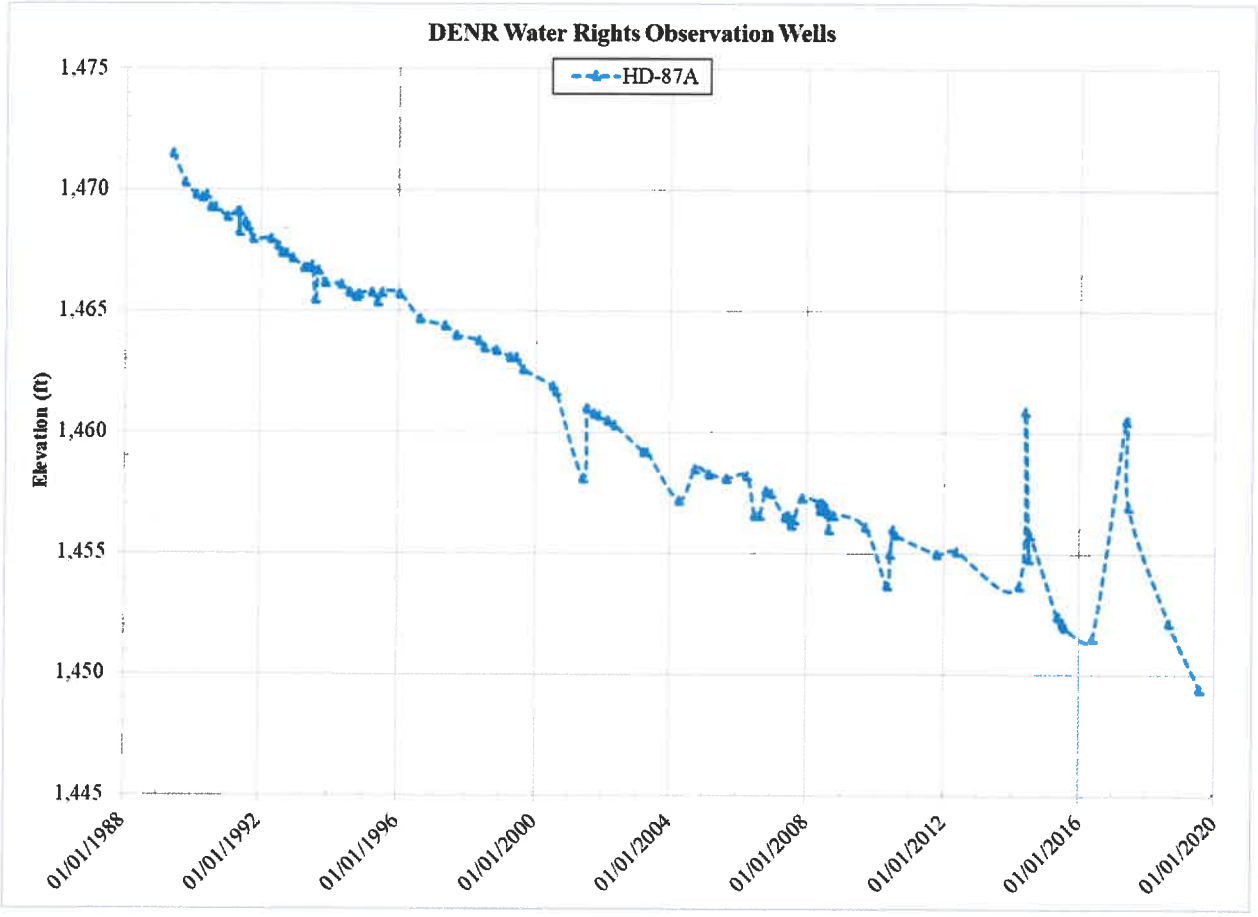


Figure 5: Hydrograph for Observation Well HD-87A (Water Rights, 2020c).

The decline in hydraulic head is likely due to uncontrolled flowing wells and not well withdrawals for beneficial use. Shortly after wells began being completed into the Dakota aquifer, many were

left to flow with no restrictions; this led to a noticeable decline in artesian head pressure in the Dakota aquifer. However, the Water Management Board has found that past declines of the potentiometric surface in the Dakota aquifer does not necessarily mean that withdrawals have exceeded recharge (Water Rights, 1987). The Board has concluded that withdrawals exceeding the average annual recharge cannot be determined based solely upon a decline in head pressure and, in theory, the Dakota aquifer head pressure is stabilizing relative to withdrawals and discharges (Water Rights, 1987). Overall, the Water Management Board's decision to increase the development of the Dakota aquifer is favorable due to beneficial withdrawals lowering the amount of pressure in uncontrolled flowing wells, thus reducing the amount of water flowing to waste.

Observation well ED-85A (approximately 73 miles north) is also completed into the Dakota aquifer and has a hydrograph that shows a stable to slightly increasing trend in hydraulic head (Figure 6). The dip in hydraulic head that occurred in 2018 was due to an aquifer pumping test (Water Rights, 2020c).

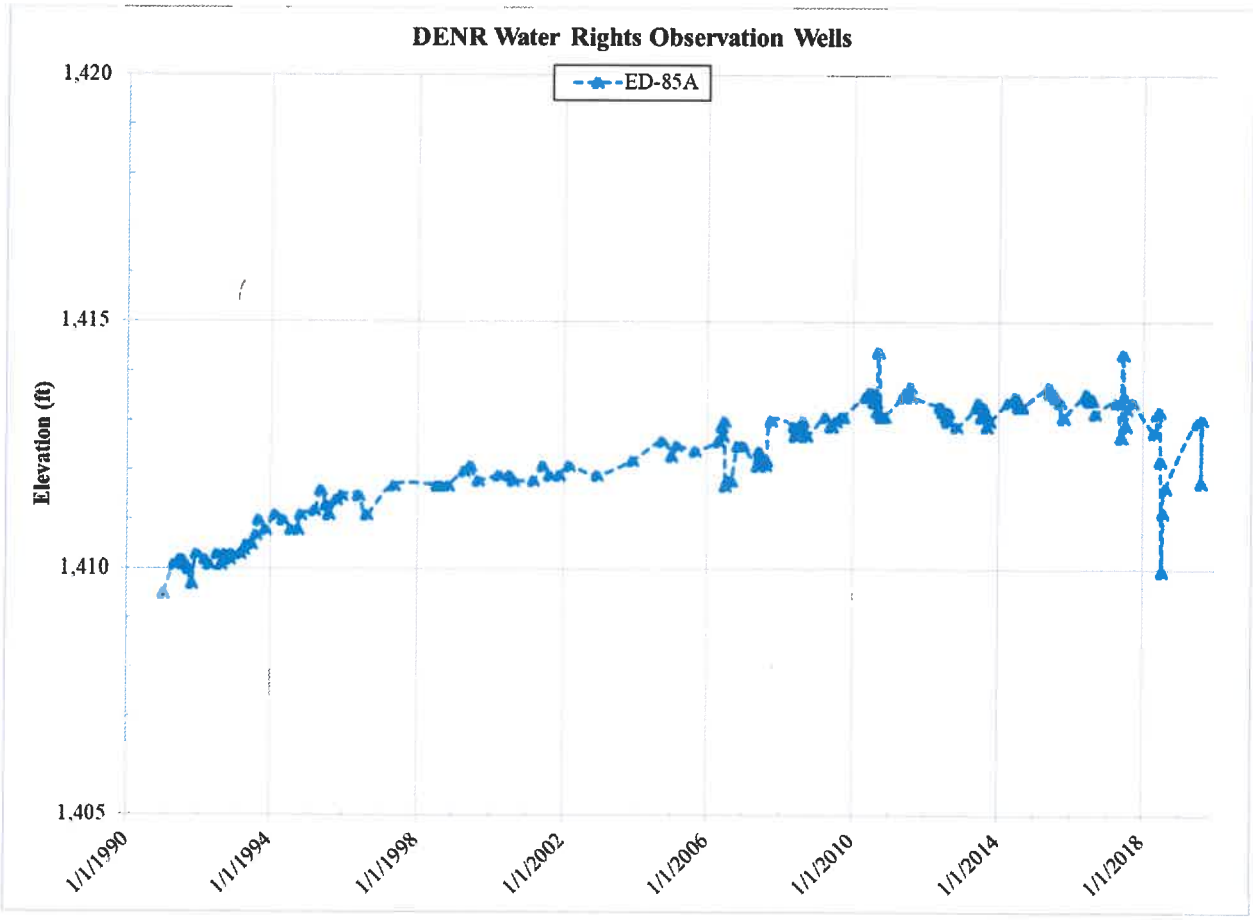


Figure 6: hydrograph for observation well ED-85A (Water Rights, 2020c)

As noted, the decreasing trend in the Dakota aquifer is likely due to the uncontrolled flowing wells. The Water Management Board has determined uncontrolled flowing wells is not a beneficial use of water and do not constitute appropriation pursuant to SDCL 46-6-3.1 (Water Rights, 1987). Observation well data indicates that there is a reasonable probability unappropriated water is available from the Dakota aquifer (Water Rights, 2020c). By allowing unappropriated water to go

to beneficial withdrawals, the pressure in the uncontrolled flowing wells is lowered, thus reducing the amount of water flowing to waste.

Dakota Aquifer Existing Water Rights And Permits

Currently, there are 238 water rights/permits appropriating water from the Dakota aquifer (Water Rights, 2020a). There are 7 diversion points completed into the Dakota aquifer within approximately 12 miles, with the nearest one being Water Right 6581-3 located approximately 9 miles to the north of the proposed diversion point (Table 6 and Figure 7). There are a number of domestic wells on file with the SD DENR Water Rights Program in the area of the proposed well site that appear to be completed into the Dakota aquifer (Water Rights, 2020b).

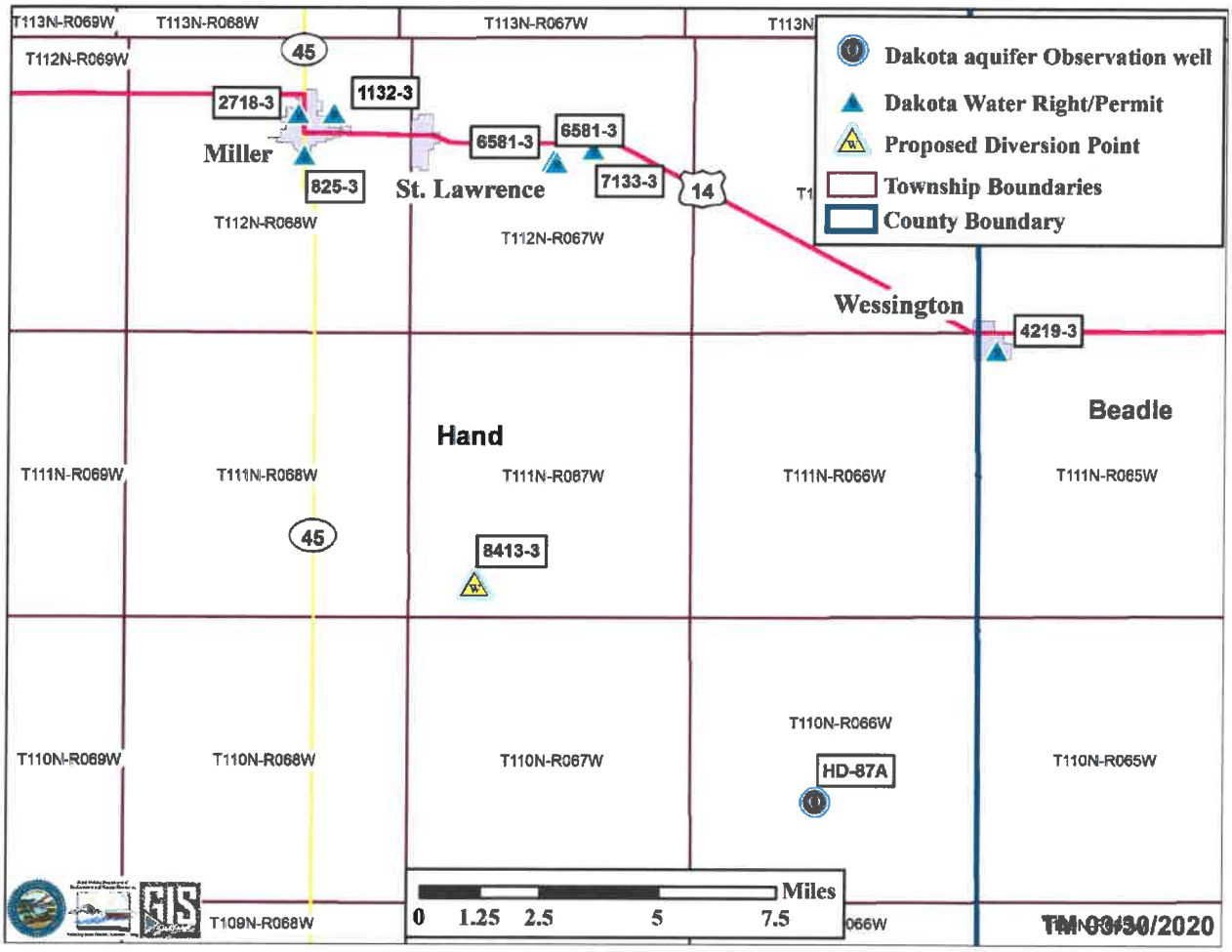


Figure 7: Map showing the proposed diversion point, nearby observation wells, and nearby water rights/permits completed into the Dakota aquifer (Water Rights, 2020a; Water Rights, 2020c).

Table 6: Nearby Dakota aquifer Water Rights/Permits within approximately 12 miles shown in Figure 7 (Water Rights, 2020a).

Permit No.	Name	Status	Use	Rate (cfs)	Acres
825-3	City Of Miller	LC	MUN	0.71	N/A
1132-3	City Of Miller	LC	MUN	0.5	N/A
2718-3	City Of Miller	LC	MUN	0.33	N/A
4219-3	City Of Wessington	LC	MUN	0.71	N/A
6581-3	Fremark Feedlot	LC	COM	0.122	N/A
7133-3	South Dakota Soybean Processors	PE	IND	0.044	N/A
LC = Water Right, MUN = Municipal, COM = Commercial, PE = Water Permit, IND = Industrial					

The Dakota aquifer is confined in this area, so drawdown from pumping the aquifer can extend over a fairly large area. Observation well data can provide insight into how the aquifer reacts to local pumping. Observation well HD-85A is located approximately 8.5 miles to the southeast of the proposed diversion point, and at the lowest recorded water level over the period of record, there was approximately 280 feet of hydraulic head remaining (Water Rights, 2020c). With the Dakota aquifer having a minimum aquifer thickness of 200 and a maximum of 320 feet in Hand and Hyde Counties, this would allow sufficient saturated thickness for a pump to be placed 20 feet below the top of the aquifer (Water Rights, 2020a; Water Rights, 2020c; Koch, 1980). The drawdown created from the proposed diversion should not unlawfully impair nearby adequate wells.

An adequate well has been defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) as:

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

SDCL 46-6-6.1 does not protect artesian head pressure as a means of delivery. In the past, the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur (Water Rights, 1995). Given the artesian head pressure of the Dakota aquifer, the nearest water right being approximately 9 miles to the north, and the lack of well interference complaints in the area; well interference from this proposed diversion is not expected to unlawfully impair nearby adequate wells. Therefore, there is a reasonable probability that any interference created by pumping for this proposed appropriation will not be unlawful.

Special Consideration: Declining Hydraulic Head

As the Dakota aquifer is a confined aquifer, the hydraulic head causes the water within the aquifer to rise above the top of the aquifer. In the late 1800s, wells began being completed into the Dakota aquifer, and a decline in the aquifer's hydraulic head occurred whenever a flowing well was drilled and not properly controlled. These uncontrolled wells create a release of pressure contained within the aquifer. This decline has caused some concern on whether the Dakota aquifer withdrawals have exceeded the recharge to the aquifer. The Water Management

Board has previously and carefully considered the declining hydraulic head in the Dakota aquifer. In the deliberation and approval of Water Permit No. 5136-3, for Farmland Industries Inc, the Water Management Board approved the findings of facts and conclusions of law containing the following summarized points (Water Rights, 1987):

- The estimated average annual recharge to the Dakota aquifer is not likely to be quantified in the near future.
- Determination of whether the withdrawals exceed the estimated average annual recharge cannot be determined solely by a decline in the hydraulic head.
- SDCL 46-6-6.1 does not require the artesian head to be protected; however, the Board must consider the effect of a limitation or loss of artesian head as one of the factors under the public interest determination.
- The decline in the hydraulic head in the Dakota aquifer has been primarily due to water being discharged through uncontrolled flowing wells.
- "Water discharged from uncontrollable flowing wells does not constitute withdrawal (appropriation) pursuant to SDCL 46-6-3.1."
- That it is in the public interest to appropriate water rather than allow the water to be discharged by uncontrollable flowing wells.
- That it is not in the public interest to deny a water permit application when the effects of the withdrawal will not be measurable and will not have a significant effect upon the decline or stabilization of the hydraulic head in the Dakota aquifer.

Special Consideration: Well Construction

The alternative well construction method for certain Dakota aquifer wells (ARSD 74:02:04:35) is not permitted for any well with uses other than reasonable domestic use and noncommercial livestock use. The proposed use for this application is neither a reasonable domestic use nor noncommercial livestock use. Any new well constructed for this application, if it is approved, must be constructed to meet the definition of an adequate well as set forth in ARSD 74:02:04:20(6) and using the construction method required by ARSD 74:02:04:28.

Conclusions

1. Water Permit Application No. 8413-3 proposes the commercial use of 77 acre-feet of water annually at a maximum instantaneous rate of 0.134 cubic feet per second (cfs) from two wells to be completed into the Niobrara aquifer (325-350 feet deep) or the Dakota aquifer (1,300–1,500 feet deep) for use in a swine production facility located approximately 10 miles southeast of Miller SD.

2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Niobrara and Dakota aquifers.

3. There is a reasonable probability that the diversion proposed by this application will not unlawfully impact adequate wells for existing water rights and domestic use.

Timothy Magstadt

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

References

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MAY 18 2020
WATER RIGHTS
PROGRAM

I am writing in concern about the water permit of Ratio LLC Kirk Aughenbaugh. This request for permit is for an animal feeding operation approximately 10 miles SE of Miller, SD

I live 2 miles east of this proposed sight and have concerns about water protection and contamination of these wells.

Having wells of my own, it is on going maintenance to see they are not contaminated with animal nitrates.

Other concerns is my available water supply. Will these wells cut my water supply? I have a 300 ft deep well and if I pump it more than a couple continuous hours a day, it goes dry. I must wait to use it until it refills. This operation proposes to use 40,000 gallons of water a day. What will this do to local wells? Will this 40,000 gallons a day meet the requirements for a 9060 head sow facility while feeding suckling pigs?

Many people were opposed to this sight and spoke at the commisioners meeting. One group was the Federal Fish and Wildlife.
They and the Game Fish and Parks have land and large water areas that feed those aquifers. Contamination of these bodies of water may have serious consequences for the wildlife and water supply.

Clean water is a natural resourse we cannot live without. Serious thought must be considered in this application. I ask that you deny this application for a water permit to LLC Ratio Kirk Aughenbaugh. Not only for private individuals, but also for the public well being for safe water.

Patricia Mowatt
36611 208th St
St Lawrence, SD 57373

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

IN REPLY REFER TO:
FWS/R6/

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Boulevard
Lakewood, Colorado 80228-1807

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MAY 18 2020
WATER RIGHTS PROGRAM

Mr. Eric Gronlund,
State Engineer
Joe Foss Building
523 East Capital
Pierre, SD 57501-3182

RE: Letter of Concern regarding New Application for Water Permit No. 8413-3

Dear Mr. Gronlund:

The U.S. Fish and Wildlife Service (FWS) submits this Letter of Concern regarding application to appropriate water under Water Permit No. 8413-3. The Applicant, Ratio LLC (Ratio), c/o Kirk Aughenbaugh, 43204 US Hwy 14, DeSmet SD 57231 has filed an application for a water permit to appropriate 77 acre-feet of water annually at a maximum pump rate of 0.134 cubic feet of water per second from two wells to be completed into the Niobrara Aquifer (325-350 feet deep) or the Dakota Aquifer (1,300-1,500 feet deep) located in the SE 1/4 NW 1/4 Section 32 for commercial use in a swine production facility to be located in the E 1/2 NW 1/4 Section 32; all in T111N-R67W. Ratio has completed two test wells in conjunction with the water permit application. Both of the test wells are only conducted down to a maximum of 410 feet, to the beginning of the Pierre shale layer above the Niobrara aquifer. The FWS is concerned that Ratio will seek to place the wells for this water permit in the relatively shallow Tulare aquifer, as related to the current well tests, and not within either the Niobrara or Dakota aquifer as currently required under the Chief Engineer's Recommendation. The Chief Engineer's Recommendation for Water Permit No.8413-3 includes the qualification "2. The well authorized by Water Permit No. 8413-3 shall be constructed into a single aquifer, either the Niobrara aquifer or Dakota aquifer, but not both. At the time of the licensing, the final water right be issued for the developed water source. "

FWS is concerned that if the proposed wells under Water Permit No.8413-3 are constructed above either the Niobrara or Dakota aquifers, they will negatively impact the lake within the adjacent Calahan Wetland Protection Area. The lake is approximately 700 feet from the proposed well sites. FWS respectfully requests the Department of Environment and Natural Resources (SD-DENR) ensures Ratio develops the two wells under Water Permit No. 8413-3 into either the Niobrara or Dakota aquifers. The FWS also requests SD-DENR send a copy of the final well logs for Water Permit No. 8413-3.

The FWS is also concerned about the water quality aspects associated with this water permit and the CAFO to which it is related. The FWS has expressed water quality concerns to SD-DENR in previous documents. However, the FWS has not received any communication from Ratio addressing those concerns.

If you have questions concerning this letter, please contact me at (303) 236-4491.

Sincerely,

(acting)

Brian S. Caruso
Chief, Division of Water Resources

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JUN 04 2020
WATER RIGHTS
PROGRAM

Proof Of Publication

Huron Plainsman
49 3rd Street SE
Huron, SD 57350
605-353-7402

Legal Notice Number: 0247

I, McKendzie Castillo, being duly sworn on oath say that the Plainsman is a daily paper published at Huron, Beadle County South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-tow consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am a Legal Advertising Coordinator of said newspaper and know that facts herein state. The annexed notice headed: SD ENVIRONMENTAL & NATURAL, was published for one day, in said newspaper and not in any supplement of the said newspaper, the publication was on 5/6/20. That the full amount of the fee charged for the publishing $ 29.03 insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whom so ever.

Subscribed and sworn to me before this date 5/29/20.

Notary Public, South Dakota

My Term Expires 03/11/2022

F. P. 05-06-20

NOTICE OF APPLICATION NO. 8413-3 to Appropriate Water

Notice is given that Ratio LLC, c/o Kirk Aughenbaugh, 43204 US Hwy 14, DeSmet SD 57231 has filed an application for a water permit to appropriate 77 acre-feet of water annually at a maximum pump rate of 0.134 cubic feet of water per second from two wells to be completed into the Niobrara Aquifer (325-350 feet deep) or the Dakota Aquifer (1,300-1,500 feet deep) located in the SE 1/4 NW 1/4 Section 32 for commercial use in a swine production facility to be located in the E 1/2 NW 1/4 Section 32; all in T111N-R67W. This site is located approximately 10 miles southeast of Miller SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8413-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at http://denr.sd.gov/public or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 18, 2020.

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

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

No. 0247 (adv.)

Published once at the total approximate cost of $29.03.

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JUN 04 2020

WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION
The Miller Press

STATE OF SOUTH DAKOTA)
)SS
County of Hand)

Michael G. Caviness of said county being first duly sworn, on oath, says that he is the publisher of *The Miller Press*, a weekly newspaper published in Miller, said County of Hand by Hand County Publishing Co., Inc. and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has been published within said County for fifty weeks next prior to the publication of the notice, herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Swine production facility seeks water permit

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 1 successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

5/2 20 20; _____ 20____

_____ 20____; _____ 20____

_____ 20____; _____ 20____

that the full amount of the fees for the publication of the annexed notice is

$ 26.10

Michael G. Caviness, Publisher

Subscribed and sworn to before me this 3 day of June 2020.

Janet L. Kittelson, Notary Public
My Commission expires: 7-25-26

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JUN 05 2020
WATER RIGHTS PROGRAM

Swine production facility seeks water permit

NOTICE OF APPLICATION NO. 8413-3 to Appropriate Water

Notice is given that Ratio LLC, c/o Kirk Aughenbaugh, 43204 US Hwy 14, DeSmet SD 57231 has filed an application for a water permit to appropriate 77 acre-feet of water annually at a maximum pump rate of 0.134 cubic feet of water per second from two wells to be completed into the Niobrara Aquifer (325-350 feet deep) or the Dakota Aquifer (1,300-1,500 feet deep) located in the SE 1/4 NW 1/4 Section 32 for commercial use in a swine production facility to be located in the E 1/2 NW 1/4 Section 32; all in T111N-R67W. This site is located approximately 10 miles southeast of Miller SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8413-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at http://denr.sd.gov/public or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 18, 2020.

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

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published May 2, 2020 at the total approximate cost of $26.10.

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DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

September 16, 2020

NOTICE

TO:

Ratio LLC
Kirk Aughenbaugh
43204 US Highway 14
DeSmet, SD 57231

Patricia Moriarty
36611 208th Street
St. Lawrence SD 57373

Brian S Caruso
US Fish & Wildlife Service
PO Box 25486
Denver Federal Center
Denver, CO 80225-0486

Todd D. Wilkinson
Counsel for Ratio, LLC
Wilkinson & Schumacher Law Prof. LLC
PO Box 29
DeSmet SD 57231

FROM: Eric Gronlund, Chief Engineer Eric Gronlund
Water Rights Program

SUBJECT: Scheduling of Hearing on Water Permit Application No. 8413-3, Ratio LLC

The Water Management Board will conduct a hearing to consider Application No. 8413-3 at 11:00 AM (Central Time), on Wednesday, October 7, 2020, at the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD. The time is an estimate and may be delayed due to prior items on the agenda. Pursuant to SDCL 46-2-9, 46-2-11, and 46-2A-23, the Board has legal authority and jurisdiction to conduct this hearing.

Applicable provisions of the notice dated June 3, 2020, and the public notice in the Miller Press published May 2, 2020, and Huron Plainsman published May 6, 2020, still apply.

Please note that the Capitol avenue main entrance of the Joe Foss Building has the lobby area under construction. However, the Matthew Training Center is still accessible to your left as you enter the lobby. Due to the Covid-19 pandemic, social distancing will be observed in the meeting room, masks are optional. Any party intending to testify, present evidence, or cross-examine witnesses will need to be physically present at the hearing.

Questions regarding the hearing process may be directed to Ron Duvall, Water Rights Program at (605) 773-3352 or ron.duvall@state.sd.us.

c: Ann Mines Bailey, Assistant Attorney General

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

September 22, 2020

NOTICE

TO:

Ratio LLC
Kirk Aughenbaugh
43204 US Highway 14
DeSmet, SD 57231

Patricia Moriarty
36611 208th Street
St. Lawrence SD 57373

Brian S Caruso
US Fish & Wildlife Service
PO Box 25486
Denver Federal Center
Denver, CO 80225-0486

Todd D. Wilkinson
Counsel for Ratio, LLC
Wilkinson & Schumacher Law Prof. LLC
PO Box 29
DeSmet SD 57231

FROM: for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Pre-hearing Officer's Procedural Order in the matter of Water Permit Application No. 8413-3, Ratio LLC

Enclosed is Pre-Hearing Officer Freeman's Procedural Order in the matter of Water Permit Application No. 8413-3, Ratio LLC.

Questions regarding the hearing process may be directed to Ron Duvall, Water Rights Program at (605) 773-3352 or ron.duvall@state.sd.us.

c: Ann Mines Bailey, Assistant Attorney General
David McVey, Assistant Attorney General

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WATER RIGHTS PROGRAM

STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WATER MANAGEMENT BOARD

IN THE MATTER OF WATER APPLICATION NO. 8413-3, RATIO LLC.	)))	PROCEDURAL ORDER

Hearing on this matter is scheduled for October 7, 2020. In preparation for hearing, the parties are hereby ordered to comply with the following:

1. To facilitate distribution to those Board members who will be appearing remotely, the parties shall provide a hardcopy of each exhibit which may be used during the course of the hearing. Each exhibit is to be numbered prior to submission. The Applicant shall identify its exhibits using letters A-Z. Water Rights shall use numbers 1-99. Patricia Moriarty shall use numbers 100-199. United States Fish and Wildlife Service shall use numbers 200-299.
2. In order to comply with the guidance issued by the Centers for Disease Control and the South Dakota Department of Health, the parties shall also submit on or before September 25, 2020, the number of individuals who will be present on their behalf during the hearing.
3. The parties must still be prepared to provide a sufficient number of copies of exhibits, with the exception of the administrative file, for use at the contested case hearing, including at least nine (9) copies for the

Board, its counsel, and court reporter, and enough additional copies for all parties participating in the contested proceedings.

On or before September 25, 2020, the number of participants to be present and the exhibits as outlined above must be provided to Ron Duvall, Water Rights, Department of Environment of Natural Resources, 523 East Capitol, Pierre, SD 57501.

Dated this 22nd day of September, 2020.

Rodney Freeman, Jr.
Prehearing Chairman
Water Management Board

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DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
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RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION NO. 8433-3, City of Lake Norden

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8433-3, City of Lake Norden, Mayor Jason Aho, PO Box 213, Lake Norden SD 57248.

The Chief Engineer is recommending DEFERRAL of Application No. 8433-3 for further study pursuant to SDCL 46-2A-2 and 46-2A-7. The deferral recommendation is so the city of Lake Norden can provide information to assist with determining if there is unappropriated water available and the potential effect of pumping on existing water users. These criteria need to be addressed as required by SDCL 46-2A-9 to determine whether a water right permit may be issued. The further study needed entails further delineation of either the aquifer boundaries or a 7-day aquifer performance test, or both.

Eric Gronlund
Eric Gronlund, Chief Engineer
July 21, 2020

NOTE: From past experience, it has been useful for the applicant or their consultant to consult with the Water Right Program regarding requirements for a suitable aquifer performance test. To discuss the requirements and recommendations for an aquifer performance test, please contact Adam Mathiowetz at (605) 773-3352.

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AUG 03 2020

WATER RIGHTS PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Codington)

I, Jackie Wettestad

certify that the attached printed Notice was taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was published

in the newspaper on the following date:

July 29, 2020

Cost of Printing $90.99

Jackie Wettestad
(Signature)

Office Manager
(Title)

7-31-2020
(Date Signed)

SOUTH DAKOTA DEPARTMENT OF ENERGY AND NATURAL RESOURCES

NOTICE OF HEARING on Application No. 8433-3 to Appropriate Water

Notice is given that City of Lake Norden, PO Box 213, Lake Norden SD 57248 has filed an application for a water permit to appropriate 1,458 acre-feet of water annually at a maximum pump rate of 2.11 cubic feet of water per second from three wells completed into the Prairie Coteau Aquifer (97-114 feet deep) located in the SW 1/4 Section 15-T113N-R53W for municipal use. This site is located one mile east of the city Lake Norden. South Dakota Codified Law (SDCL) 46-2A-4(10) provides that "if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board. The Chief Engineer is recommending DEFERRAL of Application No. 8433-3 for further study pursuant to SDCL 46-2A-2 and 46-2A-7. The deferral recommendation is so the city of Lake Norden can provide information to assist with determining if there is unappropriated water available and the potential effect of pumping on existing water users. These criteria need to be addressed as required by SDCL 46-2A-9 to determine whether a water right permit may be issued. The further study needed entails further delineation of either the aquifer boundaries or a 7-day aquifer performance test, or both. The Chief Engineer's recommendation and the application are available at http://denr.sd.gov/public or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below. The Water Management Board will consider this application at 1:00 pm, October 7, 2020 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 28, 2020. The petition may be informal, but shall be in writing and shall include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The October 7, 2020 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by September 28, 2020. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352. Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds $2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is August 10, 2020. However, since this particular matter is a water permit application and not a monetary controversy in excess of $2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board. As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25.02; 74:02:01:35.01.

Published once at the approximate cost 90.99 of $85.99.
(July 29, 2020)

RECEIVED
AUG 03 2020
WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Hamlin)

I, Lee Anne Dufek

certify that the attached printed Notice was taken from the Hamlin County Herald Enterprise

printed and published in Hayti

County of Hamlin and

state of South Dakota. The notice was published in the newspaper on the following date:

July 29, 2020

Cost of Printing $59.99

Lee Anne Dufek
(Signature)

Owner
(Title)

7-29-2020
(Date Signed)

NOTICE OF HEARING ON APPLICATION NO. 8433-3 TO APPROPRIATE WATER

Notice is given that City of Lake Norden, PO Box 213, Lake Norden SD 57248 has filed an application for a water permit to appropriate 1,458 acre-feet of water annually at a maximum pump rate of 2.11 cubic feet of water per second from three wells completed into the Prairie Coteau Aquifer (97-114 feet deep) located in the SW 1/4 Section 15-T113N-R53W for municipal use. This site is located one mile east of the city Lake Norden.

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

The Chief Engineer is recommending DEFERRAL of Application No. 8433-3 for further study pursuant to SDCL 46-2A-2 and 46-2A-7. The deferral recommendation is so the city of Lake Norden can provide information to assist with determining if there is unappropriated water available and the potential effect of pumping on existing water users. These criteria need to be addressed as required by SDCL 46-2A-9 to determine whether a water right permit may be issued. The further study needed entails further delineation of either the aquifer boundaries or a 7-day aquifer performance test, or both.

The Chief Engineer's recommendation and the application are available at http://denr.sd.gov/public or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

The Water Management Board will consider this application at 1:00 pm, October 7, 2020 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 28, 2020.

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

The October 7, 2020 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by September 28, 2020. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will b provided to all petitioners regardin the time, date and location.

Notice is given to individuals wit disabilities that this hearing is bein held in a physically accessible place Please notify the Department of En vironment and Natural Resources a least 48 hours before the hearing you have a disability for which spe cial arrangements must be made a the hearing. The telephone numbe for making arrangements is (60 773-3352.

Under SDCL 1-26-17(7) notice must state that "if the amount controversy exceeds $2,500.00 or a property right may be terminate any party to the contested case ma require the agency to use the Offic of Hearing Examiners by giving n tice of the request to the agency n later than ten days after service of notice of hearing issued pursuant t SDCL 1-26-17." This is a Notice o Hearing, service is being provided b publication, and the applicable dat to give notice to the Chief Enginee is August 10, 2020. However, sinc this particular matter is a water pe mit application and not a monetar controversy in excess of $2,500.0 or termination of a property right the Chief Engineer disputes the applica bility of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25.02; 74:02:01:35.01.

Published July 29, 2020, at total cost of $59.99.

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September 9, 2020

RECEIVED
SEP 11 2020
WATER RIGHTS
PROGRAM

Ron Duvall
Water Rights Program
Department of Environment and Natural Resources
523 E. Capitol Avenue
Pierre, SD 57501

Re: Water Permit Application #8409-3/SchletyFarms

Dear Mr. Duvall:

Enclosed is Schley Farms' Applicant's Proposed Findings of Fact and Conclusions of Law. I previously emailed you a copy.

Respectfully,

John E. Taylor

Enclosure

RECEIVED
SEP 11 2020
WATER RIGHTS
PROGRAM

STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
WATER MANAGEMENT BOARD

IN THE MATTER OF WATER PERMIT APPLICATION 8409-3	)))))	**APPLICANT'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW**

Applicant Schley Farms and Schley Real Estate LLP seeks a permit to impound and appropriate water from Mud Creek, Permit 8409-3, to use water for irrigation and incidental stock watering. The permit application was filed on August 26, 2019. After discovery and other prehearing proceedings, the Water Management Board ("the Board") conducted a hearing on February 26, 2020. That hearing was recessed pending a procedural order. Due to reasons related to the Covid-19 pandemic, the hearing resumed July 8, 2020. After the conclusion of the hearing, the Board voted to approve Permit 8409-3. The Board directed that findings of fact and conclusions of law be submitted no later than September 25, 2020. Having considered all of the materials on file with the Department of Environment and Natural Resources, Water Rights Division, the entire hearing record, and all of the oral and written arguments of counsel, at its meeting on October 7, 2020, the Board adopted the following findings of fact and conclusions of law.

FINDINGS OF FACT

1. On August 26, 2019, Schley Farms and Schley Real Estate LLP submitted an application signed by Dustin Schley to amend Permit 8042-3 and to appropriate 22 acre feet of water from Mud Creek located on the quarter line between the SW¼NW¼ and the SW¼NE¼

Section 7, Township 121 North, Range 61 West, Brown County, South Dakota (the "Application").

2. The Applicant seeks to impound and use water within Mud Creek for irrigation and incidental stock watering.

3. The South Dakota Department of Environment and Natural Resources, Water Rights Division ("Division"), determined that the Application was complete and assigned it number 8409-3.

4. Under SDCL § 46-2A-4, the Division directed that notice of the Application be published in the newspaper on October 23, 2019.

5. Mark Rath, who is employed by the Division as Natural Resources Engineer III, reviewed the Application in the ordinary course of his employment duties. Rath reviewed the available flow information from USGS in-stream gauges and prepared a hydrograph displaying the in-stream flow information for the proposed point of diversion. Rath reviewed the records of the Division and prepared a list of down-stream water rights holders. Rath reviewed the diversions reported by down-stream water rights holders. Rath determined that there was adequate unappropriated water available for the applicant's proposed use and that the proposed diversion could be developed without unlawful impairment of existing water rights. Rath prepared a report dated October 9, 2019, stating his findings and conclusions and submitted it to the Chief Engineer as required by SDCL § 46-2A-2. A copy of the report is attached as Exhibit A.

6. Under SDCL § 46-2A-2, Jeanne Goodman, the Chief Engineer, timely reviewed Rath's report and performed an independent analysis of his conclusions. The Chief Engineer recommended approval of the Application because there is a reasonable probability that there is

unappropriated water available for the applicant's proposed use, the diversion can be developed without unlawful impairment of existing rights, the proposed use is a beneficial use, and the proposed use is in the public interest, with certain qualifications stated in the recommendation, including bypassing of low flows needed for downstream domestic use, and annual reporting. A copy of the Chief Engineer's recommendation dated October 15, 2019, is attached as Exhibit B.

7. Based on the Chief Engineer's recommendation, the Division gave public notice of the application and that if no party in opposition intervened, the Chief Engineer would act on the application without hearing. The notice was published at the times and in the manner demonstrated by the affidavits of publication in the Administrative Record, which was introduced into evidence. Multiple persons filed petitions to oppose and contest the Application.

8. The following persons opposed the Application and, denominated by the Board chair as Intervenors, participated in the case: Brown County Mud Creek Watershed District, Garden Prairie Township, and Timothy Fliehs.

9. On November 21, 2019, Applicant's counsel requested an automatic delay of the hearing date under SDCL § 46-2A-5 by at least 20 days.

10. The Board held a contested case hearing on the application beginning on February 26, 2020, continuing on July 8, 2020. Chairman James Hutmacher presided at the hearing and was joined by Board members Everett Hoyt, Tim Bjork, Rodney Freeman, Jr., Leo Holzbauer, and Peggy Dixon. Board member Everett Hoyt resigned from the Board following the February 26, 2020, hearing. David McVey, Assistant Attorney General, handled certain legal issues during the hearing and advised Chairman Hutmacher on evidentiary issues. The Applicant was represented by John Taylor. The Division was represented by Ann Mines-Bailey. The Intervenors were represented by Kari Bartling.

11. During the hearing on February 26, 2020, the Board heard testimony from Mark Rath.

12. At the conclusion of cross examination of Mark Rath, Applicant's attorney requested a continuance of the proceedings and procedural order.

13. David McVey held a telephone conference on March 5, 2020, to discuss with the parties the particulars of the Applicant's requested procedural and scheduling order. After the telephone conference, the Prehearing Officer, Rodney Freeman, Jr., entered an order dated March 9, 2020, setting a hearing on the Application before the Board on May 7, 2020. The order required the parties to disclose expert witnesses by April 10, 2020, and disclose witnesses and exhibits by April 24, 2020.

14. Due to Governor Noem's emergency declaration and Executive Order 2020-04, the Chief Engineer requested a continuance of the matter on April 2, 2020.

15. The Board granted the Chief Engineer's continuance request on April 9, 2020, and cancelled the May 7, 2020, hearing before the Board.

16. The Board held a conference call with the parties on May 6, 2020, to discuss rescheduling of the matter in the coming months relative to the ongoing Covid-19 pandemic.

17. On June 11, 2020, the Board held a remote conference call with the parties to verify all were amenable to a live hearing in light of the ongoing Covid-19 pandemic and set a hearing on the Application before the Board on July 8, 2020.

18. At the hearing on July 8, 2020, the Board heard testimony from Chief Engineer Eric Gronlund, Mike Gutenkauf, Dusty Schley, Roger Rix, and Brandon Smid.

19. The Board did not limit the time for the direct or cross-examination of any witness at either the February 26 or July 8 hearings.

20. On the first factor stated in SDCL § 46-2A-9, which is whether there is a reasonable probability that there is unappropriated water available for the Applicant's proposed use, the Division presented expert testimony from Mark Rath that Mud Creek is an intermittent prairie stream based on historical flow data and his conclusions based on the hydrographs contained in his recommendation to the Chief Engineer. The Board finds that Rath's testimony was credible, supported by the evidence, and unrefuted.

21. Applicant offered expert testimony from Michael Gutenkauf, a professional engineer who works as a hydrologist with Clark Engineering from Aberdeen, South Dakota.

22. Gutenkauf conducted an analysis of the proposed diversion works, and reviewed USGS stream gauge data and USGS LiDAR imagery to determine upstream effect of the instream water impoundment. His conclusion that in 5, 10, 25, and 100-year flood event(s) the proposed diversion works do not impair upstream drainage was credible, supported by the evidence, and unrefuted.

23. The Intervenors did not present contrary expert testimony on the subject of water availability or upstream drainage impairment. Brandon Smid, a professional engineer from Helms and Associates, did offer expert testimony about the Mud Creek Watershed District's comprehensive plan, engineering plans and specifications, and planned works in vicinity of the diversion site and impoundment works.

24. Brandon Smid did not address the data in Rath's assessment or Gutenkauf's opinions.

25. Based on the undisputed testimony of Rath, there is a reasonable probability that unappropriated water is available in Mud Creek for Applicant's proposed use.

26. On the second factor in SDCL § 46-2A-9, whether the proposed diversion can be developed without unlawful impairment of existing rights, Rath testified that the Applicant holds the sole water right downstream of the point of diversion 8042-3 and concluded that should 8042-3 be impaired by Permit 8403-9, it would be self-induced by the Applicant. That testimony was unrefuted.

27. The Intervenors offered no testimony or evidence contradicting the data related to impairment of existing water rights in Rath's report and testimony.

28. None of the Intervenors have quantified and/or permitted rights to divert water from Mud Creek.

29. Based on the undisputed testimony of Rath and Gutenkauf, there is a reasonable probability that the proposed diversion can be developed without unlawful impairment of existing rights.

30. On the third factor in SDCL § 46-2A-9, whether the proposed use is a beneficial use, the Chief Engineer, Eric Gronlund, adopted the recommendation of his predecessor, Jeanne Goodman, and testified that his analysis is whether the proposed use is beneficial to the appropriator, and consistent with state policy, which is to put all water resources to full beneficial use and development by the people of South Dakota.

31. Dustin Schley, the principle of the Applicant, testified about the proposed diversion works and the use of the water from Mud Creek for crop irrigation and watering of livestock occupying his family's pasture adjacent to Mud Creek. His testimony was credible and undisputed.

32. The use of water for irrigation and stock watering is common in South Dakota and benefits landowners, farmers, ranchers, the economy, and the environment.

33. The Water Management Board has frequently approved water permits for irrigation and stock watering.

34. There is a reasonable probability that: (a) there is unappropriated water available sufficient for the Applicant's proposed use; (b) subject to certain conditions, the proposed diversion can be developed without unlawful impairment of existing water rights; (c) the Applicant's proposed uses of water are beneficial uses; and (d) the proposed uses of water are in the public interest.

35. The Chief Engineer recommended three permit qualifications to the Board.

36. In approving Permit 8409-3 at its meeting on July 8, 2020, the Board found the Chief Engineer's recommended qualifications were reasonable and necessary as stated below in the Final Decision.

37. Any of the following conclusions of law that should have been stated as a finding of fact should be recharacterized as necessary.

CONCLUSIONS OF LAW

1. The Water Management Board has jurisdiction over the subject matter and parties to this proceeding pursuant to SDCL Ch. 46-2A. Subject to the findings made on the factors stated in SDCL § 46-2A-9, the Board has the authority to grant, deny, or grant the Application upon reasonable qualifications.

2. The Application was complete and in compliance with ARSD 74:02:01:06.

3. Notice of the Application and the Chief Engineer's recommendation was timely and properly made under SDCL §§ 46-2A-2 and 46-2A-4.

4. Brown County Mud Creek Watershed District, Garden Prairie Township, and Timothy Fliehs filed timely petitions to participate in the proceedings. The deadline to oppose the Application was published as required by SDCL § 46-2A-4.

5. The two-day hearing held in February and July 2020 was a contested-case hearing under South Dakota law and was conducted according to SDCL Ch. 1-26. The rules of evidence were followed as provided in SDCL § 1-29-19(1). All parties to this proceeding were presented with a full and fair opportunity to be heard.

6. The Applicant bore the burden of proof under SDCL § 46-2A-9. The Applicant met its burden of proof and is entitled to a permit subject to qualifications adopted by the Board.

7. The Chief Engineer's recommendation that Permit 8409-3 be granted is not binding on the Board. The Board exercised independent judgment in reaching its decision.

8. Beneficial use is any use of water within or outside the state that is reasonable and useful and beneficial to the appropriator, and, at the same time is consistent with the interests of the public in the best utilization of water supplies. SDCL § 46-1-6(3).

9. The waters of the State should be put to beneficial use to the fullest extent of which they are capable. SDCL § 46-1-4.

10. The "public interest" under SDCL § 46-2A-9 is not defined by statute, but in this case the Board broadly considered how use of the water as proposed in the Application would affect the health, safety, and general welfare of the people of the State of South Dakota.

11. The Intervenors were given broad latitude in their presentation of evidence on this issue, and not all of the evidence received was relevant or dispositive.

12. The public trust doctrine imposes on the State, acting through the Board, an obligation to preserve water for public use and to control the use of water for the benefit of the public. The Board's decision in this case was informed by the public trust doctrine.

13. The Water Management Board lacks jurisdiction over matters of planning and zoning, which are matters of local government.

14. The Board is a quasi-judicial agency with limited jurisdiction. The Board cannot exercise purely judicial functions. *Petition of West-River Electric*, 675 N.W.2d 222, 230 (S.D. 2004).

15. Based on the entire record in this matter, including the findings stated above, Application 8409-3 should be granted under SDCL § 46-2A-7 subject to the qualifications stated below because the proposed appropriation meets the standards in SDCL § 49-2A-9.

16. Any of the preceding conclusions of law that should have been stated as a finding of fact should be recharacterized as necessary.

Final Decision

Application No. 8409-3 is granted subject to the following permit qualifications:

1. Water Permit No. 8409-3 authorizes impoundment with a storage capacity of 22 acre feet of water on Mud Creek.

2. The permit holder shall install a low flow bypass mechanism in the dam.

3. Low flows as needed for downstream domestic use, including livestock water and prior rights must be by-passed. The bypass during periods of low flow is only required to the extent that there is inflow upstream of the dam. The permit holder is not required to bypass stored water if there is not inflow into the dam.

Dated this ___ day of September, 2020.

By the Board:

_____
James Hutmacher, Chair

Dated this 9th day of September, 2020

TAYLOR LAW FIRM, P.C.

By _____

John E. Taylor
4820 East 57th Street, Suite B
Sioux Falls, SD 57108
(605) 906-0000
john.taylor@taylorlawsd.com
Attorney for Schley Farms, Schley Real Estate LLP, Dustin Schley

CERTIFICATE OF SERVICE

I certify that on this 9th day of September 2020, the foregoing Schley Farms, Schley Real Estate, LLP Applicant's Proposed Findings of Fact and Conclusions of Law was filed by email with the Chief Engineer of the DENR c/o Ron Duvall at ron.duvall@state.sd.us and by U.S. First Class Mail, postage paid with the DENR Water Rights Program, Joe Foss Building, 523 East Capitol Avenue, Pierre, SD 57501. Also, on this day, a true and correct copy was sent by email to the following:

Kari A. Bartling
Kolker Law Office
PO Box 467
Groton, SD 57445
tdlaw@nvc.net
Attorney for Petitioners

Ann F. Mines Bailey
Assistant Attorney General
Mickelson Criminal Justice Center
1302 E. Highway 14, Suite 1
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Attorney for South Dakota Department of Environment and Natural Resources, Water Rights Division

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John E. Taylor
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Attorney for Schley Farms, Schley Real Estate LLP, Dustin Schley

EXHIBIT A

REPORT ON WATER PERMIT APPLICATION NO. 8409-3
Schley Farms, Schley Real Estate LLP
October 9, 2019

Application No. 8409-3 proposes to impound 22 acre-feet (ac-ft) of water from Mud Creek, a tributary to the James River, by constructing a low head dam (weir) located on the quarter line between the SE 1/4 NW 1/4 and SW 1/4 NE 1/4 Section 7 with water impounded within the creek channel located in the NE 1/4 Section 7, N 1/2 Section 8, S 1/2 Section 5, W 1/2 Section 4; all in T121N-R61W. Currently, Water Permit No. 8042-3 appropriates 1.11 cubic feet of water per second from Mud Creek located in the SW 1/4 NE 1/4 Section 7 for irrigation of 72 acres in the E 1/2 NW 1/4 and W 1/2 NE 1/4 Section 7; all in T121N-R61W. The low head dam will provide storage of spring runoff for irrigation later in the season of the acres authorized by Water Permit No. 8042-3. This site is located 4 miles east of Stratford SD in Brown County.

Review of the Proposed Project and Water Source

The applicant currently holds Water Permit No. 8042-3 to irrigate 72 acres from Mud Creek. This application proposes to construct a low head dam with a low flow bypass mechanism on Mud Creek to backup water in-channel creating a 22 ac-ft storage reservoir. This reservoir will create a limited water supply allowing the applicant to pump water for the irrigation of 72 acres authorized by No. 8042-3. In this application the applicant has indicated they intend to install a low flow bypass in the low head dam to be able to release water.

Construction of the low head dam will backup and impound water in-channel on other property owners. The applicant included copies of written agreements from the affected upstream property owners allowing water to be impounded on their property.

The source of water for the proposed project is Mud Creek. Mud Creek is considered an intermittent prairie stream that headwaters in northeastern Brown County and western Day County. Figure 1 is a daily percentile flow hydrograph for a discontinued United States Geological Survey (USGS) stream gaging station located on Mud Creek. This gaging station operated from 1954 to 1977 was located approximately 3 miles downstream from the proposed dam site. The hydrograph displaying the 10, 25 and 50 daily flow percentiles for this gage indicates Mud Creek is an intermittent stream that can only be expected to flow following late winter snow melt and spring rain events. Flow at this location cannot be expected after the first part of July, particularly during periods of drier climatic conditions (USGS. 2019).

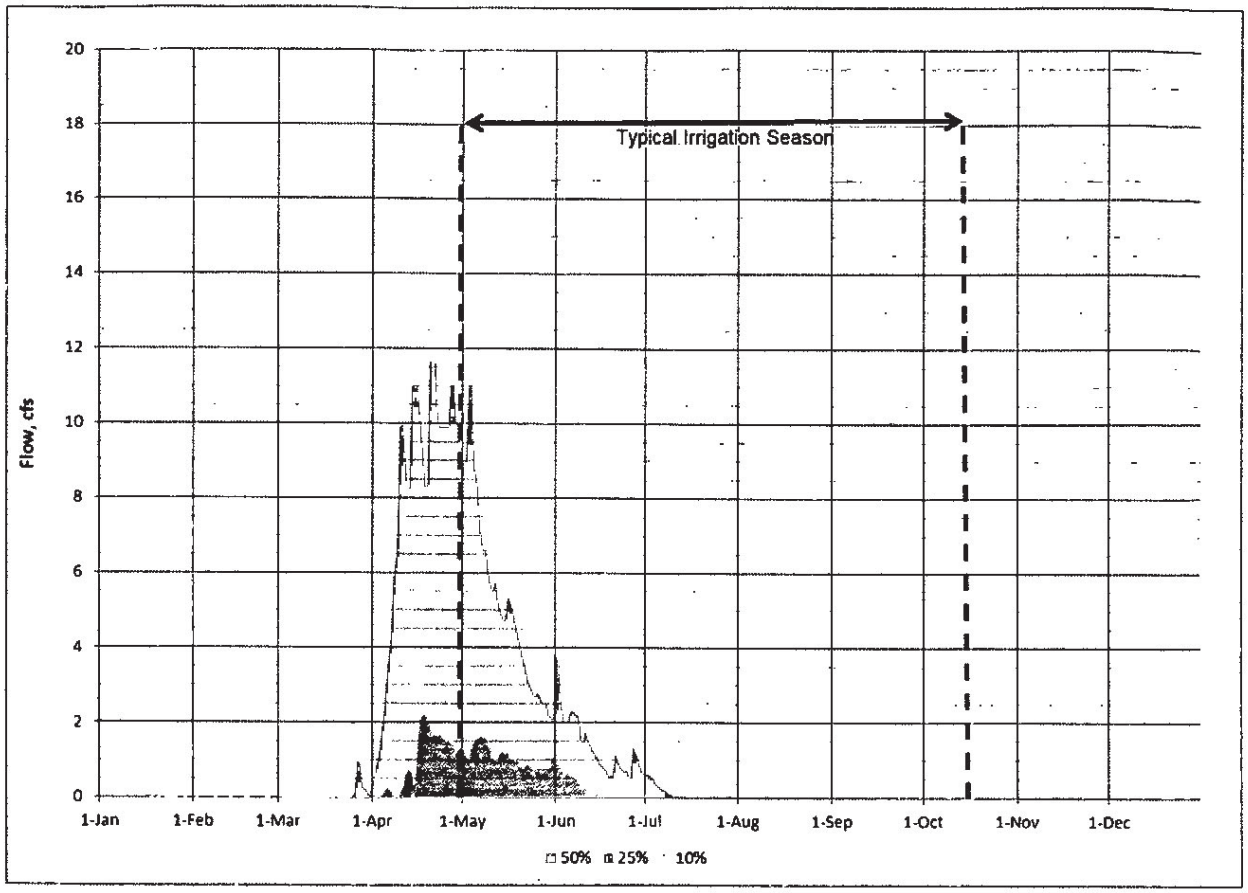

Figure 1. Daily percentile flow hydrographs for the USGS No. 06472500 Mud Creek near Stratford SD, 1954-1977, contributing drainage area 796 mi^2 (USGS. 2019).

Review of Existing Water Rights

The applicant holds the only existing water right No. 8042-3 located on Mud Creek from the project area downstream to the Mud Creek confluence with the James River. Since the applicant intends to pump the water in storage behind this low head dam for irrigation authorized by No. 8042-3, unlawful impairment is not an issue (Water Rights. 2019).

Discussion

Mud Creek is an intermittent stream; water can only be expected to be available in Mud Creek due to spring runoff during the months of April through June. The applicant proposes to construct a low head dam on Mud Creek to provide a more dependable water supply for irrigation authorized under Water Permit No. 8042-3. A review found there are no existing downstream water rights/permits on Mud Creek between the proposed dam site and the

confluence with the James River. The applicant indicated they intend to install a low flow bypass in the low head dam to be able to release water.

The proposed low head dam will backup and impound water in-channel on other property owners. To address this the applicant included copies of written agreements from the affected upstream property owners allowing water to be impounded on their property.

If this application is approved, it should include the following qualifications:

- The permit holder shall install a low flow bypass mechanism in the dam.
- Low flows must be bypassed to protect downstream domestic use include livestock watering when needed.

Conclusions

1. This application proposes to impound 22 acre-feet (ac-ft) of water from Mud Creek by constructing a low head dam.
2. Mud Creek is an intermittent stream and water can only be expected to be available in Mud Creek due to spring runoff during the months of April through June.
3. Water stored behind the dam will provide a more reliable water source for irrigation authorized by Water Permit No. 8042-3.
4. The proposed low head dam will backup and impound water in-channel on other property owners. To address this the applicant included copies of written agreements from the affected upstream property owners allowing water to be impounded on their property.
5. If approved, the permit should contain the following qualifications:
    - The permit holder shall install a low flow bypass mechanism in the dam.
    - Low flows must be bypassed to protect downstream domestic use including livestock watering when needed.

Mark D. Rath
Natural Resources Engineer III

References

1. USGS. 2019. United States Geological Survey, National Water Information System – Stream Gaging Station Network for South Dakota.

2. Water Rights. 2019. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

EXHIBIT B

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION NO. 8409-3, Schley Farms, Schley Real Estate LLP

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8409-3, Schley Farms, Schley Real Estate LLP, c/o Dustin Schley, 40017 143rd Street, Stratford SD 57474.

The Chief Engineer is recommending APPROVAL of Application No. 8409-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. Water Permit No. 8409-3 authorizes an impoundment with a storage capacity of 22 acre feet of water on Mud Creek.

2. The permit holder shall install a low flow bypass mechanism in the dam.

3. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed. The bypass during periods of low flow is only required to the extent that there is inflow upstream of the dam. The permit holder is not required to bypass stored water if there is not inflow into the dam.

See report on application for additional information.

Jeanne Goodman

Jeanne Goodman, Chief Engineer
October 15, 2019

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Re: *In the Matter Water Application No. 8409-3, Schley Farmers and Real Estate LLP*

To Whom it May Concern:

Enclosed please find a copy of the Chief Engineer's Objections to Proposed Findings of Fact, Conclusions of Law, and Final Decision and the Chief Engineer's Proposed Findings of Fact, Conclusions of Law, and Final Decision in the above-entitled matter.

Sincerely,

Ann F. Mines Bailey
Assistant Attorney General

AFM/mb
Enclosures
cc w/enc: Ron Duvall, DENR Water Rights Program

STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WATER MANAGEMENT BOARD

IN THE MATTER OF WATER APPLICATION NO. 8409-3, SCHLEY FARMS.	CHIEF ENGINEER'S OBJECTIONS TO PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND FINAL DECISION

COMES NOW, the Chief Engineer and the Department of Environment and Natural Resources - Water Rights Program (hereinafter Water Rights) in response to Schley Farms and Schley Real Estate's proposed findings of fact, conclusions of law, and final decision in this matter.

The Chief Engineer objects to the designation of the Water Rights Program as "Water Rights Division."

The Chief Engineer objects to the general designation of the application and other water permits as used throughout the proposed findings. In accordance with Water Rights' practice, it is requested that the designation be "Water Permit No." or "Water Permit Application No."

The Chief Engineer objects to the practice of attaching exhibits to the findings as the documents are already within the administrative record and easily accessible.

The Chief Engineer objects to Proposed Finding of Fact No. 1 as it provides an inaccurate legal description.

The Chief Engineer objects to Proposed Finding of Fact No. 3 as incomplete as it fails to describe the determination that the application was not an amendment but an application for a new permit.

The Chief Engineer objects to Proposed Finding of Fact No. 4 and No. 6 in that they are mischaracterizations, not supported by the record and incomplete. First, Water Rights does not "direct" or "give" publication; publication is directed by the statutes. Nonetheless, as a matter of course, when an application has proceeded to the point that publication is required by statute, Water Rights, as a courtesy, prepares a notice of publication to assist an applicant and to ensure that the necessary information is included in the notice. Water Rights informs the applicant when that notice has been drafted and further informs the applicant that it is his/her/its responsibility to make the arrangements for that publication. The Chief Engineer, however, concurs with the portion of Proposed Finding No. 4 which provides that notice was published in the newspaper on October 23, 2019. The Chief Engineer also concurs with the remainder of Proposed Finding No. 6.

With regard to Proposed Finding of Fact No. 10, the Chief Engineer proposes that it be clarified that the listed board members were present at both the February 26, 2020 meeting and the July 8, 2020 meeting. Additionally, the undersigned believes the appropriate designation for Mr. McVey in this matter is Board Counsel. Finally, the undersigned counsel's name should not be hyphenated.

The Chief Engineer also objects to Proposed Finding of Fact No. 18 and No. 30 as inaccurate as they reflect that Chief Engineer Gronlund testified during the hearing. Chief Engineer Gronlund did not testify at the hearing; rather counsel asserted on the record that Chief Engineer Gronlund adopted the recommendation of Chief Engineer Jeanne Goodman.

The Chief Engineer objects to Conclusion of Law No. 5 as the statute cited is incorrect. Instead of SDCL § 1-29-19(1), the statute cited should be SDCL § 1-26-19.

The Chief Engineer further objects to Proposed Conclusion of Law No. 14 as unnecessary.

The Chief Engineer also submits Proposed Findings of Facts, Conclusions of Law, and Final Decision which incorporates the corrections and additions mentioned above as well as proposes some grammar and stylistic changes.

Dated this 24th day of September 2020.

Ann F. Mines Bailey
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Telephone: (605) 773-3215

Counsel for Water Rights Program, DENR

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STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WATER MANAGEMENT BOARD

IN THE MATTER OF WATER APPLICATION NO. 8409-3, SCHLEY FARMS.	))))	CHIEF ENGINEER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND FINAL DECISION

Applicant Schley Farms and Schley Real Estate LLP seeks a permit to impound and appropriate water from Mud Creek, Permit No. 8409-3, to use water for irrigation and stock watering. The permit application was filed on August 26, 2019. After discovery and other prehearing proceedings, the Water Management Board (Board) conducted a hearing on February 26, 2020. That hearing was recessed pending a procedural order. Due to reasons related to the COVID-19 pandemic, the hearing resumed July 8, 2020. After the conclusion of the hearing, the Board voted to approve Water Permit Application No. 8409-3. The Board directed that findings of fact and conclusions of law be submitted no later than September 10, 2020, and that written objections or alternate findings be submitted by September 25, 2020. Having considered all of the materials on file with the Department of Environment and Natural Resources, Water Rights Program, the entire hearing record, and all of the oral and written arguments of counsel, at its meeting on October 7, 2020, the Board adopted the following findings of fact, conclusions of law, and final decision.

FINDINGS OF FACT

1. On August 26, 2019, Schley Farms and Schley Real Estate LLP submitted an application signed by Dustin Schley to amend Water Permit No. 8042-3 and to appropriate 22 acre-feet of water from Mud Creek located on the quarter line between the SE¼NW¼ and the SW¼NE¼ Section 7, Township 121 North, Range 61 West, Brown County, South Dakota.

2. The Applicant seeks to impound and use water within Mud Creek for irrigation and incidental stock watering.

3. The South Dakota Department of Environment and Natural Resources, Water Rights Program (Water Rights) determined that the Application was complete but, in fact, was not an amendment to an existing permit but properly considered a new application and was designated as Water Permit Application No. 8409-3.

4. Under SDCL § 46-2A-4, notice of the Application was published in the newspaper on October 23, 2019.

5. Mark Rath, who is employed by Water Rights as Natural Resources Engineer III, reviewed the Application in the ordinary course of his employment duties. Mr. Rath reviewed the available flow information from USGS in-stream gauges and prepared a hydrograph displaying the in-stream flow information for the proposed point of diversion. Mr. Rath reviewed the records of Water Rights and prepared a list of downstream water rights

holders. Mr. Rath reviewed the diversions reported by downstream water rights holders. Mr. Rath determined that there was adequate unappropriated water available for the Applicant's proposed use and that the proposed diversion could be developed without unlawful impairment of existing water rights. Mr. Rath prepared a report dated October 9, 2019, stating his findings and conclusions and submitted it to the Chief Engineer as required by SDCL § 46-2A-2.

6. Under SDCL § 46-2A-2, Jeanne Goodman, the Chief Engineer, timely reviewed Mr. Rath's report and performed an independent analysis of his conclusions. The Chief Engineer recommended approval of the Application because there is a reasonable probability that there is unappropriated water available for the Applicant's proposed use, the diversion can be developed without unlawful impairment of existing rights, the proposed use is a beneficial use, and the proposed use is in the public interest, with certain qualifications stated in the recommendation, including bypassing of low flows needed for downstream domestic use, and annual reporting.

7. Public notice of the Application was given and provided that if no party in opposition intervened, the Chief Engineer would act on the application without hearing. The notice was published at the times and in the manner demonstrated by the affidavits of publication in the Administrative Record, which was introduced into evidence.

8. The following persons opposed the Application and

participated in the case: Brown County Mud Creek Watershed District, Garden Prairie Township, and Timothy Fliehs.

9. On November 21, 2019, Applicant's counsel requested an automatic delay of the hearing date under SDCL § 46-2A-5 by at least 20 days.

10. The Board held a contested case hearing on the Application beginning on February 26, 2020, continuing on July 8, 2020. Chairman James Hutmacher presided at both hearings and was joined by Board members Everett Hoyt, Tim Bjork, Rodney Freeman, Jr., Leo Holzbauer, and Peggy Dixon. Board member Everett Hoyt resigned from the Board following the February 26, 2020, hearing. David McVey, Board Counsel, handled certain legal issues during the hearing and advised Chairman Hutmacher on evidentiary issues. The Applicant was represented by John Taylor. Water Rights was represented by Ann Mines Bailey. The Intervenors were represented by Kari Bartling.

11. During the hearing on February 26, 2020, the Board heard testimony from Mr. Rath.

12. At the conclusion of cross examination of Mr. Rath, Applicant's attorney requested a continuance of the proceedings and procedural order.

13. David McVey held a telephone conference on March 5, 2020, to discuss with the parties the particulars of the Applicant's requested procedural and scheduling order. After the telephone conference, the

Prehearing Officer, Rodney Freeman, Jr., entered an order dated March 9, 2020, setting a hearing on the Application before the Board on May 7, 2020. The order required the parties to disclose expert witnesses by April 10, 2020 and disclose witnesses and exhibits by April 24, 2020.

14. Due to Governor Noem's emergency declaration and Executive Order 2020-04, the Chief Engineer requested a continuance of the matter on April 2, 2020.

15. The Board granted the Chief Engineer's continuance request on April 9, 2020, and cancelled the May 7, 2020, hearing before the Board.

16. The Board held a conference call with the parties on May 6, 2020, to discuss rescheduling of the matter in the coming months relative to the ongoing COVID-19 pandemic.

17. On June 11, 2020, the Board held a remote conference call with the parties to verify all were amenable to a live hearing in light of the ongoing COVID-19 pandemic and set a hearing on the Application before the Board on July 8, 2020.

18. At the hearing on July 8, 2020, the Board heard testimony from Mike Gutenkauf, Dusty Schley, Roger Rix, and Brandon Smid.

19. The Board did not limit the time for the direct or cross-examination of any witness at either the February 26 or July 8 hearings.

20. On the first factor stated in SDCL § 46-2A-9, which is whether there is a reasonable probability that there is unappropriated water available for the Applicant's proposed use, Water Rights presented expert testimony from Mr. Rath that Mud Creek is an intermittent prairie stream based on historical flow data and his conclusions based on the hydrographs contained in his recommendation to the Chief Engineer. The Board finds that Mr. Rath's expert testimony to be credible, supported by the evidence, and unrefuted.

21. Applicant offered expert testimony from Michael Gutenkauf, a professional engineer who works as a hydrologist with Clark Engineering from Aberdeen, South Dakota.

22. Mr. Gutenkauf conducted an analysis of the proposed diversion works and reviewed USGS stream gauge data and USGS LiDAR imagery to determine upstream effect of the instream water impoundment. His conclusion that in 5, 10, 25, and 100-year flood event(s) the proposed diversion works would not impair upstream drainage was credible, supported by the evidence, and unrefuted.

23. The Intervenors did not present contrary expert testimony on the subject of water availability or upstream drainage impairment. Brandon Smid, a professional engineer from Helms and Associates, did offer expert testimony about the Mud Creek Watershed District's comprehensive plan, engineering plans and specifications, and planned works in vicinity of the diversion site and impoundment works.

24. Mr. Smid did not address the data in Mr. Rath's assessment or Mr. Gutenkauf's opinions.

25. Based on the undisputed testimony of Mr. Rath, there is a reasonable probability that unappropriated water is available in Mud Creek for Applicant's proposed use.

26. On the second factor in SDCL § 46-2A-9, whether the proposed diversion can be developed without unlawful impairment of existing rights, Rath testified that the Applicant holds the sole water right (Water Permit No. 8042-3) downstream of the point of diversion and concluded that should Water Permit No. 8042-3 be impaired by Water Permit No. 8409-3, it would be self-induced by the Applicant. That testimony was unrefuted.

27. The Intervenors offered no testimony or evidence contradicting the data related to impairment of existing water rights in Mr. Rath's report and testimony.

28. None of the Intervenors have quantified and/or permitted rights to divert water from Mud Creek.

29. Based on the undisputed testimony of Mr. Rath and Mr. Gutenkauf, there is a reasonable probability that the proposed diversion can be developed without unlawful impairment of existing rights.

30. Chief Engineer Eric Gronlund adopted the recommendation of his predecessor, Jeanne Goodman. Such a recommendation for approval is only given if the Chief Engineer finds that an application meets the factors set forth in SDCL § 46-2A-9, which includes that the proposed diversion is

for a beneficial use and is in the public interest.

31. Dustin Schley, the principle of the Applicant, testified about the proposed diversion works and the use of the water from Mud Creek for crop irrigation and watering of livestock occupying his family's pasture adjacent to Mud Creek. His testimony was credible and undisputed.

32. The use of water for irrigation and stock watering is common in South Dakota and benefits landowners, farmers, ranchers, the economy, and the environment.

33. The Water Management Board has frequently approved water permits for irrigation and stock watering.

34. There is a reasonable probability that: (a) there is unappropriated water available sufficient for the Applicant's proposed use; (b) subject to certain conditions, the proposed diversion can be developed without unlawful impairment of existing water rights; (c) the Applicant's proposed uses of water are beneficial uses; and (d) the proposed uses of water are in the public interest.

35. The Chief Engineer recommended three permit qualifications to the Board.

36. In approving Water Permit No. 8409-3 at its meeting on July 8, 2020, the Board found the Chief Engineer's recommended qualifications were reasonable and necessary as stated below in the Final Decision.

37. Any of the following conclusions of law that should have been stated as a finding of fact should be recharacterized as necessary.

CONCLUSIONS OF LAW

1. The Water Management Board has jurisdiction over the subject matter and parties to this proceeding pursuant to SDCL Ch. 46-2A and Ch. 46-2. Subject to the findings made on the factors stated in SDCL § 46-2A-9, the Board has the authority to grant, deny, or grant the Application upon reasonable qualifications.

2. The Application was complete and in compliance with ARSD 74:02:01:06.

3. Notice of the Application and the Chief Engineer's recommendation was timely and properly made under SDCL §§ 46-2A-2 and 46-2A-4.

4. Brown County Mud Creek Watershed District, Garden Prairie Township, and Timothy Fliehs filed timely petitions to participate in the proceedings. The deadline to oppose the Application was published as required by SDCL § 46-2A-4.

5. The two-day hearing held in February and July of 2020 was a contested-case hearing under South Dakota law and was conducted according to SDCL Ch. 1-26. The rules of evidence were followed as provided in SDCL § 1-26-19. All parties to this proceeding were presented with a full and fair opportunity to be heard.

6. The Applicant bore the burden of proof under SDCL § 46-2A-9. The Applicant met its burden of proof and is entitled to a permit subject to qualifications adopted by the Board.

7. The Chief Engineer's recommendation that Water Permit No. 8409-3 be granted is not binding on the Board. The Board exercised independent judgment in reaching its decision.

8. Beneficial use is any use of water within or outside the state that is reasonable and useful and beneficial to the appropriator, and, at the same time is consistent with the interests of the public in the best utilization of water supplies. SDCL § 46-1-6(3).

9. The waters of the State should be put to beneficial use to the fullest extent of which they are capable. SDCL § 46-1-4.

10. The "public interest" under SDCL § 46-2A-9 is not defined by statute. Consequently, the Board broadly considered how use of the water as proposed in the Application would affect the health, safety, and general welfare of the people of the State of South Dakota.

11. The Intervenors were given broad latitude in their presentation of evidence on this issue, and not all of the evidence received was relevant or dispositive.

12. The public trust doctrine imposes on the State, acting through the Board, an obligation to preserve water for public use and to control the use of water for the benefit of the public. The Board's decision in this case was informed by the public trust doctrine.

13. The Water Management Board lacks jurisdiction over matters of planning and zoning, which are matters of local government.

14. Based on the entire record in this matter, including the findings

stated above, Water Permit Application No. 8409-3 should be granted under SDCL § 46-2A-7 subject to the qualifications stated below because the proposed appropriation meets the standards in SDCL § 49-2A-9.

15. Any of the preceding conclusions of law that should have been stated as a finding of fact should be recharacterized as necessary.

Final Decision

Application No. 8409-3 is granted subject to the following permit qualifications:

1. Water Permit No. 8409-3 authorizes an impoundment with a storage capacity of 22 acre-feet of water on Mud Creek.
2. The permit holder shall install a low flow bypass mechanism in the dam.
3. Low flows as needed for downstream domestic use, including livestock water and prior rights must be by-passed. The bypass during periods of low flow is only required to the extent that there is inflow upstream of the dam. The permit holder is not required to bypass stored water if there is not inflow into the dam.

Dated this _____ day of October, 2020.

By the Board:

_____
James Hutmacher, Chair

STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WATER MANAGEMENT BOARD

IN THE MATTER WATER APPLICATION NO. 8409-3, SCHLEY FARMS.	)))	CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the Chief Engineer's Objections to Proposed Findings of Fact, Conclusions of Law, and Final Decision and Chief Engineer's Proposed Findings of Fact, Conclusions of Law, and Final Decision in the above matter was served by U.S. mail, first class, postage prepaid, upon the following on this 24th day of September 2020:

John E. Taylor
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Sioux Falls, SD 57108

Kari A. Bartling, Attorney
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David M. McVey
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Hand-delivered and electronically sent Word version

And on the same date, the original was filed with:

Ron Duvall
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WATER RIGHTS PROGRAM

August 20, 2020

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Re: *In the Matter Water Application No. 2805-2, R&J LLC.*

To Whom it May Concern:

Enclosed please find a copy of Water Rights' Proposed Findings of Fact and Conclusions of Law in the above-referenced file.

Sincerely,

Ann F. Mines Bailey
Assistant Attorney General

AFM/mb
Enclosures
cc w/enc: Ron Duvall, DENR Water Rights Program

STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WATER MANAGEMENT BOARD

IN THE MATTER OF WATER APPLICATION NO. 2805-2, R&J LLC	))))	WATER RIGHTS' PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

This matter came before the South Dakota Water Management Board for hearing on July 8, 2020. Board members James Hutmacher, Tim Bjork, Rodney Freeman, Peggy Dixon, Leo Holzbauer, and Bill Larson were present at the hearing and heard the evidence presented. R&J, LLC was represented by Michael M. Hickey. Intervenors Lon Buehner and William Hearne appeared *pro se*. Ann F. Mines Bailey represented the DENR Water Rights Program and the Chief Engineer.

The Board, having considered the testimony and exhibits presented and all records and documents on file and having entered its oral decision and rulings on the parties' submissions, now enters the following:

FINDINGS OF FACT

1. On September 25, 2019, Water Rights received Water Permit Application No. 2805-2 on behalf of R&J, LLC seeking an appropriation of water for commercial use in an RV park and cabins located near Rockerville, SD. The application proposes the diversion of 4 acre-feet of water annually with an instantaneous diversion rate of 0.044 cubic feet of water per second (cfs) from two wells to be completed into the Crystalline Rock aquifer in the

NW¼SW¼ (Lot A, Borglum Subdivision) Sec. 13-T1S-R6E in Pennington County.

2. At the time the application was reviewed, the Chief Engineer, Jeanne Goodman, recommended approval of the application subject to the permit including four specified qualifications. Those qualifications are as follows:

- 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.
- The wells authorized by Permit No. 2805-2 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.
- The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the wells completed into the Crystalline Rock aquifer.
- Water Permit No. 2805-2 authorizes a total annual diversion of 4.0 acre foot of water.

4. Sometime after issuing the recommendation, but prior to the hearing in this matter, Chief Engineer Goodman stepped down, accepting a new position with DENR. Eric Gronlund was subsequently named Chief Engineer. At the hearing, Chief Engineer Gronlund officially adopted Chief Engineer Goodman's earlier recommendation.

5. Notice of the application and hearing was timely advertised on December 4, 2019, in the Rapid City Journal (Pennington County).

6. DENR received timely petitions to intervene from Lon Buehner and William Hearne.

7. The matter was initially scheduled to be heard by the Water Management Board during its February 26, 2020 meeting; however, an automatic delay was requested and the hearing was rescheduled for the next regular Board meeting in May. Due to the COVID-19 pandemic, the hearing was again continued until the July, 2020 meeting.

8. Water Permit Application No. 2805-2 is a new water permit application which requires a determination pursuant to SDCL § 43-2A-9 that there is a reasonable probability unappropriated water is available for the proposed use, whether the use would impair existing rights, whether the use would be a beneficial use, and whether the proposed use is in the public interest.

9. In considering water availability, this Board must examine whether the average quantity of water withdrawn annually from the groundwater source

would exceed the quantity of the average estimated annual recharge of water to the groundwater source if this permit was granted.

10. Adam Mathiowetz, a natural resources engineer with the Water Rights Program, reviewed the permit application, analyzed the hydrology of the Crystalline Rock aquifer, and reviewed the information obtained from observations wells completed into the Crystalline Rock aquifer, as well as current water right/permit files and well completion reports for the aquifer.

11. In this area, the Crystalline Rock aquifer consist of numerous localized aquifers in the Precambrian aged core of the Black Hills. It is made up of Metagraywacke, which is siliceous mica schist with impure quartzite. The aquifer has very low primary porosity. Water movement in the aquifer occurs through fractures, joints and faults within the aquifer material. This secondary porosity is very uneven and unpredictable. The aquifer is estimated to contain approximately 2,900,000 acre-feet of recoverable water in storage in western South Dakota. Due to these aquifer characteristics, there are no average annual recharge estimates available for the localized portion of the Crystalline Rock aquifer in which the proposed diversion is sought.

12. Mr. Mathiowetz testified recharge to the Crystalline Rock aquifer occurs mainly through infiltration of precipitation and streamflow losses.

13. There are two observation wells in the Crystalline Rock aquifer. One of the wells is open to both the Deadwood Formation as well as the Crystalline Rock aquifer and was therefore not relied upon when reviewing this application. The other observation well, CU-86A, is located approximately 17.5

miles from the proposed diversion points. The data from this observation well demonstrates that the aquifer responds to climatic trends, recharging during wet periods and declining during dry periods. The observation well data demonstrates that the effects from pumping are temporal and are masked by climatic conditions. In fact, the data demonstrates an upward trend.

14. Based upon the nature and characteristics of the aquifer and the data available from the observations wells, Mr. Mathiowetz opined that there is unappropriated water available for this application.

15. Mr. Mathiowetz further testified that in reviewing the pertinent information, he concluded that the localized portion of the Crystalline Rock aquifer in which this diversion is sought is limited by larger faults and significant geologic features which have been mapped to some extent. Within this area of interest, there are ten existing water rights in the Crystalline Rock aquifer, with the nearest water right located approximately 0.17 miles from the proposed diversion site. Mr. Mathiowetz opined that even at that distance, given the relatively low diversion rate and volume requested and the lack of a significant history of complaints of well interference, there is a reasonable probability that the proposed amendment would not unlawfully impair existing water rights.

16. Additionally, there are a number of domestic wells within the vicinity of the proposed diversion site. Mr. Mathiowetz concluded that based upon the limited diversion rate and volume requested by this application and that there is little history of well interference in that area, there is a reasonable

probability that the proposed diversion would not result in an unlawful impairment of existing rights.

17. The Board finds Mr. Mathiowetz to be a credible expert witness and that these Findings of Fact are supported by the evidence presented including Mr. Mathiowetz's testimony and the reports and exhibits upon which he prepared and/or relied.

18. The Board also received the testimony of Chief Engineer Eric Gronlund. Mr. Gronlund testified that he reviewed the application, report, and recommendation and that he agreed with the former Chief Engineer's recommendation. He further testified that he believed the proposed diversion to be a beneficial use and in the public interest consistent with the Board's previous decisions.

19. The Board finds Chief Engineer Gronlund to be a credible expert witness and that these Findings of Fact are supported by the evidence presented including Chief Engineer Gronlund's testimony.

20. The Board also received the testimony of Juston Eisenbraun. Mr. Eisenbraun completed the application on behalf of R&J, LLC. Mr. Eisenbraun testified as to the plans to construct a RV campground with additional cabins, along with a store, laundry facility, and shower house. There are also plans to construct a swimming pool at a later date. The plan is to have the campground open from May until October weather permitting.

21. The Board also received the testimony of William Hearne. Mr. Hearne testified he owns land adjacent to the proposed project. Mr. Hearne

testified that as the use of water in the local area has increased the water his well is able to produce has decreased. Moreover, Mr. Hearne testified that the water quality has decreased as the use in the area has increased. Mr. Hearne testified that he believes that because of the unpredictable nature of the aquifer, one does not know where the effluent from septic systems will go. Mr. Hearne further spoke of his concerns regarding the lack of regulation and/or enforcement regarding water quality standards.

22. Lon Buehner also testified before the Board. Mr. Buehner testified that he believes the amount of water use in the localized area as stated in the Water Rights report cannot be valid because of the lack of development that exists. Mr. Buehner further testified of a great amount of development which has been planned and tentatively approved for the local area. Mr. Buehner additionally testified that there are a number of commercial establishments in the area that do not appear to have a water permit. Mr. Buehner contended that there are a number of domestic wells in the area which have an impact on the water in the area. Mr. Buehner further opined that given the topographical features of the area, the applicable area of the aquifer is quite small and that the recharge available to this area is greatly diminished.

23. The Board finds that there is unappropriated water available to satisfy this application.

24. The Board finds that granting this application would not unlawfully impair existing water rights.

25. The Board further finds that the proposed use of the water for commercial use in an RV campground constitutes a beneficial use.

26. The Board further finds that placing the water to this beneficial use is in the public interest.

27. Any finding of fact more properly designated as a conclusion of law shall be treated as such.

Based on the foregoing Findings of Fact, the Board makes the following Conclusions of Law:

CONCLUSIONS OF LAW

1. The Board has jurisdiction over this matter. The present application falls within the Board's responsibility over water appropriation and regulation in Title 46.

2. Publication was properly made, and the Notice of Hearing was properly issued pursuant to SDCL § 46-2A-4.

3. The Chief Engineer recommended granting this application. This recommendation is not, however, binding on the Board. SDCL § 46-2A-4(8).

4. The applicant is required to satisfy each of the factors set forth in SDCL § 46-2A-9.

5. The Board concludes that R&J, LLC has satisfied each of the factors set forth in SDCL § 46-2A-9.

6. South Dakota Codified Law, section 46-2A-9 provides that a permit to appropriate water may be issued "only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that

the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest." Each of these factors must be met and the permit must be denied if the applicant does not meet its burden of proof on any one of them.

7. The first factor for consideration under SDCL § 46-2A-9 is whether there is water available for the appropriation. Determination of water availability includes consideration of the criteria in SDCL § 46-6-3.1 pertaining to recharge/withdrawal: whether "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."

8. The Board concludes there is a reasonable probability that there is unappropriated water available to fulfill the amount requested by the application.

9. The Board further concludes that it is not probable that withdrawals from the aquifer would exceed recharge to the aquifer in violation of SDCL § 46-6-3.1 if this application is granted.

10. The second requirement of SDCL § 46-2A-9 is that the proposed water use may not unlawfully impair existing water rights. The proposed diversion can be developed without unlawful impairment of existing water rights.

11. The third element in SDCL § 46-2A-9 is whether the use of water would be a beneficial use: one that is reasonable and useful and beneficial to

the appropriator and also consistent with the interest of the public in the best utilization of water supplies under SDCL § 46-1-6(3). The proposed use (commercial) is a beneficial use.

12. The fourth requirement of SDCL § 46-2A-9 concerns the public interest. The proposed use of the water must be "consistent with the interests of the public of this state in the best utilization of water supplies." SDCL § 6-1-6(3). The Board finds that appropriating water for commercial use, such as this, is in the public interest.

13. Any conclusion of law more properly designated as a finding of fact shall be treated as such.

FINAL DECISION

Based on the foregoing Findings of Fact and Conclusions of Law, the Board enters its determination that Water Permit Application No. 2805-2 is granted 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. 2805-2 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. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the wells completed into the Crystalline Rock aquifer.

4. Water Permit No. 2805-2 authorizes a total annual diversion of 4.0-acre foot of water.

Dated this _____ day of October, 2020.

BY THE BOARD:

_____

South Dakota Water Management Board

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PROGRAM

September 15, 2020

To: David McVey, Juston Eisenbraun, Michael M. Hickey, William C. Hearne

RE: Suggested Revision to Proposed Findings of Fact, Conclusions of Law and Final Decision

Water Permit Application No. 20805-2, R&J LLC

To explain the need for my suggested revision to Final Decision qualification No. 3, I'd like to discuss conclusions resulting from the Report to the Chief Engineer on Water Permit No. 285-2 and discuss the ramifications of those conclusions. I believe those ramifications are likely to impact the final decision made on the subject application. I also believe the conclusions justify my suggested revision should the Water Management Board decide to approve the subject application.

Accessible water permit files confirm some information in the report to the Chief Engineer essentially reflects historical out of date information. The reasons for this are the lack of inspections on many properties for up to 50 years, lack of compliance in transferring rights, etc. Figure 1 and Table 1 of the report listed large estimated water use on properties that have been vacant for decades. It listed estimated water use for properties that had been closed for years and reopened as other businesses. The report failed to list several recently developed business entities that have been in operation for several years. It was because of these errors and omissions that I previously requested to the Chief Engineer (Jeanne Goodman at the time) that the report be redone with current and corrected information. I believed a revised report reflecting current and corrected information was necessary to properly assess the R&J LLC water permit request.

My expectation preparing for the hearing was that the sole focus would be whether or not additional water is available for the R&J LLC property to be developed. As I reviewed water permit files and additional data, I concluded the decision by the Water Management Board regarding the subject application has huge potential ramifications for several existing commercial/business entities within Figure 1 of the report to the Chief Engineer. The report did not show existing water rights for the Gaslight Restaurant, Big Mountain Cabins, or Silver Mountain Resort and Cabins. The Gaslight was recently rebuilt after a fire and the others are recent developments/expansions.

I met with the Pennington County Planning Director on February 3, 2020 to question how recent commercial/business development in the Rockerville area could be built without an existing water right permit and I was informed that Pennington County does not require a water permit for a business entity to obtain a construction or building permit. As a result, you have several business entities operating within the Figure 1 area of the report with no water right permit, as required by state law. Again, these establishments, like others in the Figure 1 area of the report, have not been inspected for water rights purposes.

There are two businesses in the Rockerville area (within the area of interest) that may be operating with water use that exceeds the maximum allowable water use of their water permit. The "Pine Haven Heritage Home" in Table 1 was an assisted living facility that ceased operation about 6 years ago. The property was eventually renovated and is now the Pine Haven portion of Rockerville Lodge and Cabins. During the rezone hearing of the R&J LLC property, the owner of the motel wrote to the Pennington

County Commissioners stating that the well produced 25 GPM (gallons per minute) but the maximum permitted water rate for the assisted living facility was 0.03 cfs which equates to 12 GPM. The other business with an apparent issue is the Hillside Country Cabins (shown on Table 1 as Hillside Country Cottages). The water right for this entity is 0.004 cfs which equals 2 GPM. Their website states they have 18 cabins. log homes and an executive lodge with maximum occupancy of approximately 85 people. I do not believe it is feasible to meet the water needs of such a large entity with the maximum permitted rate of 2 GPM.

The above water rights information is important in understanding the ramifications the R&J LLC water right decision may have on other currently operating business entities in the report's area of interest (Figure 1) that are operating without a water right or may have a water right that is insufficient to meet their water needs. If the Water Management Board denies the R&J LLC water right request because there is no unallocated water available in this localized aquifer or because the localized aquifer withdrawals are exceeding the aquifer recharge, how will the Gaslight Restaurant, and potentially Big Mountain Cabins, and Silver Mountain Resort and Cabins be able to obtain a water right which is required under state law? How will Hillside Cabins or the Pine Haven portion of Rockerville Lodge and Cabins be able to obtain additional water rights if their current use exceeds their lawfully permitted water volumes? The Water Rights Program staff may inspect those properties. Someone may file a complaint regarding those properties unlawfully producing water without a permit. If domestic water users cannot meet their water needs, they may request that all commercial/business entities without a valid water permit quit producing water. Those properties will be unable to obtain a water permit because the localized crystalline aquifer water has been fully allocated. Is the viability of the businesses currently operating without a water right at risk with the R&J LLC decision?

I have explained to the Pennington County Planning and Zoning Commissioners that the water rights issues in the Rockerville area (Figure 1) are complex and sensitive and quite frankly, a mess. The county has helped create this situation by allowing business construction without a water right permit. The state has played a part in creating the situation by failing to inspect existing water rights and allowing lodging and eating establishments to be granted licenses without a water right permit. Business owners also have had a role in creating the situation by failing to understand or follow state laws regarding water rights. Addressing these issues will take a commitment from both the state and the county as well as assistance from existing business owners.

I continue to believe there is no unallocated water available in our localized crystalline rock aquifer. I reviewed with you at the recent hearing that the four offsetting properties in the Rockerville area (Permit Nos. 483-2, 479-2, 585-2 and 2211-2) have a total water rights allocation of 231.7 acre-feet per year. This allocation represents over 7 feet of water per year within those property boundaries. However, I do recognize the potentially devastating impact a determination that there is no unallocated water available would have on the established businesses in Figure 1 that are operating unlawfully without a water right permit and may need to request a permit in the future.

Conclusions of Law No. 7 states one should determine whether "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 to the groundwater source." This is consistent with Findings of Fact No. 9 which states "In considering water availability, this Board must examine whether water withdrawn annually from the groundwater source would exceed the

quantity of the average estimated annual recharge of water to the groundwater source if this permit is granted." I do not believe with such an examination one can conclude there is water available from the localized aquifer when Finding of Fact No. 11 states, "Due to these aquifer characteristics, there are no average annual recharge estimates available for the localized portion of the Crystalline Rock aquifer in which the proposed diversion is sought." I remind the Board that I did enter an exhibit from the study referenced in Mr. Mathiowetz's report which did estimate recharge in the crystalline core of the Black Hills.

Based on Findings of Fact Nos. 13 and 14, Mr. Mathiowetz relied on data from an observation well 17.5 miles from the proposed diversion points to opine that there is unappropriated water available for the application. Applying data from an observation well 17.5 miles away, inferring the observation well is in the same aquifer as the proposed application, is inconsistent with Finding of Fact No. 11 which states "In this area, the Crystalline Rock aquifer consists of numerous localized aquifers in the PreCambrian aged core of the Black Hills." At the hearing, I discussed well invoice information which showed during several times of reduced precipitation the shared domestic wells adjacent to the applicant's property essentially were dry requiring homeowners to haul water. Such information directly offsetting the application property is more relevant than fluid levels in a well 17.5 miles away, most likely located in a different localized aquifer than the applicant's property and adjacent domestic wells. The backlog of activity for well drillers in the Black Hills during times of lower precipitation also is indicative of numerous localized aquifers in the crystalline rock where recharge during periods of lower precipitation is insufficient to meet overall water needs.

With Chief Engineer Goodman stepping down shortly before the R&J LLC water permit hearing, I was not able to ask her why she decided not to have the report rewritten to reflect current data or ask her why periodic inspections had not been performed to avoid the situation where several businesses are operating with no water rights permits and others may be taking water volumes exceeding their water allocations. Newly appointed Chief Engineer Gronlund perhaps could have provided insight but I believe he should be given the opportunity to correct the noncompliance issues. Unfortunately, I don't see how the noncompliance issues with existing businesses such as the Gaslight Restaurant, Big Mountain Cabins, Silver Mountain Resort and Cabins, etc. can be addressed without allocating them additional water than what's already been allocated in the area. I don't believe water could be allocated to those business entities if the R&J LLC application is denied due to unallocated water not being available.

I conclude that the water rights issues in the area outlined in Figure 1 of the report are a mess. The county granting construction/building permits without a water right, the state not inspecting these properties and business owners not complying with the law all are likely causes. As I stated earlier, I do not believe there is unallocated water available and I believe the R&J LLC water permit request should be denied. However, when you look at the ramifications of an R&J LLC water permit denial on other existing businesses that do not have but need a water right to be in compliance, I understand if the Board's final decision is to approve the R&J LLC request.

My concern is that increased water allocations in this area are going to negatively impact our community's ability to meet our domestic water needs and maintain acceptable water quality. I understand the Board is not responsible for managing water quality. However, it is important to note that essentially all water use in this area ends up as septic effluent. Higher water use results in higher septic effluent volumes which increases the risk of water contamination in the localized crystalline rock

aquifer. We produce water and dispose the septic effluent into the same formation. Septic systems are designed based on anticipated water use. Anticipated water use is also the basis for an approved water right permit water volume. Any business entity that produces more than their permitted water volume has the potential to not only impact available water quantity for others, but also impact water quality because of the higher associated septic volumes.

The information discussed above shows the challenge the area immediately offsetting the R&J LLC application acreage has had in meeting domestic water needs and maintaining acceptable drinking water quality. Homes adjacent to the R&J LLC acreage have periodically needed to haul water to meet their needs. As Mr. Hearne discussed at the hearing, his domestic well adjacent to the R&J LLC acreage has tested nitrate levels that exceed the EPA drinking water limit. I have recently discovered that in the past the Pine Haven portion of Rockerville Lodge and Cabins, which also is adjacent to the R&J LLC acreage, has also exceeded the EPA nitrate level limit. A third well adjacent to the R&J LLC acreage has tested a nitrate level very close to the EPA limit during the peak tourist season.

The resulting added water withdrawals and increased septic effluent from an approved R&J LLC water permit will likely make it more difficult for our community to meet our domestic water needs and maintain acceptable drinking water quality. Unlike the past, our community is now aware of the complex water rights issues that exist in the immediate area (Figure 1 of the staff report) and understands the priority of domestic water users. In the future we will likely look to the Chief Engineer and the Water Management Program staff for remedies and assistance should the domestic water needs not be met while nondomestic water users are producing from the same localized crystalline rock aquifer.

Should the Board approve the R&J LLC water permit request, I believe it will be extremely important and necessary to ensure the R&J LLC water withdrawals comply with the qualifications of the permit. To monitor compliance and provide beneficial water production information to the Chief Engineer and Water Management Program staff in identifying remedies and assistance per the above paragraph, I request that No. 3 in the FINAL DECISION qualification be changed to the following:

3. The permit holder shall measure the amount of water withdrawn from the wells completed into the Crystalline Rock aquifer. The amount of water withdrawn shall be reported to the Chief Engineer on June 1, August 1 and the closing date of the RV park season each year.

R&J LLC has indicated they plan on utilizing a holding tank for water storage. Therefore, metering the water volume should be fairly easy and inexpensive. Reporting water withdrawal volumes 3 times versus 1 time per year on the suggested dates will capture data for analysis over the peak tourist (and likely highest water use) months of June and July. Given 1) the historical lack of water permit compliance inspections in the area, 2) the necessity of adjacent homeowners to haul water in the past to meet their domestic water needs, and 3) the adjacent property water quality issues currently being addressed by Pennington County and SD DENR, I believe the metering of the water withdrawals and the reporting of water use 3 times annually by the permit holder is warranted.

Lon Buehner

Lon Buehner

Petitioner, Water Permit Application No. 285-2, R&J LLC

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September 9, 2020

Town of Buffalo
c/o Ryan Smith
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John Harter
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Mahmud Fitil
4949 S. 30th Street
Omaha, NE 68107

Dusty J. Ginsbach
Attorney for Town of Buffalo
P.O. Box 82
Buffalo, SD 57720

Re: *In the Matter Water Application No. 1992-1, Town of Buffalo*

To Whom It May Concern,

I have recently become aware that the Chief Engineer's Proposed Findings of Fact, Conclusions of Law, and Final Decision, sent to you on September 3, 2020, was actually a draft copy which contained two minor markups which are apparent on

the face of the document and not the final version. Enclosed please find the final copy. There are no substantive changes. The enclosed is simply a clean copy. I apologize for any inconvenience.

Sincerely,

Ann F. Mines Bailey
Assistant Attorney General

AFM/cmw

Enclosures

cc w/enc: Ron Duvall, DENR Water Rights Program *(Interoffice mail)*

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STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WATER MANAGEMENT BOARD

IN THE MATTER WATER PERMIT APPLICATION NO. 1992-1, TOWN OF BUFFALO	))))	CHIEF ENGINEER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND FINAL DECISION

This matter came before the South Dakota Water Management Board for hearing on July 9, 2020. Board members Jim Hutmacher, Rodney Freeman, Peggy Dixon, Leo Holzbauer, Tim Bjork, and Bill Larson were present at the hearing and heard the evidence presented. The Town of Buffalo was represented by Dusty J. Ginsbach. Ann F. Mines Bailey appeared on behalf of the Chief Engineer and the Water Rights Program. Intervenors did not appear.

The Board, having considered the testimony and exhibits presented and all records and documents on file and having entered its oral decision and rulings on the parties' submissions, now enters the following:

FINDINGS OF FACT

1. On October 25, 2019, the South Dakota Department of Environment and Natural Resources Water Rights Program ("Water Rights ") received an application for a new water permit from the Town of Buffalo.
2. Water Permit Application No. 1992-1 seeks an annual diversion from the Hell Creek aquifer of 82 acre-feet of water at a maximum diversion rate of 0.19 cubic feet per second (cfs) for municipal use. The diversion point is

one existing well located in the SE¼ NW¼ of Section 29-T19N-R5E in Harding County on the southeast edge of Buffalo, SD.

3. At the time the application was reviewed, Chief Engineer Jeanne Goodman recommended approval with the following qualifications:

- 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.
- The well authorized by Permit No. 1992-1 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.
- The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Hell Creek aquifer.
- Water Permit No. 1992-1 authorizes a total annual diversion of 82 acre foot of water.

4. Sometime after issuing the recommendation, but prior to the hearing in this matter, Chief Engineer Goodman stepped down, accepting a new position with DENR. Eric Gronlund was subsequently named Chief

Engineer. At the hearing, Chief Engineer Gronlund officially adopted Chief Engineer Goodman's earlier recommendation.

5. Notice of the application and recommendation was timely advertised on January 9, 2020, in the Black Hills Pioneer and Nation's Center News pursuant to SDCL § 46-2A-4.

6. DENR received timely petitions to intervene from Carol Hayse, Trisha Etringer, Dakota Rural Action, John Harter, Mahmud Fitil, and Elizabeth Lone Eagle.

7. The matter was initially scheduled to be heard by the Water Management Board during its February 26, 2020 meeting; however, an automatic delay was requested and the hearing was rescheduled for the next regular Board meeting in May. Due to the COVID-19 pandemic, the hearing was again continued until the July 2020 meeting.

8. Water Permit Application No. 1992-1 is a new water permit application which requires a determination pursuant to SDCL § 46-2A-9 as to whether there is a reasonable probability unappropriated water is available for the proposed use, whether the use would impair existing rights, whether the use would be a beneficial use, and whether the proposed use is in the public interest.

9. In considering water availability, this Board must examine whether the average quantity of water withdrawn annually from the groundwater source would exceed the quantity of the average estimated annual recharge of water to the groundwater source if this permit was granted.

10. The Hell Creek aquifer occurs within the saturated permeable and porous portions of the Hell Creek Formation which underlies portions of South Dakota, North Dakota, Wyoming, Montana, and Canada. It is comprised of shale interbedded with carbonaceous shale, bentonitic silty shale, siltstone, sandstone, and claystone-pebble conglomerate.

11. Water in storage for the South Dakota portion of the Hell Creek aquifer is estimated to be in excess of 82 million acre feet. It receives recharge from infiltration of precipitation, stream flow infiltration, and groundwater inflow.

12. Whitney Kilts, an engineer with the South Dakota Department of Environment and Natural Resources, Water Rights Program provided expert testimony regarding the Hell Creek aquifer, the availability of unappropriated water and the potential for unlawful impairment of existing rights should the application be granted.

13. Ms. Kilts was able to estimate average annual recharge to the aquifer from a published study of the aquifer, which used a base flow recession analysis to estimate an order of magnitude for recharge to the aquifer in South Dakota. Ms. Kilts estimated the South Dakota portion of the aquifer receives between 112,306 to 130,275 acre-feet of recharge per year.

14. Ms. Kilts testified that there are twelve water permits on file with the South Dakota Water Rights Program appropriating water from the Hell

Creek aquifer. Those twelve rights are estimated to withdraw less than 806 acre-feet of water per year.

15. Observation well data was also considered when reviewing the aquifer. The data from the observation well, located approximately 3.9 miles from the proposed diversion site, demonstrates that the aquifer is responsive to climatic conditions. Water levels have remained relatively stable and show a slight increase over the period of record, thus indicating there is more water in storage in the aquifer than there was at the start of the period of record.

16. Based upon her technical analysis and the observation well data, Ms. Kilts concluded there is unappropriated water available in the Hell Creek aquifer.

17. Ms. Kilts also reviewed the potential of unlawful impairment of existing rights. The closest water rights on file completed into the Hell Creek aquifer are other rights held by the Town of Buffalo. The closest water rights on file not held by the Town of Buffalo are Water Permit Nos. 1963-1 and 1963A-1 located approximately eight miles to the west of the proposed diversion point. Ms. Kilts identified approximately six domestic wells on record with the Water Rights Program located within one mile of the proposed diversion site.

18. Ms. Kilts opined that there is a reasonable probability that this application would not result in an unlawful impairment of existing water rights should this application be granted. She based her opinion on a

review of the observation well data which shows no signs of well interference. Additionally, Ms. Kilts pointed out that there is approximately 170 feet of artesian head pressure in this portion of the aquifer. As artesian head pressure is not protected, that 170 feet of artesian head pressure would have to be overcome before there could be an unlawful impairment. Finally, Ms. Kilts testified that her opinion was also based upon the proximity of the proposed diversion site to other well locations held by the Town of Buffalo, reasoning that it is in the interests of the Town of Buffalo to manage its pumping in a manner which would not interfere with its other wells.

19. The Board finds Ms. Kilts to be a credible expert witness and that these Findings of Fact are supported by the evidence presented, including Ms. Kilts' testimony and the reports and exhibits which she prepared and/or relied upon.

20. The Board also received the testimony of Chief Engineer Eric Gronlund. Chief Engineer Gronlund testified that he concurs with and adopts the recommendation issued under his predecessor. He further testified that based upon the Board's previous rulings, the application is a beneficial use and is in the public interest. Chief Engineer Gronlund additionally testified that municipal use includes the sale of water by the municipality. The Board finds Chief Engineer Gronlund to be a credible witness and that these Findings of Fact are supported by the testimony of Chief Engineer Gronlund.

21. Ryan Smith, Waste and Water Superintendent for the Town of Buffalo, also testified. Mr. Smith testified that he completed the application on behalf of the Town of Buffalo. Mr. Smith stated the Town wishes to retire two wells. He further provided that, in fact, two of the Town's wells have been plugged. Mr. Smith further testified that the water from this proposed diversion would be used to supply the water needs of its residents, irrigation of its properties, and bulk water sales.

22. After considering the testimony of the witnesses and the exhibits received into evidence, the Board finds that there is unappropriated water available to satisfy this application.

23. The Board further finds, based upon the evidence presented that the proposed diversion will not unlawfully impair existing rights and is for a beneficial use and in the public interest.

19. Any Finding of Fact more properly designated as a Conclusion of Law shall be treated as such.

From the foregoing Findings of Fact, the Board makes the following:

CONCLUSIONS OF LAW

1. The Board has jurisdiction over the Application and the parties pursuant to SDCL Ch. 46-2 and 46-2A.

2. Publication was properly made, and the Notice of Hearing was properly issued pursuant to SDCL § 46-2A-4.

3. The Chief Engineer recommended granting this application. That recommendation, however, is not binding upon the Board. *See* SDCL § 46-2A-4(8).

4. South Dakota Codified Law, section 46-2A-9 provides that a permit to appropriate water may be issued "only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest." Each of these factors must be met and the permit must be denied if the applicant does not meet its burden of proof on any one of them.

5. The Applicant bore the burden of proof under SDCL § 46-2A-9. The Applicant met its burden of proof and is entitled to a permit subject to qualifications adopted by the Board.

6. The first factor for consideration under SDCL § 46-2A-9 is whether there is water available for the appropriation. Determination of water availability includes consideration of the criteria in SDCL § 46-6-3.1

7. The Board concludes there is a reasonable probability that there is unappropriated water is available to fulfill the amount requested by the Applicant.

8. The Board further concludes that it is not probable that withdrawals from the aquifer would exceed recharge to the aquifer in violation of SDCL § 46-6-3.1 if this application is granted.

9. The second requirement of SDCL § 46-2A-9 is that the proposed water use may not unlawfully impair existing water rights. The proposed diversion can be developed without unlawful impairment of existing water rights.

10. The third element in SDCL § 46-2A-9 is whether the use of water would be a beneficial use: one that is reasonable and useful and beneficial to the appropriator and also consistent with the interest of the public in the best utilization of water supplies under SDCL § 46-1-6(3). The proposed use (municipal) is a beneficial use.

11. The fourth requirement of SDCL § 46-2A-9 concerns the public interest. The proposed use of the water must be "consistent with the interests of the public of this state in the best utilization of water supplies." SDCL § 46-1-6(3). The Board finds that appropriating water for municipal use is in the public interest.

12. Any Conclusion of Law more properly designated as a Finding of Fact shall be treated as such.

FINAL DECISION

Based on the foregoing Findings of Fact and Conclusions of Law, the Board enters its determination that Water Permit Application No. 1992-1 is granted 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. 1992-1 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. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Hell Creek aquifer.
4. Water Permit No. 1992-1 authorizes a total annual diversion of 82 acre foot of water.

Dated this _____ day of October, 2020.

James Hutmacher, Chairman
Water Management Board