

MINUTES OF THE 217th MEETING OF THE
WATER MANAGEMENT BOARD
LEGISLATIVE RESEARCH COUNSEL ROOM 414
IN THE STATE CAPITOL
500 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA
OCTOBER 3 & 4, 2019

CALL TO ORDER: Chairman Hutmacher called the meeting to order at 8:41AM central time.

Julie Smith conducted a roll call of members present. Present were Peggy Dixon, Leo Holzbauer, Everett Hoyt, Rodney Freeman and Jim Hutmacher. Chad Comes and Tim Bjork were absent.

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

ADOPT FINAL AGENDA:

Motion by Rodney Freeman, second by Peggy Dixon for adoption of final agenda for the October 3 – 4, 2019, meeting. Motion carried by roll call vote.

CONFLICTS DISCLOSURES AND REQUEST FOR STATE BOARD WAIVERS: None

APPROVAL OF BOARD MINUTES FOR JULY 17, 2019:

Motion by Rodney Freeman, second by Leo Holzbauer to approve the minutes as amended. Motion carried unanimously by roll call vote.

Chairman Hutmacher stated administering the oath to DENR staff will occur when the court reporter is present.

**ORDER APPOINTING BOARD MEMBER PREHEARING OFFICER AND
ALTERNATE PERHEARING OFFICER FOR UPCOMING YEAR:**

Regarding the order appointing Board's Prehearing Officer and alternate Prehearing Officer for upcoming year, Ann Mines Bailey stated at the July meeting the Board voted to appoint Rodney Freeman as the prehearing officer for the upcoming year. This order will formalize the Board's decision.

Motion by Everett Hoyt, second by Peggy Dixon to adopt the amended order to appoint Rodney Freeman as Board prehearing officer for the upcoming year and authorize the chairman to sign the order. Motion carried by roll call vote.

PUBLIC COMMENT PERIOD IN ACCORDANCE WITH SDCL 1-25-1

Public Commenters:

- John Schmidt, Woonsocket SD
- Joni Tobacco, Oglala Sioux Tribal member

At 10:00 AM, Chairman Hutmacher indicated that they were going to go back through the same motions as at 8:30 AM since the court reporter is now present.

The following attended the meeting:

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR): Jeanne Goodman, Eric Gronlund, Karen Schlaak, Vickie Maberry, Kim Drennon, Mark Rath, Adam Mathiowetz, Whitney Kilts, Ron Duvall with the Water Rights Program; Julie Smith with the Drinking Water Program.

ATTORNEY GENERAL'S OFFICE: Ann Mines Bailey, Water Rights Program Counsel and David McVey, Board Counsel

LEGISLATIVE OVERSIGHT COMMITTEE: Representative Mary Duvall

OTHERS:

In the matter of the TransCanada (spelling of names is a best effort from interpreting the sign-in sheet)

Elizabeth Lone Eagle, petitioner
Zora Lone Eagle, petitioner
Merle John Lone Eagle petitioner
Tatanka Lone Eagle, petitioner
Thomasina Real Bird, counsel for Yankton Sioux Tribe
Cindy Myers, petitioner
Mahmud Fitol, petitioner
Jason Shald, petitioner
Tracey Zephier, Attorney General, Cheyenne River Sioux Tribe
Bruce Ellison - Counsel for Dakota Rural Action
John Taylor - Counsel for TransCanada Keystone Pipeline
James Moore - Counsel for TransCanada Keystone Pipeline
William Taylor – Counsel for TransCanada Keystone Pipeline
Jung Hoe Hopgood
Greg Tencer
Matt Naasz - Counsel for Tom & Lori Wilson and Wink Cattle Company
Bob Mercer, reporter

Water Management Board
October 3 & 4, 2019 Meeting Minutes

Peter Capossela, counsel for Great Plains Tribal Water Alliance

Rebecca Terk

Jim Aamot

Teryl Cruse

Paul Seamans, petitioner

Matt Maher

Faith Spotted Eagle

Kip Spotted Eagle

Jon Schmidt

Jennifer Baker

Mike Novotny

V Wicks

John Kessler

U ElkLooke Bade

Clad Elk

Loren Locher

Doug Crow Ghost

Barry Le Bean

Paula Sutoure

Joseph Robertson

Bryan Gortmonk

Michael Walters

James Dowling

Joe Bliss

Buckley Wright

Joni Tobacco

Caroline Binder

James Dowling

Frank Diceshre

Ricky Gray Grass

Annita Lucchesi

Wichup King

Elizabeth Wakoman

Julie Smith conducted a roll call vote of Board members present. Peggy Dixon, Everett Hoyt, Tim Bjork, Leo Holzbauer, Rodney Freeman and Jim Hutmacher were present. Chad Comes was unable to attend.

ADOPT FINAL AGENDA FOR OCTOBER 3-4, 2019

Motion by Rodney Freeman, second by Tim Bjork, to adopt the final agenda. Motion carried unanimously by roll call vote.

CONFLICTS DISCLOSURES AND REQUEST FOR STATE BOARD WAIVERS: None

APPROVAL OF BOARD MINUTES FOR JULY 17, 2019:

Motion by Rodney Freeman, second by Leo Holzbauer to approve the minutes as amended.
Motion carried unanimously by roll call vote.

ADMINISTER OATH TO DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES STAFF: Carla Bachand, the court reporter, administered the oath to the DENR employees who intended to testify.

ORDER APPOINTING BOARD MEMBER PREHEARING OFFICER AND ALTERNATE PERHEARING OFFICER FOR UPCOMING YEAR:

Ann Mines Bailey stated at the July meeting the Board voted Rodney Freeman to act as the Prehearing Officer for upcoming year and Everett Hoyt as alternate Prehearing Officer. Ms. Bailey stated she prepared an order to this effect which the Board needs to adopt and sign. This order will formalize the Board's decision.

Motion by Tim Bjork, second by Leo Hozbauer to adopt the amended order to appoint Rodney Freeman as Board prehearing officer for the upcoming year and authorize the chairman to sign the order. Motion carried by roll call vote.

CONSIDER APPROVAL OF PREHEARING OFFICERS ORDERS AND ISSUED MOTIONS.

Mr. McVey stated the following documents were sent to the Board members in the packet.

- Yankton Sioux Tribe's Motion for Reconsideration of the Board's Denial of Tribe's Motion for Preparation of an EIS and Request for Oral Argument.
- Yankton Sioux Tribe's Motion for Time Certain for Expert Testimony.
- Yankton Sioux Tribe's Motion for Protective Order.
- Orders issue since July 17, 2019, meeting on motions.
- Publication Documents regarding Application Nos. 1986-1, 2792-2, 2792-2.
- Staff report and recommendation on Application No. 1986-1, TransCanada Keystone Pipeline LP.
- Petitions for intervene on Application No. 1986-1.
- Report and recommendation on Application No. 2792-2, TransCanada Keystone Pipeline LP.
- Petitions to intervene on Application No. 2792-2
- Staff report and recommendation on Application No. 2793-2, TransCanada Keystone Pipeline LP.
- Petitions to intervene on Application No. 2793-2
- Staff report on Application No. 1963A-1, Tom and Lori Wilson
- Petitions to intervene on Application No. 1963A-1.

- Publication documents on Application No. 1963A-1.
- Staff report on Application No. 1975A-1, Wink Cattle Company
- Petitions to intervene on Application No. 1975A-1.
- Publication documents on Application No. 1975A-1.
- Orders the hearing procedure

CONSIDER APPROVAL OF PREHEARING OFFICERS ORDERS ISSUED:

- Order on Yankton Sioux Tribe's Motion for Reconsideration of the Board's Denial of the Tribe's Motion for Preparation of an EIS and Request for Oral Argument
- Order on Yankton Sioux Tribe's Motion for Time Certain for Expert Testimony
- Order on Yankton Sioux Tribe's Motion for Protective Order

Motion by Everett Hoyt, second by Tim Bjork to approve and adopt the Prehearing Officers Orders as entered in the documents previously enumerated by Board Counsel. Motion carried unanimously by roll call vote.

Bruce Ellison stated in the matter for reconsideration of Yankton Sioux Tribe's motion for reconsideration of requiring an EIS, the Dakota Rural Action had joined to support the motion for reconsideration.

Chairman Hutmacher asked for appearances in the matters of:

- Water Permit Application No. 1986-1, TransCanada Keystone Pipeline LP
- Water Permit Application No. 2792-2, TransCanada Keystone Pipeline LP
- Water Permit Application No. 2793-2, TransCanada Keystone Pipeline LP

David McVey, Board Counsel stated the order of procedural set forth on March 15, 2019 set for the order of how the hearing will proceed. In terms of examination of witnesses, what will be allowed is a direct examination, cross examination, and redirect examination. In terms of objections, when making the objection, state the basis for that objection. there will be no argument on the objection unless it is requested by the Board.

Petitioners -

Ann Mines Bailey, Jeanne Goodman, Chief Engineer and the Water Rights Program.

Trans Canada Keystone Pipeline LP.

William Taylor - Counsel
James Moore - Counsel

John Taylor - Counsel
Matt Maher - Counsel

Intervenors –

Bruce Ellison - Counsel for Dakota Rural Action

Peter Capossela – Counsel for Great Plains Tribal Water Alliance and the Rosebud Sioux Tribe.

Jennifer Baker - Counsel of the Yankton Sioux Tribe

Thomasina Real Bird – Counsel of the Yankton Sioux Tribe

Opening Remarks:

Ann Mines Bailey, representing the Water Rights Program

Ann Mines Bailey stated the State Legislature has determined for any appropriation of water to be granted in this state, there are four factors that must be satisfied. The first being there must be reasonable probability that unappropriated water is available for the application. The second, the application cannot unlawfully impair an existing right. The third, it must be for beneficial use as defined by statute. The fourth, it must be in public interest.

The applicant bears the burden of proof on those four factors. However, the statutes also provide that the Chief Engineer and her staff are to review the application. The Board has the final determination as to whether the application meets those four criteria.

Ms. Mines Bailey stated that Mark Rath who conducted the technical analysis, will present evidence. Mark Rath has been with The Department of Environment and Natural Resources for about 30 years. During those 30 years, Mark has been intimately involved with the management of the state's surface water. Mark will testify that he looked at the historic water availability of waters on these three separate water sources and determined that there is unappropriated water available for appropriation. Mr. Rath has reviewed potential unlawful impairment to existing rights. Mr. Rath believes with certain qualifications on the applicant's use, that the water can be put to beneficial use or can be put to this use without unlawfully impairing existing rights.

Jeanne Goodman, Chief Engineer will also testify. As Chief Engineer, Ms. Goodman must review the technical analysis and decide as to whether the application should be recommended for approval or denial. Ms. Goodman's recommendation is based on her experience as an engineer, experience with this Board, and this Board's past decisions. Ms. Goodman has conducted that review and agreed with Mr. Rath that there is unappropriated water available, that it would not unlawfully impair any existing rights, that it would be for beneficial use as defined by statute, and it would be in the public interest.

William Taylor representing TransCanada Keystone Pipeline LP.

Mr. Taylor stated the applicant is asking to appropriate waters from the Cheyenne River, the Bad River and the White River to be used in construction with the Keystone Pipeline. Keystone Pipeline is the last segment to be constructed in an international pipeline system that begins in Hardisty, Alberta Canada. Then runs east across Canada, through North Dakota, South Dakota, Nebraska, east to Illinois. The pipeline will have lateral pipeline connections that reach to Cushing Oklahoma, which is the worlds largest hub for the distribution sale in trading of crude oil. The pipeline then travels south from the Cushing Oklahoma hub to the gulf coast of Texas. In Texas there are an extensive refinery complexes built for refining heavy crude oil. Hardisty Alberta Canada has the world second largest deposit of crude oil.

The Keystone Pipeline will transport with conjunction with the rest of the system, crude oil produced in the Athabasca Tarsands and in addition, will allow oil from the Bakken Formation located in the Williston Basin in North Dakota to be added to the pipeline and transported to Cushing and south to the refinery complex.

The Keystone Pipeline today consists of about 1,800 miles of pipeline. TransCanada operates something on the order of 35 thousand miles of pipeline in North America. This includes a major gas pipeline along the northern border that crosses South Dakota from Aberdeen to Brookings.

The pipeline project as proposed will enter South Dakota in Harding County, northwest of Buffalo and exist South Dakota in Tripp County, south of Colome. In South Dakota, a number of pumps stations that will be constructed. Mr. Taylor stated the application is asking for appropriation of water for the fabrication of concrete and other uses in the pump station process. In addition to that, in the course of construction, TransCanada asks for water for dust suppression along the pipeline route.

Mr. Taylor stated the application is also asking for an appropriation of water from three rivers for hydrostatic testing of the pipeline. Federal law requires that before the pipeline be put into service, that it be filled with water, pumped to attain a given pressure and allowed to sit to prove that it maintains that pressure within the pipeline. The water used in hydrostatic testing is borrowed water not consumed water. The water is returned to the water shed where it was taken.

In addition to the hydrostatic testing, the construction and the dust suppression, some water will be used for what is called horizontal direction drilling. Horizontal direction drilling (HDD) is a method by which the pipeline company bores a hole underneath the major roads, and pulls the pipe after it has been molded together and assembled . There will be four uses of the water in the course of the pipeline construction.

Mr. Taylor stated that they will demonstrate through their proof, compliance with the four factors contained in the Statue 46-2A-9 as previously stated by Ms. Mines Bailey. By way of witness in this first segment of the proceeding, Mr. Taylor stated they will adopt the testimony of Mr. Rath and the Chief Engineer and will offer testimony from the company in support of the applications.

Bruce Ellison representing Dakota Rural Action

Bruce Ellison stated that Dakota Rural Action has challenged the three water permit applications that TransCanada is seeking from this board. Water Permit Applications Nos. 1986-1, 2792-2, 2793-2 are requesting a large amount of our surface water for one purpose - to build a hazardous materials pipeline in a diagonal across agriculture lands and some unstable lands. With the flooding we have been having, the instability of much of these lands should be of an importance.

TransCanada has stated that they want to use this pipeline to develop the oil reserves in the tar sands. If this pipeline is approved, it will allow for that development and over 800,000 barrels of prime world oil will be coming across our lands. It would be one thing if this was a company that had a track record of doing a good job in planning, designing, construction, inspection, and protection of its pipelines.

Counsel for TransCanada has mentioned all the gas pipe lines that TransCanada maintains. Counsel did not mention the one pipeline in Pennsylvania that blew up last year seven days after it started in operation.

This oil will not for domestic use and will instead all be exported. We are transporting a foreigner company's oil as well as fracked oil across our state at great risk. There have been two large spills in South Dakota the last four years. This is oil from which we get virtually no benefit and take all the risk.

There are four factors that this Board must consider under SDCL 46-2A-9,. Is there enough water for wildlife habitat, beneficial uses, public interest, and future generation.

Peter Caposella representing the Counsel for Great Plains Tribal Water Alliance and the Rose Bud Sioux Tribe

Mr. Caposella stated he represents the Great Plains Tribe Water alliance which is a non-profit organization consisting of Standing Rock, Ogallala, Rosebud and Flandreau Santee Sioux Tribes, working together to protect their water rights. He is representing tribal communities and water users from throughout the state of South Dakota.

Mr. Caposella stated they are asking for the board to deny the TransCanada applications on the grounds that they cannot demonstrate the capacity to put the water into beneficial use for the Keystone Pipeline. They lack the federal permits to build the Keystone Pipeline. They are not going to be able to demonstrate to the Board during these proceedings that Keystone Pipeline is in compliance of federal law. Until that happens and they can come in and show that they are incomplete compliance with the Federal Law there should be no approval of the water permit applications. These applications are not for beneficial use and their approval would be a waste of water. If the permits are approved and the diversion take places, negative environmental consequences will occur. Keystone Pipeline may never go online in operation. Waste of water is impermissible under South Dakota water law. The permits should be denied on that basis.

The Tribe has reserved water rights that they have yet to develop that need to be taken into consideration. Diversions from surface water may impact groundwater and wildlife in the area. Concerns with pipeline failures, crimes including being against women.

Jennifer Baker representing Counsel of the Yankton Sioux Tribe

Jennifer Baker stated she was present on behalf of Yankton Sioux Tribe. Ms. Baker stated an application can only be approved if all four criteria are met. The Yankton Sioux Tribe will show that TransCanada cannot meet the criteria. The Tribe will also show that the Chief Engineer did not take into account the Tribe's Winters Doctrine rights. There is a possibility the tribe's water use and others may be impacted by a spill if there is a pipeline failure. The water use is not in the public interest or a beneficial use. The Chief Engineer's recommendation only considers the technical aspects and does not consider the public interest and beneficial use considerations.

Intervenors with an Opening Statement:

Cindy Myers stated she is from Stuart, Nebraska and is an individual intervenor. In 2009, she heard about the potential pipeline construction near their pristine well. Any use of water for this risky project is not in the public interest. TransCanada Keystone Pipeline will increase the potential contamination in South Dakota.

Zora Lone Eagle stated she is part of MniWakan Nakicijinoi from Bridger SD. MniWakan Nakicijinpi will present their case at the time they present their witnesses.

Elizabeth Lone Eagle stated she was an individual intervenor is from Bridger SD. She is here today to protect the lands that are sacred to them.

Jason Shald stated he was an individual intervenor that fears voices are not getting heard in this case. He is here to ask questions because this is an important issue. Based on the time given for these proceeding, Mr. Shald stated he was not sure how everyone's voice will be heard. He urged the Board to not rush to judgment and give these topics the proper time.

Mahmud Fitil stated he was an individual intervenor from Omaha Nebraska. TransCanada Keystone Pipeline tried to exclude the Nebraska intervenors. His concern is for the future generation that will be impacted. Climate change is real. The oil being transported through the pipeline will negatively impact the climate. Mr. Fitil stated people cannot live without water as it is our most precious resource.

The Water Management Board began the evidentiary hearing on TransCanada Keystone Pipeline based on the two criteria in SDCL 46-2A-9 regarding whether there is a reasonable probability that unappropriated water is available and whether the proposed diversion can be developed without unlawful impairment of existing rights.

Water Permit Application No. 1986-1 (Cheyenne River) – TransCanada Keystone Pipeline.

Ann Mines Bailey offers Exhibit 1 which is the administrative record for Application No. 1986-1. The administrative record includes the application, report, recommendation, public notice and other pleadings in this matter. With no objections, Chairman Hutmacher accepts Exhibit No. 1. into the record.

In answer to questions from Ms. Mines Bailey, Mark Rath stated he was previously administered the oath. Mr. Rath stated he has been with DENR almost 30 years and currently is the lead surface water engineer for the Water Rights Program. Exhibit 2 is Mr. Rath's curricula vitae. With no objections, Chairman Hutmacher accepts Exhibit 2 into the record.

Mr. Rath stated water is for pipeline construction for TransCanada Keystone pipeline. The application seeks 6.68 cubic feet of water per second (cfs) from the Cheyenne River with an annual volume of 238.21 ac-ft/year.

Mr. Rath stated corrections to his report. The first correction is on page 7, under in the paragraph under Figure 6 regarding review of existing water rights, the number of existing rights should be 7 instead of 5 existing water rights. Also, the cfs correction of 25.52 cfs instead of 16.74 cfs. The correction does not change his conclusion. The second correction is on page 8, in paragraph on discussion and recommendation it states the review found no record of shut-off orders issued in this reach due to low flows. However, a shut-off order was issued in 2006 for junior water rights.

Mr. Rath stated his review focused on the first two criteria in SDCL 46-2A-9. A groundwater application is reviewed based on the volume of water. A surface water application is reviewed based on whether water is available at the time of the use. In other words, review of a surface water application is diversion rate based. Mr. Rath looked at flow records generally from the USGS gaging station network. Exhibit 6 is an area map for the application. It was created using ARC-GIS. Ms. Mines Bailey moved admission of Exhibit 6. Bruce Ellison asked who created the Exhibit 6. Mr. Rath stated he created the map. Elizabeth Lone Eagle objected since there was missing data. Chairman Hutmacher accepts Exhibit 6 into the record.

Mr. Rath stated Exhibit 6 shows the diversion point proposed and the three gaging stations that were looked at as part of the review. Mr. Rath stated the Cheyenne River is a prairie stream that receives tributaries inflow. The Cheyenne River meets up with the confluence of the Belle Fourche River. This forms the lower end of the Cheyenne River.

Mr. Rath is shown Exhibit 8 which is an exhibit showing a percentile flow hydrograph for the gage on the Cheyenne River near Wasta. Elizabeth Lone Eagle objects that this does not count missing years of data. Mr. Rath stated he created the exhibit using the national flow data on USGS website regarding percentiles. USGS obtains the data from their gaging stations to create the statistical percentile. Mr. Rath stated this USGS data is relied upon by federal, state and local entities. Ms. Lone Eagle renews her objection. Chairman Hutmacher overrules the objection and accepts Exhibit 8 into the record.

Referring to Exhibit 8, Mr. Rath stated he looked at the Wasta gage to look at the upper Cheyenne River portion that was contributing water. The period of record for this gaging station is 1963 to 2018. A longer period of record at a gaging station provides a greater reflection of flows that can be expected. Mr. Rath stated he looks at percentiles of flows as what can be expected from a statistical perspective. Mr. Rath indicated Exhibit 8 shows the stream at 50 percentile can expect flows coming out of winter at about 100 cfs. After the winter season, the flow increases until June and then decreases to about 100 cfs the remainder of the year. Based on the 25 percentile flow coming out of winter with flow at 60 cfs until February where flow increases to 120 cfs and then from June through summer the flow is about 60 cfs. The 10 percentile is 40 cfs in January and February, then increasing to about 100 cfs through May before then decreasing to about 40 cfs.

Mr. Rath is shown Exhibit 9 which is the daily flow hydrograph for Belle Fourche River near Elm Springs. Mr. Rath created Exhibit 9 from the USGS website. He used all the data available from the USGS site for the period of record. Ms. Lone Eagle objects to the foundation as this information was requested and DENR refused to disclose. Chairman Hutmacher overruled the objection and accepts Exhibit 9 into the record.

Regarding Exhibit 9, Mr. Rath stated he used the Belle Fourche River gage to show the contribution that can be expected from this portion of the drainage. The period of record for this gage is 1953 – 2018. The increase flows in the summer months is attributed to the return flows from the Belle Fourche Irrigation District which is located upstream of this gage. This is a 57 thousand acre irrigation district that delivers water to irrigators. The run off from the irrigation district drastically appears to affect the hydrograph and the timing of when the water will be available in the stream.

The 50 percentile demonstrates lower flows of 30 – 50 cfs until about March and then an increase due to snow melt of about 200 cfs. Starting in May, there is an increase in flows from the Irrigation District until mid-June and then fluctuates from 250 – 300 cfs until mid-August. Then the flow drops off. This is likely due to Irrigation District stopping delivery of water and return flows slowly decrease until it reaches 30 cfs. The 25 percentile mimics the pattern of the 50 percentile at a lower - level.

Mr. Rath is shown Exhibit No. 7 which is the daily percentile flow hydrograph for USGS gaging station on the Cheyenne River near Plainview. The period of record for this gage is 1950 to 2018. Ms. Lone Eagle objects. Chairman Hutmacher overrules objection and accepts Exhibit 7 into the record.

Mr. Rath stated Exhibit No. 7 reflects the contribution from the Upper Cheyenne River and Belle Fourche River. The 50 percentile shows an increase of flow up to about 600 cfs and then a decrease to about 300 cfs until about mid-August and then drops off to about 100 cfs at the end of the year. The 25 percentile shows early summer flows of about 300 cfs and trickles off to about 100 cfs by the end of the year. The 10 percentile shows flows of about 100 cfs and dropping off to about 50 cfs by the end of the year.

Mr. Rath stated there are seven existing water rights downstream of the proposed diversion point to the Oahe Reservoir. The total appropriation of those water rights is 25.52 cfs. Irrigation rights are generally exercised from May through September.

Mr. Rath is shown Exhibit 10 which is a graph representing appropriations for irrigation and the amount of reported irrigation water use. Mrs. Lone Eagle renews her objection. Mr. Ellison requests latitude for pro se intervenors. Chairman Hutmacher accepts Exhibit 10 into the record.

Mr. Rath testifies that Exhibit No. 10 shows less water is used for irrigation than is appropriated.

Mr. Rath stated that the Winter's Doctrine was created by Congress and envisioned reserving water for reservation purpose. Winter Rights have been quantified in South Dakota and therefore were not factored into his review. Once quantified, Winter Rights would likely be senior to other appropriative rights.

Mr. Rath stated there is a reasonable probability water is available and that existing rights, based on the qualifications proposed, will not unlawfully impair existing rights. The recommendation provides for low flows and prior rights be bypassed and diversions are subject to written orders issued by the Chief Engineer.

Mr. Ellison objected to Mr. Rath speaking on behalf of the Chief Engineer. Ms. Mines Bailly asked the question again. Mr. Rath stated water is available and the project can be developed without unlawful impairment of existing rights with the qualification proposed on the recommendation.

William Taylor's cross examination of Mark Rath.

Yankton Sioux Tribe objects to calling Mr. Rath as an expert for TransCanada. Mr. Rath was not listed as an expert for TransCanada. Chairman Hutmacher overrules the objection as Mr. Rath testified for the state and they are only adopting that testimony.

Mr. Rath stated there was one water right that was not included in his initial review. This right was a US water withdrawal and he does not know if the water has been used historically.

Mr. Ellison and Mr. Caposella object to TransCanada cross examination. Chairman Hutmacher overruled the objection.

Mr. Taylor questioned Mr. Rath about his knowledge of the Mni Wasta. Mr. Rath stated it is a rural water system that he believes is operated by the Cheyenne River Sioux Tribe. This was also in the past known as the Tri County system. Mr. Rath stated the system was not considered in his analysis because the source of water is considered the Missouri River. During the mid-2000's, the diversion point was changed to the northeast where it was in deeper water. Mr. Rath stated the Mni Wasta was not an appropriation from the Cheyenne River.

In response to a question, Mr. Rath stated Mni Wiconi is the tribal component of the West River/Lyman Jones rural water system. The intake is near Ft. Pierre. Mr. Caposella and Mr.

Ellison objected to the questions in that Mr. Taylor is bringing up new questions. Chairman Hutmacher overruled indicating we are taking about availability of water.

Mr. Rath stated that the water source for the Mni Wiconi rural water system is the Missouri River and not the Cheyenne River.

Mr. Taylor directed Mr. Rath to Exhibit 10. Mr. Rath stated the blue lines on the exhibit represent the sum amount of water appropriated. The decrease in level of the blue line represents the cancellation of a water right or a reduction of acres irrigated during the licensing of a permit. An increase in the blue line represents a new water permit issued. The absence of red bars in a year reflect that irrigation was not reported from those water rights in that specific year. The red bar represents the amount of water reported as being used in each year. The Y coordinate indicates the acre feet either appropriated or used depending on the color of the bar. In answer to a question, Mr. Rath stated there are no known water rights for other than irrigation below the proposed diversion point on the Cheyenne River to the Missouri River.

Mr. Rath estimated he has prepared a few hundred reports on applications that he has reviewed. Mr. Rath listed the factors that he looks at when reviewing an application. The method for preparing a report is standard with how other staff within the Water Rights Program review water permit applications.

Mr. Rath explained that a gaging station is a site where the USGS maintains a water measuring device. Mr. Rath considers USGS records reliable. Other states and government entities rely on this stream flow data. DENR uses the data from gaging stations for making determinations on when shut off orders are warranted and the Surface Water Quality Program of DENR uses flow data when analyzing water quality data.

Regarding the USGS gage on the Cheyenne River, the period of record Mr. Rath used was from 1963 to 2018. He used 50 years of record.

The USGS gage on the Belle Fourche River was used as it is the lowest most gage on the Belle Fourche River to provide the best information on the quantity of flow attributable to the Belle Fourche River at the project site.

The third gage that was used is located at the Hwy 34 bridge near Bridger. It is representative of flows from the upper Cheyenne and Belle Fourche River that are the located near the proposed pump site. The proposed diversion point is located in the “four corners” area which is the area where corners of four counties come together.

Regarding the Winters Doctrine, Mr. Rath testified he did not take into account water rights associated with the Winters Doctrine. The reason is the Winters rights have not been quantified. It is Mr. Rath’s understanding that quantification of a claimed Winters right has to be approved by the US Congress.

Ms. Real Bird objects as Mr. Rath is not an expert on Winter Rights. Chairman Hutmacher sustained the objection.

Mr. Taylor inquired about an application for Lake Andes. Mr. Caposella and Ms. Real Bird objected to the relevance on the issue at hand. Chairman Hutmacher sustained the objection.

Mr. Taylor indicated TransCanada's agrees to a condition that TransCanada is subject to Winters Right when quantified. Ms. Real Bird stated that the Yankton Sioux Tribe is not willing to stipulate today to Mr. Taylor's proposal.

Mr. Rath stated there is a reasonable probability that water is available. If a dry year occurs, they can monitor based on flow conditions or someone can call and assert they are being impacted. The Chief Engineer may issue an order to limit water use under a priority basis. There are mechanisms in South Dakota law to enforce those orders.

Mr. Rath indicated he has prepared reports for rural water system pipelines but not on for an oil pipeline. The permits that were issued for prior oil pipelines were temporary permits for short term use of public water for construction purposes. Mr. Rath was involved in the issuance of the temporary permits for these prior oil pipelines. Chairman Hutmacher sustained the objection of Ms. Real Bird on relevance.

Mr. Rath indicated he was not aware of why those other permits were issued as temporary permits and these were now being requested as standard water permits.

Peter Caposella on behalf of Great Plains Tribal Water Alliance and Rosebud Sioux Tribe cross examines Mark Rath.

In answer to questions from Mr. Caposella, Mr. Rath stated he was not aware of the number of road miles that will need dust suppression. Mr. Rath indicated that a bypass will be required for downstream domestic use and existing rights. The proposed pumping rate for this application is 6.68 cfs which equates to 3,000 gallons per minute.

Mr. Caposella asked if there is consideration for instream flow rights. Mr. Rath indicated instream flow rights were not considered in his review. He did not know if there is a connection between groundwater and surface water at this location.

Regarding the period of flow records, Mr. Rath testified that longer periods of records provide greater reliability of what to expect for flow. It does not provide what might occur in the near future. Mr. Caposella asked if using long trends skew what are recent trends. Mr. Taylor objects. Chairman Hutmacher asked Mr. Rath to answer if able. Mr. Rath stated that longer terms provide more reliability on anticipated flows.

Mr. Caposella inquired whether using the past five years of data provides what is available in the river. Mr. Rath stated he did not think that is the case.

Thomasina Real Bird on behalf of Yankton Sioux Tribe cross examines Mr. Rath.

Mr. Rath stated to determine if water is available, he looks at the yield of the source, the timing of use and present diversions from the source. He does not use future projection reports in determining if water is available. Regarding impairment of existing rights, DENR looks at whether a proposed diversion limits someone else's ability to satisfy their senior water rights.

Mr. Rath indicated he was unaware that any agricultural producer along the route would be provided a "tap" to water from TransCanada. Mr. Rath indicated his analysis was directed solely to quantity of water to be used and not quality of the water. Mr. Rath had no opinion whether a leak from the pipe could impair existing rights.

Mr. Rath stated there was a shut off order issued in 2006 to junior rights due to a lack of water in the river at that time. Shut off orders are tailored to the specific situation.

Thomasina Real Bird asked whether DENR considered Yankton Sioux Tribe's water right. Mr. Rath stated he was unaware that the Yankton Sioux Tribe held a water right on the Cheyenne River.

Mr. Rath stated his review of the application was for only the quantity water. He did not review impairment to roads or erosion that may result during construction of the project. Mr. Rath did not look at how the discharge of water could impact existing rights.

Referring to Yankton Sioux Tribes Exhibit 104, Ms. Real Bird questioned if the proposed diversion point location was generally correctly depicted on the map. Mr. Rath concurred that the map shows the general location of the proposed diversion point.

Mr. Ellison cross examined Mr. Rath.

Mr. Rath testified he did not consider public interest or beneficial use as part of his review. To prepare for today he looked at his report, gaging stations and past water use. Mr. Rath's review does not look at the content of the pipeline. Mr. Rath did not contact Game Fish and Parks or US Fish and Wildlife Service regarding this application. He did not discuss impacts on other resources if there was a leak. The Corps of Engineers was not contacted about their regulations regarding the water use. Mr. Rath did not review the Montana court decision. Ms. Mines Bailey and Mr. Taylor objected. Chairman Hutmacher sustained the objections.

Mr. Rath stated he is aware of a stay issued by the Montana judge but is not aware of the details. Responding to a question, Mr. Rath described a trench cut across a water body. A trench is cut, and the pipe is laid in place and backfilled or allowed to refill. Mr. Rath stated he does not know if the applications for TransCanada are of great importance to the state of South Dakota.

Mr. Rath indicated he discovered the error on Page 7 of his report about one to two months after writing the report. He also discovered that he missed the most recently issued permit and the US withdrawal right. The changes did not change the conclusions in his report.

Mr. Rath has reviewed the Treaty of 1868 but that was not part of his review of this application.

Mr. Ellison asked Mr. Rath if he knew that TransCanada would need to cross perennial streams. Mr. Rath was aware there would need to be river crossings but not the precise streams. Mr. Rath is not aware of number of ephemeral streams that will be crossed. Mr. Ellison said there were over 300 water body crossings. Mr. Taylor objected as Mr. Rath has indicated he didn't know the water sources crossed. Chairman Hutmacher sustained the objection.

Mr. Ellison approached Mr. Rath with pages 73, 74 and 75 from the maps submitted with the application. They are denoted as Exhibit 1A, 1B, and 1C. Mr. Ellison indicated sheet 73 is the location for horizontal directional drilling. The map does not identify the river as the Cheyenne River. In response to a question from Chairman Hutmacher, Mr. Ellison stated the exhibits do not show the major streams as the Cheyenne River is not identified. Chairman Hutmacher asked to keep his questions quantity of water oriented.

Mr. Ellison indicates that page 74 (Exhibit 1B) shows Ash and Bridger Creek. He asked if Mr. Rath can tell if the creek flows into the Cheyenne River. Mr. Rath indicated he could not tell from the maps where the creek confluence with the Cheyenne River is located.

Mr. Ellison indicates page 75 (Exhibit 1C) and again asks the same question. Mr. Rath stated he cannot tell where the creeks flow into the Cheyenne River. Mr. Ellison asked if the diversion of water may interfere with the process of nature. Mr. Rath indicated he did not understand the point Mr. Ellison is attempting to make.

Mr. Ellison asked if DENR ever recommended that TransCanada use the Missouri River instead of the Cheyenne River. Mr. Rath stated that we did not make any such recommendation to TransCanada.

Mr. Ellison moves Exhibit 1A, 1B and 1C be admitted. Chairman Hutmacher indicates they are admitted.

Mr. Ellison questioned whether there was a requirement for a monitoring point right below the proposed diversion point. Mr. Rath stated that was not a qualification included in the recommendation for this application. Mr. Rath stated there is not a requirement to monitor the instantaneous flow being diverted. He indicated they are required to report annually the amount diverted.

In response to Mr. Ellison's question, Mr. Rath stated that after the diversion point, the Cheyenne River flows along the southern edge of the reservation boundary. Mr. Rath indicated he did not look at the total amount of water flowing by the Cheyenne River diversion point.

Zora and Tataka Lone Eagle cross examine Mark Rath.

Ms. Mines Bailey stated that entities must be represented by counsel. This is a group that is under 18 years old and has concerns with getting questioned by multiple individuals for the same entity. Chairman Hutmacher stated they cannot question until they have an attorney since they are a group.

Mr. Ellison indicated this Board has a large amount of discretion under the administrative procedure statutes and that the Lone Eagle children be allowed to ask some questions.

Board Counsel David McVey stated the Board is bound by state law and groups must be represented by counsel. Also, as minors they are not eligible to ask questions. The Board simply does not have discretion in this matter.

Elizabeth Lone Eagle strenuously objects and this was never ruled on.

The Lone Eagle children are not allowed to ask questions in this proceeding.

Thomasina Real Bird asked for latitude for the Lone Eagle's children to obtain legal counsel by tomorrow. Chairman Hutmacher indicated if the Lone Eagle children are represented by counsel they can participate.

Elizabeth Lone Eagle cross examines Mark Rath.

Mrs. Lone Eagle asked if Mr. Rath considered spiritual use of the water. Mr. Rath said he did not consider the spiritual use of water. Mrs. Lone Eagle inquired whether Mr. Rath was aware that the actual four corners of the county boundaries are not precisely at the bridge. Mr. Rath indicated he was not aware of the precise location of four corner and is not aware that the site is a spiritual location to the Lakota people.

Mrs. Lone Eagle stated that one of the factors is if there is unlawful impairment to existing rights and whether tribal rights were taken into consideration. Mr. Rath did not consider tribal water rights. Mr. Rath is generally aware of the process for quantification of tribal rights under the Winters doctrine.

Mr. Rath stated he has been involved in crafting of rules involving water rights, specifically regarding changing a diversion point location. Mr. Rath has not attended training regarding laws that have changed. Mrs. Lone Eagle asked Mr. Rath if he was aware of SDCL 1-54-5 requiring consultation with tribal governments regarding issues that may affect tribal government. Mr. Rath stated he is not aware of the statute. Ms. Mines Bailey and Mr. Taylor objected. Chairman Hutmacher upheld the objection but will give some latitude.

In response to questions, Mr. Rath said he did not know how many water rights have been processed between 2007 to 2018. Mr. Rath reviews about 2 – 5 applications each year that end up being contested. Mr. Rath stated engineers individually review applications. There is no budgetary consideration for processing an application. Mr. Rath has stated that he has attended a law conference that involved Winter rights and has researched Winters rights to some degree. Mr. Rath did not conduct any cultural resource surveys as part of his review of this application. Mr. Rath did not look at any geographical surveys as part of his review. He has no knowledge of Chief Big Foot's last camp.

Board recessed for the day.

The Board reconvened at 8:30 AM on Friday, October 4, 2019.

Jason Shald cross examines Mark Rath.

Mark Rath stated the application is for a diversion rate with an annual volume limitation. This is enforced based on self-reporting of water use.

Ms. Mines Bailey stated she had no re-direct. Ms. Mines Bailey stated that is the last witness on Application No. 1986-1 regarding water availability and impairment of existing rights.

Water Permit Application No. 2792-2 (White River) – TransCanada Keystone Pipeline

Ms. Mines Bailey offers the administrative record in the matter of Application No. 2792-2 as Exhibit 1. Chairman Hutmacher accepts Exhibit 1 into the record.

Mr. Rath testified he has been with DENR about 30 years. He is the lead surface water engineer who reviews applications and deals with lakes, droughts and flood issues. Ms. Mines Bailey offered Mr. Rath's curriculum vitae as Exhibit 2. Chairman Hutmacher accepts Exhibit 2 into the record.

Mr. Rath stated that Application No. 2792-2 proposes a diversion of 6.68 cfs with annual volume of 223.68 ac-ft of water from the White River.

Mr. Rath directed the Board to page 7 of his report. The figure on this page should be Figure 5. Then in the paragraph under Figure 5 where it states "15 existing rights" is should be "14 existing water rights". On page 8 under review of existing water rights and reported water use the reference should be to Figure 6 instead of Figure 5 and on the page 9 the reference to Figure 5 should be Figure 6.

Mr. Rath identified Exhibit 6 as an area map he compiled for this application. Ms. Mines Bailey offered Exhibit No. 6. Chairman Hutmacher accepted Exhibit 6 into the record.

Mr. Rath indicated the point of diversion location on the map. He also indicated the location of the USGS gaging stations on the Little White River, the White River upstream of the proposed diversion and the location of the USGS gaging near Oacoma which is downstream of the diversion point. The White River is a prairie stream located west river that flows east and confluences with the Missouri River.

Mr. Rath describes Exhibit 7 as the percentile flow hydrograph for the Little White River. Chairman Hutmacher accepted Exhibit 7 into the record.

The period of record for the gage is 1949 – 2019. The longer period of record provides a better overview of expected flows in the stream. Mr. Rath described the difference between "median" and "mean". This analysis uses median flows. This gage represents the flow component coming from the Little White River. The hydrograph shows the Little White River provides significant flow to the White River.

The hydrograph used the 50, 25 and 10 percentiles. Mr. Rath describes the flows that can be anticipated throughout the year based on the hydrograph for the various percentiles.

Mr. Rath describes Exhibit 8 as the percentile flow hydrograph for the White River gage near White River. Mr. Hutmacher accepted Exhibit 8 into the record.

The period record for this gage is 2001 – 2018 which is a shorter record than other gages that have been referenced. This gage demonstrates that during a good portion and late portion of the year there is not a lot of flow. Due to snow melt and rain in the spring and early summer, there is good flow. Based on the 10 percentile the river has about no flow until March, then has flow until mid-June before dropping off sharply for the rest of the year.

Mark Rath describes Exhibit 9 as the percentile flow hydrograph for the White River gage near Oacoma which is downstream of the proposed diversion point. Mr. Hutmacher accepted Exhibit 9 into the record.

The period of record for this gage is 1928 – 2018. This gage is a number of miles downstream of the proposed diversion point. Mr. Rath looked at the 50, 25 and 10 percentile flows. This is a gage DENR has used for regulatory purposes when qualifying other water rights. For the 50 percentile, flows show about 600 cfs in mid-March and dropping off to about 300 cfs before dropping off significantly after July 1st. Mr. Rath went on to describe anticipated flows based on the 25 and 10 percentiles. Mr. Rath testified there are 14 existing rights below the proposed diversion totally 30.83 cfs.

Mr. Rath describes Exhibit 10 as the appropriated water from the White River and reported irrigation water use below the proposed diversion point to the White River's confluence with the Missouri River. Chairman Hutmacher accepts Exhibit 10 into the record.

The chart shows that there is a far greater water appropriated than actually used in this reach. It is common for there to be more water appropriated than is used. In this reach, there is a qualification for a June 1st shutoff on the White River. Mr. Rath indicated that we look at quantity when determining if there is an impairment of existing rights. Mr. Rath stated he did not account for Winter rights since they have not been quantified in South Dakota. If Winter Rights existed, they would likely be senior. Mr. Rath testified that with the proposed qualifications, diversions under this application could be developed without impairment of existing rights. Mr. Rath also testified that unappropriated water is available. Mr. Rath then read the proposed qualifications on the recommendation into the record.

Mr. Taylor cross examines Mr. Rath.

Mr. Rath stated the gage at Oacoma is on the highway bridge on what he believes is Highway 47 southeast of Oacoma. This gage is used in a regulatory capacity because DENR wanted to make sure there is at least 20 cfs flow in the river. This restriction is enforced by DENR. If there is good flow in the river after June 1st, DENR has the ability to allow an irrigator to continue to

pump for a certain period of time. In 2019, there was one water right holder that made a request to pump beyond June 1st.

There are other gages on the White River and Little White River that are further upstream of the gages referenced and used as part of Mr. Rath's review. The headwaters of the Little White River are located in Oglala Lakota County. The headwaters are within the reservation boundaries. To Mr. Rath's knowledge the Rosebud and Pine Ridge Tribes have not made an effort to quantify their reserved water rights for the Little White River. As for the White River, it also flows through the Rosebud Sioux Tribe. Mr. Rath is not aware that the tribe has quantified its reserved water rights for the White River.

Mr. Taylor asked Mr. Rath to look at Exhibit 10 which shows appropriative rights being greater than use. Mr. Rath states that irrigation rights are allowed 2 ac-ft of water per acre. During licensing of a water permit, DENR can reduce the diversion rate or number of acres based on the level of development. Mr. Rath stated there is an abandonment provision in law based on use but there are also provisions for legal excuse for the nonuse of water.

Mr. Caposella cross examines Mr. Rath.

Mr. Rath has not seen the cultural and paleontology surveys. Mr. Rath does not know the number of road miles to have water applied for dust suppression. The Little White River gaging station is about 57 miles upstream of the proposed diversion. The distance between the proposed diversion point and the Oacoma gaging station is about 55 miles downstream. Mr. Caposella questioned the use of gaging station that are 57 miles upstream and 55 miles downstream of the proposed diversion point.

Mr. Rath is not aware of the groundwater and surface water interrelationship in the area. Mr. Rath stated it is possible that surface water is lost to the groundwater. However, he has no knowledge of that in this area.

Mr. Caposella inquired whether the shorter periods of record better reflect water availability. Mr. Rath responded he did not believe so. Mr. Rath indicated he was not aware that there are Rosebud Sioux Tribal lands that abut the White River in the area of the proposed diversion. Mr. Caposella indicated there are thousands of acres of tribal land in close proximity to the proposed diversion.

Mr. Rath stated his understanding is when the reservations were created there was water reserved for the reservation's use. Those rights need to be quantified and ratified by Congress. Mr. Rath indicated the tribe's likely could make a Winters doctrine claim but that the right would need to be quantified. Mr. Rath indicated that tribes are not generally coming to the state for water permitting. This is because the tribes are their own sovereign nation.

Mr. Rath stated a permit holder can only exercise his right to pump if there is 20 cfs at the Oacoma gage when pumping is occurring. This is a real time gage that DENR can monitor at any time on the internet to see if the bypass requirement is being met.

Mr. Rath indicated he works on Missouri River issues and has had interactive relations with tribes regarding the Missouri River.

Thomasina Real Bird cross examines Mark Rath.

Mr. Rath stated that he reviewed his report, gaging station information and document on Winter rights to prepare for this hearing. He talked to the Chief Engineer and Ms. Mines Bailey. He also talked to Mr. Taylor regarding a water right on the Missouri River regarding the Tri County water right on whether it is Missouri River or Cheyenne River. Mr. Rath indicated he had not spoken with Governor Noem or her staff regarding the application.

Mr. Rath took into consideration water rights on file with the State of South Dakota. He did not look at other water rights that possibly could be held by tribe. Mr. Rath only accounts for existing water right rights. Ms. Real Bird asked why DENR's review only looks at existing water rights when the statutes provide there cannot be an unlawful impairment of existing rights. Ms. Real Bird made the assertion that rights other the those dealing with water rights need to be taken into consideration.

Regarding the qualification, Mr. Rath testified the June 1st shut-off was based off a prior Board determination. DENR continued with the standard qualification used on the White River permits. There must be 20 cfs flowing at the Oacoma gaging station before diversion may take place under this proposed diversion. The gage is a real time station that can be viewed on-line. The gage reading is updated every 15 minutes. Mr. Rath stated he was not sure if this was a gage that DENR cooperates with USGS to maintain.

Mr. Rath indicates the permit holder is required to report to Chief Engineer the amount diverted each year. The permit holder is responsible to report use. Mr. Rath described various methods that can be used by the permit holder to determine the amount of water diversion such as flow meter or known pump rate and period of use.

Mr. Rath testified the proposed qualifications are not intended to deal with a pipeline leak. Mr. Rath is aware of a pipeline leak that occurred in eastern South Dakota but does not know the details. Mr. Rath stated his review did not analyze how the amount of water available could be affected by a spill. This was not a factor in review of this application. Water quality is not a factor in the review of a water permit application.

Mr. Rath stated that a shut-off order is issued by the Chief Engineer and requires the water right holder to cease the use of water.

Referring to Exhibit 10, the blue line is the total appropriation of irrigation water rights from the White River below the proposed diversion point. The same level on the blue line of Exhibit 10 indicates there is not a change in the appropriation of water from the source. Mr. Rath indicated the proposed qualifications do not address the potential of a pipeline spill.

Mr. Rath verified that the proposed diversion point on Ms. Real Bird's map is generally accurate.

Mr. Ellison cross examined Mr. Rath.

In the preparation of the report Mr. Rath stated he did not contact Game, Fish and Parks, US Fish and Wildlife Service or Corps of Engineers regarding their concerns with the application. Mr. Rath is involved with drought and flooding issues as part of his job. As part of his review, he did not look at potential flooding issue as it was not a concern regarding water availability for this application. He did not look at what would occur if there was a frack out. He did not look at contamination due to trench cutting that may occur across streams that the pipeline with cross.

Mr. Rath testified the state is the trustee of the waters of the state. Protecting the water is important to the state.

Mr. Ellison requests an offer of proof regarding emails between staff and TransCanada and Mr. Rath's involvement in those communications. Mr. Ellison offers Exhibit 311 which is a log of communications for his offer of proof.

Mr. Rath stated he did not necessarily look at all the streams or watercourses that the pipeline may cross. He is generally aware of the High Plains or Oglala aquifer but is not aware of the role the White River plays in recharge to those aquifers.

Mr. Ellison referred Mr. Rath to Exhibit 6. Mr. Rath indicated that TransCanada wants to be able to divert from either side of the White River at the proposed site. Mr. Rath is not aware of natural withdrawals that may be occurring between the upstream gages and the downstream gages. The gage at Oacoma may reflect a higher flow than is actually present at the proposed diversion point.

Mr. Ellison presented Exhibit 1B to Mr. Rath. The exhibit is the application showing the volumes of water being requested.

Mr. Rath agreed that DENR's responsible to protect against the waste of water. Mr. Rath stated the permit is issued for a maximum volume, they may use less. Mr. Ellison moves admission of Exhibit 1B. Chairman Hutmacher accepted Exhibit 1B into the record.

Mr. Ellison stated TransCanada is requesting 151.02 acre feet in 2019 and 72.66 acre feet in 2020 for a total of 223.68 acre feet of water. Mr. Ellison questioned why are we giving them 223.68 acre feet when they are only asking for only 72.66 acre feet of water? Mr. Rath stated we recommended what TransCanada requested for water use.

Mr. Ellison inquired why the bypass amount was not set above the 20 cfs amount to account for existing rights to which Mr. Rath stated that was not necessary. If after June 1st, TransCanada approached DENR to continue pumping, Mr. Ellison inquired if parties would be notified. Mr. Rath indicated that DENR would look at flows and the qualification gives the Chief Engineer the ability to issue written orders.

Elizabeth Lone Eagle cross examines Mark Rath.

Mrs. Lone Eagle inquired about flow of the Little White River and White River. Mr. Rath indicated he is not aware of cultural or burial sites along the river. Mrs. Lone Eagle asked if a decrease in flow in the White River will affect flows in the Missouri River. Mr. Rath stated that can occur. Mr. Rath does not know what cultural resources may be exposed due to lower levels.

Mrs. Lone Eagle inquired about Exhibit 10. Mr. Rath stated this information was used to determine reported irrigation water use that was part of his review. The irrigation permit holder is required to report water use and this information is considered reliable. Permit holders are not required to report the method they use to report their water use. There is oversight from the fact they have to report but not oversight in the manner that they report. DENR relies on the individual water right holder to accurately report. We do not have direct oversight over their reporting. Mrs. Lone Eagle requested the exhibit be stricken due to unreliable data. Chairman Hutmacher stated the exhibit will not be stricken.

Jason Shald cross examines Mark Rath.

Mr. Rath stated he reviews the real time streamflow gaging station data at least a couple days each week. There are no specific rules on how often the flows be monitored. Mr. Rath indicated there have been times when flow has dropped off and where DENR has not issued any extension of pumping past the June 1st shut off date.

Mahmud Fitol cross examined Mark Rath.

Mr. Fitol questioned if Mr. Rath was aware of other tribal use of the White and Little White River and if he was aware the Rosebud Tribe hold parcels of land along the White and Little White River. Mr. Rath is not aware of tribal land holdings. The Water Rights Program does not have dealings with discharging the water back to a source. That is handled by the Surface Water Quality Program.

Mr. Rath stated the amount of water pumped is self-reported. The water right holder is limited by diversion rate and not the number of pumps they use. Mr. Rath indicated the White River's flow can be impacted by drought. Mr. Rath stated that quantified Winters rights would likely be senior to other water rights.

Mr. Rath stated if we are in a drought condition and the flow is less what is authorized, a shut off order can be issued.

Ms. Mines Bailey did not conduct re-direct of Mr. Rath.

Water Permit Application No. 2793-2 (Bad River) - TransCanada Keystone Pipeline

Ms. Mines Bailey explained the documents in the administrative record for Application No. 2793-2. Ms. Bailey offered Exhibit 1, the administrative record. Chairman Hutmacher accepted Exhibit 1 into the record.

Mr. Rath stated he has been with DENR for about 30 years. He is the lead surface water engineer for the Water Rights Program. His job duties include review of water permit applications, deals with stream and lake issues as well as flood and drought conditions. Ms. Mines Bailey offered Exhibit 2 which is Mr. Rath's curriculum vitae. Chairman Hutmacher accepted Exhibit 2 into the record.

Mr. Rath stated this application proposes to divert 0.67 cfs from the Bad River with an annual volume of 50.44 acre feet of water. His review was regarding water availability and if the diversion can be developed without unlawful impairment of existing water rights. As part of his review, Mr. Rath looked at gaging information and existing uses from the stream.

Mr. Rath explained that Exhibit 6 is the area map for Application No. 2793-2. The exhibit shows the watershed, gaging station locations and the proposed diversion point. Ms. Mines Bailey offers Exhibit 6. Chairman Hutmacher accepts Exhibit 6 into the record. The cross hatched area on the exhibit indicates the watershed.

Mr. Rath explained that Exhibit 7 represents the daily percentile flow hydrograph for the gaging station near Ft. Pierre. Ms. Mines Bailey moves admission of Exhibit 7. Ms. Lone Eagle objects. Chairman Hutmacher denied the objection and accepts Exhibit 7 into the record.

The exhibit shows the 50 percentile and 25 percentiles for the gaging station which was operational from 1928 – 2018. It is the only gage downstream from the diversion point.

Mr. Rath explained that Exhibit 8 represents the daily percentile flow hydrograph for the gaging station near Midland. Ms. Mines Bailey moves admission of Exhibit 8. Chairman Hutmacher accepts the Exhibit 8 into the record.

This shows the 50 and 25 percentile flows. The exhibit shows during drier conditions there is little or no flow in the Bad River. There is flow in the spring to mid-summer. At the 25 percentile there is only minimal flow during the late spring to early summer.

Exhibit 7 is the only gaging station on the Bad River downstream of the diversion point, the 50 percentile shows flows peak in third week of March and maintains until June and then tapers off to be about dry by the first of August.

There are three appropriations downstream that appropriate a total of 6 cfs. Ms. Mines Bailey provided Exhibit 9 to Mr. Rath which is the water appropriation and use from the three downstream water rights. Ms. Mines Bailey offers Exhibit 9. Chairman Hutmacher accepts Exhibit 9 into the record.

Mr. Rath indicates the blue bars are the appropriation while the red bar shows the use reported by the irrigation water rights. It is common for a water permit holder not to use the entire amount appropriated. The Bad River is not a reliable source for irrigation. Existing rights are looked at to ensure that they won't be unlawfully impaired if the proposed diversion is developed.

Mr. Rath has a general understanding of Winters rights. He indicated the Winters right have not been quantified. However, Winter rights have not been quantified by any of the South Dakota tribes.

Mr. Rath stated water will generally only be available during the early part of the year. Therefore, there is a proposed qualification for a 6 cfs bypass at the proposed diversion point. The applicant will be required to construct a measuring device. TransCanada would need to provide the design of the measuring device to the Chief Engineer for approval prior to pumping water. The upper gaging station is not reliable during low flow conditions since there has been construction of a bridge. The qualification also requires a low flow bypass and the permit is subject to written orders of the Chief Engineer.

Mr. Taylor cross examines Mr. Rath

Mr. Rath stated the difference between prior applications and this application is that this a much smaller diversion rate and the use is primarily for dust suppression. There is not provision for hydrostatic testing or pump station construction.

Mr. Rath said the bridge reconstruction on Highway 63 by DOT caused USGS to question the reliability of the gaging station near Midland during low flow conditions. Therefore, DENR's recommendation is for TransCanada to provide some type of gaging at the diversion point. Mr. Rath described how gages are calibrated to create a rating table to determine flow and the reliability of the data.

Referring to Exhibit 9 it appears there may have been some abandonment or forfeiture of water rights over the years based on the blue bars on the graph. If an irrigator quits irrigating the water right becomes subject to abandonment and the matter comes before this Board for cancellation consideration.

Mr. Rath stated the qualifications for this application are more restrictive than the other applications. This recommendation requires installation of a flow measuring device. It is likely that water will only be available during the spring period. There will have to be a bypass of 6 cfs when pumping. DENR has no objection to TransCanada installing a metering device to measure the flow being pumped. Mr. Rath stated the Bad River does not pass through the reservation.

Mr. Caposella cross examines Mr. Rath

Mr. Rath has not seen the survey of cultural resources mentioned in the report. Mr. Rath does not know the number of road miles that will be associated with dust suppression or where the horizontal drilling will take place.

The 10 percentiles were not shown on Exhibit 8 because for the most part the river will be dry. Under the 25 percentile the river will be dry about one half of the time. It is up to the applicant to decide what type of metering device to submit to the Chief Engineer for approval.

Mr. Caposella requested the Board to take judicial notice of DENR's integrated report. Mr. Taylor and Ms. Mines Bailey objected based on relevance. Chairman Hutmacher sustained the objection.

Mr. Caposella inquired if a Winter rights has not been quantified whether the tribe still has a right to divert water. Mr. Rath stated they would have rights to divert within their boundaries.

Ms. Thomasina Real Bird cross examined Mark Rath.

Mr. Rath stated his definition of Indian County was a reference to the exterior boundaries of the reservation. To prepare for today's hearing Mr. Rath reviewed his report, the water use data and gaging information and two documents on Winters rights. He talked to the Chief Engineer and Ms. Mines Bailey in preparation for the hearing. He did not speak to Governor Noem or members of her staff regarding the application.

Mr. Rath stated he only took into account state water rights and domestic use in his review of the application. For domestic use, the recommendation includes that they maintain a flow in the river to satisfy domestic use for livestock watering. In this case that is set as a 6 cfs bypass. Mr. Rath indicated he is unaware of any tribal water rights on the Bad River.

Ms. Real Bird questioned if a cut-off date for diversions similar to the application from the White River was considered. Mr. Rath indicated that was not included on the application for the Bad River appropriation. The Chief Engineer's recommendation includes a qualification that the permit holder report annual water use. Water Rights Program will review the reports.

Mr. Rath indicated that water used for dust suppression would not return to the source. He did not know whether water will be returned to the source under hydraulic directional drilling. Factors considered in whether to issue a shut off order includes the number of permits and domestic use downstream and what is the water availability of the water source.

Based on Figure 5 from the staff report, there has been no irrigation occurring from the Bad River from 2007 through 2017. The graph does not include domestic use. Domestic use is not reported to the Water Rights Program.

Mr. Rath verified that the diversion point is generally the location of the Bad River diversion point show on Exhibit 104.

Mr. Ellison cross examined Mr. Rath.

Mr. Rath stated he spoke to the Chief Engineer regarding the testimony on the application. The discussion was not specific to this application. In preparation for today, Mr. Rath reviewed his report and the application. Mr. Rath testified that the only part of his review dealt with water availability and not degradation by potential contamination. He dealt with quantity not quality when reviewing this application.

Mr. Ellison handed Mr. Rath Exhibit 1B which is page 4 of the application. The exhibit states water use will only be used as a short term temporary permit. Mr. Ellison offers Exhibit 1B. Chairman Hutmacher accepts the exhibit into the record.

The exhibit also shows water discharges. Mr. Rath stated that a majority of water to be used from the Bad River is for dust control. While the exhibit states a majority of water being discharged in the vicinity of the diversion, the use being mostly used for dust control, indicates that a majority of water will not be discharged back to the vicinity of the diversion.

Mrs. Lone Eagle cross examines Mr. Rath.

Mr. Rath stated his general knowledge of quantifying a water right is that tribe must make a request. Then a federal team is assembled, and stakeholders meet. Courts may be able to adjudicate the water rights.

Mrs. Lone Eagle inquired whether Mr. Rath was aware of the Seven Counsel Fires of the Sioux Nation and the Lakota Alliance. Mr. Rath stated his understanding is it refers to the seven Sioux Nations. Mr. Rath is not aware of cultural or burial sites along the Bad River.

Referring to Exhibit 6, Mr. Rath responded the headwater of the Bad River is just west of the town of Philip. Two forks come together that form the Bad River. Mr. Rath is not aware of the sources to the Bad River. Mr. Rath is aware that there is livestock water use from the river.

Referring to Exhibit 8, Mr. Rath indicated this was the percentile flow hydrograph for the downstream gage hydrograph near Ft. Pierre. The flow is higher on the downstream gage. Mrs. Lone Eagle inquired whether that is an indication of contributing flow entering the Bad River below the gaging station near Midland. Mr. Rath concurred.

Mr. Rath stated we do not know that the water right holder is always reporting the correct amount of water use. Mrs. Lone Eagle moves to strike the exhibit for lack of reliable data. Chairman Hutmacher denied the motion.

Jason Shald cross examines Mr. Rath.

Mr. Rath indicated that the water permit is just one regulatory issue. The permit holder will also have to deal with the Surface Water Quality Program. To protect the volume of water in the stream, a water permit for an instream flow will need to be obtained. The rights would be administered based on priority.

Mahmud Fitol cross examines Mr. Rath.

Mr. Rath stated he did not take into consideration if the water source is contaminated with bitumen, dilbit or tar sands. Mr. Fitol asked if the desire of one water right holder trumps all other water right holders. Mr. Taylor objected and Chairman Hutmacher sustained the objection.

Ms. Mines Bailey has not re-direct.

Mr. Ellison stated he wants to interpose in an objection to Ms. Goodman not getting called to the witness stand on the first two criteria of the three applications up for consideration. Chairman Hutmacher noted the objection.

Motion by Mr. Freeman seconded by Mr. Bjork amending the Order on Hearing Procedure dated August 27, 2019 in the matter of Application Nos. 1963A-1 and 1975A-1. The proposed amendment is to move Item 4. b. (Closing statements for all TransCanada applications) to Item 4.j. and relabel present Item 4. j. and 4. k. to 4. j. and 4. l., respectively. Motion carried unanimously by roll call vote.

Motion by Mr. Freeman, seconded by Mr. Holzbauer that the meeting be adjourned. Motion carried unanimously by roll call vote.

Chairman Hutmacher declared the meeting adjourned at approximately 5:28 PM.

A Court reporter was present and transcript of the hearings may be obtained by contacting Carla Bachand, PO Box 903, Pierre, SD 57501, and (605) 224-7611.

Approved the _____ day of October 2019

Water Management Board

Witness

ATTENDANCE SHEET
WATER MANAGEMENT BOARD

Date 04/3, 2019

<u>NAME (PLEASE PRINT)</u>	<u>MAILING ADDRESS</u>	<u>CITY, STATE & ZIP</u>	<u>ITEM OF INTEREST</u>
Greg Tencer	5151 San Felipe 77055	Houston, TX 77056	
John Tencer	4820 E. 57th St, Stark Falls SD	SD 57108	
James Moore	P.O. Box 827	Stark Falls, SD 57117	
Matt Maher	700 Louisiana St	Houston TX 77002	
Wm Taylor	4820 E 57th FSD	57108	
Jung-Hoe Hopgood	1300 Metropolitan Blvd	Tallahassee, FL 32317	
Joel Schmidt	728 Breakers St	Watersound FL 32461	
Matt Karsz	Po Box 1025	Rapid City, SD	
John Schmidt	Po Box 395	Woonsocket S.D.	
Jason Shald	13906 Poppleton Circle	Omaha, NE	
Jennifer Baker	1900 Plaza Drive	Louisville, CO 80020	
MAHMUD FITIL	4949 S. 30 th	Omaha, NE	
Thomasina Real Bird	1900 Plaza Dr.	Louisville, CO 80027	
Cindy Myers	PO Box 104, Schuette NE 68780		
MICHA NOVOTNY	7011 PIERCE Cir.	OMAHA NE 68124	

ATTENDANCE SHEET
WATER MANAGEMENT BOARD
Date Oct 3, 2019

<u>NAME (PLEASE PRINT)</u>	<u>MAILING ADDRESS</u>	<u>CITY, STATE & ZIP</u>	<u>ITEM OF INTEREST</u>
Jim Amot		Brookings, SD 57006	General
Gryan Gortmaker		Pierre SD	RE permit
Teryl Cruise	PO Box 214	Pierre, SD	Self
Michael Walter		Aberdeen, SD	Self
James Dowling		Pierre	Self
Paul Scamms	27893 244 th St	Prayer SD	Self
Joe Blish		SD	
Mary Duvall	Box 453 Pierre		Logis Oversight
Buckley Wright	Pierre		
Peter Capossela	PO Box 10643	Eugene OR 97440	Rosebud Sioux
Norbert W. Komru	Box 285 Hudson SD	Hudson (and others with 3A & fee Alliance) Fair	
Joni Tobacco	PO Box 161 Pine Ridge SD	57770	
Elizabeth Lone Eagle	593 Big Foot Look Rd	Bridges	
Tatanka Lone Eagle	"	"	
Merle John Lone Eagle	"	"	
Zora Lone Eagle	"	"	

ATTENDANCE SHEET
WATER MANAGEMENT BOARD
Date Oct 3, 2019

<u>NAME (PLEASE PRINT)</u>	<u>MAILING ADDRESS</u>	<u>CITY, STATE & ZIP</u>	<u>ITEM OF INTEREST</u>
Travis Ellison	Po Box 2508	Rapid City 57702	TC
Rebecca Turk	Po Box 549	Brookings 57006	TC
V WICKS	216 E. Nowlin St	Rapid City	KXL
John Kessler	Po Box 1578	Eagle Butte	CRST
M. Elizabeth Bark	Box 436	Parmelee SD	RST
Chris Ell			
Loren Locher	700 Louisiana St	Houston, TX 77002	TC
Bob Mercer	1810 Camden Court	Pierre SD	TC
Doug Crow Ghost	Po Box D	Ft. Yates ND	
Barry Le Beau	POB 574	Pierre	CRST
Paula Antares	Box 430	Rosch 505870	TC -
Zip Spottiswoode	800 S Main SD	YST	TC
Keith Spottiswoode	Box 667 Lake Andes SD.	YST Treaty	TC
Dracyn Zecher	Po Box 540 Eagle Butte, SD ⁵⁷⁶²⁵	→	TC/KXL
Joseph Robertson	Box 667 Lake Andes, SD	YST Treaty can	TC

ATTENDANCE SHEET
WATER MANAGEMENT BOARD
Date Oct. 3, 2019

Oct. 3, 2019

NAME (PLEASE PRINT) _____

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF
INTEREST

Caroline Bender

2nd Rapid City

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Against

MAIL

ITEM