

MINUTES OF THE 159th MEETING OF THE
WATER MANAGEMENT BOARD
FLOYD MATTHEW TRAINING CENTER
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA

MARCH 11-12, 2009

CALL TO ORDER: Chairman Everett Hoyt called the meeting to order at 9:30 a.m. CDT on March 11, 2009. A quorum was present.

The following were present at the meeting:

Board Members: Everett Hoyt, Jim Hutmacher, Rodney Freeman, and Tim Bjork. Francis Brink, Bernita Loucks, and Leo Holzbauer were absent.

Department of Environment and Natural Resources (DENR): Steven Pirner, secretary of DENR; Garland Erbele, chief engineer; Eric Gronlund, Jim Goodman, Genny McMath, Karen Schlaak, Tim Schaal, Mike DeFea, Mark Rath, Ron Duvall, Ken Buhler, Hayes Haas, and Lynn Beck, Water Rights Program, Jeanne Goodman, Kelli Buscher, Shannon Minerich, and Patrick Snyder, Surface Water Quality Program; David Templeton and Aaron Larson, Division of Financial and Technical Assistance.

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

Legislative Oversight Committee: Frank Kloucek, Scotland, SD.

Others: See attached attendance sheets.

APPROVE DECEMBER 9-11, 2008, MINUTES: Jim Hutmacher requested that on page 14 under "Consider Petition for Declaratory Ruling Regarding the Applicability of Domestic Use of Long View Farm LLP's Well" the minutes be amended to reflect that Mr. Hutmacher received the material prior to the hearing, but he recused himself from participating in the hearing.

Chairman Hoyt stated that on page 13 under "Water Permit Application No. 2634-2, Eben Streeter" the minutes should reflect that the matter was resolved by stipulation by the parties.

Motion by Hutmacher, seconded by Freeman, that on page 13 under "Water Permit Application No. 2634-2, Eben Streeter" the minutes be amended to reflect that the matter was resolved by stipulation by the parties. Motion carried.

Chairman Hoyt stated that in the first paragraph on page 13, Qualification No. 5 should be added under "Water Permit Application No. 2633-2, Southern Black Hills Water System."

Motion by Bjork, seconded by Freeman, that Qualification No. 5, be added to the first paragraph on page 13 of the minutes. Motion carried.

Motion by Freeman, seconded by Bjork, to approve the minutes from the December 9-11, 2009, Water Management Board meeting, as amended. Motion carried.

MAY MEETING: The next Water Management Board meeting is scheduled for May 6-7, 2009, at the Matthew Training Center, 523 E. Capitol, Pierre. Chairman Hoyt noted that he may be unable to attend the meeting on May 6.

STATUS AND REVIEW OF WATER RIGHTS LITIGATION: Jeff Hallem reported that Judge Von Wald issued a memorandum decision affirming the board's decision in the Harlan Aman application.

Mr. Hallem stated that the civil action in the circuit court dealing with Stretch's Well Service continues, and with the possibility of the matter coming before the board, Mr. Hallem did not go into the merits of the case.

Diane Best reported on a lawsuit that was filed by the state of Missouri in federal court in North Dakota. This issue may have some potential impacts dealing with water rights in the area. Ms. Best noted that South Dakota is not a party to this lawsuit.

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

LEGISLATIVE UPDATE: DENR Secretary Steve Pirner presented an update on 2009 legislation of interest to the board.

APPOINTMENT OF RAPID VALLEY WATER MASTER: Mark Rath reported that in the past the Water Management Board has appointed Kevin Ham as the Rapid Valley water master. The Rapid Valley Conservancy District has requested that Mr. Ham be appointed water master for the 2009 irrigation season.

Motion by Freeman, seconded by Hutmacher, to appoint Kevin Ham as the Rapid Valley water master for the 2009 irrigation season. Motion carried.

CONSIDER VIOLATION FOR FAILURE TO SUBMIT ANNUAL IRRIGATION QUESTIONNAIRE: Genny McMath provided the board with her report on irrigation questionnaire violations.

On October 24, 2008, the Water Rights Program mailed 3,148 irrigation questionnaires by First Class Mail. The permit holders were given until December 1, 2008, to return the forms.

On January 23, 2009, 211 notices (involving 352 permits) were mailed to those irrigators who had not returned their irrigation questionnaires. All of the notices were sent by "signature confirmation requested."

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The January 23rd notice advised the permit holders that the board could take one or more of the following actions pursuant to SDCL 46-1-12 and SDCL 46-1-14:

- The permit(s) could be suspended for:
 1. A period of up to one year for the first violation; or
 2. A period of up to three years for the second violation, which includes one previous violation.
- The permit(s) could be canceled for three violations, which includes at least two previous suspensions;
- The permit(s) could be amended to include the mandatory irrigation questionnaire qualification;
- Postpone any action or take no action.

The Water Rights Program recommended that the board take the following action for permits with irrigation questionnaires not received by March 11, 2009:

Suspend the following permits/rights for one year (effective April 11, 2009)

4949-3	John Downes, Mgr. (Received prior to April 11,2009; no suspension occurred)
5345-5	John Downs, Mgr. (Received prior to April 11,2009; no suspension occurred)
6055-3	The Lakes Golf Course (Received prior to April 11,2009; no suspension occurred)
5222-3	McCook Country Club (Received prior to April 11,2009; no suspension occurred)
6874-3	McCook Country Club (Received prior to April 11,2009; no suspension occurred)
1653-1	Donald T. and Catherine A. Miller (Received prior to April 11,2009; no suspension occurred)
2943-3	Duane Rogers, Administrator

Suspend the following permits/rights for three years (effective April 11, 2009)

672-2	Edward Patrick Henry
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Cancel the following permits/rights (effective April 11, 2009)

5313-3	Thomas Corio - cancellation of entire water right (Received prior to April 11,2009; no suspension occurred)
984-1	Gary L. Larson (cancellation of the irrigation portion of the water right)

Amend the following to add the Irrigation Questionnaire Qualification (effective March 11, 2009):

3224-3	Steven Ching
1657-3	John Downes, Mgr.

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2105-3	John Downes, Mgr.
4293-3	John Downes, Mgr.
1055-1	Emily P. Stadheim Revocable
1012-1	River Bottom Cattle Co. LLC
618-2	Soderquist Family Ranch
1067-1	Fred Wientjes

Motion by Freeman, seconded by Bjork, to follow the recommendations for suspension and amendment of the permits/rights. If the irrigator sends in the questionnaire prior to April 11, 2009, no suspension or cancellation will occur. Motion carried.

Chairman Hoyt suggested that Ms. McMath personally contact the eight permit holders who are subject to suspension or cancellation because they have not submitted the irrigation water use questionnaire.

Mr. Freeman and Mr. Hutmacher both disagreed with directing the staff to personally contact these permit holders, noting that the permit holders have already been notified of the pending suspension or cancellation.

CANCELLATION CONSIDERATIONS: Mr. Gronlund reported that eight water permits/rights were scheduled for cancellation. The owners were notified of the hearing and the reason for cancellation. The department received no letters in response to the notices of cancellation. Mr. Gronlund requested the board consider cancellation of the eight water rights.

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

Water Permit No. 1196-1 filed by Margaret Starkey; abandonment/forfeiture
Water Right No. 2116-2 filed by Donald Schmitz now owned by Greg Schmitz;
abandonment/forfeiture (Cancellation is for the irrigation component only and does not pertain to domestic use from the storage dam.)
Water Permit No. 2331-2 filed by Woody and Barb Nordstrom; abandonment/forfeiture
Water Right No. 2407-3 filed by Delbert Tschetter; abandonment
Water Right No. 2805-3 filed by William V. Hearnen; abandonment/forfeiture
Water Right No. 3978-3 filed by Gary Voss; abandonment
Water Permit No. 5309-3 filed by Norman DeLange; abandonment/forfeiture
Water Right No. 5969A-3 filed by Keith Eidam; abandonment/forfeiture

Motion by Hutmacher, seconded by Freeman, to cancel the eight water permits/rights for the reasons listed. Motion carried.

SEVEN YEAR REVIEW OF FUTURE USE PERMIT: Future use permits are required to be reviewed by the Water Management Board every seven years for anticipated development and future need.

Eric Gronlund reported that the South Dakota Conservancy District future use permit was scheduled for review. The conservancy district submitted a letter requesting that Future Use

Permit No. 2472-2 remain in effect for 24,000 acre-feet of water weekly from the Missouri River.

The future use review was public noticed on January 28, 2009, and February 4, 2009, in the Gregory Times Advocate, and no petitions to intervene were received in response to the public notice.

The chief engineer recommended that Future Use Permit No. 2472-2 be allowed to remain in effect for 24,000 acre-feet of water weekly from the Missouri River.

David Templeton, DENR Division of Financial and Technical Assistance, reported that in October 2001, the Board of Water and Natural Resources, acting as the South Dakota Conservancy District, requested and received a Federal Energy Regulatory Commission permit (FERC) to reevaluate the Gregory County Pumped Storage Project. In March 2002, the Conservancy District received the Future Use Permit from the Water Management Board.

The 2002 State Legislature approved \$100,000 for a reevaluation of the study. The Board of Water and Natural Resources hired Black and Veatch to conduct the reevaluation, and the reevaluation report was completed in 2004. At the time, the project did not appear to be feasible due to a number of variables.

Mr. Templeton noted that at this time, concerns over global warming and coal fired power plant emissions, favor renewable energy alternatives such as hydropower, therefore, the Board of Water and Natural Resources requested that the Water Management Board allow the future use permit to remain in effect for 24,000 acre-feet weekly.

Motion by Freeman, seconded by Hutmacher, to allow the future use permit to remain in effect for the amount requested. Motion carried.

FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL DECISION IN THE MATTER OF ONE YEAR SUSPENSION OF WATER PERMIT NO. 1735-1, STEVE BAUER: Jeff Hallem presented his rulings on DENR's proposed Findings of Fact, Conclusion of Law, and Final Decision.

Mr. Hallem noted that John Frederickson, attorney for Steve Bauer, submitted a letter dated March 6, 2009, stating that he did not intend to offer objections and responses to the proposed Findings of Fact, Conclusions of Law, and Final Decision.

Mr. Hallem pointed out a typographical error in Finding of Fact No. 1. He noted that "30 pgm" should be changed to "30 gpm."

Mr. Hallem stated that the record does not support the last sentence in Finding of Fact No. 4, and he recommend that it be deleted.

In his rulings, Mr. Hallem recommended that the proposed Findings of Fact, Conclusions of Law, and Final Decision be accepted, with the two changes noted above.

Motion by Freeman, seconded by Bjork, to adopt rulings as set forth by Mr. Hallem. Motion carried.

Motion by Freeman, seconded by Hutmacher, to adopt the Findings of Fact, Conclusions of Law, and Final Decision in the matter of the one year suspension of Water Permit No. 1735-1, Steve Bauer. Motion carried.

FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL DECISION IN THE MATTER OF WATER PERMIT NO. 2633-2, SOUTHERN BLACK HILLS WATER SYSTEM: Diane Best, Assistant Attorney General, represented the Department of Environment and Natural Resources.

Talbot Weiczorek, attorney from Rapid City, SD, represented Southern Black Hills Water System.

Michael Hickey, attorney from Rapid City, represented Trout Haven Ranch owner Steve Simpson.

Mr. Hallem asked that the record reflect that no one appeared on behalf of the National Park Service. The individual intervenors, Randy Schroth and Shawn Fugier were also not present.

Ms. Best offered DENR Exhibit 5 which includes a letter dated February 5, 2009, from Diane Best to Shawn Fugier, Michael Hickey, Talbot Weiczorek, Peter Fahmy, and Randy Schroth, Trout Haven permit correspondence and correspondence regarding Southern Black Hills Water Permit Application No. 2633-2 and Eben Streeter Water Permit Application No. 2634-2.

The exhibit was admitted into the record.

Chairman Hoyt stated that in the Findings of Fact, Conclusions of Law, and Final Decision "adverse impact" should be changed to "significant adverse effect."

Motion by Hutmacher, seconded by Bjork, to accept the amendment presented by Chairman Hoyt. Motion carried

Mr. Hallem presented his rulings on the proposed Findings of Fact, Conclusions of Law, and Final Decision.

Mr. Weiczorek had no objections to Mr. Hallem's rulings.

Ms. Best suggested that on page 2, Board Ruling E, the last line be changed to "such as possible leakage to other shallower aquifers in central South Dakota."

Ms. Best suggested that on page 6, Board Ruling X, remove "for domestic purposes."

Ms. Best stated that on page 4, Board Ruling M, there seems to be a word missing. Mr. Hallem stated that "after" in the third line should be deleted.

Mr. Hickey had no objections to the proposed changes, with the exception of Board Ruling WW on page 12. He requested that in the fifth line be changed to direct the applicant to use best efforts to construct the monitoring well as stated at the time of the hearing. He noted that there is a requirement in the findings that the applicant use their best efforts, and there needs to be at least some direction from the board in terms of what it feels those best efforts should be, especially given the sensitive nature of the springs and Trout Haven's livelihood.

Mr. Wieczorek his recollection of the record is the board said they were not going to dictate how the springs are to be protected, but the applicant is obligated to protect the springs.

Mr. Hickey said the board needs to give some direction on this public interest issue. The burden should be on the applicant to show they are not affecting the springs.

Mr. Hickey asked that the board include in findings a recommendation that the parties in good faith meet to discuss how they are going to measure and determine whether there has been a significant adverse effect on the springs.

Mr. Wieczorek said he has talked to Mr. Hickey in an attempt to come to agreement, but has not heard anything. It is unfair for Mr. Hickey to ask the board to make his client to meet with Southern Black Hills when Southern Black Hills tried for over a year to get information from Mr. Hickey's client. Mr. Wieczorek said Southern Black Hills is willing to sit down and try to figure out a way to come to an agreement.

Mr. Hallem said from a legal standpoint, the findings are consistent with what the board has done in other areas. It does place the burden on the applicant and if the applicant does do something improper, it does allow the permit to be cancelled and it would give the chief engineer some ability to do some things.

Garland Erbele testified regarding Qualification No. 5, which states, "The applicant, water permit holder, under this permit shall control withdrawals from the well so there is not a significant adverse effect of the water flow from Beaver Creek Springs or a significant adverse effect on the water quality and character in Beaver Creek Springs.

Mr. Erbele testified that the qualification provides that if Mr. Simpson filed a complaint that he was being impaired, that the flow in the springs decreased, the department would conduct an investigation and make a determination as to whether Southern Black Hills was causing impairment of the springs. Based on that decision, if Mr. Simpson disagreed with the department's determination, he would have the right to request a declaratory ruling from the Water Management Board.

Mr. Hickey asked that the department take the lead with respect to establishing a mechanism to determine what the stream flow is before the well is drilled, and that sufficient monitoring be put

in place so we know if there is an impact and whether it is because of the Southern Black Hills well or climatic conditions.

Mr. Freeman said Mr. Simpson's permit contains a qualification requiring him to keep records and measurements of the stream.

Chairman Hoyt said it is clear that there would be relief in the event that either party feels aggrieved in this situation.

Motion by Freeman, seconded by Hutmacher, to modify the Water Management Board rulings as follows:

Page 2, paragraph E – following the phrase “groundwater outflow” add “such as possible leakage to other shallower aquifers in central South Dakota.” in the third and fourth lines.

Page 4, paragraph M – delete the word “after” between “Board believes” and “a decreased discharge” in the fourth line.

Page 6, paragraph X – remove “for domestic purposes.”

The motion carried.

Motion by Freeman, seconded by Hutmacher, to adopt the Water Management Board rulings, as amended. Motion carried.

Motion by Freeman, seconded by Hutmacher, to adopt the proposed Findings of Fact, Conclusions of Law, and Final Decision in the matter of Water Permit No. 2633-2, Southern Black Hills Water System, as amended including the addition of Qualification No. 5. Motion carried.

Ms. Best provided the board with a copy of the Eben Streeter permit, which includes the stipulated qualification.

PUBLIC HEARING ON AMENDMENT TO ADMINISTRATIVE RULES OF SOUTH DAKOTA REGARDING SURFACE WATER QUALITY STANDARDS: Chairman Hoyt opened the hearing at 12:15 p.m. CDT.

Patrick Snyder, Surface Water Quality Program, stated that notice of the hearing was published in the Mitchell Daily Republic and the Yankton Daily Press on January 22, 2009, and in the Aberdeen American News, Black Hills Pioneer, Brookings Register, Huron Daily Plainsman, Madison Daily Leader, Pierre Capital Journal, and Rapid City Journal on January 23, 2009. Affidavits of Publication are on file at the Department of Environment and Natural Resources Surface Water Quality office, 523 E. Capitol, Pierre, South Dakota.

The notice was also mailed to 383 interested parties.

The purpose of the hearing was to receive and consider testimony, suggestions, and recommendations to the proposed amendments to ARSD 74:51:01 – Surface Water Quality Standards, ARSD 74:51:02 – Uses assigned to lakes, and ARSD 74:51:03 – Uses assigned to streams.

The effect of the proposed amendments is as follows:

ARSD 74:51:01 – Surface Water Quality Standards – update references; correct typographical errors; clarify language; update toxic pollutant criteria; add and modify definitions; modify the dissolved oxygen, water temperature and pH criteria; add E. coli criteria; set site specific criteria for the Little White River and White River; and add beneficial uses to low flow rates for low quality fishery waters.

ARSD 74:51:02 – Uses assigned to lakes – review, remove, and reassign designated beneficial uses of certain lakes; and

ARSD 74:51:03 – Uses assigned to streams – review and reassign designated beneficial uses of certain streams and correct typographical errors.

The reason for the proposed changes is to review and update the designated beneficial use classifications and water quality standards.

Under SDCL 34A-2-17 and the federal Water Quality Standards Regulations at 40 CFR 131.20, states are required to review their water quality standards at least once every three years.

Mr. Snyder offered a presentation explaining the following proposed amendments.

Chapter 74:51:01 – Surface Water Quality Standards

§74:51:01:01- Definitions.

(23) “Epilimnion” – This definition is being added due to its use in § 74:51:01:45 - § 74:51:01:51. This specifies where the dissolved oxygen criterion is applicable in a thermally stratified waterbody.

(30) “Hypolimnion” – This definition is being added to explain the different layers in a thermally stratified waterbody. It is used in the definition of the “Thermocline.”

(40) “Metalimnion” – This definition is being added due to its use in § 74:51:01:45 - § 74:51:01:51. This specifies where the dissolved oxygen criterion is applicable in a thermally stratified waterbody.

(58) “Surface waters of the state” – This change removes a reference to 40 CFR 423.11(m), which used to apply to cooling ponds but now applies to coal pile runoff. The reference to the federal regulation is no longer pertinent to this definition.

(59) "Thermocline" – This definition is being added to explain the different layers in a thermally stratified waterbody. It is used in the definition of the "Epilimnion".

(67) "Waters of the state" – This change removes a reference to 40 CFR 423.11(m), which used to apply to cooling ponds, but now applies to coal pile runoff. The reference to the federal regulation is no longer pertinent to this definition.

These changes in definitions will result in a numbering change for definitions 24 to 69.

§ 74:51:01:22 – Laboratory procedures for tests.

This change is to reflect the most recent federal revision of 40 CFR Part 136.

§ 74:51:01:23 – Bioassay methods.

This change is to reflect the most recent federal revision of 40 CFR Part 136.

§ 74:51:01:30 – Flow rates for low quality fishery irrigation waters.

The addition of the fish and wildlife propagation, recreation, and stock watering use allows this fishery beneficial use to be treated consistently with the other low quality fishery waters.

The irrigation waters use is being added to this section based on the results of a Total Maximum Daily Load study that shows low flow conditions cause conductivity levels to naturally increase to the point that the use cannot be expected to be maintained. By adding this beneficial use to this section, waters will no longer be listed as impaired due to natural limiting conditions.

§ 74:51:01:32 – Effluent limits for discharges to coldwater fishery waters.

The change to a 30-day average for suspended solids and 5-day biochemical oxygen demand makes this section consistent with the National Secondary Wastewater Treatment Standards.

Because South Dakota has primacy for issuing surface water discharge permits, the recommendation is that the reference to the national pollutant discharge elimination system be replaced with surface water discharge to reflect South Dakota's authority over this program.

§ 74:51:01:44 – Criteria for domestic water supply waters.

These changes clarify that the criteria for nitrates, barium, fluoride, and total petroleum hydrocarbons are daily maximums.

§ 74:51:01:45 – Criteria for coldwater permanent fish life propagation waters.

Dissolved oxygen

SD DENR recommended revisions to the language specifying implementation of Dissolved Oxygen (DO) criteria. These revisions include:

- adding definitions for epilimnion, metalimnion, and hypolimnion;
- specifying the DO criteria are implemented as a daily minimum value;
- specifying the DO criteria are in units of milligrams per liter (mg/L); and

- specifying that DO is measured throughout the water column in any non-stratified waterbody and in the epilimnion and metalimnion of a stratified waterbody.

DO is necessary to sustain aquatic life, but can vary significantly in natural aquatic systems. DENR recommended these revisions to improve understanding of how the DO criteria are used. The revisions provide specifics on how DO criteria are measured, over what timeframes, and how assessment decisions are made to protect aquatic life.

Waterbodies may become thermally-stratified wherein less dense, warmer water rests on top of denser, colder bottom waters. This stratification can essentially isolate the bottom waters from replenishing oxygen supplies at the air-water surface. Without adequate mixing the bottom waters can become relatively stagnant and depleted in dissolved oxygen. The revisions to the dissolved oxygen criteria recognize that oxygen levels are not uniform in waterbodies that do not mix and subsequently stratify into an upper, warmer area that circulates and a lower, cooler area that does not circulate.

The epilimnion defined as the upper stratum of the water column that is typically uniformly warm, circulating, and well mixed, is the area of a stratified waterbody where wind action and photosynthesis provide for higher concentrations of dissolved oxygen. In larger, deeper waterbodies a middle layer (metalimnion) may also be present. The metalimnion defined as the middle layer in a thermally-stratified waterbody generally encompassing the thermocline, is typically somewhat mixed and influenced by the epilimnion. These zones are where the DO criteria are expected to be met, providing a zone of refuge for aquatic life at all times.

The lower area, the hypolimnion, is typically less well mixed (at times, stagnant), colder than the epilimnion and metalimnion, and often has a uniform temperature. Natural breakdown of organic material can consume much of the available oxygen in the hypolimnion during and after the summer growing season. Because of the nature of the hypolimnion, the dissolved oxygen criterion is not expected to be maintained in the hypolimnion of a thermally-stratified waterbody at all times. EPA's criteria document (Ambient Water Quality Criteria for Dissolved Oxygen, 1986, p. 28) states:

"Naturally-occurring dissolved oxygen concentrations may occasionally fall below target criteria levels ... [representing] the natural productivity under the particular set of natural conditions."

Recognizing there is some scientific uncertainty in setting criteria, DENR makes recommendations to the Board of Water Management based on technical analysis of available science. The Department, based on the United States Environmental Protection Agency's 1986 Dissolved Oxygen Criteria document, considers the daily minima to be protective of the fish species found in South Dakota.

pH

The change to the pH criteria is based on EPA's 1986 criteria document. The pH range currently in rule is protective of sensitive marine aquatic life, with marine algae and benthic invertebrates

more sensitive than fish to changes in pH. Additionally, with mature and larval oysters more sensitive at the extremes of the pH range of 6.5 – 9.0, the criteria to protect these sensitive organisms was set at 6.6 to 8.6 standard units.

South Dakota lacks a marine environment and the sensitive marine communities that the current pH range is meant to protect. Therefore, it is more appropriate to use the recommended EPA pH range of 6.5 – 9.0 that protects South Dakota's freshwater aquatic life. Additional changes include describing the undisassociated hydrogen sulfide as a daily maximum.

§ 74:51:01:46 – Criteria for coldwater marginal fish life propagation waters.

Please see the dissolved oxygen, and pH explanations in Section 2.7.

Additional changes include describing the undisassociated hydrogen sulfide as a daily maximum.

§ 74:51:01:47 – Criteria for warmwater permanent fish life propagation waters.

Please see the dissolved oxygen explanation in Section 2.7.

Additional changes include describing the undisassociated hydrogen sulfide as a daily maximum.

§ 74:51:01:48 – Criteria for warmwater semipermanent fish life propagation waters.

Please see the dissolved oxygen explanation in Section 2.7.

Additional changes include describing the undisassociated hydrogen sulfide as a daily maximum.

§ 74:51:01:48.01 – Site specific criteria for semipermanent fish life propagation waters – White River from the Nebraska-South Dakota border to its confluence with the Missouri River and § :48.02 - Site specific criteria for semipermanent fish life propagation waters - Little White River from its confluence with Rosebud Creek to it's confluence with the White River.

Based on physical habitat classification and analyses of historical discharge and water-quality data the current reaches do not adequately represent the natural conditions in the watershed. Monitoring and assessment data identified three unique reaches on the White River. The breaks for these reaches were determined by geology of the watershed and hydrology of the system. The proposed reaches are as follows: (1) from the Nebraska border to the confluence of Willow Creek 13 river miles north of the gage station identified as the White River near Oglala; (2) Willow Creek to the confluence of the Little White River; and (3) the confluence of the Little White River to the mouth of the river near Oacoma, South Dakota. Current reaches in the Little White River watershed are adequate and do not need adjustment, as they represent geological and hydrological conditions in this watershed.

Long term water quality monitoring and assessment data (1968 through 2008) indicate TSS concentrations in the White and Little White Rivers violate current surface water quality standards based on warmwater semipermanent fish life propagation water criteria. However, based on long-term trend analysis using USGS and SD DENR water quality data, TSS standard violations appear to be relatively constant showing a slight decline over time. The current TSS

water-quality standard is unattainable and unreasonable in this system (≥ 158 mg/L). Much of the load is coming from White River Group geology in and around the Badlands National Parks where the geology of the area causes steep-sided bluffs with little to no vegetation. This causes low infiltration rates with high runoff and erosion rates. Sediment composed of White River Group consists of clay, silt, and mudstone soils of small particle size that can create suspensions and colloidal dispersions that remain suspended for long periods of time.

Biological data (fisheries and macroinvertebrate) support proposed reach changes and modified total suspended solids concentrations. Based on recent fisheries assessment results (Fryda, 2001), the White River is typical of western South Dakota streams dominated by species that are adapted to the adverse conditions found in this arid region. The report suggests that it is likely the White River's species composition has changed very little from its historic condition, finding only one nonnative species, the common carp (*Cyprinus carpio*), along with several species of special concern representing a large percentage of the fish community. White River macroinvertebrate data suggest that the Oglala monitoring site had significantly lower TSS concentrations, a Rosgen G-type channel, and habitat more conducive to a diverse benthic community. Whereas, the lower reaches are characterized by higher TSS concentrations, Rosgen F-type channels with shifting sand bottoms, creating extremely poor macroinvertebrate habitat and, in turn, community structure. Macroinvertebrate communities in the White River watershed appear to be driven more by physical habitat and less by TSS concentrations.

Based on physical habitat classification and analyses of historical discharge, water-quality and biological data, three unique reaches were identified on the White River. The breaks for these reaches were determined by geology of the watershed and hydrology of the system. The current criterion of 158 mg/l for TSS is unattainable in the White and Little White River watersheds in South Dakota. Site/reach specific standards for TSS in proposed reaches of the White and Little White Rivers based on a load duration curves developed for the Oglala, Kadoka, Oacoma and the Little White River below White River monitoring sites using the 95th percent exceedence concentrations. The proposed site/reach specific TSS concentrations are as follows: (1) 4,525 mg/L TSS from the Nebraska border to the confluence of Willow Creek; (2) 24,300 mg/L TSS from Willow Creek to the confluence of the Little White River; (3) 21,550 mg/L TSS from the confluence of the Little White River to the mouth of the river near Oacoma, South Dakota; and the site/reach specific TSS concentration for the Little White River below White River is 1,733 mg/L TSS from Rosebud Creek to the mouth of the Little White River near Westover, South Dakota. Current and historical data support implantation of these site-specific standards for TSS in each of the proposed reaches of the White and Little White River watersheds, based on the 95th percent exceedence level.

§ 74:51:01:49 – Criteria for warmwater marginal fish life propagation waters.

Please see the dissolved oxygen explanation in Section 2.7.

Additional changes include describing the undisassociated hydrogen sulfide as a daily maximum.

§ 74:51:01:50 – Criteria for immersion recreation waters.

Dissolved oxygen

This change recognizes that oxygen levels are not uniform in waterbodies that do not mix and subsequently stratify into an upper, warmer area that circulates and a lower, cooler area that does not circulate.

The epilimnion, defined as the upper stratum of more or less uniformly warm, circulating, and fairly turbulent water, is the area of a stratified waterbody where wind action and photosynthesis provide for higher concentrations of dissolved oxygen. This zone is where the dissolved oxygen criterion should be met and maintain an aesthetically pleasing recreational environment.

E. coli

E. coli is a species of fecal coliform bacteria that is specific to fecal material from humans and warm-blooded animals.

Fecal coliforms include not only E. coli but also includes a number of other bacterial species including Enterobacter, Klebsiella, Proteus, and Citrobacter to name a few. The problem with the fecal coliform test is that it may or may not indicate fecal contamination, i.e. some of the bacteria in the fecal coliform group can be found naturally occurring in the environment like on plants or in the soil.

E. coli are less frequently found where fecal contamination is known to be absent, which makes them a better indicator of actual fecal contamination.

In 2002, EPA re-evaluated their bacteria criteria, and they stand behind their 1986 criteria document that shows E. coli (and enterococci) exhibited the strongest relationship with swimming-associated gastrointestinal illnesses.

Moving the recreational seasonal date to the main body of the rule makes it easier to show when all the recreation criteria apply.

§ 74:51:01:51 – Criteria for limited contact recreation waters.

Please see the dissolved oxygen, E. coli and season date discussion in Section 2.13.

§ 74:51:01:55 – Criteria for toxic pollutants.

This change updates the 40 CFR Part 131 reference to the most recent federal revision.

§ 74:51:01:56 – Site specific criteria for Whitewood Creek from Interstate 90 to its confluence with Gold Run Creek.

These changes reflect the following:

- The July 1, 1988, date is no longer needed as the criteria are now in effect;
- The Homestake Mining Company permit has been transferred to the South Dakota Science and Technology Authority;

- The December 1, 1987, date is no longer needed as the permit is now in effect; and
- The discharge permits are now administered by the state and are no longer called national pollutant discharge elimination permits.

§ 74:51:01:63 – Application requirements for certification of compliance with water quality standards.

This change updates the 40 C.F.R. 121 reference to the most recent federal revision.

§ 74:51:01:64 – Notice requirements for certification of compliance with water quality standards for hydropower facilities.

These changes update the 40 C.F.R. 121 reference to the most recent federal revision and language to reflect Legislative Research Council's most current language use.

§ 74:51:01:64.01 – Notice requirements for certification of compliance with water quality standards for dredge and fill permits.

These changes update the 40 C.F.R. 121 reference to the most recent federal revision and language to reflect Legislative Research Council's most current language use.

§ 74:51:01:64.02 – Notice requirements for compliance with water quality standards for federal issued national pollutant discharge elimination system permits.

These changes update the 40 C.F.R. 121 reference to the most recent federal revision and language to reflect Legislative Research Council's most current language use.

§ 74:51:01:64.03 – Contents of public notice for certification of compliance with water quality standards.

These changes update the 40 C.F.R. 121 reference to the most recent federal revision and language to reflect Legislative Research Council's most current language use.

§ 74:51:01:65 – Secretary's certification of compliance with water quality standards.

These changes update the 40 C.F.R. 121 reference to the most recent federal revision and language to reflect Legislative Research Council's most current language use.

Appendix A – Total Ammonia Criteria

This corrects a typographical error in equations 3 and 4.

Appendix B – Toxic Pollutant Criteria

These changes correct a typographical error and update criteria to be consistent with current EPA criteria.

Chapter 74:51:02 – Uses Assigned to Lakes

Several lakes are being recommended for fish life propagation uses. The domestic water supply use is recommended to be removed on several lakes, and two lakes are recommended to be deleted from this chapter as they no longer exist.

The following lakes were recommended for changes:

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Lake	Recommendation	Current Beneficial Uses	Proposed Beneficial Uses
East 81 Lake (Brookings County)	Add fishery and recreational use	9	4,7,8,9
Lake Bedashosha (Buffalo County)	Delete from chapter	5,7,8,9	9
Bitter Lake (Day County)	Add fishery and recreational use	9	4,7,8,9
Mina (Parmley) Lake (Edmunds County)	Remove drinking water use	1,4,7,8,9	4,7,8,9
Angostura Reservoir (Fall River County)	Remove drinking water use	1,4,7,8,9,10	4,7,8,9,10
Coldbrook Reservoir (Fall River County)	Remove drinking water use	1,2,7,8,9	2,7,8,9
Cottonwood Springs (Fall River County)	Remove drinking water use	1,4,7,8,9	4,7,8,9
Woodruff Lake (Hughes County)	Delete from chapter	5,7,8,9	9
Murdo Dam (Jones County)	Remove drinking water use	1,4,7,8,9	4,7,8,9
West 81 (Twin) Lake (Kingsbury County)	Add fishery and recreational use	9	4,7,8,9
Iron Creek Lake (Lawrence County)	Remove drinking water use	1,2,7,8,9	2,7,8,9
Mirror 1&2 (Lawrence County)	Remove drinking water use	1,2,7,8,9	2,7,8,9
Yates Ponds (Lawrence County)	Add fishery and recreational use	9	2,7,8,9
Lake Byre (Lyman County)	Remove drinking water use	1,4,7,8,9	4,7,8,9
White Lake (Marshall County)	Remove drinking water use	1,4,7,8,9	4,7,8,9
Twin Lakes (Minnehaha County)	Add fishery and recreational use	9	4,7,8,9
Old Wall Lake (Pennington County)	Remove drinking water use	1,5,7,8,9	5,7,8,9
Long Lake (Sanborn County)	Delete from chapter	6,7,8,9	9

Removal of drinking water supply beneficial use

The reasons for the proposed removal of the drinking water supply designated use are varied. For most of the waterbodies, they were historically used as a drinking water supply but are no longer used as such due to municipalities switching to newer water supplies. The municipalities

have since abandoned these waterbodies as sources of drinking water. Other reasons are the waterbody may have been designated as a drinking water supply but that use has never been developed. DENR has obtained or received factual information that the drinking water use is not an existing use for any of these waterbodies. This information was provided by DENR's Drinking Water Program. For practical reasons, the Department recommended the drinking water supply beneficial use be removed from these waterbodies.

§ 74:51:02:02 – Brookings County, uses of certain lakes.

East 81 Lake is being recommended by Game, Fish and Parks as a warmwater permanent fishery, immersion recreation waters, limited contact waters and fish and wildlife propagation, recreation, and stock watering.

This recommendation is based on South Dakota Game, Fish, and Parks data indicating the lake is supporting a healthy, self-sustaining fishery.

§ 74:51:02:11 – Buffalo County, uses of certain lakes.

The dam on Crow Creek that created Bedashosha Lake was breached. Crow Creek now flows freely through the breach and there are no plans on repairing or rebuilding the dam.

§ 74:51:02:21 – Day County, uses of certain lakes.

Bitter Lake is recommended to be assigned the beneficial uses of warmwater permanent fish life propagation waters, immersion recreation waters, limited contact waters, and fish and wildlife propagation, recreation, and stock watering waters.

This recommendation is based on South Dakota Game, Fish, and Parks data indicating the lake is supporting a healthy, self-sustaining fishery.

§ 74:51:02:25 – Edmunds County, uses of certain lakes.

It is recommended that the domestic water supply be removed from Mina Lake as a use because the lake is not being used as a drinking water supply.

§ 74:51:02:26 – Fall River County, uses of certain lakes.

It is recommended that the domestic water supply be removed from Angostura Reservoir, Coldbrook Lake, and Cottonwood Springs Lake as a use because these lakes are not being used as drinking water supplies.

§ 74:51:02:35 – Hughes County, uses of certain lakes.

The dam that formed Woodruff was breached and the South Fork Medicine Knoll Creek flows freely through the breach. There are no plans to repair or rebuild the dam. This section is being repealed because Woodruff Lake is the only lake in Hughes County listed as a fishery.

§ 74:51:02:40 – Jones County, uses of certain lakes.

Murdo Lake is no longer used a domestic water supply. It is recommended that the domestic water supply use be deleted as a beneficial use.

§ 74:51:02:41 – Kingsbury County, uses of certain lakes.

West 81 (Twin) Lake is being recommended by Game, Fish and Parks as a warmwater permanent fishery, immersion recreation waters, limited contact waters and fish and wildlife propagation, recreation, and stock watering.

This recommendation is based on South Dakota Game, Fish, and Parks data indicating the lake is supporting a healthy, self-sustaining fishery.

§ 74:51:02:43 – Lawrence County, uses of certain lakes.

It is recommended that the domestic water supply use be deleted as a beneficial use from Iron Creek Lake, Mirror 1 Lake and Mirror 2 Lake as they are not used as domestic water supplies.

Yates Ponds are being recommended by Game, Fish and Parks as a coldwater permanent fishery, immersion recreation waters, limited contact waters and fish and wildlife propagation, recreation, and stock watering.

This recommendation is based on South Dakota Game, Fish, and Parks data indicating the lake is supporting a healthy, self-sustaining fishery.

§ 74:51:02:45 – Lyman County, uses of certain lakes.

It is recommended that the domestic water supply use be deleted as a beneficial use from Lake Byre as the lake is not used as domestic water supply.

§ 74:51:02:48 – Marshall County, uses of certain lakes.

It is recommended that the domestic water supply use be deleted as a beneficial use from White Lake as the lake is not used as domestic water supply.

§ 74:51:02:52 – Minnehaha County, uses of certain lakes.

Twin Lakes are being recommended by Game, Fish and Parks as a warmwater permanent fishery, immersion recreation waters, limited contact waters and fish and wildlife propagation, recreation, and stock watering.

This recommendation is based on South Dakota Game, Fish, and Parks data indicating the lake is supporting a healthy, self-sustaining fishery.

§ 74:51:02:54 – Pennington County, uses of certain lakes.

It is recommended that the domestic water supply use be deleted as a beneficial use from Old Wall Lake Byre as the lake is not used as domestic water supply.

§ 74:51:02:55 – Perkins County, uses of certain lakes.

This corrects a typographical error.

§ 74:51:02:58 – Sanborn County, uses of certain lakes.

The department recommended that Long Lake be deleted from this section based on field work completed by the department.

Chapter 74:51:03 – Uses Assigned to Streams

These changes recommend changes to the beneficial uses to a number of streams..

Stream	Recommendation	Current Beneficial Uses	Proposed Beneficial Uses
Cobb Creek, also known as Florida Creek	Change fishery use	3,8,9,10	4,8,9,10
Jorgenson River	Extend current fishery/recreational designation to include a new segment of the river	9,10	6,8,9,10
Mud Creek	Add fishery and recreational use	9,10	6,8,9,10
Grindstone Creek	Add fishery and recreational use	9,10	6,8,9,10
Big Sioux River	Remove drinking water use for a segment of the river	1,5,8,9,10	5,8,9,10
Pattee Creek	Add fishery and recreational use	9,10	5,8,9,10
Beaver Creek	Change fishery use	3,8,9,10	5,8,9,10
Cascade Creek	Change fishery use	2,7,8,9,10	3,7,8,9,10
Unnamed tributary of Crow Creek	Add fishery and recreational use	9,10	2,8,9,10
Spearfish Creek	Change fishery use and add to a segment of the creek	3,8,9,10	2,8,9,10
	Add commerce and industry use to a segment of the creek	1,2,7,8,9,10	1,2,7,8,9,10,11
Keya Paha River	Remove drinking water use	1,5,8,9,10	5,8,9,10
Norwegian Gulch Creek	Add fishery and recreational use	9,10	5,8,9,10
Big Slough Creek	Add fishery and recreational use	9,10	5,8,9,10

§ 74:51:03:04 – Minnesota River’s tributaries’ uses.

Florida Creek, also known as Cobb Creek

This change in beneficial use classification was recommended after a DENR TMDL study showed that Florida Creek, also known as Cobb Creek, is no longer stocked with trout, which initially led to the creek being designated as a coldwater marginal fishery.

Coldwater species have not been stocked nor have coldwater species been collected since the 1930’s. During the TMDL study, only warmwater species were collected with the data indicating these populations are self supporting. A total of 15 species of fish were collected with the Central Stoneroller, Common Shiner, and Creek Chubs the most abundant fish collected.

Jorgenson River

This current warmwater marginal fishery and limited contact recreations uses are being recommended to be extended further upstream to a point near Peever. This recommendation is based on a field study conducted by the department.

Mud Creek

Mud Creek, a tributary of the South Fork Yellow Bank River, is being recommended for the beneficial uses of warmwater marginal fish life propagation and limited contact recreation based on a field study conducted by the department.

§ 74:51:03:06 – Bad River and certain tributaries’ uses.

Grindstone Creek

The department recommended the beneficial uses of warmwater marginal fish life propagation and limited contact recreation be assigned to Grindstone Creek based on a field study conducted by the department.

§ 74:51:03:07 – Big Sioux River and certain tributaries’ uses.

Big Sioux River

The department recommended that the domestic water supply uses be removed as a beneficial use of the Big Sioux River from the Brookings-Moody County Line to Lake Kampeska. This recommendation recognizes that no communities are using the Big Sioux River as a domestic water supply source in this stretch of the Big Sioux River.

The domestic water supply use is still assigned from the Brooking-Moody County Line to the Sioux Falls Diversion Ditch because Sioux Falls uses the Big Sioux River as a domestic water supply.

Also see the previous discussion concerning the removal of the drinking water use in the Uses Assigned to Lakes chapter.

Pattee Creek

The department recommended that the beneficial uses of warmwater semipermanent fish life propagation and limited contact recreation be assigned to Pattee Creek based on a field study conducted by the department.

§ 74:51:03:08 – Cheyenne River and certain tributaries' uses.

Beaver Creek (Custer and Fall River County)

The department recommended that Beaver Creek be reclassified as a warmwater semipermanent fishery. This is based on a TMDL study that found the stream has frequent periods of very low flow/no flow conditions. Coldwater fish have not been stocked in the creek, and no coldwater fish were found during fish surveys.

Cascade Creek

The department recommended that Cascade Creek be reclassified as a coldwater marginal fishery. This is based on a TMDL study that found that fish stocking records and the fish community reflect the actual fishery use. The recommendation also would be consistent with Game, Fish and Parks management of the stream as a "put and take" fishery.

§ 74:51:03:10 – The Belle Fourche River and certain tributaries' uses.

Unnamed tributary of Crow Creek

The department recommended that the Unnamed tributary of Crow Creek from the McNenney Hatchery outfall to Crow Creek be classified as a coldwater permanent fishery. This recommendation is based on a field study conducted by the department.

Spearfish Creek

Game, Fish and Parks recommended that the section of Spearfish Creek below Maurice Dam and the Spearfish Intake be reclassified as a coldwater permanent fishery. This is based on fish population studies.

The department recommended the commerce and industry beneficial use be assigned for the segment of Spearfish Creek from Intake Gulch to Maurice Dam. This change recognizes that this water is being used for hydroelectric power.

§ 74:51:03:20 – James River and certain tributaries' uses.

Cain Creek

The change to Cain Creek from the James River to S33, T110N, R 63W corrects a typographical error.

§ 74:51:03:24 – Niobrara’s tributaries’ uses.

The department recommended the domestic water supply use be removed as the Keya Paha River is no longer used for domestic water supply.

§ 74:51:03:25 – Vermillion River and certain tributaries’ uses.

The department recommended that the warmwater semipermanent fish life propagation and limited contact recreation beneficial uses be assigned to Norwegian Gulch Creek. These recommendations are based on a field study conducted by the department.

§ 74:51:03:26 – White River and certain tributaries’ uses.

These changes correct typographical errors.

§ 74:51:03:27 – Red River of the North’s tributaries’ uses.

Big Slough Creek

The department recommended that the warmwater semipermanent fish life propagation and limited contact recreation beneficial uses be assigned to Big Slough Creek. The recommendations are based on a field study conducted by the department.

This concluded Mr. Snyder’s presentation. He answered questions from the board members.

The following offered public comments on the proposed amendments:

Paul Lepisto, Izaak Walton League of America, Pierre, SD
Tara Weber, Finance Officer, city of Woonsocket, SD

DENR received written comments from the following:

Angela Ehlers, SD Association of Conservation Districts
Todd Duex, Homestake Mining Company
Jeff Shearer, SD Department of Game, Fish and Parks
Jeffrey Vonk, SD Department of Game, Fish and Parks
Mark Gabel, Spearfish, SD
Audrey Gabel, Spearfish, SD
Paul Miller, Spearfish, SD
Scott Zieske, Rapid City, SD
Richard Fort, Action for the Environment, Lead, SD
David Sandidge
James Veitl
Jerry Boyer, Spearfish Canyon Society, Spearfish, SD

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Grace Kostel, Spearfish, SD
Dave Miller, Rapid City, SD
Nancy Hilding, Black Hawk, SD
Ron Waterland, Wharf Resoruces, Lead, SD
Todd Mortenson, SD Cattlemen's Association, Pierre, SD
Karen Hamilton, U.S. Environmental Protection Agency, Denver, CO
Doug Decker, Legislative Research Council, Pierre, SD

The Legislative Research Council (LRC) reviewed and approved the proposed amendments for style, form, and legality. LRC's changes were incorporated into the proposed rules.

Chairman Hoyt requested board action on the proposed amendments.

Motion by Freeman, seconded by Bjork, to adopt the amendments to ARSD 74:51:01 – Surface Water Quality Standards, ARSD 74:51:02 – Uses assigned to lakes, and ARSD 74:51:03 – Uses assigned to streams, as presented. Motion carried.

Chairman Hoyt closed the hearing at 1:15 p.m. CDT.

FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL DECISION IN THE MATTER OF PETITION FOR DECLARATORY RULING REGARDING APPLICABILITY OF DOMESTIC USE FOR LONG VIEW FARM'S WELL: Board member Bernita Loucks participated via telephone conference call.

The following also participated via telephone conference call: Harold Shepard representing the individual petitioners, Rebecca Kidder representing the Yankton Sioux Tribe, and Eric Kerkvliet representing Long View Farm.

Diane Best represented the Department of Environment and Natural Resources.

Jim Hutmacher recused himself.

Mr. Hallem presented the board's rulings on the proposed Findings of Fact, Conclusions of Law, and Final Decision and the Declaratory Ruling.

Mr. Shepard stated that the Yankton Sioux Tribe submitted a letter dated February 3, 2009, requesting a change to paragraph 11. Subsequent to that the Center for Water Advocacy submitted a letter endorsing and incorporating by reference the tribe's change.

The Center for Water Advocacy and the Yankton Sioux Tribe requested adding the following sentence to the end of paragraph 11, "If water is not available from the rural water system, well water may be used for human sanitation and/or for human consumption.

Mr. Hoyt noted that the addition has been incorporated into the board's rulings.

Mr. Kerkvliet had no objections to the proposed board ruling. Mr. Kerkvliet noted that he had proposed the addition of Finding of Fact No. 12, which was rejected in paragraph J of the board rulings. He noted that his proposal is included in Conclusion of Law 15 of the Declaratory Ruling, but he objected to the first sentence being labeled a Conclusion of Law. Mr. Kerkvliet had no other objections.

Mr. Hallem said the findings are used to support the Conclusions of Law.

Ms. Best had no comments regarding the proposed Findings of Fact, Conclusions of Law and Final Decision.

Motion by Freeman, seconded by Bjork, to adopt the Water Management Board Rulings with the change in paragraph A adding "and/or for" to the fourth line. Motion carried.

Motion by Freeman, seconded by Bjork, to adopt the Declaratory Ruling, as amended. Motion carried.

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

Well Interference Qualification

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

Well Construction Rule Qualification No. 1

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

Well Construction Rule Qualification No. 2

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

Irrigation Water Use Questionnaire Qualification

This permit is approved subject to the irrigation water use questionnaire being submitted each year.

Low Flow Qualification

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

UNOPPOSED NEW WATER PERMITS ISSUED BY THE CHIEF ENGINEER WITHOUT A HEARING BEFORE THE BOARD: See attachment.

WATER PERMIT APPLICATION NO. 2629-2, FALL RIVER WATER USER DISTRICT:
Chairman Hoyt opened the hearing at 1:55 p.m.

Diane Best, Assistant Attorney General, represented the Department of Environment and Natural Resources.

Michael Hickey, attorney from Rapid City, represented the Fall River Water User District.

Intervenors, Brenda Gamache and George Sample, appeared pro se.

Ms. Best offered DENR Exhibit 8, a resolution signed by Robert Peplinsik, chairman of the Southern Black Hills Water System, Inc. in support of the Fall River Water District application. The exhibit was admitted into the record.

Ms. Best noted that prior to the hearing the board was provided with Ken Buhler's report, the chief engineer's recommendation, the petitions to intervene, DENR Exhibit 8, the revised report, the chief engineer's revised recommendation, and the notice of application.

The chief engineer recommended approval of the application, with the following qualifications:

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2629-2 is issued for a 20-year term. Pursuant to SDCL 46-2A-21, the 20-year term may be deleted at any time during the 20-year period or following its expiration. If the 20-year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 2629-2 may also be cancelled for nonconstruction, forfeiture, abandonment, or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1 and ARSD 74:02:01:37.
2. 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.
3. The well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.
4. Fall River Water Users District shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Aquifer.

Water Permit Application No. 2629-2 proposes to construct works and place to beneficial use 724 acre-feet of water annually at a maximum diversion rate of 1.0 cubic feet of water per

second from one well that is to be completed into the Madison aquifer (approximately 2,200 feet deep). A portion of the water (350 acre-feet annually) was appropriated and reserved by Future Use Permit Nos. 2560-2, 2560A-2 and 2560B-2. The water will be used to supply the Fall River Water Users District which serves users in Fall River and Custer Counties.

Ms. Best offered DENR Exhibit 1, Ken Buhler's vita; DENR Exhibit 2, the agency file; DENR Exhibit 3, a map of the area; DENR Exhibit 4, cross-section ; and DENR Exhibit 5, stratigraphic section.

The exhibits were admitted into the record.

Ms. Best called Ken Buhler who had previously been administered the oath. Mr. Buhler presented his report on the application. A transcript of Mr. Buhler's presentation was prepared and is filed with the Water Management Board meeting minutes in the DENR Water Rights Program.

Mr. Hickey called Dave Dunbar, chairman of the Fall River Water User District. Mr. Dunbar was administered the oath by Chairman Hoyt.

Mr. Dunbar testified that the Fall River Water User District was established in the early 1990s and were operation in 2000. The district services approximately 300 meters, which include farms, ranches, and rural residences in eastern Fall River County. The district currently purchases all of its water from the city of Hot Springs. Because the district is expanding, a larger source of water at a more economical cost is needed.

Mr. Dunbar noted that the petition indicated that the Fall River Water User District did not provide water for planes at the airport for the Alabaugh fire in 2007. Mr. Dunbar said the district did provide water at the airport. The district was able to provide 50 gpm, however, that was not enough to fill the tankers fast enough. Since that time, the district has worked with the local fire department to set up a program where the district can fill the brush trucks at flush hydrants throughout the district. Mr. Dunbar noted that rural water systems are not designed for fire protection.

Regarding the new well, Mr. Dunbar testified that the well driller hit the Madison aquifer at 2834 feet and went out at 3150 feet. There is a static level of about 100 feet from top to ground on the fluid in the well now. He discussed the current status of the well.

Responding to questions from Ms. Best, Mr. Dunbar stated that there are currently approximately 300 meters for rural customers on the system, including providing bulk water the town of Olerichs. It will cost approximately \$1,000,000 to drill a new well. The district's contract with the city of Hot Springs expires in approximately 14 years. The district pays 80% of the city's standard rate for water. The district plans to keep the city contract as a backup.

Responding to questions from Ms. Sample, Mr. Dunbar stated that the well being drilled southeast of Buffalo Gap will serve customers east of Buffalo Gap and a few customers in Custer County. There are no plans to go north to Fairburn and Hermosa. The water will be treated at

the well site. The district's previous water manager resigned in January 2009. The district has hired a new water manager, who will become certified in the near future. There are currently people who have paid in to an upgrade fund.

Responding to questions from Ms. Gamache, Mr. Dunbar stated that the district has not completed a study of the cone of depression, because the district relied on DENR to complete the study. Mr. Dunbar said the district was aware of the old oil refinery. When the original line was run from Hot Springs, the district had to put in steel pipe and change the route of the line because of the old refinery. The area the district bought was not affected by the old oil refinery.

Responding to questions from Mr. Hutmacher, Mr. Dunbar stated that the district intends to keep its cross-connect into Hot Springs.

Ms. Gamache said she has an article from the newspaper stating that the mayor of Hot Springs has said the city does not have the storage capacity or the pumping capacity to be an emergency for the Fall River Water User District.

Mr. Hickey called Alan Foster, FMG Engineering, who was administered the oath by Chairman Hoyt. Mr. Foster testified that he is the consulting engineer for the Fall River Water User District. He explained how a well is drilled, and he stated that the district would be capable of providing temporary water service to the area if there were a disruption in service due to the drilling of the well. Mr. Foster also discussed how the water will be chlorinated.

Responding questions from Ms. Sample, Mr. Foster stated that the chlorine treatment will be in liquid form. There are no plans to construct a large water tower on the site, but there may be a small underground storage tank.

Responding to questions from Ms. Gamache, Mr. Foster stated that he does not have the capability of determining the cone of depression coming into the well. Mr. Foster did not take core samples around the site to determine whether there is oil contamination from the old refinery.

Georgia Sample was administered the oath. She offered Petitioner Exhibit 1, a letter from Laura Inman to DENR; Petitioner Exhibit 2, diagram of the area; Petitioner Exhibit 3, letter dated March 8, 2004, from Wayne Hageman, Dakota Hills Realty and a letter dated November 21, 2001 and a report from URS Operating Services; Petitioner Exhibit 4, Wellhead protection area delineation criteria; Petitioner Exhibit 5, portions of a statute, Petitioner Exhibit 5.2, copy of SDCL 46A-1-8; Petitioner Exhibit 6, Endangered species reference - Spiny Softshell turtle; and Petitioner Exhibit 7, a newspaper article from Hot Springs Star.

Ms. Best objected to Petitioner Exhibits 4, 5, and 6.

Mr. Hickey objected to Petitioner Exhibits 1, 3, 4, 5, 5.2, 6, and 7.

Chairman Hoyt admitted Petitioner Exhibits 1, 2, 3, 4, 5.2, and 7 into the record.

Ms. Sample testified that the original meeting of all of the petitioners was due to the concerns of the possible chlorination in that area, reducing the water flow from the Fall River and also the background of the Fall River Water User District. The original group was very concerned about the proposed use, the storage, whether there was going to be a pressure tower, and chlorination on the site. The petitioners are concerned about the surrounding contamination.

Referring to Petitioner Exhibit 2, Ms. Sample stated that the Heidabrink's septic tank is to the right of their home. The Doffing septic tank is located just below the building, and Ms. Sample's septic tank is located to the left of the well site. There are three septic systems within 500 feet or less of the well site. Regarding the public interest, there is a big concern that the river has been pulled down already by water usage. The river used to be much higher. At the Gamache's property, the river is six to eight feet below where it used to be. Ms. Sample said she is aware of a well that was offered to the Fall River Water User District. The well has already been drilled and tested, but the district refused to accept the well. The petitioners are also concerned about who is responsible for the delineation method for the cone of depression. Petitioners are concerned about whether the city of Hot Springs will be used as the district's emergency backup, and whether the district has a certified water manager.

Ms. Sample stated that she and Mr. Doffing used to own the property together, and now the property has been split and Mr. Doffing owns the property immediately to the west of the well site.

Ms. Sample said she is concerned that the people who currently get water from wells around the area are not going to be able to continue to get water from their wells. She is also concerned about the financial situation of the Fall River Water User District.

Ms. Sample discussed URS Operating Services report.

Responding to questions from Ms. Best, Ms. Sample stated that the well that she and Mr. Doffing share is 50 feet deep. Ms. Sample is not a customer of the Fall River Water User District.

Responding to questions from Mr. Hickey, Ms. Sample described her interpretation of the cone of depression.

Ms. Sample called Douglas Doffing, who was administered the oath by Chairman Hoyt.

Mr. Doffing testified that he is concerned about losing water in his well.

Brenda Gamache was administered the oath by Chairman Hoyt.

She called on Mr. Buhler to testify again. A transcript of Mr. Buhler's testimony was prepared and is filed with the Water Management Board meeting minutes in the DENR Water Rights Program.

Ms. Best offered DENR Exhibit 6, Water Rights' Observation Well FR-95A and FR-95B. The exhibit was admitted into the record.

Ms. Gamache testified that she is concerned about whether the board will place any requirements on the Fall River Water User District, such as requiring an Environmental Impact Statement.

Chairman Hoyt stated that is not a recommendation of the chief engineer at this time nor has it been the board's practice to require an Environmental Impact Statement. However, the Water Management Board is not the only board that might interface with a situation, were there ground water pollution, for instance or other circumstances, so there is a body of protection that is broader than the Water Management Board's previous.

Ms. Best called Garland Erbele who had previously been administered the oath. Mr. Erbele testified that he is the chief engineer with the DENR Water Rights Program and prior to that he worked for 21 years in the DENR Drinking Water Program. Mr. Erbele stated that he is familiar with the drinking water operator certification requirements. Certification is based on the complexity of the system. A system like Fall River Water User District will require a Class I water distribution system certification because they serve less than 1500 people. At the point the district develops its own source and puts in the chlorination system, they will be required to get a Class I water treatment certification. Within the certification statutes, there is a provision that a system has up to one year to get a certified operator from the point of hiring. Mr. Erbele stated that none of the testimony offered at today's hearing changes his recommendation of approval for this permit.

Following closing statements by the parties, Chairman Hoyt requested board action.

A transcript of the board discussion and board action was prepared and is filed with the Water Management Board meeting minutes in the DENR Water Rights Program.

Motion by Freeman, seconded by Hutmacher, to approve Water Permit Application No. 2629-2, Fall River Water User District, subject to the qualifications set forth by the chief engineer.

Amended motion by Bjork, seconded by Hoyt, to add a qualification No. 5 stating that the permit holder shall control withdrawals from the well so there is no significant adverse effect on water from Beaver Creek Springs, Cascade Springs, Fall River Springs, or adverse change in the water quality and character in these springs. The motion failed with Bjork and Hoyt voting aye and Freeman and Hutmacher voting no.

The original motion to approve the permit application failed with Freeman and Hutmacher voting aye and Bjork and Hoyt voting no.

Motion by Freeman, seconded by Bjork, to approve Water Permit Application No. 2629-2, Fall River Water User District, subject to the qualifications set forth by the chief engineer with the following addition to qualification No. 2:

The well approved under this permit will be located near domestic wells and other wells, as well as Cascade Springs, Beaver Creek Springs, Minnekahta Springs, Evans Plunge Springs, and Hot Springs 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 and the above springs.

The motion carried unanimously.

Mr. Hickey will prepare the Findings of Fact, Conclusions of Law, and Final Decision.

Chairman Hoyt declared the hearing concluded at 5:45 p.m.

Chairman Hoyt declared a recess until the following day.

MARCH 12, 2009

Chairman Hoyt called the meeting to order. A quorum was present.

INFORMATIONAL BRIEFING ON WATER QUALITY CERTIFICATION PROCESS:

Jeanne Goodman, Surface Water Quality Program, provided information on the water quality certification process, which is provided for in Section 401 of the Clean Water Act. The purpose of the briefing was to prepare the board for a potential hearing on water quality certification.

Following her presentation, Ms. Goodman answered questions from the board.

WATER PERMIT APPLICATION NO. 7079-3, RICHARD VENDRIG: Ms. Best reported that Arvid Swanson, on behalf of his clients Vern and Carole Waldow and Richard Rolsma, filed a petition to intervene. On March 9, 2009, the petitioners submitted a letter stating that they did not intend to appear at the hearing, but they remain concerned as to whether there are old domestic well sites at or near the proposed dairy and lagoon site.

Ms. Best offered DENR Exhibit 1, the agency file; DENR Exhibit 2, Jim Goodman's vita; and DENR Exhibit 3, the March 9, 2009, submitted by the petitioners. The exhibits were admitted into the record.

Mr. Hallem noted that prior to the hearing the board received Mr. Goodman's report, the chief engineer's recommendation, January 20, 2009, letter from Arvid Swanson, January 20, 2009, letter from Ralph Christensen, the notice of hearing, and affidavit of publication.

Jim Goodman presented his report. Application No. 7079-3 proposes to appropriate 0.444 cfs (200 gpm) from four wells approximately 336 feet deep located in northeastern Kingsbury County. The water is for use in a dairy operation.

The Howard aquifer is a buried outwash (sand and gravel) that is under artesian conditions at this site. The aquifer underlies 835 square miles and contains an estimated 3.0 million acre-feet of

water in storage in Brookings and Kingsbury Counties. No reliable estimate for recharge is available; however it is assumed that rate to be very small because recharge would be primarily leakage through the overlying till. The direction of ground water movement appears to be from northwest to southeast in the area of this application.

A test well constructed by the applicant indicates gravel from 286 feet to 336 feet below land surface. This test well had a water level of 108 feet below and surface and reportedly water capable of producing 150 gpm using air to develop. This test well appears to have been constructed in accordance with SD Well Construction Standards.

The Water Rights Program monitors two observation wells LK-81A, located about 24 miles south of this application, and BG-2000A, located about 19 miles southeast of this application, completed into the Howard aquifer. Hydrographs for these two wells are included with Mr. Goodman's report. Neither of these wells is near enough to the location of this application to show any potential affects, but do exhibit the general characteristics of the aquifer.

The nearest existing Water Rights are Nos. 5465-3 and 5465A-3 (two wells, 0.56 cfs). These are for Lake Preston and Brandon Karban and are located about 10 miles southwest of this application. At this distance interference is not a concern. The pumping rates are relatively small and drawdown is not expected to be significant. The town of Badger holds Water Right No. 3073-3 (one well, 30 gpm). The town is approximately 2 ½ miles from this application.

Mr. Goodman concluded that water is available from the Howard aquifer. The aquifer is under artesian conditions at this site. Drawdown will occur as a result of pumping but interference is not a concern. The wells authorized by this application must be constructed in accordance with SD Well Construction Standards. The water quality from the Howard aquifer can be expected to be relatively high in sulfates, iron, manganese and total dissolved solids. At this time, plans and specifications for this facility have not been submitted to the Department for review.

The chief engineer recommended approval of the application with the Well Interference Qualification, Well Construction Rule Qualification No. 2, and the following qualifications:

1. Permit No. 7079-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-112 for concentrated animal feeding operations.
2. Permit No. 7079-3 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,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

Mr. Goodman addressed the concerns raised in the January 20, 2009 and March 9, 2009, letters submitted by the petitioners.

Richard Vendrig was administered the oath by Chairman Hoyt.

Mr. Vendrig testified that he intends to build the dairy operation in the middle of 320 acres. The lagoons will be sloped to the southwest. This will be a zero contained facility, which means nothing wasted. The manure will be treated and used in an organic farming operation. Mr. Vendrig said the plans and specifications were completed, but are being changed due to opposition to the project.

John Kaiser, well driller, was administered the oath by Chairman Hoyt.

Mr. Kaiser testified regarding the test well. He also stated that there are a number of wells in the area that are open and not being used.

Chairman Hoyt requested board action.

Motion by Freeman, seconded by Hutmacher, to approve Water Permit Application No. 7079-3, Richard Vendrig, subject to the qualifications set forth by the chief engineer. Motion carried.

Ms. Best stated that under board rule, the individuals that filed the petition in opposition have waived their rights to Findings of Fact and Conclusions of Law because they did not appear at the hearing.

FLOOD CONTROL PERMIT APPLICATION NO FC-34, UPPER MINNESOTA RIVER WATERSHED DISTRICT: Chairman Hoyt opened the hearing at 11:00 a.m.

Diane Best, Assistant Attorney General, represented the Department of Environment and Natural Resources.

Gary Leistico, attorney from St. Cloud, MN, represented the Upper Minnesota River Watershed District.

Ms. Best stated that Otter Tail Power Company, on January 30, 2009, filed a petition to intervene in order to gain additional information and to protect their existing water rights. In a letter dated March 3, 2009, Otter Tail Power Company stating that they do not intend to appear at the hearing.

Ms. Best offered DENR Exhibit 8, the March 3, 2009, letter from Otter Tail Power Company.

Ms. Best noted that the state of Minnesota is participating in the planning process for this project. Suzanne Jiwani with the state of Minnesota was in attendance at the hearing. Ms. Best noted that the state of Minnesota is not a party in these proceedings, however, the state did file a letter in support of the permit application.

Ms. Best offered DENR Exhibit 7, March 9, 2009, letter in support of the application submitted by the Minnesota Department of Natural Resources.

Ms. Best offered DENR Exhibit 1, Mike DeFea's vita; DENR Exhibit 2, the agency file; DENR Exhibit 3, an area map; DENR Exhibit 4, a map of the flood control project area; DENR Exhibit 5, a map of the downstream area; and DENR Exhibits 6A and 6B, photographs of the existing flood control structures.

DENR's exhibits were admitted into the record.

Jeff Hallem noted that prior to the hearing the board received the report on the application, the chief engineer's recommendation, the January 30, 2009, letter from Otter Tail Power Company, the public notice, and affidavits of publication.

Ms. Best said page 7 of Mr. DeFea's report contains the two statutes that define the conditions and requirements of when a flood control permit may be issued:

SDCL 46-2A11 "Flood control works - When permit may be issued. A permit for flood control works may be issued only if the project will reduce the damage from flooding or erosion in the area proposed to be benefited, the project will not increase the likelihood or the severity of flood damages in areas other than the project area or the area proposed to be benefited, the project will not endanger human life or property and the project will not impair existing water rights, except to the extent such rights are extinguished or compensated through agreement or exercise of the power of eminent domain."

SDCL 46-5-47 "Flood control-Permit required. No person may construct facilities on any watercourse to control floods for the purpose of preventing or alleviating damage without a permit issued pursuant to the procedure contained in chapter 46-2A. The permit may be approved subject to conditions deemed necessary, including, but not limited to, conditions to safeguard water supplies for existing water permits and licenses, to assure the safety of works and to prevent damage to property. No person may construct works in a manner not approved in the permit for those works. This section applies only to watercourses whose flow exceeds that of a dry-draw as defined in subdivision 46-1-6 establishes the criteria for a decision on the approval of the flood control permit."

The chief engineer recommended approval of the flood control permit with the following qualifications:

1. The Permit Holder shall be required to take the following measures to negate the potential 0.4-foot increase in Big Stone Lake.
 - Normal summer operating pool elevation of 968.0-feet, Project Datum (PD), on Big Stone Lake shall be reduced by 0.2-feet from the 968.0 PD summer pool elevation to 967.8-feet PD, corresponding to 966.2-feet, North American Vertical Datum 1988

(NAVD 1988), through the use of the UMRWD's gate operation to offset the increased flood risk.

- The permit holder will use information from the National Weather Service (NWS), North Central River Forecast Center, including the new U.S. Geological Survey Gage at Peever, SD in the development of an advanced flood forecast for the Upper Minnesota River.
 - The permit holder will use NWS hydrologic and hydraulic models of the (entire) drainage area upstream of Big Stone Lake (including the major tributaries of the Whetstone River and the Little Minnesota River), as well as NWS provided elevation forecasts for Big Stone Lake, using antecedent conditions including snow pack and soil moisture. These forecasts include probable rainfall within the drainage area (Quantitative Precipitation Forecasts). Inputs and observations made by the Upper Minnesota River Watershed District (UMRWD), working cooperatively with the NWS, will be used to refine the forecast results.
 - The permit holder will adjust gate operation based on these forecasts in advance of a potential flood event on Big Stone Lake to lower the lake elevation by 0.2-feet in anticipation of a flood event.
 - In the event there is sufficient flow in the Little Minnesota River to cause flood waters to enter the floodway and bypass the City of Browns Valley returning water to the Little Minnesota River, the permit holder shall notify the SD DENR Water Rights Program of actions taken to negate the effects of the additional water in Big Stone Lake. The reported information shall consist of daily data including date(s), time(s) of adjusted gate operation, gaged river inflow reading(s) in cfs, gate(s) opening height(s), 24-hour precipitation, and any additional information or comments the permit holder feels necessary (i.e., ice jams, open water etc...).
2. The Permit Holder is responsible for operation and maintenance of the flood control works.
 3. Flood Control Permit No. FC-34 is subject to securing easements and /or land acquisitions in areas where construction activities will take place.
 4. The Water Management Board will retain jurisdiction of Permit No. FC-34 in the event conditions change that would affect the permit qualifications such as completion of the proposed Whetstone River diversion project, which is in its planning stages.

Mike DeFea was administered the oath by Chairman Hoyt. He presented his report on the application.

Flood Control Permit Application No. FC-34, Upper Minnesota River Watershed District (UMRWD) is proposing a flood mitigation project to provide protection from the 100-year flood event for the city of Browns Valley, Minnesota. The applicant has applied for a flood control

permit submitted for the city of Browns Valley Flood Mitigation Project (BVFMP). The applicant proposes to construct a diversion dam and inlet structure located in Roberts County, and a floodway, located primarily in South Dakota, designed to divert Little Minnesota River flood flows around Browns Valley and return flood flow to the Little Minnesota River downstream of Browns Valley. As the floodway is considered a passive system, not all flood flow will enter the floodway. A portion of the flow will remain in the Little Minnesota River channel through Browns Valley maintaining aquatic life flows but will not allow historic breakout flood flows to Lake Traverse due to the location of the diversion dam. Downstream from the city of Browns Valley, the Little Minnesota River flows in a southeasterly direction into Big Stone Lake. At the outlet of Big Stone Lake, surface water elevations are controlled by a gated control dam and a silt barrier.

The inlet structure and diversion dam are to be located approximately one mile west of the City of Browns Valley. The inlet structure provides a connection between the Little Minnesota River and the floodway channel at the point of diversion.

Modeling of the proposed project was completed by Houston Engineering, Inc. The modeling showed that there was a 0.4 feet increase in elevation around Big Stone Lake because of this project. This increase in elevation needs to be mitigated or negated in order to meet the criteria established by SDCL 46-2A-11 for a decision on the approval of a flood control permit. Although this number appears to be somewhat conservative, this is the best information available.

One measure to negate the effects of the 0.4 feet increase is to require the applicant to lower the lake level 0.2 feet in anticipation of flood waters reaching the lake since there is approximately a three day lag from the time water passes the gage until it reaches Big Stone Lake. Otter Tail Power Company has the only water right on the lake. The water right is time of year and elevation dependent. The lake is operated one foot above the elevation where Otter Tail can use their maximum diversion for the plant.

Another measure is to require an operational reduction in the summer time surface pool elevation by the applicant through management of the Big Stone Lake gates by 0.2 feet. The power company supports this measure.

The applicant will use the National Weather Service hydrologic and hydraulic models of the drainage area upstream of Big Stone Lake.

Mr. DeFea stated that a third measure would be the future development of a flood control project to reroute a portion of the Whetstone River, which now flows into Big Stone Lake back to its original channel downstream from Big Stone Lake. This project would require future permitting, but may allow other mitigation measures to no longer be needed.

Mr. DeFea's conclusions are as follows:

1. Flood Control Application No. FC-34, Upper Minnesota River Watershed District and the City of Browns Valley, are proposing a flood mitigation project to provide protection

from the 1% chance (i.e. 100-year) flood. The project consists of an inlet structure, diversion dam and floodway to convey waters from the Little Minnesota River around the City of Browns Valley, MN.

2. Analysis for the project found in the Engineer's Report demonstrates that the proposed BVFMP will reduce flood damages in Browns Valley. Maps supporting the documentation included with the Engineers Report show the 1% Chance Annual Flood (i.e., 100-year flood event) associated with implementation of the Little Minnesota River Floodway. These maps show the City of Browns Valley is effectively protected from the 1% chance flood on the Little Minnesota River by implementing the Little Minnesota River Floodway.
3. An initial dam safety review has been submitted to the DENR by the UMRWD. Plans and specifications have been reviewed and have been approved by Water Rights staff.
4. Analysis showed no increase in inundation duration of the agricultural fields for the 5-year event at either assessment location, and also no increase at one of the two assessment locations for the 10-year event. The estimated duration of inundation for assessment location in the 10-year event increases by 0.25 days (from 14.50 to 14.75 days). These results demonstrate a lack of additional flood risk to agricultural lands downstream from the outlet of the Little Minnesota River Floodway.
5. To address the impacts of the Highway 75/Minnesota Valley National Wildlife Refuge, the applicant provides simulated data which shows that the effects within the Big Stone Refuge upstream from the Highway 75 dam are quite small (a few hundredths of a foot). There are no structures within the refuge.
6. The modeling shows an increase of 0.4-feet for the 1993 flood event with the breakout flood flows which normally would have flowed to Lake Traverse are now being diverted downstream to Big Stone Lake. Since the 1993 flood event closely approximates a 1% event, and is the only (post USACE Traverse project) summer flood with breakout flow to Lake Traverse, this event is assumed to determine the surcharge on Big Stone Lake. This breakout volume resulting in a 0.4-foot increase to Big Stone Lake should be mitigated or negated. It should also be noted that the 1993 flood event resulted in less than a 1% chance elevation on Big Stone Lake.
7. One proposed measure to negate the projected 0.4-foot increase would be to use early flood forecasting utilizing information from the NWS, North Central River Forecast Center, including the new USGS stream gaging station on the Little Minnesota River near Peever in the development of an advanced flood forecast. This would allow the applicant to operate the gates to release 0.2-feet of water stored in Big Stone Lake prior to the additional flood waters getting to the lake since there is approximately a three day lag from the time water passes the gage until it reaches Big Stone Lake.

8. A second proposed measure to offset the increase would require an operational reduction of 0.2-feet in the summer time surface pool elevation of Big Stone Lake through management of the Big Stone Lake control gates.

Responding to a question from Mr. Leistico, Mr. DeFea stated that he reviewed the plans and specifications and mitigation material presented by the applicant.

Tim Schaal, Water Rights Program, was administered the oath by Chairman Hoyt.

Mr. Schaal testified regarding that this will be a dry dam most of the time, except during flooding events. The dam is classified and designed as a small size Category 2, Significant Hazard structure. It has this classification, since a dam failure may cause extensive economic loss or flood damage, but no loss of life would be expected. The diversion dam will be 19.5-feet high with a normal storage capacity of zero acre-feet with a reservoir level at the primary spillway elevation. According to Safety of Dams Rules, Chapter 74:02:08, a dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 100-year frequency event. The 100-yr flood event corresponds with 9,300 cfs at the proposed dam site.

Mr. Schaal said the final plans and specifications for the dam were submitted and on February 27, 2009, the Water Rights Program issued an approval letter to the applicant.

Mr. Leistico offered Applicant Exhibits 1, 2, 3, and 4, aerial photos of a flooding event at Browns Valley; Applicant Exhibit 8, forecasting material, and Applicant Exhibit 9, the power point presentation by the engineer for the watershed district. The exhibits were admitted into the record.

Mr. Leistico called Mark Deutschman, Houtson Engineering, who was administered the oath by Chairman Hoyt.

Mr. Deutschman provided a power point presentation (Applicant Exhibit 9) and testified regarding the engineering of the project, the design goals, modeling and alternatives that were considered to address the flooding issues in Browns Valley, and details of the plans for the Little Minnesota River floodway.

There are two primary sources of flooding in the city of Browns Valley; the Little Minnesota River and the Toelle Coulee, a relatively small drainage area to the north of the city. The application addresses the Little Minnesota River flooding.

Water flows into the Red River to the north and water going to the south flows toward Big Stone Lake. Water leaving the lake becomes the headwaters of the Minnesota River, eventually joining up with the Mississippi River south of Minneapolis and St. Paul, MN.

The Lake Traverse dike was built in the 1940s. In 1943, the city of Browns Valley was flooded because there were no culverts to allow the water to flow to Lake Traverse. Culverts were

placed under Highway 28, which do allow some flow to enter Lake Traverse under certain conditions. Those culverts generally limit the quantity of flow to about 1,000 cfs as a maximum.

Mr. Deutschman stated that the 2007 flood is the ultimate reason for this application. He discussed a photograph showing Lake Traverse in the bottom of the photo, Big Stone Lake in the upper part of the photograph. On the right hand side is the Little Minnesota River that comes out of South Dakota. For this flood, there was a relative small amount of water. The peak discharges were estimated around 3,500 cfs. The 100-year discharge on the rivers were around 9,000 – 9,300 cfs. The primary reason Browns Valley was flooded in 2007 is ice and debris formed in the channel of the Little Minnesota River. When that took place it pushed the water out of the channel toward the north. The water flooded the north side of the city and ultimately picked up the Toelle Coulee drainage and flowed down toward Big Stone Lake. Some of the water did flow through the culverts into Lake Traverse. The conditions of flooding change depending on the time of the year. The peak rates are typically higher for summer floods, but the water doesn't necessarily come around the city; it breaks out and goes directly to the lake with little to no flow that occurs to the north through Lake Traverse.

Mr. Deutschman stated that a rather lengthy public process took place when this project was started. Under Minnesota watershed law, the district initiated this project. The district was asked to start this project by the city of Browns Valley and by Traverse County, Minnesota. Through the watershed district law they are required to prepare an engineer's report. As a part of preparing the engineer's report, public hearings were held, a local stakeholder group was formed which included the mayor and many of the city council members, county representatives, state, local, and federal folks. A task force was formed to look at the design goals and to consider the alternatives and make a recommendation on which alternative was best.

Mr. Deutschman said design goals were established early in the process. These design goals are consistent with some of requirements of South Dakota statute for approval of the project. The project was designed for a 1% chance event. Another goal was not to create flooding problems somewhere else.

Mr. Deutschman stated that computer models were used and the models were calibrated to make sure the information obtained from the models was credible. Topographic data was also obtained to develop those models.

Mr. Deutschman stated that the floodway will carry about 8,000 cfs during a 100-year flood event. Some water will continue through the diversion structure through a culvert to the north and through the city, but the amount is limited so it doesn't come out of the banks of the river within the city. A diversion dam will be constructed to raise the water level in the river to help it more efficiently enter the floodway. There will be an inlet to the floodway, which will be a weir. A new bridge across the floodway on Roberts CR 24 is planned near the floodway inlet. Another new bridge across the floodway is planned for Big Stone CSAH 31 just south of the boundary between Big Stone and Traverse Counties. There will be an outlet to the Little Minnesota River downstream of the city.

The diversion dam will be 19.5 feet at its maximum, but most of the diversion dam will be no higher than four to 10 feet. There will be a culvert through the dam that will allow some of the water to continue north into the city of Browns Valley. This will be an earthen embankment with a 12-foot by 5-foot box culvert through the embankment to let the low flows go through. The flood inlet will be a sheet pile weir structure 250 feet across and rocked on both upstream and downstream sides to eliminate erosion and has been sized to pass water necessary into the floodway. This functions as the spillway for the dam. Water will only be in the dam during a flood event.

Mr. Deutschman answered questions from Ms. Best and Chairman Hoyt regarding the modeling.

Mr. Leistico called Dianne Radermacher, administrator of the Upper Minnesota Watershed District, who administered the oath by Chairman Hoyt.

Ms. Radermacher testified that the Corps of Engineers constructed the Big Stone dam and the watershed district was the local sponsor for the project. The project has now been turned over to the watershed district to operate and maintain the structure. The watershed district is also in control of lake level management over Big Stone Lake. Ms. Radermacher personally operates that structure on a day to day basis. Ms. Radermacher uses information provided by the North Central River Forecast Center.

Ms. Radermacher said Applicant Exhibit 8 shows predictions for the Little Minnesota River at the Peever, SD gage. The Peever gage was disconnected in 2000 due to lack of funding. Following the major flood in 2001, the watershed district spent \$15,000 to put the Peever gage back online. There are now precipitation monitors and an emergency alarm system that will notify the city when the river reaches a certain stage.

Ms. Radermacher discussed Applicant Exhibits 1-4, which are photographs of flooding.

Jeff Backer, mayor of Browns Valley, was administered the oath by Chairman Hoyt. He discussed the impact that flooding has had on the city of Browns Valley. He requested approval of the flood control permit.

Suzanne Jiwani, State of Minnesota Department of Natural Resources, was administered the oath by Chairman Hoyt. She testified regarding DENR Exhibit 7, the March 9, 2009, letter to DENR from the Minnesota Department of Natural Resources. Ms. Jiwani said her department has been working with the South Dakota DENR to come to an agreement regarding the flood control aspects of the project and the qualifications of the permit.

The concluded testimony regarding the application. Chairman Hoyt requested board action.

Motion by Hutmacher, seconded by Bjork, to approve Flood Control Permit Application No. FC-34, Upper Minnesota River Watershed District, subject to the qualifications set forth by the chief engineer. Motion carried.

The parties waived Findings of Fact and Conclusions of Law.


Water Management Board
March 11-12, 2009, Meeting Minutes

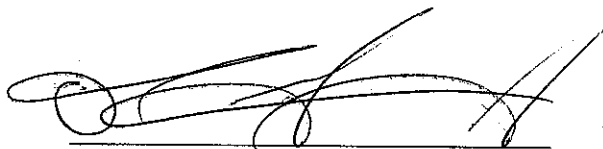
ADJOURN: Chairman Hoyt declared the meeting adjourned at 12:30 p.m.

A court reporter was present for the meeting and a transcript of the proceedings may be obtained by contacting Capital Reporting Services, PO Box 903, Pierre, SD 57501; telephone number 605-224-7611.

The entire meeting was digitally recorded and a copy of the recording may be obtained by contacting the Department of Environment and Natural Resources, 523 East Capitol Avenue, Pierre, SD 57501; telephone number 605-773-3886.

Approved this ___th day of May, 2009.


Vice Chairman, Water Management Board


Secretary, Water Management Board

WATER MANAGEMENT BOARD MEETING

March 11 & 12, 2009

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
1900-1	City of Deadwood	Deadwood	LA	0.10 cfs	municipal	1 well-Deadwood Formation	wi, 2 special
1902-1	Loup Land Development	Spearsfish	LA	0.11 cfs	shd	1 well-Minnekahta Limestone	wi, 1 special
7067-3	Marion Rus	Rock Valley IA	BG	3.11 cfs	268 acres	2 wells-Rutland Aquifer	wi, wcr, iq
7068-3	Marion Rus	Rock Valley IA	BG	3.34 cfs	310 acres	2 wells-Rutland Aquifer	wi, wcr, iq
7070-3	Jerry Kiihl	Castlewood	HM	1.78 cfs	160 acres	2 wells-Big Sioux:Brookings	wi, wcr, iq
7071-3	Jerry Kiihl	Castlewood	HM	1.78 cfs	147 acres	2 wells-Big Sioux:Brookings	wi, wcr, iq
7072-3	Fred Kubal	Scotland	BH	0.056 cfs	stock water	2 wells-Lower James Miss:Scotland	wi, wcr, 2 special
7073-3	Duane J Gaikowski	Waubay	RB	5.13 cfs	359.5 acres	2 wells-Coteau Lakes Aquifer	wi, wcr, iq
7074-3	Calvin Hanson	Meckling	CL	1.78 cfs	161.25 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7075-3	Calvin Hanson	Meckling	CL	1.78 cfs	232 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7076-3	John E Steinbauer	Watertown	CD	0.166 cfs	industrial	1 well-Pleistocene Unknown	wi
7077-3	Lenkota Country Club	Lennox	LN	0.333 cfs	60 acres	1 well-Upper Vermillion:Miss	wi, iq
7078-3	Richard Adee	Bruce	BG	no add'l	83 acres	1 well-Big Sioux:Brookings	wi, iq
7080-3	Bottum Brothers Partnership	Tulare	HD	0.154 cfs	commercial	2 wells-Dakota Aquifer	wi, wcr, 2 special
7081-3	Leon Vanderlei	Springfield	BH	1.89 cfs	140 acres	1 well-Choteau West Aquifer	wi, iq
7082-3	Bottolfson Brothers	Vermillion	CL	1.56 cfs	138 acres	1 well-Lower Vermillion Miss.	wi, wcr, iq
7083-3	Bottolfson Brothers	Vermillion	CL	1.56 cfs	103.5 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7084-3	Cameron Colony	Viborg	TU	0.222 cfs	commercial	2 wells-Turkey Ridge Aquifer	wi, 2 special
7085-3	Dakota Wind LLC	Gary	DU	12 AF	fwp, rec	tributary of Lac qui Parle River	1 special
7086-3	Chuck Donnelly	Elk Point	UN	2.67 cfs	356 acres	1 well-Missouri:Elk Point	wi, wcr, iq
7087-3	Jay A Peterson	LaCosta CA	BG	1.20 cfs	139 acres	1 well-Big Sioux:Brookings	wi, wcr, iq

Future Use Reviews

No.	Name	Address	County	Amount Remaining in Reserve	Use	Source	Qualifications
2472-2	SD Conservancy District	Pierre	GY	24,000 AF	Gregory County Pumped Storage Hydroelectric Project	Missouri River	none

ATTENDANCE SHEET
WATER MANAGEMENT BOARD

Date 3/11/09

<u>NAME (PLEASE PRINT)</u>	<u>MAILING ADDRESS</u>	<u>CITY, STATE & ZIP</u>	<u>ITEM OF INTEREST</u>
Thomas J. Glasse	PO Box 207	Burke, SD 57533	observe
Don Kraus	12249 Aspen Valley Rd	COSIYA, SD 57722	Southern B.H.W.
Talbot Wiczorek	P.O. Box 8048	Rapid City SD	Southern B.H.
John Beard	3420 Corral Dr. Apt. 109	Rapid City, S.D.	Southern B.H.W.
Jay Gilbertson	1323 Airport Av,	Beekings, SD	WQ standards
Dave Templeton		DEAR	Fu-Guyon
Jay A. Larson	P.O. Box 1201 - (Midwest estimate)	Michelle, SD	FRWUD
Tina Weber	PO Box 456 Woonsocket	Woonsocket SD 57385	Wastewater
Kerry Aaker	PO Box 398	Michelle	rules
Michael Hopkins			1735-1
Steve Larson	29089 US Hwy 385	DeSmet SD	FRWUD
Steve Harper	3905 Minnesota Pl	Rapid City SD	FRWUD
Paul Popolo	115 S. Cleveland	Pierre, SD	WQ standards
Nelli Buscher	DEAR	Pierre SD	WQ Standards
Aaron Larson	DEAR	" "	wastewater Protection

ATTENDANCE SHEET
 WATER MANAGEMENT BOARD
 Date 3/11/09

<u>NAME (PLEASE PRINT)</u>	<u>MAILING ADDRESS</u>	<u>CITY, STATE & ZIP</u>	<u>ITEM OF INTEREST</u>
Tim Giasbach	30568 Hwy 385	Delrichs S.D.	FROWD
Jeanne Goodwin	DEAR	Reine	WQS
ALLEN FOSTER	3700 STUBBS ROAD	RAPID CITY, SD	FROWD
GEORGINA Sample	13124 Eagle Rock Rd	Hot Springs SD	FROWD
Dore Doffing	13126 Knee Rock Rd.	Hot Springs S.D.	NO. 2629-2
Brenda Gamache	13024 Fall River Rd	Hot Springs S.D.	NO. 2629-2
Senator Frank Kuncel	2996h 423 Ave	Scotland 57059	All
3-12-09			
Branch Snyder	DEAR	Pierre	WQS
Mike	Richard Jandy	Lak Park	70793
Richard Kendrick	2015th 44923	Badger SD	70793
James Heas	DEAR		
Atty Gary R. Leistico	Rube-Neanen (Upper MURR WSD)	St. Cloud MN	FC-34
Suzanne Jiwani	530 Lafayette Road, St. Paul, MN	55155	FC-34
Dianne Fadermacher	2112nd St. SE, Ortonville, MN	56278	FC-34

ATTENDANCE SHEET
WATER MANAGEMENT BOARD
Date 3-12-09

NAME (PLEASE PRINT)

MAILING ADDRESS

CITY, STATE & ZIP

ITEM OF INTEREST

Curt Powers

Jeff W. Sedwick

Mark Deutchman

134 E Bldwy Box 15

318 E Bldwy

Houston Engineering

Browns Valley

Browns Valley

Maple Grove mn

city FC-34

city FC-34

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