

REPORT ON REQUEST FOR A TEMPORARY PERMIT TO USE PUBLIC WATERS  
MINERAL MOUNTAIN RESOURCES (SD) INC.

September 11, 2018

On August 22, 2018, the SD Department of Environment and Natural Resources – Water Rights Program received an application from Mineral Mountain Resources (SD) Inc. for a Temporary Permit to Use Public Waters for mining exploration drilling. The applicant requests to pump surface water from Rapid Creek from a point located in the NW ¼ of Section 24 T2N-R3E at diversion rate of approximately 200 gallons per minute (0.45 cubic feet of water per second, cfs) with a daily volume of 5,000 to 10,000 gallons per day, with the maximum total usage of 1.8 million gallons for the period August 1, 2018, through December 31, 2018. The proposed mining exploration project is located in western Pennington County near the town of Rochford.

Mineral Mountain Resources (SD) Inc. Temporary Permit Request History

Mineral Mountain Resources (SD) Inc. applied for a temporary permit in April of 2017 for the use of Rapid Creek for testing purposes. The temporary permit was issued for a total of 1.8 million gallons of water at diversion rate of 200 gallons per minute. The permit was issued with qualifications to protect downstream domestic use and senior water right use for the period May 29, 2017, through December 31, 2017. No water was diverted under this temporary permit.

In December 2017, the applicant applied for a temporary permit from Rapid Creek for testing purposes for the 2018 calendar year. The temporary permit was issued for a total of 1.8 million gallons of water at diversion rate of 200 gallons per minute. The permit was issued with qualifications to protect downstream domestic use and senior water right use for the period January 2, 2018, through May 1, 2018.

On April 5, 2018, the applicant applied for a temporary permit from Rapid Creek for testing purposes for the remainder of the 2018 calendar year. The request was for a total of 1.8 million gallons of water at diversion rate of 200 gallons per minute. The Department received an April 17, 2018, resolution from the Pennington County Commissioners requesting the Water Management Board to conduct a public hearing on the issuance of a temporary or permanent permit. The Chief Engineer deferred the decision on the application and placed the issue on the May 2, 2018, Water Management Board agenda for the Board to set a date for their consideration. The Department also received letters from the Cheyenne River Sioux Tribe, the Oglala Sioux Tribe and the Great Plains Tribal Chairmen's Association requesting the Chief Engineer to not renew the temporary permit for Mineral Mountain Resources. Letters were sent to each of these parties informing them of the May 2, 2018, Water Management Board agenda item. This application for the temporary permit was withdrawn by the applicant on April 26, 2018, stating an alternative arrangement for a water supply had been made.

## Review of the Pertinent Codified Law and Administrative Rules

South Dakota Codified Law (SDCL) 46-5-40.1 allows the Water Management Board to promulgate rules authorizing the chief engineer to issue temporary permits for the use of public water for construction, testing, or drilling purposes.

**SDCL 46-5-40.1. Temporary permits for use of public water for construction, testing, or drilling purposes--Term of permit--Qualifications and limitations.** The Water Management Board may promulgate rules to authorize the chief engineer to issue temporary permits for the use of public water for construction, testing, or drilling purposes. No temporary permit is valid after December thirty-one of the year in which the permit is issued. No temporary permit may be issued if the permit interferes with or adversely affects prior appropriations or vested rights. A temporary permit shall contain qualifications and limitations necessary to protect the public interest. The issuance of a temporary permit is permission to use public water on a temporary basis and does not grant any water rights.

The Water Management Board adopted SD Administrative Rules 74:02:01:32, 74:02:01:33, 74:02:01:34, 74:02:01:34.01 and 74:02:01:34.02 with regard to the application, issuance, rescission and appeal of rescission of temporary permits.

**74:02:01:32. Applications for temporary permit -- Telephone requests.** The chief engineer shall furnish application forms for a temporary permit upon request. The applicant shall complete the application form and submit it to the chief engineer. The chief engineer may accept telephone requests for a temporary permit at the chief engineer's discretion.

**74:02:01:33. Information required for temporary permits.** A temporary permit must contain the following information:

- (1) Name and address of the water user;
- (2) Project or projects on which water will be used;
- (3) Source of water;
- (4) Location of the water diversion points;
- (5) Maximum total amount of water to be used (in gallons);
- (6) Maximum daily withdrawal rate (in gallons);
- (7) Date after which water use can begin;

- (8) Date when water use will cease;
- (9) Date of issuance of the permit; and
- (10) Any qualifications thought necessary by the chief engineer.

**74:02:01:34. Chief engineer authorized to issue temporary permits.** The chief engineer may issue temporary permits but may, at the chief engineer's discretion, defer issuance of a temporary permit and present the application to the board for action.

**74:02:01:34.01. Rescission of temporary permits by chief engineer.** The chief engineer may, consistent with SDCL 1-26-29, rescind a temporary permit at any time prior to the expiration date of the permit for one or more of the following reasons, as determined by the chief engineer:

- (1) Water is not available to satisfy existing water permits or rights or domestic uses;
- (2) Water use under a temporary permit adversely affects existing water permits or rights or the public interest;
- (3) The temporary permit holder violates a qualification or limitation of the temporary permit;
- (4) The temporary permit holder abandons use of the temporary permit prior to the expiration date; or
- (5) The temporary permit was issued in error.

**74:02:01:34.02. Appeal of rescission of temporary permit to board.** A holder of a temporary permit rescinded by the chief engineer who wants a review of the chief engineer's decision may appeal to the board. A written request to appeal must be filed with the chief engineer within 10 days after receiving notice that the temporary permit has been rescinded. The chief engineer shall schedule the appeal for consideration by the board and prepare a notice of hearing pursuant to SDCL 1-26-17.

The Water Management Board through the promulgation of the administrative rules has delegated to the chief engineer the authority to issue temporary permits per the requirements laid out in the above statute and administrative rules. However, the chief engineer may defer issuance of a temporary permit and present the application to the Water Management Board for action.

## Review of the Water Source and Existing Water Rights

The source of water for the temporary water use request is Rapid Creek upstream from Pactola Reservoir and upstream from the Castle Creek confluence with Rapid Creek. Rapid Creek drains a large portion of the north central Black Hills east to the Cheyenne River. The Rapid Creek watershed above the Pactola Dam encompasses approximately 320 sq miles consisting of four primary streams, North Fork and South Fork of Rapid Creek, Castle Creek, and Slate Creek. These streams flow into Rapid Creek above Silver City. From Silver City, Rapid Creek flows easterly to Pactola Reservoir. Within this watershed the US Bureau of Reclamation (Reclamation) holds water rights for two large water supply reservoirs, Deerfield Reservoir to impound 15,655 acre-feet located on Castle Creek and Pactola Reservoir to impound 55,972 acre-feet located on the mainstem of Rapid Creek. Reclamation captures natural flows from Castle Creek in Deerfield Reservoir and from Rapid Creek in Pactola Reservoir during the portion of the year when there is no demand for the water downstream, typically October through April of the following year. Water is stored in these two reservoirs to provide supplemental water during times when water use by existing downstream water rights exceeds the natural flows available in the creek (USBOR, 2018).

On Rapid Creek, from the proposed diversion point to Pactola Reservoir, there are two existing water rights appropriating 0.06 cfs. Reclamation holds a water right for an annual fill up to 55,972 acre-feet in Pactola Reservoir. Pactola has received its annual fill for 2018 from Rapid Creek. There are 100 existing water rights/permits appropriating 255.81 cfs authorized to divert from Rapid Creek between Pactola Reservoir and the confluence with the Cheyenne River. Appropriations of water from Rapid Creek exceed natural flow water availability except during wetter climatic conditions. To address this natural flow shortage, Reclamation has in place long term contracts for stored water in Deerfield Reservoir with the Rapid Valley Conservancy District (District) and the City of Rapid City (City) and a contract with the City for storage in Pactola Reservoir. These contracts allow the City, the District, and a few sub-contractors the ability to purchase stored water to supplement Rapid Creek's natural flow during times of higher demand. This purchased water is released to Rapid Creek at the Pactola outlet. Since 1994, the Water Management Board has been only granting new water rights from Rapid Creek under extenuating circumstances (Water Rights, 2018).

## Analysis of the Temporary Permit Request and the Available Water Supply

The applicant has requested to pump surface water from Rapid Creek from a point approximately 13 creek miles upstream from Pactola Reservoir and approximately 7 creek miles upstream of the confluence of Castle Creek with Rapid Creek. The requested diversion rate is approximately 200 gallons per minute (0.45 cfs) with a daily volume of up to 10,000 gallons per day with a maximum total usage of 1.8 million gallons (~5.5 acre-feet). Since the application for the

temporary permit was received the afternoon of August 22 and if the temporary permit had been issued the next day, the total number of days remaining in the year was 131. At a maximum use of 10,000 gallons per day, the total usage would be 1.31 million gallons (~4.0 acre-feet). Under Administrative Rule 74:02:01:34, the chief engineer may issue temporary permits but may, at the chief engineer's discretion, defer issuance of a temporary permit and present the application to the board for action. If this matter is deferred to the Water Management Board to consider at the next scheduled meeting on October 4, the number of days remaining in the year would be 88. The maximum total amount water used would be 880,000 gallons (~2.7 acre-feet).

SDCL 46-5-40.1 allows the issuance of temporary permits for the use of public water with the following conditions:

- May be for construction, testing, or drilling purposes.
- A temporary permit is not valid after December thirty-one of the year in which the permit is issued.
- The temporary permit may not be issued if the permit interferes with or adversely affects prior appropriations or vested rights.
- A temporary permit shall contain qualifications and limitations necessary to protect the public interest.
- The issuance of a temporary permit is permission to use public water on a temporary basis and does not grant any water rights.

An analysis was completed looking at the available water supply and to determine whether a temporary permit could be issued without adversely affecting prior appropriations. Qualifications to protect the prior appropriations were also considered.

The US Bureau of Reclamation maintains an online database of historical reservoir data for Reclamation-owned reservoirs in the United States. Specifically used in the analysis was the historical individual end of month storage data for Pactola Reservoir for the 61 year period from 1956 to 2017 to estimate when natural flow was available or when supplemental water was needed to meet downstream demand (USBOR, 2018).

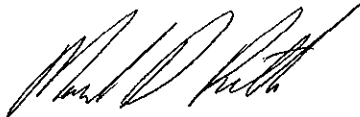
The months of the year with the largest demand by the existing water users from Rapid Creek correspond with the irrigation season of May through September. These are the months when stored water typically is released from the reservoir to supplement natural flows to meet downstream demand. Typically after the first of October water demand from the creek drops off and Reclamation begins refilling the Pactola storage with available unused natural flow water to be available for the next year. In wetter climatic years, runoff into Pactola Reservoir can exceed the amount needed to fill the contracted storage accounts and causes the reservoir storage to start filling the exclusive flood control zone. When this occurs, the standard operating procedure is to evacuate water in the flood control zone as expediently as possible.

Overall, 2018 has been a wet year in the northern Black Hills region and runoff has been sufficient to fill Pactola Reservoir to the top of the conservation pool. Runoff has also been sufficient to meet existing downstream domestic use and water right demands this year without requiring stored water releases from being made from the reservoir to supplement natural flows (USBOR, 2018). Based upon this, existing water rights and domestic uses are being satisfied, and there is water available to meet this temporary water use request for the remainder of this calendar year.

### Recommendation

Based upon projected water availability from Rapid Creek for the remainder of 2018, a temporary permit may be issued to Mineral Mountain Resources (SD) Inc. with the following qualifications:

- Mineral Mountain Resources (SD) Inc. shall notify the Chief Engineer prior to the commencement of pumping from Rapid Creek and the approximate length of time the diversion will be taking place. The amount of water diverted from Rapid Creek shall be metered, the amount recorded and the amount reported monthly to the Chief Engineer.
- Low flows as needed for downstream domestic use, including livestock water and prior rights must be by-passed. Diversions under this temporary permit are subject to senior water rights and any written orders issued by the Chief Engineer.
- Maximum use: 880,000 gallons.



Mark D. Rath  
Natural Resources Engineer III

### References

1. USBOR. 2018. United States Bureau of Reclamation, Great Plains Region.
2. Water Rights. 2018. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.