

# State of Utah

# **DEPARTMENT OF NATURAL RESOURCES Division of Water Rights**

JOEL FERRY
Executive Director

TERESA WILHELMSEN
State Engineer/Division Director

SEP 1 2 2024

#### AMENDED ORDER OF THE STATE ENGINEER

For Application to Appropriate Water Number 92-695 (A83862)

Application to Appropriate Water Number 92-695 (A83862) in the name of Blackstone Minerals NV LLC was filed on July 17, 2023, to appropriate 19 cubic feet per second (cfs) of water from points located: (1) Well - South 797 feet and West 402 feet from the NE Corner of Section 22, T21S, R16E, SLB&M (10-inch well, 8000-9000 feet deep); (2) Well - South 342 feet and West 162 feet from the NE Corner of Section 22, T21S, R16E, SLB&M (10-inch well, 8000-9000 feet deep); (3) Well - South 1169 feet and West 234 feet from the NE Corner of Section 22, T21S, R16E, SLB&M (10-inch well, 8000-9000 feet deep); (4) Well - North 963 feet and West 102 feet from the E½ Corner of Section 27, T21S, R16E, SLB&M (10-inch well, 8000-9000 feet deep); (5) Well - North 1225 feet and East 1028 feet from the S1/4 Corner of Section 22, T21S, R16E, SLB&M (10-inch well, 8000-9000 feet deep); (6) Well - South 1205 feet and West 882 feet from the NE Corner of Section 22, T21S, R16E, SLB&M (10-inch well, 8000-9000 feet deep). The water will be returned at the following points: (1) Return point - North 329 feet and East 1216 feet from the SW Corner of Section 14, T21S, R16E, SLB&M; (2) Return point - South 1481 feet and East 271 feet from the N¼ Corner of Section 22, T21S, R16E, SLB&M; (3) Return point - South 205 feet and East 406 feet from the W1/4 Corner of Section 23, T21S, R16E, SLB&M; (4) Return point - South 1214 feet and East 246 feet from the NW Corner of Section 26, T21S, R16E, SLB&M; (5) Return point - North 150 feet and East 389 feet from the SW Corner of Section 14, T21S, R16E, SLB&M; (6) Return point - South 1193 feet and East 496 feet from the N<sup>1</sup>/<sub>4</sub> Corner of Section 22, T21S, R16E, SLB&M. The water is to be used for the year-round purpose of lithium extraction. The water is to be used in all or portions of Sections 14, 22, 23, 26, & 27, T21S, R16E, SLB&M.

Notice of the application was published in the <u>ETV News</u> on August 16 and 23, 2023 and in <u>The Moab Times-Independent</u> on December 7 and 14, 2023, and protests were received from Holiday River Expeditions, Jeff & Trigg Gerber, Kelly Dunham, Trustee of the Nancy J. Dunham Trust, Gayna Salinas, Living Rivers and the Great Basin Water Network, and the Bureau of Reclamation (BOR). A hearing was held in Green River, Utah on November 14, 2023.

Protestants requested a second hearing but the nature of protests received after the November 14<sup>th</sup> hearing did not deviate significantly from those received and heard on the 14<sup>th</sup> and a second hearing was not held.

A Request for Reconsideration was received on May 21, 2024. The request was granted on June 4, 2024.

The approval criteria for applications to appropriate is contained in Utah Code § 73-3-8(1), which states:

- (1) (a) It shall be the duty of the state engineer to approve an application if there is reason to believe that:
- (i) for an application to appropriate, there is unappropriated water in the proposed source;
- (ii) the proposed use will not impair existing rights or interfere with the more beneficial use of the water;
  - (iii) the proposed plan:
  - (A) is physically and economically feasible, unless the application is filed by the United States Bureau of Reclamation; and
    - (B) would not prove detrimental to the public welfare;
  - (iv) the applicant has the financial ability to complete the proposed works;
  - (v) the application was filed in good faith and not for purposes of speculation or monopoly; ...
  - (b) If the state engineer, because of information in the state engineer's possession obtained either by the state engineer's own investigation or otherwise, has reason to believe that an application will interfere with the water's more beneficial use for irrigation, municipal and industrial, domestic or culinary, stock watering, power or mining development, or manufacturing, or will unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare, the state engineer shall withhold approval or rejection of the application until the state engineer has investigated the matter.
  - (c) If an application does not meet the requirements of this section, it shall be rejected.

The State Engineer has reviewed the application, the information provided in the various submittals prepared in support and in protest of the proposed project, the information provided at the hearing, the written testimony submitted after the hearing, and has conducted additional investigation as directed by statute. The standard by which the State Engineer evaluates applications seeking approval is the "reason to believe standard" outlined in Searle v. Milburn Irrigation Co., 2006 UT 16, 133 P.3d 382.

The proposed project presents some unique circumstances, which has led to significant consideration and study of the issues outlined under the criteria in Utah Code § 73-3-8. The regulation and development of mineral extraction is regulated under State and Federal law. The protestants raise questions related to water availability, impairment of existing water rights, project feasibility, public welfare, and other Colorado River issues.

All of these issues, along with the State Engineer's analysis are summarized and discussed in the following subsections listed by the individual criterion cited in Utah Code § 73-3-8(1).

Some comments in the written protests and at the hearing were directed towards a possible future filing by the applicant for freshwater uses associated with this project. Because the present application is only for the non-consumptive use of brine water for lithium extraction, no analysis or comment will be made regarding issues related to a possible future filing on freshwater. Many

other concerns listed in the protests fall outside the jurisdictional authority of the State Engineer to address.

#### Utah Code § 73-3-8 (1)(a)(i) Unappropriated Water in the Proposed Source

The protestants contend the Colorado River, including all its surface and underground tributaries, is over-allocated and over-appropriated, meaning that there is not sufficient unappropriated water in the proposed source to satisfy this application.

Locally, there are currently no water rights approved to use brine water from the geologic stratum identified at this location in this application. Therefore, it is the opinion of the State Engineer that there is unappropriated brine water available in this source.

More broadly, the Colorado River and its tributaries are managed and operated under compacts, federal laws, court decisions, decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." The applicant has filed for non-consumptive use of brine water to be used for lithium extraction. The protestants contend that similar operations are not fully non-consumptive. In response, the applicant has stated that they will be metering both the extraction and reinjection of the brine product to confirm the process is non-consumptive. The State Engineer has no reason to believe the applicant has misrepresented their intentions to return 100 percent of the brine to subsurface formations. The applicant is cautioned that if this application is not 100 percent non-consumptive, they may face enforcement action resulting in fines for unauthorized use of the water right. Because this application is non-consumptive, there is no depletion and therefore would not be subject to restriction or curtailment under current compacts and agreements.

It is the opinion of the State Engineer that the information reviewed supports a reason to believe that there is currently unappropriated water available for use under this application.

# <u>Utah Code § 73-3-8 (1)(a)(ii) Not Impair Existing Rights or Interfere with the More Beneficial</u> Use of Water

Protestants argue that withdrawing brine water in close proximity to the Green River may draw water from the Green River or the underlying aquifers to which the Green River may be connected which could impair other existing water rights or interfere with the more beneficial use of water. The BOR also questions whether this application would negatively impact the Colorado River Storage Project's water supply. Protestants also question whether this application would impair federal reserved water rights.

As mentioned previously, there are no existing water rights established in this area drawing brine water from the location identified in this application that could be impaired. Although there are a water rights established in the Green River area for the use of groundwater from shallow wells, there is very little actual use of groundwater in the area due to existing water quality issues related to contamination from salts in the Mancos Shale layer underlying much of the region. There are only a few water rights, primarily for agricultural purposes, located on the Green River several miles downstream from the points of diversion identified in this application.

Impairment of existing water rights would only occur if water was in short supply on the Green River and use of the proposed extraction wells caused a drawdown of surface water into the subsurface aquifers and away from downstream users. The applicant submitted a letter from Drummond "Dusty" Earley III, Ph.D., P.G., with D3 Geochemistry, LLC citing a 1982 USGS geologic study<sup>1</sup> and also a 1999 Utah Geological Survey study<sup>2</sup> which provides information that impermeable evaporite (salt) beds, shales, and siltstones, having a total thickness of hundreds of feet, hydraulically confine the deep, brine bearing Paradox clastic beds and separate the Mesozoic and Paleozoic aquifers such that there is no movement of groundwater from one aquifer to the other.

The protestants did not offer any explanation of how this application may interfere with federal reserved water rights and because this application is non-consumptive, the State Engineer is of the opinion that no federal reserved water rights will be impaired by this application.

The State Engineer has reason to believe that using wells to withdraw brine water from a depth of 9,000 feet below the ground surface will not impair existing rights or interfere with a more beneficial use of water or negatively affect the Colorado River Storage Project's water supply.

#### Utah Code § 73-3-8 (1)(a)(iii) Physically and Economically Feasible

Some of the protestants raised concern over the physical and economic feasibility of the proposed project. The protestants' arguments are summarized in two general areas of concern, namely, permitting and economic feasibility.

The Bureau of Land Management (BLM) submitted a letter of concern stating that the applicant has not received approval to conduct any mineral exploration on BLM-managed public lands, and for the two points of return listed in the application, the applicant has not applied for nor received any land use authorization from the BLM. In response to the BLM's concerns, the applicant submitted a letter on October 24, 2023, amending their application by removing the point of diversion located North 963 feet and West 102 feet from the E½ Corner of Section 27, T21S, R16E, SLB&M and also removing the points of rediversion located South 205 feet and East 406 feet from the W½ Corner of Section 23, T21S, R16E, SLB&M; and South 1214 feet and East 246 feet from the NW Corner of Section 26, T21S, R16E, SLB&M. The remaining points of diversion and rediversion are located on private land.

Several concerns were raised by protestants regarding the danger of drilling wells into the Paradox Formation given the high pressures found at depth, specifically related to potential contamination related to leaks, spills or explosions, as well as concerns related to the property's history as an industrial site with existing contamination issues.

<sup>&</sup>lt;sup>1</sup> USGS. (1982), https://pubs.usgs.gov/publication/ofr82107

<sup>&</sup>lt;sup>2</sup> UGS. (1999), https://ugspub.nr.utah.gov/publications/circular/c-99.pdf

The applicant cites a Definitive Feasibility Study (DFS) which contains information that proponents and investors can use to evaluate the viability of the project and whether it is worthwhile to invest more capital in said project. A summary of the DFS³ has a section related to required permitting for this project. It lists many of the required permits including permits from Utah Division of Oil, Gas, and Mining, Utah Division of Air Quality, Utah Division of Water Quality, Grand County, Utah School and Institutional Trust Lands Administration (now Trust Lands Administration), and the BLM. Many of the concerns raised in protest to this application fall under the primary jurisdiction of one of these other entities. The protestants are directed to work with these other entities that have primary jurisdiction and administrative rules governing such activities to address their concerns. No information has been presented by the protestants that conclusively prohibited the applicant from pursuing this project to completion provided they work through the various permitting processes and comply with the regulatory requirements for each agency that has jurisdiction over the different aspects of this project.

The applicant has presented information stating the demand for lithium is strong worldwide. They cite information in the DFS stating that this project proposes producing 13,074 tonnes per annum of high purity Lithium Carbonate over an initial 10-year project life. They also state that historical data for the Paradox Lithium Project area is more robust than many lithium exploration targets due to the long history of oil and gas exploration in the region. The Utah Geological Survey cited a resource estimate for the Paradox Basin reporting there is about 397 million brine tons at 98 ppm lithium, which equates to 205,500 recoverable tons of lithium carbonate equivalent plus byproduct bromine, boron, and iodine.<sup>4</sup> Anson Resources provided a more detailed and updated assessment to the Utah State Legislature in 2023.<sup>5</sup>

Research completed by the State Engineer shows demand for lithium tripled between 2017 and 2022 while global battery demand for clean energy production increased by two-thirds in 2022.6

Anson cites existing infrastructure including a national rail network, interstate road system, gas and electrical power, and access to the Green River as key components in the feasibility of the Green River site.<sup>7</sup>

Based on the information presented by the applicant and research completed by the State Engineer, there is sufficient reason to believe the applicant is aware of the physical and economic challenges associated with this project, believes there is an existing and future demand for the product, and has sufficient knowledge, resources, and technical expertise to advance this project.

<sup>&</sup>lt;sup>3</sup> Anson Resources. (2022), https://wcsecure.weblink.com.au/pdf/ASN/02565661.pdf

<sup>&</sup>lt;sup>4</sup> Utah Geological Survey. (2020),

https://geology.utah.gov/map-pub/survey-notes/energy-news/energy-news-increased-battery-demand-spurs-interest-in-utahs-metallic-resources/

<sup>&</sup>lt;sup>5</sup> Anson Resources. (2023), https://le.utah.gov/interim/2023/pdf/00004804.pdf

<sup>&</sup>lt;sup>6</sup> International Energy Agency. (2023),

https://iea.blob.core.windows.net/assets/afc35261-41b2-47d4-86d6-d5d77fc259be/CriticalMineralsMarketReview20 23.pdf

<sup>&</sup>lt;sup>7</sup> Anson Resources. (2023), <a href="https://wcsecure.weblink.com.au/pdf/ASN/02711031.pdf">https://wcsecure.weblink.com.au/pdf/ASN/02753393.pdf</a>

# Utah Code § 73-3-8 (1)(a)(iv) Financial Ability to Complete the Proposed Works

The application is protested on the grounds that the applicant does not have the financial ability to complete the proposed works.

The applicant provided information stating that they are a wholly-owned subsidiary of Anson Resources, Ltd., a publicly traded Australian company<sup>8</sup> with a current market capitalization of \$180 million AUD. Information from the company's 2023 Annual Report shows that during that financial year the company completed a capital raise of \$50 million to support the development of this project.<sup>9</sup> Anson reported that in September 2023 they had \$31.1 million cash on hand.<sup>10</sup>

The applicant stated that they are working with China-based Sunresin New Materials Company to support the development of the project. Information accessed online from Sunresin's website shows that they are an established company with a broad range of interests and products. They are listed on the Shenzhen Stock Exchange. Sunresin reports that they are a major Direct Lithium Extraction (DLE) sorbent producer with three existing DLE plants, one under construction, and five more under contract to start construction.

The applicant has provided sufficient information to provide a reason to believe that they have the financial ability and expertise to advance this project.

# Utah Code § 73-3-8 (1)(a)(v) Filed in Good Faith, Not for Speculation or Monopoly

The application is protested on whether or not the application was filed in good faith and not for speculation.

It was reported that the applicant through its parent company, Anson, has paid \$2.4 million to purchase approximately 140 acres in the Green River project area with the intent to construct a lithium extraction and production facility. Information online with Grand County and Emery County shows 98.33 acres owned by Blackstone at or around the place of use listed on this application. The purchase also supposedly included 1,251 BLM placer claims. Anson reports that they have started design and engineering studies at the site and are currently carrying out environmental, archaeological and land surveys to re-enter three oil wells to sample the brines at

<sup>&</sup>lt;sup>8</sup> Australian Securities & Investments Commission. (2023), https://connectonline.asic.gov.au/RegistrySearch/faces/landing/SearchRegisters.jspx? adf.ctrl-state=k7xvdmdbr\_4

<sup>&</sup>lt;sup>9</sup> Anson Resources. (2023), <a href="https://wcsecure.weblink.com.au/pdf/ASN/02718370.pdf">https://wcsecure.weblink.com.au/pdf/ASN/02718370.pdf</a>

<sup>&</sup>lt;sup>10</sup> Anson Resources. (2023), https://wcsecure.weblink.com.au/pdf/ASN/02732532.pdf

<sup>11</sup> Sunresin. (2024), https://www.seplite.com/

<sup>12</sup> Sunresin (2024), https://www.seplite.com/company/

<sup>&</sup>lt;sup>13</sup> Sunresin. (2024), <a href="https://www.seplite.com/direct-lithium-extraction/">https://www.seplite.com/direct-lithium-extraction/</a>

<sup>&</sup>lt;sup>14</sup> Grand County. (2024), <a href="http://tax.grandcountyutah.net/grandcountyutah/taxroll/05-0022-0053.pdf">http://tax.grandcountyutah.net/grandcountyutah.net/grandcountyutah/taxroll/05-0022-0053.pdf</a> & <a href="http://tax.grandcountyutah.net/grandcountyutah/taxroll/05-0022-0052.pdf">http://tax.grandcountyutah.net/grandcountyutah/taxroll/05-0022-0053.pdf</a> &

Emery County. (2024), https://emerycounty.com/home/offices/recorder/plat-map/plat-search/

<sup>&</sup>lt;sup>15</sup> Anson Resources. (2023),

https://www.mining-technology.com/news/anson-acquires-land-us/?cf-view

a depth of around 10,000 feet.<sup>16</sup> The applicant has three test well applications submitted to the Division of Oil, Gas, and Mining, one of which has been approved for drilling. The applicant has submitted an Underground Injection Control (UIC) Technical Report for a UIC Class 5 Spent Brine Return well.<sup>17</sup> A report from Anson in March 2023 states that the company expended \$1.1 million on exploration and evaluation costs for the Paradox Lithium Project.<sup>18</sup>

Sufficient information has been submitted by the applicant to show significant effort and investment has been applied to provide a reason to believe the applicant is diligently working towards the construction of this project and the application was filed in good faith.

<u>Utah Code § 73-3-8 (1)(b)(i) Public Welfare / Recreation / Natural Stream Environment</u>

Some of the protestants raise concerns related to public health and safety, possible impacts to recreation and the natural stream environment including concerns related to the Green River Endangered Species protections.

Public health and safety concerns related to well construction, including high pressures at depth, and contamination issues, including water quality issues related to leaks or blowouts, are regulated by the Utah Division of Oil, Gas, and Mining, and the Utah Division of Water Quality.

The applicant states in response to the protestant that they will be completing a National Environmental Policy Act (NEPA) analysis which will analyze and address the full range of potential environmental impacts and apply appropriate mitigation measures to identified environmental concerns. This would include any potential impacts to endangered fish in the Green River.

While the public safety concerns regarding well construction and prevention of contamination due to industrial processes are significant, the State Engineer does not have primary jurisdiction over these issues. There is reason to believe that this project, constructed under the laws, rules and regulations of the appropriate state and federal agencies, which have primary jurisdiction to address the concerns raised by the protestants, will not be detrimental to the public welfare.

Because this application is non-consumptive and is isolated from the Green River, the State Engineer considers it unlikely that this application will cause negative impacts to recreation.

#### Other Concern Raised in Protest - Green River Block Contract

The BOR stated in their protest the concern that this appropriation may require a contract with the United States or State of Utah for water defined under the Green River Block Contract.

 $\underline{https://documents.deq.utah.gov/water-quality/ground-water-protection/underground-injection-control/class-v/DWQ-2023-124900.pdf\ \&$ 

https://documents.deq.utah.gov/water-quality/ground-water-protection/underground-injection-control/class-v/DWQ-2023-124885.pdf

<sup>&</sup>lt;sup>16</sup> Anson Resources. (2024), https://wcsecure.weblink.com.au/pdf/ASN/02769157.pdf

<sup>17</sup> Utah Division of Water Quality. (2023)

<sup>&</sup>lt;sup>18</sup> Anson Resources. (2023), https://wcsecure.weblink.com.au/pdf/ASN/02659869.pdf

The Green River Block Contract<sup>19</sup> referenced by the BOR is a contract entered into in 2019 by the State of Utah and the United States of America, acting through BOR, for use of 447,500 acre-feet with 158,890 acre-feet of depletion from Application to Appropriate A30414d (Water Right Number 41-3479) or its segregated portions. This new Application to Appropriate is not a segregated portion of Water Right Number 41-3479 and therefore the provisions of the Green River Block Contract do not apply.

# Other Concern Raised in Protest - Current Appropriation Policy for Area 92

The application was protested on the concern that the current appropriation policy for Area 92 does not allow for the filing of non-consumptive use applications without restrictions on the volume of water being appropriated. This concern is unwarranted because the current appropriation policy for Area 92 does allow for such a filing.

# Concerns Raised in the Requests for Reconsideration

#### Impairment of Existing Water Rights

Protestants contend that Water Right Numbers 92-156 and 92-639 may experience impairment. Based on an irrigation duty of 6 acre-feet per acre, the volume of water approved for use under these two water rights is 84 acre-feet. It should be noted that Water Right Number 92-156 is approved for use from a surface point of diversion and ditch that no longer exist and which have been abandoned for over five decades. It should also be noted that Water Right Number 92-639 was previously used at a ranch along the Green River known as Ruby Ranch. This ranch has two other water rights, Water Right Numbers 92-39 and 92-655, which cover all of its existing irrigated acreage, meaning Water Right Number 92-639 has not been used for many years. In fact, Water Right Numbers 92-639 has a lapsed change application originally filed in 2004 to move the water right to another location on the Green River. The State Engineer has no reason to believe that this right has been in use since that time.

The other argument for impairment raised in the Request for Reconsideration centered on the flow of water from the applicant's temporary well in March 2024. The justification given relates to impacts from nearby contaminated groundwater sources. By inference, this concern seems to reference the defined Area of Concern related to contamination from a uranium mill which previously occupied this site. Upon filing of the present application, and under the Area of Concern program, automated notices were sent to the last known Department of Energy (DOE) contacts for this site.

The Green River, which is the source of supply for these rights, has an average annual flow of over three million acre-feet past the four points of diversion listed on these rights. It is the opinion of the State Engineer that the volume of brine being sought for appropriation from a

<sup>&</sup>lt;sup>19</sup> Contract for Exchange of Water, Green River Block. (2019), https://www.waterrights.utah.gov/wrinfo/policy/GRB 655executed.pdf

depth of over 9,000 feet below the ground surface will not impact the availability or quality of water available to these two water rights or any of the other water rights along the Green River for that matter.

Numerous regulations are in place with other state and federal agencies that are principally charged with regulation of drilling activities, potential spills from the applicants potential operations and legacy contamination issues. The March 2024 spill event was addressed by the Utah Department of Environmental Quality, Division of Waste Management and Radiation Control, who also discussed the incident with the U.S. Department of Energy, Office of Legacy Management. Both agencies completed independent site investigations and neither found evidence of radioactive contamination related to the incident nor did they find any violation of the Radiation Control Act or associated rules.

Additional regulatory oversight was provided by the Utah Department of Natural Resources, Division of Oil, Gas, and Mining. Staff from the Division of Oil, Gas, and Mining were on site March 7, 2024 to monitor the situation and prepared a notice of violation on March 13, 2024 related to the applicant's drilling activities. The Division of Oil, Gas and Mining continues to oversee activities relating to well drilling on the site.

The State Engineer is of the opinion that there exists sufficient regulatory oversight both at the State and Federal level over activity related to drilling and processing the brine at this site. Any potential issues will fall within the jurisdiction of the respective agencies to address.

# Mineral Lease Agreement and Contract for the Payment of Royalties

Protestants contend that Utah Code may require the applicant to obtain a contract to pay royalties to and obtain a mineral lease from the State of Utah. However, the section of code referenced by the protestants, Utah Code § 73-3-8(3) only makes this requirement mandatory for approval of an application to appropriate if the water being sought under the application is being diverted from a navigable lake or stream within the State.

As previously stated in this decision, the applicant has presented information to show the deep brine layers which are the source for their appropriation are isolated by numerous impermeable evaporite (salt) beds, shales, and siltstones, having a total thickness of hundreds of feet, which hydraulically confine the deep, brine bearing Paradox clastic beds and separate the Mesozoic and Paleozoic aquifers such that there is no movement of groundwater from one aquifer to the other. The State Engineer is of the opinion that the appropriation source, brine at over 9,000 feet deep, does not meet the definition of a "navigable lake or stream of the state" and thus the obligation under Utah Code §73-3-8(3) is not applicable. However, the applicant is cautioned that they are responsible to obtain any required royalty agreements, or leases that may otherwise pertain to this project.

Additionally, related to brine located beneath sovereign lands underlying the Green River, the applicant submitted a declaration from Mr. Gregory Knox, Professional Geologist, stating that it

would take a decade, if ever, before brine within sovereign lands underlying the Green River could be affected by drawdown from the production well proposed for use by the applicant. In the event that evidence shows that drawdown affecting mineral brines beneath sovereign lands is occurring in the future, the applicant stated that they will obtain authorization from the proper state agency at that time.

#### Beneficial Use

Protestants contend that the applicant has not demonstrated that it has the right to "extract and control lithium" and therefore, cannot establish a beneficial use of "Lithium Extraction". The applicant submitted a response to the Request for Reconsideration stating that they have located the proposed extraction wells and associated mineral estate on lands in which they have fee simple ownership and attached recorded warranty deeds conveying the property to Blackstone Minerals NV LLC, without mineral reservation. The State Engineer is of the opinion that the applicant has established a reason to believe they have the right to extract and process lithium at this site.

#### Future Use of Fresh Water

Protestants contend that fresh water from the Green River used in the production process, if commingled with the brine, represents an application to "divert water from navigable lakes or streams". The applicant provided information in their response stating that their process does not commingle surface water with subsurface brines but only with the resin used to extract lithium ions. The applicant also rightly points out that they are extracting minerals from the formations underlying their own fee simple lands not from the waters of the Green River. The State Engineer is of the opinion that the protestants' arguments have no merit in this decision.

#### Non-Consumptive Use of Water

Protestants contend that extraction of deep water brine located at approximately 9,000 feet below the ground surface and reinjection of that same brine at a depth of 6,000 feet below ground does not meet the definition of "non-consumptive" use. In other words, movement of water from one aquifer to another aquifer, according to the protestant's arguments, "depletes" the water because it is not being returned to the same source of supply. The protestant's make the case that this is similar to a trans-basin diversion of water.

The State Engineer disagrees with this interpretation of law on the following points. First, depletion or consumptive use as currently defined by the State Engineer means the "portion of water withdrawn from a surface or groundwater source that is consumed by a particular use and does not return to a natural water source or another body of water". The protestant's use of the term "depletion" is incorrect inasmuch as the water is not consumed and does return to a natural water source or another body of water, in this case, an underground aquifer at a depth of 6,000 feet. To truly be depleted, the water would be consumed and not available for any use. The applicant claims to be able to return the full volume of brine extracted to an underground aquifer. Movement of water from one aquifer to another does not fit the definition of depletion. The water is still present and available for continued appropriation and use.

#### Public Welfare

Protestants contend that the State Engineer should withhold approval of this application so that further investigation can be completed to determine whether or not the proposed undertaking will prove detrimental to the public welfare. Protestant's claim that "no sister agency is tasked with regulating this discreet issue". The applicant rightly points out in their response that the Division of Oil, Gas, and Mining has for decades regulated solution mining from deep subsurface formations, most notably from Intrepid Potash located alongside the Colorado River near Moab. Additionally, the Utah Division of Water Quality under delegated authority from the U.S. Environmental Protection Agency regulates the reinjection of spent brine as part of its Underground Injection Control Program.

Again, the State Engineer is of the opinion there exists sufficient regulatory oversight at both the State and Federal level to deal with any issues that arise from activity related to drilling and processing the brine at this site. Any potential issues will fall within the jurisdiction of the respective agencies to address.

It is the opinion of the State Engineer that this application can be approved without adversely affecting prior rights. The applicant is put on notice that diligence must be shown in pursuing the development of this application which can be demonstrated by the completion of the project as proposed in the application.

It is, therefore, **ORDERED** and Application to Appropriate Water Number 92-695 (A83862) is hereby **APPROVED** subject to prior rights and the following conditions:

- The applicant shall install and maintain measuring and totalizing recording devices to meter all water diverted from all sources pertaining to this application and all water reinjected into the subsurface formations, and shall annually report this data to the Division of Water Rights Water Use Program.
- The point of diversion located North 963 feet and West 102 feet from the E½ Corner of Section 27, T21S, R16E, SLB&M and the points of rediversion located South 205 feet and East 406 feet from the W½ Corner of Section 23, T21S, R16E, SLB&M; and South 1214 feet and East 246 feet from the NW Corner of Section 26, T21S, R16E, SLB&M are removed from this application.

This application is also approved according to the conditions of the current appropriation policy guidelines for the Colorado River Drainage, adopted March 7, 1990.

The applicant is strongly cautioned that other permits may be required before any development of this application can begin and it is the responsibility of the applicant to determine the applicability of and acquisition of such permits. Once all other permits have been acquired, this is your authority to develop the water under the above referenced application which under Utah

Code § 73-3-10 and 73-3-12 must be diligently prosecuted to completion. The water must be put to beneficial use and proof must be filed on or before **May 31, 2031**, or a request for extension of time must be acceptably filed; otherwise the application will be lapsed. This approval is limited to the rights to divert and beneficially use water and does not grant any rights of access to, or use of land or facilities not owned by the applicant.

As noted, this approval is granted subject to prior rights. The applicant shall be liable to mitigate or provide compensation for any impairment of or interference with prior rights as such may be stipulated among parties or decreed by a court of competent jurisdiction.

Proof of beneficial use is evidence to the State Engineer that the water has been fully placed to its intended beneficial use. By law, it must be prepared by a registered engineer or land surveyor, who will certify to the location, uses and extent of your water right.

Upon the submission of proof as required by Utah Code § 73-3-16 for this application, the applicant must identify every source of water used under this application and the amount of water used from that source. The proof must also show the capacity of the sources of supply and demonstrate that each source can provide the water claimed to be diverted under this right as well as all other water rights which may be approved to be diverted from those sources.

Failure on your part to comply with the requirements of the applicable statutes may result in the lapsing of this Application to Appropriate Water.

It is the applicant's responsibility to maintain a current address with this office and to update ownership of their water right. Please notify this office immediately of any change of address or for assistance in updating ownership. Additionally, if ownership of this water right or the property with which it is associated changes, the records of the Division of Water Rights should be updated. For assistance in updating title to the water right please contact the Division at the phone number below.

Your contact with this office, should you need it, is with the Southeastern Regional Office. The telephone number is 435-613-3750.

This Order is subject to the provisions of Utah Admin. Code R655-6-17 of the Division of Water Rights and to Utah Code §§ 63G-4-302, 63G-4-402, and 73-3-14 which provide for filing either a Request for Reconsideration with the State Engineer or for judicial review with the appropriate District Court. A Request for Reconsideration must be filed in writing with the State Engineer within 20 days of the date of this Order. The written request shall be filed in-person, by mail, or electronically. If the request is filed electronically it shall be submitted to: waterrights@utah.gov, which is the authorized general email for the Division. However, a Request for Reconsideration is not a prerequisite to filing for judicial review. A petition for judicial review must be filed within 30 days after the date of this Order or, if a Request for Reconsideration has been filed, within 30 days after the date the Request for Reconsideration is denied. A Request for Reconsideration is considered denied when no action is taken 20 days after the Request is filed.

Dated this 12 day of September, 2024.

Teresa Wilhelmsen, P.E., State Engineer

Mailed a copy of the foregoing Order this 12 day of September 2024 to:

Blackstone Minerals NV LLC 712 Proud Eagle Lane Las Vegas, NV 89144

John Wood (Holiday River Expeditions) 544 E 3900 S SLC, UT 84107

Jeff & Trigg Gerber PO Box 1214 Bowie, TX 76230

John Weisheit c/o Living Rivers and Great Basin Water Network PO Box 466 Moab, UT 84532

Trustee Nancy J. Dunham Trust c/o Kelly Dunham PO Box 451 Green River, UT 84525

Gayna Salinas PO Box 129 Green River, Utah 84525

Bureau of Reclamation 302 East Lakeview Parkway Provo, Utah, 84606-7317

Doralee Cannon, Applications/Records Secretary