State of Utah

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Department of Natural Resources
Division of Forestry, Fire & State Lands

JOEL FERRY
Executive Director

JAMIE BARNES
Director/State Forester

December 24, 2025

Waterleaf Phase 1, LLC
% Lilac Solutions
9350 South 150 East Ste. 710
Sandy, UT 84070

Attn: Steve Morrey, Senior Project Director

Mr. Morrey,

The Operations Application submitted on November 10, 2025, by Waterleaf Phase 1 LLC ("Applicant") for a Direct Lithium Extraction Project ("Project") on Great Salt Lake has been deemed incomplete per the requirements set forth in Utah Administrative Rule R652-21 by the Division of Forestry, Fire and State Lands ("FFSL").

FFSL finds that the Required Showings for the Operations Application (Utah Administrative Rule Subsection R652-21-704) and the Operator Certification of No Negative Impacts (Utah Administrative Rule Subsection R652-21-705) of the proposed commercial operation were not complete. Waterleaf's representations supporting the Project's commercial viability lacked the degree of detail, scalability, and justification to enable FFSL to provide a complete review of the proposed operation. Generally, FFSL finds the submitted application lacks organization - both in substance and form - and does not clearly delineate and or designate the exact location of supporting facts and associated discussion.

Overall, the Operations Application submission did not meet specific requirements of the application form and simultaneously did not provide sufficient analysis of the supporting facts. Significantly, the Applicant failed to provide key internal data that is required, data that had previously been explicitly requested by FFSL, and of which the Applicant agreed with FFSL would be provided within the Operations Application.

A complete application requires that the Applicant provides direct evidence to support the justification of meeting commercial-scale operational requirements for both "No Negative

Impact to Chemistry and Biota of Great Salt Lake" and for supporting commercial viability of the Project. Robust discussion supporting self-certification of no negative impacts and operational expertise should include both the key data and significant supporting analysis within the body of the report. To assist the Applicant to identify and resolve deficiencies, FFSL provides guidance on the most glaring omissions in Attachment 1. FFSL also highlights specific incomplete requirements of the line-items on the Operations Application form in Attachment 2. To further assist in confirming where the Applicant is in the approval process, a list of submittal dates by Applicant is provided in Attachment 3.

Curing the deficiencies with respect to the application will allow FFSL to make an informed decision on the Project, but does not vest any rights or privileges to the Applicant in relation to final approval of the Operations Application or execution of a Royalty Agreement. It is of the utmost importance that an application provides a clear, unquestionable assessment to FFSL that the Project will Not Negatively Impact the Chemistry and Biota of the Great Salt Lake and that the proposed extraction and production of Great Salt Lake elements and minerals will be economically sound for the life of mine. Per Utah Administrative Rule Subsection R652-21-708(4), FFSL requires the identified issues with respect to Operator Certification of No Negative Impact be resubmitted within 45 days for review or the application will be rejected. Per Utah Administrative Rule Subsections R652-21-707 and 709(3)b, Waterleaf shall have 60 days to cure the identified issues with respect to Commercial Viability, or the Applicant's Operations Application may be rejected.

Respectfully,

Ben Stireman

Benjamin Stireman
Deputy Director - Lands & Minerals
(385) 501-9052
bstireman@utah.gov

Attachment 1 - Overall Guidance for Applicant

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FFSL deems the Applicant's Self-Certification of No Negative Impact to Chemistry and Biota of Great Salt Lake to be incomplete with respect to the following key insufficiencies. Incomplete line-items with respect to Section 3, "Evidence supporting Operator Certification of No Negative Impacts" are listed in Attachment 2. FFSL provides this guidance with the goal of assisting the Applicant in submitting a complete and regulatory compliant application for review.

The key insufficiencies for Operator Certification of No Negative Impacts to the Biota or Chemistry of Great Salt Lake identified by FFSL at this time are as follows:

1) Applicant failed to provide a functional Table of Contents for Operations Application. Page numbers do not match either the body of the text or the numerous Appendices. Applicant's failure to follow standard expectations renders a thorough and defensible review of the application nearly impossible.
2) Applicant provides sparse detail and limited discussion of the fundamental requirements necessary for approval of its Operations Application (576 pages). Rather, Applicant generally references the extensive appendices (500 of 576 pages) requiring FFSL to speculate or conjure their justification. Throughout the body of the submitted application, the Applicant failed to consistently provide the "collection date" and the "exact location of said information in any attached documentation or report" as required by the Operations Application form.
3) Applicant failed to provide internal data of geochemical constituent concentrations and instantaneous flow rates at a level to determine the potential for negative impacts of resulting discharge to Great Salt Lake. Applicant solely provides data from the average concentrations and average flow rates of influent and effluent as performed in the feasibility assessment. To calculate ion-specific mass fluxes, it appears that samples integrated over a six-hour collection period are multiplied by weekly discharge value. It is unclear when the samples were collected and what the flow rate was then; it is also unclear if the weekly discharge values are mean values or cumulative flows. This does not adequately characterize the full range of operations at the pilot plant, and does not provide discharge loading estimates that address acute impacts to GSL. Further, these values, when multiplied together and then multiplied again for scaling, decrease variability to such a degree that an evaluation for negative impacts, acute or cumulative, cannot be reliably determined. Previously, internal data from processes within the pilot plant and processed by the on-site laboratory (or off-site laboratories) have been requested by FFSL in person on September 5, 2025 and September 19, 2025, and via email on September 22, 2025. Additionally, this requirement was reiterated by FFSL to

the Applicant in person on November 6, 2025. FFSL requires this data and also requires that any data referred to or used as justification for the Operations Application is provided directly from the Applicant in an easily accessible and tabulated digital format.

4) Applicant does not consider environmental impacts of manganese discharge in terms of impact to the Chemistry and Biota of Great Salt Lake. Applicant solely provides discussion and analysis based on the impacts to human-health. Moreover, the Applicant does not quantify the accumulation of manganese in the lake system nor discuss potential impacts and subsequent mitigation strategies.
5) Applicant does not provide data, analysis, or discussion on the chemistry and source of the proposed groundwater that will be treated with reverse osmosis. Analysis of this groundwater is essential to understand other potential impacts from discharge to Great Salt Lake or the potential for additional waste to be created as a result of the reverse osmosis process. Publicly available data exists on existing groundwater wells within a 20 km radius of the Project that details the quality of potential groundwater sources. While this groundwater resource may exist, it is wholly undocumented in this application. Much work is needed to document sufficient volumes and quality of freshwater.
6) Applicant does not evaluate non-target mineral balance changes that may result from their process with respect to potential impacts to the chemistry of Great Salt Lake.
7) Applicant self-certifies that no avian populations were disrupted yet provides no evidence or supporting documentation.
8) Applicant self-certifies that no process chemicals or contaminants were released into the surrounding environment, yet data indicates that some anomalous metals (Cu, Fe) were released into the environment. Although addressed at the pilot scale in the Final Feasibility Report, there is inadequate discussion within the body of the Operations Application. The mitigation of potentially large amounts of contaminants to be released during ramp-up of the commercial scale facility is not discussed. An understanding of this potential, or at the very least a discussion of mitigation and monitoring strategies, will greatly inform commercial-scale monitoring protocols. As an example, it appears that a large amount of Na from NaOH reagents is discharged to GSL. While the two sources of Na (reagent Na and native GSL Na) may be indistinguishable and unimportant, the masses of materials exchanged highlight the potential for even small amounts of impurities in reagents to have cumulative impacts of minor contaminants in reagents. No assurance of reagent quality is offered.

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Secondly, FFSL deems the Applicant's evidence supporting commercial viability (Utah Administrative Rule Subsections R652-21-700 through R652-21-707) to be incomplete with respect to the following key considerations. Incomplete line-items with respect to Sections 4 and

5 of the Operations Application form are listed in Attachment 2. FFSL provides this guidance with the aim of assisting the Applicant in proffering a complete application for review.

Key insufficiencies with respect to evaluation of commercial viability of the proposed Direct-Lithium-Extraction Project:

1) Applicant does not provide instantaneous flow rates and geochemical data for internal processes during the pilot plant operation. Applicant solely provides summary data for concentrations and flow rates of influent and effluent as performed in the feasibility assessment. This data alone does not provide evidence to a degree of detail that is required to perform an evaluation of the salt budget necessary to quantify losses of non-nominated Great Salt Lake Elements or Minerals. FFSL requests this data, and all data referred to or used as justification for the Operations Application, are provided directly from the Applicant in a tabulated digital format that is easily accessible and are further analysed to the required level of detail.
2) Applicant provides charts in the body of the submitted document, Section 3 of the Operations Application, without sufficiently explaining the contents of the charts. Units used in the charts are not defined and are not standardized units. In the case of process flow diagrams, not all flows are labelled that are used in the graphs, specifically “4313” and “4619.” Applicant does not discuss these values nor explain their relationship to water budget calculations to a sufficient level of detail.
3) Applicant does not provide data or calculations related to the depleted brine waste stream via the “depleted brine clarifier underflow filter press.” It is unclear whether these waste streams were evaluated in the Feasibility phase, and anticipated volumes of waste for this stream are not given in the operations application.
4) Applicant does not sufficiently explain the “$7,000 cost / ton of LCE.” No data is provided that substantiates or frames this cost in terms of the “$35MM” of OPEX. Additionally, FFSL finds it unclear if this is the cost for the first ton to be produced or if this number is averaged or amortized over the life of mine.
5) Applicant does not address or calculate the potential losses to the water budget or salt budget in storage ponds that were not utilized in the pilot scale plant or discussed in the feasibility study.
6) Applicant does not sufficiently describe, discuss, or propose mitigation strategies to account for seasonality and weather events that may affect processing and intake and outfall. The Applicant's claim that it operated during all months is not substantiated as the pilot scale operation had significant struggles in the late winter/early spring. In terms of a viable operation, the pilot plant ran effectively at pilot-scale for a 21-day “performance run” from May 20, 2025 to June 10, 2025. Additionally, the Applicant does not discuss the potential effects of mirabilite precipitation in storage tanks, ponds, or within the commercial plant during the winter months. FFSL finds that, when scaled for commercial

operations, the challenges in the filtration process during pilot phase do not sufficiently address the questions and issues arising based on seasonality.

7) Applicant does not consider, discuss, or propose mitigation plans for commercial-scale plant operations as a result of changes in lake elevation or changes to salinity. The state manages the causeway berm, via modifications to bi-directional flows, to balance south arm (Gilbert Bay) salinity. Additionally, bi-directional flows at the "West Crack" breach in the Union Pacific Railroad (UPRR) causeway, which result in lithium flux between the north and south arms, are not considered in the resource estimate of Great Salt Lake. Instead, the Applicant chose to consider only Gunnison Bay when performing resource estimation, even though Great Salt Lake is managed as one terminal hydrologic system with surface brine connections through the UPRR causeway representing the single largest flux in the system. More than 100 individual estimates of instantaneous lithium fluxes at this breach can be derived from publicly available data from USGS monitoring; in nearly every instance these estimates scale to more than 5,000 Mt/yr LCE, often 1-2 orders of magnitude greater. Consideration of the total GSL lithium resource, as well as impacts to other mineral resources and ecosystems, cannot be reliably determined without accurate understanding of GSL hydrodynamics. Further, the dispersion model, resource model, and the body of the submission by the Applicant do not specifically address nor fully discuss and analyze the potential impacts to non-nominated minerals in both Gunnison and Gilbert Bays.
8) Applicant does not sufficiently describe its established expertise in commercial-scale lithium carbonate precipitation, crystallization, and final processing. The proposed process is generally described in Section 3 of the body of the Operations Application and broadly discussed in a non-GSL specific manner in the White Paper Appendix. However, details on the scaling of this process are not provided to the required level of detail. Additionally, the Applicant does not expound in Section 1.4 of the Operations Application on its direct experience in commercial-scale lithium carbonate precipitation, crystallization, and final processing. The Applicant does not demonstrate or assure that such material will be of sufficient purity to be "battery-grade" material. Demonstrated quality of produced materials directly impacts contracts, prices, and the economic feasibility of the proposed operation.
9) Applicant's claims on lithium recovery rate at commercial scale are inconsistent. At the start of Section 4 in the body of the Operations Application, Applicant proclaims a 11,300-gpm flow rate will result in 5,000 mt/yr LCE. Using Applicant's measured 67 ppm concentration of lithium in north arm brine, FFSL calculations indicate a recovery rate of ~62%. This is at odds with the presentation of data presented that indicated an ~86% recovery rate, and conflicts with the self-imposed KPI of 80% set by Applicant during the pilot plant operations. FFSL requests that this inconsistency be explained to a high degree of scientific certainty.

Attachment 2 - Specific Line-Item Omissions or Non-Compliance with Regulatory Requirements within the Operations Application Form

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The specific list of incomplete requirements submitted in the Operations Application are listed below, and use the following formatting:

Section #. – Corresponding section within the Operations Application.

Page #, Checkbox #. – Subheading indicating which requirement has issue(s).

Italicized text is the specific description of the incomplete requirement.

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Section 3. Evidence supporting Operator Certification of No Negative Impacts for the proposed commercial operation (R652-21-705)

Page 2, Checkbox 3. Provide all data and data analysis related to Biota and Chemistry derived from the Feasibility Assessment.
Incomplete due to improper reference. Appendix K only includes Biota Study. Unclear where the data for Chemistry is contained within the Application. Please revise.

Page 2, Checkbox 4. Revise and submit the information submitted as part of the feasibility assessment, under R317-16-3(4), to reflect the commercial scale of operations and any design changes.
Incomplete due to improper reference. Appendix B does not completely answer this question. There is additional information throughout the report [e.g. parts of Section 3 in the Operations Application] with respect to commercial scaling and design changes. Please revise by providing reference to all commercial scaling and design changes.

Page 2, Checkbox 6. Names of waters where discharge or delivery may occur in latitude and longitude to the fifth decimal place in decimal degrees or to the tenth of a degree in d-m-s notation.
Incomplete. Location data is provided in Universal Transverse Mercator notation (UTM). Although the UTM provided is as precise as the requested information, please provide the locations in decimal degrees or d-m-s and, if desired, include UTM. Please revise.

Page 2, Checkbox 7. List of the sources, volume, and timing of the discharges or deliveries during planned, routine plant Operations.
Incomplete. Data provided is insufficient. Applicant provided incomplete source data [e.g. source of well water for processing, mitigation, etc.]. Applicant provided no information on the volumes and timing of the discharges during planned, routine plant Operations. Please provide

a detailed accounting of waters and chemistries within the plant during routine Operations by expounding upon data not provided in the Feasibility Report.

Section 4. Project Information

Page 2, Checkbox 3. Detailed description of the Operator's plan and operations for extraction including estimated dates when operations may begin and end and the dates withdrawals or discharges may take place.
Incomplete. Information provided is insufficient with respect to dates discharges may take place during plant operations. Please provide a detailed accounting of waters and chemistries within the plant during routine Operations.

Page 2, Checkbox 9. Commercial Plant areal extent (in figure and as a GIS file).
Incomplete. Applicant provided "LYRX files" which format GIS layer data. This is a common mistake in sharing GIS information – please resubmit the data in a shareable format, such as a "Layer Package."

Page 3, Checkbox 1. Access Roads, Improvements, including pumps, intake pipes, outtake pipes and any other infrastructure on sovereign lands and upland (in figure and as separate GIS files e.g. "roads", "pumps", etc.)
Incomplete, see above guidance for Page 2, Check 9. Please follow the instructions with respect to the detail of GIS data requested as well. It is apparent in Appendix E that these files exist.

Page 3, Checkbox 2. Provide and attach all necessary surface use permits, easements, or other authorizations required for Operations from appropriate agencies.
Incomplete. All these necessities are in submission, in negotiation, or in pending review at the time of submission as stated in Section 11 of the Operations Application submitted by the Applicant. Some of these authorization applications are outdated or not provided.

Page 3, Checkbox 3. Completed applications for surface use authorization from DFFSL for the extraction of Great Salt Lake Elements or Minerals with respect to the utilization of Great Salt Lake sovereign lands for evaporation ponds, dikes, pipelines, processing equipment, facilities, roads, or any other improvements or structures requiring surface use or disturbance.
Incomplete. Applicant submitted a previous easement application, dated September 5, 2025, which had previously been rejected on September 22, 2025 without prejudice for incompleteness. Please revise.

Page 3, Checkbox 4. Proof that sufficient Bonding is in place with DFFSL and the Utah Division of Oil, Gas & Mining.
Incomplete with reservations. Unchecked box on the application and statements in Section 8.1 of the Operations Application submitted by Applicant implies that this is pending. Although proof of Bonding is not a requirement for a complete Operations Application, proof of Bonding will be required prior to Royalty Agreement.

Page 3, Checkbox 5. Proof of a reclamation plan negotiated with and approved by DFFSL.
Incomplete. Although a plan is provided, it has not been previously negotiated or approved with DFFSL prior to application submission.

Page 3, Checkbox 11. Provide and attach copies of any easements, permits, approvals, agreements, applications or other documents required for initiation of operations.
Incomplete. Improper reference resulting in error in application. These copies appear to be provided to some level of completeness in Appendix F, although the "Reference Location for the Information" on the application form is incorrect (Same as line item above… Section 3.6). Please revise with precise page numbers of the location within the report.

Page 3, Checkbox 13. A detailed description of any agreements, contracts, options, and other financial arrangements entered into by the Operator and a third-party relating to Operations.
Incomplete. The Applicant indicates throughout the report that various waste streams will need to be disposed of off-site. There is no reference or detail on third-party contracts for this disposal nor an estimation of how many trucks or other transport will be required. Per the Operations Application submitted, 12,700 tons per year (approximately 35 tons per day) will be disposed off-site solely from the eluate neutralization solids. This does not include additional waste solids from "depleted brine solids" or other uncategorized waste.

Section 5. Other Agreements and Self-certifications

Page 4, Checkbox 1. Proof of an executed Cooperative Agreement with other GSL operator(s).
Incomplete with reservations. Although it is not a requirement for a complete Operations Application, an executed Cooperative Agreement will be required prior to issuance and execution of a Royalty Agreement.

Attachment 3 - Key Dates

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October 20, 2024 - Great Salt Lake Feasibility Application submitted to FFSL

November 22, 2024 - Amended Great Salt Lake Feasibility Application submitted to FFSL

December 20, 2024 - FFSL Approval Letter for GSL Feasibility Application with conditions

September 4 and 5, 2025 - Joint Application Meeting per Utah Administrative Rules R652-21-703, at the request of Waterleaf

October 23, 2025 - a Final Feasibility Report - Pilot Plant was submitted to FFSL

November 10, 2025 - an Operations Application was submitted to FFSL

December 24, 2025 - a response to Waterleaf was submitted by FFSL

February 7, 2026 - 45-day revision deadline for “Operator Certification of No Negative Impacts” response from Waterleaf to FFSL

February 22, 2026 - 60-day revision deadline for “Commercial Viability” response from Waterleaf to FFSL