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REPORT

Willow Rock Energy Storage Center (21-AFC-02)

Center for Biological Diversity Data Request Response Set 1

Submitted by:

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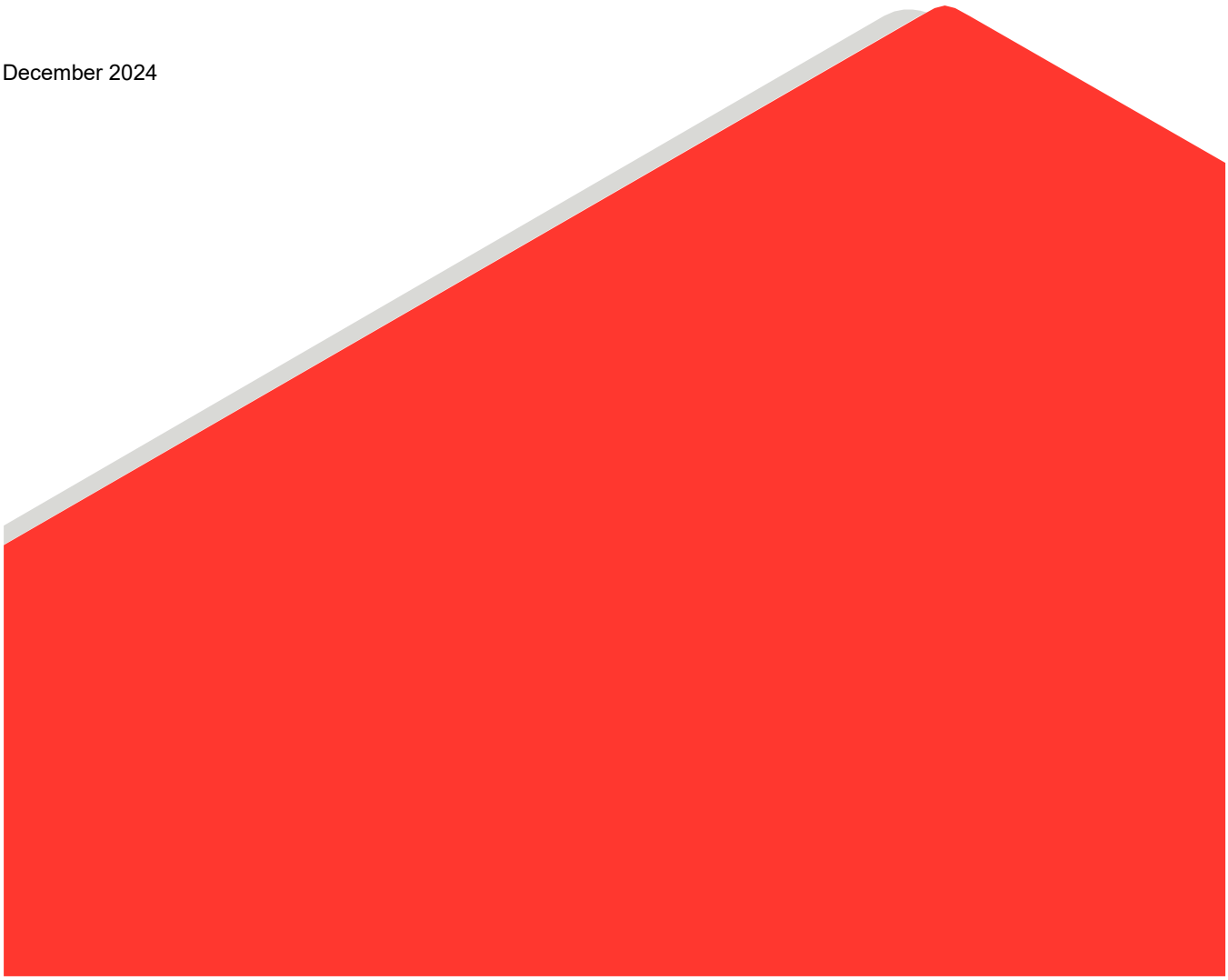

Foreword

On March 1, 2024, GEM A-CAES, LLC (Applicant) docketed the Supplemental Application for Certification (SAFC) Volume 1 for the Willow Rock Energy Storage Center (WRESC; 21-AFC-02). On July 16, 2024, the Executive Director recommends that the Committee accept the Supplemental AFC as complete, and that the 12-month timeline to reach a decision on the AFC, as required by Public Resources Code section 25540.6, should begin.

Pursuant to Title 20, California Code of Regulations, section 1716, the Center for Biological Diversity docketed Data Request Set 1 on November 26, 2024. Data Request Set 1 presents a list of questions associated with the resource topic areas of Biological Resources and Water Resources.

To address the Center for Biological Diversity's request, each Data Request within Set 1 has been responded to with supplemental information or guidance on where the information may be found.

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1.0 INTRODUCTION

GEM A-CAES LLC's (the "Applicant") is responding to the Center for Biological Diversity Data Request Set 1, numbers:

- **Biological Resources**: DR1 through DR10
- **Water Resources**: DR11 through DR13

This response document addresses Data Request Set 1. The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as presented by the Center for Biological Diversity and are keyed to the Data Request (DR) numbers (DR#). New or revised graphics, tables, or attachments are provided as attachments and are numbered in reference to the Data Request number. For a hypothetical example, the first attachment used in response to Data Request DR1 would be numbered Attachment DR1-1. Each page in this response document is sequentially page-numbered consistently with the remainder of the document, although some attachments may also have their own internal page numbering system.

2.0 BIOLOGICAL RESOURCES

2.1 Western Joshua Tree & Joshua Tree Woodlands

2.1.1 Data Request DR1

The Willow Rock Energy Storage Center SAFC – Volume 1, Part A (TN254806 at 187) states up to 325 western Joshua trees may be relocated. However, the Draft Preliminary Conceptual Western Joshua Tree Relocation Plan (the "Draft WJT Relocation Plan"), DR 92-1, identifies two scenarios: under Scenario 1, a maximum of 249 trees would be relocated, and under Scenario 2, a maximum of 266 trees would be relocated.

DR1: *Please clarify the discrepancy between the initial projection of 325 trees to be relocated and the lower numbers provided in the Draft WJT Relocation Plan. Specifically, please explain the factors contributing to the difference.*

Response: The 325 western Joshua trees reported as potential trees for relocation in the Willow Rock Energy Storage Center SAFC – Volume 1, Part A (TN254806) were identified prior to the publication of the California Department Fish and Wildlife (CDFW's) "Western Joshua Tree Relocation Guidelines and Protocols" (CDFW 2024) and CDFW's Joshua Tree Census Instructions (CDFW 2024). The number of Joshua trees potentially suitable for relocation was reviewed and refined using the guidelines above and data from the Joshua tree census, conducted after the publication of the SAFC. The maximum numbers provided in the Draft WJT Relocation plan represent these revised estimates.

2.1.2 Data Requests DR2 to DR4

In response to CEC Staff Data Request 90, the Applicant reported a total count of 3,781 western Joshua trees (WJTs) (TN259736).

For mitigation fee calculation purposes, a western Joshua tree individual is defined as a stem or trunk arising from the ground, regardless of its proximity to any other western Joshua tree stem or trunk. Cal. Fish & G. Code § 1927.3(b).

Although the Applicant's Western Joshua Tree Census Survey materials state that each WJT stem or trunk emerging from the ground was treated as an individual tree regardless of proximity to other WJT stems or trunks (TN254820 at 6), the most recent WJT census (DR 89-1) identifies several entries within the Applicant's reported total of 3,781 as including multiple individuals under the "Number of Individuals" column. Additionally, for entries listing multiple individuals in this column, the WJT census (DR 89-1) does not consistently include corresponding tree numbers for each individual. For example, where a tree is listed as having 9 "individuals," there are not 9 separate tree number entries corresponding to that figure. This discrepancy suggests potential inconsistencies in how individual WJTs were counted or categorized.

DR2: *Please confirm whether the total count of 3,781 WJTs reported in response to CEC Staff's Data Request 90 and reflected in the corresponding census (DR 89-1) accounts for each stem or trunk arising from the ground as a separate individual.*

Response: Yes, the 3,781 WJT reported counts each emerging stem or trunk as an individual.

DR3: *If the 3,781 total does not treat each stem or trunk as an individual WJT, please provide the corrected total, ensuring each stem or trunk arising from the ground is counted as a separate WJT.*

Response: Please see response to DR2.

DR4: *If the 3,781 total treats each stem or trunk as an individual WJT, please explain what the numbers under the "Number of Individuals" column on DR 89-1 indicate. Additionally, please explain why the WJT census does not consistently provide corresponding tree numbers for each individual recorded in the "Number of Individuals" column.*

Response: The column titled "Number of Individuals" is a remnant column from the original database, which was developed to collect data on WJT prior to publication of CDFW's *Joshua Tree Census Instructions* that require individual stems and trunks to be counted.

2.1.3 Data Requests DR5 to DR7

To obtain an incidental take permit under the Western Joshua Tree Conservation Act, a permittee must, among other requirements, submit "a census of all western Joshua trees on the project site, including size information and photographs, that categorize the western Johsua trees according to" specified class sizes. Cal. Fish & G. Code § 1927.3(a).

In response to data requests from CEC Staff, the Applicant submitted its most recent WJT census data, DR89-1. However, the data provided in DR 89-1 does not include complete information for each individual WJT, such as photographs, size class, and tree height.

Although some of this information appears to have been provided in earlier census data (see TN254820–21 and TN258311), tree identifiers (tree numbers and IDs) are not used consistently across all data sets.

DR5: *To the extent not already provided, please provide complete data for each WJT included in the census, DR 89-1, including the following details for each tree: photographs, tree height, tree class, tree status (alive or dead), and indication of whether the WJT is mature.*

Response: Please see **Attachment DR5-1** for the WJT census database (submitted via Kiteworks).

DR6: *To the extent not already provided, please indicate the proposed impact type to each WJT included in the census, DR 89-1, specifying whether it is planned for removal, relocation, or preservation in place.*

Response: See **Attachment DR5-1** for the WJT census database that includes the anticipated impacts and planned removal, relocation, and preservation information.

DR7: *Please provide a table or data in another form that reconciles the tree numbers, tree IDs and photo IDs across all three data sets containing WJT census data provided to date: TN254820–21, TN258311, DR 89-1.*

Response: See **Attachment DR5-1** for the WJT census database.

2.1.4 Data Requests DR8 and DR9

Under the Western Joshua Tree Conservation Act, "[n]o person or public agency shall . . . take . . . a western Joshua tree or *any part or product of the tree,*" except as authorized. Cal. Fish & G. Code § 1927.2(a) (emphasis added).

According to CDFW's August 31, 2022, comment letter regarding the Applicant's original project proposal (TN245782at 17), a 290-foot buffer is recommended for individual WJTs. As CDFW explained, "[a] 290-foot buffer is warranted to not only avoid impacts to individual trees, but *potential impacts to the seed bank as well*. Vander Wall et al. (2006) documented 290 feet as a maximum distance of seeds dispersed carried by rodents." (*Id.* (emphasis added).)

To avoid damage to a WTJ's root zone, a 50-foot buffer is recommended. See, e.g., CDFW, Census Instructions, https://wildlife.ca.gov/Conservation/Environmental- Review/WJT/Permitting/Census-Instructions (last accessed November 25, 2024).

DR8: *Using the Tree IDs provided in DR89-1, please identify all western Joshua trees that will be preserved in place (i.e., not lethally removed or relocated) and are expected to fall within 290 feet of any project-related activities. This includes, but is not limited to, project construction, temporary construction laydown areas, parking, gen-tie line routes, and temporary storage and relocation of western Joshua trees.*

Response: See **Attachment DR5-1** for WJT census database. The database also includes a column that identifies the additional trees that occur in the 290-foot buffer.

DR9: *Using the Tree IDs provided in DR89-1, please identify all western Joshua trees that will be preserved in place (i.e., not lethally removed or relocated) and are expected to fall within 50 feet of any project-related activities. This includes, but is not limited to, project construction, temporary construction laydown areas, parking, gen-tie line routes, and temporary storage and relocation of western Joshua trees.*

Response: See **Attachment DR5-1** for WJT census database. The database also includes a column that identifies the trees within the 50-foot buffer.

2.1.5 Data Request DR10

CDFW recognizes Joshua tree woodlands as a Sensitive Natural Community. CDFW, California Natural Community List (June 1, 2023). According to the supplemental AFC, 74.66 acres of Joshua tree woodland habitat was mapped in the project site. (TN254816 at 28.) Despite this, the SAFC does not assess the Project's impacts on Joshua tree woodlands. (*See, e.g.*, TN254806 at 136–37.).

DR10: *Please provide all data relevant to the Project's potential direct and indirect impacts on Joshua tree woodlands, including whether the Project will reduce the extent of this sensitive natural community, and fragment or degrade its quality.*

Response: The 74.66 acres of Joshua tree woodland identified in the SAFC is located on gen-tie options 2a and 2b. This Joshua tree woodland polygon was identified during the background data review of the "California Vegetation Map in Support of the Desert Renewable Energy Conservation Plan" (Reyes et al. 2021). Background data on sensitive ecosystem mapping was field verified in 2023 and 2024 and background mapping was updated at a 10-acre scale based on field documented conditions. Joshua tree woodland was not identified in the WRESC site, and P1 and P2 storage locations from background resources or field review. The Joshua tree woodland on the gen-tie options was not modified based on field verification.

3.0 WATER RESOURCES

3.1 Surface Reservoir and Stormwater Pond

3.1.1 Data Requests DR11 to DR13

As outlined in the Supplemental AFC, the Project includes a 21.5-acre, 577-acre-foot capacity hydrostatically compensating surface reservoir with a liner and an interlocking shape floating cover to minimize evaporative water loss. (TN254806 at 40, 56.) The Project also includes a site stormwater drainage system and stormwater percolation/evaporation pond. (TN254806 at 40.)

However, the Supplemental AFC does not evaluate the reservoir's or percolation/evaporation pond's potential impacts on wildlife, particularly the risks of entrapment or entanglement for wildlife species including terrestrial and volant wildlife.

DR11: *Please provide details regarding the material composition and load bearing capacity of the interlocking shape floating cover.*

Response: The Applicant has conducted market research and has identified hexagonal floating covers as a possible option. Hexagonal floating covers are used to cover industrial wastewater, tailing dams, treatment processing plants, metal and petrochemical plants, leachate ponds, airports, raw water reservoirs, and other applications for heat retention, photosynthesis prevention, and/or a wildlife deterrent. Products similar to what is being conceptualized for WRESC are typically fabricated from virgin or recycled, high density polyethylene (HDPE). Additionally, manufacturers often incorporate additives that reduce the likelihood of degradations from UV sunlight. The Applicant has not selected a vendor for the floating cover at this time. As the Applicant selects a vendor, additional details on the products' composition and load-bearing capacity will be provided.

DR12: *Please specify the dimensions of the interlocking shape floating cover, including any gaps between the interlocking shapes and between the cover and the walls of the reservoir.*

Response: The Applicant has not selected a vendor for the floating cover at this time. However, market research has indicated that a hexagonal floating cover may be an option for preventing the compensating reservoir or evaporation ponds use by wildlife. Hexagonal discs similar to what has been described here are typically between 4 and 6 inches in diameter and are deployed evenly across the basin. Manufacturer specifications indicate that the selection of a hexagonal shape disc will assist in preventing gaps from occurring. Neither the compensating reservoir nor the evaporation pond will be constructed with vertical walls.

DR13: *Please provide all data relevant to the Project's reservoir's and percolation/evaporation ponds' potential impacts on wildlife, including the risk entrapment or entanglement for wildlife species.*

Response: The Applicant anticipates that the compensating reservoir and evaporation pond will be constructed with banks sloped at a grade of either 2:1 or 3:1. The sloping grades of the banks and use of determent features that are not structurally rigid will assist in preventing entrapment or entanglement of wildlife species.

ATTACHMENT DR5-1

WJT Census Database (submitted via Kiteworks)

wsp.com