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Date: May 15, 2023

To: **Tom Dodson & Associates**  
Attention: Kaitlyn Dodson-Hamilton  
Vice President – Environmental Specialist

From: Daniel Smith, Biologist  
Jacobs Engineering Group, Inc.

CC Tom Dodson  
President  
Tom Dodson & Associates

Lisa M. Patterson, Ecologist/Regulatory Specialist/QSP  
National Senior Environmental Manager  
Jacobs Engineering Group, Inc.

**SUBJECT: REVIEW OF PROPOSED MITIGATION MEASURES  
AND RECOMMENDED ADDITIONAL CONSERVATION MEASURES  
TO OFFSET IMPACTS TO ASH-GRAY PAINTBRUSH  
FOR THE MOON CAMP RESIDENTIAL SUBDIVISION PROJECT  
SAN BERNARDINO COUNTY, CALIFORNIA**

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Dear Ms. Dodson-Hamilton,

Jacobs Engineering Group, Inc. (Jacobs) has prepared this mitigation review and recommendations memo in response to the January 20, 2022, ruling by San Bernardino County Superior Court Judge David Cohn that found the County of San Bernardino (County) failed to comply with CEQA in approving the Moon Camp Residential Subdivision Project (Project). The ruling partially granted a Petition for Writ of Mandate ordering the County to rescind Project approvals, based on the Court's finding that the County's determination of a less than significant level of impact failed to comply with CEQA in two narrow instances: 1) that there was insufficient evidence to support the County's determination that Mitigation Measure BR-1a of the Final EIR (approved July 28, 2020) served as adequate partial mitigation for Project related impacts to the federally listed as threatened ash-gray paintbrush (*Castilleja cinerea*) or sensitive pebble plain habitat and 2) that there was insufficient evidence to support the County's determination that the Project would have a less than significant impact on Wildfire Safety Hazards and Emergency Evacuation.

This review and recommendations memo is intended to address the Court's finding that the County failed to comply with CEQA regarding its determination that implementation of the mitigation measures previously identified in the July 2020 FEIR would reduce Project related impacts to ash-gray paintbrush or pebble plain habitat to less than significant levels. To this end, Jacobs reviewed the Court's ruling, as well as the relevant biological technical reports and existing proposed mitigation measures to provide recommendations that would assist the County in its revision of the relevant sections of the FEIR, so that

the County could address the inadequacies identified by the Court and bring its consideration of the Project into compliance with CEQA.

The FEIR identified three (3) mitigation measures to minimize and offset impacts to ash-gray paintbrush and/or pebble plain habitat:

BR-1a – The establishment of a conservation easement on a local 10-acre property known as the Dixie Lee Lane property.

BR-1b – The establishment of a 9.1-acre on-site conservation easement on Lots A, B, C, D, and H.

BR-1d – Implementation of setback lines (i.e., no-work buffers) to avoid impacts to ash-gray paintbrush during construction on Lots 47, 48, 49, and 50, wherever feasible.

Previous studies of the floristic inventory and habitat characterization of the Project site were conducted by Dr. Timothy Krantz in 2008, 2010, and 2016 (McGill 2018). Those surveys identified 5,567 individual ash-gray paintbrush on approximately 7.17 acres of the Project site. No other state or federally listed plant species have been documented on the Project site. Although ash-gray paintbrush often occurs in pebble plain habitat, it is also associated with several other plant communities and according to the results of the floristic botanical surveys conducted by Dr. Krantz, all ash-gray paintbrush occurrences on the Project site are within *Pinus jeffreyi* Forest (yellow pine forest) habitat (Krantz 2010).

Pebble plain is a rare plant community associated with specific soil conditions comprised of dense clay soils covered in a surface layer of quartzite rocks that are brought to the surface by frost heave. In addition to the unique soil characteristics and treeless habitat structure of pebble plains, this habitat is defined by the presence of two endemic threatened (federal) plant species: *Eriogonum kennedyi* var. *austromontanum* (southern mountain buckwheat) and *Eremogone ursina* (Big Bear Valley sandwort [formerly *Arenaria ursina*]) (Derby and Wilson 1978; Krantz 2008). Approximately 0.69 acres of the Project site has some pebble plain soil characteristics (Krantz 2008; Krantz 2010; McGill 2018). However, Dr. Krantz noted in his 2008 and 2010 survey reports that neither of the two key pebble plain indicator species (southern mountain buckwheat and Big Bear Valley sandwort) were present on site and the ash-gray paintbrush documented on the Project site occurs within yellow pine forest habitat. Therefore, Dr. Krantz accurately concluded that the Project site did not contain any pebble plain habitat that would require mitigation (Krantz 2010).

As part of the 2010 focused special status plant species survey for the Project site, Dr. Krantz also assessed a 10-acre, discrete pebble plain site located in the nearby community of Sugarloaf known as the Dixie Lee Lane pebble plain. Dr. Krantz conducted a sampling survey of the 10-acre site and found that the northern portion of the Dixie Lee Lane pebble plain supported an average density of 2.1 individual ash-gray paintbrush per square meter, based on 21 total detections within 10, meter-square sample plots (Krantz 2010).

The Project would provide for the on-site establishment of a 9.1-acre conservation easement (BR-1b), which would include 4.84 acres of occupied ash-gray paintbrush habitat comprised of yellow pine forest that supports 4,895 individual ash-gray paintbrush, or approximately 88% of the total ash-gray paintbrush population on site (McGill 2018). This conservation easement would serve as mitigation to offset Project related impacts to the remaining 672 individual ash-gray paintbrush that occur on site by providing protection in perpetuity for the highest density occurrence of ash-gray paintbrush on site.

Additional minimization of impacts to the remaining 672 individual ash-gray paintbrush is provided by BR-1d, whereby the implementation of building setbacks would further reduce the number of ash-gray paintbrush directly impacted by construction.

The Petitioners (i.e., The Friends of Big Bear Valley, San Bernardino Valley Audubon Society, Inc., and Center for Biological Diversity) contended in their Petition for Writ of Mandate that establishment of a conservation easement over the 10-acre Dixie Lee Lane pebble plain site (BR-1a) is legally infeasible because a portion of the site had already previously been set aside as mitigation for a project associated with the Big Bear High School. It was purported by Dr. Krantz that the 10-acre Dixie Lee Lane site was previously intended to serve as a mitigation bank and two acres were to be set aside to mitigate for the Big Bear High School project, but that the conveyance of the land was never formally recorded (Krantz 2010). Additionally, the Petitioners contended that the Dixie Lee Lane site was not adequate to partially mitigate Project related impacts to ash-gray paintbrush because it did not support a significant population of ash-gray paintbrush and this species does not always occur in pebble plain habitat. The Court partially granted the Petition on the ground that the recorded inconsistencies regarding 1) the habitat quality of the 10-acre Dixie Lee Lane pebble plain site and the presence of ash-gray paintbrush on that site, 2) whether Project related impacts to pebble plain habitat would require mitigation, and 3) the legal status of the Dixie Lee Lane property as potential off-site mitigation did not support the County's determination that BR-1a provided adequate partial mitigation for Project related impacts to ash-gray paintbrush or pebble plain habitat.

Regarding habitat quality and ash-gray paintbrush presence within the 10-acre Dixie Lee Lane pebble plain site, the Petitioners and the Court inaccurately characterized the Dixie Lee Lane ash-gray paintbrush population regarding its value as off-site mitigation for Project related impacts to the species. The Petitioners asserted that there was not a significant ash-gray paintbrush population on the Dixie Lee Lane site and the Court cited the partial conclusion of the 2010 Krantz survey that the species was infrequent on the Dixie Lee Lane site with only 21 individual ash-gray paintbrush counted. However, the 21 plants identified during survey represented a sample of 10, 1 square meter sample plots resulting in an average density of 2.1 individual plants per square meter within the northern portion of the site (Krantz 2010). Although ash-gray paintbrush was not identified in samples of the middle and southern portions of the Dixie Lee Lane site and was infrequent on site compared to other species (i.e., southern mountain buckwheat and Big Bear Valley sandwort), the survey did not encompass 100% coverage of the 10-acre site. Establishment of a conservation easement over the 10-acre Dixie Lee Lane pebble plain site (BR-1a) was only intended as partial mitigation for Project related impacts to up to 672 individual ash-gray paintbrush (12% of the population on the Project site), in addition to the on-site establishment of a 9.1-acre conservation easement (BR-1b) that would permanently protect 4,895 individual ash-gray paintbrush (88% of the population on the Project site). Given that the northern portion of the 10-acre Dixie Lee Lane pebble plain site supports an average density of 2.1 ash-gray paintbrush per square meter, it is quite possible there are 672 or more ash-gray paintbrush on the Dixie Lee Lane site, potentially within less than 1 acre.

Regarding whether Project related impacts to pebble plain habitat would require mitigation, the Project would not impact pebble plain habitat because there is no pebble plain habitat within the Project site (Krantz 2010). Therefore, although the Dixie Lee Lane site consists of pebble plain habitat, BR-1a would only be intended to provide partial mitigation for Project related impacts to ash-gray paintbrush (up to 672 individuals), not pebble plain habitat in general.

Regarding the legal status of the Dixie Lee Lane property as potential off-site mitigation, no portion of the site that has already been established as mitigation for other project(s) can be utilized as mitigation to offset Project related impacts to ash-gray paintbrush. If the Project Proponent could establish that a portion of the 10-acre Dixie Lee Lane pebble plain site were in fact legally available for use as mitigation, then that portion could potentially provide partial mitigation for the Project related impacts to ash-gray paintbrush. As stated previously, an average density of 2.1 individual ash-gray paintbrush per square meter occur in the northern portion of the Dixie Lee Lane site. If updated surveys providing 100% coverage of all legally available portions of the Dixie Lee Lane site found a total ash-gray paintbrush population closer in number to the 672 individual plants that could potentially be impacted by the Project, then BR-1a would likely provide significant partial mitigation for Project related impacts to ash-gray paintbrush.

It is recommended that if the legal status of the Dixie Lee Lane property as potential off-site mitigation (BR-1a) cannot be definitively determined, then BR-1a be removed from the FEIR. Regardless of whether the legal status of the Dixie Lee Lane property as potential off-site mitigation cannot be determined or it is determined to be unavailable, BR-1b and BR-1d would still constitute adequate mitigation to offset Project-related impacts to ash-gray paintbrush. Given that BR-1b would provide protection in perpetuity for 88% of the ash-gray paintbrush population on the Project site to mitigate for potential impacts to the remaining 12% of the on-site population (a nearly 9:1 ratio) and BR-1d would further minimize Project related impacts to the remaining unprotected 12% of the population, Project related impacts to this species would likely be considered less than significant without Mitigation Measure BR-1a. Further support for a determination that the proposed mitigation measures would reduce Project related impacts to ash-gray paintbrush to less than significant levels is provided by the Court's ruling that "Mitigation for the ash-gray Indian paintbrush habitat is adequate" in Section IV. B. 2. of the Ruling (Mitigation for Rare Plants). This ruling is in reference to the Petitioners' contention that the Long-Term Management Plan (LTMP) did not adequately set forth performance criteria for the mitigation measures intended to protect ash-gray paintbrush.

Based on feedback we have received in the past from the U.S. Fish and Wildlife Service (USFWS) regarding mitigation for impacts to ash-gray paintbrush, the Project Proponent may want to consider coordinating with an organization such as the California Botanic Garden to salvage ash-gray paintbrush seed prior to any Project related impacts to this species. Seed collections allow for genetic conservation of the species and help develop propagation protocols for the species. The USFWS has requested ash-gray paintbrush seed collection in the past and this could be a valuable conservation measure to include as part of the Moon Camp Project.

Please contact me if you have any questions or require any further information.

Thank you,

**Daniel Smith, Biologist**

*BI West Region*

**Jacobs**

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