

**Appendix K:
2016 Ashy Grey Indian Paintbrush Survey Update**

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TIMOTHY KRANTZ

Environmental Consulting

June 27, 2016

SUBJECT: Survey of Ashy-grey Indian Paintbrush
Moon Camp Tentative Tract 16136

ATTN: Mr. Kevin White
Land Use Services
San Bernardino County Government Center
385 N. Arrowhead Ave.
San Bernardino, CA 92415

Dear Mr. White:

Please find herein a report of a recent field inspection of the Moon Camp 50-lot Residential Subdivision, T.T. No. 16136, situated in the vicinity of Big Bear Lake, San Bernardino County, California (SCH # 2002021105).

On behalf of the Applicant's representative, Mr. Michael Perry, we walked the project site rare plant habitats on May 25, 2016. This letter confirms our findings that the rare plant species of concern, in particular, the ashy-grey Indian paintbrush, *Castilleja cinerea*, are still distributed on the property in approximately the same locations and densities as they were mapped and described in the Biological Resources section of the Revised and Recirculated Draft Environmental Impact Report (RRDEIR), dated November 2011, and in several previous rare plant surveys of the property, particularly the *Focused Special Status Plant Species Survey* dated August 29, 2010 (Krantz 2010).

The distributions and abundance of the ashy-grey Indian paintbrush (AGP) have not changed significantly since the 2010 report was submitted. In fact, the AGP is a plant species that is least likely to show year-to-year annual changes in distribution because it is a perennial hemi-parasite on its host plants. That is, AGP is a partial parasite, deriving a portion of its nutrients from its hosts via haustoria on its roots. In the case of the Moon Camp population, AGP is associated with the Wright's matting buckwheat, *Eriogonum wrightii* ssp. *subscaposum*. Both plants are relatively long-lived perennials, on the order of 10-20 years or more, and are, thus, not disposed to much annual variation in overall distribution.

timothy krantz
environmental consulting

39611 Oak Glen Rd. #11, Yucaipa, CA 92399
909.705.6707
timothykrantz@gmail.com



TIMOTHY KRANTZ

Environmental Consulting

Other rare plants species were also observed in association with the AGP population, such as Parish's rock-cress (*Boechera parishii*), rat-tails (*Ivesia argyrocoma*) and purple monkeyflower (*Mimulus purpureus*).

In conclusion, there are essentially no changes in the distributions of AGP and other rare plant species occurring on the Moon Camp property in comparison with previous surveys and as described in the RRDEIR.

Sincerely,

Dr. Timothy P. Krantz