

**Joshua Trees
at
Halloran Summit**

**Prepared for:
Horrocks Engineers, Inc.**

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Summary

The Herbst Halloran Summit site has 42 eastern Joshua trees growing on or near the project's limits of work. The disposition of the eastern Joshua tree, *Yucca jaegeriana*, is not subject to state or national endangered or protected species laws and regulations. There are **no western Joshua trees on the site.**

Introduction

Background

On July 27, 2023, Hollen Herbst, of Terrible Herbst, Inc., called to ask me to propose consulting work at one of their locations. After agreeing to create the proposal, she referred me to the project's lead consultant, Mr. Russell Skuse, of Horrocks Engineers, Inc. We agreed to my preparation of a Joshua Tree Report for the property in question, located at Halloran Summit in the County of San Bernardino. The site is a single 9.1 acreⁱ parcel at the southeast corner of Interstate 15 and Halloran Summit Road. A cell phone tower, located near the highway right of way, and abandoned buildings of a former truck stop currently occupy the parcel. The native vegetation, on the site has been disturbed during historical use of the parcel, but 42 *eastern* Joshua trees currently grow there. This species, *Yucca jaegeriana*, is similar in appearance and basic biology to the closely related *western* Joshua tree, *Yucca brevifolia*. The treatment and disposition of the latter is highly regulated by the *Western Joshua Tree Conservation Act* (WJTCA)ⁱⁱ. The latter, and the subject of this report, is being intensively studiedⁱⁱⁱ, it is currently the only species of Joshua tree subject to this law. In California, the particular species growing on a site can be determined by the location. Eastern Joshua trees are found, generally, east of Baker, CA, toward the Nevada state line, and in the Avawatz Wilderness, to the north and west of Baker^{iv}. No western Joshua trees grow in the area of the project site.

Assignment

On August 16, 2023, I provided a proposal to Horrocks for services which include the following:

- Determine Joshua tree species and regulatory requirements
- Create an inventory of Joshua trees

Limits of the Assignment

San Bernardino County *Information Bulletin IB-0016 [western] Joshua Trees*, is followed, generally, but the legal and regulatory constraints do not apply to *eastern* Joshua trees^v. Since the geographical natural range of western Joshua tree does not extend anywhere near this site, it is highly unlikely that they will be found there. Eastern Joshua trees are not considered in this report.

Purpose and Use of this Report

The primary purpose of this report is to provide information on the Joshua tree resource that will comply with requirements for the San Bernardino County development review process. The requirement in *Information Bulletin IB-0016 [western] Joshua Trees* that applies in this case is section 4.0 *Determination of presence/absence or avoidance*.

OBSERVATIONS and ANALYSIS

On September 7, 2023, I travelled to the Halloran Summit site to meet with Connor Horlacher, a surveyor with Horrocks, to document the locations and conditions of 42 eastern Joshua trees. All of the Joshua trees on the site exhibit the subtle, yet peculiar qualities of the eastern Joshua tree as compared to western Joshua tree. These qualities include the following:

- Smaller, shorter leaves
- Somewhat smaller overall stature
- More frequent, spontaneous branching
- *Bushier* overall appearance

No western Joshua trees, were observed on the site.

DISCUSSION

East vs. West

More than 85 years ago, botanist Susan Delano McKelvey first described the eastern Joshua tree, calling it a variety of *Yucca brevifolia*. Since then, close examination of the two Joshua tree types, and of their mutually obligatory relationships with their pollinator moth species^{vi} has concluded that they are, indeed, separate species. DNA analysis reveals that the moths that pollinate the eastern Joshua tree can also pollinate western Joshua trees, but not the other way around^{vii}. This reproductive isolation is the most important factor in distinguishing

species. So that's how we now have both western Joshua tree, *Yucca brevifolia*, and eastern Joshua tree, *Yucca jaegeriana*.

So according to the sources cited in the end notes, the Joshua trees on this site are definitively *Yucca jaegeriana*, eastern Joshua tree. As such, they are not subject to the constraints of the WJTCA, nor to either federal or California endangered species laws or regulations.

RECOMMENDATIONS

Since there are no western Joshua trees, *Yucca brevifolia*, on the site, there are no recommendations beyond the recommendation to accept the absence of this species.

SPECIFICATIONS

Since there are no western Joshua trees, *Yucca brevifolia*, on the site, there are no specifications except to determine the absence of this species from the project site..

CONCLUSION and ATTESTATION

This site being outside the natural range of the western Joshua tree according to official maps, and this site having been officially declared^{viii} to be within the natural habitat range for only the eastern Joshua tree, and personally having not discovered any western Joshua trees on the site, I conclude, and attest, that this project, having a complete absence of the regulated species in question, completely avoids any and all *take* of the western Joshua tree.

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Qualifications of Author

The author, Paul E. Chaney, holds a BS degree in Ornamental Horticulture from California State Polytechnic University, Pomona. He has been a California licensed C-27 landscape contractor since 1988 and a D-49 tree service contractor since the State required it 1992. He holds ISA Certified Arborist® credential WE-0135A and is Tree Risk Assessment Qualified. Since 1988, he has reported extensively on construction impacts to trees for CEQA compliance during the development review process, including over 50 reports similar to this one. Mr. Chaney wrote the first CEQA arborist reporting standards for the cities of San Bernardino, Fontana, Highland, and Yucaipa. His experience includes over 35 years of observing how trees respond to nursery production practices, structural and maintenance pruning treatments, and damage from various causes, including those that are construction related. Mr. Chaney's consulting clients have included engineers, developers, architects, landscape architects, landscape contractors, attorneys, insurance companies and adjusters, home and business owners, and public agencies, including the County of San Bernardino and the State of California.

- i San Bernardino County property records this parcel **0570061260000** as measuring 400,000 square feet, or 9.183 acres. <https://arcpropertyinfo.sbcounty.gov/> The surveyor's note #6 from the *ALTA/NSPS Land Title Survey* by Stovall Land Surveying documents ...a total of 8.24 acres, more or less.
- ii The text of the law can be found here: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB122
- iii Chris Clarke, *Are There Two Species of Joshua Tree?*, 2013
<https://www.pbssocal.org/redefine/are-there-2-species-of-joshua-trees>
- iv Eastern and Western Joshua tree range map <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=218303&inline>
- v On August 15, 2023, I received a reply telephone call from Julia Karo, of CDFW. She confirmed that the species of Joshua tree at Halloran Summit is indeed, Eastern Joshua Tree, and that it is not subject to the California or Federal endangered species laws and regulations.
- vi Unique biology of eastern Joshua Trees
<https://www.usgs.gov/centers/southwest-biological-science-center/science/eastern-joshua-trees-and-their-sole-pollinators>
- vii Chris Clarke, *Are There Two Species of Joshua Tree?*, 2013
<https://www.pbssocal.org/redefine/are-there-2-species-of-joshua-trees>
- viii On August 15, 2023, I received a reply telephone call from Julia Karo, of CDFW. She confirmed that the species of Joshua tree at Halloran Summit is indeed, Eastern Joshua Tree, and that it is not subject to the California or Federal endangered species laws and regulations.