



CALIFORNIA  
NATIVE PLANT SOCIETY



June 2, 2022

Samantha Murray, President  
California Fish and Game Commission  
1416 Ninth Street, Suite 1320  
Sacramento, CA 95814

Submitted via email to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov)

**RE: Agenda Item 5: Petition to list Western Joshua Trees as threatened under the California Endangered Species Act – Support “Threatened” Listing**

Dear President Murray and Commissioners:

Thank you for the opportunity to provide comments on your upcoming decision as to whether listing western Joshua trees as “threatened” under the California Endangered Species Act (CESA) is warranted (Fish & G. Code, § 2075.5).

The undersigned organizations, which represent hundreds of thousands of people throughout California, strongly support continued state protection of the western Joshua tree. We urge the Commission to adopt a

finding that listing of the species *is* warranted and officially add the species to the list of Threatened Species. Doing so would be a demonstration of true climate leadership, as the western Joshua tree would become the first species protected under CESA primarily due to the threat of climate change.

Our state's western Joshua trees are being profoundly impacted by human activity, most directly from climate change and habitat loss, but also from wildfire, drought and invasive species, each of which are exacerbated by climate change. Protections under CESA would greatly help protect western Joshua trees from direct habitat loss as well as foster recovery actions by the California Department of Fish and Wildlife (DFW) and other state and local agencies. These protections are necessary to ensure that this iconic species continues to inhabit California and inspire future generations.

While much of the western Joshua tree's range is on public lands, over 40% of its California range is on private land, of which only a tiny fraction is protected from development. Outside of Joshua Tree National Park, areas of federal land that are home to the species are subject to poorly regulated activities including off-road vehicle use, cattle grazing, power and pipeline rights-of-way and large-scale energy projects that consume or degrade habitat.

The Joshua tree's ability to colonize new habitat at higher elevations or latitudes is extremely limited and no such range expansion is yet occurring, even as the lower elevation and southern edge of its range is already contracting in the face of a warming climate. The convergence of factors necessary for recruitment results in successful establishment of new Joshua tree seedlings only a few times a century. Such recruitment has already largely stopped at the drier, lower limits of the species' range.

In this context, climate change represents an existential threat to western Joshua trees. The western Joshua tree in California will lose upwards of 90% of its range under likely climate scenarios. There is no safe refuge for western Joshua trees, as the higher elevation areas in which Joshua trees are projected to best be able to survive increasing temperatures and drying conditions are at great risk of fire due to the prevalence of invasive non-native grasses. Prolonged droughts, which are projected to occur with greater frequency and intensity over the coming decades, will not only preclude recruitment across ever-greater areas of the species' range, but will lead to higher adult mortality, either directly due to temperature and moisture stress or indirectly due to increased herbivory from hungry rodents lacking alternative forage. Further, it is uncertain whether the western Joshua tree's pollinating moth will be able to keep pace with a changing climate. Absent the pollinating moth, Joshua trees will not be able to produce seeds, meaning there will be no juvenile trees to replace older trees as they die off.

Additionally, the western Joshua tree is further threatened by direct habitat loss. Development has already consumed vast swaths of habitat in the range of the western Joshua tree. Over the coming decades, over a million additional acres are projected to be destroyed or degraded from development. This large-scale loss or severe degradation of habitat would be of conservation concern for the species even ignoring the threats posed by climate change. Taking climate change into account, such loss of habitat and the genetic resiliency and connectivity it provides will further push the species towards extinction in California.

Without rapid and substantial reductions in greenhouse gas emissions and protection of habitat, the western Joshua tree will likely be extirpated from most if not all of its range in California by the end of the century. It therefore clearly meets the definition of a "threatened species" under state law and must be protected as such.

While the threats facing the western Joshua tree in the coming decades are dire, they are not insurmountable. If the species and its habitat are protected early, and with active management to enhance recruitment and survival, and potentially dispersal, the western Joshua tree has a realistic chance of persisting in the wild over the coming decades. CESA listing, and the consequent development and implementation of a recovery plan and local or regional Natural Communities Conservation Plans (NCCPs), would help ensure the survival of this iconic species of the Mojave.

We recognize that recognizing a species as warranting protection under CESA primarily due to the threat of climate change is something that DFW and the Commission have never done. We also recognize that DFW recommended against listing the western Joshua tree, and voting to protect a species notwithstanding an adverse recommendation of DFW is not a decision to be made lightly. Nevertheless, given that four of the five independent peer reviews (the same four peer-reviewers who have actually studied the species) disagreed either with DFW's recommendation or with the rationale behind it, we believe that the overwhelming weight of the science still supports listing.

Rather than becoming yet another tragic symbol of our political leaders' failure to adequately respond to the climate crisis, protection under CESA would allow the western Joshua tree to serve as a symbol of California's climate leadership. We look forward to you demonstrating such leadership and making the legally and scientifically necessary finding that listing the western Joshua tree as a threatened species *is* warranted.

Sincerely,

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