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## Memo To File

### A. Project Information

**Park Name:** Sequoia and Kings Canyon National Parks

**PEPC Project Number:** 126037

**Project Title:** Do Not Re-establish Tree Seedlings in Suwanee Grove

**Project Location:**

**County, State:** Tulare, California

**Project Leader:** Meg Kargul

### B. Description of the Current Action (Project Description)

The NPS will continue monitoring but will take no action to plant sequoias or mixed conifer seedlings within Suwanee Grove.

### C. Description of Previous Compliance Documentation

**Decision Document Name:** Re-establish Tree Seedlings in Severely Burned Giant Sequoia Groves and Adjacent Fisher Habitat in Sequoia and Kings Canyon National Parks FONSI

**Decision Document PEPC ID:** 107200

**Decision Document Approval Date:** October 4, 2023

### D. Notes

As described below and in alignment with the Finding of No Significant Impact for the Re-Establish Tree Seedlings in Severely Burned Giant Sequoia Groves and Adjacent Fisher Habitat Revised Environmental Assessment (Revised EA), as amended, conditions in Suwanee Grove partially, but do not entirely, meet the decision tree criteria for taking action to plant sequoias and mixed conifer seedlings in the Grove.

- *Remote Sensing Data Analysis (complete):* Identification of contiguous patches of high severity fire effects in Suwanee Grove was completed immediately following the KNP Complex Wildfire using the Rapid Assessment of Vegetation Condition after Wildfire, Standardized Composite Burn Index (RAVG 4 category CBI product). This remote sensing tool identified that this Grove had suffered high tree mortality and is vulnerable to conversion to shrub habitat. This information served as a basis for the original proposal to replant these areas. This decision criteria is therefore met to consider planting within Suwanee Grove.
- *Mortality and Regeneration Analysis (complete):* Post-fire field surveys in 2023 found 62.7% mortality of large sequoias within the area of Suwanee Grove that burned at high-severity in the 2021 KNP Complex Wildfire (data from Soderberg and Das 2023). The 2023 survey data from Suwanee Grove also found an estimated mean of 7,803 sequoia seedlings/acre in this area, equating to a 1.0% probability of being equivalent to the second-year seedling densities determined by Stephenson et al. 2024 (Soderberg et al

2024). While the actual seedling regeneration within the proposed action area does not meet the 90% probability of meeting the sequoia seedlings/acre mean second-year seedling density determined by Stephenson et al. 2024, the pattern of tree mortality in Suwanee Grove is not as contiguous as found in other groves—leaving some live patches that the NPS anticipates will contribute to future seed rain and thereby potential regeneration within this portion of the Grove (Soderberg et al 2024). The NPS specifically completed a patch analysis and found less than 10% of the entire grove is outside the likely seed rain zone. “In such cases, regeneration failure should be less likely to lead to permanent loss of grove area, as existing seed trees remain as a source of replenishment after future fires—so long as those fires are in keeping with the heterogeneous, mixed-severity fire regimes within which giant sequoias evolved” (Soderberg et al. 2024, 12). Based on these field surveys and findings—namely, that sufficient large sequoias are still alive and the majority of the grove area is within the seed rain of these remaining live trees, the NPS has determined that Suwanee Grove is at low risk of losing a large portion of the grove due to regeneration failure. Therefore, planting of nursery grown giant sequoia seedlings is not necessary to prevent type conversion and preserve this grove. The purpose and need of the EA can be met without further action.

- *Climate Assessment (complete)*: Results of this analysis indicate that Suwanee Grove has a high likelihood of continuing to support forest under future climate conditions. This decision criteria is therefore met to consider planting within Suwanee Grove.

#### E. Conclusion

I certify that the existing NPS NEPA document has been reviewed and there are no substantive differences between the current proposal and its associated environmental impacts and the proposal and impacts as described in the existing NEPA document and associated decision document.

Superintendent: \_\_\_\_\_



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Clayton F. Jordan