California Sensitive Plant Review
A botanical report for Sacred Groves
August 22, 2025

Project: Sacred Groves Conservation Green Burial – a proposed natural burial area, approximately 47-acres in size.

Surveyor/Reviewer: Jennifer Wheeler, B.S. Cal Poly Humboldt, 1993. Rangeland Resource Science with Botany emphasis. Professional experience: Botanist, USDI Bureau of Land Management, Arcata Field Office, 1993-2020. Long-time contributor to CNDDB database.

Date of CNDDB Review: 8/6/2025 - CNDDB Access Source: CNDDB report prepared by CDFW for: SACRED GROVES (CONSERVATION GREEN BURIAL)

Botanical Survey history of Proposed Project Site:

August 10, 2015. Survey conducted by Gary Lester, LACO. Agricultural grassland area surveyed for bio-solid disposal project. Sensitive species: Siskyou checkerbloom (*Sidalcea malvaflora ssp. patula).* 6' X 5' area; 40· 44' 41.53" N, 123• 57' l0.17" W (World Geodetic System 1984, Google Earth). Siskyou checkerbloom was not included in the CNDDB records provided on 8/6/2025. Regardless, I inspected the reported site in consultation with the landowner actively on 8/11/25, and passively on 6/29/2024. No Sidalcea species are present. The landowner also reports that he used to 'hay' that zone in the spring (May) to capture the first season's 'haying' - and I suspect the small population was rapidly extirpated.

6/29/2024. Survey conducted by Jennifer Wheeler.
Objectives: Walk agricultural grassland to identify grass and forb species with landowner, walk forest/grassland ecotone and inspect understory. Check rock outcrops in grassland and at forest ecotone. Meander around in forest understory/grassland ecotone/under oaks, looking to identify native trees and shrubs to facilitate discussion of suitable native supplemental species enhancements for overall project vision. No sensitive plants incidentally observed during field visit, though not focus of visit.

8/11/2025 Survey conducted by Jennifer Wheeler.
Objectives: Botanically survey Douglas-fir mixed hardwood areas and ecotone with Oregon white oak (*Quercus garryana*), as well as survey specifically for LACO-observed, and CNDDB recorded sensitive species occurrences in Iaqua Buttes and Korbel quads. Determine presence/absence to extent possible. Re-visit Siskyou checkerbloom reported 2015 location to confirm presence/absence. CNDDB data suggest coast fawn lily (*Erythronium revolutum*) on mesic sites on adjacent property to the east. Though early August is at end of the fawn lily detection period, drying leaves, if present, would likely be identifiable to genus, certainly to family. If undetermined monocot/lily-like leaves are detected upon survey, a recommendation of further spring surveys would be recommended.

Location information:
7.5 minutes Quads examined: Iaqua Buttes, T4N, R2E, SECTION 9, HUMBOLDT MERIDIAN, and Korbel (Adjacent quadrangle to the north).

The proposed project area contains two zones from the Humboldt County general plan: Agricultural exclusive, and Timber, or TPZ. The agricultural exclusive zone consists of 27.9 acres of naturalized,

mixed perennial/annual agricultural grassland with few forbs present; and the timber zone consists of approximately 16.8 acres of Douglas-fir mixed hardwood forest.

The predominate composition of the forested zone consists of Douglas fir, tan oak, bay laurel, madrone, canyon live oak, white oak, and scattered chinquapins. Adjacent to the subject property, an area that had been clear cut around 2005 was planted with coast redwood.

Soil site conditions:
NRCS Cooperative Soil Survey classification of the proposed Project Area are as follows:
Soils typical of Franciscan complex. Soil Unit 584- Wiregrass (40%)-Pittplace (25%)-Scaath (15%) series; and 10% inclusions. There are no known serpentinite inclusions on the property that are known to be associated with ecologically unique plant species, that often are of sensitive status.

Botanical Review

Available plant list: Laco Associates, August 2015 (agricultural grassland only) (See separate attachment).

Sensitive species identified on Iaqua Buttes CNDDB report, prepared and provided by CDFW: 8/6/25

Species	Potential for impact by project	Habitat/bloom time	Occurrence data
Platismatia lacunosa 2B.3	No impact	On fir and alder trees - lichen	No CNDDB occurrence records in project area.
Usnea longissima 4.2	No impact	arboreal	Pacific Lumber, Sec. 9 IN SECOND GROWTH PSEUDOTSUGA MENZIESII, ARBUTUS MENZIESII, AND LITHOCARPUS DENSIFLORUS. NEAR RIDGETOPS ON NW AND NE ASPECTS. QUERCUS KELLOGGII TREES ARE FOUND IN A MEADOW NEAR THE DOMINANT FOREST TYPES
Packera bolanderi var. bolanderi 2B.2	No impact – All rocky sites and cut banks surveyed. Not detected during survey.	Blooms April/May through July– open areas in forests, wet rocky cliffs cliffs Perennial.	CNDDB occurrences 63/69. Occurrences on quad associated with steep rocky cliffs and north facing road cutbank with 70% canopy cover.
Noccaea fendleri ssp. Californica 1B.1	None. No appropriate soil type.	Strict endemic requiring serpentine soil outcrops.	
Sidalcea malachroides 4.2	No impact. Not detected during survey.	May to August – disturbed forest openings	No CNDDB occurrence records in project area.
Sidalcea malviflora ssp. patula 1B.2	No impact. Not detected during survey.	Open coastal forest, grassy areas (May to	No CNDDB occurrence records in project area.

	Former site and surrounding vicinity were completely surveyed. No sidalcea species present. Former location had been hayed repeatedly, and the population appears extirpated.	August)	Laco reported a finding in 2015 in subject grassland area. Not present. The agricultural grassland, rocky outcrops, and forest/grassland ecotone have been surveyed on June 29, 2024, and August 2025.
Sidalcea oregana ssp. eximia 1B.2	No impact.	Openings (May to August)	No CNDDB occurrence records in project area.
Gilia capitata spp. Pacifica 1B.2	No impact.	Prairies, gravelly soils, grassy openings Blooms April-August	No CNDDB occurrence records in project area. Not present. The agricultural grassland, rocky outcrops, and forest/grassland ecotone have been surveyed on June 29, 2024, and August 2025.
Montia howellii 2B.2	No impact Not present. Moist areas were sought out. There are no prolonged moist areas on site within the proposed project area including design features to exclude intermittent stream buffers.	Moist to wet habitats, March to May. Frequently found in persistently moist, disturbed habitats such as dirt roads, skid trails, landings, parking areas.	No CNDDB occurrence records in project area.
Coptis laciniata 4.2	No impact, no suitable habitat in proposed project area.	Blooms through May, moist woods and stream banks This plant grows in seeps, streambanks, often among mosses on wet sites in conifer forests, below 3000 ft.	No CNDDB occurrence records in project area.
Mitellastra caulescens 4.2	No impact, no presence or suitable habitat detected.	Shady moist forest and wet meadows. Blooms through July	No CNDDB occurrence records in project area.
Erythronium oregonum (white) 2B.2	No impact	Shaded forests, moist, damp areas. Blooms	No CNDDB occurrence records in project area.

	Not detected during survey. ** Erythronium leaves persist from their emergence in late winter/early spring until around June or July, after which they die back completely as the plant goes dormant for the summer. The fruit ripens and is dispersed relatively quickly in late spring/early summer, shortly after the flowering period ends. *Scoliopus bigelovii* leaves were detected in two areas in the project area. *Scoliopus* is a comparable analog of the phenology and expected leaf condition of Erythronium. Based on these findings, I do not suspect Erythronium is in the project area where there is potential impact for soil disturbance.	as late as June.	
Erythronium revolutum (pink fawn lily) 2B.2	No impact Erythronium leaves persist from their emergence in late winter/early spring until around June or July, after which they die-back completely as the plant goes dormant for the summer. The fruit ripens and is dispersed relatively quickly in late spring/early summer, shortly after the flowering period ends. *Scoliopus bigelovii* leaves were detected in two areas in the project area. *Scoliopus* is a comparable analog of the phenology and expected leaf condition of Erythronium. Based on these findings, I do not suspect Erythronium is in the project area where there is potential impact for soil disturbance.	Shaded forests, moist, damp areas. Blooms as late as June.	CNDDB occurrence reported in vicinity, though not detected during survey.
Piperia candida 1B.2	No impact, not present	Coniferous, mixed evergreen forest. Blooms through September.	No CNDDB occurrence records in project area.
Lycopodium clavatum 4.1	No impact, not present	Moist forest edges, disturbed areas	No CNDDB occurrence records in project area.

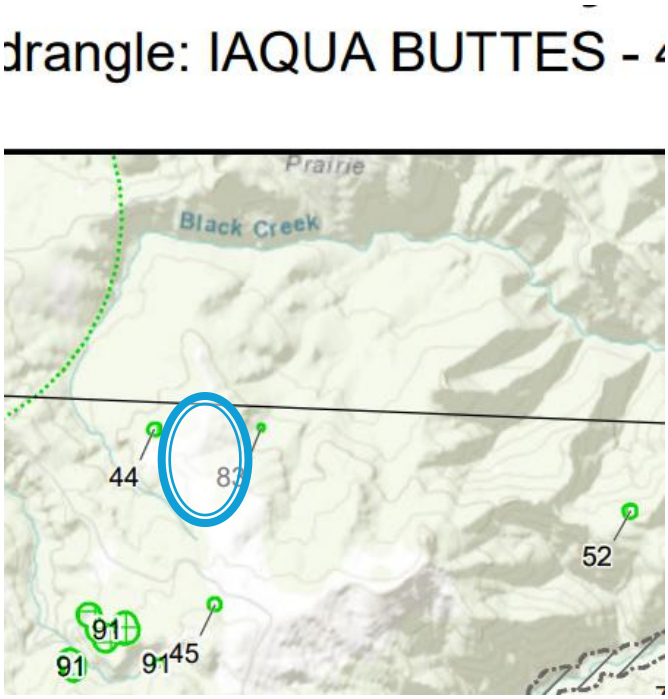
**Upland Douglas Fir forest – sensitive community reported in CNDDB report; not present in the project area.

Quercus garryana Oregon white oak woodland and forest Alliance 71.030.00 G4 S3 was considered as a sensitive natural community that could be present on the site; however, the component of white oak present within and on the Douglas-fir mixed hardwood forest ecotone does NOT meet the membership rules to qualify as an Oregon White Oak sensitive natural community.

The white oak component on the proposed project area does not meet:

- *Quercus garryana*> 30% relative cover in the tree canopy; > 25% absolute cover, and lacking an appreciable conifer cover (NatureServe 2007).
- *Quercus garryana*> 30% relative cover in the tree canopy often with other oaks such as *Q. kelloggii*; if at least three oak species co-dominate, see the *Quercus* spp. alliance (Buck-Diaz et al. 2021, Klein et al. 2015).

Figure 1: CNDDB geographical extent of known sensitive species sites in vicinity of proposed project area (blue circle, below).



Results/Discussion:
No CNDDB listed sensitive species were detected.

CNDDB listed species with occurrences in both the relevant quandrangle and project vicinity include coast fawn lily (*Erythronium revolutum*) and running pine (*Lycopodium clavatum*). No running pine was located during survey. Furthermore, landowner and amateur botanist, Eric Almquist, proclaims to know this species well and has never observed it on his property.

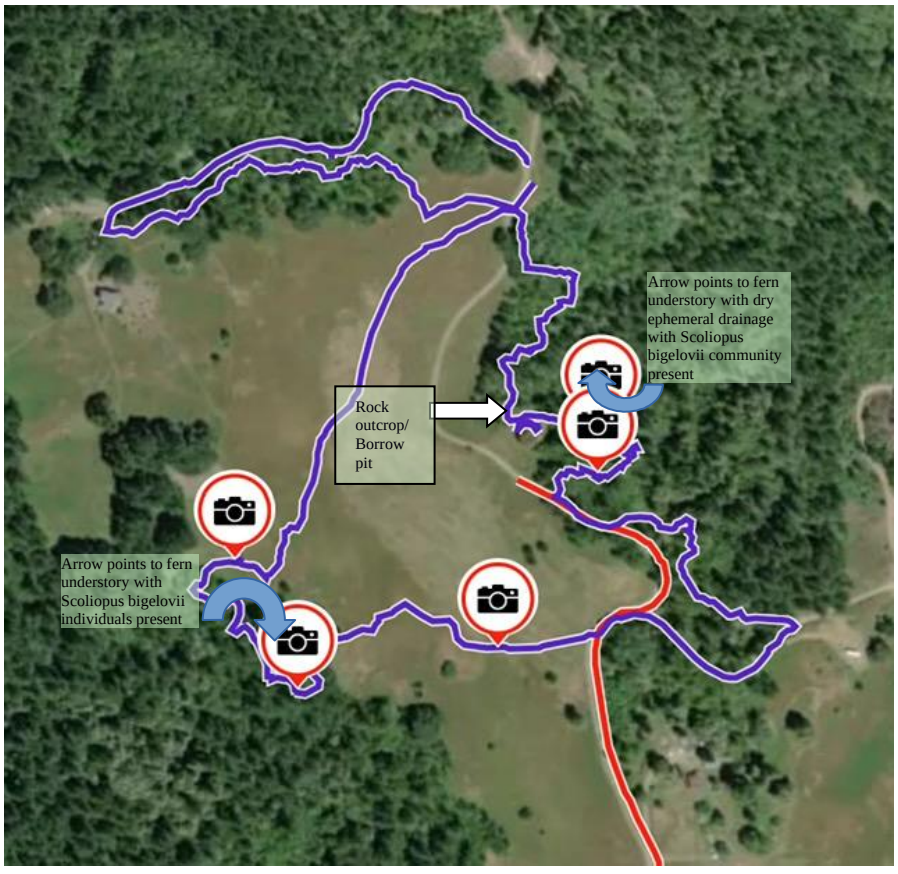
Appropriate habitat for coast fawn lily was located that largely paralleled associated species reported in CNDDB Occurrence #25/ Site #83 (shown on Figure 1). Occurrence #25 was located on Scotia Pacific timber lands in May of 2004 on an unnamed stream embankment that drained into to Black Creek. The surrounding Scotia Pacific property adjacent to the subject property was clear cut in 2005 and replanted to redwood, the edge of which was observed. Due to hydrological changes following this land use, it is quite possible the original site is no longer extant. I did not survey private property and am unable to confirm whether it is extant or extirpated.

Occurrence #25 associated species included *Pseudotsuga menziesii*, *Lithocarpus densiflorus*, *Polystichum munitum*, *Scoliopus bigelovii*, *Toxicodendron diversilobum*, and *Trientalis latifolia*. During survey, I located two areas on the property with very similar understory conditions and associated species, with the addition of an abundance of *Maianthemum racemosum*, areas noted by blue arrows in Figure 2. These areas did not contain *Erythonium* leaves as of August 11, 2025.

Erythronium leaves can persist from their emergence in late winter/early spring until around June or July, after which they die-back completely as the plant goes dormant for the summer. Shortly after the flowering period ends, the fruit ripens and is dispersed relatively quickly in late spring/early summer. Fetid adder's tongue *(Scoliopus bigelovii)* is an appropriate analog of the phenology and expected leaf condition of *Erythronium*. Fetid adder's tongue plants with drying leaves were detected in two areas in the project area. Based on these findings, I do not suspect any *Erythronium* species occurring in the project area containing suitable habitat.

I have no recommendation for further surveys for sensitive species ahead of proposed implementation of the project.

Figure 2 – Survey path on August 11, 2025



Photos:

Photo 1. Ecotone of Douglas-fir mixed hardwood forest and grassland. Large Oregon white oak center background of photo. This photo was taken at the northern side of the project area at the northern edge of the grassland. August 11, 2025.

Photo 2. Agricultural grassland taken from southeast corner of project area. Landowner Eric Almquist pictured. August 11, 2025.

Photo 3. Rocky outcrop, east of main entrance road, and at ecotone of Douglas-first mixed hardwood forest. Area has been a gravel borrow site for road base on private property. Rock outcrop hosts canyon live oak (Quercus chrysolepis), poison oak (Toxicodendron diversilobum), and California catchfly (Silene californica). August 11, 2025.

Photo 4. One of two understory areas, southeast of rocky outcrop shown in Photo 3, and noted in Figure 2) with sword fern, false Solomon seal, and fetid adders' tongue as associates. August 11, 2025.

Photo 5. Example of the phenological condition of fetid adder's tongue leaves found among the sword fern understory shown in Photo 4 and located in the two areas of Figure 2. August 11, 2025.

Photo 6. Main unnamed, intermittent seasonal drainage in forest on east side of road. Very dry, no mesic associated plants observed in drainage. August 11, 2025.

Photo 7. One of two typical forest understory layers under forested area in the north of the property area. Very sparsely vegetation tanoak duff. August 11, 2025.

Figure 8. Both common understory layers in northern forest portion. Left, California blackberry (Rubus ursinus) and modesty (Whipplea modesta), and right, sparsely vegetated tanoak and bay duff. August 11, 2025.

Photo 9. Property owner Eric Almquist and Jennifer Wheeler discussing grass species in the agricultural grassland, within the proposed project area. June 29, 2024.

Appendix A:

Supplemental species observed (in addition to LACO's 2015 survey of the agricultural grassland zone):

Trees:
Arbutus menziesii
Corylus cornuta ssp. Californica
Chrysolepis sempervirens
Notholithocarpus densiflorus
Psuedotsuga menziesii
Querus chrysolepis
Quercus oregona
Umbellularia californica
Sequoia sempervirens - planted

Shrubs/vines
Berberis sp.
Holodiscus disclolor
Ceanothus integerrimus
Rosa woodsii
Rubus leucodermis
Rubus parviflora
Rubus ursinus
Symphoricarpos alba
Toxicodendron diversilobum

Ferns
Athyrium felix-femina
Polystichum munitum
Pteridium aquilinum

Herbs
Adelinia grandis
Adenocaulon bicolor
Anapholis margaritacea
Apocynum androesaemifolium - grassland
Asarum caudatum
Claytonia sibirica
Cynoglossum
Dichelostemma ida-maia
Epoilobium ciliatum – (grassland)
Fragaria vesca
Galium aparine
Galium sp.
Genisa monspessulana (one plant in survey area- pulled)
Goodyera oblongifolia
Iris douglasiana

Iris purdyi
Lonicera hispidula
Madia madioides
Maianthemum racemosum
Osmorhiza chilensis
Oxalis oregona
Perideridia oregana (grassland)
Prunella vulgaris
Ranunculus sp.
Silene californica
Scoliopus bigelovii
Tellima grandiflora
Trientalis latifolia
Vancouveria planipetala
Viola glabella
Viola ocellata
Viola sempervirens
Whipplea modesta

Appendix B (LACO report attached separately)