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Botanical Survey

C-Store Replacement and New Car Wash Use Permit P23-00300-MOD
Planning Commission Hearing Date (May 7, 2025)

SEQUOIA
Ecological Consulting, Inc.

Date: September 13, 2024

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RE: **Special-Status Plant Survey Report**
C-Store Replacement and New Car Wash Project | Angwin, CA

INTRODUCTION

Sequoia Ecological Consulting, Inc. (Sequoia) performed two rounds of special-status (i.e., rare, threatened, or endangered) plant surveys in July and August 2024 for Pacific Union College (PUC, Client) in support of the C-Store Replacement and New Car Wash Project (project) located in Angwin, California (Figures 1 and 2). The entire project site encompasses an approximately 1.28-acre area with an existing gas station and adjacent upland in Angwin, California. The project involves replacing the existing gas station, constructing a new carwash, and creating access areas for the construction.

The entire project area was surveyed per Comment #9 of the Napa County Planning, Building, and Environmental Services Division's *Application Status Letter* for the project (P23-00300; 2024) and Napa County's *Guidelines for Preparing Special Status Plant Studies* requirements (2016). To avoid impacts to sensitive plant species and natural communities within the survey area, Sequoia senior botanist Andrew Ford conducted two rounds of protocol-level, floristic botanical surveys throughout the project site following protocol survey guidelines provided by the California Department of Fish and Wildlife (CDFW 2018) and California Native Plant Society (CNPS 2001). The objective of the surveys was to search for special-status plant and bryophytic species with potential to occur in the project area, determine the location and population status of each species, and evaluate the potential for impact to these species during construction. Surveys were conducted in July and August 2024, which coincided with the known blooming periods for the potentially occurring special-status plant species. Survey methods, results, and descriptions of plant communities found on the project site are provided below.

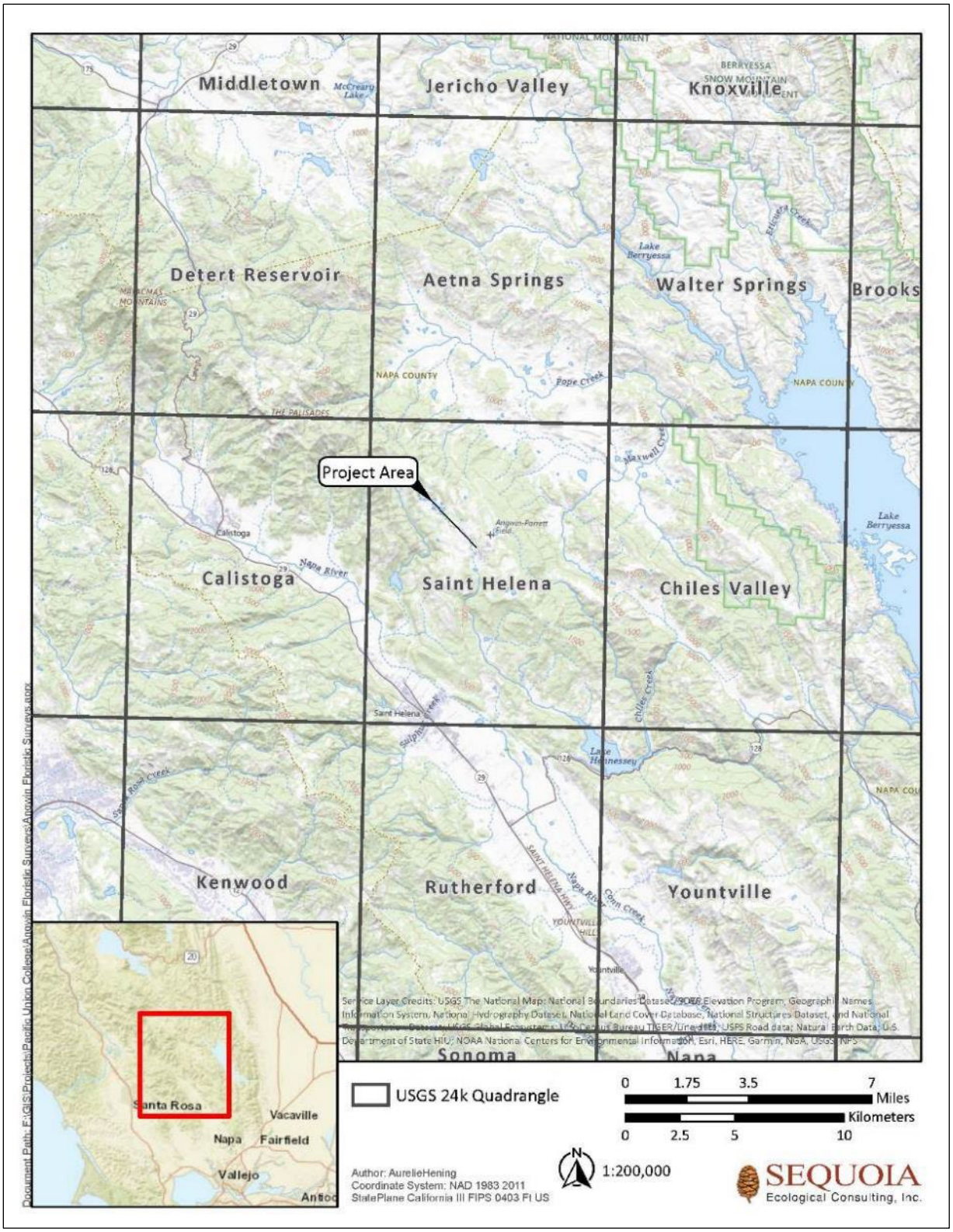

Figure 1. Regional map of the C-Store Replacement and New Car Wash Project site.

Figure 2. Location map of the C-Store Replacement and New Car Wash Project site.

PROJECT SITE LOCATION AND DESCRIPTION

The approximately 1.28-acre project site is located in the Census-Designated Place of Angwin in Napa County, California, along Howell Mountain Road between its intersection with College Avenue and Brookside Drive (Figures 1 and 2). The project site is comprised of a gas station and surrounding plant communities include mixed hardwood forest, semi–natural associations and alliances, and disturbed/ruderal communities. The area surveyed for this report includes the project site footprint, plus a surrounding 500-foot buffer.

SURVEY METHODS

Background Research

Prior to performing field surveys, a review of background literature was conducted to assess potential for special-status plant species to occur within the project site. Special-status plants are species listed under the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), the Native Plant Protection Act (NPPA), and/or the CNPS Rare Plant Inventory, including Ranks 1 to 4. The following CNPS Ranks definitions for rank are included in the following section:

- CNPS 1: Plants presumed extinct in California, and plants rare, threatened, or endangered in California and elsewhere
- CNPS 2: Plants rare, threatened, or endangered in California, but more common elsewhere
- CNPS 3: Plants needing more information to assess status. (CNPS Rank 3 plants have potential to be relisted as Rank 1 or 2)
- CNPS 4: Plants with a California Rare Plant Rank of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly.

Data sources queried included a CDFW California Natural Diversity Database (CNDDB; CDFW 2024) search of the project site and surrounding 5-mile buffer; CNPS Rare Plant Inventory (CNPS 2024) search for the St. Helena U.S. Geological Survey (USGS) 7.5’ quadrangle and surrounding eight quads; and U.S. Fish and Wildlife Service (USFWS) designated Critical Habitats (USFWS 2024). Soil Survey Geographic (SSURGO 2024) data were also reviewed for available substrate information to evaluate edaphic suitability for special-status species. Special-status plants with potential to occur in habitats present within the project site are discussed below. Existing rare plant occurrences and results of the CNDDB search can be found in Figure 3. A table of special-status plant species documented in the region during the background literature search along with their potential to occur on-site can be found in Attachment A.

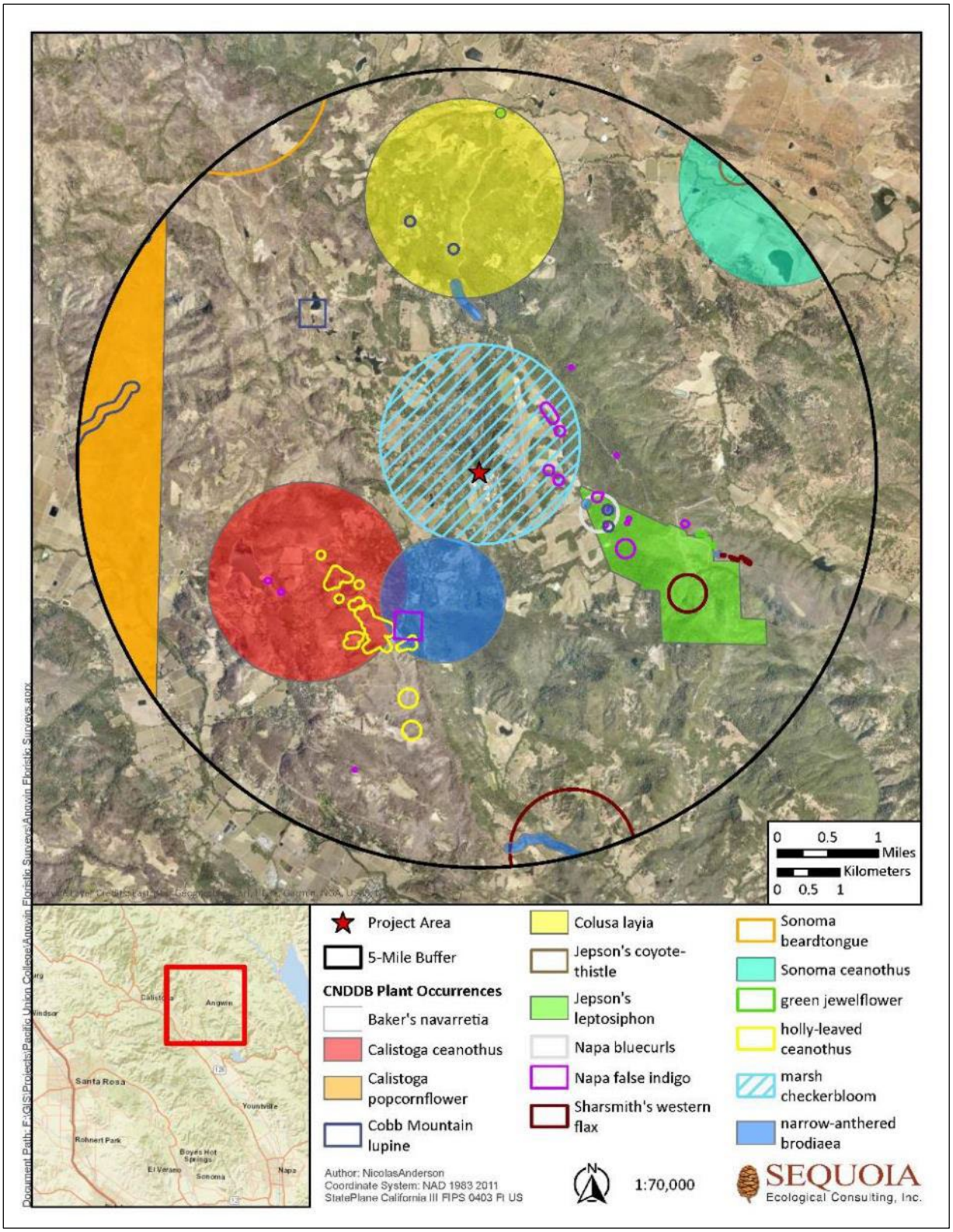

Figure 3. Records of CNDDB special-status plants within 5 miles of the project site.

Reference Site Surveys

As required by the CDFW's survey guidelines (2018), reference sites were visited to support the focused surveys performed in 2024. Sequoia's CNPS-certified consulting botanist Andrew Ford (CCB-0029) inspected multiple locations with potential for occurrences that coincided with known blooming periods of target special-status plant species identified during the desktop review. These locations included areas within the vicinity of the project site, such as Las Posadas State Forest, Snell Valley, Lake Hennessey City Recreational Area, and Pope Valley and Howell Mountain Road, including spur roads.

RESULTS

Results of Sequoia's desktop review and protocol-level special-status plant surveys are provided below. Table A-1 (Attachment A) presents the potential for occurrence of special-status plant species known to occur in the vicinity of the project site, along with habitat requirements and occurrence of and basis for classification. Table B-1 (Attachment B) shows all plant species observed on the project site during focused surveys.

Background Research

During the initial desktop review, Sequoia identified twenty-two (22) special-status plants and bryophytes near and/or within the project site (Attachment A, Table A-1; Figure 3). Based on the absence of suitable habitat and/or substrate on-site, or the lack of nearby or recent occurrences, the majority of these 22 species were determined to have low to no potential to occur within the project site.

Topography, Hydrology, and Climate

This survey area is within the Census-Designated Plan of Angwin, located in northeastern Napa County on the Pacific Coast with an elevation of 1,749 feet above sea level (USGS 2010). The survey area encompasses a privately owned gas station and paved sidewalks, plus a 500-foot buffer which includes public roads, private apartments and businesses, and the Pacific Union College campus which includes ruderal roadside vegetation, planted ornamental gardens, oak woodland and marginal mixed-conifer woodland.

Mean average high temperature for the region is 70.6°F and average low is 43°F. (Western Regional Climate Center 2024) Average annual precipitation in the area ranges from 0.03 to 24.02 inches, occurring mainly between October and May (Western Regional Climate Center 2024).

Geology and Soils

Geology of the region consists of volcanic formations with a combination of Tertiary-age rock formed through pyroclastic and volcanic mudflow deposits and volcanic flow rocks, and marine metasedimentary and sedimentary sandstone, shale, and conglomerate laid down during the Late Cretaceous age (California Geological Survey 2010). The following soil types were mapped within the project site (NRCS 2024; Figure 4).

180—Tehama silt loam, 0 to 5 percent slopes

These soils occur in slopes from 0 to 5 percent, are non-saline and well-drained. They occur in terraces and alluvial fans along the base of the slopes. From the depth of 0 to 12 inches, the soil consists of silt loam and from the depth of 12 to 60 inches the soil consists of silty clay loam. The parent material to this soil type is sandstone and shale and it is not prone to flooding.

102—Aiken loam, 30 to 50 percent slopes

These soils occur on hillsides on the foot slope and side slopes in convex areas. While this soil is non saline and well-drained, it does have a restrictive layer from 40 to 60 inches to lithic bedrock. The layers consist of loam from 0 to 8 inches, clay loam from 8 to 14 inches, clay from 14 to 44 inches and un-weathered bedrock from 44 to 54 inches. This soil is residuum of weathered volcanic rock and is not prone to flooding.

Plant Communities

Per CDFW special-status plants survey guidelines, observations of general plant communities and sensitive natural communities need to be noted during field visits. Sequoia assessed existing vegetation maps to help focus surveys on-site and determine where special-status species were most likely to occur. Sequoia assessed all vegetation types on-site and performed ground truth analyses for habitats. Vegetation classification broadly followed the classification provided by Sawyer, Keeler-Wolf, and Evens (2009). Plant naming nomenclature follows the Jepson Manual (Baldwin et al. 2012) and the Jepson eFlora Project (2024). Of the habitat types found within Napa County, three different vegetation alliances within two overall plant communities were identified on the project site during the surveys; each is described below, and specific habitats can be found listed under each type. Sensitive communities and semi-natural associations and alliances are also listed below.

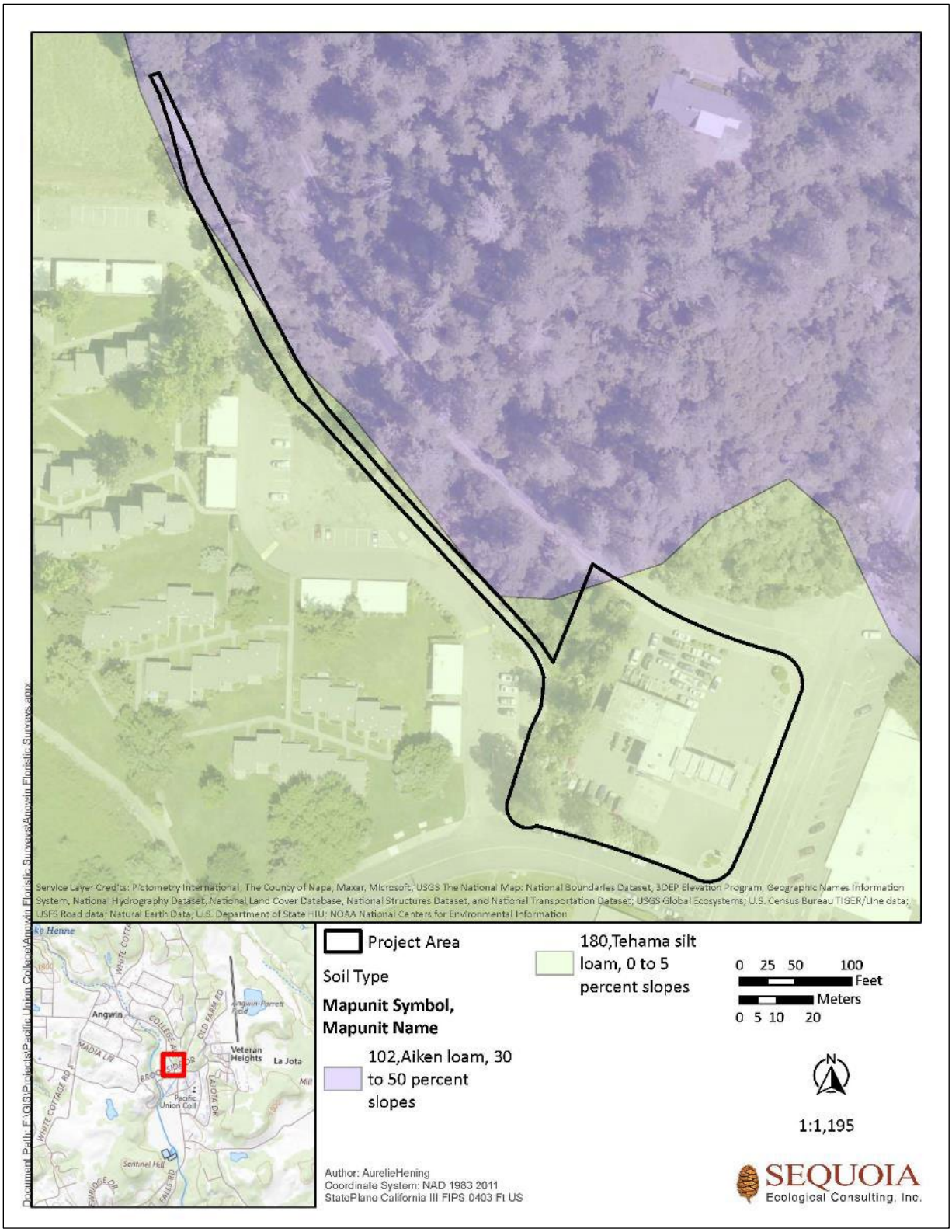

Figure 4. NRCS web soil survey map of the project site.

Mixed Hardwood Forest

Mixed hardwood woodlands are large tracts of habitat which are dominated primarily by oaks (genus *Quercus*), normally growing in dense or scattered canopies. Other hardwoods present in this habitat type include California bay laurel (*Umbellularia californica*), toyon (*Heteromeles arbutifolia*), and Pacific madrone (*Arbutus menziesii*). Throughout the survey area buffer, small stands of Douglas fir (*Pseudotsuga menziesii*) were found in small numbers. Within the survey area, mixed oak bay woodlands were present consisting of coast live oak (*Quercus agrifolia*), California black oak (*Q. kelloggii*), canyon live oak (*Q. chrysolepis*), and California bay laurel. The understories of all types of oak forests consist of a heavily of grasses and forbs, including wild oat (*Avena fatua*), brome (*Bromus* spp.), fescue (*Festuca* spp.), melic (*Melica* spp.), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), hedge nettle (*Stachys bullata*), field hedge parsley (*Torilis arvensis*), various aster species, poison oak (*Toxicodendron diversilobum*), and assorted shrubs.

The following alliances have been identified within this habitat within the survey area:

- *Quercus agrifolia* Woodland Alliance
- *Quercus wislizeni* Woodland Alliance

Semi-Natural Associations and Alliances

In California and specifically the central coast region, non-native trees are commonly observed planted in single rows or in clumps, often as windbreaks. The broom species not native to California, including French broom (*Genista monspessulana*) dominated canopies along with some *Cotoneaster* species.

The following alliances were found within this habitat.

- *Cytisus scoparius* – *Genista monspessulana* – *Cotoneaster* spp. Semi-Natural Alliance

Disturbed/Ruderal

The survey area consists of developed and/or barren areas. This habitat is primarily areas that are paved or have some form of infrastructural construction that is devoid mainly of plant life. These areas lack soil, and any surviving plants are typically hardy, non-native forbs and grasses.

Sensitive Natural Communities

No sensitive habitat communities designated as vulnerable by the CDFW were identified within the survey area. All listed communities ranked 1 to 3 are considered rare in California. Habitat classification follows the system documented through CDFW's *California Sensitive Natural Communities* list (CDFW 2023).

Field Surveys

Floristic surveys entailing multiple survey visits to capture full floristic diversity across various blooming seasons were conducted within the project site. Special-status plant surveys performed on the project site were conducted by Sequoia CNPS-certified consulting botanist Andrew Ford on July 25 for the first round of surveys and August 23 for the second round of surveys. Surveys were conducted during the appropriate flowering period for special-status plants known to occur in the region of the project, as identified during the desktop review (Attachment A), and in accordance with CDFW (2018), CNPS (2001), and County of Napa (2016) published survey guidelines stating that special-status plant surveys should be conducted at the proper time of year when special-status plants would be identifiable if present. Surveys were conducted by walking meandering transects through the survey area. All plant species observed during the surveys were documented and identified to the level necessary to determine rarity status. Plants that could not be identified in the field were taken back to the lab and keyed using Biedleman and Kozlof (2014), Baldwin et al. (2012), Ruygt (2020), and the Jepson eFlora (Jepson eFlora Project 2024). A list of all vascular plant taxa encountered within the project site is included in Table B-1 (Attachment B).

During the July and August 2024 plant surveys, none of the twenty-two (22) special-status plant species identified during the desktop review were detected within the project site or surrounding 500-foot survey buffer. Additionally, eighty (80) distinct species of vascular plants were documented throughout the project site (Attachment B). Attachment C contains a photolog of the survey area and representative photos of the habitat on-site.

CONCLUSION

No special-status plant species or sensitive natural communities were identified within the project site or surrounding 500-foot buffer during Sequoia's July and August 2024 botanical surveys. Accordingly, project implementation and construction is not anticipated to impact special-status plant species or sensitive natural communities. These surveys fulfill Comment #9 of the Napa County *Application Status Letter* for the project and the requirements of Napa County's *Guidelines for Preparing Special Status Plant Studies*.

If you have any questions or concerns regarding this report, please do not hesitate to contact us at the email addresses or phone numbers listed below. Thank you for the opportunity to support you on this project.

Sincerely,

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Attachments

- Attachment A – Special-Status Plant Table
- Attachment B – CSRNCW Plant Species List
- Attachment C – Survey Photos

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Attachment A

Special-Status Plant Table

Table A-1. Special-status plant species with potential to occur on the C-Store Replacement and New Car Wash Project site.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Alopecurus aequalis var. *sonomensis*	Sonoma alopecurus	FE	--	1B.1	Marshes and swamps (freshwater), riparian scrub. Elevation: Blooms: May–July	**No Potential.** No CNDDB, CalFlora or iNaturalist occurrences recorded within three miles of the project. There is no suitable freshwater marshes and swamps within the survey area.
Amorpha californica var. *napensis*	Napa false indigo	--	--	1B.2	Cismontane woodland, chaparral, open slopes. Elevation: Blooms: April–July	**Moderate Potential**. Several recent CNDDB and CalFlora occurrences on Howell Mountain Road. Several individuals were found by Mr. Ford during unrelated project surveys in Las Posadas State Forest approximately five miles east of the survey area.
Astragalus claranus	Clara Hunt's milk-vetch	FE	SE	1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland. Elevation: Blooms: March–May	**Low Potential.** There are no CNDDB or CalFlora occurrences within the survey area. Suitable woodland habitat is present within project area.
Brodiaea leptandra	Narrow-anthered brodiaea	--	--	1B.2	Foothill woodland, valley grassland. Elevation: Blooms: May–July	**Low Potential.** There are no CNDDb or CalFlora occurrences within 3-miles of the survey area. Suitable foothill woodland habitat present within project area.
Ceanothus divergens	Calistoga ceanothus	--	--	1B.2	Chapparal. Elevation: Blooms: February–April	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within survey area.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Ceanothus purpureus	Holly-leaved ceanothus	--	--	1B.2	Chapparal. Elevation: Blooms: March-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within project area
Ceanothus sonomensis	Sonoma ceanothus	--	--	1B.2	Chapparal. Elevation: Blooms: February-April	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within project area.
Eryngium constancei	Loch Lomond button-celery	FE	SE	1B.1	Vernal pools. Elevation: Blooms: April-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. There is no vernal pool habitat within the survey area.
Eryngium jepsonii	Jepson's coyote thistle	--	--	1B.2	Wetlands. Elevation: Blooms: April-August	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within survey area.
Hesperolinon sharsmithiae	Sharsmith's western flax	--	--	1B.2	Serpentine soils, chaparral. Elevation: Blooms: May-July	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. There are no serpentine soils or suitable habitat within survey area.
Lasthenia burkei	Burke's goldfields	FE	SE	1B.1	Meadows and seeps (mesic), vernal pools. Elevation: Blooms: April-June	**No Potential.** There There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. There is no suitable seeps and meadows.
Leptosiphon jepsonii	Jepson's leptosiphon	--	--	1B.2	Open or partially shaded grassy slopes. Elevation: Blooms: March-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable grassy slope habitat within survey area.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Limnanthes vinculans	Sepastopol meadowfoam	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools. Elevation: Blooms: April-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable meadows and seeps or vernal pool habitat within survey area.
Lupinus sericatus	Cobb Mountain lupine	--	--	1B.2	Yellow pine forest, foothill woodland, chaparral. Elevation: Blooms: March-June	**Low Potential.** There are no CNDDB or CalFlora occurrences near the survey area. There is suitable woodland habitat within survey area.
Navarretia leucocephala ssp. *pauciflora*	Few-flowered navarretia	FE	ST	1B.1	Vernal pools (volcanic ash) . Elevation: Blooms: May-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable vernal pool habitat within survey area.
Plagiobothrys strictus	Calistoga popcornflower	FE	ST	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools. Elevation: Blooms: March-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable vernal pools and seep habitat within survey area.
Poa napensis	Napa blue grass	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland. Elevation: Blooms: May-August	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area.
Sidalcea keckii	Keck's checkerbloom	FE	--	1B.1	Cismontane woodland, valley and foothill grassland. Elevation: Blooms: April-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area.
Sidalcea oregana ssp. *valida*	Kenwood Marsh checkerbloom	FE	SE	1B.1	Marshes and swamps (freshwater) . Elevation: Blooms: June-September	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within survey area.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Streptanthus hesperidis	Green jewelflower	--	--	1B.2	Rocky serpentine outcrops, chaparral, cypress woodlands. Elevation: Blooms: May-July	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable serpentine soils or cypress woodland habitat within survey area.
Trichostema ruygtii	Napa bluecurls	--	--	1B.2	Chaparral, oak woodland, mixed evergreen forest, vernal pools. Elevation: Blooms: June-October	**Low Potential.** There are no CNDDB or CalFlora occurrences near the survey area. There is suitable oak woodland habitat but no vernal pool habitat present within project area.
Trifolium amoenum	Two-fork clover	FE	--	1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite), moist, heavy soils, disturbed areas. Elevation: Blooms: April–July	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area.

Key to Federal and State Listing Status:

FE=Federally listed endangered, FT=Federally listed threatened, ST=State listed threatened, SE=State listed endangered, SR=State listed rare.

Key to CNPS codes:

CNPS 1A—CNPS list of plants that are presumed extinct in California

CNPS 1B—CNPS list of plants rare, threatened, or endangered in California and elsewhere

CNPS 2—CNPS list of plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

CNPS 3—CNPS list of plants About Which We Need More Information – A Review List

CNPS 4—CNPS list of plants of Limited Distribution—A Watch List

CNPS Threat/Extensions

0.1—Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

0.2—Fairly threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)

0.3—Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Attachment B

C-Store Replacement and New Car Wash Project Plant Species List

Table B-1. C-Store Replacement and New Car Wash Project plant species list.

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Acacia melanoxylon	Blackwood acacia	*Fabaceae*	N	--	--	--
Acer macrophyllum	Bigleaf maple	*Sapindaceae*	Y	--	--	--
Achillea millefolium	Common yarrow	*Asteraceae*	Y	--	--	--
Acmispon americanus var. *americanus*	Spanish lotus	*Fabaceae*	Y	--	--	--
Acmispon glaber var. *glaber*	Deerweed	*Fabaceae*	Y	--	--	--
Adiantum jordanii	Five-fingered fern	*Pteridaceae*	Y	--	--	--
Aesculus californicus	California buckeye	*Sapindaceae*	Y	--	--	--
Agapanthus praecox	Blue agapanthus	*Amaryllidaceae*	N	--	--	--
Alnus rhombifolia	White alder	*Betulaceae*	Y	--	--	--
Arbutus menziesii	Pacific madrone	*Ericaceae*	Y	--	--	--
Artemisia douglasii	Douglas' mugwort	*Asteraceae*	Y	--	--	--
Avena fatua	Wild oat	*Poaceae*	N	--	--	--
Baccharis pilularis ssp. *consanguinea*	Coyote brush	*Asteraceae*	Y	--	--	--
Briza maxima	Rattlesnake grass	*Poaceae*	N	--	--	--
Brodiaea elegans	Harvest brodiaea	*Themidaceae*	Y	--	--	--
Bromus diandrus	Ripgut brome	*Poaceae*	N	--	--	--
Bromus hordeaceus	Soft chess	*Poaceae*	N	--	--	--
Bromus madritensis ssp. *rubens*	Foxtail chess	*Poaceae*	N	--	--	--
*Buxus microphylla**	Japanese boxwood	*Buxaceae*	N	--	--	--
Calochortus albus	White globe lily	*Liliaceae*	Y	--	--	--
Calochortus amabilis	Diogene's lantern	*Liliaceae*	Y	--	--	--
Carduus pycnocephalus spp. *pycnocephalus*	Italian thistle	*Asteraceae*	N	--	--	--
Carex barbarae	Santa Barbara sedge	*Cyperaceae*	Y	--	--	--
Carex densa	Dense sedge	*Cyperaceae*	Y	--	--	--
Centaurea solstitialis	Yellow star thistle	*Asteraceae*	N	--	--	--
Chlorogalum pomeridianum var. *pomeridianum*	Wavy-leaf soaproot	*Agavaceae*	Y	--	--	--
Cichorium intybus	Chicory	*Asteraceae*	N	--	--	--
Cirsium vulgare	Bull thistle	*Asteraceae*	N	--	--	--
Convolvulus arvensis	Field bindweed	*Convolvulaceae*	N	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Cotoneaster pannosus	Woolly cotoneaster	*Rosaceae*	N	--	--	--
Crataegus monogyna	Hawthorn	*Rosaceae*	N	--	--	--
Cynodon dactylon	Bermudagrass	*Poaceae*	N	--	--	--
Cynosurus echinatus	Dogstail grass	*Poaceae*	N	--	--	--
Cyperus eragrostis	Tall flatsedge	*Cyperaceae*	Y	--	--	--
Dactylis glomerata	Orchard grass	*Poaceae*	N	--	--	--
Diplacus aurantiacus	Sticky monkeyflower	*Phrymaceae*	Y	--	--	--
Elymus glaucus	Blue wildrye	*Poaceae*	Y	--	--	--
Epilobium ciliatum ssp. *watsonii*	Willowherb	*Onagraceae*	Y	--	--	--
Erythranthe guttata	Common monkeyflower	*Phrymaceae*	Y	--	--	--
Eschscholzia californica	California poppy	*Papaveraceae*	Y	--	--	--
Euphorbia peplus	Petty spurge	*Euphorbiaceae*	N	--	--	--
Festuca microstachys	Sixweeks fescue	*Poaceae*	Y	--	--	--
Festuca myuros	Rattail sixweeks fescue	*Poaceae*	N	--	--	--
Galium aparine	Common cleavers	*Rubiaceae*	Y	--	--	--
Genista monspessulana	French broom	*Fabaceae*	N	--	--	--
Geranium dissectum	Cutleaf geranium	*Geraniaceae*	N	--	--	--
Gleditsia triacanthos	Honey locust	*Fabaceae*	N	--	--	--
Hedera helix	English ivy	*Araliaceae*	N	--	--	--
Helminthotheca echioides	Bristly oxtongue	*Asteraceae*	N	--	--	--
Heteromeles arbutifolia	Toyon	*Rosaceae*	Y	--	--	--
Hirschfeldia incana	Shortpod mustard	*Brassicaceae*	N	--	--	--
Holcus lanatus	Common velvetgrass	*Poaceae*	N	--	--	--
Hypochaeris glabra	Smooth cat's-ear	*Asteraceae*	N	--	--	--
Hypochaeris radicata	Rough cat's-ear	*Asteraceae*	N	--	--	--
Iris foetidissima	Stinking iris	*Iridaceae*	N	--	--	--
Juglans hindsii	California black walnut	*Juglandaceae*	Y	--	--	--
Juncus patens	Bog rush	*Juncaceae*	Y	--	--	--
Lactuca serriola	Prickly lettuce	*Asteraceae*	N	--	--	--
Lathyrus vestitus var. *vestitis*	Common Pacific pea	*Fabaceae*	Y	--	--	--
Lonicera hispidula	Pink honeysuckle	*Caprifoliaceae*	Y	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Lotus corniculatus	Bird's foot trefoil	*Fabaceae*	N	--	--	--
Lysimachia arvense	Scarlet pimpernel	*Myrsinaceae*	N	--	--	--
Madia sativa	Coast tarweed	*Asteraceae*	Y	--	--	--
*Malus domestica**	Apple	*Rosaceae*	N	--	--	--
Marah fabacea	California manroot	*Cucurbitaceae*	Y	--	--	--
Medicago polymorpha	California burclover	*Fabaceae*	N	--	--	--
Melica californica	California melic	*Poaceae*	Y	--	--	--
Melilotus albus	White sweet clover	*Fabaceae*	N	--	--	--
Mollugo verticillata	Common mollugo	*Molluginaceae*	N	--	--	--
*Nandina domestica**	Heavenly bamboo	*Berberidaceae*	N	--	--	--
*Nerium oleander**	Oleander	*Apocynaceae*	N	--	--	--
Paspalum dilatatum	Dallisgrass	*Poaceae*	N	--	--	--
Pentagramma triangularis	Gold back fern	*Pteridaceae*	Y	--	--	--
Pinus ponderosa	Ponderosa pine	*Pinaceae*	Y	--	--	--
*Pittosporum tobira**	Japanese pittosporum	*Pittosporaceae*	N	--	--	--
Plantago lanceolata	Lanceleaf plantain	*Plantaginaceae*	N	--	--	--
Plantago major	English plantain	*Plantaginaceae*	N	--	--	--
Poa annua	Annual bluegrass	*Poaceae*	N	--	--	--
Polycarpum tetraphyllum	Four-cornered allseed	*Caryophyllaceae*	N	--	--	--
Polygonum aviculare	Common knotweed	*Polygonaceae*	N	--	--	--
Portulaca oleracea	Common purslane	*Portulacaceae*	N	--	--	--
Prunus cerifera	Cherry plum	*Rosaceae*	N	--	--	--
Pseudotsuga menziesii	Douglas fir	*Pinaceae*	Y	--	--	--
Pyracantha sp.	Firethorn	*Rosaceae*	N	--	--	--
Quercus agrifolia	Coast live oak	*Fagaceae*	Y	--	--	--
Quercus chrysolepis	Canyon live oak	*Fagaceae*	Y	--	--	--
Quercus kelloggii	California black oak	*Fagaceae*	Y	--	--	--
Quercus lobata	Valley oak	*Fagaceae*	Y	--	--	--
Quercus wislizeni	Interior live oak	*Fagaceae*	Y	--	--	--
*Rhaphiolepis indica**	Indian hawthorn	*Rosaceae*	N	--	--	--
Robinia pseudoacacia	Black locust	*Fabaceae*	N	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Rosa californica	California rose	*Rosaceae*	Y	--	--	--
Rubus armeniacus	Himalayan blackberry	*Rosaceae*	N	--	--	--
Rubus ursinus	California blackberry	*Rosaceae*	Y	--	--	--
Rumex acetosella	Sheep sorrel	*Polygonaceae*	N	--	--	--
Rumex crispus	Curly dock	*Polygonaceae*	N	--	--	--
Sambucus mexicana	Blue elderberry	*Adoxaceae*	Y	--	--	--
Sequoia sempervirens[*]	Coast redwood	*Cupressaceae*	Y	--	--	--
Sonchus asper	Spiny sow thistle	*Asteraceae*	N	--	--	--
Sonchus oleraceus	Common sow thistle	*Asteraceae*	N	--	--	--
Spartium juncea	Spanish broom	*Fabaceae*	N	--	--	--
Spergularia rubra	Red sandspurry	*Caryophyllaceae*	N	--	--	--
Symphoricarpos laevigatus	Common snowberry	*Caprifoliaceae*	Y	--	--	--
Symphoricarpos mollis	Creeping snowberry	*Caprifoliaceae*	Y	--	--	--
Taraxacum officinale	Common dandelion	*Asteraceae*	N	--	--	--
Torilis arvensis	Field hedge parsley	*Apiaceae*	N	--	--	--
Toxicodendron diversilobum	Poison oak	*Anacardiaceae*	Y	--	--	--
Trifolium hirtum	Rose clover	*Fabaceae*	N	--	--	--
Trifolium repens	White clover	*Fabaceae*	N	--	--	--
Triteleia laxa	Ithuriel's spear	*Themidaceae*	Y	--	--	--
Umbellularia californica	California bay laurel	*Lauraceae*	Y	--	--	--
Vicia villosa	Hairy vetch	*Fabaceae*	N	--	--	--
Vinca major	Greater periwinkle	*Apocynaceae*	N	--	--	--
Vitis sp.	Grape	*Vitaceae*	N	--	--	--
Wyethia glabra	Coast Range mule's ears	*Asteraceae*	Y	--	--	--

*Species is planted and not naturally occurring.

Attachment C

C-Store Replacement and New Car Wash Rare Plant Survey Photos

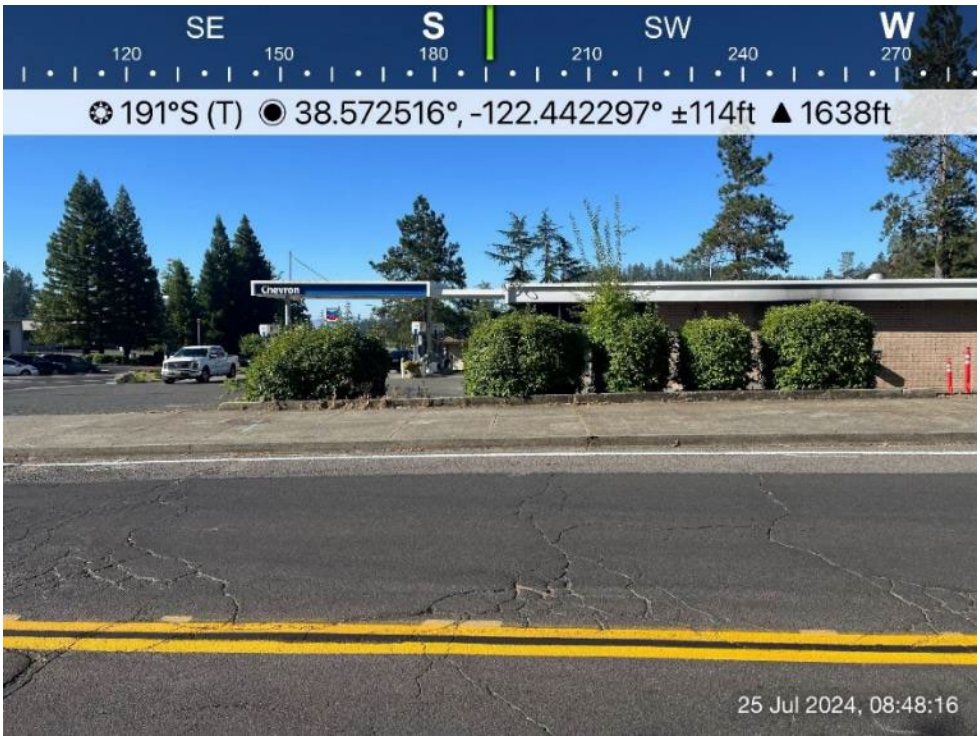

Photo 1. General view of the survey area from College Avenue.

Photo 2. Dense stand of blackwood acacia on the opposite side of College Avenue adjacent to survey area.

Photo 3. Heavy thicket of Himalayan blackberry along the foot trail downslope of the gas station property.

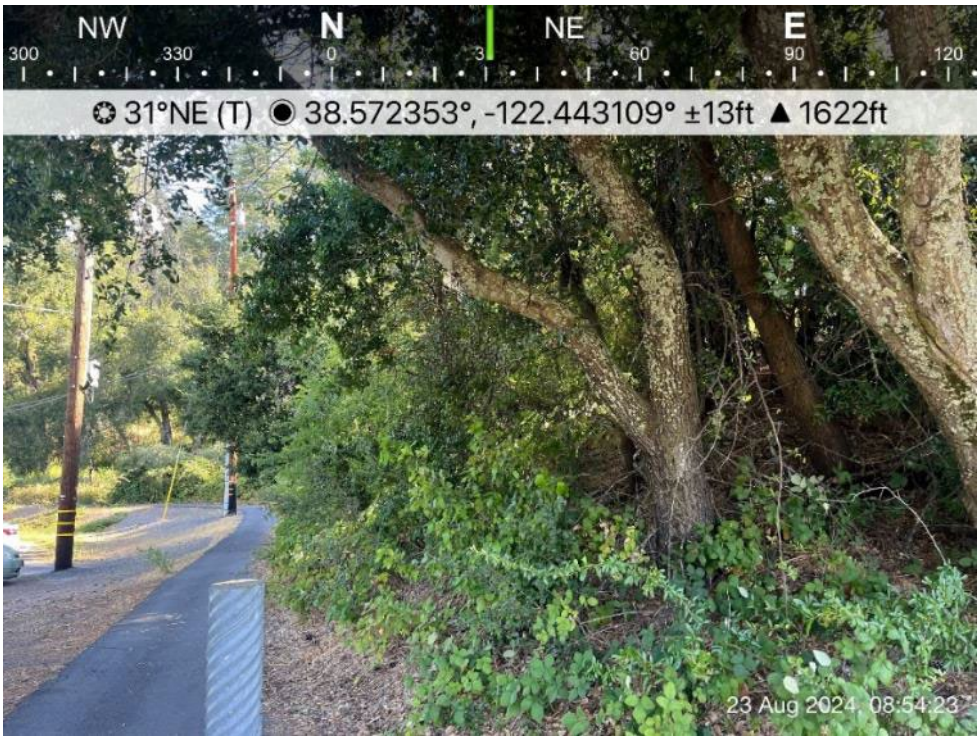

Photo 4. Oak stand along the foot path within the 500-foot buffer of the survey area.

Photo 5. Road cut along College Avenue adjacent to gas station property.

Photo 6. Pooling wet area caused by leaky irrigation and runoff downslope from the survey area.

Photo 7. View of burned out building and garage.

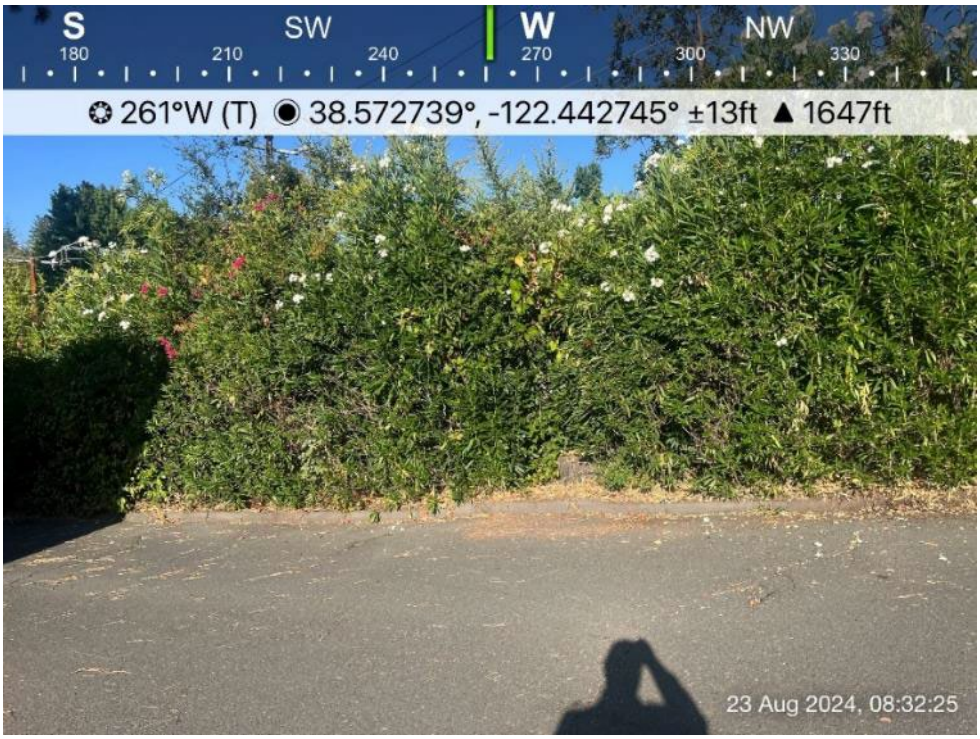

Photo 8. Shrub topiaries on the fringe of the gas station property.

SEQUOIA
Ecological Consulting, Inc.

Date: April 22, 2025

To: Sam Heier | Executive Director
Pacific Union College – Financial Administration
e. sheier@puc.edu | p. (707) 965-6233

From: Tatyana Soto-Bartzi | Botanist – Biologist
Sequoia Ecological Consulting, Inc.

Ari Rogers | Restoration Specialist – Project Manager
Sequoia Ecological Consulting, Inc.

Soumya Suresh | Project Biologist – Assistant Project Manager
Sequoia Ecological Consulting, Inc.

RE: **Preconstruction Special-Status Plant Survey Report**
C-Store Replacement and New Car Wash Project | Angwin, CA

INTRODUCTION

Sequoia Ecological Consulting, Inc. (Sequoia) performed a pre-construction survey of special-status (i.e., rare, threatened, or endangered) plant surveys on April 7, 2025 for Pacific Union College (PUC, Client) in support of the C-Store Replacement and New Car Wash Project (project) located in Angwin, California (Figures 1 and 2). The entire project site encompasses an approximately 1.28-acre area with an existing gas station and adjacent upland in Angwin, California. The project involves replacing the existing gas station, constructing a new carwash, and creating access areas for the construction.

The entire project area was surveyed per Comment #9 of the Napa County Planning, Building, and Environmental Services Division's *Application Status Letter* for the project (P23-00300; 2025) and Napa County's *Guidelines for Preparing Special Status Plant Studies* requirements (2016). To avoid impacts to sensitive plant species and natural communities within the survey area, Sequoia botanist Tatyana Soto-Bartzi conducted a pre-construction botanical survey throughout the project site following protocol survey guidelines provided by the California Department of Fish and Wildlife (CDFW 2018) and California Native Plant Society (CNPS 2001). The objective of the survey was to search for special-status plant and bryophytic species with potential to occur in the project area, determine the location and population status of each species, and evaluate the potential for impact to these species during construction. The survey was conducted on April 7, 2025, which coincided with the known blooming periods for the potentially occurring special-status plant species. Survey methods, results, and descriptions of plant communities found on the project site are provided below.

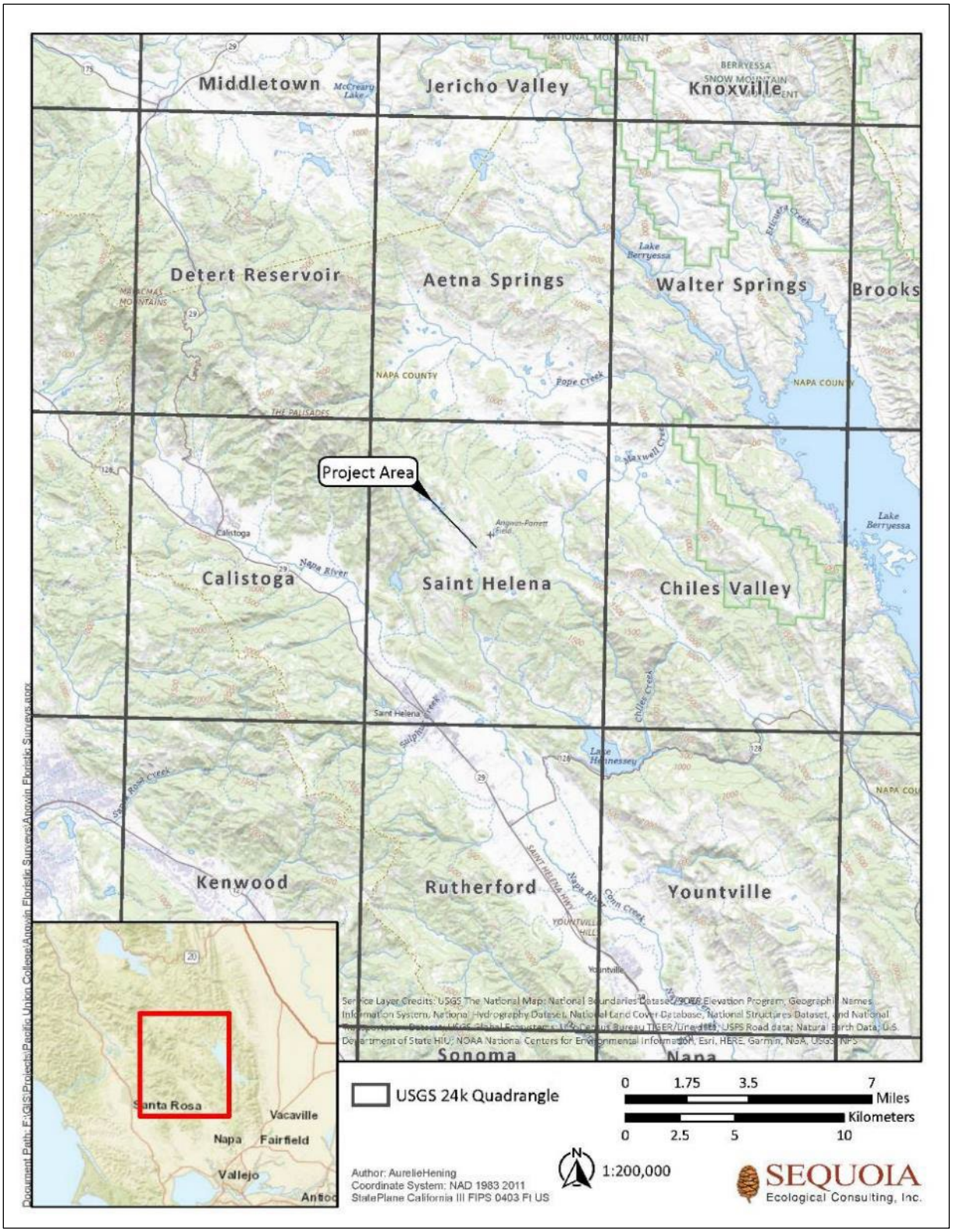

Figure 1. Regional map of the C-Store Replacement and New Car Wash Project site.

Figure 2. Location map of the C-Store Replacement and New Car Wash Project site.

PROJECT SITE LOCATION AND DESCRIPTION

The approximately 1.28-acre project site is located in the Census-Designated Place of Angwin in Napa County, California, along Howell Mountain Road between its intersection with College Avenue and Brookside Drive (Figures 1 and 2). The project site is comprised of a gas station and surrounding plant communities include mixed hardwood forest, semi–natural associations and alliances, and disturbed/ruderal communities. The area surveyed for this report includes the project site footprint, plus a surrounding 500-foot buffer.

SURVEY METHODS

Background Research

Prior to performing field surveys, a review of background literature was conducted to assess potential for special-status plant species to occur within the project site. Special-status plants are species listed under the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), the Native Plant Protection Act (NPPA), and/or the CNPS Rare Plant Inventory, including Ranks 1 to 4. The following CNPS Ranks definitions for rank are included in the following section:

- CNPS 1: Plants presumed extinct in California, and plants rare, threatened, or endangered in California and elsewhere
- CNPS 2: Plants rare, threatened, or endangered in California, but more common elsewhere
- CNPS 3: Plants needing more information to assess status. (CNPS Rank 3 plants have potential to be relisted as Rank 1 or 2)
- CNPS 4: Plants with a California Rare Plant Rank of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly.

Data sources queried included a CDFW California Natural Diversity Database (CNDDB; CDFW 2025) search of the project site and surrounding 5-mile buffer; CNPS Rare Plant Inventory (CNPS 2025) search for the St. Helena U.S. Geological Survey (USGS) 7.5’ quadrangle and surrounding eight quads; and U.S. Fish and Wildlife Service (USFWS) designated Critical Habitats (USFWS 2025). Soil Survey Geographic (SSURGO 2025) data were also reviewed for available substrate information to evaluate edaphic suitability for special-status species. Special-status plants with potential to occur in habitats present within the project site are discussed below. Existing rare plant occurrences and results of the CNDDB search can be found in Figure 3. A table of special-status plant species documented in the region during the background literature search along with their potential to occur on-site can be found in Attachment A.

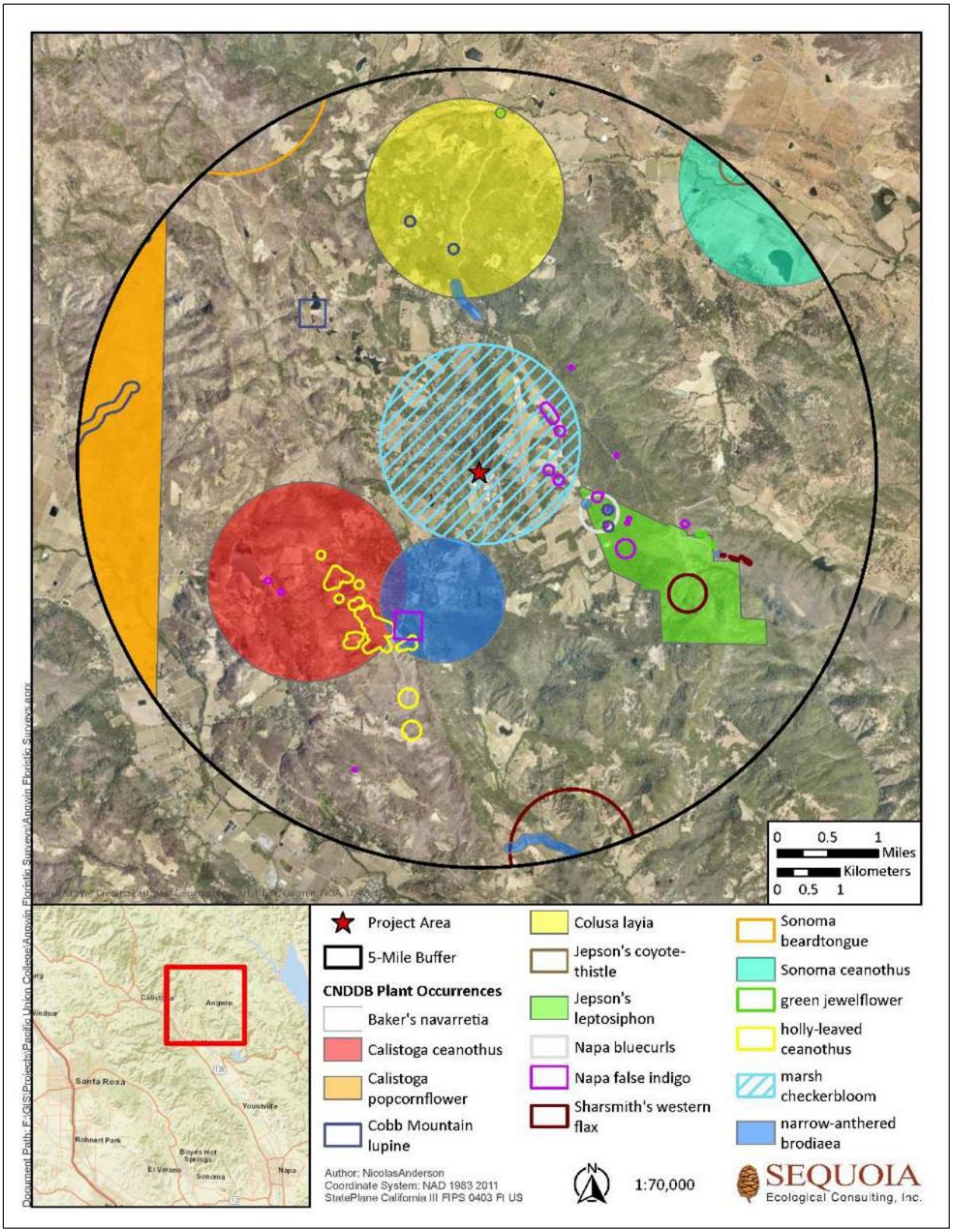

Figure 3. Records of CNDDB special-status plants within 5 miles of the project site.

RESULTS

Results of Sequoia's desktop review and protocol-level special-status plant surveys are provided below. Table A-1 (Attachment A) presents the potential for occurrence of special-status plant species known to occur in the vicinity of the project site, along with habitat requirements and occurrence of and basis for classification. Table B-1 (Attachment B) shows all plant species observed on the project site during focused surveys.

Background Research

During the initial desktop review, Sequoia identified twenty-two (22) special-status plants and bryophytes near and/or within the project site (Attachment A, Table A-1; Figure 3). Based on the absence of suitable habitat and/or substrate on-site, or the lack of nearby or recent occurrences, the majority of these 22 species were determined to have low to no potential to occur within the project site.

Topography, Hydrology, and Climate

This survey area is within the Census-Designated Plan of Angwin, located in northeastern Napa County on the Pacific Coast with an elevation of 1,749 feet above sea level (USGS 2010). The survey area encompasses a privately owned gas station and paved sidewalks, plus a 500-foot buffer which includes public roads, private apartments and businesses, and the Pacific Union College campus which includes ruderal roadside vegetation, planted ornamental gardens, oak woodland and marginal mixed-conifer woodland.

Mean average high temperature for the region is 70.6°F and average low is 43°F. (Western Regional Climate Center 2025) Average annual precipitation in the area ranges from 0.03 to 24.02 inches, occurring mainly between October and May (Western Regional Climate Center 2025).

Geology and Soils

Geology of the region consists of volcanic formations with a combination of Tertiary-age rock formed through pyroclastic and volcanic mudflow deposits and volcanic flow rocks, and marine metasedimentary and sedimentary sandstone, shale, and conglomerate laid down during the Late Cretaceous age (California Geological Survey 2010). The following soil types were mapped within the project site (NRCS 2025; Figure 4).

180—Tehama silt loam, 0 to 5 percent slopes

These soils occur in slopes from 0 to 5 percent, are non-saline and well-drained. They occur in terraces and alluvial fans along the base of the slopes. From the depth of 0 to 12 inches, the soil consists of silt loam and from the depth of 12 to 60 inches the soil consists of silty clay loam. The parent material to this soil type is sandstone and shale and it is not prone to flooding.

102—Aiken loam, 30 to 50 percent slopes

These soils occur on hillsides on the foot slope and side slopes in convex areas. While this soil is non saline and well-drained, it does have a restrictive layer from 40 to 60 inches to lithic bedrock. The layers consist of loam from 0 to 8 inches, clay loam from 8 to 14 inches, clay from 14 to 44 inches and un-weathered bedrock from 44 to 54 inches. This soil is residuum of weathered volcanic rock and is not prone to flooding.

Plant Communities

Per CDFW special-status plants survey guidelines, observations of general plant communities and sensitive natural communities need to be noted during field visits. Sequoia assessed existing vegetation maps to help focus surveys on-site and determine where special-status species were most likely to occur. Sequoia assessed all vegetation types on-site and performed ground truth analyses for habitats. Vegetation classification broadly followed the classification provided by Sawyer, Keeler-Wolf, and Evens (2009). Plant naming nomenclature follows the Jepson Manual (Baldwin et al. 2012) and the Jepson eFlora Project (2025). Of the habitat types found within Napa County, three different vegetation alliances within two overall plant communities were identified on the project site during the surveys; each is described below, and specific habitats can be found listed under each type. Sensitive communities and semi-natural associations and alliances are also listed below.

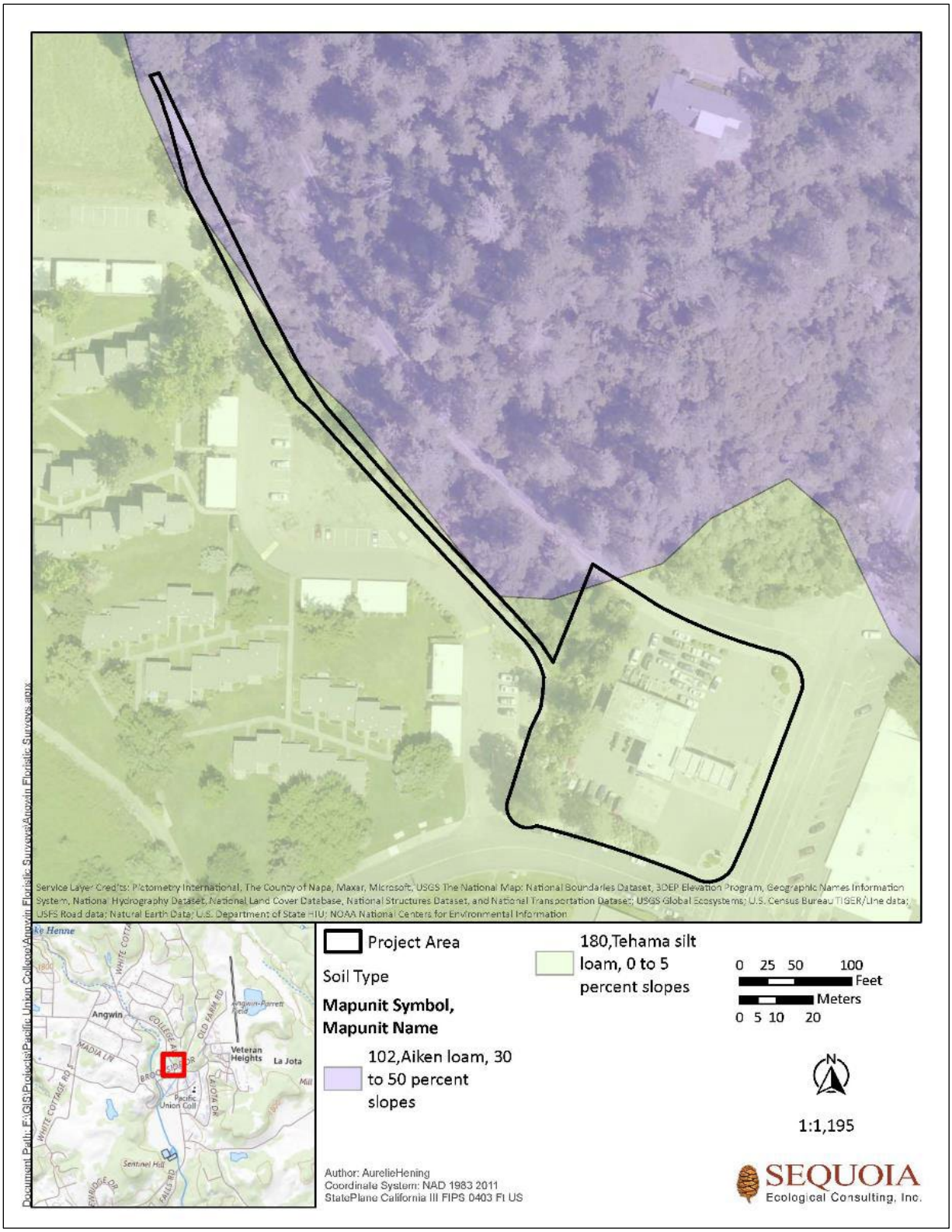

Figure 4. NRCS web soil survey map of the project site.

Mixed Hardwood Forest

Mixed hardwood woodlands are large tracts of habitat which are dominated primarily by oaks (genus *Quercus*), normally growing in dense or scattered canopies. Other hardwoods present in this habitat type include California bay laurel (*Umbellularia californica*), toyon (*Heteromeles arbutifolia*), and Pacific madrone (*Arbutus menziesii*). Throughout the survey area buffer, small stands of Douglas fir (*Pseudotsuga menziesii*) were found in small numbers. Within the survey area, mixed oak bay woodlands were present consisting of coast live oak (*Quercus agrifolia*), California black oak (*Q. kelloggii*), canyon live oak (*Q. chrysolepis*), and California bay laurel. The understories of all types of oak forests consist of a heavily of grasses and forbs, including wild oat (*Avena fatua*), brome (*Bromus* spp.), fescue (*Festuca* spp.), melic (*Melica* spp.), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), hedge nettle (*Stachys bullata*), field hedge parsley (*Torilis arvensis*), various aster species, poison oak (*Toxicodendron diversilobum*), and assorted shrubs.

The following alliances have been identified within this habitat within the survey area:

- *Quercus agrifolia* Woodland Alliance
- *Quercus wislizeni* Woodland Alliance

Semi-Natural Associations and Alliances

In California and specifically the central coast region, non-native trees are commonly observed planted in single rows or in clumps, often as windbreaks. The broom species not native to California, including French broom (*Genista monspessulana*) dominated canopies along with some *Cotoneaster* species.

The following alliances were found within this habitat.

- *Cytisus scoparius* – *Genista monspessulana* – *Cotoneaster* spp. Semi-Natural Alliance

Disturbed/Ruderal

The survey area consists of developed and/or barren areas. This habitat is primarily areas that are paved or have some form of infrastructural construction that is devoid mainly of plant life. These areas lack soil, and any surviving plants are typically hardy, non-native forbs and grasses.

Sensitive Natural Communities

No sensitive habitat communities designated as vulnerable by CDFW were identified within the survey area. All listed communities ranked 1 to 3 are considered rare in California. Habitat classification follows the system documented through CDFW's *California Sensitive Natural Communities* list (CDFW 2023).

Field Surveys

Floristic surveys entailing multiple survey visits to capture full floristic diversity across various blooming seasons were conducted within the project site. The pre-construction special-status plant survey performed on the project site was conducted by Sequoia botanist Tatyana Soto-Bartzi on April 7, 2025. The survey was conducted during the appropriate flowering period for special-status plants known to occur in the region of the project, as identified during the desktop review (Attachment A), and in accordance with CDFW (2018), CNPS (2001), and County of Napa (2016) published survey guidelines stating that special-status plant surveys should be conducted at the proper time of year when special-status plants would be identifiable if present. The survey was conducted by walking meandering transects through the survey area. All plant species observed during the surveys were documented and identified to the level necessary to determine rarity status. Plants that could not be identified in the field were taken back to the lab and keyed using Biedleman and Kozlof (2014), Baldwin et al. (2012), Ruygt (2020), and the Jepson eFlora (Jepson eFlora Project 2025). A list of all vascular plant taxa encountered within the project site is included in Table B-1 (Attachment B).

During the April 2025 plant survey, none of the twenty-two (22) special-status plant species identified during the desktop review were detected within the project site or surrounding 500-foot survey buffer. Additionally, one hundred and thirty-eight (138) distinct species of vascular plants were documented throughout the project site (Attachment B). Attachment C contains a photolog of the survey area and representative photos of the habitat on-site.

CONCLUSION

No special-status plant species or sensitive natural communities were identified within the project site or surrounding 500-foot buffer during Sequoia's April 2025 pre-construction botanical surveys. Accordingly, project implementation and construction is not anticipated to impact special-status plant species or sensitive natural communities. These surveys fulfill Comment #9 of the Napa County *Application Status Letter* for the project and the requirements of Napa County's *Guidelines for Preparing Special Status Plant Studies*.

If you have any questions or concerns regarding this report, please do not hesitate to contact us at the email addresses or phone numbers listed below. Thank you for the opportunity to support you with this project.

Sincerely,

Soumya Suresh
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Attachments

- Attachment A – Special-Status Plant Table
- Attachment B – CSRNCW Plant Species List
- Attachment C – Survey Photos

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Attachment A

Special-Status Plant Table

Table A-1. Special-status plant species with potential to occur on the C-Store Replacement and New Car Wash Project site.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Alopecurus aequalis var. *sonomensis*	Sonoma alopecurus	FE	--	1B.1	Marshes and swamps (freshwater), riparian scrub. Elevation: Blooms: May–July	**No Potential.** No CNDDB, CalFlora or iNaturalist occurrences recorded within three miles of the project. There is no suitable freshwater marshes and swamps within the survey area.
Amorpha californica var. *napensis*	Napa false indigo	--	--	1B.2	Cismontane woodland, chaparral, open slopes. Elevation: Blooms: April–July	**Moderate Potential**. Several recent CNDDB and CalFlora occurrences on Howell Mountain Road. Several individuals were found during unrelated project surveys in Las Posadas State Forest approximately five miles east of the survey area.
Astragalus claranus	Clara Hunt's milk-vetch	FE	SE	1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland. Elevation: Blooms: March–May	**Low Potential.** There are no CNDDB or CalFlora occurrences within the survey area. Suitable woodland habitat is present within project area.
Brodiaea leptandra	Narrow-anthered brodiaea	--	--	1B.2	Foothill woodland, valley grassland. Elevation: Blooms: May–July	**Low Potential.** There are no CNDDb or CalFlora occurrences within 3-miles of the survey area. Suitable foothill woodland habitat present within project area.
Ceanothus divergens	Calistoga ceanothus	--	--	1B.2	Chapparal. Elevation: Blooms: February–April	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within survey area.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Ceanothus purpureus	Holly-leaved ceanothus	--	--	1B.2	Chapparal. Elevation: Blooms: March-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within project area
Ceanothus sonomensis	Sonoma ceanothus	--	--	1B.2	Chapparal. Elevation: Blooms: February-April	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within project area.
Eryngium constancei	Loch Lomond button-celery	FE	SE	1B.1	Vernal pools. Elevation: Blooms: April-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. There is no vernal pool habitat within the survey area.
Eryngium jepsonii	Jepson's coyote thistle	--	--	1B.2	Wetlands. Elevation: Blooms: April-August	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within survey area.
Hesperolinon sharsmithiae	Sharsmith's western flax	--	--	1B.2	Serpentine soils, chaparral. Elevation: Blooms: May-July	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. There are no serpentine soils or suitable habitat within survey area.
Lasthenia burkei	Burke's goldfields	FE	SE	1B.1	Meadows and seeps (mesic), vernal pools. Elevation: Blooms: April-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. There is no suitable seeps and meadows.
Leptosiphon jepsonii	Jepson's leptosiphon	--	--	1B.2	Open or partially shaded grassy slopes. Elevation: Blooms: March-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable grassy slope habitat within survey area.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Limnanthes vinculans	Sepastopol meadowfoam	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools. Elevation: Blooms: April-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable meadows and seeps or vernal pool habitat within survey area.
Lupinus sericatus	Cobb Mountain lupine	--	--	1B.2	Yellow pine forest, foothill woodland, chaparral. Elevation: Blooms: March-June	**Low Potential.** There are no CNDDB or CalFlora occurrences near the survey area. There is suitable woodland habitat within survey area.
Navarretia leucocephala ssp. *pauciflora*	Few-flowered navarretia	FE	ST	1B.1	Vernal pools (volcanic ash) . Elevation: Blooms: May-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable vernal pool habitat within survey area.
Plagiobothrys strictus	Calistoga popcornflower	FE	ST	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools. Elevation: Blooms: March-June	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable vernal pools and seep habitat within survey area.
Poa napensis	Napa blue grass	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland. Elevation: Blooms: May-August	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area.
Sidalcea keckii	Keck's checkerbloom	FE	--	1B.1	Cismontane woodland, valley and foothill grassland. Elevation: Blooms: April-May	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area.
Sidalcea oregana ssp. *valida*	Kenwood Marsh checkerbloom	FE	SE	1B.1	Marshes and swamps (freshwater) . Elevation: Blooms: June-September	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable habitat within survey area.

Scientific Name	Common Name	Listing Status			Habitat	Potential for Occurrence
		Federal	State	CNPS		
Streptanthus hesperidis	Green jewelflower	--	--	1B.2	Rocky serpentine outcrops, chaparral, cypress woodlands. Elevation: Blooms: May-July	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area. No suitable serpentine soils or cypress woodland habitat within survey area.
Trichostema ruygtii	Napa bluecurls	--	--	1B.2	Chaparral, oak woodland, mixed evergreen forest, vernal pools. Elevation: Blooms: June-October	**Low Potential.** There are no CNDDB or CalFlora occurrences near the survey area. There is suitable oak woodland habitat but no vernal pool habitat present within project area.
Trifolium amoenum	Two-fork clover	FE	--	1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite), moist, heavy soils, disturbed areas. Elevation: Blooms: April–July	**No Potential.** There are no CNDDB, CalFlora or iNaturalist occurrences near the survey area.

Key to Federal and State Listing Status:

FE=Federally listed endangered, FT=Federally listed threatened, ST=State listed threatened, SE=State listed endangered, SR=State listed rare.

Key to CNPS codes:

CNPS 1A—CNPS list of plants that are presumed extinct in California

CNPS 1B—CNPS list of plants rare, threatened, or endangered in California and elsewhere

CNPS 2—CNPS list of plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

CNPS 3—CNPS list of plants About Which We Need More Information – A Review List

CNPS 4—CNPS list of plants of Limited Distribution—A Watch List

CNPS Threat/Extensions

0.1—Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

0.2—Fairly threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)

0.3—Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Attachment B

C-Store Replacement and New Car Wash Project Plant Species List

Table B-1. C-Store Replacement and New Car Wash Project plant species list.

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Acacia melanoxylon	Blackwood acacia	*Fabaceae*	N	--	--	--
Acer macrophyllum	Bigleaf maple	*Sapindaceae*	Y	--	--	--
Achillea millefolium	Common yarrow	*Asteraceae*	Y	--	--	--
Acmispon americanus var. *americanus*	Spanish lotus	*Fabaceae*	Y	--	--	--
Acmispon glaber var. *glaber*	Deerweed	*Fabaceae*	Y	--	--	--
Adiantum jordanii	Five-fingered fern	*Pteridaceae*	Y	--	--	--
Aesculus californicus	California buckeye	*Sapindaceae*	Y	--	--	--
Agapanthus praecox	Blue agapanthus	*Amaryllidaceae*	N	--	--	--
Alnus rhombifolia	White alder	*Betulaceae*	Y	--	--	--
Arbutus menziesii	Pacific madrone	*Ericaceae*	Y	--	--	--
Artemisia douglasii	Douglas' mugwort	*Asteraceae*	Y	--	--	--
Athyrium filix-femina	Lady fern	*Dryopteridaceae*	Y	--	--	--
Avena fatua	Wild oat	*Poaceae*	N	--	--	--
Baccharis pilularis ssp. *consanguinea*	Coyote brush	*Asteraceae*	Y	--	--	--
Briza maxima	Rattlesnake grass	*Poaceae*	N	--	--	--
Brodiaea elegans	Harvest brodiaea	*Themidaceae*	Y	--	--	--
Bromus diandrus	Ripgut brome	*Poaceae*	N	--	--	--
Bromus hordeaceus	Soft chess	*Poaceae*	N	--	--	--
Bromus madritensis ssp. *rubens*	Foxtail chess	*Poaceae*	N	--	--	--
*Buxus microphylla**	Japanese boxwood	*Buxaceae*	N	--	--	--
Calochortus albus	White globe lily	*Liliaceae*	Y	--	--	--
Calochortus amabilis	Diogene's lantern	*Liliaceae*	Y	--	--	--
Cardamine oligosperma	Little western bittercress	*Brassicaceae*	Y	--	--	--
Carduus pycnocephalus spp. *pycnocephalus*	Italian thistle	*Asteraceae*	N	--	--	--
Carex barbarae	Santa Barbara sedge	*Cyperaceae*	Y	--	--	--
Carex densa	Dense sedge	*Cyperaceae*	Y	--	--	--
Centaurea solstitialis	Yellow star thistle	*Asteraceae*	N	--	--	--
Cerastium glomeratum	Sticky mouse-ear chickweed	*Caryophyllaceae*	N	--	--	--
Chlorogalum pomeridianum var. *pomeridianum*	Wavy-leaf soaproot	*Agavaceae*	Y	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Cichorium intybus	Chicory	*Asteraceae*	N	--	--	--
Cirsium vulgare	Bull thistle	*Asteraceae*	N	--	--	--
Clarkia sp.	Evening primrose	*Onagraceae*	Y	--	--	--
Claytonia perfoliata	Miner's lettuce	*Montiaceae*	Y	--	--	--
Conium maculatum	Poison hemlock	*Apiaceae*	N	--	--	--
Convolvulus arvensis	Field bindweed	*Convolvulaceae*	N	--	--	--
Cotoneaster pannosus	Woolly cotoneaster	*Rosaceae*	N	--	--	--
Crataegus monogyna	Hawthorn	*Rosaceae*	N	--	--	--
Cynodon dactylon	Bermudagrass	*Poaceae*	N	--	--	--
Cynosurus echinatus	Dogstail grass	*Poaceae*	N	--	--	--
Cyperus eragrostis	Tall flatsedge	*Cyperaceae*	Y	--	--	--
Dactylis glomerata	Orchard grass	*Poaceae*	N	--	--	--
Diplacus aurantiacus	Sticky monkeyflower	*Phrymaceae*	Y	--	--	--
Dryopteris arguta	Coastal woodfern	*Dryopteridaceae*	Y	--	--	--
Elymus glaucus	Blue wildrye	*Poaceae*	Y	--	--	--
Epilobium ciliatum ssp. *watsonii*	Willowherb	*Onagraceae*	Y	--	--	--
Erodium cicutarium	Common stork's-bill	*Geraniaceae*	N	--	--	--
Erythranthe guttata	Common monkeyflower	*Phrymaceae*	Y	--	--	--
Eschscholzia californica	California poppy	*Papaveraceae*	Y	--	--	--
Euphorbia peplus	Petty spurge	*Euphorbiaceae*	N	--	--	--
Festuca microstachys	Sixweeks fescue	*Poaceae*	Y	--	--	--
Festuca myuros	Rattail sixweeks fescue	*Poaceae*	N	--	--	--
Foeniculum vulgare	Fennel	*Apiaceae*	N	--	--	--
Galium aparine	Common cleavers	*Rubiaceae*	Y	--	--	--
Genista monspessulana	French broom	*Fabaceae*	N	--	--	--
Geranium dissectum	Cutleaf geranium	*Geraniaceae*	N	--	--	--
Geranium purpureum	Little-robin	*Geraniaceae*	N	--	--	--
Gleditsia triacanthos	Honey locust	*Fabaceae*	N	--	--	--
Hedera helix	English ivy	*Araliaceae*	N	--	--	--
Helminthotheca echioides	Bristly oxtongue	*Asteraceae*	N	--	--	--
Heteromeles arbutifolia	Toyon	*Rosaceae*	Y	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Hirschfeldia incana	Shortpod mustard	*Brassicaceae*	N	--	--	--
Holcus lanatus	Common velvetgrass	*Poaceae*	N	--	--	--
Hypochaeris glabra	Smooth cat's-ear	*Asteraceae*	N	--	--	--
Hypochaeris radicata	Rough cat's-ear	*Asteraceae*	N	--	--	--
Iris foetidissima	Stinking iris	*Iridaceae*	N	--	--	--
Iris macrosiphon	Long-tube iris	*Iridaceae*	Y	--	--	--
Juglans hindsii	California black walnut	*Juglandaceae*	Y	--	--	--
Juncus patens	Bog rush	*Juncaceae*	Y	--	--	--
Lactuca serriola	Prickly lettuce	*Asteraceae*	N	--	--	--
Lamium amplexicaule	Henbit deadnettle	*Lamiaceae*	N	--	--	--
Lathyrus vestitus var. *vestitis*	Common Pacific pea	*Fabaceae*	Y	--	--	--
Lonicera hispidula	Pink honeysuckle	*Caprifoliaceae*	Y	--	--	--
Lotus corniculatus	Bird's foot trefoil	*Fabaceae*	N	--	--	--
Lupinus bicolor	Miniature lupine	*Fabaceae*	Y	--	--	--
Lysimachia arvense	Scarlet pimpernel	*Myrsinaceae*	N	--	--	--
Madia sativa	Coast tarweed	*Asteraceae*	Y	--	--	--
Malus domestica[*]	Apple	*Rosaceae*	N	--	--	--
Marah fabacea	California manroot	*Cucurbitaceae*	Y	--	--	--
Medicago polymorpha	California burclover	*Fabaceae*	N	--	--	--
Melica californica	California melic	*Poaceae*	Y	--	--	--
Melilotus albus	White sweet clover	*Fabaceae*	N	--	--	--
Mollugo verticillata	Common mollugo	*Molluginaceae*	N	--	--	--
Nandina domestica[*]	Heavenly bamboo	*Berberidaceae*	N	--	--	--
Nemophila heterophylla	Small baby blue eyes	*Boraginaceae*	Y	--	--	--
Nerium oleander[*]	Oleander	*Apocynaceae*	N	--	--	--
Oemleria cerasiformis	Osoberry	*Oemleria*	Y	--	--	--
Paspalum dilatatum	Dallisgrass	*Poaceae*	N	--	--	--
Pedicularis densiflora	Indian warrior	*Orbanchaceae*	Y	--	--	--
Pentagramma triangularis	Gold back fern	*Pteridaceae*	Y	--	--	--
Physocarpus capitatus	Pacific ninebark	*Rosaceae*	Y	--	--	--
Pinus ponderosa	Ponderosa pine	*Pinaceae*	Y	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
*Pittosporum tobira**	Japanese pittosporum	*Pittosporaceae*	N	--	--	--
Plantago lanceolata	Lanceleaf plantain	*Plantaginaceae*	N	--	--	--
Plantago major	English plantain	*Plantaginaceae*	N	--	--	--
Poa annua	Annual bluegrass	*Poaceae*	N	--	--	--
Polycarpum tetraphyllum	Four-cornered allseed	*Caryophyllaceae*	N	--	--	--
Polygonum aviculare	Common knotweed	*Polygonaceae*	N	--	--	--
Polypodium californica	California polypody	*Polypodiaceae*	Y	--	--	--
Portulaca oleracea	Common purslane	*Portulacaceae*	N	--	--	--
Prunus cerifera	Cherry plum	*Rosaceae*	N	--	--	--
Pseudotsuga menziesii	Douglas fir	*Pinaceae*	Y	--	--	--
Pyracantha sp.	Firethorn	*Rosaceae*	N	--	--	--
Quercus agrifolia	Coast live oak	*Fagaceae*	Y	--	--	--
Quercus chrysolepis	Canyon live oak	*Fagaceae*	Y	--	--	--
Quercus kelloggii	California black oak	*Fagaceae*	Y	--	--	--
Quercus lobata	Valley oak	*Fagaceae*	Y	--	--	--
Quercus wislizeni	Interior live oak	*Fagaceae*	Y	--	--	--
Raphanus raphanistrum	Wild radish	*Brassicaceae*	N	--	--	--
*Rhaphiolepis indica**	Indian hawthorn	*Rosaceae*	N	--	--	--
Robinia pseudoacacia	Black locust	*Fabaceae*	N	--	--	--
Rosa californica	California rose	*Rosaceae*	Y	--	--	--
Rubus armeniacus	Himalayan blackberry	*Rosaceae*	N	--	--	--
Rubus ursinus	California blackberry	*Rosaceae*	Y	--	--	--
Rumex acetosella	Sheep sorrel	*Polygonaceae*	N	--	--	--
Rumex crispus	Curly dock	*Polygonaceae*	N	--	--	--
Sambucus mexicana	Blue elderberry	*Adoxaceae*	Y	--	--	--
Sanicula crassicaulis	Pacific sanicle	*Apiaceae*	Y	--	--	--
*Sequoia sempervirens**	Coast redwood	*Cupressaceae*	Y	--	--	--
Sonchus asper	Spiny sow thistle	*Asteraceae*	N	--	--	--
Sonchus oleraceus	Common sow thistle	*Asteraceae*	N	--	--	--
Spartium juncea	Spanish broom	*Fabaceae*	N	--	--	--
Spergularia rubra	Red sandspurry	*Caryophyllaceae*	N	--	--	--

Scientific Name	Common Name	Family	Native Y/N	CNPS Ranking	Federal Listing	State Listing
Stachys sp.	Hedgenettle	*Lamiaceae*	Y	--	--	--
Symphoricarpos laevigatus	Common snowberry	*Caprifoliaceae*	Y	--	--	--
Symphoricarpos mollis	Creeping snowberry	*Caprifoliaceae*	Y	--	--	--
Taraxacum officinale	Common dandelion	*Asteraceae*	N	--	--	--
Torilis arvensis	Field hedge parsley	*Apiaceae*	N	--	--	--
Toxicodendron diversilobum	Poison oak	*Anacardiaceae*	Y	--	--	--
Trifolium hirtum	Rose clover	*Fabaceae*	N	--	--	--
Trifolium repens	White clover	*Fabaceae*	N	--	--	--
Trillium ovatum	Western trillium	*Melanthiaceae*	Y	--	--	--
Triteleia laxa	Ithuriel's spear	*Themidaceae*	Y	--	--	--
Umbellularia californica	California bay laurel	*Lauraceae*	Y	--	--	--
Vicia villosa	Hairy vetch	*Fabaceae*	N	--	--	--
Vicia sativa	Common vetch	*Fabaceae*	N	--	--	--
Vinca major	Greater periwinkle	*Apocynaceae*	N	--	--	--
Vitis sp.	Grape	*Vitaceae*	N	--	--	--
Wyethia glabra	Coast Range mule's ears	*Asteraceae*	Y	--	--	--

*Species is planted and not naturally occurring.

Attachment C

C-Store Replacement and New Car Wash Pre-Construction Rare Plant Survey Photos

Photo 1. General view of the survey area from College Avenue.

Photo 2. Vegetation along the uphill side of the of the gas station property.

Photo 3. Vegetation along the foot path within the 500-foot buffer of the survey area.

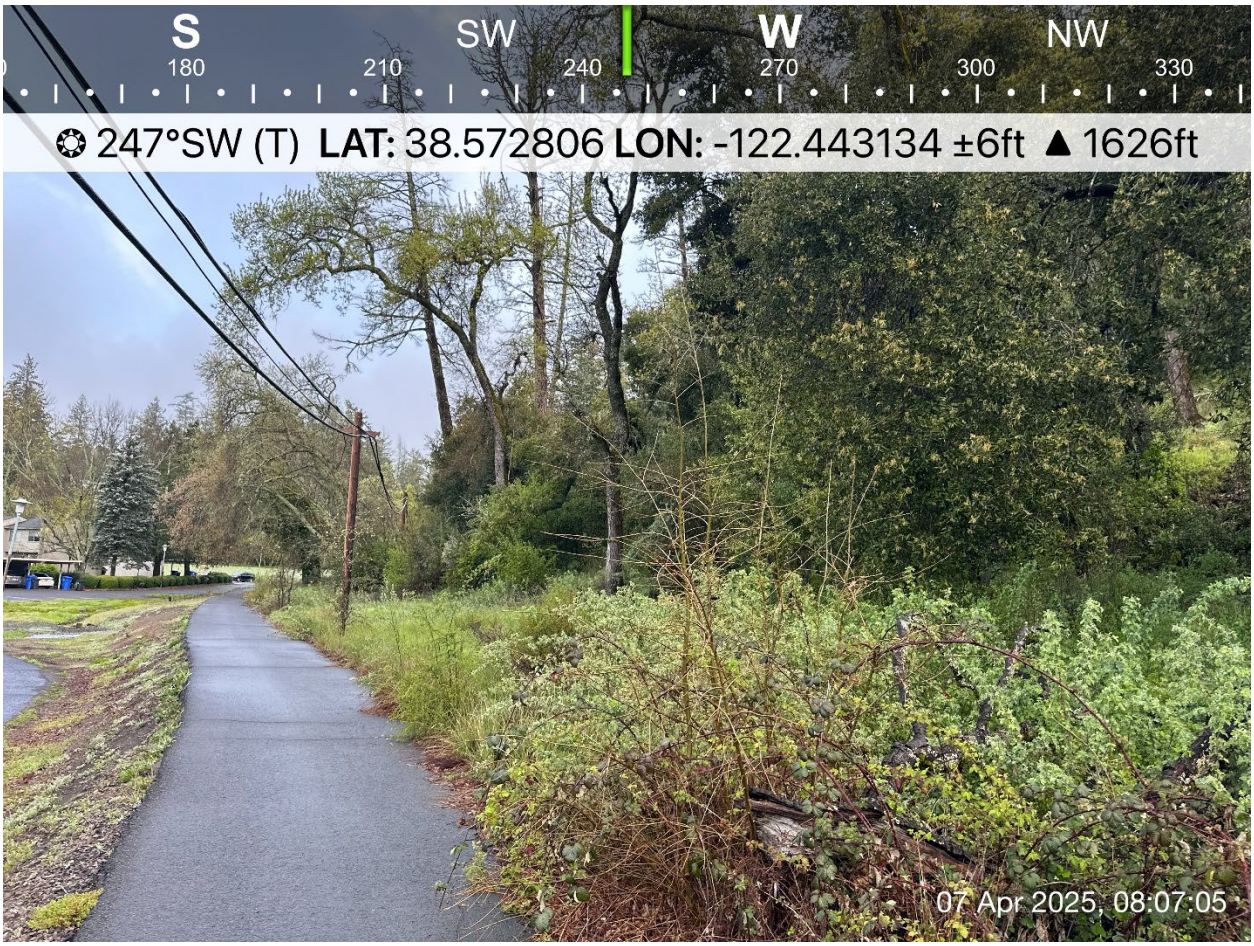

Photo 4. Road cut along College Avenue adjacent to gas station property.

Photo 5. View of burned out building and garage.