



CALIFORNIA
NATIVE PLANT SOCIETY

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California's native
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November 7, 2022

Robert Salisbury, Senior Planner
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submitted via email to: sgtquarry.comments@pln.sccgov.org
CC: planning.commission@pln.sccgov.org, boardoperations@cob.sccgov.org

Re: California Native Plant Society Comments on Sargent Ranch Quarry, Draft Environmental Impact Report, SCH # 2016072058

Dear Mr. Salisbury:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) regarding the proposed Sargent Ranch Quarry (SRQ). The following comments are submitted on behalf of the California Native Plant Society (CNPS), a non-profit environmental organization with over 12,000 members in 35 Chapters across California and Baja California, Mexico. CNPS's mission is to protect California's native plant heritage and preserve it for future generations through the application of science, research, education, and conservation. We work closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices.

CNPS writes in opposition to the Sargent Ranch Quarry project (SCH#2016072058) and urges the Planning Commission to recommend that the Santa Clara County Board of Supervisors (BOS) deny the project. The project will have significant and irreversible impacts to cultural and biological resources, and the DEIR has failed to adequately establish baseline conditions and analyze impacts to biological resources to justify, based on substantial evidence, that the proposed mitigation measures for biological impacts will be effective. Below we outline in greater detail the multitude of issues related to the project and the deficiencies in the DEIR, and for these reasons the project should be denied.

Special-Status Plant Species and Floristic Surveys

The DEIR has failed to adequately analyze the project's impacts to botanical resources because sufficiently recent, protocol-level floristic surveys for special-status plants and

sensitive natural communities have not been performed. As stated in section 3.4-1 of the DEIR, “Although none of these species has been detected in the Project area, no focused surveys for these species have been performed, and given the presence of suitable habitat, these species could be present in the Project area.” Mitigation Measure 3.4-1 relies on preconstruction focused surveys to determine the presence or absence of only the 10 special-status species that the EIR identified as having potential to occur on the site. Deferring biological studies until after project approval in this manner prevents public comment and oversight over the protection of these species, and runs afoul of CEQA’s requirement that the lead agency analyze and disclose a project’s impacts to the public before the project is approved. The lack of botanical surveys also precludes the development of species specific mitigation measures that have been reviewed and vetted by the responsible agencies and the public prior to the approval of the project, which is required by CEQA.

The 10 special-status plant species with the potential to occur in the project area listed in table 3.4-2 do not match any of the species occurrences listed in figure 3.4-5, nor do they match the list of potentially occurring special-status species listed on pages 41-45 of the Live Oak Associates (LOA) report in Appendix E. We question why the species with known CNDDDB locations within the project area are not included in the list of special-status species with the potential to occur. The plant list in table 3.4-2 appears to be pulled from the H. T. Harvey peer review of the LOA report, although the majority of these species are not shown to be found in any of the quads surrounding the project area in the nine quad plant list produced by CNPS during the review of this DEIR, in the special-status list produced by LOA, or their list of observed species on pages 112-122 of the LOA Biotic Evaluation. Congdon’s tarplant (*Centromadia parryi* ssp. *congdonii*) is the only species that appears in both table 3.4-2 and the LOA list of potentially occurring special-status species. The LOA findings suggest that, in addition to Congdon’s tarplant, roundleaf filaree (*California macrophylla*), fragrant fritillary (*Fritillaria liliacea*), Loma Prieta hoita (*Hoita strobilina*), pink creamsacs (*Castilleja rubicundula* ssp. *rubicundula*), and big-scale balsamorhiza (*Balsamorhiza macrolepis* var. *macrolepis*) could be present in the project vicinity. Our CNPS Rare Plant Inventory¹ (RPI) search of the Chittenden Quad (3612185) shows nine California Rare Plant Rank (CRPR) taxa, none of which are in table 3.4-2, however six of these species are listed as having known occurrences in figure 3.4-5. We have included a comparison of the various lists in Exhibit A. The CNPS RPI lists two CRPR 4.2 species (watch list species that are uncommon in California with limited distribution), serpentine leptosiphon (*Leptosiphon ambiguus*) and large-flowered leptosiphon (*Leptosiphon grandiflorus*), in addition to the seven CRPR 1B taxa (species rare, threatened, or endangered in California and elsewhere) listed in the California

¹ [https://rareplants.cnps.org/Search/result?fm=T&sl=1&quad=3612185:](https://rareplants.cnps.org/Search/result?fm=T&sl=1&quad=3612185)

Natural Diversity Database² (CNDDDB). Douglas' fiddleneck (*Amsinckia douglasiana*) is another CRPR 4.2 species that may occur in or adjacent to the project area near Sargent according to the Calflora database.³ These ten species are listed in Exhibit B. As this area has not been well surveyed for botanical resources, it is possible that many more species that have been identified in surrounding areas may be present on the project site.

According to the California Department of Fish and Wildlife's (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities⁴ (protocols), "When creating a list of special-status plants with the potential to occur in a project area, special care should be taken to search all quads with similar geology, habitats, and vegetation to those found in the project area." Although LOA did perform a nine quad search of the area surrounding Sargent Ranch, the list that they produced does not match the CNPS RPI list that we queried in October of 2022. A current list of all 59 special-status species that could potentially occur, given the presence of suitable habitat, is included in Exhibit C, including several species listed under the State and/or Federal Endangered Species Acts. The CDFW protocols state that "Resulting lists should only be used as a tool to facilitate the use of reference sites, with the understanding that special-status plants and sensitive natural communities in a project area may not be limited to those on the list. Botanical field surveys and subsequent reporting should be comprehensive and floristic in nature and not restricted to or focused only on a list." A floristic survey would capture all species present within the project area and not be focused solely on species that are expected to be found.

Floristic surveys are the only way to confirm the presence or absence of special-status species within the project area, and are the only way to ensure that the full scope of impacts to special-status plants is being captured in the agency's analysis. By not performing protocol-level surveys in the face of the evidence that numerous special-status plants have potential to occur on the project site, the agency has failed to establish the environmental setting. EIRs are required to describe the baseline physical conditions on the project site through which the lead agency will determine whether an impact is significant (CEQA Guidelines, § 15125(a)(1)). The failure to conduct floristic surveys precludes the agency from being able to accurately establish the baseline physical conditions, and thereby precludes the EIR from meeting CEQA's mandate of making an evidence-based determination of the project's impacts to botanical resources and mitigating those impacts if they are significant.

Relying only on preconstruction focused surveys for the 10 special-status species that have been identified during desktop review, as required by Mitigation Measure 3.4-1, will

² <https://wildlife.ca.gov/Data/CNDDDB>

³ <https://www.calflora.org/>

⁴ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>

not be sufficient to conclude that the project will not adversely impact other special-status plant species, especially considering the great discrepancies in the plant lists. As discussed below, performing only focused surveys for the 10 special-status species identified is not consistent with CDFW's survey protocols and is not sufficient to ensure that all of the special-status plants that might exist on the project site are accounted for, in the event that special-status plants other than those 10 species are present and could be impacted by the project. The project area is substantial with large areas that would be impacted, and it is possible that special-status species that do not appear on CNNDDB or in other desktop sources are present on the project site. Protocol-level floristic surveys must be conducted in order to conclude that the DEIR analysis has sufficiently addressed potentially significant impacts to plants.

Floristic surveys should be carried out in a year with near-average or above average precipitation (i.e., precipitation that is at least 70% of the long-term average for the site, as determined using the 30-year climate normals from the PRISM Climate and Weather System, and when above ground plant material is identifiable (i.e., in bloom). According to the CDFW protocols, "Habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components, may require multiple annual surveys to fully capture baseline conditions." This would require that surveys be carried out throughout the year, and potentially over multiple years, to properly identify all potential special-status species in the project area. The CDFW protocols also make recommendations on the extent of surveys and on the timing and number of visits required:

Survey Extent - "Botanical field surveys should be comprehensive over the entire project area, including areas that will be directly or indirectly impacted by the project. Adjoining properties should also be surveyed where direct or indirect project effects could occur, such as those from fuel modification, herbicide application, invasive species, and altered hydrology. Surveys restricted to known locations of special status plants may not identify all special status plants and sensitive natural communities present, and therefore do not provide a sufficient level of information to determine potential impacts."

Timing and Number of Visits - "Conduct botanical field surveys in the field at the times of year when plants will be both evident and identifiable. Usually this is during flowering or fruiting. Space botanical field survey visits throughout the growing season to accurately determine what plants exist in the project area. This usually involves multiple visits to the project area (e.g., in early, mid, and late-season) to capture the floristic diversity at a level necessary to determine if special status plants are present. The timing and number of visits necessary to determine if special status plants are present is determined by geographic location,

the natural communities present, and the weather patterns of the year(s) in which botanical field surveys are conducted.”

In light of the evidence that special-status plant species have potential to occur within the project area, protocol-level floristic surveys must be performed and their data incorporated into the analysis and determinations made in the final EIR prior to the approval of this project. Relying on preconstruction surveys alone is not a replacement for quantifying and analyzing the project’s impacts to botanical species and disclosing those impacts to the public. *Lotus v. Dep’t of Transp.*, 223 Cal.App.4th 645, 658 (Cal. Ct. App. 2014); *San v. County*, 149 Cal.App.4th 645, 663-64 (Cal. Ct. App. 2007); *see also San v. County*, 149 Cal.App.4th 645, 663-64 (Cal. Ct. App. 2007) (“a mitigation measure cannot be used as a device to avoid disclosing project impacts.”).

Mitigation

Where special-status species are found to be impacted we strongly encourage avoidance over mitigation. Allowing mitigation through preservation and management of populations up to 30 miles away from an impacted population may cause a loss of genetic diversity, especially if leading edge or peripheral populations are lost. Where mitigation would include measures to transplant individual plants or seeds from the impacted area to the mitigation site there could be several ecological issues to introducing a genetically distinct population to an existing population up to 30 miles away from an impacted area. Moving a genetically isolated population to an area where it could interbreed with another genetically distinct population, or closely related taxa, would affect the genetic makeup of both populations causing a loss of genetic diversity,⁵ and could cause a shift in genetic boundaries.⁶ Any mitigation should limit the preservation of a special-status population to an area where it could naturally spread considering geophysical boundaries and the seed dispersal method of the species, and where there would be no risk of losing or diluting the genetics of the impacted population or other existing populations.

The list of special status species needs to be updated to accurately portray the species that could be present in the project area. Mitigation ratios for each species should be developed based on the biological factors specific to that species, and supported by substantial evidence showing that the ratio is sufficient to compensate for the loss of that species. The EIR should also consider whether land with the necessary soil and vegetative characteristics is actually available in sufficient quantities to allow for the necessary mitigation ratios.

⁵ Leppig, G. and White, J.W., 2006. Conservation of peripheral plant populations in California. *Madroño*, 53(3), pp.264-274.

⁶ Halbur, M.M., Sloop, C.M., Zanis, M.J. and Emery, N.C., 2014. The population biology of mitigation: impacts of habitat creation on an endangered plant species. *Conservation Genetics*, 15(3), pp.679-695.

The contingency measures for when mitigation actions do not meet performance criteria, and descriptions of adaptive management to improve performance of mitigation measures or to address climate change or other changes in site conditions should be outlined in the EIR.

The proposed buffer zones may initially protect a species from disturbance but there are risks that these populations may become degraded during the proposed 30 year term of the mining operation. Changes in habitat, hydrology, and the deposition of dust, which reduces photosynthesis, affects stomata function, and can inhibit reproduction⁷, can all adversely affect plant populations adjacent to mining operations. Not approving this mining project would be the most effective way to avoid these impacts.

Documentation and Mitigation of Impacts to Sensitive Natural Communities

According to the peer review of the LOA report from H.T Harvey & Associates, areas identified as Coast Live Oak Forest and Woodland that would be removed for construction along the northern borders of Phase 3 and Phase 4, and the southern edge of the Permanent Overburden Stockpile, should be characterized as Mixed Riparian Forest and Woodland. This peer review also identified drainages in Phases 3 and 4 that feature erosional side channels and populations of facultative wetland species and may be considered to be jurisdictional wetlands. It does not appear that LOA performed additional surveys to verify this, although these areas were updated in the 2021 supplement to the Biological Evaluation technical report (now phases 1 and 2 under the new proposed timeline). This indicates that these Mixed Riparian Forest and Woodlands would be removed and need to be mitigated for, requiring permits from the CDFW under Section 1600 of the California Fish and Game Code.

Sensitive natural communities need to be identified so that any potential impacts can be evaluated and mitigated, as required by section 15065(a) of CEQA. The LOA report did produce a list of habitats on the project site as well as a map of habitat types on the Sargent Ranch property during its surveys for the California Tiger Salamander (CTS), however these were not vegetation surveys intended to identify sensitive natural communities (SNC) at the alliances and association level. The fact that a peer review was able to identify jurisdictional wetlands and riparian habitats shows that these initial surveys were insufficient to capture the baseline conditions of the project area. Mapping habitats without the consideration of vegetation alliances precludes the EIR from being able to assess the impacts to SNCs. The CDFW protocols state that “Adequate information about special-status plants and sensitive natural communities present in a project area will enable reviewing agencies and the public to effectively assess potential

⁷ Farmer, A.M., 1993. THE EFFECTS OF DUST ON VEGETATION A REVIEW. *Environmental Pollution*, 79, pp.63-75.

impacts to special-status plants and sensitive natural communities and will guide the development of avoidance, minimization, and mitigation measures”, and recommends the following guidance to produce this information:

Record the following information for locations of each special-status plant and sensitive natural community detected during a botanical field survey of a project area.

- The specific geographic locations where the special-status plants and sensitive natural communities were found. Preferably this will be done by use of global positioning system (GPS) and include the datum in which the spatial data was collected and any uncertainty or error associated with the data. If GPS is not available, a detailed map (1:24,000 or larger) showing locations and boundaries of each special-status plant population and sensitive natural community in relation to the project area is acceptable. Mark occurrences and boundaries as accurately as possible;
- The site-specific characteristics of occurrences, such as associated species, habitat and microhabitat, structure of vegetation, topographic features, soil type, texture, and soil parent material. If a special-status plant is associated with a wetland, provide a description of the direction of flow and integrity of surface or subsurface hydrology and adjacent off-site hydrological influences as appropriate;
- The number of individuals in each special-status plant population as counted (if population is small) or estimated (if population is large);
- If applicable, information about the percentage of each special-status plant in each life stage such as seedling, vegetative, flowering, and fruiting;
- The density of special-status plants, identifying areas of relatively high, medium and low density of each special-status plant in the project area; and
- Digital images of special-status plants and sensitive natural communities in the project area, with diagnostic features.

This would include vegetation types that are regionally rare or unique even if they are not included in the state’s list of sensitive vegetation types as described in Section 15125(c) of the CEQA guidelines.

Oak Woodlands

The project activities would require the removal of large areas of coast live oak (*Quercus agrifolia*) woodland, in conflict with county ordinances and policies that were intended to protect biological resources. An arborist report outlining the quality of oak woodland

habitats and the recommended mitigation ratio should be determined prior to project approval so that the impacts to these woodlands are disclosed to the public in the EIR. This allows the public and responsible agencies to comment on the impacts and the proposed measures to mitigate the losses. It will take decades for container plantings in the project areas to recover the ecosystem services provided by mature trees. Many species of Arkeh, the Mutsun word for oak, will not begin to produce yuukis (Mutsun for acorns) until they are 20 years old,⁸ meaning there would be large areas of oak woodland that would not be providing ecosystem services including forage for wildlife. Requiring a specific container size as opposed to a specific tree age or caliper creates a great amount of uncertainty as to the maturity of trees to be used in restoration. Depending on the grower, the age of a crop of fifteen gallon or 24” box nursery stock of rappak (Mutsun for small oak) can vary greatly, and in many cases a retail quality fifteen gallon container may be larger and more mature than a landscape quality 24” boxed tree. To compensate for the variability of container stock the removal of a tree should require that a specific number of trees of a certain caliper (trunk diameter) should be planted based on the size of the tree removed.

Additionally the size and location of conservation easements should be identified prior to project approval to ensure that there are sufficient unprotected existing oak woodlands that are suitable to meet the conservation needs as determined by the County of Santa Clara Department of Planning and Development. To retain the ecological function of the impacted areas the Planning Department should not have the discretion to allow for a different species of tree than the species that was removed to be planted in reclamation efforts. Not only should the same species be planted but the material should be grown from seed collected from the trees that were removed, or from adjacent populations to retain the genetic diversity of the affected area. A Habitat Mitigation and Monitoring Plan should be developed for oak woodlands in addition to wetlands, ponds, creeks, and riparian habitat. These plans should be prepared at the expense of the Project Applicant prior to approval of the project, and it should be required that the plans are peer reviewed by a qualified biologist.

Restoration and Invasive Species

Controlling the spread of invasive species in an area where non-native grasses are already prevalent will be very challenging. The mitigation measures listed under 3.4-1b need to require vehicle wash stations at the entrances and exits of the work site to prevent the introduction of new invasive species to the project area. The listed measures will not help to mitigate the spread of invasive species within the project area, and these species will likely colonize areas disturbed by grading and mining operations. The

⁸ <https://extension.tennessee.edu/publications/documents/W126.pdf>

monitoring protocols to manage the inevitable spread of invasive species needs to be explicitly clear in the Invasive Species and Phytophthora Management Plan (ISPMP) to be prepared by the applicant, and an independent consultant should be hired to oversee the monitoring of the project. The use of weed and disease-free seed is an important consideration for reclamation, but the use of site specific seed and container stock would retain genetic diversity and offer an opportunity to restore the reclaimed areas to a natural assemblage of native species. There are several companies that offer seed collection and bulking services to supply seed for restoration and reclamation purposes, and the use of genetically appropriate seed should be required.

Santa Clara County General Plan

The Santa Clara County General Plan was developed in the early 1990's and was meant to guide growth and development through 2010. We are concerned that a general plan developed close to thirty years ago may not represent modern public interests or the best available science in the face of ongoing climate change, unprecedented losses of biodiversity and the goals of the 30x30 effort to preserve 30% of California lands by the year 2030. According to the Governor's Office of Planning and Research, "By statute, the general plan is required to be updated "periodically." While there is no requirement for how often to update the general plan, the planning period has traditionally been 15-20 years."⁹

Policy SC 15.9, under Development Hazards/Environmental Safety, states that, "Wildlife, rare and endangered plants and animals, and heritage resources should be identified and protected from loss and destruction." This would indicate that surveys should be implemented to identify special-status plant species and sensitive natural communities, and that impacts to heritage resources, including tribal lands, indigenous land use, and tribal relations that would be affected by the destruction of sacred lands in the Sargent Ranch should be considered. Choosing to preserve these lands would show that Santa Clara County is adapting its planning to our changing planet and acknowledging the people that stewarded these lands for thousands of years prior to European development.

Alternatives

Table S-2 in the DEIR outlines the impacts of the proposed project and the alternatives shows that all alternatives other than the No Project Alternative (Alternative 1) have significant and unavoidable impacts even when mitigated for and all of the less than significant impacts would require mitigation to achieve a less than significant outcome. From the Santa Clara County General Plan, section R-RC 74 states that "Alternatives to proposed quarry sites should be thoroughly investigated in the Environmental Impact

⁹ https://opr.ca.gov/docs/General_Plan_Guidelines_FAQ.pdf

Report, and reasons for rejection should be clearly justified.” Considering the 14 significant and unavoidable impacts and the 35 impacts that would require mitigation to become less than significant, we cannot see the rejection of Alternative 1 being clearly justifiable.

Tribal and Cultural Resources, Spiritual Impacts on Amah Mutsun Ancestral Lands and Indigenous Sovereignty

The Amah Mutsun Tribal Band is a federally unrecognized tribe and are the direct descendents of the aboriginal Tribal groups whose villages and territories fell under the sphere of influence of Missions San Juan Bautista (Mutsun) and Santa Cruz (Awaswas)¹⁰ during the late 18th, 19th and early 20th centuries. Sargent Ranch is known as Juristac (Huris-tak), which means “Place of the Big Head” and is home to a spiritual being where the Amah Mutsun held healing and renewal ceremonies.¹¹ The land on which the project is proposed is sacred ceremonial land of the Amah Mutsun Tribal Band, who have a deep spiritual relation to the cultural sites identified in the DEIR. We suggest that the Planning Commission adhere to the Amah Mutsun’s requests and comments, and consider applicable provisions of the Native American Freedom of Religion Act and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) as they relate to this project proposal and the DEIR.

In light of the evidence presented above, we urge the Planning Commission to recommend the denial of the Sargent Ranch Quarry project. Thank you for the opportunity to comment on this proposal, and please contact us if you have any questions.

Sincerely,

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¹⁰ <https://amahmutsun.org/history>

¹¹ <https://www.protectjuristac.org/about/>

Exhibit A - Comparison of Plant Lists

SCIENTIFIC NAME	CRPR	CNPS RPI	Calflora	LOA	H.T. Harvey	3.4-2	3.4-5
<i>Acanthomintha lanceolata</i>	4.2	X					
<i>Allium howellii</i> var. <i>howellii</i>	4.3	X					
<i>Amsinckia douglasiana</i>	4.2		X				
<i>Androsace elongata</i> ssp. <i>acuta</i>	4.2				X	X	
<i>Arctostaphylos andersonii</i>	1B.2	X		X			
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	1B.2	X		X			
<i>Arctostaphylos</i> <i>pajaroensis</i>	1B.1	X		X			
<i>Arctostaphylos</i> <i>regismontana</i>	1B.2			X			
<i>Astragalus tener</i> var. <i>tener</i>	1B.2	X		X			
<i>Balsamorhiza macrolepis</i>	1B.2	X		X			
<i>California macrophylla</i>	CBR	X		X			
<i>Campanula exigua</i>	1B.2	X		X			
<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	1B.2	X		X			X
<i>Ceanothus rigidus</i>	4.2	X					
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	1B.1	X		X		X	
<i>Chorizanthe pungens</i> var. <i>pungens</i>	1B.2	X		X			
<i>Chorizanthe robusta</i> var. <i>robusta</i>	1B.1			X			
<i>Cirsium fontinale</i> var. <i>campylon</i>	1B.2	X					
<i>Clarkia concinna</i> ssp. <i>automixa</i>	4.3				X	X	

SCIENTIFIC NAME	CRPR	CNPS RPI	Calflora	LOA	H.T. Harvey	3.4-2	3.4-5
<i>Clarkia lewisii</i>	4.3	X					
<i>Collinsia multicolor</i>	1B.2	X					
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	1B.1	X		X			
<i>Deinandra halliana</i>	1B.1	X					
<i>Delphinium californicum</i> ssp. <i>interius</i>	1B.2	X					
<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	1B.1	X		X			
<i>Eriastrum virgatum</i>	4.3	X					
<i>Ericameria fasciculata</i>	1B.1	X		X			
<i>Eriogonum nortonii</i>	1B.3	X					
<i>Eriogonum nudum</i> var. <i>indictum</i>	4.2	X					
<i>Eryngium aristulatum</i> var. <i>hooveri</i>	1B.1	X		X			X
<i>Erythranthe diffusa</i>	4.3	X					
<i>Extriplex joaquinana</i>	1B.2	X		X			
<i>Fritillaria agrestis</i>	4.2	X			X	X	
<i>Fritillaria liliacea</i>	1B.2	X		X			X
<i>Galium andrewsii</i> ssp. <i>gatense</i>	4.2	X					
<i>Hoita strobilina</i>	1B.1	X		X			
<i>Holocarpha macradenia</i>	1B.1	X					
<i>Hordeum interceden</i>	3.2				X	X	
<i>Horkelia cuneata</i> var. <i>sericea</i>	1B.1	X					
<i>Hosackia gracilis</i>	4.2	X					
<i>Iris longipetala</i>	4.2	X					
<i>Isocoma menziesii</i> var. <i>diabolica</i>	4.2	X			X	X	
<i>Legenere limosa</i>	1B.1	X		X			

SCIENTIFIC NAME	CRPR	CNPS RPI	Calflora	LOA	H.T. Harvey	3.4-2	3.4-5
<i>Leptosiphon ambiguus</i>	4.2	X					
<i>Leptosiphon aureus</i> (<i>aciularis</i>)	4.2				X	X	
<i>Leptosiphon grandiflorus</i>	4.2	X					
<i>Lessingia hololeuca</i>	3	X					
<i>Lessingia micradenia</i> var. <i>glabrata</i>	1B.2	X		X			
<i>Lomatium parvifolium</i>	4.2	X					
<i>Malacothamnus</i> <i>aboriginum</i>	1B.2	X		X			
<i>Malacothamnus arcuatus</i>	1B.2	X		X			
<i>Malacothamnus hallii</i>	1B.2			X			
<i>Monolopia gracilens</i>	1B.2	X		X			
<i>Navarretia cotulifolia</i>	4.2				X	X	
<i>Navarretia prostrata</i>	1B.2	X					
<i>Penstemon rattanii</i> var. <i>kleei</i>	1B.2	X		X			
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	4.2	X			X	X	
<i>Pinus radiata</i>	1B.1	X					
<i>Piperia michaelii</i>	4.2	X			X	X	
<i>Piperia yadonii</i>	1B.1	X					
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	4.2	X					
<i>Plagiobothrys diffusus</i>	1B.1	X					
<i>Plagiobothrys glaber</i>	1A	X		X			
<i>Puccinellia simplex</i>	1B.2	X					X
<i>Ranunculus lobbii</i>	4.2	X					
<i>Rosa pinetorum</i>	1B.2	X		X			
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	1B.2	X		X			X
<i>Trifolium amoeonum</i>	1B.1			X			

SCIENTIFIC NAME	CRPR	CNPS RPI	Calflora	LOA	H.T. Harvey	3.4-2	3.4-5
Trifolium hydrophilum	1B.2	X		X			X

CRPR 1B species are rare, threatened, or endangered in California and elsewhere.

CRPR 2B species are rare, threatened, or endangered in California but common elsewhere.

CRPR 3 species need review, where more information on the species is needed.

CRPR 4 species are uncommon in California, with limited distribution.

CNPS RPI -

<https://rareplants.cnps.org/Search/result?frm=T&sl=1&quad=3612185:3612184:3612174:3612175:3612176:3612186:3712114:3712115:3712116>: accessed 11/01/2022

Calflora -

<https://www.calflora.org/entry/wgh.html#srch=t&fmt=photo&y=36.8804&x=-121.6123&z=12&wkt=-121.57498+36.89335,-121.56839+36.89716,-121.56637+36.89692,-121.5629+36.89621,-121.56032+36.89726,-121.56069+36.9021,-121.56047+36.90551,-121.56004+36.90721,-121.55987+36.90882,-121.55891+36.91075,-121.55575+36.91431,-121.55281+36.9161,-121.54829+36.91781,-121.54562+36.91937,-121.54198+36.92052,-121.53974+36.92269,-121.54069+36.92399,-121.54256+36.92581,-121.5447+36.92661,-121.54689+36.92855,-121.54856+36.92907,-121.55129+36.93263,-121.55337+36.93632,-121.5532+36.94028,-121.55322+36.94462,-121.56721+36.9444,-121.62872+36.94382,-121.62598+36.94136,-121.62323+36.93847,-121.62237+36.93491,-121.61894+36.93093,-121.61345+36.92901,-121.61018+36.92585,-121.6071+36.92214,-121.60343+36.91922,-121.60219+36.91781,-121.5988+36.91829,-121.59826+36.91123,-121.59217+36.90547,-121.58857+36.90076,-121.58089+36.89661,-121.57729+36.89325,-121.57498+36.89335>: accessed 11/01/2022

LOA - Live Oak Associates Biotic Evaluation Sargent Ranch Quarry pages 41-45, pages 125-129 of appendix E

H.T. Harvey - H.T. Harvey & Associates peer review of LOA Biotic Evaluation pages 5 and 6, pages 291 and 292 of appendix E

3.4-2 - Sargent Quarry Draft EIR Table 3.4-2 Potentially Occurring Special-Status Species page 3.4-19

3.4-5 - Sargent Quarry Draft EIR Figure 3.4-5 Special-Status Species Observations (figure 5) page 3.4-25

Exhibit B - Taxa with known locations within Chittenden Quad

SCIENTIFIC NAME	COMMON NAME	FAMILY	CA RARE PLANT RANK
<i>Amsinckia douglasiana</i>	Douglas' fiddleneck	Boraginaceae	4.2
<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	pink creamsacs	Orobanchaceae	1B.2
<i>Eryngium aristulatum</i> var. <i>hooveri</i>	Hoover's button-celery	Apiaceae	1B.1
<i>Fritillaria liliacea</i>	fragrant fritillary	Liliaceae	1B.2
<i>Hoita strobilina</i>	Loma Prieta hoita	Fabaceae	1B.1
<i>Leptosiphon ambiguus</i>	serpentine leptosiphon	Polemoniaceae	4.2
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	Polemoniaceae	4.2
<i>Puccinellia simplex</i>	California alkali grass	Poaceae	1B.2
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	Brassicaceae	1B.2
<i>Trifolium hydrophilum</i>	saline clover	Fabaceae	1B.2

Exhibit C - Taxa with known locations within the Nine Quad Search area

SCIENTIFIC NAME	COMMON NAME	FAMILY	FED LIST	STATE LIST	CA RARE PLANT RANK
<i>Acanthomintha lanceolata</i>	Santa Clara thorn-mint	Lamiaceae	None	None	4.2
<i>Allium howellii</i> var. <i>howellii</i>	Howell's onion	Alliaceae	None	None	4.3
<i>Amsinckia douglasiana</i>	Douglas' fiddleneck	Boraginaceae	None	None	4.2
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	Ericaceae	None	None	1B.2
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	Ericaceae	None	None	1B.2
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	Ericaceae	None	None	1B.1
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	Fabaceae	None	None	1B.2
<i>Balsamorhiza macrolepis</i>	big-scale balsamroot	Asteraceae	None	None	1B.2
<i>Campanula exigua</i>	chaparral harebell	Campanulaceae	None	None	1B.2
<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	pink creamsacs	Orobanchaceae	None	None	1B.2
<i>Ceanothus rigidus</i>	Monterey ceanothus	Rhamnaceae	None	None	4.2
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	Asteraceae	None	None	1B.1
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	Polygonaceae	FT	None	1B.2

<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton thistle	Asteraceae	None	None	1B.2
<i>Clarkia lewisii</i>	Lewis' clarkia	Onagraceae	None	None	4.3
<i>Collinsia</i> <i>multicolor</i>	San Francisco collinsia	Plantaginaceae	None	None	1B.2
<i>Cordylanthus</i> <i>rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	Orobanchaceae	None	CE	1B.1
<i>Deinandra halliana</i>	Hall's tarplant	Asteraceae	None	None	1B.1
<i>Delphinium</i> <i>californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	Ranunculaceae	None	None	1B.2
<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	Santa Clara Valley dudleya	Crassulaceae	FE	None	1B.1
<i>Eriastrum</i> <i>virgatum</i>	virgate eriastrum	Polemoniaceae	None	None	4.3
<i>Ericameria</i> <i>fasciculata</i>	Eastwood's goldenbush	Asteraceae	None	None	1B.1
<i>Eriogonum</i> <i>nortonii</i>	Pinnacles buckwheat	Polygonaceae	None	None	1B.3
<i>Eriogonum nudum</i> var. <i>indictum</i>	protruding buckwheat	Polygonaceae	None	None	4.2
<i>Eryngium</i> <i>aristulatum</i> var. <i>hooveri</i>	Hoover's button-celery	Apiaceae	None	None	1B.1
<i>Erythranthe diffusa</i>	Palomar monkeyflower	Phrymaceae	None	None	4.3
<i>Extriplex</i> <i>joaquinana</i>	San Joaquin spearscale	Chenopodiaceae	None	None	1B.2
<i>Fritillaria agrestis</i>	stinkbells	Liliaceae	None	None	4.2

<i>Fritillaria liliacea</i>	fragrant fritillary	Liliaceae	None	None	1B.2
<i>Galium andrewsii</i> ssp. <i>gatense</i>	phlox-leaf serpentine bedstraw	Rubiaceae	None	None	4.2
<i>Hoita strobilina</i>	Loma Prieta hoita	Fabaceae	None	None	1B.1
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	Asteraceae	FT	CE	1B.1
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	Rosaceae	None	None	1B.1
<i>Hosackia gracilis</i>	harlequin lotus	Fabaceae	None	None	4.2
<i>Iris longipetala</i>	coast iris	Iridaceae	None	None	4.2
<i>Isocoma menziesii</i> var. <i>diabolica</i>	Satan's goldenbush	Asteraceae	None	None	4.2
<i>Legenere limosa</i>	legenere	Campanulaceae	None	None	1B.1
<i>Leptosiphon ambiguus</i>	serpentine leptosiphon	Polemoniaceae	None	None	4.2
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	Polemoniaceae	None	None	4.2
<i>Lessingia hololeuca</i>	woolly-headed lessingia	Asteraceae	None	None	3
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	Asteraceae	None	None	1B.2
<i>Lomatium parvifolium</i>	small-leaved lomatium	Apiaceae	None	None	4.2
<i>Malacothamnus aboriginum</i>	Indian Valley bush-mallow	Malvaceae	None	None	1B.2
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	Malvaceae	None	None	1B.2

Monolopia gracilens	woodland woollythreads	Asteraceae	None	None	1B.2
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	None	None	1B.2
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	Plantaginaceae	None	None	1B.2
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	Apiaceae	None	None	4.2
Pinus radiata	Monterey pine	Pinaceae	None	None	1B.1
Piperia michaelii	Michael's rein orchid	Orchidaceae	None	None	4.2
Piperia yadonii	Yadon's rein orchid	Orchidaceae	FE	None	1B.1
Plagiobothrys chorisianus var. hickmanii	Hickman's popcornflower	Boraginaceae	None	None	4.2
Plagiobothrys diffusus	San Francisco popcornflower	Boraginaceae	None	CE	1B.1
Plagiobothrys glaber	hairless popcornflower	Boraginaceae	None	None	1A
Puccinellia simplex	California alkali grass	Poaceae	None	None	1B.2
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	None	None	4.2
Rosa pinetorum	pine rose	Rosaceae	None	None	1B.2
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Brassicaceae	None	None	1B.2
Trifolium hydrophilum	saline clover	Fabaceae	None	None	1B.2