

Biological Assessment Report#

(# = Updated 10/28/21 from the original July, 2021 submittal in response to 8/30/21 email comment from Senior Environmental Specialist Deborah Waller)

For:

Mr. Kamal Azari

Project Site:

1321 Spring Hill Road, Petaluma, CA 94952
(APN #: 020-050-026)

Mailing address:

1399 Spring Hill Road, Petaluma, CA 94952

Updated October 28, 2021

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Introduction:

Regarding a proposal by Kamal Azari (Owner) to add a public wine tasting room and associated infrastructure (Project) at 1321 Spring Hill Road, Petaluma, CA 94952 (APN #: 020-050-026) (Site) (See Appendix A-D), the following Biological Assessment (BA) addresses biological resources and watercourse/wetland elements to address elements noted in the County of Sonoma's Permit & Resource Management Department (PRMD) "Guidelines For Preparing Special-Status Plant Studies" and "Guidelines For Preparing Biological Resource Studies Or Assessments" handouts (Guidelines).

Important September 8, 2021 update: Responding to an August 30, 2021 email letter from a PRMD Senior Environmental Specialist Deborah Waller, I note this updated Biologist Assessment Report (BA) provides the following clarifications to each of Ms. Waller's August 30, 2021 email comments, such as noting answers to her email, immediately below, and throughout this document:

1. The Site assessed in this BA is limited to the aforementioned APN # above, #020-050-026. It is currently a vacant, upland, ruderal, non-native grassland that also hosts four large Blue Gum Eucalyptus (*Eucalyptus globulus*) trees. Note: This BA does NOT address the adjoining parcel (APN # 020-050-009) that hosts the Owner's residence.
2. See below for more details related to the Site's description and habitat (Section 2, below), including Appendix C, Photo 2, 3, and 5 that show the trees, including an overhead photo of the four Blue Gum Eucalyptus. The diameter at breast height (DBH) of these four trees is also noted in Section 2, below.
3. Protocol level botanical surveys (Surveys) were conducted on May 19, 2021, June 5, 2021, and September 6, 2021. In so doing, adhered to methods corresponding to California Department of Fish and Wildlife (CDFW)¹ and California Native Plant Society (CNPS)² botanical survey protocol guidelines. The latter September 8, 2021 survey was conducted expressly to detect the potential presence of late-blooming rare, special-status botanical species, including Congested-headed Hayfield Tarplant (*Hemizonia congesta* ssp. *congesta*). More details about my Surveys' results appear below, which did not yield the presence of any rare, special-status animal and floristic species — including my Surveys' results that did not yield the presence of Congested-headed Hayfield Tarplant (Appendix A, Figure 8 shows the closest, past CNDDDB observation of Congested-headed Hayfield Tarplant 2.9 miles from the Site.)
3. The description of the Site below applies, with the following additional details: a) No vernal pools or standing water were present during the Surveys upon the Site's dry, upland, ruderal, non-native grassland habitat. Beyond the aforementioned Survey dates, I also have never seen vernal pools or standing water on the Site based on my other multiple year-round visits to the Owner's parcel for other reasons, including biological and wetland assessments of his property based on a different Biological Assessment I developed for him in 2017. Hence, I believe no jurisdictional wetland habitat or *waters of California* habitat exists on the Site, plus no nexus or connectivity exists from the Site to the off site watercourse occurs. More details appear below in relation to this dynamic.

¹ CNDDDB query included the Petaluma 7.5 US Geological Survey (USGS) quadrangle on September 5, 2021.

² <https://rareplants.cnps.org/Search/Results>

As for the presence or potential for occurrence of special-status at the Site, see an updated table in Appendix C, below. It continues to feature a column that was present in the initial July, 2021 BA submittal that states the “Rationale for Species Potential,” thereby ensuring this BA and the Surveys assessed the four Santa Rosa Plain Conservation Strategy rare, special-status botanical species — Sebastopol Meadowfoam (*Limnanthes vinculans*), Burke’s Goldfields (*Lasthenia burkei*), Sonoma Sunshine (*Blennosperma bakeri*) and Many Flowered Navarretia (*Navarretia leucocephala* ssp. *plientha*)— in addition to the potential for occurrence of other rare, special-status botanical species that could be present at an upland parcel such as the Site beyond the late winter/spring (i.e., February-April) blooming period, including, the May-June spectrum when the most recent Surveys occurred.

All of the Appendix C table botanical special-status species were assessed based on the results of a query at the California Natural Diversity Database (CNDDDB) and the CNPS web site for the Petaluma 7.5 minute United States Geological Service (USGS) quadrangle.

In so doing, the “Rational for Potential Occurrence” concludes that none of the botanical species in the table were observed during the Surveys and, likewise, none are judged to have potential for occurrence on the Site.

Given my assessment concluded that “no potential for occurrence” exists for these four Santa Rosa Plain Conservation Strategy botanical species, I do not believe February-April rare plant surveys would be necessary at the Site. These species along with 16 other rare, special-status species corresponding to the

The absence of rare, special-status plant species on the Site is not surprising, given periodic, ongoing disturbance at the Site. More specific, its soil bed is consistently subject annually to trampling and compaction by domestic animals and machines. For this reason, the species noted during the Surveys were all typical of non-native grassland habitat dominated by invasive, ruderal species, including English Plaintain (*Plantago lanceolata*), Field Mustard (*Brassica rapa*), and non-native grass species (*Bromus* spp.).

In turn, from my 30 years of conducting botanical surveys in similar ruderal habitat conditions (including dozens of botanical surveys in Sonoma County since 2006), I have never encountered the rare, special-status botanical species noted on the below table in Appendix C. For example, a late-season blooming tarweed species — Congested-headed Hayfield Tarplant — is the only rare, listed tarweed species that appears on the aforementioned queries I conducted via the online CNPS rare plenty inventory. More details about its absence at the Site for all of the Surveys are noted below.

Given the above information, I do not believe the Project would result in negative impacts upon rare, special-status botanical species present within the Appendix C table, below.

As for vertebrate species, please note the following updates that address your August 30, 2021 email:

As a 10(a)1(A) federal US Fish and Wildlife Service permit holder (Permit #1017430) for several species, including the California Red-legged Frog (*Rana draytonii*), my initial two surveys yielded no presence at the Site for this special-status species. I concluded its potential for occurrence at the Site to be none because:

a) the Site does not provide suitable sheltering, foraging, dispersal or breeding habitat conditions for this federally-threatened species.

b) the presence of water flow or pooled water from winter through late spring/summer usually too shallow or is absent by spring/summer within the drainage/watercourse that begins approximately 190 feet southeast of the Site (See Appendix A, Figure 4 and Appendix B, Photo 4.).

During the Surveys, waterflow in the drainage/watercourse was absent, with only the upper, northern portion of it immediately adjacent to Spring Hill Road moist and hosting one to two-inches of water. Then, approximately 100 feet south of Spring Hill Road, the watercourse was merely moist and devoid of flow. For this reason, dispersal of any CRLF onto the Site in 2021 is unlikely to occur and, in addition, I believe no CRLF would also likely disperse onto the Site annually, even during above normal rain seasons.

c) the documented observations of CRLF within a mile of the Site were within ponds or pooled water conditions that provide suitable conditions for its presence that are absent at the Site and nearby it.

As for figures relating to CRLF in relation to the nearby watercourse and, also, the mapping of trees on the Site, please see Appendix A, Figure 4 and Figure 6, below. Figure 6 shows the ephemeral drainage/watercourse is approximately 190 feet south of the Site. The caption underneath it describes the information you suggested in your August 30, 2021 email letter that I should share.

Likewise, no American Badgers (*Taxidea taxus*) were observed nor were any burrows seen on the Site during the Surveys to indicate their presence. Consequently, I do not believe any potential negative impacts will result from the Project upon these two species. More details related to avoidance and minimization measure advisories related to the potential presence of this protected mammal species as well as bird species appears below in the *Conclusions and Recommendations* section.

As background, my experience as an Environmental Consulting Biologist since 2001 in California includes conducting more than 20 BA's for Sonoma County projects similar to the current Project assessed in this BA.

In so doing, via Planner Georgia MacDaniel's advisory to me in a June 4, 2021 email letter, this BA focuses on assessing the following bullet points related to the Project.

Below, I provide a brief conclusion answer, with explanatory details present in the report beyond this initial "Introduction" section. Above, on page two and three, updated information appears as responses to the August 30, 2021 email query from Ms. Deborah Waller.)

a. Will the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Answer: No.

b. Will the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Answer: No.

c. Will the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Answer: No.

d. Will the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Answer: No.

e. Will the Project have conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

Answer: No.

f. Will the Project have Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Answer: No, none exist for the Site or nearby it.

My conclusions outlined below are based on three surveys (Surveys) at the Site — May 19, June 5, and September 6, 2021 — and online research, combined with printed resources related to the Site's biological resources to potentially host rare, special-status plant and wildlife species, in addition to potentially hosting jurisdictional wetlands or *waters of the state**.

{* = This BA assesses in section #5, *Watercourses/Wetlands on the Site and Assessment of the Project in Relation to Sonoma County (PRMD) Setback Requirements*, a February 8, 2021 US Army Corps of Engineers' letter (USACOE Letter) from Sahrye Cohen (the USACOE's North Branch Chief in its Regulatory Division).}

1. Proposed Development Action And Project Description (Project)

The Owner's goal to receive a Use Permit from PRMD in relation to the Project is based on his proposed construction action to:

- Add a new 2,809 square-foot tasting room building to the Site, a 16.6 vacant, ruderal upland parcel that is adjacent to the Owner's current residence that exists among 17-acres at 1399 Spring Hill Road, Petaluma, CA 94952. The building will contain an approximately 2,409 square-foot tasting area and an approximately 400 square-foot food preparation area. The food preparation area is proposed to be utilized to warm prepared food catered for the proposed special events. The proposed building has a maximum height of 34 feet. Restrooms are proposed in a separate 302 square foot building located approximately 8 feet from the proposed tasting room building.

- Add an approximate total of 4,973 square feet of patio/walkways are proposed around the perimeter of the proposed tasting room building and an approximately 2,000 square foot patio/terrace for viewing is proposed to the west of the proposed tasting room.

The tasting room is proposed to accommodate 2 employees and 20 wine tasters a day. Its proposed hours of operation will be Thursday - Sunday, 11am-5pm for the tasting room and 11 am - 5 pm for special events.

- Host annually 10 special events (8 Agricultural Promotional Events, 2 Industry Wide Events), with 200 guests per special event and 3 employees, including 2 tasting room employees. The tasting room will participate in industrywide events. Portable toilets will be utilized for the special events and the events will utilize outdoor areas adjacent to the proposed tasting room, with possible visits to the vineyards. Special events will utilize music and amplified sound.
- Add a new parking lot adjacent to the new tasting room building. It will contain 28 regular parking spaces and 2 physically-challenged parking spaces. An overflow parking area is proposed to the east for 53 regular parking spaces. Total combined proposed parking spaces are 83.

Other details related to the Project's proposed design:

- Tasting room domestic wastewater shall be disposed of in a non-standard type septic system to the west and southwest of the proposed tasting room in the area of the pre-perc site inspection performed under SEV07-0960 and the percolation test performed under SEV07-1062. The septic system shall be designed in accordance with the current OWTS Manual and be sized to accommodate the domestic wastewater generated by the proposed use, including domestic wastewater generated by employees, wine tasters, and special event guests.
- Two new driveways are proposed to allow access to the proposed parking lot from Spring Hill Road. Driveways will conform to Sonoma County Transportation and PublicWorks standards and applicable Use Permit conditions. (See Appendix A, Figures)

2. Biological Setting And Vegetation On The Site

Located approximately 2.75 miles west-southwest of central Petaluma, Sonoma County, the biological resources of the Site occur amid upland, ruderal, highly disturbed habitat dominated by two different vegetational habitats^{3,4}:

a) ruderal, frequently disturbed, upland, non-native grassland in addition to b) sporadic Blue Gum Eucalyptus woodland consisting of four planted, non-native, even-aged 110-foot-tall Blue Gum Eucalyptus (*Eucalyptus globulus*) trees that grow on the extreme north side of the Site adjacent to Spring Hill Road (see Appendix A and Appendix C, Photo 2, 3, and 5). Note Photo 5 at Appendix C

³ Sawyer, John O., Todd Keeler-Wolf, and Julie M. Evans. 2009. A Manual of California Vegetation. Second edition. California Native Plant Society Press, Sacramento, CA. Online version available at: <http://vegetation.cnps.org/>

⁴ Holland, Robert F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*, California Dept. of Fish and Game, Sacramento, CA.

shows a photo of the even-aged, 110-foot-tall trees that from east to west are the following diameter at breast heights (DBH): 113, 112, 102, and 92 inches.

The Site is subject to periodic human disturbance via passersby and usage of equipment (e.g., ATV vehicles). The Site's non-native annual grassland should be considered as common and it is not listed by the California Department of Fish and Wildlife as a special-status habitat⁵.

Based on the Surveys, the Site is devoid of native botanical species. Diversity of plant species was low during the Surveys, with non-native plant species dominating the Site. See below for more details related to the results of the Surveys.

The Site slopes at approximately 10% from the northwest to the southeast. The soil profile consists of Steinbeck Loam (SnC) and Los Osos Clay Loam (LoD) per the USDA NRCS Custom Soil Resource Report⁶. Note this soil profile is not considered to support wetland vegetation species.

Surrounding usage outside the boundaries of the Site include the Owner's residence toward the west and west-southwest. The Owner's parcel of 17 acres features non-native and native plant species, along with vineyards that occur south-southwest and southwest of the Site. No vineyards are present on the Site assessed for this BA (i.e., the proposed for the wine tasting building).

As for the Biological Resources Evaluation Area (i.e., an area that includes all lands within one mile of the parcel's boundaries), the nearby area within which the Site exists is primarily dominated by similar-sized parcels that are, likewise, devoted to agricultural/vineyard/orchard activities along with dairy/chicken farming operations. No small or large parks, natural areas, or reserves exist within one mile of the Site in all directions.

More specific, toward the north across from the Site, residences exist amid large, upland, parcels that also feature landscaped and natural vegetation.

East and southeast of the Site, another residence occurs on similar parcel consisting of upland, non-native grassland along with cultivated plantings.

More details about the aforementioned watercourse that occurs east and southeast of the Site appear below.

Immediately west and southwest of the Site, the Owner cultivates a couple of vineyard parcels within the 1399 Spring Hill Road parcel where he resides. The entrance gate here (see Appendix B, Photos) grants easement and access to the Site intended for the Project at 1321 Spring Hill Road.

See the *Results of the Surveys* section below for a discussion related to the plant species on the Site, in addition to Appendix C for a list of plant species detected during the Surveys detected on the Site and within 100 feet of it.

⁵ California Natural Diversity Database (CNDDDB) query included the Petaluma 7.5 US Geological Survey (USGS) quadrangle on May 21 and September 4, 2021.

⁶ See: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

3. Methodology For Surveys And Field Survey Protocol

The Surveys were conducted with three aims:

- 1) to determine if any special-status plant and wildlife species occur on the Site, including whether special-status, listed wildlife species occur within in a buffer zone within 100 feet of it. See below for the results and discussion related to the Surveys. Appendix D features a list of plant and wildlife species seen during the Surveys.
- 2) to assess whether the proposed Project would potentially result in negative impacts upon any special-status plant and wildlife species; and
- 3) to determine if the Project could potentially result in negative impacts upon the nearby aforementioned drainage/watercourse approximately 190 feet south of the Site.

Discussion of these three aims occurs below in the next section.

The “target” special-status species for my Surveys were identified by noting observations nearby the Site of special-status, listed plant and wildlife species in the aforementioned CNDDDB for the Petaluma 7.5 minute United States Geological Survey (USGS) and by conducting a query of the California Native Plant Society’s list of rare, special-status species for Sonoma County and the Petaluma 7.5 minute USGS quadrangle⁷.

Plant species were identified on the Site by conducting meandering walking surveys throughout the Site, but no plant species were collected during the Survey. Plant species represented on the Site and present in the results were primarily limited to non-native grass species. No searches and identification were conducted for algae, fungi, mosses, lichens, ferns, lycophyta and sphenophyta because they are absent on the Site.

In addition to the databases noted above, target special-status rare species upon which the Surveys focused were based on the Site’s vegetation habitat characteristics. That is to say, special-status plant species typically are rare to absent upon developed, frequently-disturbed, non-native grassland parcels such as the Site because rare plant species typically require specific habitat conditions. These conditions are not present on the Site, and vary from one parcel to another, with key variables centered on a site’s hydrology, climate, soil properties, nutrient composition, aspect, exposure, and plant competition for growing space.

As for wildlife species, all animals were identified by sight, if present, and by evidence for their presence such as tracks, nests, scat, whitewash, and feathers. Bird species were judged to be present based observation of them, in addition to identification them through hearing their songs and calls. Animals were identified in the field by sight, sign, or call. Binoculars were employed while meandering walking occurred throughout the parcel as well as its perimeter areas within 250 feet of the Site’s boundaries.

The sporadic, few shrubs and three previously-noted Blue Gum Eucalyptus trees grow on the Site they were monitored for the potential presence of nesting common and special-status bird species. Special monitoring attention was included in the Surveys for the potential presence of the rare,

⁷ <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> and <https://rareplants.cnps.org/Search/Results>

special-status species noted in Appendix C, *Potential For Occurrence of Rare, Special-Status Species On The Site*.

Beyond birds, the Surveys centered on assessing other signs of common and special-status animal species, including the ground-burrowing American Badger, *Taxidea taxus* that sometimes occupy non-native grassland/pasture habitat similar to the Site's composition.

In addition, based on the CNDDDB, the Surveys focused on detecting the presence of Pallid Bat (*Antrozous pallidus*), Western Mastiff Bat (*Eumops merotis*), Swainson's Hawk (*Buteo swainsoni*), and Monarch Butterfly (*Danaus plexippus*) on the Site or within 250 feet of it⁸.

A list of the plant and wildlife species observed on the Site during the Survey appears in Appendix D, below. For wildlife species, the observations include those detected within 250 feet of the Site.

4. Results Of The Surveys

Only common plant and wildlife species were seen during the Surveys. No rare, special-status plant and wildlife species were detected. My findings in relation to the drainage/watercourse south of the Site are noted below in a section titled *Watercourses/Wetlands on the Site*.

Dominant common plant species observed on the Site during the Surveys are described above in section two, with the Non-native Grassland habitat dominated by non-native *Bromus* genus, *Festuca* genus, and Wild Oats (*Avena barbata*) grasses. The Surveys yielded the following dominant forb/wildflower species: English Plantain (*Plantago lanceolata*) and Wild Radish (*Raphanus sativus*).

Consequently, I believe the Project will not result in negative impacts upon common or special-status species plant and wildlife species will occur on the Site or nearby it, including species present on the *Special Animals* list⁹ a CNDDDB query¹⁰ and California Native Plant Society (CNPS)¹¹ databases that were queried for the Site.

Appendix D features of list of plant species identified during the Surveys on the Site and on its borders within 50 feet of it.

As for wildlife species observed during the Survey, the Site offers less than ideal foraging, shelter, and perching habitat for bird species. As a result, few bird species utilize it. Observations of bird species on the Site were limited to House Finch (*Haemorhous mexicanus*), Eurasian-collared Dove (*Streptopelia decaocto*), Western Bluebird (*Sialia mexicana*), as well as flyover appearances from American Crow (*Corvus brachyrhynchos*), Red-winged Blackbird (*Agelaius phoeniceus*), and Brewer's Blackbird (*Euphagus cyanocephalus*).

⁸ Ibid.

⁹ See: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>

¹⁰ CNDDDB query included the Petaluma 7.5 US Geological Survey (USGS) quadrangle on May 21 and September 4, 2021

¹¹ <http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/Search?search=%2b%22Sonoma%20%28SON%29%22> and <https://www.calflora.org/app/taxon?crn=4068>

Based on my aforementioned query of the CNNDDB for the Site, special-status wildlife species in the region that are the most likely candidates to appear at the Site or nearby it include Pallid Bat, Western Mastiff Bat, Swainson's Hawk American Badger, and Monarch Butterfly. A list of the potential presence of special-status plant and wildlife species Petaluma quadrangle (within which the Site exists) and Sonoma County appears in Appendix C.

No evidence or occurrence of special-status wildlife species was present during the Surveys. Potential impacts upon the five aforementioned special-status species are discussed in the next section, below.

No other common or special-status amphibian, reptile, or mammal species were observed on the Site or nearby it during the Surveys.

5. Watercourses/Wetlands on the Site and Assessment of the Project in Relation to Sonoma County (PRMD) Setback Requirements

No watercourses occur on the Site, based on the Surveys and my pre-survey research conducted online.

As mentioned above, a drainage/watercourse exists southeast of the Site, beginning approximately 190 feet from the Site's southeastern property line (See Appendix A, Figure 4 and Appendix B, Photo 4).

Given the 190-foot distance of the Site from this drainage/watercourse, I do not believe any setback violations will occur to initiate concerns expressed in the February 8 USACOE Letter noted above and attached here as Appendix E.

In a typical, normal-rainfall annual season, no water from the Site would be expected to flow as runoff into the drainage/watercourse.

Similarly, the steep slope downward from the Site toward the drainage/watercourse would not likely result in an overflow or major rise of during a typical, normal rain season. Consequently, I do not believe the drainage/watercourse would ever likely cause negative impacts upon the Site's biological resources.

In addition, the soil composition in the profile in this area provides acceptable drainage percolation for any rising water levels that could potentially occur during the rainy season and/or high rain episodes. This soil profile composition — Steinbeck Loam (SnC) and Los Osos Clay Loam (LoD), as mentioned above in section 2 — consists of two different soil types, neither of which is classified as a "wetland"/hydric soil by the USGS¹².

As for regulatory measures pertaining to the previously described drainage/watercourse, the Project's southern boundary is at least 190 feet from this ephemeral to intermittent watercourse. Consequently, no wetland/riparian setback violation will occur as a result of the Project, per the PRMD *DRN-005 Waterway Setback Requirements* section devoted to waterways¹³.

¹² See: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

¹³ See: <https://sonomacounty.ca.gov/PRMD/Instructions-and-Forms/DRN-005-Waterway-Setback-Requirements/>

Given the information in this section (above), it provides an explanation for why I answered “no” to the #b and #c assessment questions in the “Introduction,” above.

6. Potential Negative Impacts Upon Plant And Animal Species Due To The Proposed Action

Based on the non-native annual grassland vegetation community present on the Site in combination with the aforementioned CNDDDB and CNPS queries conducted before the Surveys occurred, the Site has no potential to low potential for occurrence of special-status plant and wildlife species. Again, a list of the potential special-status species in the Site’s area within the Petaluma USGS 7.5 minute quadrangle and Sonoma County appears in Appendix C.

The CNDDDB lists several plant species potentially present within the Petaluma USGS 7.5 minute quadrangle within which the Site exists¹⁴ (See Appendix C). Given the aforementioned habitat conditions on the Site and periodic human intrusions/impacts throughout the parcel, none of these species would be expected to be present on the Site or adjacent to it when typical flowering times occur for them in 2021. As noted above, the Surveys did not yield the presence of any rare, special-status botanical species.

For instance, above, I mentioned the Site does not host suitable habitat for the four rare, special-status Santa Rosa Plain protected species. As for rare, listed tarweed species potentially occurring in the 7.5’ USGS Petaluma quadrangle, the Congested Hayfield Tarplant (*Hemizonia congesta* ssp. *congesta*) grows in valley and foothill grassland habitat, in addition to roadsides at elevations ranging from 66 to 1,837 feet^{15,16}.

Accounts of the potential for occurrence of rare, special-status species follow:

Congested-headed Hayfield Tarplant. The closest CNDDDB observation for this listed 1b.2 subspecies was in 1930, approximately 2.79 miles east of the Site near Petaluma (See Appendix A, Figure 8, below.). However, this species was not seen during the Surveys probably due in part to the previously mentioned periodic disturbance to which the Site is regularly subjected.

Consequently, no negative impacts are expected to occur upon special-status plant species on the Site or adjacent to it. In turn, no mitigation measures are recommended in association with plant species.

Regarding fauna, the CNDDDB lists 24 special-status animal species as potentially present within the Petaluma USGS 7.5 minute quadrangle within which the Site exists¹⁷ (See Appendix C). Given the absence of suitable habitat on the Site and adjacent to it, none of these species was expected to be observed and, indeed, this was the case during the Surveys.

Among the 24 species, the most likely to be present in association with the Site include Pallid Bat, Western Mastiff Bat, and Swainson’s Hawk, as well as American Badger, and Monarch Butterfly.

¹⁴ Ibid.

¹⁵ CNDDDB query included the Petaluma 7.5 US Geological Survey (USGS) quadrangle on September 5, 2021.

¹⁶ See: <https://www.calflora.org/app/taxon?crn=4068>

¹⁷ CNDDDB query included the Petaluma 7.5 US Geological Survey (USGS) quadrangle on May 21, 2021.

Summaries corresponding to each of these five species follows, along with a determination of their potential for occurrence on the Site and whether the Action will result in any potential negative impacts upon them.

Pallid Bat, which is listed by the California Department of Fish and Wildlife (CDFW) as a Species of Special Concern, lives in deserts, grasslands, shrublands, woodlands. It is most common in open dry habitats with rocky areas for roosting¹⁸. Given suitable habitat for both roosting and maternal sites is absent on the Site and nearby it, no evidence of this species was detected during the Surveys. As a result, this species is considered to have zero to low potential for occurrence on the Site and nearby it. Because no significant impacts are expected to incur upon this species, no avoidance measures are suggested.

Western Mastiff Bat, which is listed by the California (CDFW) as a Species of Special Concern, typically frequents canyons, as well as human-made structures such as bridges and abandoned mines. The Site and habitat near it is devoid of these structures and does not host canyons, bridges, or abandoned mines. Consequently, this species is considered to have zero to low potential for occurrence on the Site and nearby it. Because no significant impacts are expected to incur upon this species, no avoidance measures are suggested.

Swainson's Hawk, which breeds and forages in grasslands, shrublands, and open woodlands, is adapted to foraging in agricultural areas, such as wheat and alfalfa fields, where crops do not exceed the typical height of native grasses. Nests are built in trees located within such a habitat matrix, often along stream courses or in planted shelterbelts or patches of open woodland. Typical nest trees include blue gum Eucalyptus, black locusts, junipers, oaks, and cottonwoods¹⁹.

Although no nesting habitat exists for this species on the Site, the nearby blue gum Eucalyptus trees on the Site offer potential suitable roosting and nesting sites. However, no Swainson's Hawk individuals or their nests were seen here during the Surveys.

Note this California Species of Special Concern may possibly nest in Sonoma County, no nearby nesting records of this species occur in the CNDDDB or within ebird (ebird.org)²⁰, a database of bird sightings that is coordinated by the Cornell Lab of Ornithology. Because no significant impacts are expected to incur upon this species, no mitigation measures are suggested.

American Badger, which is designated a California Species of Special Concern, occurs in large, undisturbed meadows, fields, prairies, and agricultural land. Regular disturbance on the Site preclude the ability of the American Badger to utilize it. As a result, this species is considered to have no potential for occurrence on the Site. Given no significant impacts are expected to incur upon this species, no mitigation measures are suggested.

Although the **Monarch Butterfly** is not listed by the state of California or federally as a special-status species, it is considered "sensitive" because its population numbers have decreased. No plant species on the Site are present to attract this species (e.g., *Asclepias* genus members = milkweed

¹⁸ See: http://www.yoloconservationplan.org/yolo_pdfs/speciesaccounts/mammals/pallid-bat.pdf

¹⁹ See: <http://www.nmpartnersinflight.org/gpage71.html>

²⁰ See: eBird.org, "Explore" section (Cornell Lab of Ornithology, Ithaca, NY)

genus). Instead, it requires large trees as overwintering roosting sites during the winter, especially in regions closer to the coast than the Site's location.

No CNDDDB records of this species were noted in the recent query of this CDFW database. Nonetheless, the three large Eucalyptus trees growing on the Site were assessed during the Surveys. Because no Monarch Butterfly individuals were seen and because none are listed in the CNDDDB for the area, they are considered absent from the area. Consequently, the Project is not expected to cause significant negative impacts upon this insect species. In turn, no avoidance measures are suggested.

Regarding the presence of nesting birds, the Surveys occurred during the non-breeding season. Hence, no nesting avian species would be expected to be negatively impacted.

Given the information in this section (above), it provides an explanation for why I answered "no" to the #a, #b, and #c assessment questions in the "Introduction," above.

Moreover, in relation to #d above in the "Introduction," I believe the Project will not result in negative impacts upon movement of any native resident or migratory fish or wildlife species. The Site does not occur within or next to any established native resident or migratory wildlife corridors and, in addition, the Project will not impede any common or rare, special-status species to utilize wildlife nursery sites.

7. Conclusions And Recommendations

Restating the Introduction conclusion again here, I believe the proposed Project will not result in significant negative impacts upon the Site's biological resources, including any special-status plant and animal species.

However, the following avoidance and minimization measures may be necessary before ground-breaking and construction begins at the Site, including:

a. Pre-construction nesting bird survey

Given the date of this BA submittal, the Project must continue to comply with active bird nest protection regulatory measures through August 31, 2021 and/or from February 1 through August 31 annually, in relation to CDFW regulations in its 3500 code series and a federal law — the Migratory Bird Treaty Act — coordinated by the U.S. Fish and Wildlife Service.

Consequently, if the Project begins during the aforementioned time frame, then a qualified Avian Biologist will be required to conduct a pre-construction nesting bird survey centered on detecting the potential presence of nesting songbird and raptor species on the Site or in buffer zone.

More exact, if construction on the Site occurs between February 1 and August 31, an Avian Biologist must conduct surveys for nesting songbird and raptor species in accordance with established CDFW survey protocols. Surveys should cover the Site and all suitable nesting habitat within 500 feet of its boundaries. If nesting songbird or raptor species are detected, the Avian Biologist must establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active songbird nests will be 75 feet and 500 feet for non-listed raptors, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting raptors. Factors to be considered for determining buffer size will include:

the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until the Avian Biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

b. Wetland avoidance measures

As for avoidance measures related to wetlands, as stated above, no wetland/riparian setback violation will occur as a result of the Project upon the drainage/watercourse existing south of the Site's southern-most boundary, per my interpretation of the PRMD's DRN-005 Waterway Setback Requirements section devoted to waterways²¹.

c. Pre-construction survey for American Badger

No American Badger or their burrows were observed during the recent Surveys at the Site. However, given future potential for occurrence of American Badger exists at the Site (based on sightings in nearby areas and because the Site's habitat could potentially host this burrowing mammal species in the future), a pre-construction survey for American Badger should be conducted in the future within 14 days of construction beginning at the Site to ensure any impacts from the Project are less than significant upon this California Species of Special Concern.

Avoidance and minimization measures shall include:

Pre-construction survey for the American Badger should be conducted in development zones no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities at the Site, or for any Project activity likely to impact the American Badger. If construction activities (including ground disturbing activities) are phased, then so shall the pre-construction surveys be phased.

If dens are found within the construction area and require removal, they shall be monitored for badger presence using a tracking medium or a video probe. Tracking medium must be monitored for three consecutive days to provide evidence of vacancy. All dens and burrows within the construction area and which contain badger sign must be hand excavated by a trained Wildlife Biologist. If a den is found to be occupied by an American Badger, the den shall not be excavated until the badger is allowed to passively vacate the den.

If dens are located within 100 feet of construction areas, but not within construction areas, they shall not be removed. Instead, exclusion fencing should be added to ensure no encroachment of equipment

The exclusion fencing around each observed badger burrow shall consist of plastic construction fencing held in place by t-posts every 25 feet, or by a rope and flagging fence. The purpose of the fencing is to exclude construction activities occurring near the den (s).

To ensure the above design prescription is executed successfully, an important design feature should occur: Gaps of three feet should be present every 25 feet in a fence to allow a badger to go in and out. Consequently, construction equipment will not be able to encroach within 100 feet of a burrow, but the gaps will allow a badger to get around a fence, if necessary.

²¹ See: <https://sonomacounty.ca.gov/PRMD/Instructions-and-Forms/DRN-005-Waterway-Setback-Requirements/>

The fencing should be around the outside of any burrow, equidistant from it 100 feet in all directions to prevent construction equipment encroachment.

Project-related vehicles shall observe a 20-mph speed limit while on the Site. This is particularly important at night (between sunset and sunrise) when American badgers are most active. Construction activities at night (sunset to sunrise) should be prohibited.

To prevent inadvertent entrapment of American badgers or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals by a qualified biologist or trained monitor.

In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape. If an entrapped animal is incapable of escaping or is otherwise trapped for an excess of 12 hours, the California Department of Fish and Game should be contacted for advice.

American Badgers are attracted to den-like structures such as pipes and may enter stored pipe, becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four-inches or greater that are stored in an unfenced storage yard for one or more overnight periods should be thoroughly inspected the qualified Wildlife Biologist for American Badgers before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If necessary, and under the direct supervision of a Wildlife Biologist, a pipe inhabited by a badger may be moved once to remove it from the path of construction activity, until the animal has escaped.

d. Tree protection plan for existing trees on the Site

Above, a description of the Site's Blue Gum Eucalyptus trees occurs. Avoid and minimization measures to protect them during the Project follow:

All Blue Gum Eucalyptus trees shall be preserved on the Site. At a minimum, a buffer shall be established to protect each tree's dripline plus no fewer than five feet from drip line. Temporary fencing, signage, flagging, and other demarcations shall be established to prevent impacts to the tree and buffered area for the duration of the Project.

e. Best Management Practices (BMPs) for erosion and sediment control

Best Management Practices at the Site should adhere to the PRMD advisory at its web site, per: <https://sonomacounty.ca.gov/PRMD/Eng-and-Const/Grading-and-Storm-Water/Erosion-Prevention-and-Sediment-Control/>

See Appendix F for a PRMD issued advisory of BMPs that the Owner will be required to satisfy.

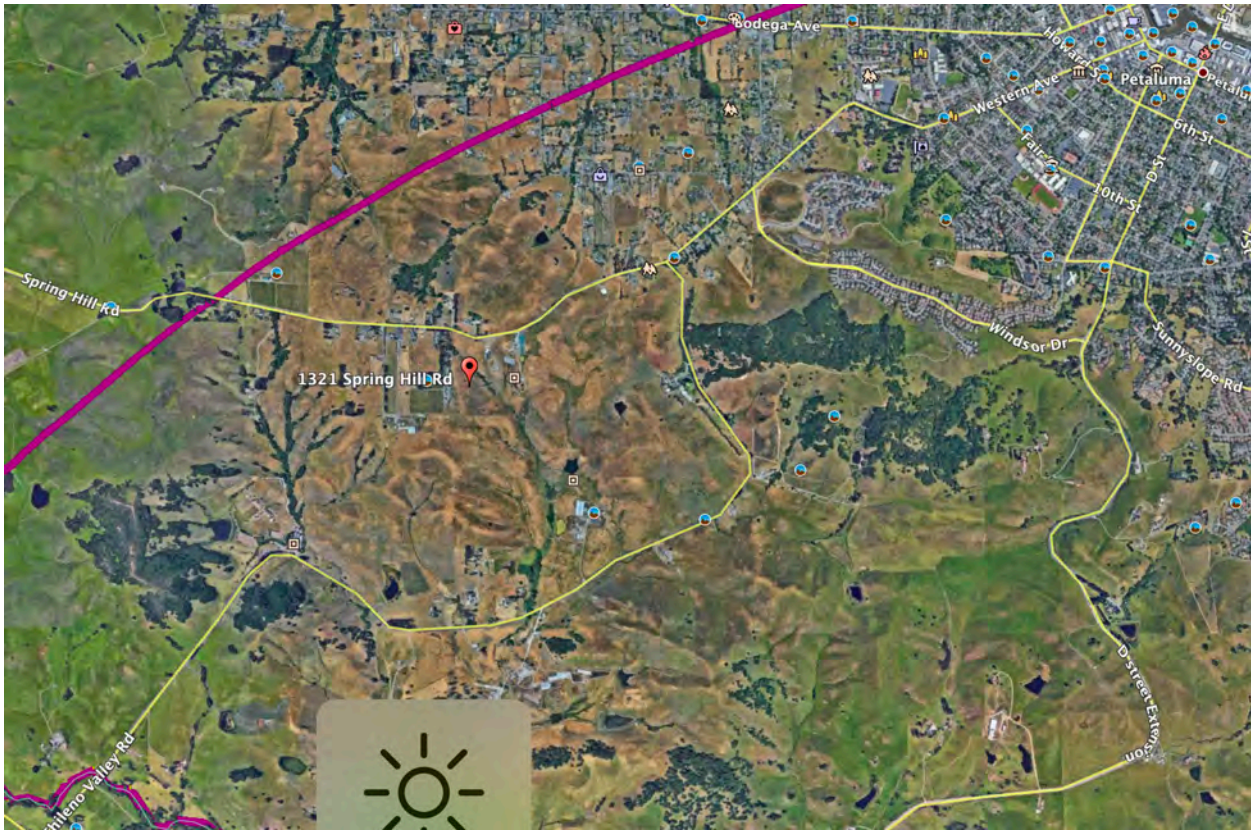
As qualification to the above information in this section, note:

Regarding the presence of nesting birds, the most recent 2021 Surveys stated no nesting songbird and raptor species is expected to be negatively impacted based on the results of the Surveys that did not detect any nesting birds on the Site or in buffer zone areas.

In sum, based on the above information, I believe the Project should be allowed to progress without delay and the Owner should be granted a Use Permit and any other necessary permits to proceed with his proposed Project.

APPENDIX A

FIGURES



APPENDIX A – Area Map– Figure 1

The 17-acre Site footprint upon which the Owner proposes to add a wine tasting building at 1321 Spring Hill Road, Petaluma, CA 94952 (APN #020-050-026) is approximately 2.75 miles from Petaluma (that is present at the top right of the above photo).

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APPENDIX A – Parcel Map – Figure 2

Adjacent parcels along with the center of the site (**red text** address, above) at 1321 Spring Hill Road, Petaluma, CA 94952. The site is approximately 2.75 miles west of Petaluma, CA, Sonoma County. Note the next figure, below: Figure 3 shows the precise boundaries of the site. Figure 4 (also below) shows the professional architectural rendering of the site.

Parcel Number 020-050-026 **Search** **Address** 1321 Spring Hill Rd., Petaluma **Search**

1 Parcel Found

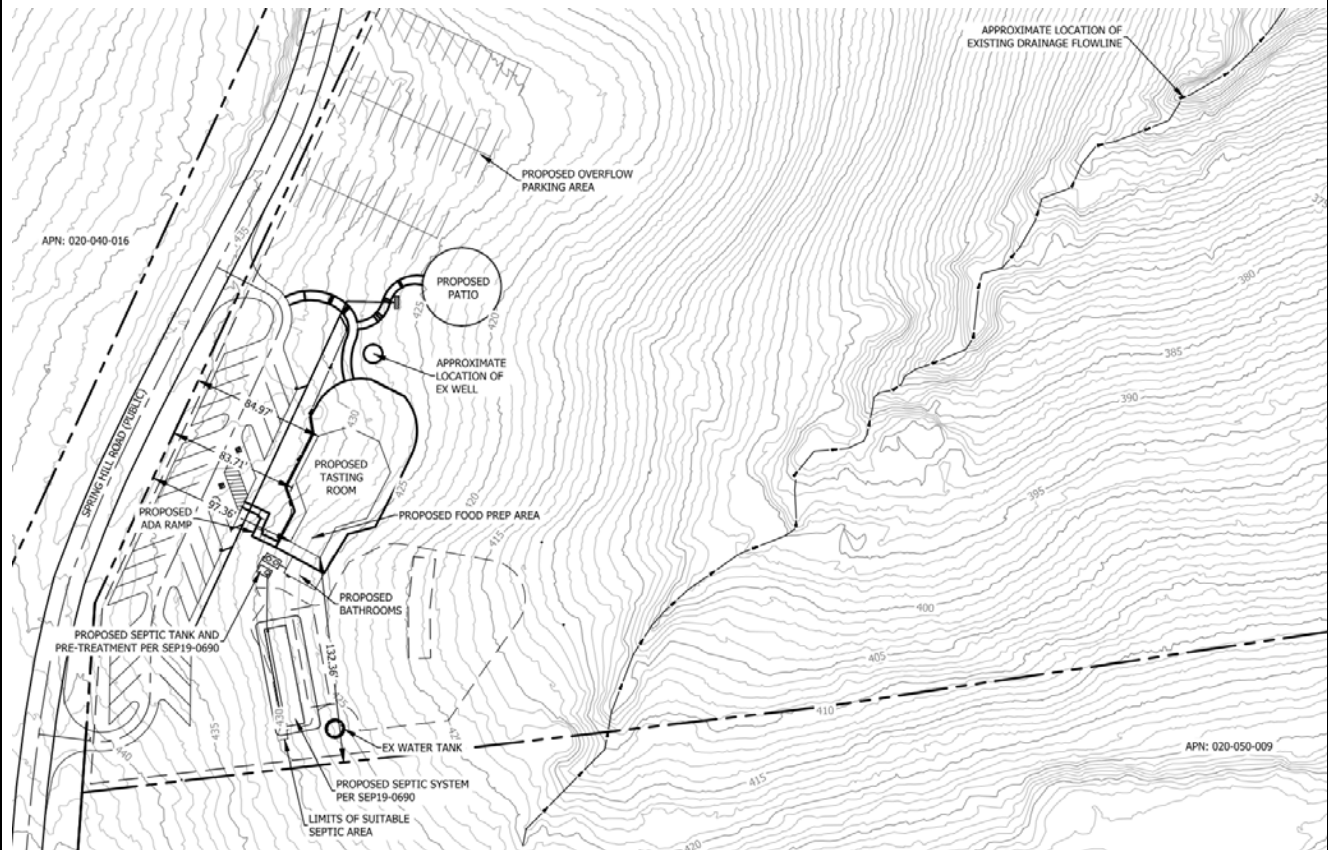


County of Marin, Sonoma County, Bureau of Land Management, Esri, HERE, Garmin, INCREM... Powered by [Esri](#)

APPENDIX A – Parcel/APN # Map – Figure 3

The 17-acre Site footprint upon which the Owner intends to add a wine tasting building at 1321 Spring Hill Road, Petaluma, CA 94952 (APN #020-050-026) is approximately 2.75 miles from Petaluma.

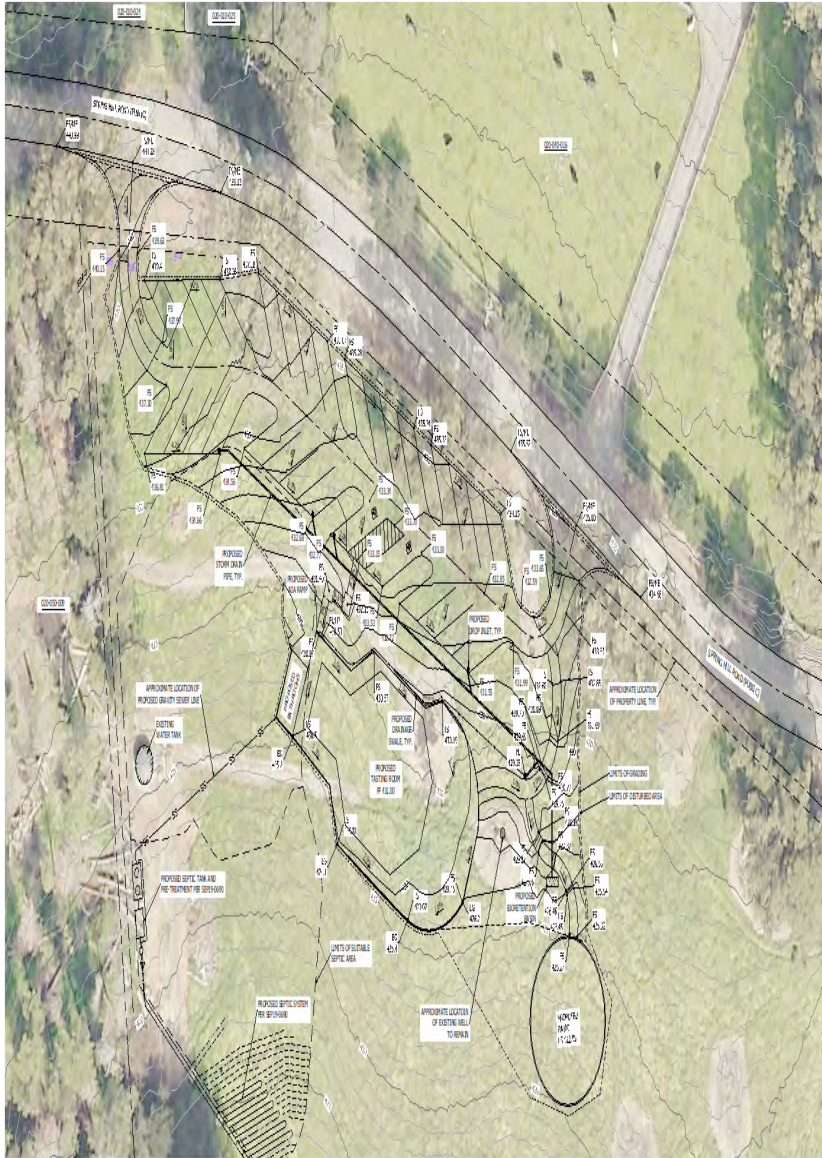
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APPENDIX A – Architectural Site Plan – Figure 4

The *Site Plan* for the proposed project appears above, per *BC Engineering Group, Inc.*, a civil engineering and land planning firm in Santa Rosa, CA. The proposed footprint for the wine tasting room appears in the middle of the above figure as “Proposed Tasting Room.” Note the following Figure 5 on the next page shows:

- a) the off-site drainage/watercourse (center and top right of the figure, below) that begins at least 190 feet southeast from the proposed construction footprint.
- b) the location of the proposed septic system (southwest portion of the Site; see below figure).



NOTE:

1. PIPE SIZES, SPACES, AND MATERIALS SHALL BE DETERMINED BASED ON THE DESIGN FRAME.
2. PROPERTY LINES AND APPROXIMATE AND EXISTING COUNTY GAS AND WATER LINES ARE NOT REPRESENTED AS EXACT LOCATIONS.
3. ALL DISTURBED AND PROPOSED FEATURES SHALL BE APPROVED.


PRELIMINARY SHEETWORK SUMMARY:

- TOP = 100' TO 120' DRAINAGE
- FILL = 100' TO 120' DRAINAGE
- NO FILL OR CUTTING DRAINAGE
- TOTAL DISTURBED AREA = 100 ACRES
- TOTAL FILL VOLUME = 100,000 CUBIC YARDS

SCALE 1"=10'

NOT FOR CONSTRUCTION

BC ENGINEERING GROUP, INC.
 2000 C Street, Suite 100, San Diego, CA 92101
 (619) 591-1000
 www.bc-engineering.com

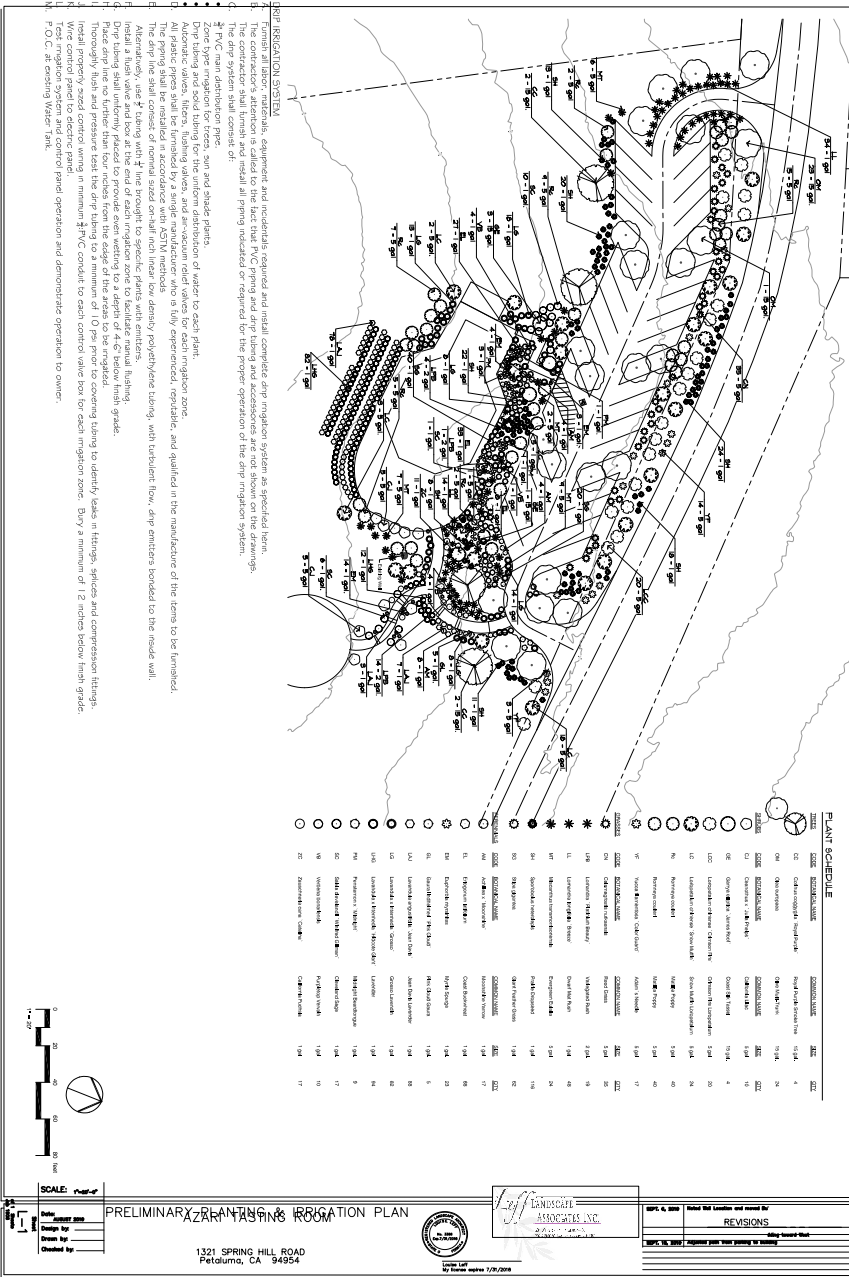


PRELIMINARY GRADING AND DRAINAGE PLAN
 PRELIMINARY GRADING AND DRAINAGE PLAN
 1321 1st Street, Suite 100, San Diego, CA 92101
 (619) 591-1000

PAGE 10/10

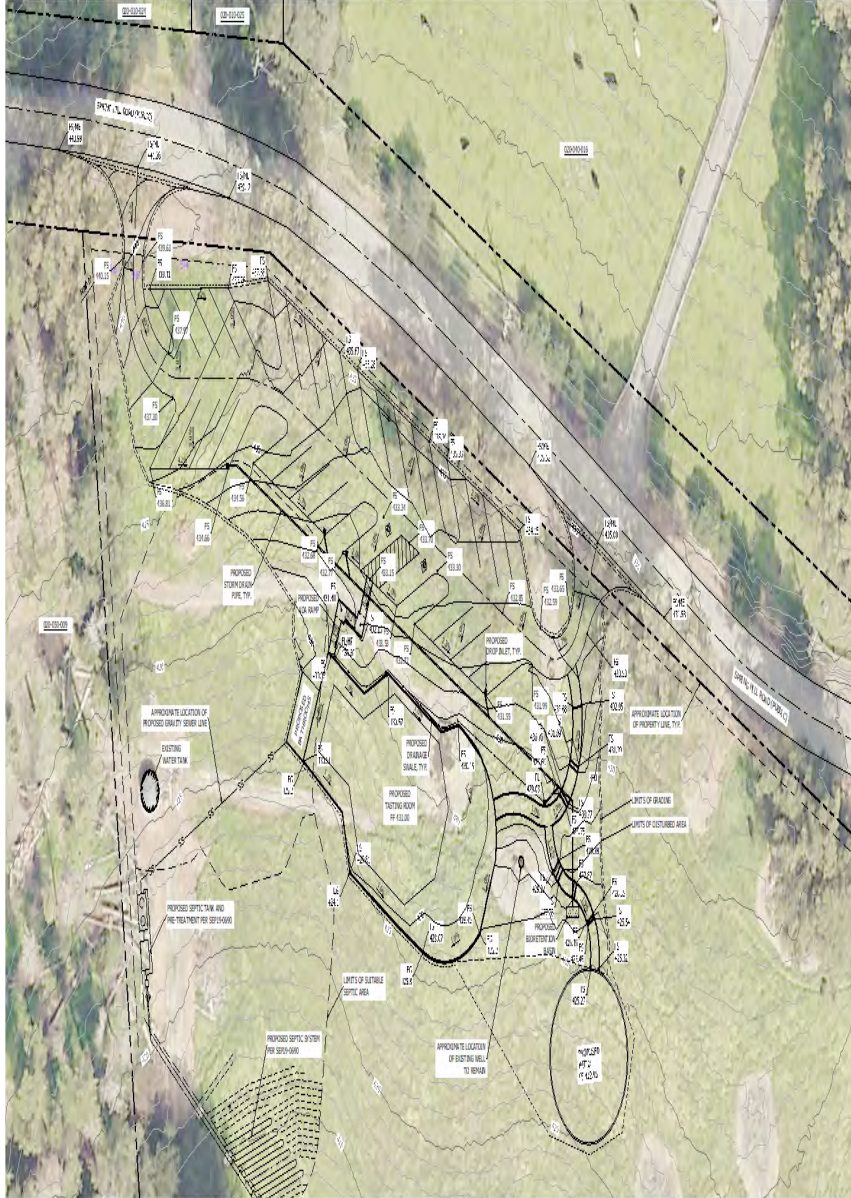
NO.	DATE	DESCRIPTION	BY
1	08/10/10	ISSUED FOR PERMIT	C.L.O.
2	08/10/10	ISSUED FOR PERMIT	C.L.O.
3	08/10/10	ISSUED FOR PERMIT	C.L.O.
4	08/10/10	ISSUED FOR PERMIT	C.L.O.
5	08/10/10	ISSUED FOR PERMIT	C.L.O.
6	08/10/10	ISSUED FOR PERMIT	C.L.O.
7	08/10/10	ISSUED FOR PERMIT	C.L.O.
8	08/10/10	ISSUED FOR PERMIT	C.L.O.
9	08/10/10	ISSUED FOR PERMIT	C.L.O.
10	08/10/10	ISSUED FOR PERMIT	C.L.O.

APPENDIX A – Project Construction Area (i.e., construction and staging areas) – Figure 5



APPENDIX A – Preliminary Planting Plan For Site – Figure 6

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- NOTE:**
1. PIPE SIZES, SLOPES, AND INVERTS WILL BE DETERMINED DURING THE DESIGN PHASE.
 2. PROPOSED LINES AND APPROXIMATE AND PER CONFORM COUNTY AND LOCAL ORDINANCES AND NOT REPRESENT A GUARANTEED DESIGN.
 3. ALL EXISTING AND PROPOSED FEATURES SHOWN ARE APPROXIMATE.

PROPOSED FACILITIES SUMMARY:

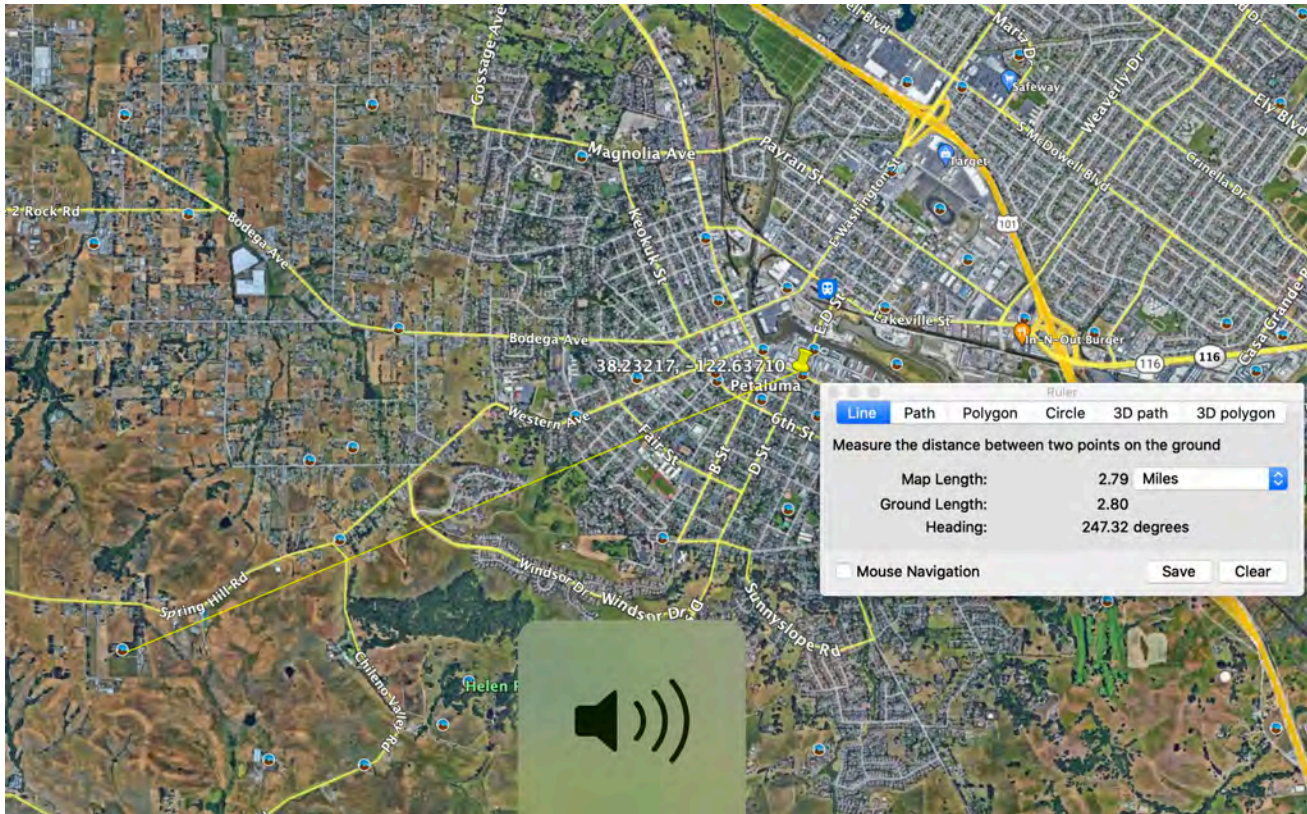
CIP = 15.0" CONCRETE PIPE
 FLL = 18.0" FIBERGLASS LINED PIPE
 RW = 18" RCP CONCRETE RAINWATER
 TRENCH WALLS W/REINFORCED SANDWICH PANELING ONLY ARE NOT APPROVED.

SCALE 1"=20'

NOT FOR CONSTRUCTION

<p>BCS ENGINEERS GROUP, INC. www.bcsengineersgroup.com 3211 MARINA AVENUE, SUITE 200, SAN FRANCISCO, CA 94134 949.438.8888, 949.438.8889, 949.438.8890</p>	DATE
	BY
<p>PRELIMINARY</p> <p>1. PRELIMINARY GRADING AND DRAINAGE PLAN 2. PRELIMINARY GRADING AND DRAINAGE PLAN 3. PRELIMINARY GRADING AND DRAINAGE PLAN 4. PRELIMINARY GRADING AND DRAINAGE PLAN</p>	DESCRIPTION
	NO.

APPENDIX A – Preliminary Grading and Drainage Plan – Figure 7



APPENDIX A – Closest observation of Congested-headed Hayfield Tarplant (*Hemizonia congesta* ssp. *congesta*) – Figure 8

APPENDIX B

PHOTOS



Photo 1 — Looking south, a well (right-center in photo) is shown at the site (1321 Spring Hill Road, Petaluma, CA) along with some of the owner's residential parcel's buildings and vineyards (background of photo) that occur outside the parcel's boundaries.

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Photo 2 — Looking east, the north border of the site is represented by the barbed wire fence and the Blue Gum Eucalyptus (*Eucalyptus globulus*) tree (left side of photo). The rest of the site exists on the right side of the photo and extends south beyond the scene shown above (See Appendix A, Figure 4.).

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Photo 3 — Looking west, similar to Photo 2, the north border of the site is represented by the barbed wire fence and a different Blue Gum Eucalyptus (*Eucalyptus globulus*) tree (center of photo) that occurs immediately inside the site's north border adjacent to Spring Hill Road. The rest of the site exists on the left side of the photo and beyond toward the south (See Appendix A, Figure 4.).

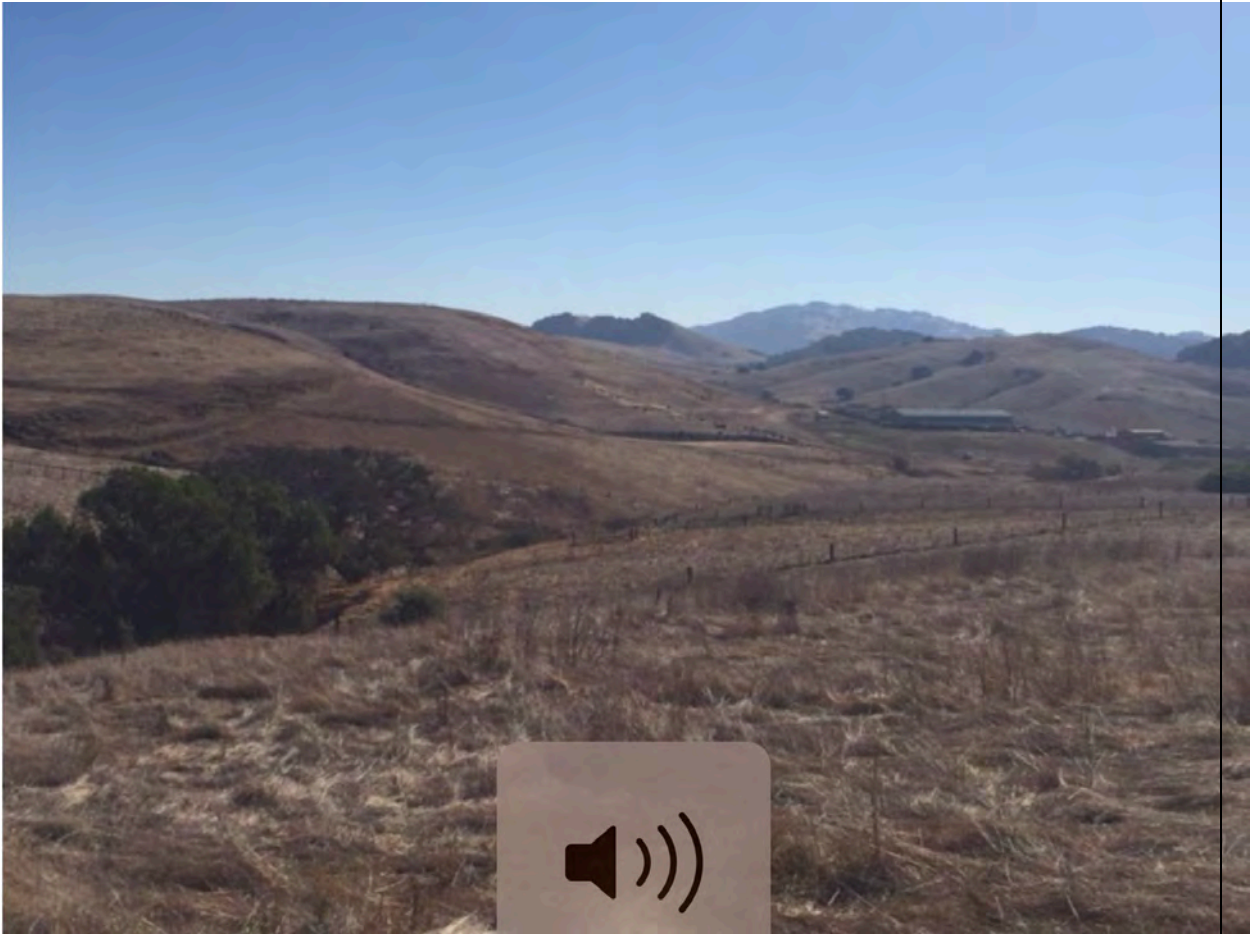


Photo 4 — Looking east from south of the site, a distant view is shown of the trees growing amid the upper banks of the drainage/watercourse mentioned in the above report’s narrative. This drainage/watercourse occurs at least 190 feet or more from the south border of the site at 1321 Spring Hill Road, Petaluma, CA. (See Appendix A, Figure 4.).

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Photo 5 — Looking from overhead, four Blue Gum Eucalyptus trees are adjacent to each other adjacent to the fence line on the northern border of the Site at 1321 Spring Hill Road, Petaluma, CA. See Photo 2 and 3 above.

The even-aged, 110-foot-tall trees are the following diameter at breast heights (DBH) (from left to right in the above photo): 28, 25, 26.5, and 26 inches.

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APPENDIX C

**Potential For Rare, Special-Status Species Potentially Occurring
On The Site Or Within 100 Feet Of It**

Appendix C

**Potential For Rare, Special-Status Species Potentially Occurring
On The Site Or Within 100 Feet Of It**

SPECIES	STATUS ¹			HABITAT	RATIONALE
	USFWS	CDFW	CNPS		

Plants

¹ Presence of species on the following table is via a search query at a) <https://rareplants.cnps.org/Search/Results> for the Petaluma 7.5' USGS quadrangle; and b) CNDDDB query included the Petaluma 7.5 US Geological Survey (USGS) quadrangle on May 21, 2021.

Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	--	--	1B	Cismontane woodland, valley and foothill grassland/ clay, often serpentinite Bloom: May-Jun	None: habitat on site is not likely to support species
Sonoma alopecurus	<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	E	--	1B	Marshes and swamps (freshwater), riparian scrub Bloom: May-Jul	None: No suitable habitat on project site
Napa false indigo	<i>Amorpha californica</i> var. <i>napensis</i>	--	--	1B	Broadleafed upland forest (openings), chaparral, cismontane woodland Bloom: Apr-Jul	None: No suitable habitat on project site
Sonoma manzanita	<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i>	--	--	1B	Chaparral, lower montane coniferous forest / sometimes serpentinite Bloom: Jan-Apr (Jun)	None: No suitable habitat on project site
Rincon manzanita	<i>Arctostaphylos stanfordiana</i> ssp.	--	--	1B	Chaparral (rhyolitic), cismontane woodland Bloom: Feb-Apr	None: No suitable habitat on project site
Suisun marsh aster	<i>Aster lentus</i>	--	--	1B	Marshes and swamps (brackish and freshwater) Bloom: May-Nov	None: No suitable habitat on project site
Clara Hunt's milk-vetch	<i>Astragalus clarianus</i>	E	T	1B	Open grassy areas and thin clay soil Bloom: Mar-May	Low: habitat on site is not likely to support species
alkali milk vetch	<i>Astragalus tener</i> var <i>tener</i>	--	--	1B	Playas, valley and foothill grassland (adobe clay), vernal pools/alkaline Bloom: Mar-Jun	Low: habitat on the project site is not likely to support species

San Joaquin spearscale	<i>Atriplex joaquiniana</i>	--	--	1B	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland / alkaline Bloom: Apr-Oct	Low: habitat on the project site is not likely to support species
big-scale balsamroot	<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--	--	1B	Chaparral, cismontane woodland, valley and foothill grassland / sometimes serpentinite Bloom: Mar-Jun	Low: habitat on site is not likely to support species
Sonoma sunshine	<i>Blennosperma bakeri</i>	--	--	1B	Valley and foothill grassland (mesic), vernal pools Bloom: Mar-May	Low: habitat on the project site is not likely to support species
Narrow-anthered California brodiaea	<i>Brodiaea californica</i> var. <i>leptandra</i>	--	--	1B	Open forest, chaparral, often serpentine Bloom: May-Jul	None: No suitable habitat on project site
white sedge	<i>Carex albida</i>	--	--	1B	Bogs and fens, marshes and swamps (freshwater) Bloom: May-Jul	None: No suitable habitat on project site
Rincon Ridge ceanothus	<i>Ceanothus confusus</i>	--	--	1B	Dry shrubby slopes Bloom: Feb-Apr	None: No suitable habitat on project site
Calistoga ceanothus	<i>Ceanothus divergens</i>	--	--	1B	Dry shrub-covered rocky, volcanic slopes Bloom: Feb-Mar	None: No suitable habitat on project site
holly-leaved ceanothus	<i>Ceanothus purpureus</i>	--	--	1B	Dry shrub-covered rocky, volcanic slopes Bloom: Feb-Jun	None: No suitable habitat on the project site
Sonoma ceanothus	<i>Ceanothus sonomensis</i>	--	--	1B	Chaparral, in sand, serpentine, volcanic soils Bloom: Feb-Apr	None: No suitable habitat on project site
serpentine cryptantha	<i>Cryptantha clevelandii</i> var. <i>dissita</i>	--	--	1B	Chaparral (serpentinite) Bloom: Apr-Jun	None: No suitable habitat on project site
dwarf downingia	<i>Downingia pusilla</i>	--	--	2	Vernal pools, roadside ditches Bloom: Mar-May	None: habitat on the project site is not likely to support species on the project site

narrow-leaved daisy	<i>Erigeron angustatus</i>	--	--	1B	Chaparral (serpentinite or volcanic) Bloom: May-Sep	None: No suitable habitat on project site
streamside daisy	<i>Erigeron biolettii</i>	--	--	3	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest/rocky, mesic Bloom: Jun-Oct	None: No suitable habitat on project site
Tiburon buckwheat	<i>Eriogonum luteolum</i> var. <i>caninum</i>	--	--	3	Chaparral, coastal prairie, Valley and foothill grassland/serpentinite Bloom: Jun-Sep	None: No suitable habitat on project site
Loch Lomond button-celery	<i>Eryngium constancei</i>	E	E	1B	Vernal Pools Bloom: Apr-Jun	None: No suitable habitat on project site
Congested-headed hayfield tarplant	<i>Hemizonia congesta</i> ssp. <i>congesta</i>	--	--	1B.2	Sometimes roadsides, and valley and foothill grassland (66'–1,837'); Bloom: Apr. – Nov.	Marginal, suitable habitat present; however, this species was not detected during the Surveys, including a 9/8/21 survey.
Two-carpellate western flax	<i>Hesperolinon bicarpetatum</i>	--	--	1B	Chaparral (serpentinite) Bloom: May-Jul	None: No suitable habitat on project site
Brewer's western flax	<i>Hesperolinon breweri</i>	--	--	1B	Chaparral, grassland, sometimes serpentine Bloom: May-Jul	Low: habitat on the project site is not likely to support species
Napa western flax	<i>Hesperolinon serpentinum</i>	--	--	1B	Chaparral (serpentinite) Bloom: May-Jul	Low: habitat on the project site is not likely to support species
Northern California black walnut	<i>Juglans hindsii</i>	--	--	1B	Canyons, valleys Bloom: Apr-May	Low: habitat on the project site is not likely to support species

Contra Costa goldfields	<i>Lasthenia conjugens</i>	E	--	1B	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools/mesic Bloom: Mar-Jun	Low: habitat on the project site is not likely to support species
delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--	--	1B	Marshes and swamps (freshwater and brackish) Bloom: May-Jul (Sep)	None: No suitable habitat on project site
Colusa layia	<i>Layia serpentrionalis</i>	--	--	1B	Chaparral, cismontane woodland, valley and foothill grassland/sandy, serpentinite Bloom: Apr-May	Low: habitat on the project site is not likely to support species
Legenere	<i>Legenere limosa</i>	--	--	1B	Vernal pools Bloom: Apr-Jun	None: No suitable habitat on project site
Jepson's leptosiphon	<i>Leptosiphon jepsonii</i> (syn. <i>Linanthus</i>)	--	--	1B	Chaparral, oak forest, usually volcanic Bloom: Apr-May	None: No suitable habitat on project site
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	--	R	1B	Intertidal marshes, streambanks Bloom: Apr-Nov	None: No suitable habitat on project site
Sebastopol meadowfoam	<i>Limnanthes vinculans</i>	E	E	1B	Meadows and seep, valley and foothill grassland, vernal pools/vernally mesic Bloom: Apr-May	None: No suitable habitat on project site
Cobb Mountain lupine	<i>Lupinus sericatus</i>	--	--	1B	Open wooded slopes Bloom: Mar-Jun	None: No suitable habitat on project site
Mt Diablo cottonweed	<i>Micropus amphibolus</i>	--	--	3	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland	None: No suitable habitat on project site
robust monardella (robust coyote mint)	<i>Monardella villosa</i> ssp. <i>Globosa</i>	--	--	1B	Open areas Bloom: Jun-Jul	Low: habitat on the project site is not likely to

Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>Bakeri</i>	--	--	1B	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools	Low: habitat on the project site is not likely to support
few-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>Pauciflora</i>	E	T	1B	Vernal pools (volcanic ash flow) Bloom: May-Jun	None: No suitable habitat on project site
many-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>Plieantha</i>	E	E	1B	Vernal pools (volcanic ash flow) Bloom: May-Jun	None: No suitable habitat on project site
Marin County navarretia	<i>Navarretia rosulata</i>	--	--	1B	Closed-cone coniferous forest, chaparral/serpentine, rocky Bloom: May-Jul	None: No suitable habitat on project site
Sonoma beardtongue	<i>Penstemon newberryi</i> var. <i>sonomensis</i>	--	--	--	Outcrops, talus Bloom: Apr-Aug	None: No suitable habitat on project site
Calistoga popcorn- flower	<i>Plagiobothrys strictus</i>	E	T	1B	Moist sites near hot springs Bloom: Apr-	None: No suitable habitat on
Napa blue grass	<i>Poa napensis</i>	E	E	1B	Low, sterile ground near hot springs Bloom: May-Aug	None: No suitable habitat on project site
Marin checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>Viridis</i>	--	--	1B	Dry ridges near coast Bloom: May-Aug	None: No suitable habitat on project site
marsh checkerbloom	<i>Sidalcea oregana</i> ssp. <i>Hydrophila</i>	--	--	1B	Wet soil of streambanks, meadows Bloom: May-Aug	None: No suitable habitat on project site
Kenwood Marsh checkerbloom	<i>Sidalcea oregana</i> ssp. <i>vallida</i>	E	E	1B	Marshes and swamps (freshwater) Bloom: Jun-Sep	None: No suitable habitat on project site
green jewel-flower	<i>Streptanthus breweri</i> var. <i>hesperidis</i>	--	--	1B	Chaparral (openings), cismontane woodland / serpentine, rocky Bloom: May-Jul	None: No suitable habitat on project site

showy Indian clover	<i>Trifolium amoenum</i>	E	--	1B	Moist, heavy soils, disturbed areas Bloom: Apr-Jun	None: Presumed extinct; no suitable habitat on project site
saline clover	<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	--	--	1B	Salt marshes, grasslands, coastal woodlands, openings, wet meadows, ditches, roadsides, disturbed places, open alkaline or spring-moist heavy soils Bloom: Apr-Jun	Low: habitat on the project site is not likely to support species
oval-leaved viburnum	<i>Viburnum ellipticum</i>	--	--	2	Chaparral, yellow-pine forest, generally on north-facing slopes Bloom: May-June	Low: habitat on the project site is not likely to support species

Invertebrates

valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	--	--	Central Valley, requires elderberry shrubs	None: project site is outside the species range
monarch butterfly	<i>Danaus plexxipus</i>				Requires <i>Asclepis</i> genus host plants; overwinters in large trees, including Eucalyptus	Low: no suitable host plants on site; low potential for winter roosts upon Site's Eucalyptus trees
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T	--	--	Vernal pools and seasonal depressions in Central Valley, central and south Coast Mtns.	None: No suitable habitat on Site.
California freshwater shrimp	<i>Syncaris pacifica</i>	E	E	--	Low elevation, low gradient streams with densely-vegetated margins and moderately heavy riparian cover	None: No suitable habitat on Site.

Reptiles

western pond turtle	<i>Clemmys marmorata</i>	--	SSC	--	Associated with permanent or semi-permanent water	None: No suitable habitat on project site
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Amphibians

California red- legged frog	<i>Rana draytonii</i>	T	SSC	--	Lowlands and foothills with permanent sources of deep water with dense emergent vegetation; disperse through upland habitat	None: No suitable sheltering, foraging, and breeding habitat on Site and dispersal onto Site unlikely from watercourse 190 feet south-southwest of parcel
foothill yellow- legged frog	<i>Rana boylei</i>	--	SSC	--	Variety of habitats with shallow, flowing water, small to moderate- sized streams with some cobble- sized substrate and sparse riparian cover	None: No suitable habitat on project site

California newt	<i>Taricha torosa torosa</i>	--	SSC	--	valley-foothill hardwood, conifer, coastal scrub and mixed chaparral, annual grassland and mixed conifer types with breeding sites	None: No suitable habitat on project site
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Birds

Cooper's hawk	<i>Accipiter cooperi</i>	--	SSC	--	Riparian and live oak habitats usually, but variety of habitats near water	None: No suitable habitat on project site
Swainson's hawk	<i>Buteo swainsoni</i>		T		Mixture of grassland, cropland, shrubs, and open woodland habitats.	None: No suitable habit on project site
sharp- shinned hawk	<i>Accipiter striatus</i>	--	SSC	--	Nesting - riparian, deciduous, mixed conifer. Prefers riparian habitats (isolated)	None: No suitable habitat on project site
tricolored blackbird	<i>Agelaius tricolor</i>	--	SSC	--	Nesting colony - Central Valley and vicinity. Requires open water, protected nesting substrate (e.g. emergent vegetation) and foraging area	None: No suitable habitat on project site

short-eared owl	<i>Asio flammeus</i>	--	SSC	--	Annual and perennial grasslands, prairies, dunes, meadows, and saline and freshwater emergent wetlands	None: No suitable habitat on project site
long-eared owl	<i>Asio otus</i>	--	SSC	--	Riparian woodland	None: No suitable habitat on project site
burrowing owl	<i>Athene cunicularia</i>	--	SSC	--	Burrow sites in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation	None: No suitable habitat on project site
northern harrier	<i>Circus cyaneus</i>	--	SSC	--	Foothill and valley grasslands, meadows, emergent wetlands, rarely found in heavily wooded areas	Low: habitat on the project site is not likely to support species
yellow warbler	<i>Dendroica petechia brewsteri</i>	--	SSC	--	Riparian woodlands	None: No suitable habitat on project site
white-tailed kite	<i>Elanus leucurus</i>	--	FP	--	Open grassland, meadows, oak and deciduous woodland	None: No suitable habitat on project
willow flycatcher	<i>Empidonax traillii</i>	--	E	--	Dense willow stands, near water	None: No suitable habitat on project site
California horned lark	<i>Eremophila alpestris actia</i>	--	SSC	--	Variety of open habitats	Low: habitat on the project site is not likely to support species
merlin	<i>Falco columbarius</i>	--	SSC	--	Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitat (Including open grasslands and woodlands)	Low: habitat on the project site is not likely to support species
prairie falcon	<i>Falco mexicanus</i>	--	SSC	--	Dry open terrain (nesting). Associated with perennial grasslands, savannahs, and rangeland	Low: habitat on the project site is not likely to support species

American peregrine falcon	<i>Falco peregrinus</i>	--	E, FP	--	Near wetlands, rakes, rivers, or other water (nesting): on cliffs, dunes, mounds, and human made structures	None: No suitable habitat on project site
salt-marsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	--	SSC	--	San Francisco Bay Region, salt and fresh water marshes	None: No suitable habitat on project site
bald eagle	<i>Haliaeetus leucocephalus</i>	T	E, FP	--	Nests in large, old-growth, or dominant live tree with open branchwork, Nest usually located near a permanent water source.	None: No suitable habitat on project site
loggerhead shrike	<i>Lanius ludovicianus</i>	--	SSC	--	Variety of open habitats, including valley foothill, woodland and riparian	Low: habitat on the site is not likely to support species
California black rail	<i>Laterallus jamaicensis coturniculus</i>	--	T,FP	--	Salt marshes	None: No suitable habitat on project site
purple martin	<i>Progne subis</i>	--	SSC	--	(Nesting) Woodlands, coniferous, Douglas fir, ponderosa pine, Monterey pine	Low: habitat on the site is not likely to support species
Ridgway's rail	<i>Rallus obsoletus</i>	E	E,FP	--	Salt-water and brackish marshes in the vicinity of San Francisco Bay	None: No suitable habitat on project site
Mammals						
pallid bat	<i>Antrozous pallidus</i>	--	SSC	--	Deserts, grasslands, shrublands, woodlands. Most common in open dry habitats with rocky areas	Low: limited habit exists on the project site
Townsend's western big-eared bat	<i>Corynorhinus townsendii townsendii</i>	--	SSC	--	Humid coastal regions of northern and central Ca. Roost in caves, lava tubes, and mines	Low: habitat on the project site is not likely to support species
western mastiff bat	<i>Eumops perotis</i>	--	SSC	--	Foothill and valley grassland, chaparral, coastal and desert scrub, conifer and deciduous woodland	Low: habitat on the project site is not likely to support species

American badger	<i>Taxidea taxus</i>	--	SSC	--	Open grassland, prairies, savannah, and pasture.	Low: habitat on the project site is not likely to support species; periodic human disturbance includes grazing and soil compaction
salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	E	E	--	Saline emergent wetlands of San Francisco Bay and its tributaries	None: No suitable habitat on project site
Suisun shrew	<i>Sorex ornatus sinuosus</i>	--	SSC	--	Tidal marshes of the northern shores of San Pablo and Suisun Bays	None: No suitable habitat on project site

Legal Status Definitions:

USFWS = United States Fish and Wildlife Service (Federal)

CDFW = California Department of Fish and Wildlife (State)

Listing Categories:

E= Endangered (legally protected);

T =Threatened (legally protected)

R=Rare (legally protected)

FP = Fully Protected (legally protected, no take allowed)

SSC = California Species of Special Concern (no formal protection)

California Native Plant Society Categories:

^{1B} = Plant species considered rare or endangered in California and elsewhere (but not legally protected under ESA or CESA)

² = Plant species considered rare or endangered in California but more common elsewhere (but not legally protected under ESA or CESA)

³ = More information is needed to define status (Currently on Review)

APPENDIX D

SPECIES SEEN ON SURVEY

APPENDIX D
Plant Species Seen During The May 19 and June 5, 2021 Surveys On
The Site And Adjacent To It

Botanical Name	Common Name
APIACEAE (CARROT FAMILY)	
<i>Foeniculum vulgare</i>	Fennel
<i>Lomatium utriculatum</i>	Yellow Hog Fennel
<i>Daucus carota</i>	Queen Anne's Lace
ASTERACEAE (SUNFLOWER/COMPOSITE FAMILY)	
<i>Achillea millefolium</i>	Yarrow
<i>Carduus pycnocephalus</i>	Italian Thistle
<i>Centaurea solstitialis</i>	Yellow Star-Thistle
<i>Hypochaeris radicata</i>	Hairy Cat's-ear
<i>Picris echioides</i>	Bristly Ox-tongue
BRASSICACEAE (MUSTARD FAMILY)	
<i>Brassica rapa</i>	Field Mustard
<i>Raphanus sativus</i>	Radish
CARYOPHYLLACEAE (PINK FAMILY)	
<i>Cerastium glomeratum</i>	Mouse-ear Chickweed
CONVOLVULACEAE (MORNING GLORY FAMILY)	
<i>Convolvulus arvensis</i>	Bindweed
	C
FABACEAE/LEGUMINOSAE (LEGUME FAMILY)	
<i>Lotus corniculatus</i>	Bird's Foot Trefoil
<i>Medicago polymorpha</i>	Bur Clover
<i>Trifolium bifidum</i> var. <i>decipiens</i>	Clover
<i>Vicia villosa</i> ssp. <i>varia</i>	Vetch
FAGACEAE (OAK FAMILY)	
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast Live Oak
GERANIACEAE (GERANIUM FAMILY)	
<i>Erodium botrys</i>	Broad-leaf Filaree
<i>Geranium dissectum</i>	Cut-leaved Cranesbill
PAPPAVERACEAE (POPPY FAMILY)	
<i>Eschscholzia californica</i>	California Poppy
PLANTAGINACEAE (PLANTAIN FAMILY)	
<i>Plantago erecta</i>	Dwarf Plantain
<i>Plantago lanceolata</i>	Narrow-leaved Plantain
<i>Agrostis pallens</i>	Bentgrass
POACEAE (GRASS FAMILY)	
<i>Avena barbata</i>	Slim Oat
<i>Bromus hordeaceus</i>	Soft Chess
<i>Festuca californica</i>	California Fescue
<i>Festuca perennis</i>	Italian Rye Grass
<i>Poa annua</i>	Bluegrass

APPENDIX D, Continued

**Wildlife Species Seen During The May 19 and June 5, 2021 Surveys On
The Site And Adjacent To It**

Scientific Name	Common Name
REPTILES	
<i>Sceloporus occidentalis</i>	Western fence lizard
BIRDS	
<i>Cathartes aura</i>	Turkey vulture
<i>Calypte anna</i>	Anna's hummingbird
<i>Aphelocoma californica</i>	California scrub-jay
<i>Corvus corax</i>	Common raven
<i>Poecile rufescens</i>	Chestnut-backed chickadee
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Pipilo crissalis</i>	California towhee
MAMMALS	
<i>Thomomys bottae</i>	Botta's pocket gopher

APPENDIX E
REGULATORY ADVISORY



DEPARTMENT OF THE ARMY

SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS 450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102



February 8, 2021

Regulatory Division

SUBJECT: File Number SPN 2001-00034

Kamal Azari

1399 Spring Hill Road Petaluma, CA 94952 kamalazari@gmail.com (707) 338-4455

Dear Mr. Azari:

This letter is written in response to a request for comments on the Completeness Referral Package concerning your project for a use permit for a new 3,226 square foot tasting room. Your project is located near a riparian corridor and drainage at 1321, 1395, 1397, 1399, 1501, and 1503 Spring Hill Road in Petaluma, Sonoma County, CA. Since this activity may affect the streamside conservation area and/or drainage, and, therefore, impact a water of the U.S., the U.S. Army Corps of Engineers (Corps) will need to review those portions of your project.

All proposed work and/or structures extending bayward or seaward of the line on shore reached by mean high water (MHW) in tidal waters or by ordinary high water in non-tidal waters designated as navigable waters of the United States must be authorized by the Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403 *et seq.* Additionally, all work and structures proposed in unfilled portions of the interior of diked areas below former MHW must be authorized under Section 10 of the same statute.

All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act, 33 U.S.C. § 1344 *et seq.* Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed work may be within our jurisdiction, and a permit may be required for your project. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the File Number at the top of this letter into Item No. 1 of the application. The application must include plans showing the location, extent, and character of the proposed activity, prepared in accordance with



the requirements contained in this pamphlet. You should note in planning your project that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

You may refer any questions on this matter to Kendra Spicher of my Regulatory staff by telephone at 415-503-6832 or by e-mail at kendra.a.spicher@usace.army.mil. All correspondence should be addressed to the Regulatory Division, North Branch, referencing the file number at the head of this letter.

Sincerely,

Sahrye Cohen
North Branch Chief, Regulatory Division

A handwritten signature in cursive script that reads "Sahrye Cohen".

Enclosures Copy Furnished:

CA DFW, Fairfield, CA
CA RWQCB, Santa Rosa, CA



APPENDIX F
BEST MANAGEMENT PRACTICES



From the PRMD web site — <https://sonomacounty.ca.gov/PRMD/Eng-and-Constr/Grading-and-Storm-Water/Erosion-Prevention-and-Sediment-Control/> — the following Best Management Practices should be implemented for the Project:

1. Perform erosion prevention and sediment control in accordance with chapter 11 and 11a of the Sonoma County Code (SCC).
2. The approved plans shall conform to Permit Sonoma erosion prevention and sediment control best management practices (BMP's) guide as posted on the Permit Sonoma website.
3. The property owner is responsible for preventing storm water pollution generated from the construction site year round. Work sites with inadequate erosion prevention and/or sediment control may be subject to a stop work order and/or additional inspection fees to verify compliance with SCC
4. If discrepancies occur between these notes, material referenced on the approved plans or manufacturer's recommendations, then the most protective shall apply.
5. At all times the property owner is responsible for obtaining and complying with the state of California national pollutant discharge elimination system (NPDES) general permit for storm water discharges associated with construction and land disturbing activities such as clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement.
6. The property owner must implement an effective combination of erosion prevention and sediment control on all disturbed areas during the rainy season (October 1 - April 30). Grading and drainage improvement shall be permitted during the rainy season only when on-site soil conditions permit the work to be performed in compliance with SCC
7. During the rainy season, storm water BMP's referenced or detailed in Permit Sonoma's BMP guide shall be implemented and functional on the site at all times and the area of erodible land exposed at any one time during the work shall not exceed one acre or 20 percent of the permitted work area, whichever is greater, and the time of exposure shall be minimized to the maximum extent practicable.
8. During the non-rainy season, on any day when the national weather service forecast is a chance of rain of 30 percent or greater within the next 24 hours, storm water BMP's referenced or detailed in Permit Sonoma's BMP guide shall be implemented and functional on the site to prevent soil and other pollutant discharges. At all other times, BMP's should be stored on site in preparation for installation prior to rain events.



9. Erosion prevention and sediment control BMP's shall be inspected by the property owner before forecasted storm events and after storm events to ensure BMP's are functioning properly. Erosion prevention and sediment control BMP's that have failed or are no longer effective shall be promptly replaced. Erosion prevention and sediment control BMP's shall be maintained until disturbed areas are stabilized.
10. The limits of grading shall be defined and marked on site to prevent damage to surrounding trees and other vegetation. Preservation of existing vegetation shall occur to the maximum extent practicable. Any existing vegetation within the limits of grading that is to remain undisturbed by the work shall be identified and protected from damage by marking, fencing, or other measures.
11. Changes to the erosion prevention and sediment control plan may be made to respond to field conditions if the alternative BMP's are equivalent or more protective than the BMP's shown on the approved plans. Alternative BMP's are subject to review and approval by Permit Sonoma staff.
12. Discharges of potential pollutants from construction sites shall be prevented using source controls to the maximum extent practicable. Potential pollutants include but are not limited to: sediment, trash, nutrients, pathogens, petroleum hydrocarbons, metals, concrete, cement, asphalt, lime, paint, stains, glues, wood products, pesticides, herbicides, chemicals, hazardous waste, sanitary waste, vehicle or equipment wash water, and chlorinated water.
13. Entrance(s) to the construction site shall be maintained in a condition that will prevent tracking or flowing of potential pollutants off site. Potential pollutants deposited on paved areas within the county right-of-way, such as roadways and sidewalks, shall be properly disposed of at the end of each working day or more frequently as necessary. The contractor shall be responsible for cleaning construction vehicles leaving the site on a daily basis to prevent dust, silt, and dirt from being released or tracked off site. All sediment deposited on paved roadways shall be removed at the end of each working day or more often, as necessary.
14. All disturbed areas shall be protected by using erosion prevention BMP's to the maximum extent practicable, such as establishing vegetation coverage, hydroseeding, straw mulch, geotextiles, plastic covers, blankets, or mats. Temporary Revegetation shall be installed as soon as practical after vegetation removal, but in all cases prior to October 1. Permanent revegetation or landscaping shall be installed prior to final inspection.
15. Whenever it is not possible to use erosion prevention BMP's on exposed slopes, sediment control bmp's such as fiber rolls and silt fences shall be installed to prevent sediment migration. Fiber rolls and silt fences shall be trenched and keyed into the



soil and installed on contour. Silt fences shall be installed approximately 2 to 5 feet from toe of slope.

16. Hydroseeding shall be conducted in a three step process. First, evenly apply seed mix and fertilizer to the exposed slope. Second, evenly apply mulch over the seed and fertilizer. Third, stabilize the mulch in place. An equivalent single step process, with seed, fertilizer, water, and bonded fibers is acceptable.

Applications shall be broadcasted mechanically or manually at the rates specified below. Seed mix and fertilizer shall be worked into the soil by rolling or tamping. If straw is used as mulch, straw shall be derived from wheat, rice, or barley and be approximately six to eight inches in length. Stabilization of mulch shall be done hydraulically by applying an emulsion or mechanically by crimping or punching the mulch into the soil. Equivalent methods and materials may be used only if they adequately promote vegetation growth and protect exposed slopes.

Materials and Application Rate (pounds per acre):

Seed mix

- Bromus mollis (blando brome) 40 pounds
- Trifolium hirtum (hykon rose clover) - 20 pounds

Fertilizer

- 16-20-0 & 15% sulphur - 500 pounds

Mulch

- Straw - 4000 pounds

Hydraulic stabilizing

non-asphaltic, derived from plants

- M-binder or sentinel - 75-100 pounds

Equivalent material

- Per manufacturer

17. Dust control shall be provided by contractor during all phases of construction.
18. Storm drain inlets shall be protected from potential pollutants until drainage conveyance systems are functional and construction is complete.
19. Energy dissipaters shall be installed at storm drain outlets which may convey erosive storm water flow.
20. Soil, material stockpiles, and fertilizing material shall be properly protected with plastic covers or equivalent bmp's to minimize sediment and pollutant transport from the construction site.



21. Solid waste, such as trash, discarded building materials and debris, shall be placed in designated collection areas or containers. The construction site shall be cleared of solid waste daily or as necessary. Regular removal and proper disposal shall be coordinated by the contractor.
22. A concrete washout area shall be designated to clean concrete trucks and tools. At no time shall concrete products and waste be allowed to enter county waterways such as creeks or storm drains. No washout of concrete, mortar mixers, or trucks shall be allowed on soil. Concrete waste shall be properly disposed.
23. Proper application, cleaning, and storage of potentially hazardous materials, such as paints and chemicals, shall be conducted to prevent the discharge of pollutants.
24. Temporary restrooms and sanitary facilities shall be located and maintained during construction activities to prevent the discharge of pollutants.
25. Appropriate vehicle storage, fueling, maintenance, and cleaning areas shall be designated and maintained to prevent discharge of pollutants.

