YOLO COUNTY
DEPARTMENT OF COMMUNITY SERVICES

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION
ZONE FILE # 2016-0015

CREW WINERY USE PERMIT AMENDMENT

March, 2017

Initial Environmental Study

1. **Project Title:** Zone File #2016-0015 (Crew Winery Use Permit Amendment)

2. **Lead Agency Name and Address:**
   Yolo County Department of Community Services
   292 West Beamer Street
   Woodland, CA 95695

3. **Contact Person, Phone Number, E-Mail:**
   Jeff Anderson, Associate Planner
   (530) 666-8036
   jeff.anderson@yolocounty.org

4. **Project Location:** The project is located at the northwest corner of County Road 15B and County Road 92B, three miles southwest of the town of Zamora (APN: 054-230-018). See Figure 1 (Vicinity Map).

5. **Project Sponsor's Name and Address:**
   John Giguiere
   3632 East Lincoln Avenue
   Sacramento, CA 95818

6. **Land Owner's Name and Address:**
   Crew Wine Company, LLC
   12300 County Road 92B
   P.O. Box 493
   Zamora, CA 95698

7. **General Plan Designation(s):** Agriculture (AG)

8. **Zoning:** Agricultural Extensive (A-X)

9. **Description of the Project:** See attached "Project Description" on the following pages.

10. **Surrounding Land Uses and Setting:** See table below.

Relation to Project	Land Use	Zoning	General Plan Designation
Project Site	Existing winery, Agricultural, vineyard, range land	Agricultural Extensive (A-X)	Agricultural (AG)
North	Agricultural, rangeland, home sites (two)	A-X	AG
South	County Road 15B, Agricultural, vineyard	A-X	AG
East	County Road 92B, Agricultural, vineyard	A-X	AG
West	Agricultural, rangeland	A-X	AG

11. **Other public agencies whose approval is required:** Yolo County Public Works Division; Yolo County Building Division; Environmental Health Division; Central Valley Regional Water Quality Control Board

12. **Other Project Assumptions:** The Initial Study assumes compliance with all applicable State, Federal, and local codes and regulations including, but not limited to, County of Yolo Improvement Standards, the California Building Code, the State Health and Safety Code, and the State Public Resources Code. The project is reviewed and analyzed under the County's Code of Zoning Ordinances; particularly, the Agricultural Zoning Ordinance. The purpose of the Agricultural Zoning Ordinance is to provide for land uses that support and enhance agriculture as the predominant land use in the unincorporated area of the County.

Project Description

Crew Winery is requesting a Use Permit Amendment to expand its existing winery, approved in 2008 (ZF #2007-031), to allow for increased production capacity. The winery is located at 12300 County Road 92B, approximately three miles southwest of the town of Zamora, on a 155-acre Agricultural Extensive (A-X) zoned parcel. The existing winery encompasses approximately seven acres of the 155-acre site. Portions of the proposed winery expansion will be located within the existing developed area, and approximately four acres will be graded and cleared to construct new buildings and structures. Crew Winery currently bottles approximately 105,000 cases of wine per year, and proposes to increase to approximately 255,000 cases per year after the proposed expansion, which may take approximately ten years to reach that estimate. The property is accessed off of County Road 92B and County Road 15B, which both have paved entrances.

Existing Winery Operations

The existing winery has a development footprint of approximately seven acres (i.e., paved or graveled areas including buildings and structures, tank farm, internal roads, parking areas, etc.). The primary structures within the seven acre footprint include a tasting room, four barrel storage buildings, bottling building, administration offices, vineyard shop, agricultural storage buildings, wine fermentation tanks, and detention pond.

Proposed Expansion

Portions of the proposed winery expansion will be located within the existing developed area, and approximately four acres will be graded and cleared to construct new buildings and structures. The primary structures proposed within and outside of the existing developed footprint include:

Area within existing developed footprint:

-Vineyard Office:	2,000 SF
-Wine Storage/Fermentation Tanks:	14,000 SF (650,000 gallons)
-Truck Scale:	700 SF
-Crush Pad:	6,000 SF
-Refrigeration and Electrical Upgrades:	1,000 SF
-Fire Pump and Water Storage Tank:	2,500 SF

Area outside of existing developed footprint:

-Production Offices, Laboratory, & Break Room:	5,200 SF
-Barrel Building/ Case Goods Storage:	40,000 SF
-Process Wastewater Treatment Pond & Skid:	41,000 SF
-Hospitality Building (10,000 SF total)	
Hospitality Center/Demonstration Kitchen:	3,000 SF
Administration Offices:	2,000 SF
Barrel Cave (underground):	5,000 SF

The proposed project will be constructed in several stages spread out over the next ten years. The most pressing needs, including administrative offices, production offices, laboratory space, and approximately 300,000 gallons of wine storage/fermentation tanks are proposed to be constructed over the next four years. According to the applicant, the proposed hospitality building will most likely be constructed closer to 2026 or 2027. The proposed development will occur within three distinct areas (Sites A, B, and C, see Figure 3, below).

Site A. Site A is an approximately 2.2-acre vacant field between the existing facility and County Road 92B. The northern portion of Site A is graveled and used as overflow parking for tasting room visitors. The remaining portion is maintained as very short (less than 2-inch) grassy/weedy

vegetation. A natural swale runs east-west through the site, but otherwise the site is mostly flat. This site is a remnant of the grazed grassland community that occurred throughout this part of the Dunnigan Hills prior to agricultural (vineyard and orchard) conversion. There are no trees, shrubs, or other significant biological resources on the site. With the exception of the existing winery facility on the west side, Site A is surrounded entirely by vineyards. There are no trees or shrubs in the immediate vicinity of the site with the exception of small ornamental trees planted on the north and west side of the production facility and along the east side of County Road 92A.

Site B. Site B is part of the existing vineyard immediately northwest of the tasting room facility. The project would involve removing approximately 15,000 square feet (0.3 acres) of the vineyard and constructing a 10,000 square foot building with hospitality center, administration offices, demonstration kitchen, and barrel room; and an adjacent 5,000 square foot parking lot. The site consists entirely of vineyard and includes no trees, shrubs, or significant biological resources. A water retention basin was constructed downslope of and approximately 300 feet from Site B. The remaining vineyard, which extends downslope to the edge of the pond, would be between the pond and Site B. The retention basin occurs along a natural swale that extends northward toward open grazed grassland areas north of the facility. The basin currently collects runoff from the existing facility and surrounding slopes. Water levels in the pond fluctuate seasonally depending on rainfall, irrigation runoff from the surrounding vineyards, and runoff from production operations.

Site C. Site C is the proposed location of a 40,000 square-foot (0.9 acre) wastewater treatment pond. It is also located entirely within the existing vineyard, immediately north of the agricultural storage building in the southwest corner of the facility, north of County Road 15B, and approximately 200 feet west of the natural swale that drains into the retention pond.

Approximately 7 acres of the site is developed as the existing winery, approximately 45 acres are planted in vineyard, and the remaining 117 acres are maintained as grassland/rangeland. Willow Spring Creek, a blue-line stream (potential jurisdictional waters of the U.S.), runs through the property from the northeast corner of the property to the southwest portion of the property. However, the watercourse is located over 1,300 feet away from any proposed development, and the project does not propose any alteration of the watercourse. The project proposes to remove approximately two acres of vineyard to accommodate the proposed winery expansion.

The existing tasting room is typically open daily from 11:00 am to 4:30 pm and receives approximately 10 visitors per day. The tasting room does not serve food; however, visitors are encouraged to bring their own snacks or meals. Food trucks are occasionally brought in to serve tasting room visitors on select days. The tasting room is not proposed to be expanded as part of this application, and daily visitors are not expected to increase significantly from the existing estimates. The proposed hospitality center will contain a demonstration kitchen and area used to entertain vendors and special guests to showcase their products in an intimate setting, on an infrequent basis.

Crew Winery currently employs approximately 41 full-time employees and 114 part-time employees. After full build-out of the proposed project, the winery projects to increase the full-time employees by 24 (total of 65) and part-time employees by 14 (total of 128). Approximately 100 of the part-time employees work in the vineyard operations on the adjacent properties during the harvest period. A breakdown of the current and future employee count is provided below.

	Current Employees		Future Employees (at build-out)	
	Full-Time	**Part-Time**	**Full-Time**	**Part-Time**
Tasting Room	1	7	3	14
Vineyard Operation	20	100	25	100
Office/Administration	10	2	17	2
Winery Operations (Production)	10	5	20	12

Crew Winery processes grapes grown the same parcel as the winery (approximately ±45 acres), and approximately 530 acres grown just south of the winery across County Road 15B. Crew Winery also imports a small amount of grapes (approximately 200 tons a year) from outside of the region. Crew Winery does not plan to process grapes from additional acres as the result of this expansion. The adjacent grapes grown in the immediate vicinity of Crew Winery (approx. 640 acres) is operated by a separate entity and processed elsewhere. These grapes are typically shipped to Napa or the Delta for processing at different wineries. Maintenance and processing of these vineyards, as well as the vineyards owned and operated by Crew Winery, are allowed by right in the agricultural zones and are not subject to the Crew Winery Use Permit.

Access to the winery is provided by two separate driveway approaches off County Roads 15B and 92B. The Use Permit to construct and operate the existing winery was approved by the Planning Commission on April 10, 2008 (ZF #2007-031). During that public hearing, concerns were raised by members of the public and commissioners about potential truck traffic the project would create on County Road 92B. County Road 92B is a two lane, rural road with geometric characteristics similar to other low-volume County roads serving agricultural lands. Three single family homes are the only existing development along County Road 92B. The pavement widths and features, such as curves, do not necessarily meet modern design standards (i.e., 12 foot vehicle lanes and 4 foot paved shoulders). The Planning Commission added a condition of approval during the hearing to encourage truck traffic on County Road 15B rather than County Road 92B. The condition reads, "The applicant shall take reasonable steps to require, to the extent feasible, that trucks serving the facility use County Road 15B rather than County Road 92B." The Crew Winery staff has posted a sign at the exit onto County Road 92B notifying trucks to use County Road 15B. Additionally, Crew Winery has informed the County that they notify delivery trucks and all trucks with whom they contract with to use County Road 15B. The proposed project will continue to be conditioned, to the extent feasible, to direct truck traffic to County Road 15B.

Aside from the grapes imported from out of the region (approximately 200 tons per year or 8-10 truck trips), grapes processed at Crew Winery are transported to the processing facility using tractors and gondola trailers using internal farm roads and crossing County Road 15B. The majority of vineyard related truck traffic (hauling grapes) in the general vicinity of Crew Winery occurs as a result of the other nearby vineyards sending product to Napa or Delta region during harvest time (generally August—October). As stated above, this activity is not associated with Crew Winery and not subject to the Use Permit or environmental review. Vineyard production is an allowed use in the agricultural zones.

Crew Winery currently bottles approximately 105,000 cases per year (bottling does not occur during the harvest season, August – October). Therefore, truck trips associated with shipment of finished product occurs periodically nine months out of the year. All of the wine is shipped to a distribution center in Napa for storage and eventual distribution to market. Each truck is capable of holding approximately 1,200 to 1,400 cases of wine per shipment. Additionally, with every truck load of wine shipped out to Napa, another truck load of glass bottles and other packaging supplies is delivered. Therefore, using the conservative estimate of 1,200 cases per load, Crew currently has about 20 truck trips on average per month (nine months out of the year). After the

winery expansion is complete (capacity of approximately 255,000 cases per year), truck trips would increase to approximately 48 truck trips per month.

The existing winery contains a parking lot adjacent to the tasting room and administrative offices with 26 spaces. The project proposes to add approximately 50 additional parking spaces distributed between two lots. Additionally, parking areas are available near the agricultural/vineyard shops and near production facilities to accommodate employees. Parking areas will be maintained with water sprinkling, crushed asphalt, and graveling as necessary, to reduce dust generation.

Crew Winery operates a public water system under permit issued by Yolo County Environmental Health Division. The system supplies domestic water from an onsite well. Water usage as metered at the domestic water supply well was 2.3 million gallons in 2016, or 7.1 acre feet. Under the proposed project (Use Permit Amendment), water usage is projected to grow to 3.3 million gallons per year by 2025, or 10.1 acre feet. Water usage accounts for all winemaking activities, landscaping irrigation, and domestic uses (drinking water, bathrooms, etc.).

Crew Wine Company has been issued a Waiver of Waste Discharge Requirements (WDR R5-2015-0005-0063) by the Central Valley Water Quality Control Board, which allows for discharge of wastewater, up to 100,000 gallons/year, to approximately 39 acres of the onsite vineyard adjacent to the wine production facility on APN 054-230-018. During wet months, the wastewater is transferred to commercial tanker trucks to be delivered to East Bay Municipal Utility District or Yolo County Central Landfill for disposal. Crew Winery is currently pursuing an amendment to its existing Waiver from the Central Valley Regional Water Quality Control Board to allow for discharge of winery wastewater on approximately 1,460 acres of vineyard, which includes land owned by Crew Winery and other entities. The issuance of Waste Discharge Requirements is an activity that is Statutorily Exempt from further environmental review pursuant to Section 15263 of the CEQA Guidelines.

Figure 1
Vicinity Map

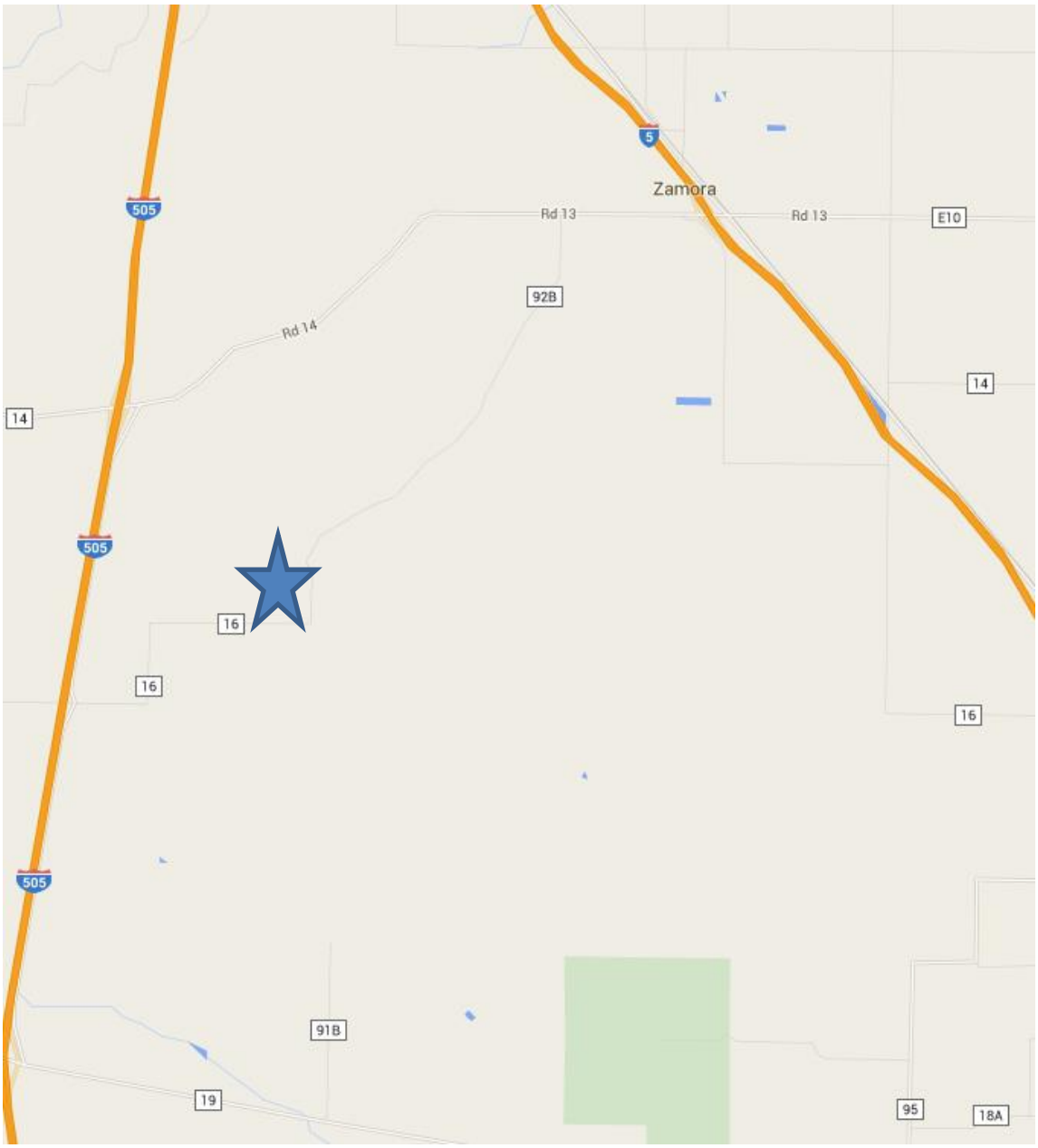


Figure 2
Project Site (APN: 054-230-018)

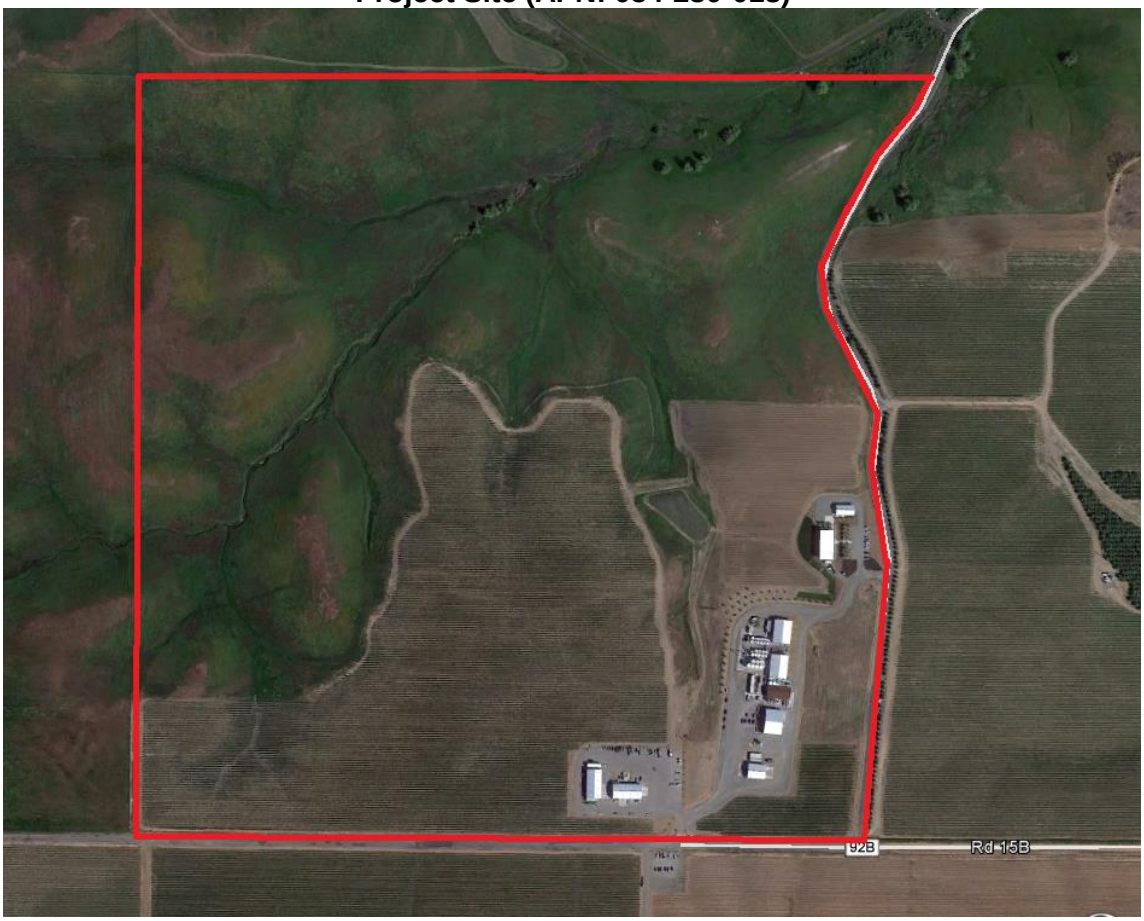


Figure 3
Project Site
Proposed expansion areas identified (approximate)

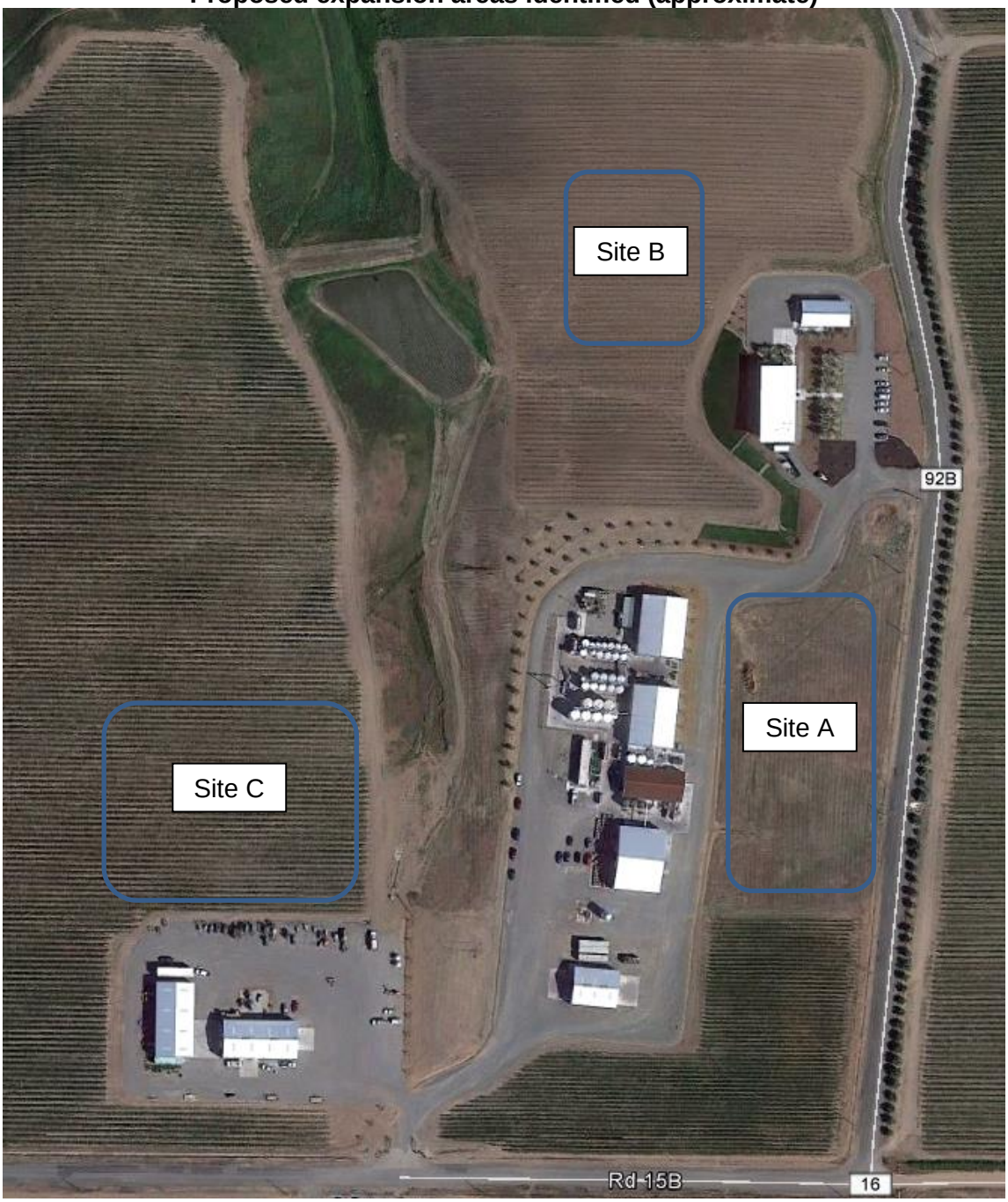
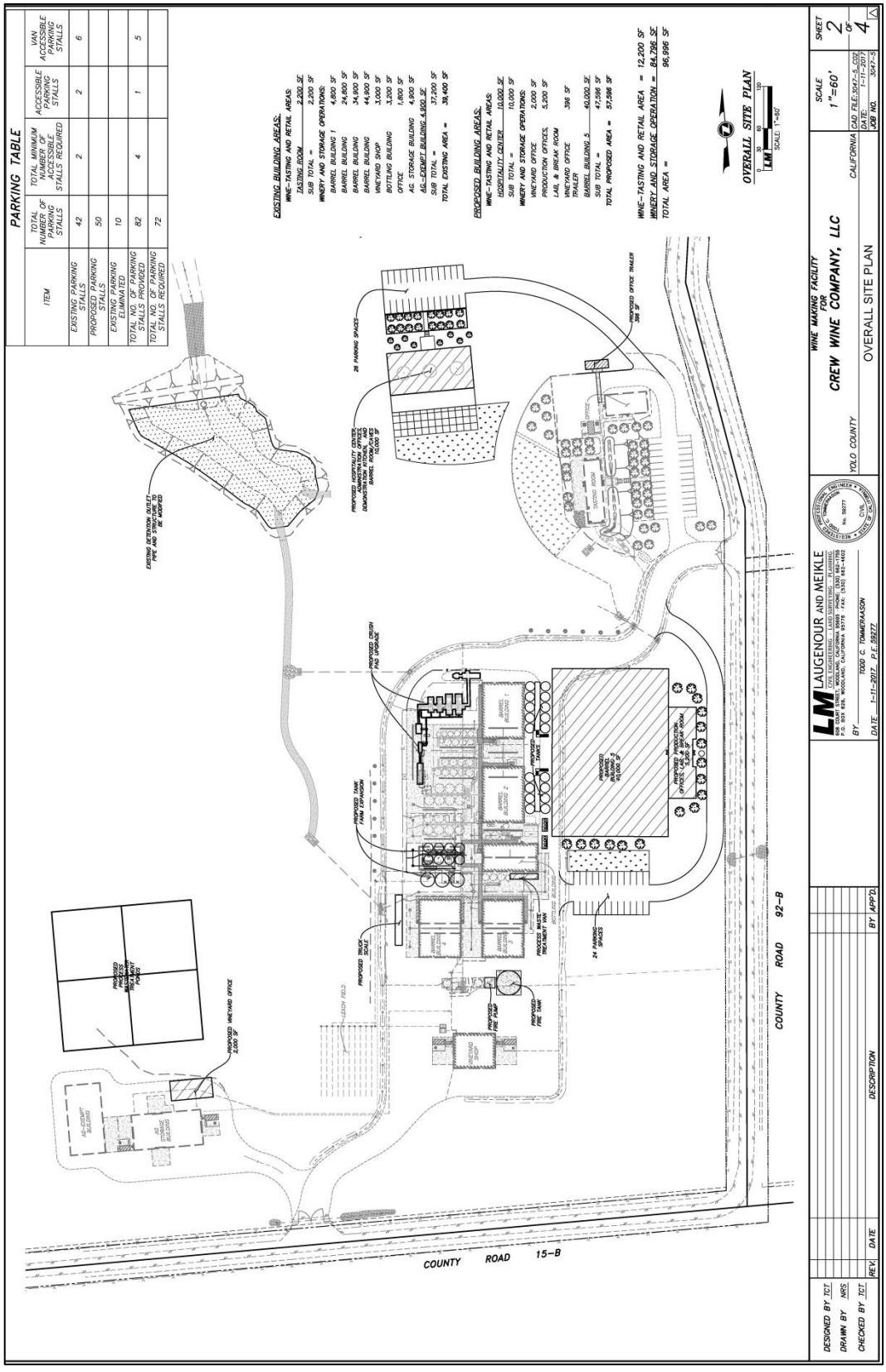


Figure 4
Site Plan



Environmental Factors Potentially Affected

The environmental factors checked below could potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact" (before any proposed mitigation measures have been adopted or before any measures have been made or agreed to by the project proponent) as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural and Forestry Resources	☐ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because the project is consistent with an adopted general plan and all potentially significant effects have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT, the project is exempt from further review under the California Environmental Quality Act under the requirements of Public Resources Code section 21083.3(b) and CEQA Guidelines Section 15183.

Planner's Signature	Date	Planner's Printed name
	03/10/17	Jeff Anderson

Purpose of this Initial Study

This Initial Study has been prepared consistent with CEQA Guideline Section 15063, to determine if the project as described herein may have a significant effect upon the environment.

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. A "Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less than Significant Impact". The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. (Mitigation measures from Section XVIII, "Earlier Analyses", may be cross-referenced.)
5. A determination that a "Less than Significant Impact" would occur is appropriate when the project could create some identifiable impact, but the impact would be less than the threshold set by a performance standard or adopted policy. The initial study should describe the impact and state why it is found to be "less than significant."
6. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D) of the California Government Code. Earlier analyses are discussed in Section XVIII at the end of the checklist.
7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

I.	AESTHETICS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☒	☐
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION

a) Have a substantial adverse effect on a scenic vista?

Less than Significant Impact. For purposes of determining significance under CEQA, a "scenic vista" is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. While there are no officially designated scenic vistas near the project area, the site does provide expansive views of the Dunnigan Hills rural landscape that is dotted with vineyards, rangeland, and other agricultural features. Elements of the project proposal include construction of a laboratory and employee break room, production offices, warehouse for barrel and case goods storage, stainless steel tanks for wine storage and fermentation, vineyard office, administration offices, wastewater treatment pond, and hospitality center with demonstration kitchen, among other ancillary features typical of a winery. Scenic vistas would not be obstructed by the proposed changes to the property and aesthetic impacts would be considered less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?

Less than Significant Impact. There are no officially designated scenic highways near the project area, although, as described above, the area provides expansive views of the agricultural landscape from certain vantage points. As identified in (a), above, the proposal includes construction of new facilities to implement a winery expansion. However, these proposed changes to the property's grounds will be designed to enhance scenic resources; impacts are expected to be less than significant.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The project proposes the construction of a laboratory and employee break room, production offices, warehouse for barrel and case goods storage, stainless steel tanks for wine storage and fermentation, vineyard office, administration offices, wastewater treatment pond, and hospitality center with demonstration kitchen, among other ancillary features typical of a winery. The project proposes expanding the developed footprint by four acres, bringing the total winery footprint to approximately 11 acres.

The approximately 155-acre property is bound by County Road 92B to the east, rangeland to the west, rural home sites and agricultural (rangeland/dry faming) property to the north, and vineyards to the south, which is characteristic of other large agricultural parcels in the Dunnigan Hills area. The project is not expected to degrade the existing aesthetic character of the site and its surroundings, and moreover relies on the surrounding beauty of the property and surrounding scenery to attract visitors. Impacts would be considered less than significant.

d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Less than Significant Impact. The proposal could introduce new sources of temporary and permanent lighting to the project area during night-time operations and/or occasional lighting associated with vehicle traffic headlights. Much of the project, however, is buffered by landscaping and/or vineyards. The nearest neighboring homesites are nearly 1,800 feet and 3,500 feet away from the project site, and the project will be conditioned to require that any outdoor lighting must include light fixtures that are low-intensity, shielded and/or directed away from adjacent properties in order to minimize glare and overspill on adjacent parcels, the night sky, and the public right-of-way. Impacts from new light sources will be less than significant.

II.	AGRICULTURE AND FOREST RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☒	☐
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less than Significant Impact. The existing winery occupies ±7 acres, and an additional ±4 acres are proposed to be cleared and graded to accommodate the expansion. Thus, the total winery footprint would occupy approximately seven percent (±11 acres) of the 155-acre parcel of agriculturally zoned land which is partially planted in wine grapes.

Soils within the project site are identified as Corning gravelly loam (2 to 15 percent slopes, eroded) and Sehorn-Balcom complex (2 to 15 percent slopes). The Corning soils are classified as poor, Class IV soils by the U.S. Soil Conservation Service *Soil Survey of Yolo County,* and the Sehorn-Balcom soils are classified as fair, Class III soils. The majority of the project site, including the existing winemaking facility, is designated as "Grazing Land" on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency.

The vineyard that will be removed to accommodate the 40,000 square foot process wastewater treatment pond is designated as “Unique Farmland” on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. However, impacts resulting in the conversion of Unique Farmland (approximately one-acre) would be less than significant.

The project’s impact to Unique Farmland is considered less than significant because the Yolo County General Plan and County zoning regulations consider agricultural commercial and industrial support services to be an agricultural use. The Yolo County Code defines “agricultural use” as those principal, accessory, and conditional uses and structures that are defined in the Agricultural Zoning Ordinance (Yolo County Code Sections 8-2.304). Large wineries are listed as conditionally permitted uses in the Agricultural Zoning Ordinance.

b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

Less than Significant Impact. The proposed project is located on A-X (Agricultural Extensive) zoned property and is enrolled in the Williamson Act. The proposed project is classified as a large winery under Section 8-2.304 of the County Code. The existing Use Permit for the winery was approved by the Yolo County Planning Commission on April 10, 2008 (ZF 2007-031). The winery currently produces approximately 105,000 cases of wine per year, and proposes to increase production to approximately 255,000 cases per year after the expansion. Large wineries are defined in the Zoning Code as those operations that include tastings and sales in a space greater than fifteen (15,000) square feet with sales of more than twenty-one thousand (21,000) cases per year. The winery currently includes tastings and sales on-site and will continue to offer such services.

The project proposes to construct a 10,000 square foot hospitality center building, of which approximately 2,000sf will be dedicated to administrative offices and approximately 5,000sf for an underground barrel cave. The remaining approximately 3,000 square feet will contain a demonstration kitchen and area used to entertain vendors and special guests to showcase their products in an intimate setting. These gatherings do not rise to the level of special events that attract large amounts of people.

The Crew Winery property is enrolled in a Williamson Act contract. The Department of Conservation (DOC), the state agency responsible for monitoring farmland conversion and administering the Williamson Act, is generally supportive of agricultural business ventures on land under a Williamson Act contract so long as the use supports and promotes the agricultural commodity being grown on the premises and the number of attendees does not temporarily or permanently impair agricultural operations. The DOC has typically found tasting rooms to be similar in nature to stands selling produce grown on-site, and therefore compatible; event/hospitality centers and other facilities which increase the population of the area can have a more difficulty finding consistency with the Williamson Act. In their review of the project, the DOC recommended that staff carefully consider impacts resulting from a potential increase in population to the area. The DOC’s primary concern appears to be related to the uncertainty of events to be held at the proposed hospitality center. The DOC further recommended that the permit include limitations as to the number of events and attendees allowed. As discussed above, the proposed hospitality center is proposed to be used to entertain small groups of vendors and guests in an intimate setting.

Crew Winery has not requested to hold any special events in excess of what is currently allowed under existing zoning regulations. The project is not expected to conflict with zoning or the Williamson Act; impacts will be less than significant.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?; *and*

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed winery expansion project would not conflict with existing zoning for, or cause rezoning of, or result in the loss or conversion of forest or timberland.

e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?

Less than Significant Impact. As identified in (a), above, the project site has been shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency as "Grazing Land" and "Unique Farmland." The surrounding area has similarly been mapped. Most of the surrounding farmland is grazing land or under active agricultural production, including wine grapes and orchard. The expansion of the winery facility will result in the removal of approximately two acres of vineyard production; however, wineries are considered agricultural uses pursuant to the Zoning Code. See discussion in (a), above, regarding removal of vineyard to accommodate the project. Impacts to agricultural resources would be considered less than significant.

III.	AIR QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Where applicable, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Thresholds of Significance:

The project site is within the Yolo-Solano Air Quality Management District (YSAQMD), and the Sacramento Valley Air Basin regulates air quality conditions within Yolo County. Yolo County is classified as a non-attainment area for several air pollutants, including ozone (O_3) and particulate matter 10 microns or less in diameter (PM_{10}) for both federal and state standards, the partial non-attainment of the federal particulate matter 2.5 ($PM_{2.5}$), and is classified as a moderate maintenance area for carbon monoxide (CO) by the state.

Development projects are most likely to violate an air quality plan or standard, or contribute substantially to an existing or project air quality violation, through generation of vehicle trips.

For the evaluation of project-related air quality impacts, the YSAQMD recommends the use of the following thresholds of significance:

- Long-term Emissions of Criteria Air Pollutants (ROG, NO_X, and PM_{10})—The criteria air pollutants of primary concern include ozone-precursor pollutants (ROG and NO_X) and PM_{10}. Significance thresholds have been developed for project-generated emissions of reactive organic gases (ROG), nitrogen oxides (NO_X), and particulate matter of 10 microns or less (PM_{10}). Because $PM_{2.5}$ is a subset of $PM_{10,}$ a separate significance threshold has not be established for $PM_{2.5}$. Operational impacts associated with the proposed project would be considered significant if project-generated emissions would exceed YSAQMD-recommended significance thresholds, as identified below:

Table AQ-1 YSAQMD-Recommended Quantitative Thresholds of Significance for Criteria Air Pollutants	
Pollutant	**Threshold**
Reactive Organic Gases (ROG)	10 tons/year (approx. 55 lbs/day)
Oxides of Nitrogen (NO_X)	10 tons/year (approx. 55 lbs/day)
Particulate Matter (PM_{10})	80 lbs/day
Carbon Monoxide (CO)	Violation of State ambient air quality standard
Source: Handbook for Assessing and Mitigating Air Quality impacts (YSAQMD, 2007)	

- Emissions of Criteria Air Pollutants (ROG, NO_X, and PM_{10})—Construction impacts associated with the proposed project would be considered significant if project-generated emissions would exceed YSAQMD-recommended significance thresholds, as identified in Table AQ-1, and recommended control measures are not incorporated.

- Conflict with or Obstruct Implementation of Applicable Air Quality Plan— Projects resulting in the development of a new land use or a change in planned land use designation may result in a significant increase in vehicle miles traveled (VMT). Substantial increases in VMT, as well as, the installation of new area sources of emissions, may result in significant increases of criteria air pollutants that may conflict with the emissions inventories contained in regional air quality control plans. For this reason and given the region's non-attainment status for ozone and PM_{10}, project-generated emissions of ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} that would exceed the YSAQMD's recommended project-level significance thresholds, would also be considered to potentially conflict with or obstruct implementation of regional air quality attainment plans.

- Local Mobile-Source CO Concentrations—Local mobile source impacts associated with the proposed project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e., 9.0 ppm for 8 hours or 20 ppm for 1 hour).

- Toxic Air Contaminants. Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.

- Odors. Odor impacts associated with the proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

DISCUSSION

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The winery expansion project would not substantially conflict with or obstruct implementation of the Yolo Solano Air Quality Management District Air Quality Attainment Plan (1992), the Sacramento Area Regional Ozone Attainment Plan (1994), or the goals and objectives of the Yolo County 2030 Countywide General Plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact. The Yolo-Solano Region is a non-attainment area for state particulate matter (PM_{10}) and ozone standards, the federal ozone standard, and the partial non-attainment of the federal particulate matter 2.5 ($PM_{2.5}$). Development of the winery expansion would not contribute significantly to air quality impacts, but could generate significant amounts of PM_{10} and $PM_{2.5,}$ during grading and construction activities to develop the project. To address the potential for short-term impacts related to grading and construction activities, standard dust and emissions control measures which are recommended by the Yolo Solano Air Quality Management District will be attached as Conditions of Approval to the Use Permit, and include the following best environmental practices:

To reduce tailpipe emissions from diesel-powered construction equipment, all applicable and feasible measures would be implemented, such as:

- Maximizing the use of diesel construction equipment that meet CARB's 2010 or newer certification standard for off-road heavy-duty diesel engines;
- Using emission control devices at least as effective as the original factory-installed equipment;
- Substituting gasoline-powered for diesel-powered equipment when feasible;
- Ensuring that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation; and
- Using Tier 4 engines in all construction equipment, if available.

To reduce construction fugitive dust emissions, the following dust control measures would be implemented:

- Water all active construction sites at least twice daily in dry conditions, with the frequency of watering based on the type of operation, soil, and wind exposure;
- Effectively stabilize dust emissions by using water or other approved substances on all disturbed areas, including storage piles, which are not being actively utilized for construction purposes;
- Prohibit all grading activities during periods of high wind (over 20 miles per hour);
- Limit onsite vehicle speeds on unpaved roads to 15 miles per hour;
- Cover all trucks hauling dirt, sand, or loose materials;
- Cover inactive storage piles;
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints; and
- Limit the area under construction at any one time

Impacts to air quality will be less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient

air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. Development projects are considered cumulatively significant by the YSAQMD if: (1) the project requires a change in the existing land use designation (i.e., general plan amendment, rezone); and (2) projected emissions (ROG, NOx, or PM_{10} and $PM_{2.5}$) of the project are greater than the emissions anticipated for the site if developed under the existing land use designation. The project is an expansion of an existing winery that will include construction of administration and production offices, laboratory and employee break room, warehouse storage, barrel cave, process water treatment pond, hospitality center, parking areas, and various other buildings and structures to support the winery. See Project Description for a full list of proposed development. The project would not result in significant projected emissions. Wineries are conditionally permitted uses in the agricultural zones.

The proposed project will be constructed in several stages spread out over the next ten years. The most pressing needs, including administrative offices, productions offices, laboratory space, and approximately 300,000 gallons of wine storage/fermentation tanks are proposed to be constructed over the next four years. According to the applicant, the proposed hospitality building will most likely be constructed closer to 2026 or 2027.

Temporary project construction emissions could contribute to levels that exceed State ambient air quality standards on a cumulative basis, contributing to existing nonattainment conditions, when considered along with other construction projects. However, the project is located in a rural area that largely supports ongoing agricultural activities, including daily farming operations and harvesting of wine grapes.

By implementing the above Conditions of Approval identified in (b), potential for construction-related emissions for the proposed project would result in less than significant levels. Short-term air quality impacts would be generated by truck trips during construction activities.

Long-term mobile source emissions from the winery expansion activities would also not exceed thresholds established by the Yolo-Solano Air Quality Management District Handbook (2007) and would not be cumulatively considerable for any non-attainment pollutant from the project. Truck deliveries to the facility would occur approximately 3-5 times per day in addition to existing agricultural operations, which include daily farming activities and harvest activities. Project vehicle trips would also be associated with employees, guests, vendors, and delivery trucks accessing the facility, which may include approximately 105 round-trip vehicle trips per day. Parking areas will be maintained with water sprinkling, crushed asphalt, and graveling as necessary, to reduce dust generation. Daily hours of operation are typically 8:00 am to 5:00 pm for processing operations. During harvest season (middle of August to middle of October) operating hours increase to 24 hours a day. Tasting room hours are 11:00 am to 4:30 pm daily.

Traffic generated by implementation of the project is estimated at approximately 105 daily vehicle trips (not including existing traffic from daily farming and harvest activities) to and from the site. This traffic would create air emissions that are lower than the significance thresholds set by the YSAQMD.

The Yolo-Solano Air Quality Management District also regulates Volatile Organic Compound (VOC) emissions through a permit process for combustion sources with a rated heat input greater than 1 MMBtu/hr. The applicant would be required to obtain and/or update existing permits for the agricultural processing operations (winery and other) in accordance with existing Yolo-Solano Air Quality Management District regulations 3.1 (general permit) and 3.2 (exemptions). Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Altogether, although the proposed project will increase daily use of the project site, it would not create a cumulatively considerable net increase of any criteria pollutants.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The proposed project is located in the agricultural area of the southern Dunnigan Hills, approximately three miles southwest of the town of Zamora, with relatively few sensitive receptors within proximity to the project site. ("Sensitive receptors" refer to those segments of the population most susceptible to poor air quality, i.e. children, elderly, and the sick, and to certain at-risk sensitive land uses such as schools, hospitals, parks, or residential communities). The closest residence is located approximately 1,600 feet north of the limits of the proposed expansion area. Existing agricultural operations at the site include daily farming operations, which includes wine grape harvest activity 24-hours per day August through November.

The project could have the potential to expose nearby receptors to minimal pollutant concentrations from construction equipment, truck deliveries, and fermentation emissions. However, dust will be controlled through effective management practices, such as water spraying during construction activity. Thus, short term air quality impacts due to construction activities to implement the project would not have an adverse impact on rural homes in the area and the proposed project will not expose sensitive receptors to pollutant concentrations in excess of standards.

Agricultural processing, such as wine-making, would be conducted at a considerable distance from the closest rural residence with no adverse impacts from the fermentation process. These additional operations would have a less than significant impact on air pollutant concentrations. Other long-term impacts would be from vehicles, including passenger cars and delivery trucks, and accessing the site for daily tastings.

Construction activities to develop the winery expansion will be required to control dust through effective management practices. As a condition of project approval, the following list of best management practices will be required to control dust:

- All construction areas shall be watered as needed.
- All trucks hauling soil, sand, or other loose materials shall be covered or required to maintain at least two feet of freeboard.
- Unpaved access roads, parking areas, and staging areas shall be paved, watered, or treated with a non-toxic soil stabilizer, as needed.
- Exposed stockpiles shall be covered, watered, or treated with a non-toxic soil stabilizer, as needed.
- Traffic speeds on unpaved access roads shall be limited to 15 miles per hour.
- Any visible soil material that is carried onto adjacent public streets shall be swept with water sweepers, as needed.

Air quality impacts to sensitive and other nearby receptors are expected to be less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact. The proposed winery expansion is not expected to generate objectionable odors. The project includes agricultural processing; however, these impacts are expected to be less than significant.

IV.	BIOLOGICAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d.	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?	☐	☐	☒	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

BIOLOGICAL SETTING

Description of the Project Site

The following description is excerpted from the Biological Site Assessment prepared for the project by Estep Environmental Consulting (Estep, 2017).

Site A. Site A is an approximately 2.2-acre vacant field between the existing facility and County Road 92B. The northern portion of Site A is graveled and used as overflow parking for tasting room visitors. The remaining portion is maintained as very short (less than 2-inch) grassy/weedy vegetation. A natural swale runs east-west through the site, but otherwise the site is mostly flat. This site is a remnant of the grazed grassland community that occurred throughout this part of the Dunnigan Hills prior to agricultural (vineyard and orchard) conversion. There are no trees, shrubs, or other significant biological resources on the site. With the exception of the existing winery facility on the west side, Site A is surrounded entirely by vineyards. There are no trees or shrubs in the immediate vicinity of the site with the exception of small ornamental trees planted on the north and west side of the production facility and along the east side of County Road 92A.

Site B. Site B is part of the existing vineyard immediately northwest of the tasting room facility. The project would involve removing approximately 15,000 square feet (0.3 acres) of the vineyard and constructing a 10,000 square foot building with hospitality center, administration offices, demonstration kitchen, and barrel room; and an adjacent 5,000 square foot parking lot. The site consists entirely of vineyard and includes no trees, shrubs, or significant biological resources. A water retention basin was constructed downslope of and approximately 300 feet from Site B. The remaining vineyard, which extends downslope to the edge of the pond, would be between the pond and Site B. The retention basin occurs along a natural swale that extends northward toward open grazed grassland areas north of the facility. The basin currently collects runoff from the existing facility and surrounding slopes. Water levels in the pond fluctuate seasonally depending on rainfall, irrigation runoff from the surrounding vineyards, and runoff from production operations. At the time of the site visit, the ponded area was approximately 200 by 100 feet, with a narrow band of emergent wetland vegetation around the perimeter.

Site C. Site C is the proposed location of a 40,000 square-foot (0.9 acre) wastewater treatment pond. It is also located entirely within the existing vineyard, immediately north of the agricultural storage building in the southwest corner of the facility, north of County Road 15B, and approximately 200 feet west of the natural swale that drains into the retention pond.

The project site occurs within the southern portion of the Dunnigan Hills, portions of which have been converted to vineyard and orchard agriculture. The project site is entirely surrounded by vineyards or by the existing facilities. However, open grassland/rangeland occurs within approximately 400 feet north of Site B and within about 700 feet of Site A. The drainage feature separating Site A and Site C also remains as a narrow corridor of grassland extending northward into the larger grassland/rangeland landscape, and is approximately 200 feet east of Site C. Open grassland/rangeland remains beyond the recently converted vineyards and orchards north, east, and west of the project site. Trees and shrubs are limited in the surrounding area, particularly south, west, and east of the project site. The nearest trees are several willow trees along a small drainage approximately 0.2 miles north of Site B.

Due to the potential for biological resources to occur within proximity to the project site, a biological assessment was conducted by Jim Estep, Estep Environmental Consulting. The results of the January 19, 2017, Biological Site Assessment are included as Attachment A to this Initial Study.

DISCUSSION

a) 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 Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact With Mitigation Incorporated. The proposed project is located on the property of the existing winery facility, which includes vineyards, production and bottling units, workshops, storage areas, a public tasting room, and parking areas. Several of the project elements are upgrades within the footprint of the existing facility and will result in no additional land use changes or impacts to biological resources. However, three disconnected sites, Sites A, B, and C are proposed for expansion of the facility. Site A is an approximately 2.2 acre vacant field between the existing buildings and County Road 92B that would be used to expand the production facilities. Within this area, the expansion would include laboratory and warehouse space, administrative and production offices, truck scale, crush pad, a barrel cave, and fire pump and water storage tank. Site B is a 15,000 square foot area currently planted in vineyard. Site B would include a 10,000 square foot building immediately northwest of the existing tasting room that will include a hospitality center, administration offices, demonstration kitchen, and barrel

room; and an adjacent 5,000 square foot parking lot. Site C is also currently planted in vineyard and would include a 40,000 square foot waste water treatment pond immediately north of an existing agricultural/farm storage building.

According to the Yolo Habitat Conservancy (YCH), there are no documented Swainson's hawk nest sites within one-mile of the proposed project. However, there are many documented Swainson's hawk nest sites within the 10-mile area of the proposed project, along with some white-tailed kite nests. The proposed project site contains modeled habitat for the following covered species: Swainson's hawk, White-tailed kite, Tricolored blackbird, Western burrowing owl, and California tiger salamander. Modeled habitat for these species and for the Western pond turtle is present within one-mile of the site.

As a result of existing habitat and the potential for special status species to occur within proximity to the project site, a biological survey was conducted. The following includes excerpts from the 2017 biological assessment prepared by Jim Estep.

A field assessment was conducted on the property on October 6, 2016. Mr. Estep inspected the project site on foot to characterize land use, biological resources, and presence of plant communities and wildlife species on each site and in the surrounding landscape. Mr. Estep walked 20-foot transects throughout Site A to determine the presence or absence of burrowing owls. Using binoculars and spotting scope, species occurrences were documented focusing on the potential presence of special-status species. The potential for and magnitude of impact from implementation of the proposed project was assessed.

According to the assessment, the conversion of grassland/rangeland habitat to vineyards, habitat was removed for most potentially occurring wildlife, particularly those species unique to the Dunnigan Hills and those that rely on grassland habitats. The small patch of remnant grassland at Site A is probably too small to support significant wildlife activity. During the field visit, pocket gopher (*Thomomys bottae*) sign was observed, but no other wildlife species or habitats were documented on the site. By virtue of it being within an otherwise undeveloped, rural area, Site A may receive occasional use by foraging raptors, common birds and mammals such as common crow (*Corvus brachyrhynchos*), cliff swallow (*Petrochelidon pyrrhonota*), coyote (*Canis latrans)*, striped skunk (*Mephitis mephitis*), and opossum (*Didelphis virginiana*) and possibly occasional migratory birds that are flying through the area, but the small size and isolation within the vineyards probably precludes substantial activity. Wildlife use of Site B is restricted primarily to common birds that forage or roost within the vineyard or occasional mammals passing through the vineyard. In general, wildlife use of vineyards is minimal compared with uncultivated landscapes or other agricultural types, such as row, grain, and hay crops. Conversion to vineyards effectively removes the majority of wildlife habitat value.

Table 1 indicates the special-status species that have potential to occur on or in the vicinity of the project site, along with their habitat association, the availability of habitat on the project site, and whether or not the species has been detected on the project site.

Table 1.
Special-status species with potential to occur on the Crew Winery project site.

Species	Status State/ Federal	Habitat Association	Habitat Availability on the Project Site	Observed Onsite During Survey	Reported Occurrence on the Project Site
Valley elderberry longhorn beetle *Desmocerus*	-/T	Elderberry shrubs	None	No	No

californicus dimorphus					
Western pond turtle *Actinemys marmorata*	CSC/-	Streams, ponds, water conveyance channels	None	No	No
California tiger salamander *Ambystoma californiense*	T/T	Ponds, vernal pools, grasslands	None	No	No
White-tailed kite *Elanus leucurus*	FP/-	Nests in trees, hunts in fields, grasslands, and wetlands	Marginally suitable foraging habitat – Site A	No	No
Swainson's hawk *Buteo swainsoni*	T/-	Nests in trees, hunts in grassland and cultivated fields	Marginally suitable foraging habitat – Site A	No	No
Mountain plover *Charadrius montanus*	CSC/PT	Short grassland, plowed fields	Marginally suitable habitat - Site A	No	No
Northern harrier *Circus cyaneus*	CSC/-	Grasslands, pastures, fields, seasonal wetland	Marginally suitable foraging habitat – Site A	No	No
Burrowing owl *Athene cunicularia*	CSC/-	Grasslands, field edges with ground squirrel activity	Marginally suitable habitat – Site A	No	No
Loggerhead shrike *Lanius ludovicianus*	CSC/-	Grasslands, agricultural areas	Marginally suitable foraging habitat – Site A	No	No
Tricolored blackbird *Agelaius tricolor*	CSC/-	Marsh, bramble, thickets, silage, grasslands, pastures	Marginally suitable foraging habitat – Site A.	No	No
Palid bat *Antrozous pallidus*	CSC/-	Grasslands, shrub lands, woodlands.	Aerial foraging habitat – both sites	No	No
Townsends big-eared bat *Corynorhinus townsendii*	CSC/-	Caves, bridges, buildings, rock crevices. tree hollows	Aerial foraging habitat – both sites	No	No

Western red bat *Lasiurus blossevillii*	CSC/-	Large trees, woodlands, grasslands and cultivated fields	Aerial foraging habitat – both sites	No	No

T=threatened; E=Endangered; PE=Proposed Threatened; CSC=California species of species concern; FP=state fully protected;

Valley Elderberry Longhorn Beetle. The valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is a medium-sized woodboring beetle, about 0.8 inches long. Endemic to California's Central Valley and watersheds that drain into the Central Valley, this species' presence is entirely dependent on the presence of its host plant, the elderberry shrub (*Sambucus* spp.). VELB is a specialized herbivore that feeds exclusively on elderberry shrubs, the adults feeding on leaves and flowers, and the larvae on the stem pith. Habitat for VELB consists of elderberry shrubs with stems greater than 1 inch in basal diameter. Elderberry grows in upland riparian forests or savannas adjacent to riparian vegetation, but also occurs in oak woodlands and savannas and in disturbed areas. It usually co-occurs with other woody riparian plants, including valley oak, Fremont cottonwood, various willows, and other riparian trees and shrubs (Barr 1991, U.S. Fish and Wildlife Service 1984, Collinge et al 2001).

There are no elderberry shrubs on or near Sites A, B, or C and therefore no potential for VELB occurrence. The nearest reported occurrence of VELB is along Cache Creek, over five miles southeast of the project site (CNDDB 2015).

Western Pond Turtle. Western pond turtles (*Actinemys marmorata*) are closely associated with permanent water bodies, such as lakes, ponds, slow moving streams, and irrigation canals that include down logs or rocks basking sites, and that support sufficient aquatic prey. Western pond turtles also require upland habitat that is suitable for building nests and to overwinter. Nests are constructed in sandy banks immediately adjacent to aquatic habitat or if necessary, females will climb hillsides and sometimes move considerable distances to find suitable nest sites (Jennings and Hayes 1994).

There are no water bodies, streams, or suitable conveyance channels (e.g., permanent water) on Sites A, B, or C and therefore no potential for this species to occur onsite. There is, however, potential for the species to occur in the retention pond downslope and west of Site B. The nearest documented occurrence is approximately 10 miles west along Cache Creek (CNDDB 2015).

California Tiger Salamander. California tiger salamander (*Ambystoma californiense*) is restricted to grasslands, oak savannah, and coastal scrub communities of lowlands and foothill regions where aquatic sites are available for breeding. Breeding sites generally consist of natural ephemeral pools (Barry and Shaffer 1994) or artificial ponds that mimic them (e.g., stock ponds that are allowed to dry). Most reported populations breed exclusively in seasonal and perennial stock ponds. Breeding sites may also include perennial features with open water refugia that do not support populations of bullfrog (*Rana catesbeiana*) or predatory fishes (Holomuzki 1986; Fitzpatrick and Shaffer 2004).

There are few occurrence records of this species in Yolo County, but most are from the northern Dunnigan Hills. Four recorded occurrences were located within an area bounded by Interstate 5 to the east, Bird Creek to the south, and Buckeye Creek to the north and west, about 8 miles north of the project site. These four occurrences are from within an area that now comprises the Dunnigan Creek Unit (Central Valley Region Unit 1) of designated critical habitat. This is also a single occurrence from the Capay Hills, approximately 10 miles west of the project site (CNDDB 2015).

There are no water bodies, streams, or suitable conveyance channels (e.g., permanent water) on Sites A, B, or C and therefore no potential for this species to occur onsite. However, the retention pond downslope and west of Site B has characteristics that are suitable for California tiger salamander occurrence.

Mountain Plover. Unlike most other plover species, the mountain plover (*Charadrius montanus*) is an upland species, often found far from water. The mountain plover does not breed in California, but does occur during the winter. The species arrives on its wintering grounds in California from November through December where it remains through March. The wintering habitat of mountain plovers in the Central Valley has been described as pastureland nearly devoid of vegetation, sparsely vegetated fields, grazed grasslands and disked agricultural fields The species occurs only in areas either devoid of or with very sparse and short vegetation (Stoner 1942, Manolis and Tangren 1975, Hunting et al. 2001, Hunting and Edson 2008).

Mountain plovers are uncommon, localized winter visitors to Yolo County. Small flocks have been observed in recently-plowed agricultural fields near Woodland and Davis, especially along County Roads 16, 25, 27, and 102 and in unflooded portions of the Yolo Bypass. Conditions at Site A generally meet the definition of suitable wintering habitat, but the small, isolated patch of grassland is unlikely to support the species. Therefore, Site A is considered marginal habitat with limited potential for occurrence of this species.

Swainson's Hawk. The Swainson's hawk is a medium-sized raptor associated with generally flat, open landscapes. In the Central Valley it nests in mature native and nonnative trees and forages in grassland and agricultural habitats. Although a state-threatened species, the Swainson's hawk is relatively common in Yolo County due to the availability of nest trees and the agricultural crop patterns that are compatible with Swainson's hawk foraging. Numerous nest sites have been documented in Yolo County (Estep 2008, 2012).

None of the expansion sites support nesting habitat for the Swainson's hawk. There are no suitable nest trees in the immediate vicinity of the project site. The nearest reported nest site is approximately 2 miles northeast of the project site. Site A supports grassland habitat that is generally considered suitable foraging habitat. However, the small patch size and isolation of the site within a primarily orchard/vineyard landscape substantially reduces the suitability of the site. Therefore, Site A is considered marginal foraging habitat for this species with limited potential for occurrence of this species. Neither Site B or Site C support suitable habitat for the Swainson's hawk.

White-tailed kite. The white-tailed kite is a highly specialized and distinctively-marked raptor associated with open grassland and seasonal wetland landscapes. It typically nests in riparian forests, woodlands, woodlots, and occasionally in isolated trees, primarily willow, valley oak, cottonwood, and walnut) and some nonnative trees. It forages in grassland, seasonal wetland, and agricultural lands, but is more limited in its use of cultivated habitats compared with the Swainson's hawk. As a result, the species occurs throughout most of Yolo County, but in low breeding densities (Dunk 1995, Erichsen 1995, Estep 2008, 2012).

None of the expansion sites support nesting habitat for the white-tailed kite. There are no suitable nest trees in the immediate vicinity. The nearest reported nest is approximately 5 miles northwest of the project site. Site A supports grassland habitat that is generally considered suitable foraging habitat. However, the small patch size and isolation of the site within a primarily orchard/vineyard landscape substantially reduces the suitability of the site. Therefore, Site A is considered marginal foraging habitat for this species with limited potential for occurrence of this species. Neither Site B nor Site C support suitable habitat for the white-tailed kite.

Northern harrier. The northern harrier (*Circus cyaneus*) is a ground-nesting raptor, constructing rudimentary nest sites on the ground in marsh, grassland, and some agricultural

habitats, particularly grain fields. They forage in seasonal wetland, grassland, and agricultural habitats for voles and other small mammals, birds, frogs, and small reptiles, crustaceans, and insects. They also roost on the ground, using tall grasses and forbs in wetlands, or along wetland/field borders for cover (MacWhirter and Bildstein 1996).

None of the expansion sites support suitable nesting habitat for the northern harrier. Site A supports grassland habitat that is generally considered suitable foraging habitat. However, the small patch size and isolation of the site within a primarily orchard/vineyard landscape substantially reduces the suitability of the site. Therefore, Site A is considered marginal foraging habitat for this species with limited potential for occurrence of this species. Neither Site B nor Site C support suitable habitat for the northern harrier.

Western Burrowing Owl. The western burrowing owl (*Athene cunicularia*) occurs in open, dry grasslands, agricultural and range lands, and desert habitats. In the Central Valley, they are associated with remaining grassland habitats, pasturelands, and edges of agricultural fields. They also occur in vacant lots and remnant grassland or ruderal habitats within urbanizing areas. Historically nesting in larger colonies, due to limited nesting habitat availability most of the more recent occurrences are individual nesting pairs or several loosely associated nesting pairs. The burrowing owl is a subterranean-nesting species, typically occupying the burrows created by California ground squirrels *(Otospermophilus beecheyi)*. They also occupy artificial habitats, such as those created by rock piles and occasionally in open pipes and small culverts. They forage for small rodents and insects in grassland and some agricultural habitats with low vegetative height. Key to burrowing owl occupancy are grassland or ruderal conditions that maintain very short vegetative height around potential nesting sites. They will generally avoid otherwise suitable grassland habitats if vegetation exceeds 12 inches in height (Gervais et al. 2008).

No burrowing owls or burrowing owl activity was noted on the project site during the site visit. In Yolo County, the majority of burrowing owl occurrences are from the grassland and pasture habitats of the southern panhandle and in cultivated and ruderal habitats in the Davis area. Nesting and wintering occurrences have also been reported from the area immediately north of Winters and elsewhere and along the grassland foothills on the west side of the valley, and in the southern Dunnigan Hills. Isolated occurrences have also been reported from cultivated lands in the interior of the county. There are three reported occurrences from the immediate vicinity of the project site, one of which may have been within the footprint of the existing facility (CNDDB 2015). Since the conversion to vineyards, these sites have been inactive. Although Site A continues to support habitat suitable for burrowing owls, this remnant patch of grassland/rangeland may not be sufficiently large to support a nesting or wintering burrowing owls.

Loggerhead Shrike. The loggerhead shrike (*Lanius ludovicianus*) occurs in open habitats with scattered trees, shrubs, posts, fences, utility lines, or other perches. It nests in small trees and shrubs and forages for small rodents, reptiles, and insects in pastures and agricultural lands. It has been reported from numerous locations in Yolo County (CNDDB 2015), including the grassland and oak savannah foothills along the western edge of the valley. .

Nesting habitat is not present on any of the expansion sites. Site A supports marginally suitable foraging habitat, but perching opportunities for shrikes are lacking.

Tricolored Blackbird. Although currently designated as a state species of special concern, the legal status of the tricolored blackbird (*Agelaius tricolor*) has recently been under review by the CDFW and the USFWS. The species was emergency listed as endangered under the state endangered species act in December 2014, which expired in December 2015. The species is currently under review for a permanent state listing. The species is also currently under review by the USFWS following a 90-day finding that formal federal listing may be warranted.

The tricolored blackbird nests in colonies from several dozen to several thousand breeding pairs. They have three basic requirements for selecting their breeding colony sites: open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony. Nesting colonies are found in freshwater emergent marshes, in willows, blackberry bramble, thistles, or nettles, and in silage and grain fields. Suitable foraging habitat includes grasslands, pasturelands, seasonal wetlands, and some cultivated habitats (Beedy and Hamilton 1999).

None of the expansion sites support breeding habitat for this species. The nearest reported colony is in the Dunnigan Hills several miles north of the project site; however, this site has been inactive for several years. Most of the other reported colonies are on the valley floor east and south of the project site. Site A supports marginal foraging habitat for this species, but the lack of breeding occurrences in the vicinity and the small, isolated nature of the Site A substantially reduces the potential for foraging occurrences.

Special-status Bats. Three special status bats potentially occur in the vicinity of the project site, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), and western red bat (*Lasiurus blossevillii*), all state species of special concern. Pallid bat occurs primarily in shrublands, woodlands, and forested habitats, but also can occur in grasslands and agricultural areas. Townsends's big-eared bat occurs in a variety of woodland and open habitats, including agricultural areas. Western red bat occurs in wooded habitats, including orchards, and grasslands. Pallid bat and Townsend's big-eared bat roost in mines, caves, rocky crevices, large hollow trees, and occasionally in large open buildings that are usually abandoned or infrequently inhabited. Western red bat usually roosts in large trees (Pierson and Rainey 1998, Pierson 1998, Fellers and Pierson 2002, Pierson et al. 2006)

None of the expansion sites support roosting habitat for these species. The nearest potential roosting habitat is in the Capay Hills, west of the project site or along Cache Creek, south of the project site. All species could potentially forage over each site.

Loss of Habitat

Potential Impacts

The proposed project will remove a total of up to 2.2 acres of graveled or remnant grassland/rangeland habitat at Site A, approximately 15,000 square feet (0.3 acres) of vineyard at Site B, and 40,000 square feet (0.9 acres) of vineyard at Site C. Although formerly part of a larger grassland/rangeland community in the Dunnigan Hills, the small, remnant, and isolated patch at Site A does not currently constitute an important biological resource. Expansion of the existing production facility into this remaining open space will have a negligible effect on plants, wildlife, and other biological resources and does not constitute a significant impact. Because they currently support low biological value, the removal of the vineyard at Sites B and C also does not constitute a significant impact to biological resources.

Special-status Species

Valley Elderberry Longhorn Beetle. The proposed project will not result in impacts to this species.

Western Pond Turtle. There is no onsite habitat for this species. The retention pond downslope from Site B has potential to support this species. However, the project is not expected to directly or indirectly affect the functioning of the pond beyond existing baseline conditions.

California Tiger Salamander. There is no onsite habitat for this species. The retention pond downslope from Site B provides suitable habitat. Although this species is known to occur in the

northern Dunnigan Hills, the project is approximately 8 miles south of documented occupied sites. The project site is also not within USFWS-designated critical habitat for this species, which is also approximately 8 miles north of the project site. The project is not expected to directly or indirectly affect the functioning or quality of the pond beyond existing baseline conditions.

Mountain Plover, Swainson's Hawk, White-tailed Kite, Northern Harrier, Northern Shrike, Tricolored Blackbird. The proposed project will remove up to 2.2 acres of marginally suitable foraging habitat for these species at Site A. Because of the small amount of habitat removed, the marginal condition of the site, and the lack of onsite occurrences, this does not constitute a significant loss of habitat for these species. However, it may be subject to the conditions in General Plan Policy CO-2.42, which requires the applicant to provide compensatory mitigation according to the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County.

Western Burrowing Owl. The project will remove approximately 2.2 acres of marginally suitable habitat for burrowing owls. Because the species is no longer known to occur on the project site and because the site is considered to support marginal habitat value, this does not constitute a significant impact to this species. However, in the event construction occurs in subsequent years when the site could be potentially occupied by nesting or wintering burrowing owls, possible nest destruction or mortality should be avoided by implementing pre-construction surveys and implementing standard avoidance measures. If burrowing owls are found during preconstruction surveys, the project would then be subject to standard compensatory mitigation according to CDFW guidelines.

Special-Status Bats. The project will not remove aerial foraging habitat for special-status bats and will not affect bat roosts or roosting habitat.

Although the project site was formerly part of the larger grassland/rangeland community in the Dunnigan Hills, since conversion of the surrounding land to vineyards and orchards, Site A is now a small, isolated patch of disturbed grassland surrounded on all sides by vineyard and the existing production facility. As a result, the biological value and function of Site A is substantially diminished. Its removal, while removing a small amount of marginal habitat for some species, does not constitute a significant impact. However, compensatory mitigation for the loss of potential habitat on Site A will be required to address the loss of Swainson's hawk foraging habitat pursuant to General Plan Policy CO-2.42. The potential loss of Swainson's hawk (and other raptors) foraging habitat is addressed in Mitigation Measure BIO-1, below. Additionally, preconstruction surveys for breeding and wintering burrowing owls (Mitigation Measure BIO-2) would also be required to avoid the potential for mortality if this species should inhabit the site prior to construction.

Sites B and C are currently part of an active orchard. Having very low biological value and function, the removal of the orchard to accommodate expansion of the facility and the water treatment pond would have no significant impacts on biological impacts. However, because of the close proximity of the proposed water treatment pond to the grassland swale that drains into the retention pond, project specific conditions of approval will be incorporated to avoid depositing materials, including soils and toxins into the grassland swale and seasonal drainage during project construction.

The project's adopted Conditions of Approval and mitigation measures will protect special status species that may exist in the project vicinity from construction related and project operation impacts. Impacts to species of concern would be considered less than significant with mitigation incorporated.

Mitigation Measure BIO-1

Prior to issuance of any grading or building permits for construction within Site A, the applicant will be required to mitigate for the permanent loss of Swainson's hawk foraging habitat, which may be satisfied by payment of an in-lieu fee (for projects under 40 acres), the purchase of credits from an approved mitigation bank or mitigation receiving site, dedication of conservation easements either onsite or offsite, or other arrangements satisfactory to the County that ensure permanent 1:1 conservation of high-quality foraging habitat for the Swainson's hawk.

Significance After Mitigation
Implementation of MM BIO-1 adequately addresses the loss of suitable foraging habitat for this species. With mitigation, this impact would be considered less than significant.

Mitigation Measure BIO-2
Prior to construction at any time of the year, a qualified biologist shall conduct a survey consistent with CDFW's Staff Report on Burrowing Owl Mitigation (Mitigation Guidelines; CDFW, 2012). Results of the habitat assessment and surveys shall be submitted to the County and, if an active nest is identified, survey results and planned no-disturbance setbacks will also be submitted to and approved by CDFW.

If an active burrowing owl nesting burrow is located during preconstruction surveys, a no-disturbance setback shall be established to avoid destruction or disturbance of the burrow. No project activity shall commence within the setback until a qualified biologist has determined in coordination with CDFW that the young have fledged, the nest is no longer active, or that reducing the buffer would not result in nest abandonment.

If an active wintering burrow is within construction areas, the construction areas shall be adjusted to avoid direct disturbance to the burrow. If this is not feasible, the winter burrow may be removed by installing one-way doors to allow owls to escape and then collapse the burrow according to Mitigation Guidelines. Before any burrow exclusion and/or burrow closure (temporary or permanent) occurs, a Burrowing Owl Exclusion Plan, consistent with Appendix E of the Mitigation Guidelines (CDFW, 2012) shall be submitted to and approved by CDFW. If an active burrow is found and must be relocate, habitat compensation will be implemented subject to approval by CDFW and consistent with the Mitigation Guidelines.

Significance After Mitigation
Implementation of MM BIO-2 would protect potential burrowing owl nests that may exist in the project vicinity from construction related impacts. With mitigation, this impact would be considered less than significant.

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

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impact. The property contains a water retention basin that is downslope of an approximately 300 feet from the proposed development within Site A. The retention basin occurs along a natural swale that extends northward toward open grazed grassland areas north of the facility. The basin currently collects runoff from the existing facility and surrounding slopes. Water levels in the pond fluctuate seasonally depending on rainfall, irrigation runoff from the surrounding vineyards, and runoff from production operations. Because of the close proximity of the proposed water treatment pond to the grassland swale that drains into the retention pond, project specific conditions of approval will be incorporated to avoid depositing materials, including soils and toxins into the grassland swale and seasonal drainage during project

construction. With these project-specific Conditions of Approval, impacts to riparian habitat are expected to be less than significant. The project is not expected to significantly impact wetlands.

d) 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?

Less than Significant Impact. The project is located on a parcel where the majority of the land is vacant field or planted in wine grapes, which include daily farming operations with harvest activity. As addressed in the biological assessment prepared for the project, the project site offers very little habitat value for wildlife due to its location within the vineyard where most of the habitat value has been removed and/or replaced. The project is not expected to interfere with the movement of any wildlife species nor impede a wildlife nursery site. Impacts will be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. The proposed project would not conflict with any other local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The County does not have any other conservation ordinances, except for a voluntary oak tree preservation ordinance that seeks to minimize damage and require replacement when oak groves are affected by development. There are no proposed oak tree removals to accommodate the project. Impacts will be less than significant.

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Yolo Habitat Conservancy, a Joint Powers Agency composed of the County, the cities, and other entities, is in the process of preparing a Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for Yolo County. The NCCP/HCP will focus on protecting habitat of terrestrial (land, non-fish) species. Through implementation of the project's Conditions of Approval and the specific biological resources mitigation measures, conflicts with the developing NCCP/HCP are not anticipated, as potential impacts to special-status species have been addressed through a biological site evaluation prepared by Estep Environmental Consulting (January 19, 2017).

V.	CULTURAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☒	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Less than Significant Impact. The project site is not known to have any significant historical resources as defined by the criteria within the CEQA Guidelines. The proposed project site is located within and adjacent to an existing winery originally constructed in 2009. The site is surrounded by vineyard and orchards, and other rural properties and rangeland.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant Impact. The project site is currently developed as a winery with multiple buildings and structures, including a tasting room, vineyard shops, office buildings, tank farm, and bottling and storage buildings. The project proposes to clear and grade approximately four acres to accommodate the winery expansion. The project site is not known to have any archaeologically significant characteristics as defined by the criteria in the CEQA Guidelines. The County sent a formal notice and invitation to initiate AB 52 consultation on the proposed project those tribal entities requesting notification. No comments were received. However, a standard Condition of Approval will require that should subsurface cultural resources be encountered during any project construction, including grading and land clearing activities, construction shall be halted until a professional archaeologist can be consulted and the Yocha Dehe Wintun Nation shall be notified, and, in consultation with their designed monitors, the site shall be evaluated for cultural significance and to determine proper disposition of any artifacts or culturally sensitive resources. Impacts to archaeological resources are expected to be less than significant.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact. See discussion in (b), above. Project construction and implementation are not expected to affect any paleontological resources known or suspected to occur on the project site.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. No human remains are known or predicted to exist in the project area. However, the potential exists during construction to uncover previously unidentified resources. Section 7050.5 of the California Health and Safety Code states that when human remains are discovered, no further site disturbance shall occur until the County coroner has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendation concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and the remains are recognized to be those of a Native American, the coroner shall contact the Native American Heritage Commission within 24 hours.

VI.	GEOLOGY AND SOILS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
	1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
	2. Strong seismic groundshaking?				
	3. Seismic-related ground failure, including liquefaction?				
	4. Landslides?				
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c.	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

GEOLOGICAL SETTING

According to the 2030 Countywide General Plan, the only fault in Yolo County that has been identified by the California Division of Mines and Geology (1997) to be subject to surface rupture (within an Alquist-Priolo Earthquake Fault Zone) is the Hunting Creek Fault, which is partly located in a sparsely inhabited area of the extreme northwest corner of the County. Most of the fault extends through Lake and Napa Counties. The other potentially active faults in the County are the Dunnigan Hills Fault, which extends west of I-5 between Dunnigan and northwest of Yolo, and the newly identified West Valley and East Valley Faults (Fault Activity Map of California, California Geological Survey, 2010). The Dunnigan Hills Fault is located approximately 3 miles northeast of the project site. These faults are not within an Alquist-Priolo Earthquake Fault Zone, and are therefore not subject to surface rupture.

DISCUSSION

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture or a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist

for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42).

Less than Significant Impact. The project is not located within an Alquist-Priolo Earthquake Special Study Zone. No landforms are known to be on the project site that would indicate the presence of active faults. Several earthquake fault zones are present within the County, and the above-identified faults are within regional proximity, albeit remote, of the project site. However, surface ground rupture along faults is generally limited to a linear zone a few yards wide. Because the project site is not located within an Alquist-Priolo Earthquake Special Study Zone, ground rupture that would expose people or structures at the facility to substantial adverse effects is unlikely to result in any significant impacts.

ii) Strong seismic ground shaking?

Less than Significant Impact. Ground shaking occurs as a result of energy released during faulting, which could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. Any major earthquake damage on the project site is likely to occur from ground shaking, and seismically related ground and structural failures. Local soil conditions, such as soil strength, thickness, density, water content, and firmness of underlying brock affect seismic response. Although known active seismic sources are located within regional proximity to the project site, damage from seismically induced shaking during a major event should be no more severe in the project area than elsewhere in the region. Any proposed construction would be required to be built in accordance with Uniform Building Code requirements, and will be generally flexible enough to sustain only minor structural damage from ground shaking. Therefore, people and structures would not be exposed to potential substantial adverse effects involving strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid. Factors determining the liquefaction potential are the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Liquefaction poses a hazard to engineered structures, as the loss of soil strength can result in bearing capacity insufficient to support foundation loads. The project includes construction of new facilities, as well as other development, and is therefore required to comply with all applicable Uniform Building Code and County Improvement Standards requirements to ensure that risks from ground failure are minimized.

iv) Landslides?

Less than Significant Impact. A landslide involves the downslope transport of soil, rock, and sometimes vegetative material *en masse*, primarily under the influence of gravity. Landslides occur when shear stress (primarily weight) exceeds shear strength of the soil/rock. The shear strength of the soil/rock may be reduced during high rainfall periods when materials become saturated. Landslides also may be induced by ground shaking from earthquakes.

The project site is relatively flat and is in an area of low landslide susceptibility due to the slope class and material strength. Development of the project will be required to comply with all applicable Uniform Building Code and County Improvement Standards. Large landslides are unlikely to occur at the project site, particularly with enough force and

material to expose people or structures on the project site to potentially substantial adverse effects, including the risk of loss, injury, or death.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Construction proposed by the project will be subject to a grading permit that requires implementation of best management practices to minimize any adverse effects, and a Storm Water Pollution Prevention Plan is required for disturbance of one acre or more. These existing requirements for erosion control and stability of building sites would remain in effect for all phases of project implementation. The proposed project would not be expected to result in significant impacts related to erosion or loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. The project site is not located in an area of unstable geologic materials, and the project is not expected to significantly affect the stability of the underlying materials, which could potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The project is not expected to subject people to landslides or liquefaction or other cyclic strength degradation during a seismic event. Landslides and lateral spreading occurrences in Yolo County are typically more prevalent in the Capay Valley along Cache Creek.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

Less than Significant Impact. The existence of substantial areas of expansive and/or corrosive soils has not been documented at the project site. The project proposes new development, and all construction to implement the project will be required to be built in accordance with Uniform Building Code requirements. A geotechnical report, along with soil samples, may be required as part of the building permit process. Risks to life and property from project development on expansive soils would be considered less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Less than Significant Impact. The existing winery is served by an onsite septic system. The proposed expansion will be served by the onsite septic system, which may be increased in size to accommodate the new development. As required by Yolo County Environmental Health, the project will be conditioned to require an approved Site Evaluation Report from Yolo County Environmental Health for onsite sewage disposal prior to project implementation. Additionally, prior to any building permit issuance, a sewage disposal site plan/evaluation report must be reviewed for adequate soil permeability, depth to shallow groundwater, depth of restrictive soils, structures' footprint area, drainage courses, contours, and other necessary criteria for approval. These required Environmental Health regulations will be adopted as standard Conditions of Approval to ensure impacts are less than significant.

VII.	GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment.	☐	☐	☒	☐
b.	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	☐	☐	☐	☒
c.	Be affected by climate change impacts, e.g., sea level rise, increased wildfire dangers, diminishing snow pack and water supplies, etc.?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The issue of combating climate change and reducing greenhouse gas emissions (GHG) has been the subject of state legislation (AB 32 and SB 375). The Governor's Office of Planning and Research has adopted changes to the California Environmental Quality Act (CEQA) Guidelines, and the environmental checklist which is used for Initial Studies such as this one. The changes to the checklist, which were approved in 2010, are incorporated above in the two questions related to a project's GHG impacts. A third question has been added by Yolo County to consider potential impacts related to climate change's effect on individual projects, such as sea level rise and increased wildfire dangers.

Yolo County has adopted General Plan policies and a Climate Action Plan (CAP) which addresses these issues. In order to demonstrate project-level compliance with CEQA relevant to GHG emissions and climate change impacts, applications for discretionary projects must demonstrate consistency with the General Plan and CAP. The adopted 2030 Yolo Countywide General Plan contains the following relevant policies and actions:

Policy CO-8.2: Use the development review process to achieve measurable reductions in greenhouse gas emissions.

Action CO-A117: Pursuant to the adopted Climate Action Plan (CAP), the County shall take all feasible measures to reduce its total carbon dioxide equivalent (CO2e) emissions within the unincorporated area (excluding those of other jurisdictions, e.g., UC-Davis, Yocha Dehe Wintun Nation, DQ University, school districts, special districts, reclamation districts, etc.), from 648,252 metric tons (MT) of CO2e in 2008 to 613,651 MT of CO2e by 2020. In addition, the County shall strive to further reduce total CO2e emissions within the unincorporated area to 447,965 MT by 2030. These reductions shall be achieved through the measures and actions provided for in the adopted CAP, including those measures that address the need to adapt to climate change. (Implements Policy CO-8.1)

Action CO-A118: Pursuant to and based on the CAP, the following thresholds shall be used for determining the significance of GHG emissions and climate change impacts associated with future projects:

> 1) Impacts associated with GHG emissions from projects that are consistent with the General Plan and otherwise exempt from CEQA are determined to be less than significant and further CEQA analysis for this area of impact is not required.

2) Impacts associated with GHG emissions from projects that are consistent with the General Plan, fall within the assumptions of the General Plan EIR, consistent with the CAP, and not exempt from CEQA are determined to be less than significant or mitigated to a less than significant level, and further CEQA analysis for this area of impact is generally not required.

To be determined consistent with the CAP, a project must demonstrate that it is included in the growth projections upon which the CAP modeling is based, and that it incorporates applicable strategies and measures from the CAP as binding and enforceable components of the project.

3) Impacts associated with GHG emissions from projects that are not consistent with the General Plan, do not fall within the assumptions of the General Plan EIR, and/or are not consistent with the CAP, and are subject to CEQA review are rebuttably presumed to be significant and further CEQA analysis is required. The applicant must demonstrate to the County's satisfaction how the project will achieve its fair share of the established targets including:

- Use of alternative design components and/or operational protocols to achieve the required GHG reductions; and

- Use of real, additional, permanent, verifiable and enforceable offsets to achieve required GHG reductions. To the greatest feasible extent, offsets shall be: locally based, project relevant, and consistent with other long term goals of the County.

The project must also be able to demonstrate that it would not substantially interfere with implementation of CAP strategies, measures, or actions. (Implements Policy CO-8.5)

DISCUSSION

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. The proposed winery expansion is consistent with the Countywide General Plan as it contains allowed and conditionally permitted uses within the agricultural zoning districts. Likewise, the project is consistent with the growth projections assumed in the General Plan EIR, since growth of agricultural commercial uses are projected in the agricultural and rural areas of the County. The project could create GHG emissions due to vehicle trips generated during construction of the project. However, project development will be phased over several years. Emissions would be of a temporary nature and thus are not expected to have a significant permanent impact.

Long-term GHG impacts from the winery expansion would be caused by truck deliveries up to 3-5 times per day, vehicle traffic generated from daily wine tasting, employees, and vendors. Project traffic is estimated at approximately 105 roundtrip vehicle trips per day. See traffic generation information in Section III Air Quality. This traffic assumption does not include existing traffic generated at the site for ongoing agricultural operations, including 24-hour harvest activity from August through November.

The project's design features propose to take advantage of the area's natural resources, such as sunlight and topography, to minimize energy use and noise levels. The applicant proposes to employ numerous green technologies in building design features. Building considerations will thus meet many of the 2030 Countywide General Plan policies that support use of green building design in new development.

The proposed project is not considered to have an individually significant or cumulatively considerable impact on global climate change.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. The proposed winery expansion would not conflict with any applicable plan, policy or regulation adopted to reduce GHG emissions, including the numerous policies of the adopted 2030 Yolo Countywide General Plan and Climate Action Plan. As identified in (a), above, the project proposes using green architecture to minimize energy use by incorporating sustainable design features. The project thus implements several policies in the General Plan that support the reduction of greenhouse gas emissions.

c) Be affected by climate change impacts, e.g., sea level rise, increased wildfire dangers, diminishing snow pack and water supplies, etc.?

No Impact. The project is not located in an area of risk for fire or sea level rise. No impacts are expected due to climate change.

VIII.	HAZARDS AND HAZARDOUS MATERIALS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

DISCUSSION

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? *and*

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. Construction of the proposed project could require the transport, storage, use, handling and disposal of different types of hazardous substances including fuel, oil, lubricants, and solvents. Operation of the project itself, however, would not include significant storage or handling of hazardous materials, other than typical use of forklifts and storage of propane. The transport, use, and disposal of any construction and/or operations related to hazardous materials, such as forklifts and propane storage, will be stored and handled in

accordance with all applicable federal, state, and local requirements, including Yolo County Environmental Health Division regulations, which require submittal of a Hazardous Materials/Waste Application Package (Business Plan). Hazardous impacts to the public or environment would be considered less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The project site is not located within one-quarter mile of an existing or proposed school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The project will not be located on a site that has been included on a list of hazardous materials sites.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located within an airport land use plan, is not within the vicinity of a public airport, and would not result in a safety hazard for people residing or working in the project area. There would be no safety hazard related to public airports that would endanger people residing or working in the project area.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are several agricultural and private landing strips for airplanes located throughout the County, although the project site is not located within the immediate vicinity of a private airstrip. There would be no safety hazard related to private airstrips that would endanger people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The location of the project would not affect any adopted emergency response plan or emergency evacuation plan. The project site is located in a rural area of the County with adequate access off County Road 92B and County Road 15B. The applicant has implemented a site specific emergency plan that identifies facility information, owner and local emergency contact information, gathering or refuge locations, fire extinguisher locations, and other pertinent emergency response information. Impacts will be less than significant.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is not located in a designated Fire Hazard Severity Zone, and is furthermore located in an area surrounded by irrigated farmland. Impacts will be negligible.

IX.	HYDROLOGY AND WATER QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site?	☐	☐	☒	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?	☐	☐	☒	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f.	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☐	☒
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

DISCUSSION

a) Violate any water quality standards or waste discharge requirements?

Less than Significant Impact. Environmental Health standards and requirements include the review and approval of a sewage disposal site plan/evaluation report, as well as a water source plan, prior to implementation of an approved project. See, also, discussion in (c), (d), below, regarding use of best management practices and other required measures to prevent project storm water pollution. Section XVII(a) (Utilities and Service Systems) addresses project requirements for proper onsite sewage disposal. The project proposes to continue use of an existing domestic well and onsite wastewater treatment system.

Crew Wine Company's process wastewater is screened and collected in a central sump. The water from the sump is pumped into a 7,000 gallon poly-tank equipped with an aerator. In this tank, the heavy wine lees are settled to the bottom and periodically pumped out into tanker trucks for delivery to East Bay Municipal Utility District or Yolo County Central Landfill treatment facilities. The clear process waste water is allowed to overflow into a second 7,000 gallon poly-tank which is also equipped with an aerator (aerobic digester) to further reduce biological oxygen demand load of the process wastewater. The clear process wastewater from the second digester then overflows into a third 7,000 gallon poly-tank where the water is stored until loaded into a water truck and dispersed onto the on-site vineyard roadways for dust control (dry months only). Crew Wine Company has been issued a Waiver of Waste Discharge Requirements (WDR R5-2015-0005-0063) by the Central Valley Water Quality Control Board, which allows for discharge of wastewater, up to 100,000 gallons/year, to approximately 39 acres of the onsite vineyard adjacent to the wine production facility on APN 054-230-018. During wet months, the wastewater is transferred to commercial tanker trucks to be delivered to East Bay Municipal Utility District or Yolo County Central Landfill for disposal.

Crew Winery is currently pursuing an amendment to its existing Waiver from the Central Valley Regional Water Quality Control Board to allow for discharge of winery wastewater on approximately 1,460 acres of vineyard, which includes land owned by Crew Winery and other entities. This activity is Statutorily Exempt pursuant to Section 15263 of the CEQA Guidelines.

Water quality standards and waste discharge requirements are not expected to be violated.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact. Crew Winery operates a public water system under permit issued by Yolo County Environmental Health Division. The system supplies domestic water from an onsite well. Water usage as metered at the domestic water supply well was 2.3 million gallons in 2016, or 7.1 acre feet. Under the proposed project (Use Permit Amendment), water usage is projected to grow to 3.3 million gallons per year by 2025, or 10.1 acre feet. Water usage accounts for all winemaking activities, landscaping irrigation, and domestic uses (drinking water, bathrooms, etc.).

Luhdorff and Scalmanini Consulting Engineers (LSCE) prepared analyzed the potential impacts on groundwater by increased water demands of the Crew Winery domestic well as the result of the proposed project (Attachment B). LSCE determined that the proposed incremental use of 1 million gallons per year, or 3 acre feet, is insignificant with respect to direct and indirect impacts on groundwater use on the neighboring properties. LSCE estimates that the total pumping interference in 2025 (at total build out of the proposed project) would be less than 1.5 feet at the property line with almost no increase due to planned winery expansion. Additionally, LSCE concluded that there would be no measurable impact to the groundwater subbasin; however, Crew Winery would also comply with any requirements set forth by a local Groundwater Sustainability Agency under the Sustainable Groundwater Management Act (SGMA) to maintain sustainability in the groundwater subbasin. Impacts to groundwater supplies and groundwater recharge are expected to be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation? *and*

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase

the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?

Less than Significant Impact. The project proposes expansion of an existing winery on three separate areas, totaling approximately four acres. Through adopted Conditions of Approval, the applicant will be required to submit civil improvement plans for the entire project site to ensure all new drainage improvements to the property tie-in to existing drainage facilities and features, as necessary. All applicable permanent post-construction storm water pollution controls for new development will be required to adhere to the Yolo County Improvement Standards, which will be reviewed by Yolo County Engineering staff. Construction of the project will also be required to comply with Improvement Standards that require best management practices to address storm water quality, erosion, and sediment control, which may include a Storm Water Pollution Prevention Plan if one acre or more is disturbed.

The project is not expected to substantially alter the existing drainage pattern of the project site, which will be addressed through the abovementioned required submittals, i.e., grading permits and civil improvement plans. The project includes development of approximately four acres of new building area with associated parking; although most parking stalls and access drives will be graveled with only minimal amounts of new impervious surfaces, such as paving, required for accessibility. Implementation of the above required Conditions of Approval will ensure that the project does not significantly modify any drainage patterns or change absorption rates, or the rate and amount of surface runoff.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? *and*

f) Otherwise substantially degrade water quality?

Less than Significant Impact. See discussion in (c) and (d), above. With the implementation of project construction and site preparation-related Conditions of Approval that address proper drainage improvements and storm water pollution controls, the proposed project is not expected to cause additional runoff. Only seven percent of the 155-acre property will be affected, with a majority of the property remaining in active vineyard production and rangeland. Impacts to water quality are expected to be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed project is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. Additionally, the project consists of development associated with the expansion of an existing winery, and does not include any housing component.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

No Impact. See (g), above. The proposed project is not located within a 100-year flood plain and will not impede or redirect flood flows. As indicated in the drainage study, rainfall runoff from the expansion area and most of the developed area of the winery, as well as about 17 acres of existing vineyard, will drain to an existing detention pond (Laugenour & Miekle, March 2016).

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. See discussion in (h), above. The proposed project is not located immediately downstream of dam or adjacent to a levee that would expose individuals to risk from flooding.

j) Result in inundation by seiche, tsunami, or mudflow?

No Impact. The project is not located in an area that could potentially pose a seiche or tsunami hazard and is not located near any physical or geologic features that would produce a mudflow hazard.

X.	LAND USE AND PLANNING.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

DISCUSSION

a) Physically divide an established community?

No Impact. The proposed project is located outside the growth boundary identified for the town of Zamora, but is within the greater Zamora community, in unincorporated Yolo County, and is surrounded by other agricultural uses. The project would not divide an established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project site is designated Agriculture (AG) in the Yolo County 2030 Countywide General Plan. The project site's primary AG designations support agriculturally-related commercial and industrial uses in the agricultural areas. Specifically, the AG designation defines agricultural industrial uses as including processing, storage, and supply, and defines agricultural commercial uses as including roadside stands, wineries, farm-based tourism, and crop-based seasonal events that serve the rural areas.

The project would be consistent with several General Plan Goals and Policies from the Land Use and Community Character Element, Conservation and Open Space Element, and Agriculture and Economic Development Element. The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Less than Significant Impact. The County does not have an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP), although a draft plan is now being prepared by the Yolo County Habitat/Natural Community Conservation Plan Joint Powers Agency (the Yolo Habitat Conservancy (YHC)). In accordance with this draft plan, this Initial Study addresses measures to reduce impacts to special status species that have been identified by YHC as possibly occurring at the project site due to the potential for the site to support habitat. See discussion in Section IV (Biological Resources).

XI.	MINERAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?; *and*

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The project area is not located within any identified area of significant aggregate deposits, as classified by the State Department of Conservation. Most aggregate resources in Yolo County are located along Cache Creek in the Esparto-Woodland area.

XII.	NOISE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:					
a.	Exposure of persons to or generation of noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Yolo County has not adopted a noise ordinance which sets specific noise levels for different zoning districts or for different land uses in the unincorporated area. Instead, the County relies on the State of California Department of Health Services' recommended Community Noise Exposure standards, which are set forth in the State's General Plan Guidelines (2003). These standards are included in the Yolo County 2030 Countywide General Plan and used to provide guidance for new development projects. The recommended standards provide acceptable ranges of decibel (dB) levels. The noise levels are in the context of Community Noise Equivalent Level (CNEL) measurements, which reflect an averaged noise level over a 24-hour or annual period. The Countywide General Plan identifies up to 75 dB CNEL as an acceptable exterior noise environment for agricultural land uses and up to 60 dB CNEL for residential land uses.

DISCUSSION

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Less than Significant Impact. The project site is surrounded by active agricultural land uses and includes three rural home sites that are within a 0.75 mile of the project site. As indicated above, the State noise guidelines define up to 75 dB CNEL for outdoor noise levels in agricultural areas as an acceptable level, measured at the property line. The ambient noise levels in the project vicinity are a result of onsite, surrounding, and distant agricultural activities, such as tractors disking the adjacent farm fields, harvest activity in nearby fields and onsite vineyard, as well as other farm vehicles and traffic along County Roads 15B and 92B. Typical noise levels for tractors are approximately 80 dB at 50 feet away.

The 2030 Yolo Countywide General Plan Final Environmental Impact Report (FEIR) (Yolo County, 2009) notes that typical construction noise ranges between 80 to 88 dBA at 50 feet generated by tractors, front loaders, trucks, and dozers. Temporary noise associated with construction activities would be similar to existing noise associated with ongoing agricultural activities, such as tractors, diesel pumps and generators, harvest activities, truck hauling, and other agricultural vehicles. Existing agricultural noise sources at the project site include typical farming activities, and 24-hour harvest activity from August through November. The FEIR notes that typical noise levels for tractors conducting farming activities ranges from 78 dBA L_{max} to 106 dBA at 50 feet, with an average of about 84 dBA.

The proposed grading and construction of the winery expansion are not expected to generate noise levels at the boundaries of the property that will significantly impact the nearest neighbors, since the residences are located far enough away from the noisiest construction activities. Noise levels diminish or attenuate as distance from the noise source increases, based on an inverse square rule. Noise from a single piece of construction equipment attenuates at a rate of 6dB for each doubling of distance.

Long-term noise sources from operation of the winery will come from truck deliveries up to five times per day, and visitors and employees accessing the site daily. The 2030 Countywide General Plan strongly promotes the continuation of farming activities on agricultural land and anticipates those activities to expand. Policies in the Countywide General Plan promote compatibility of permitted land use activities with applicable noise standards and encourage new discretionary development to use best-available noise reduction measures in project design. As indicated elsewhere in this Initial Study, the project will make use of topographical and agricultural features to buffer the project. Overall, noise levels will not expose nearby receptors in excess of standards adopted by the County's General Plan, including the State-recommended Community Noise Exposure standards.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Groundborne vibration levels may be measured similar to noise in vibration decibels (VdB). The 2030 Yolo Countywide General Plan FEIR notes that typical construction vibration levels range from 58 VdB at 25 feet for a small bulldozer and up to 112 VdB for a pile driver. The construction activities related to the winery expansion may require pile driving to anchor pads, so vibration levels in this upper range may be generated during construction. However, construction activities are not expected to generate vibration levels at the boundaries of the property that will significantly impact the nearest neighbors, since the residence is located far enough away from the construction activities.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. Given the relatively low traffic use in the area, traffic noise levels along County Roads 15B and 92B at the project site are not currently contributing to significant noise levels throughout the day. Existing operations at the project site include daily general farming activities, 24-hour harvest activities August through November each year, and wine production operations (i.e., air compressors, refrigerators, bottling, fork lifts, and truck deliveries. However, much of the wine production activities occur within enclosed buildings. These ongoing operational noises will be lessened through building design, location within the site, and natural topography of parcel. The noise sources generated by daily visitor activity for tastings are not expected to increase due to the proposed expansion of the winery. The applicant anticipates that the level of daily traffic generation at the site will be commensurate with existing traffic levels generated by the current operation, with only a slight increase (i.e., 5 truck trips per day). Any permanent increases in ambient noise levels are expected to be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. Temporary construction activities could result in substantial increases in ambient noise levels but would be attenuated at the property boundaries to acceptable levels. These temporary construction activities are expected to generate similar levels of noise as existing agricultural uses on the property and elsewhere in the vicinity. The nearest residence is located approximately 0.35-mile away to the north and is surrounded by existing agricultural activities at the project site. Since sound attenuates as it leaves the source, it is unlikely that the closest residents will be experiencing noise sources (i.e., winery production). Impacts from periodic increases in ambient noise levels are expected to be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?; *and*

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project site is not located within an airport land use plan. Implementation of the proposed project would not expose individuals to excessive noise levels associated with any nearby airstrip's aircraft operations.

XIII.	POPULATION AND HOUSING.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

DISCUSSION

a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?;

b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?; *and*

c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?

Less than Significant Impact. The proposed project will result in a temporary and periodic increase in human population during daily operations. However, the project would not result in an increase in population growth and would not displace any existing housing or current residents that would necessitate the construction of housing elsewhere. Impacts would be less than significant.

XIV.	PUBLIC SERVICES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:					
a.	Fire protection?	☐	☐	☒	☐
b.	Police protection?	☐	☐	☒	☐
c.	Schools?	☐	☐	☐	☒
d.	Parks?	☐	☐	☐	☒
e.	Other public facilities?	☐	☐	☐	☒

DISCUSSION

a) Fire protection?

Less than Significant Impact. The Zamora Fire District, located approximately three miles (as the crow flies) northeast of the project site, provides fire protection services to the property and surrounding environs. Implementation of the proposed project could increase the risk for fire, and thus, the demand for fire protection services. The facility currently maintains a 13,000 gallon water storage tank and the proposed project will include a new 2,500 square foot fire pump and water storage tank. The new fire tank capacity will be determined by the Fire Marshal and design engineers. The construction of the project will ensure an adequate water supply is secured onsite for fire-fighting purposes, and will require approval by the Zamora Fire District.

Implementation of the project's proposed fire protection measures, as well as implementation of construction standards that meet current building and fire codes, will ensure that impacts to fire protection services will be less than significant.

b) Police Protection?

Less than Significant Impact. Implementation of the project may increase the need for law enforcement at the project site and along the roadways, but would not result in the construction of new or modified facilities in order to maintain adequate service levels. Impacts will be less than significant.

c) Schools?;
d) Parks?; *and*
e) Other public facilities?

No Impact. The proposed winery expansion will not result in the demand for any new housing and would not generate any additional demand for schools, parks, or other public facilities such as libraries, hospitals, satellite County offices, etc. Prior to issuance of building permits at the project site, any applicable impact fees will be collected.

XV.	RECREATION.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

DISCUSSION

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?; *and*

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The proposed project would not require the construction of additional recreational facilities nor substantially increase the use of existing recreational facilities.

XVI.	TRANSPORTATION/TRAFFIC.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e.	Result in inadequate emergency access?	☐	☐	☒	☐
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The roadway network within unincorporated Yolo County consists primarily of two lane roads that are designed to serve small farming communities and agricultural uses. Thus, policies in the 2030 Countywide General Plan encourage inter-and intra-regional traffic to use State and federal interstates and highways, since the primary role of county roads is to serve local and agricultural traffic. The project site is located southwest of the town of Zamora, in the rural and agricultural area of the Dunnigan Hills, and is accessed off County Roads 15B and 92B. Both roads are not designated “General Plan roadways” in the 2030 Countywide General Plan, nor are they considered “Local Roads.” Local roads are also not designated General Plan roadways, but are shown in the Circulation Element for orientation purposes (Yolo County, 2009).

General Plan roadways are defined as: Minor Two-Lane County Roads, which primarily function as collector roads providing access to adjacent land carrying local traffic; Major Two-Lane County Roads, which function as collector roads that serve travel that is intra-county, carrying traffic between communities and/or other areas of the County; Conventional Two-Lane Highways, which are identified for State-maintained highways used as connectors between major traffic generators or links in State and national highway networks; Arterials, which are fed by local and collector roads to provide intra-community circulation and connection to regional roadways; and Freeways, which are intended to serve both intra-regional and inter-regional travel (Yolo County, 2009).

Level of Service (LOS) is a quantitative measure of traffic operating conditions whereby a letter grade A through F is assigned to an intersection or roadway segment, representing progressively worsening traffic conditions. LOS A, B, and C are considered satisfactory to most motorists, and allow for the relatively free movement of traffic. LOS D is marginally acceptable, with noticeable delays and unstable traffic speeds. LOS E and F are associated with increased congestion and delay.

County Roads 15B and 92B have not been measured for level of service since it is not defined in the General Plan as providing countywide roadway function, as described above. The nearest Major Two-Lane roadway is County Road 13/14, which is approximately 1.5 miles north of the project site (as the crow flies), and currently has an established LOS A, with a projected LOS B (from I-505 to I-5) upon build-out of the 2030 Countywide General Plan. Minimal truck traffic is expected on County Road 13/14 as a result of the proposed project. As discussed in (a) and (b) below, the majority of truck traffic associated with transportation of finished product is destined for Napa.

DISCUSSION

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?; *and*

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. The proposed project (winery expansion) will require a limited number of truck trips to prepare the site for the project, i.e., grade the site for construction, construct administration and production offices, laboratory and employee break room, warehouse storage, barrel cave, process water treatment pond, hospitality center, parking areas, and various other buildings and structures to support the winery. However, the project is proposed to be developed in phases, and construction activities to accommodate each phase of the project are expected to generate minimal short-term traffic.

Access to the winery is provided off two separate driveway approaches off County Roads 15B and 92B. The winery operation currently employees 41 full-time employees and 114 part-time employees (approximately 100 of those part-time employees are employed during harvest season only). The proposed expansion would increase the full-time employees by 24 (total 65) and part-time employees by 13 employees (total 127). The tasting room averages approximately 10 visitors per day, and is not expected to significantly increase after the winery expansion (the tasting room is not proposed to be increased as part of this project). The proposed hospitality center is also not expected to increase daily traffic volumes, as it would be used occasionally to entertain selected customers (i.e., vendors, distributors, etc.).

The number of daily trips (primarily from employees) to the site will increase with approval of the winery expansion, but is expected to be commensurate with traffic occurring in the agricultural areas of the County. Traffic generated by implementation of the project is estimated at approximately 105 daily vehicle trips (not including existing traffic from daily farming and harvest activities) to and from the site. Agricultural uses related to wineries, tasting rooms, and other commercial/industrial agriculturally-related uses were considered in the 2030 Countywide General Plan. Thus, corresponding traffic assumptions have already been accounted for in the EIR prepared for the General Plan. Regional traffic is not expected to significantly increase with

implementation of the project, but will rely on growing market demand; it is assumed that tourist traffic in the region may grow with the propagation of additional tasting rooms and wineries in the Dunnigan Hills area. Planning staff is not aware of any future wineries within the Dunnigan Hills area as of the writing of this environmental document.

The Use Permit to construct and operate the existing winery was approved by the Planning Commission on April 10, 2008 (ZF 2007-031). During that public hearing, concerns were raised by members of the public and commissioners about potential truck traffic the project would create on County Road 92B. County Road 92B is a two lane, rural road with geometric characteristics similar to other low-volume County roads serving agricultural lands. Three single family homes are the only existing development along County Road 92B. The pavement widths and features such as curves do not necessarily meet modern design standards (i.e., 12 foot vehicle lanes and 4 foot paved shoulders). The Planning Commission added a condition of approval during the hearing to encourage truck traffic on County Road 15B rather than County Road 92B. The condition reads, "The applicant shall take reasonable steps to require, to the extent feasible, that trucks serving the facility use County Road 15B rather than County Road 92B." The Crew Winery staff has posted a sign at the exit onto County Road 92B notifying trucks to use County Road 15B. Additionally, Crew Winery has informed staff that they notify delivery trucks and all trucks with whom they contract with to use County Road 15B. The proposed project will continue to be conditioned to direct truck traffic to County Road 15B.

County Road 15B, between County Road 90B and County Road 92B, primarily serves the winery, adjacent vineyard operations, and rangeland. Although not needed to reduce any significant environmental impact, the project will be conditioned to require the applicant to provide annual road maintenance for this segment throughout the life of the permit.

Aside from the grapes imported from out of the region (approximately 200 tons per year or 8-10 truck trips), grapes processed at Crew Winery are transported to the processing facility using tractors and gondola trailers using internal farm roads and crossing County Road 15B. The majority of vineyard related truck traffic (hauling grapes) in the general vicinity of Crew Winery occurs as a result of the other nearby vineyards sending product to Napa or Delta region during harvest time (generally August—October). As stated above, this activity is not associated with Crew Winery and not subject to the Use Permit or environmental review. Vineyard production is an allowed use in the agricultural zones.

Crew Winery currently bottles approximately 105,000 cases per year (bottling does not occur during the harvest season, August – October). Therefore, truck trips associated with shipment of finished product occurs periodically nine months out of the year. All of the wine is shipped to a distribution center in Napa for storage and eventual distribution to market. Each truck is capable of holding approximately 1,200 to 1,400 cases of wine per shipment. Additionally, with every truck load of wine shipped out to Napa, another truck load of glass bottles and other packaging supplies is delivered. Therefore, using the conservative estimate of 1,200 cases per load, Crew currently has about 20 truck trips on average per month (nine months out of the year). After the winery expansion is complete (capacity of approximately 255,000 cases per year), truck trips would increase to approximately 48 truck trips per month.

Impacts from traffic generated as a result of the project will be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Less than Significant Impact. The project site is not located within the vicinity of a public airport or private airstrip. The proposed project does not include any uses that would adversely affect air traffic patterns, and impacts on air traffic patterns are anticipated to be less than significant with project implementation.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. See discussion in (a), (b), above. The site is accessed off County Roads 15B and 92B, which include dedicated driveway approaches and internal roadways. The applicant has proposed to require truck access to and from the facility via County Road 15B, which is consistent with a previous condition placed on the winery pursuant to ZF #2007-031. Additionally, the project will be conditioned to require the applicant to provide annual road maintenance for the segment of County Road 15B between County Road 90B and County Road 92B. The existing winery already serves large trucks accessing the site for agriculturally-related activities, such as daily farming and harvest. Construction equipment that is utilized during construction will be able to adequately access the site. Impacts are expected to be less than significant.

e) Result in inadequate emergency access?

Less than Significant Impact. The project would not result in inadequate emergency access. See discussion in (d), above. The site is accessed from County Roads 15B and 92B, which include dedicated driveway approaches and internal roadways. Additional parking areas will be provided adjacent to the facilities and the internal roadway and access ways will not be obstructed by the new development. The project will be conditioned to prohibit parking on the County right-of-way (County Roads 15B and 92B). Impacts to emergency access will be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The project would not result in any permanent features that would affect or alter existing public transit, bicycle, or pedestrian facilities nor interfere with the construction of any planned facilities.

XVII.	UTILITIES AND SERVICE SYSTEMS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☒	☐
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

DISCUSSION

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. Crew Wine Company's process wastewater is screened and collected in a central sump. The water from the sump is pumped into a 7,000 gallon poly-tank equipped with an aerator. In this tank, the heavy wine lees are settled to the bottom and periodically pumped out into tanker trucks for delivery to East Bay Municipal Utility District or Yolo County Central Landfill treatment facilities. The clear process waste water is allowed to overflow into a second 7,000 gallon poly-tank which is also equipped with an aerator (aerobic digester) to further reduce biological oxygen demand load of the process wastewater. The clear process wastewater from the second digester then overflows into a third 7,000 gallon poly-tank where the water is stored until loaded into a water truck and dispersed onto the on-site vineyard roadways for dust control (dry months only). Crew Wine Company has been issued a Waiver of Waste Discharge Requirements (WDR R5-2015-0005-0063) by the Central Valley Water Quality Control Board, which allows for discharge of wastewater, up to 100,000 gallons/year, to approximately 39 acres of the onsite vineyard adjacent to the wine production facility on APN 054-230-018. During wet months, the wastewater is transferred to commercial tanker trucks to be delivered to East Bay Municipal Utility District or Yolo County Central Landfill for disposal.

Crew Winery is currently pursuing an amendment to its existing Waiver from the Central Valley Regional Water Quality Control Board to allow for discharge of winery wastewater on approximately 1,460 acres of vineyard, which includes land owned by Crew Winery and other entities. The issuance of Waste Discharge Requirements is an activity that is Statutorily Exempt from further environmental review pursuant to Section 15263 of the CEQA Guidelines.

Wastewater treatment requirements and waste discharge requirements are not expected to be violated.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. Crew Winery operates a public water system under permit issued by Yolo County Environmental Health Division. The proposed development will tie into the existing public water system. Crew Wine Company's process wastewater is screened and collected in a central sump and subsequently pumped into tanks (see discussion Section IX(a)). The proposed expansion will be served by the onsite septic system, which may be increased in size to accommodate the new development. As required by Yolo County Environmental Health, the project will be conditioned to require an approved Site Evaluation Report from Yolo County Environmental Health for onsite sewage disposal prior to project implementation. Additionally, the project may require the construction of additional process wastewater treatment ponds approximately one-acre in size. The proposed wastewater treatment ponds will be located in an existing vineyard area adjacent to the existing development. As a Condition of Approval, the applicant will be required to seek approval from Yolo County Environmental Health for the addition of any new well(s) and septic system(s) to implement the proposed project. With the required Environmental Health standards included in the project's adopted Conditions of Approval, impacts will be less than significant.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The Crew Winery facility is currently served by an existing detention pond. A drainage report, prepared by Laugenor and Meikle in March 2016, was submitted with the application materials. The drainage report presented a summary of a planning-level analysis of the proposed drainage conditions and of design modifications that would be needed to mitigate runoff from the proposed expansion. Rainfall runoff from the expansion and most of the original development, along with approximately 17 acres of existing vineyards, will drain to the existing detention pond. Areas of existing development are drained by swales and storm drain pipelines. These facilities discharge to the vineyard area where the runoff is conveyed by swale to the detention pond. Areas of new development will be drained by proposed storm drains or swales that will be designed during the building-permit phase of the development. The drainage report concluded that increases in runoff from the proposed development will be mitigated by the detention pond; however, the outlet orifice and discharge pipe will need to be upsized.

As per Yolo County Public Works Engineering requirements, a grading plan for the entire project site shall be submitted for review to ensure the proposed development properly ties in all new drainage improvements to existing drainage facilities and features, as necessary. The applicant shall not design or regrade the project site to drain to public right-of-way (e.g., to a roadside ditch along a County road). Impacts will be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

Less than Significant Impact. Crew Winery operates a public water system under permit issued by Yolo County Environmental Health Division. The system supplies domestic water from an onsite well. Water usage as metered at the domestic water supply well was 2.3 million gallons in 2016, or 7.1 acre feet. Under the proposed project (Use Permit Amendment), water usage is projected to grow to 3.3 million gallons per year by 2025, or 10.1 acre feet. Water usage accounts for all winemaking activities, landscaping irrigation, and domestic uses (drinking water, bathrooms, etc.). Any future new well will require review and approval from Yolo County Environmental Health.

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. The project site is not served by a wastewater treatment facility, but is served by an existing onsite septic system and leach fields for domestic wastewater discharge. Process wastewater from agricultural processing activities will be diverted to holding tanks and hauled offsite for proper disposal, or discharged on adjacent vineyards. As discussed in (b), above, Yolo County Environmental Health will require a site map and site evaluation for the project's use of any new onsite septic system. An adopted Condition of Approval will ensure that use of a new onsite septic system will have adequate capacity to meet project demands. Impacts will be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?; *and*

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The existing Yolo County Central Landfill can adequately accommodate the solid waste generation by the proposed winery expansion. The project would not significantly impact the disposal capacity of the landfill, and the applicant would be required to comply with all solid waste regulations as implemented and enforced by Yolo County.

XVIII.	MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b.	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

DISCUSSION

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact. Based on the analysis provided in this Initial Study and the mitigation measures required, the project would not degrade the quality of the environment. As discussed in Section IV, Biological Resources, of this Initial Study, the proposed project could potentially impact raptor foraging habitat for the Swainson's hawk and other raptors, as well as nesting habitat for the burrowing owl. Mitigation Measures proposed as part of the project would reduce impacts to biological resources to less than significant levels so that the habitat and/or range of any special status plants or animals are not endangered.

No important examples of California history or prehistory will be eliminated due to project implementation. Adopted Conditions of Approval will require that surveys be performed if any previously undiscovered cultural resources are unearthed during ground disturbing activities. Overall, impacts will be less than significant.

b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant Impact. The proposed project has temporary construction impacts which could degrade air quality cumulatively, in combination with other construction projects in Yolo

County. These potential impacts will be reduced to a less-than-significant level through implementation of the standard air quality measures described in Section III (Air Quality) of this Initial Study. In addition, the project will contribute incrementally to an increase in cumulative energy demand, traffic levels, and greenhouse gas (GHG) emissions in the region and globally. The latter cumulative impacts are associated with growth allowed under the 2030 Yolo Countywide General Plan. The General Plan and adopted Climate Action Plan include numerous policies and measures that require new development, including this project, to reduce air quality, energy, transportation, and GHG impacts, through application of design features and other measures. California Building Codes require that the applicant reduce the level of energy consumed during construction of the project. Although these impacts may be reduced and/or mitigated at an individual level, at a cumulative level these impacts cannot be fully mitigated and would be considered significant and unavoidable, as noted in the certified Final Environmental Impact Report for the 2030 Yolo Countywide General Plan. The addition and/or expansion of agricultural commercial activities, such as the wineries, has been studied and evaluated as part of the 2030 Yolo Countywide General Plan. Overall, with implementation of the project's Conditions of Approval and proposed design considerations, cumulative impacts will be less than significant.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. Based on the analysis provided in this Initial Study, impacts to human beings resulting from the proposed project would be less than significant with the implementation standard regulations. The project as conditioned would not have substantial adverse effects on human beings, either directly or indirectly, and would be required to comply with Conditions of Approval to manage: glare from new sources of outdoor lighting; dust control from construction-related activities; water quality and storm water pollution prevention; and the approval of septic and water systems. Impacts related to all issues discussed in this Initial Study have been determined to be less than significant through the implementation of standard requirements and project design. Overall impacts from implementation of the project will be less than significant.

References

- Estep Environmental Consulting, 2017. *Biological Site Assessment of the Crew Winery Expansion Project, Dunnigan Hills, Yolo County,* January 19, 2017
- Project description and application materials provided by applicant
- Project comments submitted by Responsible Agencies, 2017. *Agencies include: California State Department of Conservation, Yolo Habitat Conservancy, Yolo County Public Works Division, Yolo County Environmental Health Division*
- USDA Natural Resource Conservation District maps and materials provided by District Conservationist
- Luhdorff & Scalmanini Consulting Engineers, 2017. *Memorandum: Crew Wine Company Domestic Well Impacts, January 11, 2017*
- Yolo County, 2009. *Land Use Contract, Agreement No. 09-25 Williamson Act Agreement,* March 12, 2009
- Yolo County, 2009. *Yolo County 2030 Countywide General Plan*, adopted November, 2009 and *Yolo County 2030 Countywide General Plan Final EIR*, April 2009
- Yolo-Solano Air Quality Management District, 2007. *Handbook for Assessing and Mitigating Air Quality Impacts,* July, 2007.
- Yolo County Zoning Ordinance*, Title 8, Chapter 2 of the County Code*, 2014, as amended

Attachments:
Attachment A – Biological Site Assessment
Attachment B – Luhdorff & Scalmanini January 11, 2017 Memorandum: Crew Wine Company Domestic Well Impacts
Attachment C- Site Plans

ATTACHMENT A

Biological Site Assessment

Biological Site Assessment of the Crew Winery Expansion Project, Dunnigan Hills, Yolo County

January 19, 2017

Introduction

The Crew Winery has submitted an application for a Use Permit from Yolo County to expand their production facility in the Dunnigan Hills, Yolo County (Figure 1). As part of the permit review process, Yolo County is preparing an environmental document to address potential impacts of the proposed project pursuant to the California Environmental Quality Act (CEQA). Information in this report is intended to inform or be incorporated into the CEQA document to address issues related to biological resources.

Project Location

The Crew Winery facility is located in the Dunnigan Hills at the intersection of County Road 15B and County Road 92B, 1.3 miles east of Interstate 505, and eight miles northwest of the City of Woodland (Figure 2).

Project Description

The proposed project is located on the property of the existing winery facility, which includes vineyards, production and bottling units, workshops, storage areas, a public tasting room, and parking areas. Several of these project elements are upgrades within footprint of the existing facility and will result in no additional land use changes or impacts to biological resources. However, three disconnected sites, Sites A, B, and C are proposed for expansion of the facility. Site A is an approximately 2.2 acre vacant field between the existing buildings and County Road 92B that would be used to expand the production facilities. Within this area, the expansion would include laboratory and warehouse space, administrative and production offices, truck scale, crush pad, a barrel cave, and fire pump and water storage tank. Site B is a 10,000 square foot building immediately northwest of the existing visitor facility that includes a hospitality center, administration offices, demonstration kitchen, and barrel room; and an adjacent 5,000 square foot parking lot. Site C is a 40,000 square foot waste water treatment pond immediately north of the agricultural storage building (Figure 2).

Objectives

The objectives of the biological resources site assessment are to:

- Evaluate land use and natural community associations
- Evaluate general wildlife use

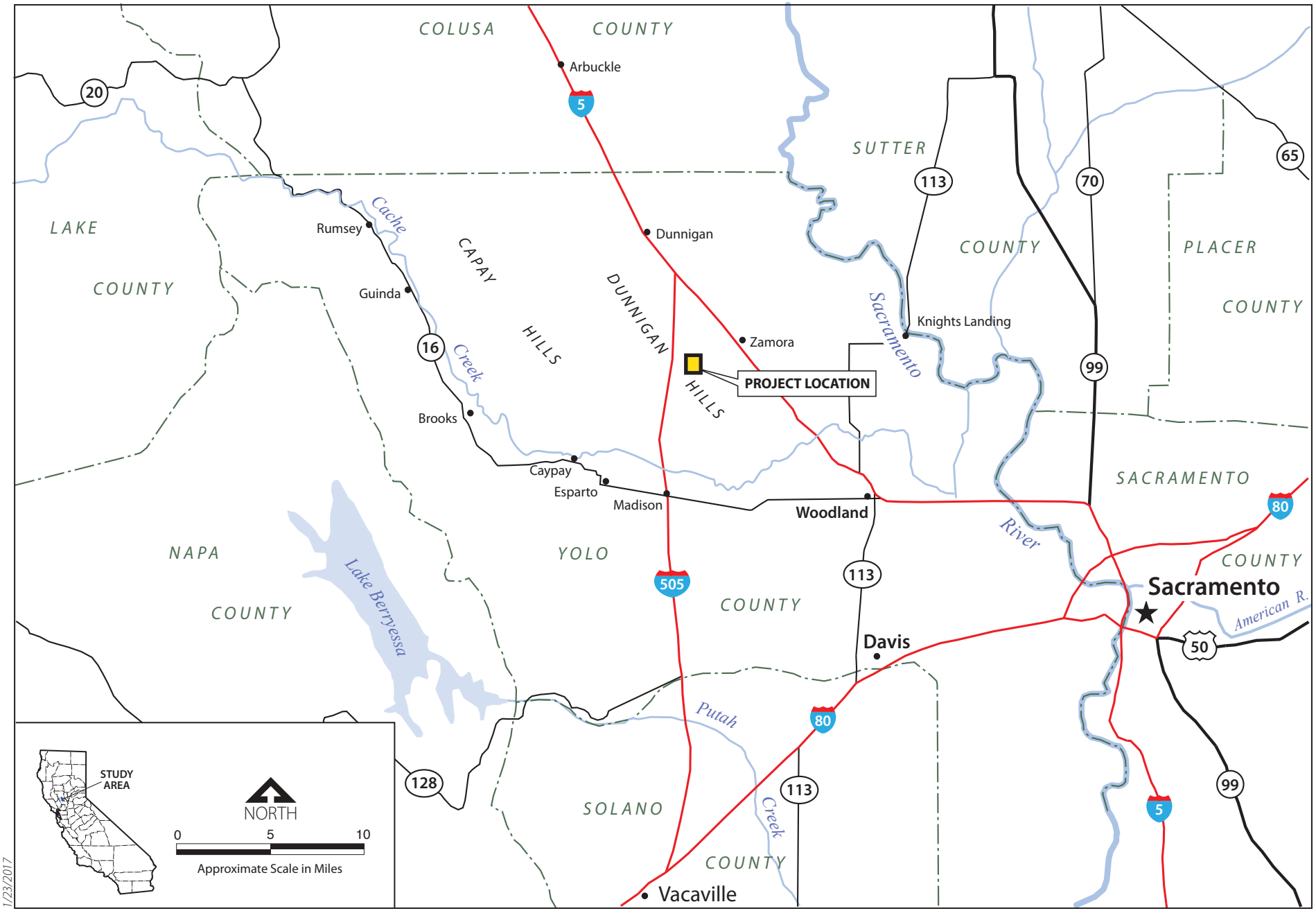


Figure 1
Location of Crew Winery Expansion Project

Figure 2
Crew Winery Expansion Sites

- Determine the presence of unique biological resources and sensitive habitats
- Determine the presence, absence, or potential for occurrence of special-status species
- Assess current baseline levels of human use and disturbance
- Assess the potential for and the extent to which proposed project components could significantly impact biological resources relative to the baseline condition pursuant to CEQA definition
- Provide recommendations to minimize the impact of project elements on biological resources.

Methods

Presurvey Investigation

Prior to conducting the site visit, available information regarding biological resources on or near the project area was gathered and reviewed. Sources include:

- California Natural Diversity Data Base;
- Yolo County Habitat Conservation Plan/Natural Community Conservation Plan species accounts and maps;
- Yolo County General Plan,
- Other published and unpublished biological reports, accounts, and research.

Aerial photographs and land use/vegetation maps of the project area and surrounding area were also reviewed.

Field Surveys

I conducted a field assessment of the project sites between approximately 0900 and 1200 hours on October 6, 2016. I inspected each project site on foot to characterize land use, biological resources, and presence of plant communities and wildlife species on each site and in the surrounding landscape. I walked 20-foot transects throughout Site A to determine the presence or absence of burrowing owls. Using binoculars and spotting scope, I documented species occurrences focusing on the potential presence of special-status species. I assessed the potential for and magnitude of impact from implementation of the proposed project.

Regulatory Framework

Several state and federal laws and regulations are relevant to the proposed project. Each is briefly described below.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that significant environmental impacts of proposed projects be reduced to a less-than-significant level through adoption of feasible avoidance, minimization, or mitigation measures unless overriding considerations are identified and documented.

During the CEQA review process, environmental impacts are assessed and a significance determination provided based on pre-established thresholds of significance. Thresholds are established using guidance from CEQA, particularly Appendix G of the State CEQA guidelines and CEQA Section 15065 (Mandatory Findings of Significance). CEQA guidance is then refined or defined based on further direction from the lead agency.

Consistent with Appendix G of the State CEQA guidelines, a biological resource impact is considered significant (before considering offsetting mitigation measures) if the lead agency determines that project implementation would result in one or more of the following:

- Substantial adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife (CDFW) or US Fish and Wildlife Service (USFWS);
    - A substantial adverse effect on a special-status wildlife species is typically defined as one that would:
        - Reduce the known distribution of a species,
        - Reduce the local or regional population of a species,
        - Increase predation of a species leading to population reduction,
        - Reduce habitat availability sufficient to affect potential reproduction, or
        - Reduce habitat availability sufficient to constrain the distribution of a species and not allow for natural changes in distributional patterns over time.
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or interference with the use of native wildlife nursery sites.
    - Substantial interference with resident wildlife movement is typically defined as obstructions that prevent or limit wildlife access to key habitats, such as water sources or foraging habitats, or obstructions that prohibit access through key movement corridors considered important for wildlife to meet needs for food, water, reproduction, and local dispersal.
    - Substantial interference with migratory wildlife movement is typically defined as obstructions that prevent or limit regional wildlife movement through the project area to meet requirements for migration, dispersal, and gene flow that exceed the defined baseline condition.

Consistent with CEQA Section 15065 (Mandatory Findings of Significance), a biological resource impact is considered significant if the project has the potential to:

- substantially degrade the quality of the environment;
- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels;
- threaten to eliminate a plant or animal community;
- substantially reduce the number or restrict the range of an endangered, rare or threatened species.

CEQA defines the significance of an impact on a state-listed species based on the following:

- Appendix G of the State CEQA guidelines states that a biological resource impact is considered significant (before considering offsetting mitigation measures) if the lead agency determines that project implementation would result in "substantial adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS"; and
- CEQA Section 15065 (Mandatory Findings of Significance), a biological resource impact is considered significant if the project has the potential to "substantially reduce the number or restrict the range of an endangered, rare or threatened species".

Federal Migratory Bird Treaty Act (MBTA)

The federal Migratory Bird Treaty Act (MBTA) (Title 16, United States Code [USC], Part 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 CFR 21, 50 CFR 10). Specifically, the MBTA states: "Unless and except as permitted by regulations …it shall be unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, kill … possess, offer for sale, sell … purchase … ship, export, import…transport or cause to be transported … any migratory bird, any part, nest, or eggs of any such bird … (The Act) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior." The word "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect."

Federal Endangered Species Act

The USFWS administers the federal Endangered Species Act (ESA) as it relates to terrestrial wildlife. The ESA requires USFWS to maintain lists of threatened and endangered species and affords substantial protection to listed species. The USFWS can list species as either endangered or threatened. An endangered species is at risk of extinction throughout all or a significant portion of its range (ESA Section 3[6]). A threatened species is likely to become endangered within the foreseeable future (ESA Section 3[19]). Section 9 of the ESA prohibits the take of any fish or wildlife species listed under the ESA as endangered and most species listed as threatened. Take, as defined by the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the species, including significant habitat modification." The ESA includes mechanisms that provide exceptions to the Section 9 take prohibitions. For non-federalized projects, Section 10 allows for the issuance of a 10(a)(1)(b) permit to take covered species during otherwise lawful activities with approval of a habitat conservation plan.

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits take of wildlife and plants listed as threatened or endangered by the California Fish and Game Commission. *Take* is defined under the California Fish and Game Code as any action or attempt to "hunt, pursue, catch, capture, or kill." The CESA allows exceptions to the take prohibition for take that occurs during otherwise lawful activities. The requirements of an application for incidental take under CESA are described in Section 2081 of the California Fish and Game Code. Incidental take of state-listed

species may be authorized if an applicant submits an approved plan that minimizes and "fully mitigates" the impacts of this take.

California Fish and Game Code 3503.5 (Birds of Prey)

Section 3503.5 of the Fish and Game Code prohibits the take, possession, or destruction of any birds of prey or their nests or eggs. The California Department of Fish and Wildlife may issue permits authorizing take pursuant to CESA.

Yolo County General Plan

The Yolo County General Plan includes numerous policies regulating and emphasizing the protection of natural resources. Those most relevant to the proposed project include the following:

- Policy CO-2.1. Consider and maintain the ecological function of landscapes, connecting features, watersheds, and wildlife movement corridors.
- Policy CO-2.3. Preserve and enhance those biological communities that contribute to the county's rich biodiversity including blue oak and mixed oak woodlands, native grassland prairies, wetlands, riparian areas, aquatic habitat, agricultural lands, heritage valley oak trees, remnant valley oak groves, and roadside tree rows.
- Policy CO-2.38. Avoid adverse impacts to wildlife movement corridors and nursery sites (e.g., nest sites, dens, spawning areas, breeding ponds).
- Policy CO-2.41. Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with applicable local, State, and Federal requirements.
- Policy CO-2.42. Projects that would impact Swainson's hawk foraging habitat shall participate in the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HIP/NCCP Joint Powers Agency, or satisfy other subsequent adopted mitigation requirements consistent with applicable local, State, and federal requirements.

Biological Setting

Description of the Project Sites

Site A. Site A is an approximately 2.2-acre vacant field between the existing facility and County Road 92B (Figure 2). The northern portion of Site A is graveled and used as overflow parking for tasting room visitors. The remaining portion is maintained as very short (less than 2-inch) grassy/weedy vegetation (Plates 1 and 2). A natural swale runs east-west through the site, but otherwise the site is mostly flat. This site is a remnant of the grazed grassland community that occurred throughout this part of the Dunnigan Hills prior to agricultural (vineyard and orchard) conversion. There are no trees, shrubs, or other significant biological resources on the site. With the exception of the existing winery facility on the west side, Site A is surrounded entirely by vineyards. There are no trees or shrubs in the immediate vicinity of the site with the exception of small ornamental trees planted on the north and west side of the production facility and along the east side of County Road 92A (Figure 2). .

Plate 1. Location of Site A showing the short grassland patch with the existing facility in the background.

Plate 2. Site A looking southward from the northern edge of the grassland patch. County Road 92B, the eastern edge of the site, is on the left side of the photo, and the existing production facility is on the right. .

Site B. Site B is part of the existing vineyard immediately northwest of the tasting room facility (Figure 2). The project would involve removing approximately 15,000 square feet (0.3 acres) of the vineyard and constructing a 10,000 square foot building with hospitality center, administration offices, demonstration kitchen, and barrel room; and an adjacent 5,000 square foot parking lot. The site consists entirely of vineyard and includes no trees, shrubs, or significant biological resources (Plate 3). A water retention basin was constructed downslope of and approximately 300 feet from Site B (Plate 4). The remaining vineyard, which extends downslope to the edge of the pond, would be between the pond and Site B. The retention basin occurs along a natural swale that extends northward toward open grazed grassland areas north of the facility. The basin currently collects runoff from the existing facility and surrounding slopes. Water levels in the pond fluctuate seasonally depending on rainfall, irrigation runoff from the surrounding vineyards, and runoff from production operations. At the time of the site visit, the ponded area was approximately 200 by 100 feet, with a narrow band of emergent wetland vegetation around the perimeter.

Plate 3. Site B looking west from the patio of the existing tasting room facility, showing the lawn in the foreground. A portion of the vineyard on the right side of the photo would be removed to expand the existing facility.

Plate 4. Site B, looking downslope toward the water retention pond. The expansion area would be about 300 feet upslope of the pond and separated by the remaining vineyard, which extends to the edge of the pond.

Site C. Site C is the proposed location of a 40,000 square-foot (0.9 acre) wastewater treatment pond (Figure 2). It is also located entirely within the existing vineyard, immediately north of the agricultural storage building in the southwest corner of the facility, north of County Road 15b, and approximately 200 feet west of the natural swale that drains into the retention pond.

Description of the Dunnigan Hills and Lands Surrounding the Project Site

The Dunnigan Hills is a prominent anticlinal (a fold in layered rocks in which the strata are inclined downward and away from the axis) structure resulting from uplift and folding of the interior Coast Ranges. This generally elongate and symmetrical feature extends southeast as an appendage from the Capay Hills, which form the eastern extent of the interior Coast Ranges. The Dunnigan Hills extend from approximately the Yolo/Colusa County line south to approximately Cache Creek, and east to Interstate 5. Interstate 505 extends north-south through the center of the Dunnigan Hills. Reaching elevations of nearly 400 feet above sea level, this prominent and mostly treeless feature has until recently been maintained as uncultivated grazed grassland with some hill slopes regularly cultivated with wheat and some interior cultivated valleys such as Oat Valley and Bird Valley. Over the last two decades portions of the Dunnigan Hills, particularly in the south, have undergone a conversion to vineyards and orchards.

The project site occurs within the southern portion of the Dunnigan Hills, portions of which have been converted to vineyard and orchard agriculture. The project site is entirely surrounded by vineyards or by the existing facilities. However, open grassland/rangeland occurs within approximately 400 feet north of site B and within about 700 feet of Site A (Figure 2). The drainage feature separating Site A and Site C also remains as a narrow corridor of grassland

extending northward into the larger grassland/rangeland landscape, and is approximately 200 feet east of Site C. Open grassland/rangeland remains beyond the recently converted vineyards and orchards north, east, and west of the project site. Trees and shrubs are limited in the surrounding area, particularly south, west, and east of the project site. The nearest trees are several willow trees along a small drainage approximately 0.2 miles north of Site B.

General Wildlife Use

Prior to conversion to vineyards, the project site and surrounding area supported habitat for a variety of grassland-associated wildlife. Resident and migratory birds, including several raptor species use the Dunnigan Hills grasslands for nesting and foraging. Several uncommon species including larkspurs (*Calcarius* sp), mountain plover (*Charadrius montanus*), grasshopper sparrow (*Ammodramus savannarum*), and lark bunting (*Calamospiza* melanocorys) occur in the Dunnigan Hills. Mammals and reptile species are also common and where wetlands or ponds occur, amphibians may also be present.

With the conversion of the grassland/rangeland habitat to vineyards, habitat was removed for most potentially occurring wildlife, particularly those species unique to the Dunnigan Hills and those that rely on grassland habitats. The small patch of remnant grassland at Site A is probably too small to support significant wildlife activity. During the field visit, pocket gopher (*Thomomys bottae*) sign was observed, but no other wildlife species or habitats were documented on the site. By virtue of it being within an otherwise undeveloped, rural area, Site A may receive occasional use by foraging raptors, common birds and mammals such as common crow (*Corvus brachyrhynchos*), cliff swallow (*Petrochelidon pyrrhonota*), coyote (*Canis latrans)*, striped skunk (*Mephitis mephitis*), and opossum (*Didelphis virginiana*) and possibly occasional migratory birds that are flying through the area, but the small size and isolation within the vineyards probably precludes substantial activity. Wildlife use of Site B is restricted primarily to common birds that forage or roost within the vineyard or occasional mammals passing through the vineyard. In general, wildlife use of vineyards is minimal compared with uncultivated landscapes or other agricultural types, such as row, grain, and hay crops. Conversion to vineyards effectively removes the majority of wildlife habitat value.

Special-Status Species

Special-status species are generally defined as species that are assigned a status designation indicating possible risk to the species. These designations are assigned by state and federal resource agencies (e.g., California Department of Fish and Wildlife, U.S. Fish and Wildlife Service) or by private research or conservation groups (e.g., National Audubon Society, California Native Plant Society). Assignment to a special-status designation is usually done on the basis of a declining or potentially declining population, either locally, regionally, or nationally. To what extent a species or population is at risk usually determines the status designation. The factors that determine risk to a species or population generally fall into one of several categories, such as habitat loss or modification affecting the distribution and abundance of a species; environmental contaminants affecting the reproductive potential of a species; or a variety of mortality factors such as hunting or fishing, interference with man-made objects (e.g., collision, electrocution, etc), invasive species, or toxins.

For purposes of environment review, special-status species are generally defined as follows:

- Species that are listed, proposed, or candidates for listing under the federal Endangered Species Act (50 CFR 17.11 – listed; 61 FR 7591, February 28, 1996 - candidates);
- Species that are listed or proposed for listing under the California Endangered Species Act (Fish and Game Code 1992 Sections 2050 et seq.; 14 CCR Sections 670.1 et seq.);
- Species that are designated as Species of Special Concern by CDFW;
- Species that are designated as Fully Protected by CDFW (Fish and Game Code, Section 3511, 4700, 5050, and 5515;
- Species included on Lists 1B or 2 by the California Native Plant Society;
- Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380).

Table 1 indicates the special-status species that have potential to occur on or in the vicinity of the project, along with their habitat association, the availability of habitat on the project site, and whether or not the species has been detected on the project site.

Table 1. Special-status species with potential to occur in the vicinity of the project site.

Species	**Status State/ Federal**	**Habitat Association**	**Habitat Availability on the Project Site**	**Observed Onsite During Survey**	**Reported Occurrence on the Project Site**
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	-/T	Elderberry shrubs	None	No	No
Western pond turtle *Actinemys marmorata*	CSC/-	Streams, ponds, water conveyance channels	None	No	No
California tiger salamander *Ambystoma californiense*	T/T	Ponds, vernal pools, grasslands	None	No	No
White-tailed kite *Elanus leucurus*	FP/-	Nests in trees, hunts in fields, grasslands, and wetlands	Marginally suitable foraging habitat – Site A	No	No
Swainson's hawk *Buteo swainsoni*	T/-	Nests in trees, hunts in grassland and cultivated fields	Marginally suitable foraging habitat – Site A	No	No
Mountain plover *Charadrius montanus*	CSC/PT	Short grassland, plowed fields	Marginally suitable habitat - Site A	No	No
Northern harrier *Circus cyaneus*	CSC/-	Grasslands, pastures, fields, seasonal wetland	Marginally suitable foraging habitat – Site A	No	No
Burrowing owl *Athene cunicularia*	CSC/-	Grasslands, field edges with ground squirrel activity	Marginally suitable habitat – Site A	No	No

Species	Status State/ Federal	Habitat Association	Habitat Availability on the Project Site	Observed Onsite During Survey	Reported Occurrence on the Project Site
Loggerhead shrike *Lanius ludovicianus*	CSC/-	Grasslands, agricultural areas	Marginally suitable foraging habitat – Site A	No	No
Tricolored blackbird *Agelaius tricolor*	CSC/-	Marsh, bramble, thickets, silage, grasslands, pastures	Marginally suitable foraging habitat – Site A.	No	No
Palid bat *Antrozous pallidus*	CSC/-	Grasslands, shrub lands, woodlands.	Aerial foraging habitat – both sites	No	No
Townsends big-eared bat *Corynorhinus townsendii*	CSC/-	Caves, bridges, buildings, rock crevices. tree hollows	Aerial foraging habitat – both sites	No	No
Western red bat *Lasiurus blossevillii*	CSC/-	Large trees, woodlands, grasslands and cultivated fields	Aerial foraging habitat – both sites	No	No

T=threatened; E=Endangered; PE=Proposed Threatened; CSC=California species of species concern; FP=state fully protected

Valley Elderberry Longhorn Beetle. The valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is a medium-sized woodboring beetle, about 0.8 inches long. Endemic to California's Central Valley and watersheds that drain into the Central Valley, this species' presence is entirely dependent on the presence of its host plant, the elderberry shrub (*Sambucus* spp.). VELB is a specialized herbivore that feeds exclusively on elderberry shrubs, the adults feeding on leaves and flowers, and the larvae on the stem pith. Habitat for VELB consists of elderberry shrubs with stems greater than 1 inch in basal diameter. Elderberry grows in upland riparian forests or savannas adjacent to riparian vegetation, but also occurs in oak woodlands and savannas and in disturbed areas. It usually co-occurs with other woody riparian plants, including valley oak, Fremont cottonwood, various willows, and other riparian trees and shrubs (Barr 1991, U.S. Fish and Wildlife Service 1984, Collinge et al 2001).

There are no elderberry shrubs on or near Sites A, B, or C and therefore no potential for VELB occurrence. The nearest reported occurrence of VELB is along Cache Creek, over five miles southeast of the project site (CNDDB 2015).

Western Pond Turtle. Western pond turtles (*Actinemys marmorata*) are closely associated with permanent water bodies, such as lakes, ponds, slow moving streams, and irrigation canals that include down logs or rocks basking sites, and that support sufficient aquatic prey. Western pond turtles also require upland habitat that is suitable for building nests and to overwinter. Nests are constructed in sandy banks immediately adjacent to aquatic habitat or if necessary, females will climb hillsides and sometimes move considerable distances to find suitable nest sites (Jennings and Hayes 1994).

There are no water bodies, streams, or suitable conveyance channels (e.g., permanent water) on Sites A, B, or C and therefore no potential for this species to occur onsite. There is, however, potential for the species to occur in the retention pond downslope and west of Site B. The nearest documented occurrence is approximately 10 miles west along Cache Creek (CNDDB 2015).

California Tiger Salamander. California tiger salamander (*Ambystoma californiense*) is restricted to grasslands, oak savannah, and coastal scrub communities of lowlands and foothill regions where aquatic sites are available for breeding. Breeding sites generally consist of natural ephemeral pools (Barry and Shaffer 1994) or artificial ponds that mimic them (e.g., stock ponds that are allowed to dry). Most reported populations breed exclusively in seasonal and perennial stock ponds. Breeding sites may also include perennial features with open water refugia that do not support populations of bullfrog (*Rana catesbeiana*) or predatory fishes (Holomuzki 1986; Fitzpatrick and Shaffer 2004).

There are few occurrence records of this species in Yolo County, but most are from the northern Dunnigan Hills. Four recorded occurrences were located within an area bounded by Interstate 5 to the east, Bird Creek to the south, and Buckeye Creek to the north and west, about 8 miles north of the project site. These four occurrences are from within an area that now comprises the Dunnigan Creek Unit (Central Valley Region Unit 1) of designated critical habitat. This is also a single occurrence from the Capay Hills, approximately 10 miles west of the project site (CNDDB 2015).

There are no water bodies, streams, or suitable conveyance channels (e.g., permanent water) on Sites A, B, or C and therefore no potential for this species to occur onsite. However, the retention pond downslope and west of Site B has characteristics that are suitable for California tiger salamander occurrence.

Mountain Plover. Unlike most other plover species, the mountain plover (*Charadrius montanus*) is an upland species, often found far from water. The mountain plover does not breed in California, but does occur during the winter. The species arrives on its wintering grounds in California from November through December where it remains through March. The wintering habitat of mountain plovers in the Central Valley has been described as pastureland nearly devoid of vegetation, sparsely vegetated fields, grazed grasslands and disked agricultural fields The species occurs only in areas either devoid of or with very sparse and short vegetation (Stoner 1942, Manolis and Tangren 1975, Hunting et al. 2001, Hunting and Edson 2008).

Mountain plovers are uncommon, localized winter visitors to Yolo County. Small flocks have been observed in recently-plowed agricultural fields near Woodland and Davis, especially along County Roads 16, 25, 27, and 102 and in unflooded portions of the Yolo Bypass. Conditions at Site A generally meet the definition of suitable wintering habitat, but the small, isolated patch of grassland is unlikely to support the species. Therefore, Site A is considered marginal habitat with limited potential for occurrence of this species.

Swainson's Hawk. The Swainson's hawk is a medium-sized raptor associated with generally flat, open landscapes. In the Central Valley it nests in mature native and nonnative trees and forages in grassland and agricultural habitats. Although a state-threatened species, the Swainson's hawk is relatively common in Yolo County due to the availability of nest trees and the agricultural crop patterns that are compatible with Swainson's hawk foraging. Numerous nest sites have been documented in Yolo County (Estep 2008, 2012).

None of the expansion sites support nesting habitat for the Swainson's hawk. There are no suitable nest trees in the immediate vicinity of the project site. The nearest reported nest site is approximately 2 miles northeast of the project site. Site A supports grassland habitat that is generally considered suitable foraging habitat. However, the small patch size and isolation of the site within a primarily orchard/vineyard landscape substantially reduces the suitability of the site. Therefore, Site A is considered marginal foraging habitat for this species with limited potential

for occurrence of this species. Neither Site B or Site C support suitable habitat for the Swainson's hawk.

White-tailed kite. The white-tailed kite is a highly specialized and distinctively-marked raptor associated with open grassland and seasonal wetland landscapes. It typically nests in riparian forests, woodlands, woodlots, and occasionally in isolated trees, primarily willow, valley oak, cottonwood, and walnut) and some nonnative trees. It forages in grassland, seasonal wetland, and agricultural lands, but is more limited in its use of cultivated habitats compared with the Swainson's hawk. As a result, the species occurs throughout most of Yolo County, but in low breeding densities (Dunk 1995, Erichsen 1995, Estep 2008, 2012).

None of the expansion sites support nesting habitat for the white-tailed kite. There are no suitable nest trees in the immediate vicinity. The nearest reported nest is approximately 5 miles northwest of the project site. Site A supports grassland habitat that is generally considered suitable foraging habitat. However, the small patch size and isolation of the site within a primarily orchard/vineyard landscape substantially reduces the suitability of the site. Therefore, Site A is considered marginal foraging habitat for this species with limited potential for occurrence of this species. Neither Site B nor Site C support suitable habitat for the white-tailed kite.

Northern harrier. The northern harrier (*Circus cyaneus*) is a ground-nesting raptor, constructing rudimentary nest sites on the ground in marsh, grassland, and some agricultural habitats, particularly grain fields. They forage in seasonal wetland, grassland, and agricultural habitats for voles and other small mammals, birds, frogs, and small reptiles, crustaceans, and insects. They also roost on the ground, using tall grasses and forbs in wetlands, or along wetland/field borders for cover (MacWhirter and Bildstein 1996).

None of the expansion sites support suitable nesting habitat for the northern harrier. Site A supports grassland habitat that is generally considered suitable foraging habitat. However, the small patch size and isolation of the site within a primarily orchard/vineyard landscape substantially reduces the suitability of the site. Therefore, Site A is considered marginal foraging habitat for this species with limited potential for occurrence of this species. Neither Site B nor Site C support suitable habitat for the northern harrier.

Western Burrowing Owl. The western burrowing owl (*Athene cunicularia*) occurs in open, dry grasslands, agricultural and range lands, and desert habitats. In the Central Valley, they are associated with remaining grassland habitats, pasturelands, and edges of agricultural fields. They also occur in vacant lots and remnant grassland or ruderal habitats within urbanizing areas. Historically nesting in larger colonies, due to limited nesting habitat availability most of the more recent occurrences are individual nesting pairs or several loosely associated nesting pairs. The burrowing owl is a subterranean-nesting species, typically occupying the burrows created by California ground squirrels *(Otospermophilus beecheyi)*. They also occupy artificial habitats, such as those created by rock piles and occasionally in open pipes and small culverts. They forage for small rodents and insects in grassland and some agricultural habitats with low vegetative height. Key to burrowing owl occupancy are grassland or ruderal conditions that maintain very short vegetative height around potential nesting sites. They will generally avoid otherwise suitable grassland habitats if vegetation exceeds 12 inches in height (Gervais et al. 2008).

No burrowing owls or burrowing owl activity was noted on the project site during the site visit. In Yolo County, the majority of burrowing owl occurrences are from the grassland and pasture habitats of the southern panhandle and in cultivated and ruderal habitats in the Davis area.

Nesting and wintering occurrences have also been reported from the area immediately north of Winters and elsewhere and along the grassland foothills on the west side of the valley, and in the southern Dunnigan Hills. Isolated occurrences have also been reported from cultivated lands in the interior of the county. There are three reported occurrences from the immediate vicinity of the project site, one of which may have been within the footprint of the existing facility (CNDDB 2015). Since the conversion to vineyards, these sites have been inactive. Although Site A continues to support habitat suitable for burrowing owls, this remnant patch of grassland/rangeland may not be sufficiently large to support a nesting or wintering burrowing owls.

Loggerhead Shrike. The loggerhead shrike (*Lanius ludovicianus*) occurs in open habitats with scattered trees, shrubs, posts, fences, utility lines, or other perches. It nests in small trees and shrubs and forages for small rodents, reptiles, and insects in pastures and agricultural lands. It has been reported from numerous locations in Yolo County (CNDDB 2015), including the grassland and oak savannah foothills along the western edge of the valley. .

Nesting habitat is not present on any of the expansion sites. Site A supports marginally suitable foraging habitat, but perching opportunities for shrikes are lacking.

Tricolored Blackbird. Although currently designated as a state species of special concern, the legal status of the tricolored blackbird (*Agelaius tricolor*) has recently been under review by the CDFW and the USFWS. The species was emergency listed as endangered under the state endangered species act in December 2014, which expired in December 2015. The species is currently under review for a permanent state listing. The species is also currently under review by the USFWS following a 90-day finding that formal federal listing may be warranted.

The tricolored blackbird nests in colonies from several dozen to several thousand breeding pairs. They have three basic requirements for selecting their breeding colony sites: open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony. Nesting colonies are found in freshwater emergent marshes, in willows, blackberry bramble, thistles, or nettles, and in silage and grain fields. Suitable foraging habitat includes grasslands, pasturelands, seasonal wetlands, and some cultivated habitats (Beedy and Hamilton 1999).

None of the expansion sites support breeding habitat for this species. The nearest reported colony is in the Dunnigan Hills several miles north of the project site; however, this site has been inactive for several years. Most of the other reported colonies are on the valley floor east and south of the project site. Site A supports marginal foraging habitat for this species, but the lack of breeding occurrences in the vicinity and the small, isolated nature of the Site A substantially reduces the potential for foraging occurrences.

Special-status Bats. Three special status bats potentially occur in the vicinity of the project site, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), and western red bat (*Lasiurus blossevillii*), all state species of special concern. Pallid bat occurs primarily in shrublands, woodlands, and forested habitats, but also can occur in grasslands and agricultural areas. Townsends's big-eared bat occurs in a variety of woodland and open habitats, including agricultural areas. Western red bat occurs in wooded habitats, including orchards, and grasslands. Pallid bat and Townsend's big-eared bat roost in mines, caves, rocky crevices, large hollow trees, and occasionally in large open buildings that are usually abandoned or infrequently inhabited. Western red bat usually roosts in large trees (Pierson and Rainey 1998, Pierson 1998, Fellers and Pierson 2002, Pierson et al. 2006)

None of the expansion sites support roosting habitat for these species. The nearest potential roosting habitat is in the Capay Hills, west of the project site or along Cache Creek, south of the project site. All species could potentially forage over each site.

Project Impacts

Loss of Habitat

The proposed project will remove a total of up to 2.2 acres of graveled or remnant grassland/rangeland habitat at Site A, approximately 15,000 square feet (0.3 acres) of vineyard at Site B, and 40,000 square feet (0.9 acres) of vineyard at Site C. The total conversion within the expansion areas is 3.4 acres. Although formerly part of a larger grassland/rangeland community in the Dunnigan Hills, the small, remnant, and isolated patch at Site A does not currently constitute an important biological resource. Expansion of the existing production facility into this remaining open space will have a negligible effect on plants, wildlife, and other biological resources and does not constitute a significant impact. Because they currently support low biological value, the removal of the vineyard at Sites B and C also does not constitute a significant impact to biological resources.

Special-status Species

Valley Elderberry Longhorn Beetle. The proposed project will not result in impacts to this species.

Western Pond Turtle. There is no onsite habitat for this species. The retention pond downslope from Site B has potential to support this species. However, the project is not expected to directly or indirectly affect the functioning of the pond beyond existing baseline conditions.

California Tiger Salamander. There is no onsite habitat for this species. The retention pond downslope from Site B provides suitable habitat. Although this species is known to occur in the northern Dunnigan Hills, the project is approximately 8 miles south of documented occupied sites. The project site is also not within USFWS-designated critical habitat for this species, which is also approximately 8 miles north of the project site. The project is not expected to directly or indirectly affect the functioning or quality of the pond beyond existing baseline conditions.

Mountain Plover, Swainson's Hawk, White-tailed Kite, Northern Harrier, Northern Shrike, Tricolored Blackbird, The proposed project will remove up to 2.2 acres of marginally suitable habitat for these species at Site A. Because of the small amount of habitat removed, the marginal condition of the site, and the lack of onsite occurrences, this does not constitute a significant loss of habitat for these species. However, it may be subject to the conditions in General Plan Policy CO-2.42, which requires the applicant to provide compensatory mitigation according to the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County .

Western Burrowing Owl. The project will remove approximately 2.2 acres of marginally suitable habitat for burrowing owls. Because the species is no longer known to occur on the project site and because the site is considered to support marginal habitat value, this does not constitute a significant impact to this species. However, in the event construction occurs in

subsequent years when the site could be potentially occupied by nesting or wintering burrowing owls, possible nest destruction or mortality should be avoided by implementing pre-construction surveys and implementing standard avoidance measures. If burrowing owls are found during preconstruction surveys, the project would then be subject to standard compensatory mitigation according to CDFW guidelines.

Special-Status Bats. The project will not remove aerial foraging habitat for special-status bats and will not affect bat roosts or roosting habitat.

Conclusions and Recommendations

The proposed project involves expansion of the existing facility at three immediately adjacent sites, including approximately 2.2 acres of disturbed grassland adjacent to the existing production facility (Site A), approximately 15,000 square feet (0.3 acres) of active vineyard adjacent to the existing wine tasting facility (Site B), and 40.000 square feet (0.9 acres) of active vineyard adjacent to the existing agricultural storage building (Site C).

Although the site was formerly part of the larger grassland/rangeland community in the Dunnigan Hills, since conversion of the surrounding land to vineyards and orchards, Site A is now a small, isolated patch of disturbed grassland surrounded on all sides by vineyard and the existing production facility. As a result, the biological value and function of Site A is substantially diminished. Its removal, while removing a small amount of marginal habitat for some species, does not constitute a significant impact. However, Site A may be subject to the conditions in General Plan Policy CO-2.42, which requires the applicant to provide compensatory mitigation according to the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County. Preconstruction surveys for breeding and wintering burrowing owls should also be conducted to avoid the potential for mortality if this species should inhabit the site prior to construction. Additional compensatory mitigation may be required if burrowing owls are found during preconstruction surveys.

Sites B and C are currently part of an active orchard. Having very low biological value and function, the removal of the orchard to accommodate expansion of the wine tasting facility and the water treatment pond would have no significant impacts on biological resources. Downstream effects to the nearby retention pond are not expected to exceed current conditions. Site B is a small portion of a larger vineyard that will be retained and separates the Site B project site from the retention pond. Similarly, Site C is also a small portion of a larger vineyard that will be retained and separates the Site C site from the retention pond. However, because of the close proximity of the proposed water treatment pond to the grassland swale that drains into the retention pond, measures should be taken during construction and operation to avoid depositing materials, including soils and toxins into the grassland swale and seasonal drainage.

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ATTACHMENT B

Luhdorff & Scalmanini Jaunary 11, 2017 Memorandum:
Crew Wine Company Domestic Well Impacts

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

GROUNDWATER RESOURCES
HYDROLOGY · DEVELOPMENT · MANAGEMENT

Memorandum

DATE: January 11, 2017 PROJECT: 16-5-057

TO: Jeff Anderson
Yolo County Department of Community Services

CC: Ken Lazzaroni
Crew Wine Company

FROM: Jonathan Kaminsky, P.E.
Luhdorff & Scalmanini Consulting Engineers

SUBJECT: **CREW WINE COMPANY DOMESTIC WELL IMPACTS**

Per your request, this memorandum presents an analysis of potential impacts on groundwater by increased water demands of the Crew Wine Company domestic well. The increased water demands are associated with winery operations under a proposed Use Permit Amendment being processed by the Yolo County Department of Community Services.

Background

Crew Wine Company (Company) operates a winery and tasting room near Zamora, CA. The Company operates a public water system under permit issued by Yolo County Environmental Health Department. The system supplies domestic water from an onsite well. Water usage as metered at the domestic water supply well was 2.3 million gallons in 2016, or 7.1 acre feet. Under the Amended Use Permit, water usage is projected to grow to 3.3 million gallons by 2025, or 10.1 acre feet. Water usage accounts for all winemaking activities, landscaping irrigation, and domestic uses (drinking water, bathrooms, etc.).

CEQA Standards

We evaluated the impacts of the proposed incremental groundwater pumpage of 1 million gallons per year (3 acre feet per year) by the winery according to CEQA standards. The applicable standard for impacts to groundwater is found in Appendix G of the Environmental Checklist Form for an Initial Study[1]:

IX. HYDROLOGY AND WATER QUALITY --

Would the project:

[1] No mechanisms were identified under which the proposed increased groundwater pumpage would affect groundwater quality in the project setting.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Quantifying Impacts

Our approach to evaluating impacts under the applicable CEQA standard is to consider direct and indirect influences caused by well usage. Direct influences are those in which operation of a well creates a localized cone of depression surrounding the well. In this case, impacts may arise if the cone of depression expands and decreases the available pumping drawdown in a neighboring well. The impact, termed pumping interference, can be evaluated analytically and through measurement. Indirect impacts are those in which available groundwater resources are adversely affected due to the net extraction from the aquifer system. Here, the aquifer system would be comprised of a basin, or subbasin, consisting of saturated alluvial materials that provide a source of supply for various beneficial uses including domestic, agricultural, and industrial.

Potential direct and indirect impacts by the proposed increase in the Company's domestic use are discussed below.

Pumping Interference

When operating a groundwater well, a cone of depression of water level drawdown in the aquifer is induced around the well. This influence is greatest at the well and diminishes with distance from the well. Nearby wells may experience temporary water level drawdown if they are located within the cone of depression. The induced drawdown is termed pumping interference and it only occurs when a well is running.

Several parameters govern pumping interference including aquifer properties and pumping rate and duration. To provide a conservative estimate of potential interference effects, we used the Theis equation[2]. The Theis equation is commonly employed in evaluating well hydraulic problems and for interpreting pumping data. The equation is shown below:

$$s(r,t) = \frac{Q}{4\pi T} W(u)$$

The variables to the equation are transmissivity (T), storativity (S), pumping flowrate (Q), time of pumping (t), and distance from the well (r). The equation calculates aquifer drawdown due to pumping. W(u) is the well function that can be approximated with a numerical series.

[2] Theis, C.V. 1935. The Relation between the Lowering of the Piezometric Surface and the Rate and Duration of Discharge of a Well Using Ground Water Storage. Am. Geophys. Union Trans., Pt. 2, p. 519-24.

The following table specifies the values used in the Theis analytical solution to calculate drawdown, or the cone of depression, created by pumping of the Crew Wine Company's domestic well:

Parameter	Value
Transmissivity	50,000 gpd/ft
Storativity	0.001
Pumping Flowrate	50 gpm
Time of pumping	8 hrs/day for 240 days/yr

Transmissivity and storativity values are conservative estimates for a gravel aquifer, which is the reported aquifer lithology for the screened interval in the state Well Completion Report (attached) for the subject domestic supply well.

Using the Theis equation, the following table lists the calculated aquifer drawdown incurred at the end of the seasonally high demand period (month to month) for the current and projected 2025 usages:

Distance from Well (ft)	Current Drawdown (ft)	Future (2025) Drawdown (ft)	Drawdown Change (ft)
100	1.53	1.54	0.01
250	1.32	1.33	0.01
350 (property line)	1.24	1.25	0.01

The calculation is based on intermittent pumping of the onsite well at 50 gpm to fill the onsite storage tank. Conservative estimates of pumping parameters were used based on the highest demand month (September), which uses approximately 20% of yearly water demand, and considers the maximum incremental water usage by 2025 (1 million gallons/year). The drawdowns are calculated at the end of the pumping season when drawdown is greatest and before the aquifer recharges during the wet season.

The greatest potential for impacts to offsite wells is at the Company's property lines. The distance of the domestic well to the Company's property line is about 350 feet (see **Figure 1**). At this distance from the well, the calculated increase in drawdown due to additional pumping attributable to winery expansion is 0.01 feet. This is an insignificant increase in drawdown and would not be readily measureable in the field. Therefore, the anticipated additional pumping for winery expansion would have a negligible impact on use of other wells. This is not unexpected for a small supply well in this setting. By contrast, irrigation supply wells may range up to 2,000 gpm and would induce more than 50 feet of pumping interference for similar assumptions and distances.

Effects of Well Use on Groundwater Storage

Water from the aquifer is pumped from the Yolo Subbasin of the Sacramento Valley Basin (DWR Bulletin 118 Basin No. 5-21.67). The basin is listed as a "high" priority basin under the California Statewide Groundwater Elevation Monitoring (CASGEM) Program due to total wells, irrigated acreage, and groundwater reliance. The Yolo Subbasin has experienced subsidence in some

areas as well as localized high TDS levels. Under the Sustainable Groundwater Management Act (SGMA), the Yolo Subbasin must be managed by a Groundwater Sustainability Plan (GSP) by 2020. The Company will comply with the provisions of the GSP when implemented by a Groundwater Sustainability Agency (GSA), which may include metering and reporting of extraction quantities and restrictions on use if sustainable yield is not achieved.

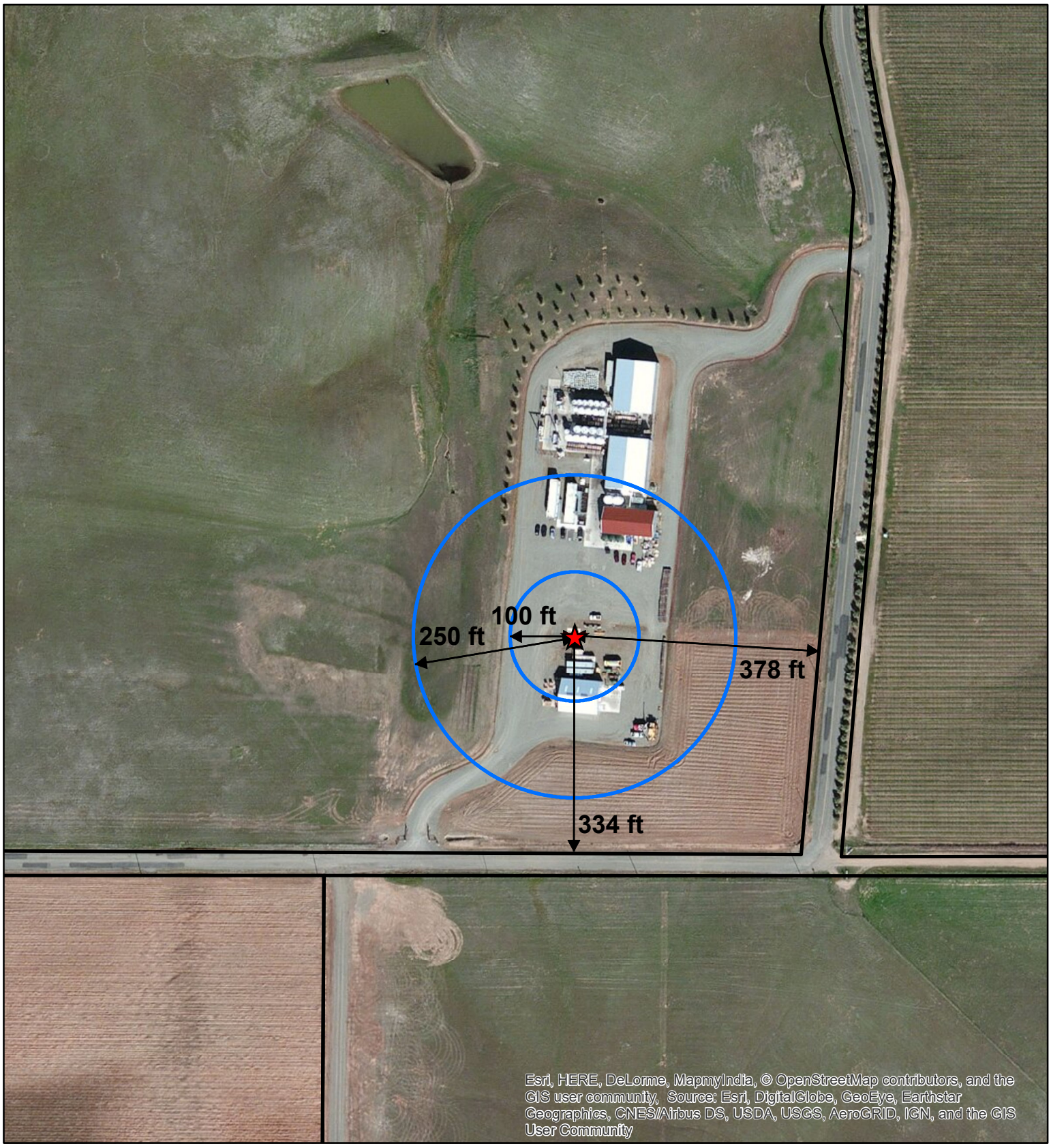
Conclusion

By CEQA standards, the proposed incremental use of 1 million gallons per year, or 3 acre feet, is insignificant with respect to direct and indirect impacts on groundwater use on the neighboring properties. We estimate that total pumping interference in 2025 would be less than 1.5 feet at the property line with almost no increase due to planned winery expansion. Additionally, we conclude that there would be no measurable impact to the groundwater subbasin; however, Crew Company Winery would also comply with any requirements set forth by a local Groundwater Sustainability Agency under SGMA to maintain sustainability in the groundwater subbasin.

Attachments

Figure 1

Well Completion Report for Crew Wine Company Supply Well



N

0 62.5 125 250 375 500
Feet

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

Figure 1
Domestic Well Pumping Interference Analysis
Crew Wine Company

The free Adobe Reader may be used to view and complete this form. However, software must be p...

File Original with DWR

Page ________ of ________

Owner's Well Number ________

Date Work Began 02/25/2008   Date Work Ended 3/6/2008

...al Permit Agency Yolo County Health Dept.

...mit Number 08-016   Permit Date 1/25/08

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e069809

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N   Longitude W

APN/TRS/Other

Geologic Log

Orientation ⦿ Vertical ○ Horizontal ○ Angle Specify ________

Drilling Method Air/Mud Rotary   Drilling Fluid Water

Depth from Surface Feet	to Feet	Description (Describe material, grain size, color, etc)
0	4	Clay
4	58	Gravel
58	179	Clay
179	185	Gravel
185	198	Blue clay
198	205	Gravel
205	280	Clay
280	288	Gravel
288	318	Clay
318	330	Gravel
330	360	Clay

RECEIVED JUL 07 2008 ENVIRONMENTAL HEALTH

Total Depth of Boring 360 Feet

Total Depth of Completed Well 330 Feet

Well Owner

Name Vintage Wine Trust L.P.

Mailing Address 3632 E. Lincoln Ave.

City Sacramento   State CA   Zip 95818

Well Location

Address 300 yd. North of 15B and 300 yd. West of 92B

City Zamora   County Yolo

Latitude ____ Deg. ____ Min. ____ Sec. N   Longitude ____ Deg. ____ Min. ____ Sec. W

Datum ________ Decimal Lat. ________ Decimal Long. ________

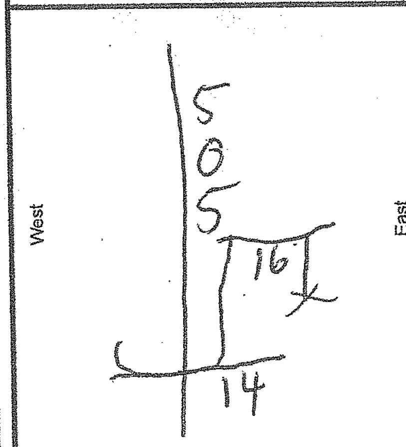
APN Book 054   Page 23   Parcel 005

Township ________ Range ________ Section ________

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North



South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

⦿ New Well
○ Modification/Repair
○ Deepen
○ Other ________
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

⦿ Water Supply
☐ Domestic ☐ Public
☑ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other ________

Water Level and Yield of Completed Well

Depth to first water 140 (Feet below surface)

Depth to Static Water Level 220 (Feet)   Date Measured 02/29/2008

Estimated Yield * 80 (GPM)   Test Type turbine

Test Length 12 (Hours)   Total Drawdown 200 (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	80	14	Blank	PVC	SDR17	8		
65	280	14	Blank	PVC	SDR21	8		
280	330	14	Screen	PVC	SDR21	8	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	65	Cement	10 sack sand slurry
65	330	Fill	#8 SRI sand

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other ________

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name Sullivan Drilling (Person, Firm or Corporation)

P.O. Box 1227 (Address)   Orland (City)   CA (State)   95963 (Zip)

Signed Charlie Sullivan (C-57 Licensed Water Well Contractor)   6-5-08 (Date Signed)   656504 (C-57 License Number)

DWR 188 REV. 1/2006

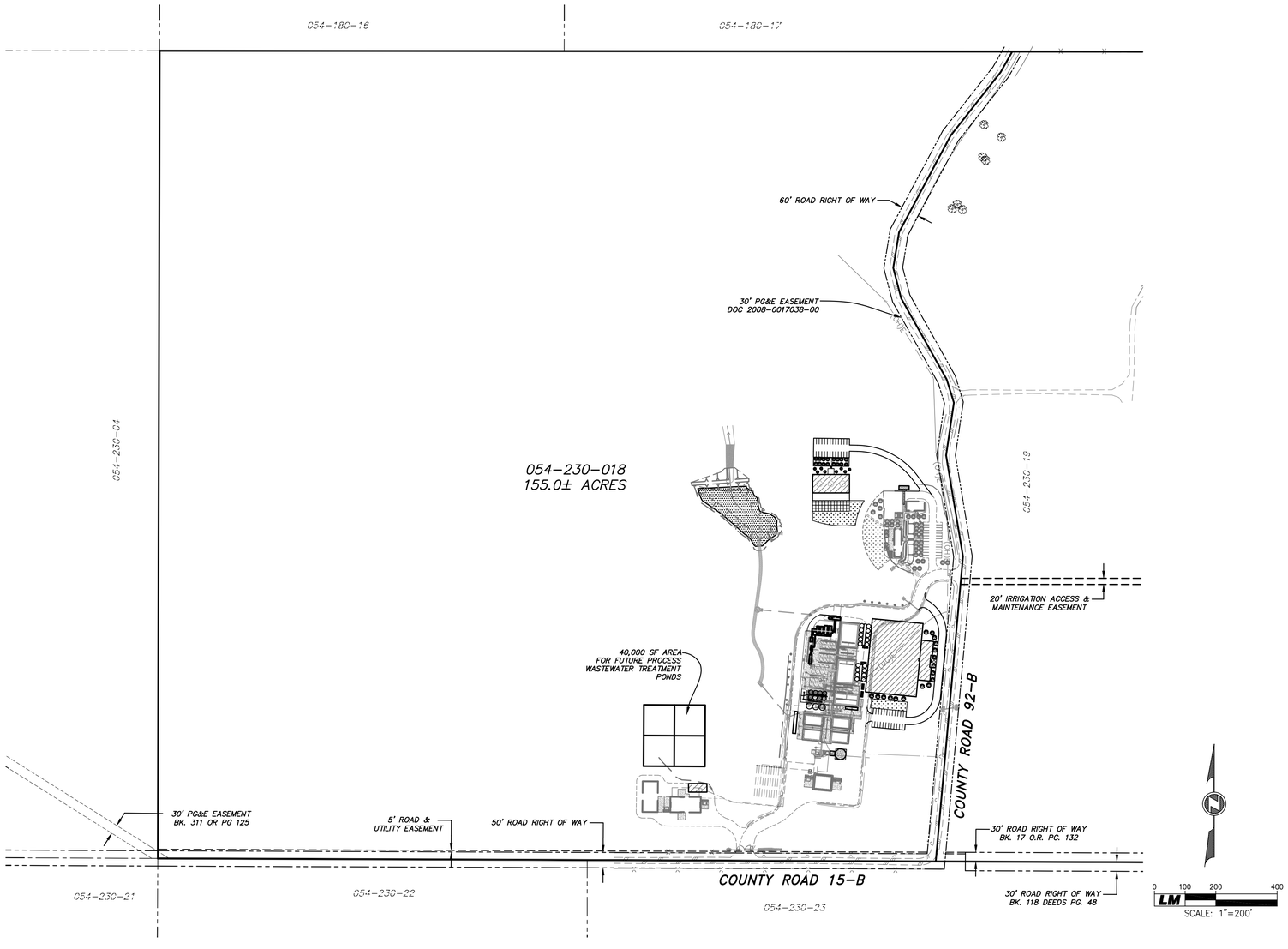
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ATTACHMENT C

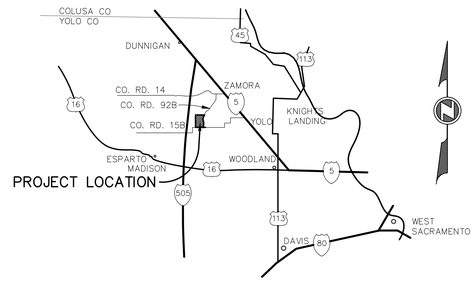
Site Plans

WINE MAKING FACILITY
FOR
CREW WINE COMPANY

YOLO COUNTY, CA



VICINITY MAP



SHEET INDEX

OWNER:	CREW WINE COMPANY, LLC P.O. BOX 493 ZAMORA, CA 95698
EXISTING USE:	AGRICULTURAL & WINE MAKING FACILITY
PROPOSED USE:	AGRICULTURAL & WINE MAKING FACILITY
EXISTING ZONING:	A-X (AGRICULTURAL EXTENSIVE)
PROPOSED ZONING:	A-X (AGRICULTURAL EXTENSIVE)
SEWER SERVICE:	LEACH FIELD & SEPTIC TANK
STORM DRAIN SERVICE:	OVERLAND TO DETENTION POND
WATER SERVICE:	PRIVATE WELL
GAS & ELECTRIC SERVICE:	PACIFIC GAS & ELECTRIC
TELEPHONE SERVICE:	ATT
FLOOD ZONE:	X PANEL NUMBER 06113C0275G
GROSS AREA:	155.0± ACRES
APN:	054-230-018
DOCUMENT NO.	2014-0003898

DESIGNED BY TCT
DRAWN BY NRS
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY TODD C. TOMMERAASON
DATE 1-11-2017 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

WINE MAKING FACILITY
FOR
CREW WINE COMPANY, LLC

YOLO COUNTY CALIFORNIA

TITLE SHEET

SCALE 1"=200'
CAD FILE: 3047-5_C01
DATE: 1-11-2017
JOB NO. 3047-5

SHEET 1 OF 4

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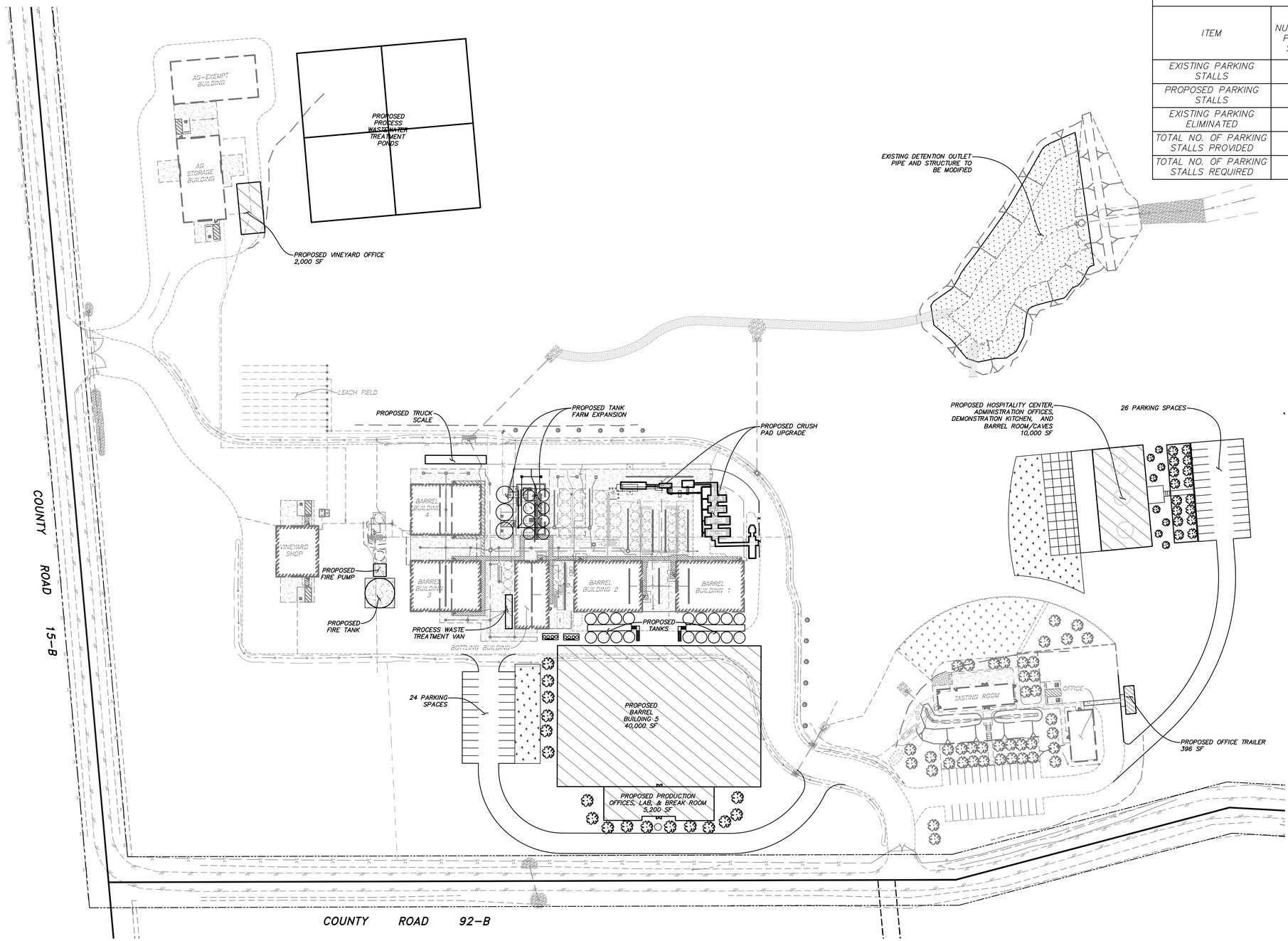

PARKING TABLE

ITEM	TOTAL NUMBER OF PARKING STALLS	TOTAL MINIMUM NUMBER OF ACCESSIBLE STALLS REQUIRED	ACCESSIBLE PARKING STALLS	VAN ACCESSIBLE PARKING STALLS
EXISTING PARKING STALLS	42	2	2	6
PROPOSED PARKING STALLS	50			
EXISTING PARKING ELIMINATED	10			
TOTAL NO. OF PARKING STALLS PROVIDED	82	4	1	5
TOTAL NO. OF PARKING STALLS REQUIRED	72			

EXISTING BUILDING AREAS:

WINE-TASTING AND RETAIL AREAS:	
TASTING ROOM	2,200 SF
SUB TOTAL =	2,200 SF
WINERY AND STORAGE OPERATIONS:	
BARREL BUILDING 1	4,800 SF
BARREL BUILDING	24,800 SF
BARREL BUILDING	34,900 SF
BARREL BUILDING	44,900 SF
VINEYARD SHOP	3,000 SF
BOTTLING BUILDING	3,200 SF
OFFICE	1,800 SF
AG. STORAGE BUILDING	4,900 SF
AG.-EXEMPT BUILDING	4,900 SF
SUB TOTAL =	37,200 SF
TOTAL EXISTING AREA =	**39,400 SF**

PROPOSED BUILDING AREAS:

WINE-TASTING AND RETAIL AREAS:	
HOSPITALITY CENTER	10,000 SF
SUB TOTAL =	10,000 SF
WINERY AND STORAGE OPERATIONS:	
VINEYARD OFFICE	2,000 SF
PRODUCTION OFFICES, LAB, & BREAK ROOM	5,200 SF
VINEYARD OFFICE TRAILER	396 SF
BARREL BUILDING 5	40,000 SF
SUB TOTAL =	47,596 SF
TOTAL PROPOSED AREA =	**57,596 SF**

WINE-TASTING AND RETAIL AREA = 12,200 SF
WINERY AND STORAGE OPERATION = 84,796 SF
TOTAL AREA = 96,996 SF

OVERALL SITE PLAN

0 30 60 120
SCALE: 1"=60'

DESIGNED BY TCT
DRAWN BY NRS
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
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BY TODD C. TOMMERAASON
DATE 1-11-2017 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

WINE MAKING FACILITY FOR
CREW WINE COMPANY, LLC
YOLO COUNTY CALIFORNIA
OVERALL SITE PLAN

SCALE 1"=60'
CAD FILE: 3047-5_C02
DATE: 1-11-2017
JOB NO. 3047-5
SHEET 2 OF 4

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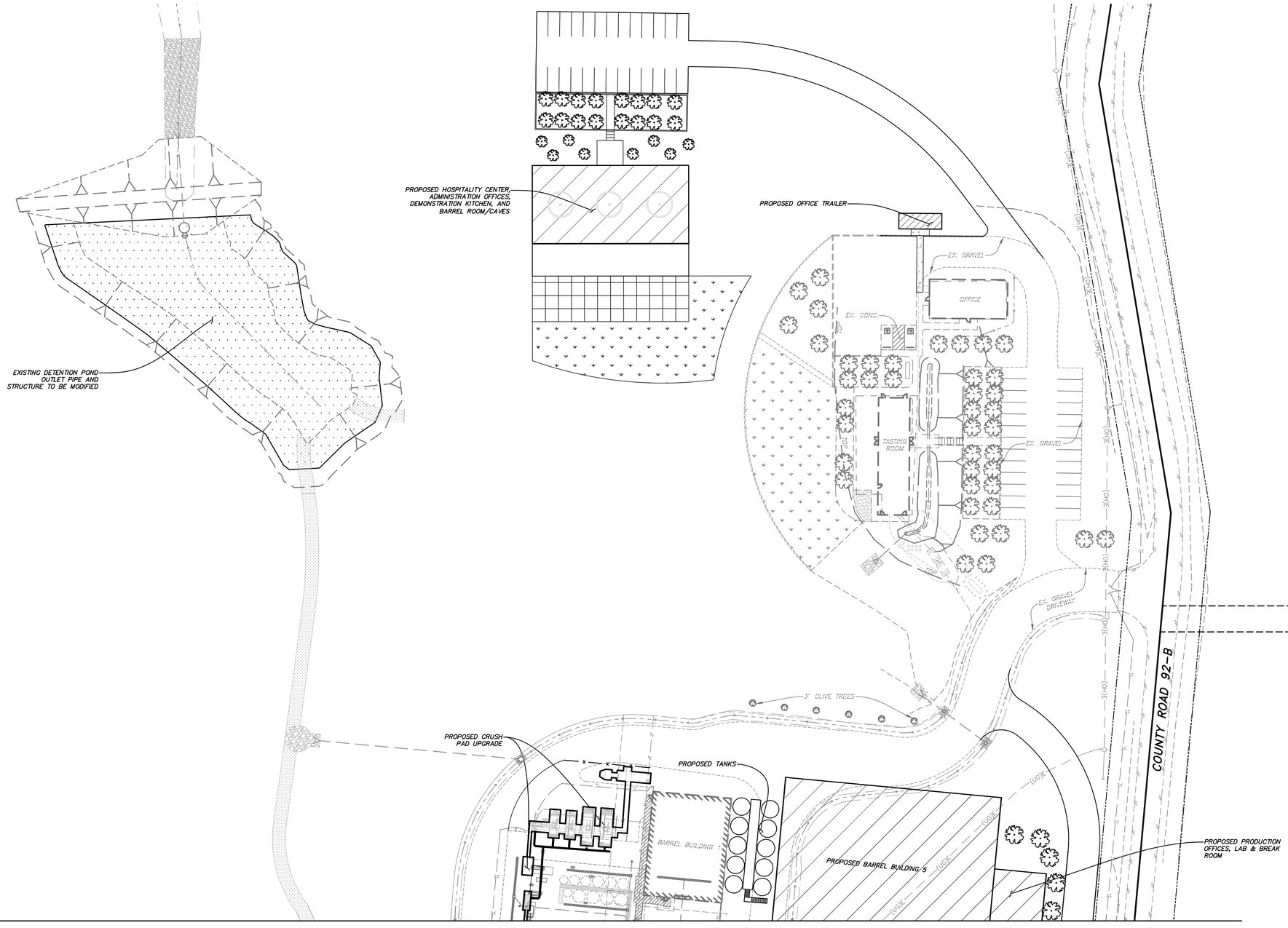

SEE SHEET 4

SCALE: 1"=40'

DESIGNED BY TCT	REV.	DATE	DESCRIPTION	BY	APP'D.
DRAWN BY NRS					
CHECKED BY TCT					

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CIVIL ENGINEERING · LAND SURVEYING · PLANNING
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DATE 1-11-2017 P.E. 59277
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WINE MAKING FACILITY
FOR
CREW WINE COMPANY, LLC

YOLO COUNTY CALIFORNIA

SITE IMPROVEMENT PLAN

SCALE	SHEET
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CAD FILE: 3047-5_C03	
DATE: 1-11-2017	
JOB NO. 3047-5	

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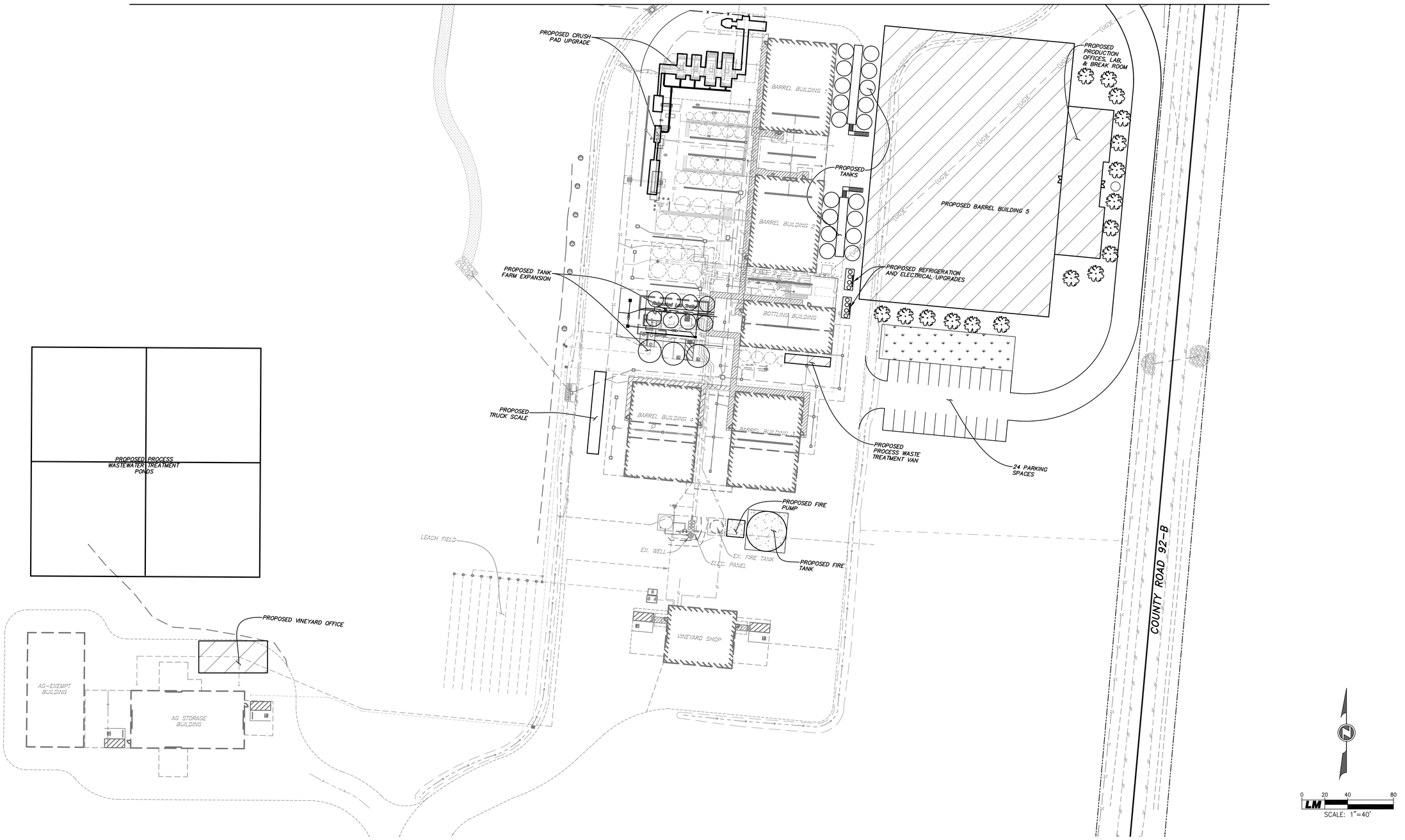
SEE SHEET 3



DESIGNED BY TCT
DRAWN BY NRS
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

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608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
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BY TODD C. TOMMERAASON
DATE 1-11-2017 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

WINE MAKING FACILITY
FOR
CREW WINE COMPANY, LLC

YOLO COUNTY CALIFORNIA

SITE IMPROVEMENT PLAN

SCALE	1"=40'
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DATE:	1-11-2017
JOB NO.	3047-5
SHEET	4 OF 4

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