
6. ALTERNATIVES ANALYSIS

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INTRODUCTION

The primary intent of the alternatives evaluation in an EIR, as stated in CEQA Guidelines §15126.6(a), is to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Further, the Guidelines state that "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." The feasibility of an alternative may be determined based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control.

CEQA provides the following guidelines for discussing alternatives to a proposed project:

- “No project” alternative . . . shall also be evaluated along with its impact. The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. . . . When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the “no project” alternative will be the continuation of the existing plan, policy or operation into the future. . . . If the project is other than a land use or regulatory plan . . . the “no project” alternative is the circumstance under which the project does not proceed. . . . After defining the “no project” alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the “no project” alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (CEQA Guidelines §15126.6(e)).
- The discussion of alternatives shall focus on alternatives capable of eliminating significant adverse effects or reducing them to a level of insignificance, even if these alternatives would partially impede the attainment

of the project objectives, or would be more costly (CEQA Guidelines §15126.6 (d)(3)).

- If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines §15126.6 (d)(4)).

The range of alternatives required in an EIR is governed by the “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision-making and informed public participation.

Comments received during the scoping meeting and public comment on the NOP indicated a desire for a range of alternatives that addressed the following issues:

- An alternative that does not require timberland conversion.
- Alternative project locations in non-forested lands.
- Alternative excluding portion of the site near the Wellman property.
- An alternative reducing project size.
- An alternative that establishes conservation easements over the historical resources.

As discussed below the Reduced Acreage Alternative would exclude the portion of the project adjacent to the Wellman property and reduce the total conversion/development area. The Offsite Alternative addresses the possibility of located the project on non-forested lands, which would not require a timberland conversion. All historical resources will be preserved; therefore, an alternative that specifically addresses such resources is not necessary.

Selection of Alternatives

The requirement that an EIR evaluate alternatives to the proposed project or alternatives to the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the Public Resources Code and the CEQA Guidelines direct that the EIR need "set forth only those alternatives necessary to permit a reasoned choice." The CEQA Guidelines provide definition for "a range of reasonable alternatives" and, thus, limit the number and type of alternatives that may need to be evaluated in a given EIR. According to the CEQA Guidelines §15126.6(f):

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail

only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

First and foremost, alternatives in an EIR must be feasible. In the context of CEQA Public Resources Code §21061.1, "feasible" is defined as:

...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Finally, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative."

ALTERNATIVES CONSIDERED BUT DISMISSED IN THIS EIR

Tree-Size Restricted Conversion Area Alternative

An Alternative was considered that included a timber conversion area, which was restricted to include only the smaller trees on the project site. However, Jeff Longcrier, Registered Professional Forester and Consulting Biologist for NCRM, indicated that there are not discernable concentrations of smaller trees within the project site sufficient to contain a vineyard. During the past conversion to orchard and grazing uses, most of the timber was removed during a relatively short time period. The timber that currently occupies the site all regenerated during a similar time period, and as a result the stands of trees on the project site are similar in age, and the difference in age is not distinct enough to create an effective boundary between older and younger trees. Therefore, due to its infeasibility, the Tree-Size Restricted Conversion Area Alternative has been dismissed from further analysis in this EIR.

Complete Reservoir Capture Alternative

The Complete Reservoir Capture Alternative included only areas of the project site that drained completely into the proposed reservoir. As indicated previously, the proposed reservoir has been designed to collect surface water from a 36-acre watershed within the project area. Therefore, this Alternative would reduce the conversion area to 36 acres, which is a 154-acre reduction in the total vineyard area proposed for the project. The small size of the conversion area would not be economically viable and would not adequately meet the project objectives. As stated in CEQA Guidelines Section 15126.6 "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project..." As the Complete Reservoir Capture Alternative would not meet the basic objectives of the project the Alternative does not meet the standards of the CEQA Guidelines; therefore, the Alternative has been dismissed from further analysis in this EIR.

ALTERNATIVES CONSIDERED IN THIS EIR

No Project – No Action Alternative

The No Project – No Action Alternative would include no timberland conversion, no planting of vineyards, and no construction of buildings or any associated infrastructure. The No Project – No Action Alternative would allow the continued existence of the project site in its current state. While this Alternative would not meet the project objectives, CEQA requires the Alternative to be analyzed.

Land Use

In its current state, the project site is consistent with the surrounding land uses, which include rural residences, agriculture, actively harvested timberland, a monastery, and a waste disposal site. The project site is designated Rural Resources Development by the Sonoma County General Plan. The General Plan (p. 52) states that the intent of the Rural and Resources Development designation is to protect lands used for timber, geothermal and mineral resource production and for natural resource conservation. Allowing the project site to remain in its current condition would be consistent with the intent of the General Plan for the site. In addition, Article 5 of the Sonoma County Zoning Ordinance states that the Resources and Rural Development (RDD) zoning designation is intended to be applied in lands needed for commercial timber production, geothermal production, aggregate resources production; lands needed for protection of watershed, fish and wildlife habitat, biotic resources, and for agricultural production activities that are not subject to all of the policies contained in the Agricultural Resources Element of the General Plan. Therefore, the current use of the project site is consistent with the Zoning Ordinance. Finally, because the No Project – No Action Alternative would not allow future development on the site and would, in effect, preserve the environmental resources on the site, the No Project – No Action Alternative would be consistent with the Goals and Policies stated in the Sonoma County General Plan. Therefore, similar to the proposed project, the No Project – No Action Alternative would result in no conflicts with the adopted General Plan and Zoning Ordinance, as well as minimal impacts with existing surrounding land uses.

Air Quality

Under the No Project – No Action Alternative the project site would be allowed to exist in its current state. Currently, vehicles rarely access the project site, and the No Project – No Action Alternative would not increase existing traffic levels. Consequently, although the proposed project would not result in significant increases in area emissions due to project operation, the No Project – No Action Alternative would not result in any operational emissions. In addition, unlike the proposed project, the No Project – No Action Alternative would not involve ground-related construction activities, such as grading. Therefore, the No Project – No Action Alternative would not generate fugitive dust. Overall, the No Project – No Action Alternative would result in fewer air quality impacts than the proposed project.

Biological Resources

Implementation of the No Project – No Action Alternative would, in effect, act as a conservation easement for the project site. Under the No Project – No Action Alternative the site would remain in its current state: trees would not be removed, the site would not be graded, vineyards would not be planted, and buildings and/or infrastructure would not be constructed. Therefore, the No Project – No Action Alternative would result in reduced impacts to sensitive status plant and animal species or any associated habitats. However, the proposed project has been designed to reduce net sedimentation from the project site by 10 to 21 tons/yr; therefore, long-term impacts to fisheries from sedimentation would be greater under the No Project – No Action Alternative. In addition, as explained in the Hydrology and Water Quality chapter, summer flows would be expected to increase under the proposed project, which would be of potential benefit to salmonid species. However, under the No Project – No Action Alternative summer flows would remain the same. Therefore, while the No Project – No Action Alternative would result in fewer impacts to special-status plants and animals, impacts to salmonids would be fewer under the proposed project.

Cultural Resources

Implementation of the No Project – No Action Alternative would allow the project site to remain in its current state. The Cultural Resources Assessment performed by Thomas Origer & Associates identified significant prehistoric cultural resources and significant prehistoric sites. In addition, fossil-bearing geological strata underlie the project site, which could be damaged by ground-related construction activities, such as grading. The proposed project would avoid known cultural resources; however, grading of the site could uncover unknown cultural resources. Because the No Project – No Action Alternative would not result in any disturbance of the project site soils, the No Project – No Action Alternative would not adversely affect the known and unknown cultural resources on the site. Therefore, the No Project – No Action Alternative would result in fewer impacts associated with cultural resources than the proposed project.

Hazards

Unlike the proposed project, the No Project – No Action Alternative would allow the project site to remain in its current state; therefore, the old mill site would not require demolition, and ground-related construction activities, such as grading, would not occur. The potential for toxic chemicals exists at the old mill site, due to the possibility that wood was treated on-site. The proposed project includes mitigation measures that require soils testing. In the case that hazardous chemicals are detected at levels exceeding local, State, and federal standards, the mitigation requires the remediation of the soils to the satisfaction of the County Department of Health and the DTSC. Because the No Project – No Action Alternative does not include soils analysis or remediation, in the case that toxic chemicals do actually exist on the old mill site, the chemicals would remain on the site and could potentially result in impacts to ground and surface water quality. In addition, because the proposed project includes conversion of timberland to vineyards, it

is likely that the risk associated with wildland fires would be decreased under the proposed project. Therefore, because the proposed project includes mitigation for any toxic chemicals extant at the old mill site, as well as mitigation for any pesticides used during vineyard operation, and because the project could potentially reduce the risk associated with wildland fires on the site, the No Project – No Action Alternative could potentially have greater impacts than the proposed project.

Hydrology and Water Quality

Under the No Project – No Action Alternative the project site would be allowed to exist in its current state: trees would not be removed, the site would not be graded, vineyards would not be planted, and buildings and/or infrastructure would not be constructed. Unlike the proposed project, because the No Project – No Action Alternative would not include removal of any on-site trees, short-term erosion impacts associated with timber harvest would not occur. It is important to note, however, that because construction activities will comply with Forest Practice Rules and other State and local regulations, and considering that this EIR requires implementation of mitigation measures included in this Draft EIR, construction impacts to sedimentation would not occur. In addition, mitigation incorporated into the proposed project would reduce long-term sedimentation by 10 to 21 tons/yr; therefore, the long-term impact related to sedimentation would be greater under the No Project – No Action Alternative. In addition, as the Hydrology and Water Quality chapter explained, summer flows would be expected to increase under the proposed project. However, because the No Project – No Action Alternative would not require any irrigation, wells, or reservoir, the No Project – No Action Alternative would result in fewer impacts associated with water supply. Overall, the No Project – No Action Alternative could result in fewer impacts associated with Hydrology and Water Quality as compared to the proposed project; yet, long-term sedimentation would be increased downstream.

Geology

The No Project – No Action Alternative would include no timberland conversion, no planting of vineyards, and no construction of buildings or any associated infrastructure. The No Project – No Action Alternative would allow the continued existence of the project site in its current state. Because the No Project – No Action Alternative would not place any structures (or people) on the project site, the No Project – No Action Alternative would not result in adverse effects associated with seismic activity, including ground shaking and liquefaction. In addition, under the No Project – No Action Alternative, neither timber harvest nor grading activities would be required; therefore, unlike the proposed project, increased soil erosion during project implementation would not occur. However, under the No Project – No Action Alternative the mitigation that would be implemented to eliminate the current gulying and erosion would not occur. Therefore, long-term impacts related to erosion would be greater under the No Project – No Action Alternative. Overall, the No Project – No Action Alternative would result in fewer impacts related to Geology than the proposed project.

Transportation

The No Project – No Action Alternative would sustain the project site’s existing state. Because the project site is currently rarely accessed by vehicles, the No Project – No Action Alternative would not generate traffic, and would therefore not result in adverse effects to the local roadways and intersections. Furthermore, implementation of the No Project – No Action Alternative would not affect alternative modes of transportation. However, the proposed project would also not result in significant adverse affects related to transportation; therefore, the No Project – No Action Alternative would result in transportation impacts similar to the proposed project.

Noise

Implementation of the No Project – No Action Alternative would allow the project site to remain in its current state, which produces very little (if any) unwanted sound. However, although mitigation is included to reduce impacts to a level of insignificance, the proposed project would generate both short-term noise, associated with construction activities, and long-term noise, associated with vineyard operation. Because the No Project – No Action Alternative would not result in any increases in Noise, the No Project – No Action Alternative would result in fewer noise-related impacts than the proposed project.

Aesthetics

The project site is currently comprised of timberland and grassland habitats. Under the No Project – No Action Alternative the project site would be allowed to exist in its current state: trees would not be removed, the site would not be graded, vineyards would not be planted, and buildings and/or infrastructure would not be constructed. Although the conversion of timberland to vineyards is not considered a significant impact under the Sonoma County General Plan, under the proposed project, views from adjacent residences would be impacted, requiring the planting of screening trees as mitigation. Therefore, the No Project – No Action Alternative would result in fewer aesthetic impacts than the proposed project.

No Project - Timber Resource Management Alternative

The No Project – Timber Resource Management Alternative would not involve the planting of vineyards, construction of buildings, or any associated infrastructure. However, onsite timber would be harvested in conformance with the Forest Practice Rules. While the project proponent has not indicated a desire to engage in long-term forest management of the property if the vineyard conversion is not approved, timber harvesting would be permitted upon approval of a Timber Harvest Permit, and timber harvesting is a historic use of both the project site and surrounding properties. Therefore, the No Project – Timber Resource Management Alternative is being analyzed to develop a more complete picture of the potential outcomes that may occur in the absence of the proposed project.

Land Use

In its current state, the project site is consistent with the surrounding land uses, which include rural residences, agriculture, actively harvested timberland, a monastery, and a waste disposal site. The project site is designated Rural Resources Development by the Sonoma County General Plan. The General Plan (p. 52) states that the intent of the Rural and Resources Development designation is to protect lands used for timber, geothermal and mineral resource production and for natural resource conservation. Therefore, harvesting of the onsite timber would be consistent with the intent of the General Plan for the site. In addition, Article 5 of the Sonoma County Zoning Ordinance states that the Resources and Rural Development (RDD) zoning designation is intended to be applied in lands needed for commercial timber production, geothermal production, aggregate resources production; lands needed for protection of watershed, fish and wildlife habitat, biotic resources, and for agricultural production activities that are not subject to all of the policies contained in the Agricultural Resources Element of the General Plan. Therefore, the timber harvesting on the project site would also be consistent with the Zoning Ordinance. Therefore, similar to the proposed project and the No Project – No Action Alternative, No Project – Timber Resource Management would result in no conflicts with the adopted General Plan and Zoning Ordinance, as well as minimal conflicts with existing surrounding land uses.

Air Quality

Under the No Project – Timber Resource Management Alternative the project site would be actively managed for timber production. Currently, vehicles rarely access the project site; under the No Project – Timber Resource Management Alternative, logging trucks and worker vehicles would frequent the project site similar to the proposed project during the harvesting season. The activity would potentially be spread out over a longer period of time as harvesting timber could be matched to market demand or the management goals of the timber harvester. The total number of logging truck trips would be similar to the proposed project. Replanting of the project site would also require some number of vehicle trips; however, following timber harvest and restocking, vehicle trips would be similar to the current situation. As regards climate change and the absorption of carbon dioxide, the No Project – Timber Resource Management Alternative would likely have the largest positive impact as young trees absorb more carbon dioxide, and harvested timber would continue to sequester the historically absorbed carbon dioxide as wood products. Overall, the No Project – Timber Resource Management Alternative would result in similar emissions to the proposed project during, the harvest period, but following timber harvest would reduce emissions as compared to the proposed project.

Biological Resources

Implementation of the No Project – Timber Resource Management Alternative would, result in short-term impacts to biological resources similar to the proposed project. The same areas designated for vineyard conversion would be selectively logged, and those areas designated for preservation in the proposed project would also be preserved in the

No Project – Timber Resource Management Alternative. Over the long term, under the No Project – Timber Resource Management Alternative the project site would be restocked and would continue to provide habitat. While the No Project – Timber Resource Management Alternative would include erosion control measures pursuant to the requirements of the Forest Practice Rules, long-term monitoring and maintenance of such measures is not required. Therefore, as the proposed project has been designed to reduce net sedimentation from the project site by 10 to 21 tons/yr; long-term impacts to fisheries from sedimentation would likely be greater under the No Project – Timber Resource Management Alternative. Impacts to summer flows would be expected to be similar under near term conditions, as both the No Project – Timber Resource Management Alternative and proposed project would be expected to increase summer flows. However, in the long-term conditions would be similar to the current conditions as the restocked timber matures. Therefore, the No Project – Timber Resource Management Alternative would result in similar impacts to special-status plants and animals in the short term, while impacts to salmonids would be fewer under the proposed project as a result of reduced sedimentation.

Cultural Resources

Implementation of the No Project – Timber Resource Management Alternative would result in similar impacts to known cultural resources as the proposed project. The Cultural Resources Assessment performed by Thomas Origer & Associates identified significant prehistoric cultural resources and significant prehistoric sites. In addition, fossil-bearing geological strata underlie the project site, which could be damaged by ground-related construction activities, such as grading. The proposed project would avoid known cultural resources; however, grading of the site could uncover unknown cultural resources. Because the No Project – Timber Resource Management Alternative would harvest timber throughout the area designated for vineyard conversion, the Alternative could also avoid the identified cultural resources via protection measures set forth in the Timber Harvest Permit. Unlike the proposed project, timber harvest would not require earthmoving; therefore the No Project – Timber Resource Management Alternative would likely not adversely affect unknown cultural resources on the site. Therefore, the No Project – Timber Resource Management Alternative would result in fewer impacts associated with cultural resources than the proposed project.

Hazards

Similar to the proposed project, the No Project – Timber Resource Management Alternative would result in the removal of timber from the areas proposed for vineyard conversion. Due to the potential for unanticipated costs from remediation, demolition of the old mill site would be unlikely to occur under the Alternative. The potential for toxic chemicals exists at the old mill site due to the possibility that wood was treated on-site. The proposed project includes mitigation measures that require soils testing. In the case that hazardous chemicals are detected at levels exceeding local, State, and federal standards, the mitigation requires the remediation of the soils to the satisfaction of the County Department of Health and the DTSC. Because the No Project – Timber Resource

Management Alternative does not include soils analysis or remediation, in the case that toxic chemicals do actually exist on the old mill site, the chemicals would remain on the site and could potentially result in impacts to ground and surface water quality. In addition, because the proposed project includes conversion of timberland to vineyards, it is likely that the risk associated with wildland fires would be decreased under the proposed project. The proposed project would include the use of Integrated Pest Management practices to reduce the use of pesticides; however, the proposed project would still result in the application of some pesticides. The No Project – Timber Management Alternative would likely not include the application of any pesticides. However, because the proposed project includes mitigation for any toxic chemicals extant at the old mill site, as well as mitigation for any pesticides used during vineyard operation, and because the project could potentially reduce the risk associated with wildland fires on the site, the No Project – Timber Resource Management Alternative could potentially have greater impacts than the proposed project.

Hydrology and Water Quality

Under the No Project – Timber Resource Management Alternative timber would be removed from those areas proposed for vineyard conversion in the proposed project. However, the site would not be graded, vineyards would not be planted, and buildings and/or infrastructure would not be constructed. Similar to the proposed project, the No Project – Timber Resource Management Alternative would include removal of on-site trees. Similar to the proposed project timber harvesting would comply with Forest Practice Rules and other State and local regulations, and considering that this EIR requires implementation of mitigation measures included in the Hydrology and Water Quality chapter, timber harvest impacts to sedimentation would not occur. Yet, the proposed project incorporates mitigation that would reduce long-term sedimentation by 10 to 21 tons/yr; therefore, the long-term impact related to sedimentation would be potentially be greater under the No Project – Timber Resource Management Alternative as additional steps to reduce erosion, monitoring, and maintenance of sedimentation controls such as those proposed by the project (i.e., gully protection measures, sediment monitoring, etc.) would not occur. In addition, as the Hydrology and Water Quality chapter explained, summer flows would be expected to increase under the proposed project. The No Project – Timber Resource Management Alternative would also result in a near term increase in summer flows, until such time as forest growth returns flows to the current state. Overall, the No Project – Timber Resource Management Alternative could result in more impacts associated with Hydrology and Water Quality as compared to the proposed project, because long-term sedimentation would be increased downstream.

Geology

The No Project – Timber Resource Management Alternative would include no timberland conversion, no planting of vineyards, and no construction of buildings or any associated infrastructure. However, timber would be harvested, and the project site restocked pursuant to the Forest Practice Rules. Because the No Project – Timber

Resource Management Alternative would not place any structures on the project site, the No Project – Timber Resource Management Alternative would not result in adverse effects associated with seismic activity, including ground shaking and liquefaction. However, similar to the proposed project, the No Project – Timber Resource Management Alternative would involve timber harvest. However, grading and vineyard conversion would not occur which would reduce the potential for exposed soils to be entrained by stormwaters. However, while the No Project – Timber Resource Management Alternative would undertake erosion control measures pursuant to the Forest Practice Rules, the mitigation that would be implemented by the proposed project to eliminate the current gullying and erosion would not occur. Therefore, long-term impacts related to erosion would be greater under the No Project – Timber Resource Management Alternative. Overall, the No Project – Timber Resource Management Alternative would result in fewer impacts related to Geology than the proposed project.

Transportation

The No Project – Timber Resource Management Alternative would consist of timber harvest and restocking of the areas proposed for vineyard conversion under the proposed project. Because the project site is currently rarely accessed by vehicles, the No Project – No Action Alternative would not generate traffic, and would therefore not result in adverse effects to the local roadways and intersections. Furthermore, implementation of the No Project – No Action Alternative would not affect alternative modes of transportation. However, the proposed project would also not result in significant adverse affects related to transportation; therefore, the No Project – No Action Alternative would result in transportation impacts similar to the proposed project.

Noise

Implementation of the No Project – Timber Resource Management Alternative would result in short-term noise impacts similar to the proposed project during the harvesting period. However, although mitigation is included to reduce impacts to a level of insignificance, the proposed project would generate both short-term noise, associated with construction activities, and long-term noise, associated with vineyard operation. Because the No Project– Timber Resource Management Alternative would not result in any increases in long-term noise levels, the No Project – Timber Resource Management Alternative would result in fewer noise-related impacts than the proposed project.

Aesthetics

The project site is currently comprised of timberland and grassland habitats. Under the No Project – Timber Resource Management Alternative the project site would be logged; however, the site would not be graded, vineyards would not be planted, and buildings and/or infrastructure would not be constructed. Eventually, the site would return to an approximation of the current state. Although the conversion of timberland to vineyards is not considered a significant impact under the Sonoma County General Plan, the proposed project would result in a change to a different type of view, whereas the No Project –

Timber Resource Management Alternative would result in a similar view. Therefore, the No Project – Timber Resource Management Alternative would result in fewer aesthetic impacts than the proposed project.

Offsite Alternative

One of the requirements of CEQA is the assessment of the comparative environmental impacts of alternative locations for the “project.” Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR. The Offsite Alternative would result in the development of the project at a location other than the site proposed.

Maps displaying soils, elevations, and slopes similar to the project site were reviewed for surrounding areas of Sonoma County to identify potential offsite locations. Sites that do not have the right soils, elevations, slopes, and solar aspects would not be suitable for achieving the project objectives, and would not constitute feasible alternatives pursuant to CEQA. Soil maps were consulted to identify areas with the same class of soils as the proposed project, as the project site was specifically selected by the applicant for its abundance of Goldridge and Hugo loam soils, which are optimum for cultivation of Pinot Noir wine grapes (See Figure 6-1, Soils in Project Vicinity). Soil type has a substantial impact on vineyard quality; therefore, location of the project site on different soil types would substantially reduce the feasibility of the project. As illustrated in Figure 6-2, Elevation in Project Vicinity, a specific range of elevations are required to attain the necessary microclimate conditions for growing premium wine grapes. Location of the project outside of the appropriate microclimate could result in adverse impacts to grape quality from excessive heat, or necessitate the installation of infrastructure to protect against frost damage. As excessively steep slopes cannot be converted to vineyards without substantial risk of erosion, potential offsite locations would require a less than 23 degree slope (See Figure 6-3, Slopes in Project Vicinity). The project area is characterized by the hills, many of which are quite steep; therefore, a shallow slope angle substantially reduces the potential locations for the vineyard. Finally, the solar aspect must be considered to ensure that sunlight and moisture conditions are suitable for a vineyard (See Figure 6-4, Solar Aspect in Project Vicinity). The northeast to southeast solar aspect is considered ideal as this direction provides ample sun, without the excessive sun that a south or west aspect would bring, or the shade that would result from a northern aspect. In addition, the potential site must be of comparable size in order to attain most of the project objectives.

Figure 6-1
Soils in Project Vicinity – Considerations for Offsite Alternative

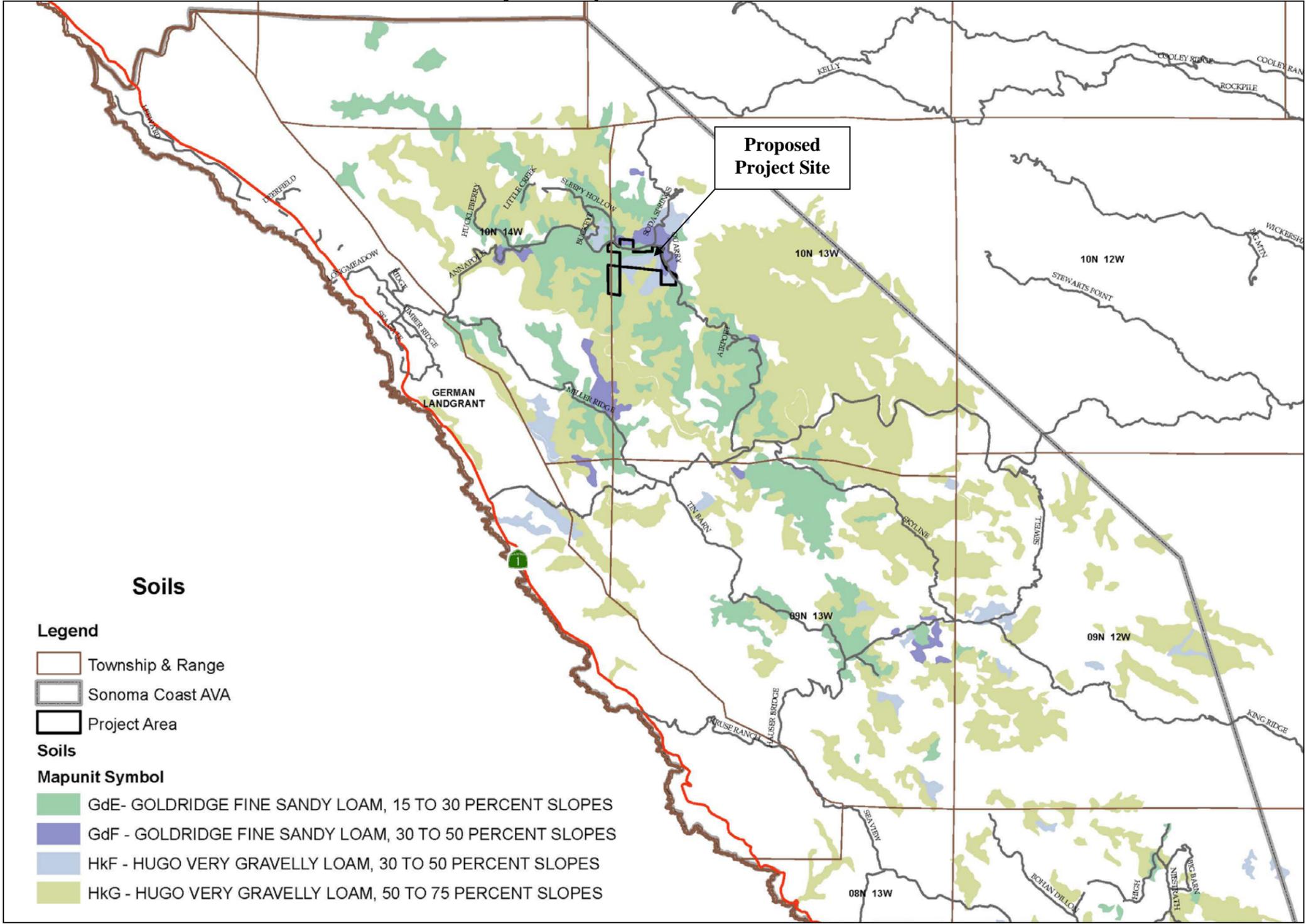


Figure 6-2
Elevation in Project Vicinity – Considerations for Offsite Alternative

