The closest known record for Behren's silverspot butterfly is located approximately 4.6 miles southwest of the project site. The site of record is located on the coastal bluffs north of Stewart's Point. As this butterfly is known from coastal, and grassland terraces immediately adjacent to the ocean, the butterfly is not expected to be found on the project site. In addition, the butterfly's host plants *Viola* spp., while sparsely present on the project site, occur in densely wooded areas that do not otherwise provide suitable conditions for the butterfly.

Plants

The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California and the NDDB were queried and the following rare and endangered plants were reported to within 5 miles of the project area:

Common Name ***Scientific Name***	***Status***	***Associated Habitat***	**Blooming period**	**Probability on Project Site**
Serpentine daisy *Erigeron serpentinus*	Fed: State: CNPS: List 1B.3	Chaparral (serpentinite), elevation 60-670 meters.	May-August	**None**. No serpentine habitat present onsite. Would have been detectable during appropriately-timed surveys.
Supple daisy *Erigeron supplex*	Fed: State: CNPS: List 1B.2	Coastal bluff scrub; coastal prairie; elevation 10-50 meters.	May-July	**None**. No coastal bluff or coastal prairie habitat present onsite. Would have been detectable during appropriately-timed surveys.
Short-leaved evax *Hesperevax sparsiflora brevifolia*	Fed: State: CNPS: List 2.2	Coastal bluff scrub; coastal dunes; elevation 0-215 meters	March-June	**None**. No coastal bluff or dune habitat present onsite. Would have been detectable during appropriately-timed surveys.
Goldfields *Lasthenia macrantha bakeri*	Fed: State: CNPS: List 1B.2	Closed-cone coniferous forest (openings), meadows and seeps; marshes and swamps; coastal scrub; elevation 60-520 meters.	April-October	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Goldfields *Lasthenia macrantha macrantha*	Fed: State: CNPS: List 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; elevation 5-520 meters.	January-November	**None**. No coastal bluff or dune habitat present onsite. Would have been detectable during appropriately-timed surveys.

Common Name ***Scientific Name***	***Status***	***Associated Habitat***	**Blooming period**	**Probability on Project Site**
Beaked tracyina *Tracyina rostrata*	Fed: State: CNPS: List 1B.2	Cismontane woodland; valley and foothill grassland; elevation 90-790 meters	May-June	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Secund jewelflower *Streptanthus glandulosus hoffmani*	Fed: State: CNPS: List 1B.3	Chaparral; cismontane woodland; valley and foothill grassland (rocky, often serpentinite); elevation 120-475 meters.	March-July	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Three Peaks jewelflower *Streptanthus morrisonii elatus*	Fed: FC State: CNPS: List 1B.2	Chaparral (serpentinite); elevation 90-815 meters.	June-September	**None.** No serpentine habitat present onsite. Would have been detectable during appropriately-timed surveys.
Dorr's Cabin jewelflower *Streptanthus morrisonii hirtiflorus*	Fed: FC State: CNPS: List 1B.2	Chaparral [serpentinite]; closedcone coniferous forest; elevation 185-820 meters.	June-June	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Morrison's jewelflower *Streptanthus morrisonii morrisonii*	Fed: State: CNPS: List 1B.2	Chaparral (serpentinite, rocky talus); elevation 120-585 meters.	May-September	**None**. No serpentine or talus habitat present onsite. Would have been detectable during appropriately-timed surveys.
Swamp bellflower *Campanula californica*	Fed: State: CNPS: List 1B.2	Bogs & fens; closed-cone coniferous forest; coastal prairie; meadows; marshes & swamps (freshwater); north coast coniferous forest (mesic); elevation 1-405 meters.	June-October	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Coastal bluff morning-glory *Calystegia purpurata saxicola*	Fed: State: CNPS: List 1B.2	Coastal dunes, coastal scrub; elevation 10-105 meters.	May-September	**None**. No coastal bluff or coastal dune habitat present onsite. Would have been detectable during appropriately-timed surveys.
Pygmy cypress *Cupressus goveniana pigmaea*	Fed: State: CNPS: List 1B.2	Closed-cone coniferous forest (usually podzol-like soil), elevation 30-500 meters.	March-March	**None.** No suitable habitat present onsite. Would have been detectable.

Common Name ***Scientific Name***	***Status***	***Associated Habitat***	**Blooming period**	**Probability on Project Site**
Deceiving sedge *Carex saliniformis*	Fed: State: CNPS: List 1B.2	Closed-cone coniferous forest (usually podzol-like soil), elevation 30-500 meters.	June-June	**None**. No suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
The Cedars manzanita *Arctostaphylos bakeri sublaevis*	Fed: State: CR CNPS: List 1B.2	Closed-cone coniferous forest; chaparral; [serpentinite seeps]; elevation 185-760 meters.	February-May	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
California indigobush *Amorpha californica napensis*	Fed: State: CNPS: List 1B.2	Broad-leaved upland forest (openings); chaparral; cismontane woodland; elevation 120-2,000 meters	April-July	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Cobb Mountain lupine *Lupinus sericatus*	Fed: State: CNPS: List 1B.2	Broadleaved upland forest; chaparral; cismontane woodland; lower montane coniferous forest; elevation 275-1,525 meters.	March-June	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Cedars fairy lantern *Calochortus raichei*	Fed: State: CNPS: List 1B.2	Closed-cone coniferous forest; chaparral [serpentinite]; elevation 00-490 meters.	May-August	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Coast lily *Lilium maritimum*	Fed: C State: CNPS: List 1B.1	Broadleafed upland forest; closed-cone coniferous forest; coastal prairie; coastal scrub; northcoast coniferous forest; marshes and swamps; elevation 5-335 meters.	May-August	**None**. Suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Point Reyes checkerbloom *Sidalcea calycosa rhizomata*	Fed: State: CNPS: List 1B.2	Freshwater marshes and swamps, near coast; elevation 3-75 meters.	April-September	**None**. No suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Maple-leaved checkerbloom *Sidalcea malachroides*	Fed: State: CNPS: List 1B.2	Broadleafed upland forest; coastal prairie; north coast coniferous forest; coastal scrub riparian woodland [often in disturbed areas]. Elevation 2-730 meters.	April-August	**None**. Suitable habitat present onsite. Would have been detectable during appropriately timed surveys.
Checker mallow *Sidalcea malvaeflora purpurea*	Fed: State: CNPS: List 1B.2	Broadleafed upland forest, coastal prairie. Elevation 15-65 meters.	May-May	**None**. No suitable habitat present onsite. Would have been detectable during appropriately-

Common Name ***Scientific Name***	***Status***	***Associated Habitat***	**Blooming period**	**Probability on Project Site**
				timed surveys.
Blasdale's bent grass *Agrostis blasdalei*	Fed: State: CNPS: List 1B.2	Coastal bluff scrub; coastal dunes; coastal prairie. Elevation 5-150 meters.	May-July	**None**. No suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Globe gilia *Gilia capitata tomentosa*	Fed: State: CNPS: List 1B.1	Coastal bluff scrub (rocky, outcrops). Elevation 15-155 meters.	May-July	**None**. No coastal bluff scrub habitat present onsite. Would have been detectable during appropriately-timed surveys.
Dark-eyed gilia *Gilia millefoliata*	Fed: State: CNPS: List 1B.2	Coastal dunes; elevation 2-30 meters.	April-July	**None**. No suitable dune habitat present onsite. Would have been detectable during appropriately-timed surveys.
Rose leptosiphon *Leptosiphon rosaceus*	Fed: State: CNPS: List 1B.1	Coastal bluff scrub; elevation 0-100 meters.	April-July	**None**. No coastal bluff scrub habitat present onsite. Would have been detectable during appropriately-timed surveys.
Sonoma spineflower *Chorizanthe valida*	Fed: FE State: CE CNPS: List 1B.1	Coastal prairie (sandy). Elevation 10-305 meters.	June-August	**None**. No coastal bluff scrub habitat present onsite. Would have been detectable during appropriately-timed surveys.
Snow Mountain buckwheat *Eriogonum nervulosum*	Fed: State: CNPS: List 1B.2	Chaparral (serpentinite). Elevation 300-2,105 meters.	June-September	**None**. No suitable habitat present onsite. Would have been detectable during appropriately-timed surveys.
Holly-leaf ceanothus *Ceanothus purpureus*	Fed: State: CNPS: List 1B.2	Chaparral (serpentinite). Elevation 300-2,105 meters.	February-June	**None**. No serpentine habitat present onsite. Would have been detectable during appropriately-timed surveys.
Thin-lobed horkelia *Horkelia tenuiloba*	Fed: State: CNPS: List 1B.2	Chaparral; cismontane woodland (volcanic, rocky). Elevation 120- 640 meters.	May-July	**Present on site. See further discussion below**

Impacts to special-status plant species.

As noted above, thin-lobed horkelia has been identified on the project site and the proposed project would result in minor impacts to this plant. The plant is not protected under either the State or Federal Endangered Species Acts, nor is the plant protected pursuant to any special state or federal regulation or law. However, the thin-lobed horkelia is a CNPS List 1B.2 species. According to the CNPS, all of the plants constituting List 1B meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the CDFG Code, and thus would be eligible for state listing (CNPS 2001). CDFG requires their discussion in CEQA documents.

The majority of the project site does not support thin-lobed horkelia. Rather the plant is found primarily in the Northern Coastal Grassland habitat on the southwestern portion of the project site. Small numbers of thin-lobed horkelia would be impacted by the proposed vineyard project and by proposed wetland creation within a portion of the project site that would be preserved in perpetuity. Project activities that could adversely affect this plant include earth-moving/grading activity that kills individual plants, and earth-moving/grading activity that alters the hydrology of the project site, effectively removing natural irrigation from the meadow where these plants currently thrive. The above listed activities would be regarded as significant adverse impacts. To reduce impacts to thin-lobed horkelia, the applicant has agreed to the following mitigation measure:

Prior to the issuance of a grading permit, the applicant shall set aside approximately 18 acres for a Horkelia tenuiloba reserve. The reserve shall be dedicated in perpetuity through a permanent deed restriction recorded on the title of the property. The reserve area shall not be developed. Timber operations in the areas adjacent to the reserve shall use directional falling so that timber marked for removal falls away from the reserve area. Heavy equipment and vehicles shall be excluded from the reserve area during project development and operations. Following completion of vineyard development activities, the applicant shall ensure that any herbicide applications which may take place in the nearby vineyard unit(s) do not affect or enter the horkelia reserve. This plan shall be subject to the review and approval of the Department of Forestry and the Sonoma County Permit and Resource Management Department.

Impacts to a unique manzanita complex.

Annapolis manzanita has been identified on the project site. Annapolis manzanita is a hybrid manzanita unique to the Annapolis area. Two Annapolis manzanita populations occur on the project site. Annapolis manzanita does not have any state or federal status, nor is the plant listed by CNPS. However, because of the uniqueness of this population, Dr. Tom Parker and Mr. Michael Vasey of San Francisco State University recommended that the proposed project include incorporation of protection measures for Annapolis manzanita until further studies have been conducted. Because CEQA documents will take into account the local or unique rarity of a species and require protection for these locally unique or locally rare species, any impacts to Annapolis manzanita must be considered significant and adverse pursuant to CEQA.

To reduce impacts to Annapolis manzanita, the applicant has agreed to the following mitigation measure: *Prior to issuance of a grading permit, the applicant shall set aside an area totaling approximately 4.4 acres on the east side of the project site (see Figure 3.4-3) for the preservation of Annapolis manzanita identified on the Artesa property. The reserve shall be dedicated in perpetuity through a permanent deed restriction recorded on the title of the property. The reserve area shall not be developed. Timber operations in the areas adjacent to the preserve shall use directional falling so that timber marked for removal falls away from the reserve area. Heavy equipment and vehicles shall be excluded from the reserve area during project development and operations. Following completion of vineyard development activities, the applicant shall ensure that any herbicide applications which may take place in the nearby vineyard unit(s) do not affect or enter the Annapolis manzanita reserve. The plan shall be subject to the review and approval of the Department of Forestry and the Sonoma County Permit and Resource Management Department.*

Aquatic and near-water habitat conditions

Pools and Riffles: These habitats are not located within the Conversion THP area but are found downstream from the plan area. Pools are formed by the interaction of the watercourse with topographic features and by the presence of woody debris in watercourse channels. The pool and riffle content of watercourses can be altered through changes in waterflow and the content of sediment, woody debris and large boulders in the channels. As a part of the proposed conversion THP, no operations will take place within WLPZs adjacent to the conversion THP area. These no operations zones along with measures proposed in the Erosion Control Plan will prevent increases in the sediment content of downstream watercourses and will prevent the direct input of woody debris to these watercourses. The proposed application of no operations zones along watercourses coupled with soil stabilization measures proposed in the ECP will effectively prevent any direct changes to the pool and riffle content of the downstream watercourses. As such, the proposed conversion THP and vineyard development will not adversely affect or alter the pool and riffle content of the downstream watercourses. Please see the discussion of pools above under the "Watercourse Condition" heading for a further analysis of pools and riffles.

Large Woody Debris: Large woody debris (LWD) is a very important component in the creation of pool habitat in streams. Rainville et al. (1985) found that in nearly 80% of the pools surveyed in small streams, LWD was the structural agent forming the pool or associated with the pool. The amount of large woody debris present in the watercourses in the assessment area varies widely. The proposed conversion THP will not result in an adverse impact to future LWD recruitment as there will be no operations within WLPZs on watercourses adjacent to the plan area. It is likely that LWD recruitment along these watercourses will increase over time due to the elimination of timber harvesting in the watercourse protection zones. Please see the discussion of organic debris above under the "Watercourse Condition" heading for a further analysis of large woody debris.

Near-Water Vegetation: Due to the establishment of no operations zones adjacent to watercourses, near-water vegetation will not be reduced as a result of timber operations. Shade canopy provided by the near water vegetation currently ranges from 75% to 100% where these watercourses flow through wooded areas. Near water vegetation is generally composed of Douglas-fir, redwood, California bay, and madrone. Establishment of WLPZ no operations zones will effectively maintain existing near-water vegetation, therefore the proposed conversion THP will not have an adverse impact on near-water vegetation. Please see the discussion of stream-side vegetation above under the "Watercourse Condition" heading for a further analysis of near-water vegetation.

Terrestrial habitat conditions

1) Snags, Dens and Nest Trees: Snags, den trees, nest trees and their recruitment are required elements in the overall habitat needs of more than 160 wildlife species. Many of these species play a vital role in maintaining the overall health of timberlands. Snags of greatest value are >16" DBH and 20 ft. in height. The proposed timberland conversion will not result in a significant adverse impact to the snag, den and nest tree component of the biological assessment area. Very few snags are currently located within the conversion THP area because the majority of the plan area was converted to agricultural use or grazing in the past. These areas have largely reverted to a natural state and now consist of young growth Redwood, and Douglas-fir intermixed with tanoak. No dens were observed on the conversion THP area during plan preparation therefore, reduction in den habitat is unlikely to result from the proposed conversion operations. Nest trees located within the conversion THP area will be harvested. In the event that an active nest of a listed bird species is discovered it shall be protected as descibed under Item 32 in Section II of the THP. Removal of nest trees within the conversion THP area will not result in a significant reduction in nest tree habitat due to the fact that a very small percentage of potential nest tree habitat in the Biological Assessment Area will be removed. All snags, dens and nest trees located on the plan submitter's property outside of the project area will be protected through the establishment of habitat reserves.

2) Downed Large Woody Debris: Large downed logs (particularly conifers) in the upland and near-water environment in all stages of decomposition provide an important habitat for many wildlife species. Large woody debris of greatest value consists of downed logs >16" diameter at the large end and >20 feet in length. Existing downed large woody debris within the conversion THP area that meet the dimensions above will be piled outside of the conversion area and left for use by wildlife. The remaining woody debris will be piled and burned on site upon completion of harvesting operations. As such, the proposed conversion THP will result in the elimination of a small portion of the downed large woody debris within the conversion THP area. The elimination of the small portion of the downed large woody debris within the conversion THP area will not result in a significant affect on the downed woody debris component of the Biological Assessment area as the conversion THP area only accounts for a very small percentage of the Biological Assessment area.

3) Multistory Canopy: Multistoried stands are defined as stands composed of two or more canopy layers. Multistoried stands contribute to vertical heterogeneity of stands and influence species diversity. Multi-storied stands are relatively uncommon in the BAA due to the logging

history. Redwood, Douglas fir, and tanoak are the key understory components in most of the two layered stands observed. The conversion THP area does not currently contain conifer stands with a true multistory canopy structure. Stands on the plan area generally consist of young growth Douglas-fir and Redwood and a hardwood component. While there are scattered dominant residual trees, these do not make up a second story. As such, the proposed conversion THP will not result in an adverse impact to the amount of multistory canopy structure within the Biological Assessment area.

4) Road density: The primary concerns for excessive road density are the disturbance, displacement and fragmentation of wildlife habitats and mortality of wildlife. For example, declines have been noted in the use of areas adjacent to frequently traveled roads by deer and bear. Deer and bear populations have a permanent home range within the assessment area. Road densities in the Gualala Basin average approximately 4.8 miles per square mile with densities in the assessment area approaching 6 miles per square mile. The amount of frequently traveled permanent and secondary roads will not increase as a result of the proposed conversion THP. The only roads proposed for construction during timber operations are temporary roads. The existing access roads to the conversion THP area will be reused as a part of timber harvesting and vineyard development and maintenance. Vehicle access to the vineyard units will be via encroachments at the existing permanent roads that access the conversion plan area/vineyard units and then along "vineyard avenues" within the vineyard units and new perimeter roads. As such the proposed project will not have an adverse impact on wildlife use as a result of increased road use and or construction.

5) Hardwood cover: Hardwoods are an important component of habitat diversity within the coniferous forest, as they provide a rich source of food and cover to mammals, birds and insects. Stands within the conversion THP area include a component of hardwoods. Hardwood composition on the conversion THP area includes tanoak, madrone and California bay. The proposed conversion THP will eliminate all hardwood cover on the THP area. All hardwoods will be retained in the adjacent portions of the property within proposed habitat reserves. This conversion of hardwood cover accounts for a very small portion of the Biological Assessment Area. This reduction in the hardwood cover of the Biological Assessment area will not result in a significant adverse impact to the hardwood cover of the Biological Assessment Area.

6) Late Seral (Mature) Forest: The characteristics of a late seral forest include large trees as part of a multilayered canopy and the presence of large numbers of snags and downed logs that contribute to an increased level of stand decadence. Currently there is no late seral stage (LSS) forest on the conversion THP area. As such, the proposed project will not result in an adverse impact to the late seral mature forest components and continuity of the Biological Assessment Area. The "Soda Springs Reserve" which is approximately 50 acres, is located just outside of the assessment area and is the closest area to the THP that provides this type of habitat. This is an "Old Growth" reserve located north of the conversion THP area that provides (LSS) habitat.

7) Special Habitat Elements: Some wildlife species require special habitats or habitat elements to exist. The loss of a key habitat element may have a profound effect on a species even though the habitat is otherwise suitable. Each species may have several key limiting factors to consider. The conversion THP area however does not contain any significant or limiting "special

habitat elements". Vernal pools, bogs, migratory routes, rock outcroppings, raptor nest trees, perenial or ephemeral springs are not located on the conversion THP area. The habitat that will be affected by the proposed operations exists throughout the assessment area and the small portion of the assessment area that will be affected will not result in a significant adverse impact.

Other Biological Habitat Factors/Conditions

Habitat Fragmentation/Wildlife Corridors: The proposed project would result in the conversion of approximately 190 acres of existing North Coast Coniferous Forest, Northern Coastal Grasslands, and Coastal Scrub plant communities to vineyards and vineyard support infrastructure. These vegetation communities support the foraging and nesting activities of various wildlife species on the project site, and therefore, the timber harvest and vineyard construction associated with the proposed project could result in direct adverse impacts to the movement patterns of individual animals using the proposed timber conversion area as a movement or migration corridor.

However, disruption of wildlife habitat and activities due to the proposed project would be minimized to the extent feasible through the provision of suitable movement corridors between the vineyard units. The applicant would preserve wildlife corridors within the project area by fencing only the vineyard units, and incorporating remaining natural habitat, such as mixed-hardwood or oak woodland, riparian areas, and other high-use habitats and elements, into the site plan. Fencing around the vineyard units would include a number of "escape gates" to allow for the safe release of deer or other wildlife, should they become trapped in the vineyard units. The applicant would protect approximately 133 acres with conservation easements on the site, part of which would preserve a wildlife corridor running the length of upper Patchett Creek on the eastern portion of the property. The streamside conservation area would be a minimum of 100 feet in width, on either side of the creek as measured from the top of bank. All other tributaries would be protected in buffers that are 25 to 75 feet in width, on either side of the top-of-banks. All streamside conservation areas on the project site would be dedicated in permanently protected deed restricted areas. Canopy cover in this area ranges from 50 percent to 100 percent, and the existing vegetation, including redwood, Douglas-fir, and riparian vegetation, would not be removed. In addition, the 15.6-acre thin-lobed Horkelia preserve would protect a wetland area and would provide a corridor for wildlife to move from the west side of the project to areas south of the project site, including the Patchett Creek headwaters.

Mitigations Proposed to Prevent Adverse Impacts to the Biological Assessment Area:

1.) A 15.6 acre Horkelia tenuiloba reserve shall be established and dedicated in perpetuity through a permanent deed restriction recorded on the title of the property.
2.) A 4.4 acre manzanita reserve shall be established and dedicated in perpetuity through a permanent deed restriction recorded on the title of the property.
3.) Streamside conservation areas on the project site totaling approximately 133 acres shall be preserved to protect the beneficial uses of the watershed and provide wildlife habitat. The conservation areas will be recorded as permanent deed restrictions on the title of the property that run with the title in perpetuity.

4.) No timber harvest operations shall occur until such time as CAL FIRE has reviewed all survey and habitat information required by 919.9 (provided in Section V of the THP) and has determined pursuant to 14 CCR 919.10 that take of an NSO will not occur. Any change in timber operations that results from a change in location, or the discovery, of an NSO after plan approval will have to be incorporated into the plan through the amendment process.
5.) Fencing shall only be constructed around vineyard units, which will result in the maintenance of wildlife corridors between the proposed vineyard units.
6.) 1.24 acres of mitigation wetlands shall be created to off set the loss of 0.418 acres of waters of the U.S. and State.
7.) Additional species specific mitigation measures are listed under Item 32 in Section II of the THP.

4. Recreational Resources:

PAST AND FUTURE PROJECTS

The past and future projects for the Recreational Assessment Area are the same as those listed under the Soil Productivity Assessment Area. Please refer to the Soil Productivity Assessment Area for a discussion of past and future projects for the Recreation Assessment Area.

1. Identification of recreational activities: Recreational use of the property itself is limited to the landowner and guests and is low intensity. However, adjacent landowners access their properties on roads that go through the conversion THP area and within 300 feet of the project area is a paved public road. Landowners utilizing the access roads through the operation area and the public utilizing the county road may participate in recreational activities such as sightseeing, hiking and bird watching. These activities may be impacted visually and will be addressed under visual resources below.
2. No recreational special treatment areas have been designated by the Board of Forestry or County of Sonoma within or adjacent to the plan area. Timber operations will be conducted primarily during the week on private property and therefore will not impact significant numbers of people.

The operations proposed under the THP do not have a reasonable potential to join with the impacts of any other project to cause significant cumulative impacts to recreational resources.

5. Visual Resources:

PAST AND FUTURE PROJECTS

The past projects in the Visual Assessment Area are the same as those discussed above under Watershed Asssessment and Biological Assessment. Please refer to the Watershed Asssessment and Biological Assessment Area discussions for a list of past and future projects for the Visual Assessment Area.

1. There are no Special Treatment Areas designated by the Board of Forestry on or near the project area.

2. The plan area is visible from the ridges and ridgetops surrounding the plan area and from Annapolis Road located adjacent to the plan area and permanent access roads located on the plan area. Viewpoints from surrounding ridgetops are limited by distance and topography as they are half a mile to greater than a mile from the conversion THP area. These viewpoints are accessed via private property and as such are not readily visible to significant numbers of people. The conversion THP area as viewed from Annapolis Road and access roads on the project area are visible to significant numbers of people and will be the focus of the visual assessment.

3. People utilizing Annapolis Road and access roads on the project area will primarily view the

proposed operation from a vehicle on a public road.

The Sonoma County General Plan defines scenic resources under three open space categories in the Open Space Element: community separators, scenic landscape units, and scenic highway corridors. As indicated on Figure OS-2 in the Sonoma County General Plan, the project site does not lie within a scenic landscape unit, a community separator, or a scenic highway corridor. The Sonoma County General Plan EIR also divides the County into distinct visual units. The project site is located in the Mendocino Highlands (Visual Unit #2). According to the Sonoma County General Plan EIR (pg. 5), mitigation measures will reduce the level of impact on visual units (and scenic backdrops) to an insignificant level. These mitigation measures do not apply to the project site. For example, VR-2.1 states "Highway 1, the proposed by-pass, Cazadero Highway, Bohemian Highway, Jonive Road, Coleman Valley Road, and Stewarts Point/Skaggs Springs Road are designated as scenic highways." None of the above mentioned roads are located adjacent to the project property. Furthermore, the proposed vineyard use is consistent with the type of development/use anticipated for the project site in the General Plan.

Scenic views of the property from Annapolis Road will be altered from existing views of timberland and grassland to views of vineyard rows. However, the Sonoma County General Plan indicates that vineyards are highly valued landscapes within the County. In addition, the Scenic Resources Section in the Open Space Element of the Sonoma County General Plan is primarily concerned with maintenance of the openness of the scenic resources, which provides important visual relief from urban densities (General Plan, p. 175). Because the proposed project would not involve the construction of numerous buildings or result in any other urbanization, implementation of the project would result in a change from one rural setting (timberland) to another (vineyard), thereby preserving the "openness" of the project site.

Several residential properties surround the project site, including the Starcross Monastic Community (34500 Annapolis Road) located north of the project site, and five rural residences located immediately northwest, west, and south of the project site. The visual impact to people that utilize the permanent access roads (driveways) on the plan will be greatest. Neighbors that use these roads have become accustomed to and place value on the timberland and grassland along the driveways to their properties. As noted previously, the project site is currently void of development and views of the site from nearby residences consist of forest and grassland scenery. The proposed project would substantially alter the existing views; however, a substantial number of trees would remain on the project site as only 190 acres of the 324-acre site would be included in the vineyard area. Furthermore, the streamside conservation areas, cultural resources sites, biological reserves, and natural topographic relief would serve to break the vineyard area into smaller, less visually pronounced areas. As a result, the existing grassland and forest views would be replaced with a mixture of vineyards and forests.

Trees and forested areas are typically considered aesthetically pleasing visual resources. Once a timber conversion occurs, the forested visual character of a site is, for practical purposes, permanently lost. (It should be noted, however, that enjoyment of forest scenery as opposed to vineyard scenery, which can also be considered aesthetically pleasing, is a matter of personal preference.) In the absence of specific standards within planning documents impacts to

viewsheds are highly subjective. However, as discussed above, vineyards are considered to be a highly valued landscape within Sonoma County.

By one estimate, Sonoma County has seen over 26,000 acres of vineyard added between June 1997 and April 2007 (see DEIR page 3.2-26). The vast majority of this vineyard expansion has occurred in non-timberland areas. Nonetheless, recent timberland conversion activities in Sonoma County have included an increasing amount of vineyard development. However, as discussed in Impact Statement 3.2-5 of the DEIR, the proposed project is consistent with General Plan policies related to timber production and timber land conversion.

The proposed project, in conjunction with past and future timberland conversions to vineyard in Sonoma County, would contribute to a cumulative loss of timberland and associated aesthetic qualities. Cumulative development in areas identified as scenic landscape units by the Sonoma County General Plan would be considered to be significant; however, development in areas not designated as scenic, where the proposed project is located, would not be considered significant. Therefore, while the existing views would be altered, the cumulative impact to visual resources is considered to be ***less-than-significant***.

Please see a further discussion of visual/aesthetics impacts included within Chapter 3.11 of the Environmental Impact Report.

6. Traffic:

Logs will be hauled off the conversion THP area via a private road system to Annapolis Road (a paved county road) then either 1) west to Highway 1 or 2) east to Skaggs Springs Road (a paved county road), then east on Skaggs Springs Road to Dry Creek Road, and east on Dry Creek Road to State Highway 101. All of these roads were used historically for log transport, and they are currently being used for log and grape transport today. These routes are used primarily by residents of the area and tourists as well as commercial use for grape transport and log transport and commercial delivery use for residents.

Hauling associated with the proposed timber operation will generally take place on weekdays, when tourist traffic is at a minimum, thus minimizing any potential adverse effect log hauling as a part of this THP could have on current traffic conditions. Due to the relatively low volume of conifer to be removed from the plan area the proposed hauling operations will be of short duration. It is expected that approximately 250 loads of logs will be removed from the project area and that operations will occur over a 3 month period. In addition, traffic associated with personnel conducting the logging operations is expected to be very low as the personnel will stay on site or near by during operations. Log hauling on these roads occurs regularly and use of these roads for the transport of logs as a part of this conversion THP will not change the current flow of traffic present on the haul route. As such, the proposed harvest activity will have a nominal impact on the present traffic conditions along the haul route.

Please see a further discussion of traffic impacts included within Chapter 3.9 of the Environmental Impact Report.

H. Additional Cumulative Impact Information for Climate Change

Global climate change and the variables that influence this change are subject to intensive scientific investigation and debate. Green Houses Gasses (GHG) like carbon dioxide (CO_2) are believed to be increasing and tend to warm the planet. In response, the State of California has enacted legislation and policies designed to reduce GHG emissions and to increase energy efficiency (AB 1493, 2002; AB 32, 2006; Governor Schwarzenegger Executive Order S-3-05). In California, the California Global Warming Solutions Act of 2006 (Assembly Bill 32) is the states legislative effort at reducing GHG emissions to 1990 levels by 2020. This statute attempts to address global warming by establishing goals and measures for reducing GHG emissions. To aid in this directive, the California Air Resources Board (CARB) has developed a scoping plan that outlines the State's strategy to achieve 2020 GHS emission limits. The scoping plan recognizes that California's forestlands reduce GHG emissions by sequestering atmospheric carbon and are currently a carbon sink (atmospheric removal of carbon through sequestration is greater than atmospheric emissions from processes like fire and decomposition of wood). The 2020 Scoping Plan current target for California's forest sector is to maintain sequestration through sustainable forest management practices, reducing the risk of catastrophic wildfire and the avoidance or mitigation of land-use changes that reduce carbon storage.

Forestry activities may release CO_2 through disturbance effects associated with tree cutting, road, landing and skid trail construction, site preparation by mechanical methods or burning and potentially chemical treatment of hardwoods. Equipment operation emits CO_2 through the burning of fossil fuels primarily diesel and gasoline during road construction, skidding, loading and hauling of timber products. Forest emissions can also occur through wildfire, pest mortality and other natural and anthropogenic events.

The proposed project would convert forests and grasslands to vineyards, a reservoir, corporation yard, and roads. Out of a total of 324 acres, the proposed project includes the logging of approximately 171-acre timberland conversion area and developing approximately 19 acres of grassland. Approximately 171 acres would then be developed as a vineyard, including the cover cropped paths between the vines. Implementation of the proposed project would likely reduce the carbon absorption of the project site. Following conversion the project site would continue to sequester carbon; however, the sequestration rate would be reduced as a result of the decreased tree cover. The project site however would continue to sequester more carbon dioxide than vineyard activities would emit.

It is also important to note that certain aspects of the project's design, as well as operational activities, would help to minimize the generation of greenhouse gases. For example, wildfires are a large source of carbon emissions and the conversion of timberland adjacent to rural residential communities, such as the proposed project, would reduce the potential for fires started in the community spreading into the nearby forests, which could result in catastrophic wildfires.

Currently, thresholds of significance for GHGs have not been identified by either the ARB, or the NSCAPCD. Early actions proposed by the ARB are not strictly applicable to the proposed project, and the proposed project would be subject to any applicable State regulations as they are developed. Furthermore, in the context of statewide, nationwide, or global emissions, and considering the carbon sequestration that would continue to occur once the vineyards are planted, the proposed project's incremental contribution to this cumulative impact would not be cumulatively considerable. Therefore, the proposed project would have a less-than-significant impact on climate change.

Please see Sec. 4-3 of the DEIR for additional information

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