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MEMORANDUM

TO: **David Schiltgen, Sonoma County PRMD**
FROM: **Tom Adams**
DATE: **January 27, 2010**

RE: **File Number PLP06-0107**
Preservation Ranch Project Objectives

This memorandum has been prepared to provide the County with additional information regarding the Preservation Ranch project's vineyard specific project objective. This memorandum revises the information provided to the County in November 2009. The intent is to provide the County with information on climate, distance from the coast (marine influence), elevation ranges, and soil depths and characteristics PPV considers essential for the establishment of high quality vineyards and its business purpose. Accordingly, this memorandum provides additional information regarding the Project Objectives and is not intended to supersede the project objectives originally provided to the County. Those Preservation Ranch project objectives are as follows:

1) Plant 1,861[revised to 1,769.1] acres of vineyards on identified pockets of land with superb agricultural potential.

2) Utilize voluntary merger of existing parcels to limit future development potential and bring the property into consistency with the General Plan.

3) Rehabilitate and protect the remainder of the property for sustainable timber management and improved wildlife habitat.

While there are multiple project objectives, all are interdependent from an environmental, planning, and economic standpoint. The financial contributions of, and balance between, commercial timber resource management and agricultural production makes possible and is necessary for funding voluntary merger, restoration, long-term timber and habitat enhancement, and proposed preservation programs. A balanced mix of uses helps capture the full economic value of the Property within the existing confines of environmental and public policy, and makes it financially feasible to undertake the public benefit elements of the Project.

Premier Pacific Vineyards High End Vineyards and Site Selection Criteria

The Supply of High Quality Vineyard Land is Finite and Declining

The picture below depicts the limited regions of the world where high-end grape production is possible. Since the vineyard is the primary determinant of grape quality and, therefore, wine quality, fine wine can only be made from grapes grown on high-end vineyards. High-end vineyard properties are unique, finite and an increasingly scarce resource, and can only be found in select regions of the world. These areas exhibit specific and rare climate and soil characteristics and are typically found on the Western banks of continents, within certain latitudes and with certain maritime influences. Although wine grapes can be grown in any temperate climate, the "best" grapes can only be grown in very limited areas of the world. In some top growing areas such as Burgundy, Bordeaux, Tuscany and Napa Valley, there is virtually no high quality vineyard land left to plant.

Within the target appellations, soil conditions dictate not only the appropriate choice of grape varietal, but also the ultimate quality of the grapes. Even within Napa Valley there are significant differences between growing conditions in the appellations which significantly affect grape quality and price. This variation in growing conditions also exists within the Sonoma Coast AVA, with the best growing sites for Pinot Noir and Chardonnay located in what is unofficially referred to as the "True Sonoma Coast" (see below). These specific criteria greatly limit the number of acres in the world capable of yielding the highest quality fruit.

Property Screening and Due Diligence Process

Premier Pacific Vineyard's (PPV) core competency necessary for implementing its business plan is the ability to select vineyard sites capable of producing superior quality high-end grapes. Accordingly, PPV focuses its acquisition search in specific regions with the requisite mix of climate and soil characteristics essential for high-end grape production. Once PPV identifies a potential property for acquisition within these limited regions, the Company conducts a rigorous underwriting process to determine the suitability of a property for high-end vineyard development. This due diligence process is one that PPV is highly experienced at and involves reviewing and analyzing a property's microclimate, soil types, water sources, and drainage capability, among other factors. While many regions can grow wine grapes each site must be closely analyzed to determine which grape varietals can be grown that meet the demands of the high-end wine industry. Even within a particular AVA, site selection (climate, soil, water, elevation) root stock, clone selection, vineyard design, and vineyard development can have a significant impact on the quality of the wine grapes.

General Key Screening Factors

***Climate*:** Summer temperatures should be moderate with low humidity, often achieved by the presence of maritime influences from the Pacific Ocean or higher elevations that moderate inland temperatures. A lack of rainfall in the last six weeks before harvest is also important so that flavors can concentrate in the grapes without risk of mold. Significant diurnal temperature

variations (the difference between daily high and low temperatures) are also desirable since they lengthen growing time, an important factor in producing complex wine.

***Soil*:** Soils should be well drained (typically containing gravel and rock components), with a neutral to acidic pH. The best soils for wine grape quality are different from traditional agricultural soils in that lower fertility is more desirable for high quality wine grapes while high fertility is more desirable for traditional agricultural commodity production.

***Water*:** Water supply can be sourced from a one or more combinations of rainfall, groundwater wells, riparian water access and reservoir storage of surface runoff. In evaluating a sites water supply it is important to consider environmental as well as quantity and quality factors.

Preservation Ranch Selection Process

The Preservation Ranch property was put on the market by Coastal Ridges, LLC along with other property it and/or its affiliates owned in both Sonoma and Mendocino Counties totaling approximately 60,000 acres. During the same general time frame Coastal Ridges made known its intention of filing an application with the California Department of Forestry for a timber conversion of approximately 10,000 acres on its 60,000-acre holdings, a portion of which is now Preservation Ranch. Coastal Ridges subsequently sold over two thirds of the subject property.

Premier Pacific Vineyards originally looked at the Coastal Ridges property in 2003 and after conducting a rigorous underwriting process to determine the property's potential for high-end Coastal Mountain and Mountain (see discussion below) vineyards, purchased the approximately 20,000-acre Sonoma County tract (southern most tract) of the 60,000-acre holdings in 2004 (Preservation Ranch). The northern most portion of the Coastal Ridges property (approx. 24,000 acres), located in Mendocino County was purchased by The Conservation Fund in coordination with The Nature Conservancy (Garcia Tract) after these entities evaluated the Coastal Ridges property to identify which sites presented the best combination of conservation values and standing timber resources (The Garcia Tract is a working forest). While we are not privy to what exactly went into the Coastal Ridges and TNC decision to purchase the Garcia Tract, the fact that they passed on the Sonoma Tract, ultimately purchased by Preservation Ranch is relevant in that it highlights why Preservation Ranch was determined to present the opportunity for significant restoration of its timber and other natural resources, that is, the baseline conditions (low timber inventory/high tanoak composition) required too much investment/time to restore without some additional value (vineyards). The central portion of the Coastal Ridges 60,000-acre property, located entirely in Mendocino County was retained by Coastal Ridges, LLC and is said to contain the highest timber inventories and best site conditions for commercial timber production of the three tracts.

The due diligence process that led to a decision to purchase Preservation Ranch looked at a number of different factors including the differences in the diurnal temperature[1] profiles, which result from a potential vineyard's proximity to the marine influence and elevation, as well as

1 Variation in temperature between day time highs and night time lows.

other site specific factors. Vineyards on the North Coast can be thought of as falling into one of five climatic regions: valley, mountain, coastal, coastal mountain, or inland mountain. PPV's Preservation Ranch due diligence and decision to purchase the property was focused on two specific climatic regions: coastal mountain and mountain. That due diligence process included the following considerations:

Location: Sonoma Coast / True Sonoma Coast

Sonoma Coast AVA

The expansive Sonoma Coast AVA is the source of some of California's highest quality and most revered wines. Its 7,000 planted acres extend roughly from San Pablo Bay in the south to the Mendocino County border in the north. The appellation is well known for its cool climate relative to other parts of Sonoma County and prominent maritime weather influences. These factors contribute to slow, even grape maturation with optimum ripeness that coincides with the end of the growing season, making it well-suited for growing Pinot Noir and Chardonnay. While in general the Sonoma Coast is a region known for high-end wine grapes, the large size of the AVA creates a great diversity in the quality of vineyard sites available. Not all vineyard sites within the Sonoma Coast AVA provide the climate and soils necessary to produce high-end wine grapes. In other words, not all vineyard sites are created equal, even within the same AVA, especially one as large and diverse as the Sonoma Coast AVA.

The Project includes approximately 1,143 gross vineyard acres (65%) within the Sonoma Coast AVA out of the total 1,769 gross vineyard acres proposed.

True Sonoma Coast

"True" Sonoma Coast AVA

The "True" Sonoma Coast is not an official AVA, but includes some of the coolest growing areas in California and home to some of the most well-known vineyards and wines in the state. There is no approved definition of the area, but it is generally agreed upon that the "True" Sonoma Coast starts north of Bodega, runs parallel to the Pacific Ocean inland by as much as 5 or more miles (if vineyards are unobstructed by high western ridges) and ends at the northern border of Sonoma and Mendocino Counties. The cool, moderating influence of the Pacific Ocean and consistent morning fog deliver days that are often 15-20 degrees cooler than inland. The western portions of Preservation Ranch are located within this "sub" AVA. While distance from the coast is one factor, there are other considerations that are taken into consideration when evaluating the vineyard potential of property within the Sonoma Coast AVA. These include the topography that lies between the vineyard and the ocean (marine influence/climate), elevation, soils, aspect, and rainfall.

<u>Coastal Mountain Region</u>: While every site has unique characteristics a high percentage of the

project's proposed vineyards located in the "True" Sonoma Coast meet the general criteria of a Coastal Mountain Region. These areas experience relatively cool daytime temperatures due to elevation and proximity to the marine influence but have warmer night temperatures because they are above some of the marine layer. These locations are above most of the fog and experience medium wind velocities.

Climate / Elevation Objective: 3 to 8 Miles from coast at 600 to 1,600 feet Elevation not requiring water for frost protection / Coastal Mountain Climate

The portion of Preservation Ranch within the True Sonoma Coast provides the opportunity to grow very high quality Pinot Noir and Chardonnay. Based on our research and experience on the existing Evans Ridge vineyard and other vineyards located in the True Sonoma Coast, Pinot Noir and Chardonnay vineyards capable of producing the highest quality wine need to be located from 600 to 1,600 feet in elevation. The reason for this is the relationship between elevation and climate, namely temperature variations throughout the growing season. Any lower in elevation than 600 feet can result in the need for frost control, i.e., wind machines or sprinklers and cooler temperatures that can impede the ripening of the fruit (fewer temperature days). Elevations higher than 1,600 feet are typically further inland and begin to experience less marine influence, although this is somewhat mitigated by the relationship between elevation and temperature (higher elevations outside coastal inversion layer = cooler temperatures). These higher elevation and further inland vineyard sites are generally not ideal for growing Pinot Noir or Chardonnay; however, they are ideal for growing premium quality Cabernet Sauvignon, Cabernet Franc, Merlot, Petite Verdot and Petite Syrah since they tend to replicate the Mountain regions (e.g., Rockpile AVA, Howell Mountain, Mount Veeder) climate (see Sonoma County AVA discussion).

Soils / Drainage Objective: Shallow (2 to 4 feet) and Well Drained Soils

The soils on Preservation Ranch have excellent physical and chemical properties for growing wine grapes. There are four dominant soil series on the property, with the Mayman and Laughlin series soils occupying the property ridge tops, and the Hugo and Josephine series occupying the hill slopes. The soils are characterized as gravelly sandy loam (Hugo and Mayman series), loam and sandy clay loam (Laughlin series), and clay loam (Josephine series). The soils have relatively low clay content and are moderately permeable. Soils depth on the ridge top and side slopes varies from 2 to 4 feet. Vineyards on the Sonoma Coast, with similar type soils, consistently produce world class wines. These same soil characteristics coupled with the ridge top locations provide for adequate drainage so as to allow for deficit irrigation practices necessary to produce high-end wines in this region.

Water / Rainfall Objective: Sufficient rainfall to allow for sheet flow collection within vineyard footprint (no ground water or stream diversions)

The National Oceanic and Atmospheric Administration (NOAA) isohyetal graphs depicting average annual rainfall show Preservation Ranch receiving an annual average of 60 inches of rainfall. The vineyards will be irrigated by capturing a small percentage of the annual rainfall as it forms diffuse sheet flow on the vineyard footprint during large storm events. The irrigation

demand for the vineyards will be approximately 0.5 ac-ft/ac. Sheet flow runoff from a portion of each vineyard site will be collected within the vineyard footprint in a drainage system that will flow by gravity and/or pumped to storage reservoirs. The high average annual rainfall on the property ensures an adequate water supply even under drought conditions These high rainfall numbers provide an opportunity to capture the increased volume of water that results from converting forest land to vineyards (vineyards use less water than trees) thereby mitigating the potential increased erosion that these flows may contribute to while also negating the need to pump groundwater or divert surface water flows all of which results in a positive to neutral water balance when comparing pre- and post-project conditions.

Sonoma County AVA

A portion of the Property is located in the Sonoma County AVA (between Sonoma Coast AVA to the west and Rockpile AVA to the east)**.** This eastern portion of the Property while generally not receiving as much coastal influence due to its distance from the coast and topography (east of highest ridge) has great vineyard potential for varietals that prefer a warmer climate, such as, Merlot, Pinot Blanc, Sauvignon Blanc, Cabernet Sauvignon, Petite Sirah, and Zinfandel (see Climate discussion below). Examples of this can be seen in the wines produced in the Rockpile AVA to the east of the Property. Like the difference between the Sonoma Coast AVA and the "True" Sonoma Coast, this area has unique factors, discussed below, that set it apart from much of the rest of the County that make it ideally suited for very high quality vineyards. Not unlike the difference between Dry Creek AVA and Rockpile AVA. The Project proposes approximately 626 gross vineyard acres (35%) within the Sonoma County AVA out of a total of 1,769 gross acres.

Mountain Region: Every site has unique characteristics but a high percentage of the project's proposed vineyards located outside of the "True" Sonoma Coast meet the general criteria of a Mountain Region. These areas typically experience relatively warm night temperatures due to the elevation putting the sites in the warm air above the inversion layer. Mid-day temperatures are typically three to six or more degrees cooler than the Valley locations. Higher temperatures do occur at these sites but much less frequently than at lower elevations.

Climate / Elevation Objective: East of Highest Ridge / 7 to 10 miles from Coast / 750 to 2,300 feet Elevation / No frost protection / Mountain Climate

Due to the size of Preservation Ranch the property provides the opportunity to grow a range of high-end wine grape varietals. The Preservation Ranch project will be planting primarily Pinot Noir, Chardonnay, and Cabernet Sauvignon. The ability to grow this range of varietals on the same property is a result of the property covering approximately 30 square miles and extending from approximately 3 miles from the Pacific Ocean in the west to approximately 9 to 10 miles from the Pacific Ocean in the east. The 626 acres of proposed vineyards located outside of the Sonoma Coast AVA is best suited for predominately Cabernet Sauvignon and other Bordeaux varietals. However, based on the climate and elevation it is unique from many other areas in the County due to the distance from the coast and elevations which, result in a Mountain Climate similar to Rockpile, Howell Mountain, and Mount Veeder, as well as the shallow well drained

soils. While similar varietals can be grown in both Valley and Mountain areas the Mountain areas typically ripen later and have shallow soils resulting in unique flavor characteristics that distinguish the grapes and quality of the wine from Valley areas.

Elevation is an important consideration since the elevation of a vineyard site effects climate by changing the intensity of solar radiation, fog, rainfall, frost days, and wind. The vineyard sites proposed at Preservation Ranch located within the Sonoma County AVA range from approximately 750 to 2,300 feet in elevation again providing for a range of high-end vineyard sites typically increasing in temperature as you move up in elevation and to the East due to increasing distance from the coast; however, the temperature gains are somewhat mitigated by elevation gains, a characteristic of Mountain climate vineyards. This area experiences some coastal influence but typically much less then the western portion due to it being predominately located to the East of the highest ridge on the property.

Soils / Drainage Objective: Shallow (2 to 4 feet) and Well Drained Soils

See discussion of Soils and Drainage above.

Water / Rainfall Objective: Sufficient rainfall to allow for sheet flow collection within vineyard footprint (no ground water or stream diversions)

See discussion of Water and Rainfall above.