



## Dennis Jackson - Hydrologist

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August 15, 2008

John McDowell  
Napa County Conservation, Development and Planning Office  
1195 Third Street, Room 210  
Napa, CA 94559

**RECEIVED**

**AUG 18 2008**

NAPA CO. CONSERVATION  
DEVELOPMENT & PLANNING DEPT.

Re: Bennett Lane Winery, Use Permit Modification #P07-00299-MOD

Dear Mr. McDowell:

I am submitting these comments on behalf of Mr. Ellis Hamilton of Two Dog Vineyard. Mr. Hamilton's property lies to the east of the Bennett Lane winery. I served as the Hydrologist for the Mendocino County Water Agency from 1989 through 1994. I have a Master degree in Physical Science with an emphasis on Hydrology. I have been a private consultant since 1995.

The information presented in the Initial Study for this project does not support a Negative Declaration. My specific comments follow the restatement of the Project Description.

### **Project Description**

The Bennett Lane Winery is located at 3340 State Highway 128, approximately 1,000 feet south of Bennett Lane. The winery is on Assessor's Parcel number 017-160-002. The property is owned by the Lynch Family Vineyards, LLC. The project is an approval of a Major Modification to Use Permit #92452-UP to expand the existing winery structures and expand visitation and marketing as follows:

1. remodel the existing approximate 8,900 sq-ft winery building including expansion of the offices
2. construct a new approximately 3,650 sq-ft tasting room with offices
3. construct a new approximately 5,000 sq-ft barrel storage building with commercial kitchen
4. add an enclosed courtyard between the buildings
5. relocate and expand the customer parking lot, 22 parking spaces
6. increase tours and tasting by appointment only to 32 visitors per day, with 168 visitors average per week
7. a marketing plan with 48 private wine, food and harvest events per year with a maximum of 40 people per event, and 4 Industry Open House events with a maximum of 50 people per event (at the July 16, 2008 meeting, the 48 private events were reduced to 24)
8. three Auction related events per year with a maximum of 125 people per event
9. installation of winery wastewater and sewage septic upgrades
10. No changes in the annual production limit of 50,000 gas/year.

**Napa River Impaired for Sediment**

The environmental review for the Bennett Lane Winery is incomplete because the fact that the Napa River has been listed as Impaired for Sediment under Section 303(d) of the Federal Clean Water Act has not been discussed.

The San Francisco Bay Regional Water Quality Control Board (RWQCB) has prepared a draft Sediment TMDL (Total Daily Maximum Load) Plan for the Napa River. The draft Sediment TMDL has not yet been approved by the State Water Resources Control Board.

The RWQCB staff report (Napolitano, Potter and Whyte, January 2007) for the Sediment TMDL found that;

*Channel incision, which occurs in Napa River and lower reaches of its tributaries, has greatly reduced the quantity and quality of spawning and rearing habitat for salmon, and appears to be a key factor limiting Chinook salmon reproductive success and smolt survival under current conditions (Stillwater Sciences and Dietrich, 2002).*

The staff report also states that;

*Rapid and active channel incision, or downcutting, in mainstem Napa River and its lower tributary reaches and associated rapid and intensive erosion of stream terrace banks are causing significant adverse changes to salmon habitat and are a significant sources of fine sediment in the Napa River (Stillwater Sciences and Dietrich, 2002). The discharge of sediment and the process of channel incision are occurring, in part due to controllable water quality factors.*

The RWQCB staff report found that channel incision is one of the largest contributors of fine sediment to the Napa River. A contributing factor to channel incision is an increase in stormwater discharge from developed land in the watershed. The Bennett Lane Winery project has the potential to increase the volume of stormwater discharge into the tributary of Blossom Creek which is tributary to the Napa River. By itself, the increased stormwater discharge from the Bennett Lane Winery into the unnamed tributary of Blossom Creek may not have a significant affect on channel incision, however, the *cumulative impact* of increased stormwater discharge from all impervious surfaces that drain into the Napa River or its tributaries must be considered in the environmental review process. This is particularly important because channel incision in the Napa River and its tributaries adversely impacts federally listed salmon species.

Flooding along the Napa River is considered to be a substantial problem. In fact, several years ago Napa voters adopted Measure A to find ways to decrease flooding. The cumulative impact on flooding in the Napa River from the potential increase in the volume of stormwater runoff from this project has not been considered.

Any increase in the volume of stormwater runoff from the Bennett Lane Winery is a cumulative impact to both flooding and channel incision and has the potential to degrade Chinook salmon habitat. The failure of the Initial Study to identify and discuss the cumulative impact of any increase in the volume of stormwater runoff from the Bennett Lane Winery is a significant flaw that invalidates the conclusion that a Negative Declaration is warranted.

Mr. Hamilton has noticed that there is an 8" diameter outfall pipe that enters the unnamed tributary of Blossom Creek on the Bennett Lane Winery property. There is no discussion of what this pipe drains in the project file. No stormwater runoff from the proposed project should be routed through this pipe.

### Stormwater Pollution Prevention Plan

A Stormwater Pollution Prevention Plan (SWPPP) is required for construction projects that disturb more than one acre. The applicant claims that the disturbed area is less than one acre but provides no calculations to support that claim. I made a very rough estimate of the footprint of the project from the reduced site plans in the file and found that at least 44,400 sq-ft would be disturbed to build the new buildings, courtyard and parking lot. My estimate shows that the disturbed area of the project exceeds one acre (43,560 sq-ft). I made conservative assumptions about the area that would be disturbed and so it is possible that the actual disturbed area may be higher than my estimate. My estimate of the disturbed area indicates that the applicant needs to prepare a SWPPP for the Bennett Lane Winery.

The purpose of the SWPPP would be to ensure that the quality of any stormwater released from the project during construction met appropriate water quality standards. However, since the Napa River is impaired for sediment and that channel incision is a significant contributor of fine sediment to the Napa River the SWPPP for the Bennett Lane Winery should consider ways of retaining all stormwater discharges on the parcel.

Condition 20 listed in the *Conditions of Approval: Bennett Lane Winery Expansion*, P08-00299-Mod (Exhibit B) specifies that:

*Parking lots shall be designed to drain through grassy swales, buffer strips, or sand filters prior to any discharge from the impervious surface into a water course.*

However, there are no design calculations in the files for any swales, buffer strips or sand filters. If these facilities are not properly designed they may not adequately capture pollutants carried in the water. In addition, no increase in stormwater runoff volume should be allowed to enter the unnamed tributary of Blossom Creek. Calculations to design swales, buffer strips, sand filters, and detention ponds require estimates of the design storm rainfall intensity, disturbed area, and topographic slope. Information about none of these elements was found in the file for the Bennett Lane Winery.

### Water for Fire Suppression

The Napa County Fire Marshall sent a Memo to the Conservation, Development and Planning Department, dated June 20, 2007, concerning the Bennett Lane Winery. The Fire Marshall, "...reviewed the use permit application to increase the size of an existing winery from 7,552 to 10,170 square feet of building at the address above."

The memo from the Fire Marshall states that:

*The minimum required fire flow for the protection of the proposed project is 300 gallons per minute for 60 minutes duration at 20 pounds residual water pressure with a storage volume of 9,000 gallons. This fire flow is based on the square footage of the building and has been reduced by one half because the structures will have an automatic fire sprinkler system. The fire flow and storage volume in a sprinklered building is in addition to the water demand of the sprinkler system. (Emphasis in bold added).*

The Bennett Lane Winery project has apparently been revised since it was reviewed by the Fire Marshall in June of 2007. The project now calls for increasing the square footage of the buildings from 8,900 sq-ft to 17,550 sq-ft which is 7,380 sq-ft more than the project reviewed by the Fire Marshall. This is a 72% increase in the square footage of the building of the project. There is no indication in the record that the Fire Marshall has been given the opportunity to review the revised expanded project. The Fire Marshall should be asked to review the revised project to determine if the minimum fire flow and water storage

volume should be increased to provide adequate fire protection for the project. In addition, if increased fire flows are required then, calculations should be presented to demonstrate that the pumping capacity of the well and storage tanks is sufficient to provide the minimum fire flow for the required 60 minute duration at 20 pounds of pressure.

### **Water Availability**

The Napa County Conservation, Development and Planning Office uses a simple rule-of-thumb to determine if a project has the potential to deplete groundwater supplies. For a parcel on the valley floor the rule-of-thumb is to limit groundwater extraction to no more than 1.0 acre-foot per year per acre. This rule-of-thumb may work when it is applied to the Napa Valley as a whole but it does not account for local variations in groundwater conditions.

Three neighbors have submitted letters saying that they view the area around the Bennett Lane Winery to be an area with limited water supplies. Local wells tend to be about 200 feet deep and well logs show that there are clay layers. The water temperatures, from wells in the vicinity of the Bennett Lane Winery, are around 76 degrees Fahrenheit. These factors suggest that the wells in the vicinity of the Bennett Lane Winery tap an aquifer that is separated from the shallow groundwater system. If this is the case the aquifer that is supplying the wells is not recharge by rain falling on the land surface above the well. If so, the County's rule-of-thumb does not address the balance between pumping and recharge in the aquifer used by the Bennett Lane Winery and its neighbors.

If the wells in the vicinity of the Bennett Lane Winery tap a confined aquifer, it is possible that the radius-of-influence of the Bennett Lane Winery may be sufficiently large to have the potential to directly affect the water level in neighboring wells during pumping. Lowering the water level in a neighbor's well increases their pumping costs.

The county's rule-of-thumb also does not address whether a well can sustain production for an extended period of time. If the volume of water stored in the aquifer tapped by a specific well is small, sustained pumping may deplete the aquifer. Also, if the aquifer has fine grained material that can be mobilized during pumping it is possible for the yield of the well to decline over time.

The *Phase I Water Availability Analysis* is dated August 12, 2002. The *Phase I Water Availability Analysis* is based on substantially fewer visitations per week. The *Phase I Water Availability Analysis* does not adequately describe the project under consideration and should be revised to reflect the substantial changes that have been made to the proposed project.

A 72-hour constant-discharge aquifer test should be performed to determine the impact of the proposed project on neighboring wells and to demonstrate that the well can produce at a rate to supply fire suppression flows at any time of year. The water level in neighboring wells should be monitored during the test. The test should be conducted in late September or early October, prior to the onset of the rainy season.

### **Summary**

The environmental review for the expansion of the Bennett Lane Winery does not support a Negative Declaration for the project. The environmental review is flawed because:

- The fact that the Napa River is listed as Impaired for Sediment under Section 303(d) of the Federal Clean Water Act is not mentioned.

- Channel incision is one of the primary sources of sediment in the Napa River. Cumulative increases in stormwater runoff are a contributing factor to channel incision.
- No stormwater runoff should be released into the Napa River
- No calculations of the size of the disturbed area were presented. I estimate that the disturbed area is greater than one acre and therefore would require a Stormwater Pollution Prevention Plan.
- The square footage of the buildings for proposed project appears to have been substantially increased since June 2007 when the project was reviewed by the Fire Marshall. The Fire Marshal should review the revised project to determine the appropriate minimum fire flow and water storage requirements for the revised project.
- The project well may have the potential to lower the water levels in the neighboring wells, thereby increasing their pumping costs.
- The Phase One Water Availability Analysis was prepared in August of 2002 for a significantly smaller project.

Sincerely,

A handwritten signature in black ink that reads "Dennis Jackson". The signature is written in a cursive, flowing style with a long horizontal line extending from the left side of the name.

Dennis Jackson  
Hydrologist

**References:**

- Napolitano, M., S. Potter and D. Whyte. 2007. Napa River River Watershed Sediment TMDL and Habitat Enhancement Plan, Staff Report. SF Bay Regional Water Quality Control Board, Oakland, CA. 141 pp.
- Stillwater Science, William Dietrich, June 2002, *Napa River Basin Limiting Factors Analysis, Final Report*, San Francisco Bay Regional Water Quality Control Board, California Coastal Commission.
- Stillwater Science, William Dietrich, June 2002, *Napa River Basin Limiting Factors Analysis, Final Report, Appendix A*, San Francisco Bay Regional Water Quality Control Board, California Coastal Commission.