

“D”

Supplemental Technical Information



A Tradition of Stewardship
A Commitment to Service

Napa County Public Works

1195 Third Street, Suite 101
Napa, CA 94559-3092
www.countyofnapa.org/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Steven E. Lederer
Director

December 18, 2019

Subject: Ponti Road and Scarlett Winery Use Permit Request #P16-00428-UP APN 030-280-010

The Department of Public Works (DPW) has been requested to provide information regarding Ponti Rd., and how the road relates to the subject use permit application.

After research into the history of the road, the county's maintenance thereon, and after discussion with the County Surveyor, DPW has determined that Ponti Rd. is a public road. The County has authority over the road from pavement edge to edge, but not beyond that.

If the applicant has a desire to offer to repave or do other maintenance/upgrades to the road within the bounds of the existing pavement, DPW would have no objection (after obtaining the proper encroachment permit) to that activity. DPW has no authority to require such an offer.

Sincerely,

A handwritten signature in blue ink, appearing to read "S. Lederer".

Steven E. Lederer
Director of Public Works

Cc: PBES Project Planner
Laura Anderson, Deputy County Counsel

November 22, 2019
File No. 19-1-116

Ms. Charlene Gallina
Napa County Department of Planning, Building & Environmental Services
Conservation Division
1195 Third St., 2nd Floor
Napa, CA 94559

SUBJECT: Proposed Scarlett Winery (P16-00428-UP) Responses to Comments

Dear Ms. Gallina:

In response to your request, Luhdorff & Scalmanini, Consulting Engineers (LSCE) has reviewed documents posted as part of the October 2, 2019 Planning Commission Agenda Item 7C related to the proposed Scarlett Winery at 1052 Ponti Road (APN 030-280-010, Use Permit No. P16-00428-UP). Specifically, we reviewed the Initial Study/Mitigated Negative Declaration (IS/MND), the 2018 Water Availability Analysis (WAA) prepared by Bartelt Engineering¹, the 2018 Stormwater Control Plan prepared by Bartelt Engineering², and public comments posted with Agenda Item 7C. This letter provides responses to groundwater and water use related comments submitted in the letter dated September 20, 2019 from Kamman Hydrology & Engineering, included as Attachment C in the October 1, 2019 comment letter from Shute, Mihaly & Weinberger.

RESPONSE A – GROUNDWATER CONDITIONS NEAR 1052 PONTI ROAD

Kamman Hydrology & Engineering (KHE) comments that the IS/MND provides an incorrect characterization of groundwater conditions and references a hydrograph for a well monitored by Napa County near the proposed Scarlett Winery. The monitored well, NapaCounty-132, is an active production well and has been monitored by Napa County for over five decades. The KHE comment references a description of year-to-year groundwater level declines at NapaCounty-132 noted in the 2016 Basin Analysis Report for the Napa Valley Subbasin.³ The comment states:

The hydrograph for this well illustrates a long-term and steady decline in groundwater levels in the aquifer below the Scarlett Winery site. Thus, contrary to the statements and conclusions

¹ Bartelt Engineering. 2018. *Water Availability Analysis for Scarlett Winery, 1052 Ponti Road, Napa County, CA, APN 030-280-010*. January 2018 (Revised). 6 p.

² Bartelt Engineering. 2018. *Stormwater Control Plan for a Regulated Project, Scarlett Winery, 1052 Ponti Road, Napa County, CA, APN 030-280-010*. January 2018 (Revised). 20 p.

³ Luhdorff & Scalmanini Consulting Engineers. 2016. *Napa Valley groundwater sustainability: a basin analysis report for the Napa Valley Subbasin*. Prepared for Napa County. December 13, 2016. 375 p.

presented in the IS/MND, groundwater levels and associated aquifer storage beneath the Project Site are not stable, but are in a state of decline.
- Kamman Hydrology & Engineering, September 20, 2019, p. 2

The hydrograph referenced in the comment, and shown in Figure 4-6 of the 2016 Basin Analysis Report for the Napa Valley Subbasin, includes data through December 2015 during the 2012 to 2016 drought. The County has continued to monitor this well since December 2015, even increasing to a monthly frequency to better understand how water levels in this well vary seasonally and annually. Data collected since December 2015 show that water levels have remained stable in the NapaCounty-132 well (see **Attachment A**). The groundwater level and precipitation data through 2018 included in the NapaCounty-132 hydrograph have been presented in Annual Reports prepared for Napa County.^{4,5}

The year-to-year groundwater level declines noted in the 2016 Basin Analysis Report refer to data collected between 2007 and 2015 when groundwater levels experienced declining levels in successive years. As noted in the 2016 Basin Analysis Report, 2007 was also when a vineyard near NapaCounty-132 was replanted. Young vines can temporarily require additional irrigation compared to more established vines due to younger vines' smaller root systems. Temporarily increased irrigation demand near the monitored well may account for some of the year-to-year declines observed from 2007 to 2015. Another influence on groundwater levels over that time was the extended period of years with below median precipitation. Over a nine-year span from 2007 to 2015, total annual precipitation was below the 1970 to 2019 median value in seven years (see **Attachment A**). With median to above median precipitation occurring in 2016, 2017, and 2019, the data show that spring season groundwater levels in NapaCounty-132 have recovered to levels consistent with levels observed since the early 1970s. Even during the 2007 to 2015 period, depths to groundwater measured at NapaCounty-132 were never greater than 33 feet. These observations support the finding of stable long-term groundwater level trends stated in the IS/MND.

RESPONSE B – POTENTIAL IMPACTS ON GROUNDWATER RECHARGE

KHE also comments that proposed land use changes, increases in impervious surface area, and surface drainage improvements may result in a net decrease in the annual volume of groundwater recharge:

Even though the WAA indicates that the project will lead to a small decrease in groundwater demand, it is unknown whether the changes in land-use/-cover, the relatively large increase (nearly 300%) in impervious surface area, and surface drainage improvements will lead to a net decrease in the annual volume of groundwater recharge that exceeds the decrease in demands. If the reduction in annual groundwater recharge volume exceeds the decrease in annual demand volume associated with the project, the project could reduce the amount of annual recharge and exacerbate the current declines in local groundwater supply.
- Kamman Hydrology & Engineering, September 20, 2019, p. 3

⁴ LSCE. 2018. *Napa County groundwater sustainability: annual report – water year 2017*. February 2018.

⁵ LSCE. 2019. *Napa County groundwater sustainability: annual report – water year 2018*. March 2019.

The Stormwater Control Plan (Plan) prepared by Bartelt Engineering describes that land surface slopes range from 0 to 1 percent on the portion of the project parcel where development and stormwater retention are proposed to occur. The Plan describes that approximately 59,441 square feet, or about 1.37 acres, of additional impervious area would be added to the project parcel based on the proposed design of new buildings and infrastructure. The Plan also describes several low impact development strategies to be used to reduce or avoid increased stormwater runoff volumes, including maintaining natural drainage patterns on the parcel and allowing stormwater runoff from the proposed new impervious areas to be retained within existing vineyards following natural drainage patterns.

From the perspective of groundwater recharge potential and changes that may result from the project, the increase in impervious area of approximately 1.37 acres does not present a significant risk of groundwater supply reduction given average rates of groundwater recharge from infiltration in Napa Valley and the County's existing water use threshold for Napa Valley Floor areas. The Napa Valley Floor water use threshold of 1 acre-foot per acre results in water use threshold of 47.17 acre-feet per year for the project, based on the portion of the project parcel located within the Napa Valley Floor. The proposed total use of 29.40 acre-feet per year is 17.77 acre-feet per year below the parcel-specific water use threshold.

Prior studies of Napa Valley hydrology by LSCE and MBK Engineers have calculated average annual rates of infiltration on the Napa Valley Floor ranging from 2.54 acre-feet per acre to 2.36 acre-feet per acre.^{6,7} Infiltration, as described in those prior studies, reflects the retention of precipitation in soils and is represented by the difference between the volume of precipitation and the volume of runoff. Of the total volume of water that infiltrates into the soil profile, some portion can become groundwater recharge if not otherwise removed from the soil profile through evaporation or transpiration by plants. Those prior studies have calculated average annual rates of groundwater recharge resulting from infiltration in the Napa Valley Floor ranging from 0.52 acre-feet per acre to 1.5 acre-feet per acre. At those rates, the increase in impervious area planned to occur, 1.37 acres, could be estimated to reduce infiltration by an average of 3.23 acre-feet per year to 3.48 acre-feet per year and reduce groundwater recharge by approximately 0.71 acre-feet per year to 2.06 acre-feet per year, if none of the runoff generated by the new impervious area is able to infiltrate on other parts of the parcel. Taking the higher average annual rates, as a conservative approach, the increase in impervious area could potentially reduce infiltration by an average of 3.48 acre-feet per year and reduce groundwater recharge by 2.06 acre-feet per year. The potential reduction in groundwater recharge of 2.06 acre-feet per year is well below the 17.77 acre-feet per year allotment which the project does not propose to use. This supports the finding of the IS/MND that the project would have a less than significant impact on groundwater supplies or groundwater recharge such that management of the basin is impeded.

⁶ Luhdorff & Scalmanini Consulting Engineers (LSCE) and MBK Engineers. 2013. *Updated Hydrogeologic Conceptualization and Characterization of Conditions*. Prepared for Napa County. 181 p.

⁷ LSCE. 2016. *Napa Valley groundwater sustainability: a basin analysis report for the Napa Valley Subbasin*. Prepared for Napa County. December 13, 2016. 375 p.

CONCLUSION

Currently available data on groundwater conditions in the vicinity of the proposed Scarlett Winery, including data not cited by commenters, reflects long-term stable groundwater levels in a well monitored by Napa County for over five decades, NapaCounty-132. The groundwater monitoring data support the finding of stable long-term groundwater level trends stated in the IS/MND and do not indicate that reductions in groundwater storage are occurring.

While other considerations may exist relative to the impacts from increased stormwater generation due to impervious areas planned as part of the project, a significant reduction in groundwater recharge is not among them. Even if none of the stormwater runoff generated by the new impervious area is able to infiltrate on other parts of the parcel, the estimated potential reduction in groundwater recharge, 2.06 acre-feet per year, represents less than 12% of the 17.77 acre-foot per year water use allotment which the project does not propose to use. This supports the finding of the IS/MND that the project would have a less than significant impact on groundwater supplies or groundwater recharge such that management of the basin is impeded.

The WAA developed by Bartelt Engineering describes the existing and planned uses of water on the project parcel that would result in a net decrease in annual water use of approximately 0.15 acre-feet. The WAA presents water use estimates for both current and proposed uses, at rates consistent with the County's current WAA Guidance. Given the apparent lack of prior water use monitoring on the project parcel and the County's interest in ensuring that proposed uses are consistent with the water use thresholds set by the County to maintain groundwater availability, it is recommended that the County include a requirement that the project monitor and record water use and groundwater levels on the project parcel as a condition of permit approval, as described in the County's standard conditions of approval.

We appreciate the opportunity to provide these responses to comments. If you have any questions, or wish to discuss any of the above, we would be pleased to respond.

Sincerely,

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS



Reid Bryson
Senior Hydrologist

Enclosure

CC: Vicki Kretsinger Grabert, LSCE

