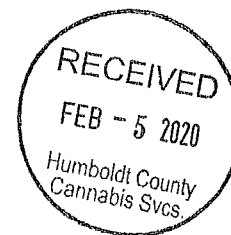


Richard D. LaVen
Retired Water Project Manager
City of Fort Bragg, CA
P.O. Box 756
Fortuna, CA 95540
725-4974



Portia Saucedo, Planner
Humboldt County Planning Commission
Eureka, CA 95501

Re: Application Number PLN-11065-CUP 16-139 (filed July 20, 2016)
On the February 6, 2020 Agenda, this application is cited as CUP 16-346.

To Whom it May Concern,

This letter is in response to the Staff Report accompany the above item on the February 6, 2020 Consent Agenda.

This is my second letter of protest of this Application. Ms. Anne Wade's water problems have not been addressed. Her home has been rendered virtually unlivable by this project because she has lost her access to a dependable water supply.

The January 2020 Staff Report included the following:

in Attachment 1: Recommended Conditions of Approval,

Performance Standards for Cultivation and Processing Operations;

Ongoing Requirements / Development Restrictions which must be satisfied for the life of the project:

Item 30 III: Plumbing facilities and water source must be capable of handling increased usage without adverse consequences to neighboring properties or to the environment.

In the February 2020 Staff Report, that requirement is still in place.

My first protest letter stated that this project has already created adverse consequences on AP-308-131-016. Planning Department Staff has solved this problem by accepting a pump test submitted by the applicant. On January 20, 2020, the applicant's consultant, Watson Well Service, conducted a pump test on the applicant's well. The pump ran at 33 gallons per minute for eight hours. During that wet weather test, the water level dropped approximately 7 feet. Please note that the pumping rate reported for the test, 33 gallons per minute, was less than the pump rate requested in the application, 38 gallons per minute.

The surface elevation at the test well is about 360 feet above sea level. The test well is reported to be 408 feet deep. That means the bottom of the well is about 48 feet below sea level. The water surface elevation began at a measured distance of 324 feet from the well surface (an elevation of 36 feet above sea level), then dropped and stabilized at a measured 331 feet from the well surface, or 29 feet above sea level.

The observation well is reported to serve a property at 1740 Table Bluff Road. But if the description and the air photo, the direction (southwest) and the reported distance between wells (3,327 feet) are taken into account, the observation well appears to be located at an elevation of about 160 feet (from the USGS topographic map) and serves a property on Copenhagen Road. During the pump test, the water level in the

observation well remained steady, at 117 feet below the reference point. Assuming that the surface elevation of the well is 160 feet above sea level, the water surface remained steady at about 43 feet above sea level.

There was no report of the physical characteristics of water sampled from either well. Simple measurements (water temperature, conductivity, pH) as well as more definitive chemical analysis of samples would provide some indication that water from the test well and the observation well had similar characteristics.

Discounting Table Bluff's structural geology, it appears that the elevation of groundwater surface levels on the south side of Table Bluff are higher than those same levels on the top or north side. What this wet weather pump test demonstrated is that there is no hydraulic connectivity between the two wells.

The applicant has NOT demonstrated that the ONGOING REQUIREMENTS for the LIFE of the PROJECT, Item 30 III, that the water source can be utilized without adverse consequences to neighboring properties.

REQUEST:

Item 2 of the Recommended Conditions of Approval requires the applicant to conduct an annual dry-season standard pump test. The applicant is required annually to employ a licensed and experienced professional to evaluate the pump test and to submit the results to the Planning Department for review.

This condition appears to be based on the assumption that the applicant's January 20, 2020 pump test was satisfactory. It was not, and since it was not, what then?

I request that this application NOT be approved until a dry weather pump test is completed, professionally reviewed and accepted by the Planning Department.

Such a test must include observation wells be located on neighboring properties. There are 4 such wells known or reported to me:

1. The well on Martin Rau's property. This well is approximately 550 feet east of the applicant's well. Mr. Rau has granted permission to use his well as an observation well.
2. The well on Anne B. Wade's property. This well is approximately 1,930 feet (my Google Earth measurement) northwest of the applicant's well. Ms. Wade has granted permission to use her well as an observation well.
- 3 & 4 These are wells located on the Peterson property west of Table Bluff Road. The Petersons are aware of this issue but have not yet been contacted about using their wells as observation wells.

The dry weather pump test must be conducted by a licensed and experienced professional. The following requirements are requested:

1. Before the test begins, the test well and all observation wells must be pumped briefly to remove stagnant water and then allowed to come to equilibrium.
2. After equilibrium, water samples must be taken from each well. Water temperature, pH, and conductivity of each sample will be measured on site. Water samples will be lab tested for conventional physical and chemical properties.
3. The pump test must be a step test, where the pump is run at a low rate until a static water level in the test well is achieved. Then the pump rate is increased and the process is repeated. Pump rates must include both the 33 gallons per minute rate used in the wet weather test and

the 38 gallons per minute rate requested by the applicant. The purpose for the low pump rate steps is to see if there is a rate of pumping that does not affect the observation wells.

4. After the pump test is completed, a second set of water samples must be collected from each well. Each sample must be tested for the same parameters as the pre-test samples.

Instead of the annual aquifer test requirement of Item 2, I propose that the applicant be required to install, operate and maintain automated continuous water level recording devices on the project well and on all the observation wells. The output of these devices can then be sent to the owners of the observation wells. All the water level data can be evaluated by a qualified professional, who would submit an annual report to the Planning Department. After review and consultation, the Planning Department could order another pump test if one was needed.

ANOTHER SUGGESTION:

Once again, there is a way out of this water sharing problem without resorting to well, pumps, and expensive pump tests and monitoring. My previous letter demonstrated that rainfall running from existing roofs on the property would yield slightly less than a million gallons of water during an average year. All it takes is plastic gutters, plastic piping, and a large set of storage tanks, bladders or lined ponds. Pumps can be windmills or solar powered.

Simply require the applicant to use rainwater instead of groundwater.

Sincerely,



Richard D. LaVen

Water Project Manager, City of Fort Bragg, CA, 2000-2008
Hydrologist, BLM Burned Area Emergency Response Team, Eley, NV, 1999
Hydrologist, Hoopa Tribal Fisheries, 1999
Director of Land Management, Hoopa Valley Tribe, 1996-1999
Freelance hydrologist, 1988-1996
Lecturer in Forest Hydrology, Humboldt State University, 1979-1988, 1994
Forest Hydrologist, Six Rivers National Forest, 1974-1979
Forest Hydrologist, Francis Marion National Forest, SC, 1971-74
Forester, Jefferson National Forest, VA, 1970-1971

Ph.D. candidate, paleomagnetism and climate modeling, 1985-1988
MS, Wildland Hydrology, Humboldt State University, 1988
BS, Forest Management, State University of New York College of Forestry, 1968.