GEO-LAW
LAW AS IT RELATES TO THE EARTH

August 2, 2022

VIA E-MAIL

David Villalobos, MPA
Hearing Support Supervisor
Planning & Development
County of Santa Barbara
123 E. Anapamu St.
Santa Barbara, CA 93101
E-mail: dvillalo@countyofsb.org
Phone: 805.568.2058

Re: Sierra Botanicals' (Mr. Justin El-Diwany) August 10, 2022 Appeal Of Nojoqui Farms Cannabis Cultivation Application (Case No. 19LUP-0000-00530): Hydrogeologic and Technical Support Demonstrating Why Sierra Botanicals Should Prevail On Appeal

Dear Mr. Villalobos:

This law firm - GEO-LAW, P.C. - a specialized water law, land use and real estate firm, is legal counsel to Justin El-Diwany, owner of Sierra Botanicals in Buellton, California, as well as Isabella Organic Farms LLC / Jake Rodriguez, an individual, manager of land leased by Sierra Botanicals (hereinafter, collectively referred to as "Sierra Botanicals"), with respect to various water rights matters impacting Sierra Botanicals' business, including the subject appeal of Nojoqui Farms' cannabis cultivation application and other regulatory proceedings before the County of Santa Barbara and the California Department of Fish & Wildlife.

At the outset, it is important for the County of Santa Barbara ("County") to understand first and foremost, that Sierra Botanicals is party to these administrative proceedings because the proposed project is detrimental to Mr. El-Diwany's livelihood. Water is obviously a common and precious resource, especially over the last few years of drought conditions, and it is

imperative that any new applicant fulfill the necessary investigative and entitlement requirements so that piecemeal projects and impacts are not endured watershed wide.

It is tempting for an applicant such as Nojoqui Farms to shake off responsibility by arguing, for example, “the amount of water a party can draw is the responsibility of Water Quality Board, not the County of Santa Barbara", but here are the simple facts that should be open and obvious to County Staff and Directors.

First, to grow cannabis, it is necessary for any applicant, including Nojoqui Farms, to have approvals from multiple State and County agencies. Sierra Botanicals, in fact, met the hurdles for all responsible agencies and was issued an annual license for its commercial cannabis activities in December of 2019. During that process, Sierra Botanicals was required to obtain a finalized Lake and Streambed Alteration (“LSA”) Agreement with the California Department of Fish and Wildlife (“CDFW”). What’s more, during the application process, farms are required to submit a hydrogeologic report prepared by a licensed, certified professional hydrogeologist (“CHG”), which is evaluated along side the project by a hydrogeologic engineer that is employed by the State of California.

In addition to the Applicant Nojoqui Farms’ application, as well as various biological reports and the hydrogeologic report, any applicant must also furnish a mathematical model based on longitudinal date that shows their proposed pumping regime and its anticipated impact on the any creek or stream. Here, Sierra Botanicals initially furnished an application with a pumping regime of 6,000 gallons per day on a 15-minute pumping cycle followed by 45-minutes of rest. Sierra Botanicals’ expert hydrogeologic consultant, Kear Groundwater, based this model on 13 days of data collection, and two separate field inspections. After looking at the data, the State Authority rationed down Sierra Botanicals’ allowed daily water use to 4,000 gallons per day. Then, after communicating back and forth with the department, Sierra Botanicals agreed to 4,000 gallons per day and was issued its LSA.

Now, unlike the Appellant, Sierra Botanicals, the Applicant, Nojoqui Farms, has not had its hydrogeologic report, nor its pumping regime, analyzed by the State Authority, nor any other third-party reviewer. This is important and cannot be overlooked by the County.

As a PhD Geologist, I personally have reviewed the hydrogeologic information prepared by the applicant and I have also reviewed the expert report of Kear Groundwater, Sierra Botanicals’ hydrogeologic consultant. There are some important technical considerations that the County must understand and weigh as it considers the detrimental effects of the applicant’s proposed project, as discussed immediately below, beginning with the site geology. At the very minimum, the County should require that Nojoqui Farm’s application be sent out for independent third-party review by a qualified, expert hydrogeologist and hydrogeologic engineering firm. In addition, the County should require the Nojoqui Farms apply for an LSA before the County

wastes further precious resources on this matter; i.e., for acreage that may not be viable for cultivation per the State of California. Why waste the County's precious resources and time until this is done?

More specifically, the Sierra Botanicals parcel is located in southwestern Santa Barbara County, approximately four miles south of the City of Buellton. The subject parcel is bordered on the west by Nojoqui Creek and to the east by parcels adjacent to Highway 101 (See Figure 1 of Kear Groundwater report, 2018, attached hereto as **"EXHIBIT A"**). The main ridgeline of the transverse Santa Ynez Mountain Range lies between the Ranch and the Pacific Ocean, routing local drainage to the northward toward the Santa Ynez River. Borehole logs and geologic maps indicate that the parcels directly overly Quaternary alluvial deposits, varying in thickness up to approximately 200 feet. Tertiary Cozy Dell Shale outcrops adjacent east and west to the property, and Tertiary Matilija Sandstone outcrops to the north and underlies the property at depth. The Tertiary Gaviota-Sacate Formation underlies the property at depth to the south and outcrops to the south. If alluvial aquifers are found to be inadequate for future water needs, these formations may yield water; the Matilija formation being the primary target, with several locations on the property being accessible at various depths (increasing southward). Postulated bedrock well locations are shown in cross section view in Figure 3 of the Kear Groundwater report (see **"EXHIBIT A"**).

Based on GEO-LAW P.C.'s review, of the above referenced reports, there is substantial objective scientific evidenced to concluded that the applicant's proposed project will have a substantial, negative, and detrimental effect on the water levels of Nojoqui Creek and the related biologic environment and species. Indeed, as Kear Groudwater concludes: "the pumping of the [Sierra Botanicals] Well at the property has a measurable acute effect on the adjacent creek if the pumping duration is of adequate length. Short pumping durations minimize or remove this acute effect; by timing pumping operations appropriately for modern agriculture, acute effects on creek flow can be avoided completely and/or lower than measurable via standard instrumentation and methods. The limited extent of the shallow alluvium, connection to surface water flow, and the exposure of bedrock in the creek bottom where alluvium is absent suggests a complete and reciprocal interaction with surface and alluvial groundwater in the property area." (See Kear Groundwater, 2018, pp. 1-2.). Importantly, Kear Groundwater's ultimate conclusion is that "acute pumping of the tested well at Nojoqui Farms parcels clearly and consistently has a measurable effect on surface water nearby in Nojoqui Creek." (See Kear Groundwater, 2018, p. 9).

Based on the conclusions of Kear Grounwater, GEO-LAW P.C.'s own independent review of the technical reports, it appears the applicant has not adequately considered and investigated the true impact of its proposed project, and thus approving this project could cause harm to a protected species, red legged frog, which has recorded occurrences within the Nojoqui Creek. Indeed, if review by the State Authority concerning Sierra Botanicals' project

resulted in a requirement that Sierra Botanicals draw no more than 4,000 gallons per day from this watershed because it would harm the Nojoqui Creek, well then where in the world is the water going to come from for the applicant to draw water for 30 acres of cannabis, a much larger operation than Sierra Botanicals?

If you would like to discuss the contents of this letter or any other matter concerning the appeal hearing, you may reach Dr. Benumof at 1-888-GEO-LAW1 or ben@geo-law.com.

Sincerely,

Benjamin T. Benumof. Ph.D., Esq.
E/S (electronic signature)

KG18-0439

TO: Justin El-Dwany
Sierra Botanicals

FROM: Kear Groundwater
P.O. Box 2601
Santa Barbara, CA 93120-2601

DATE: December 18, 2018

SUBJECT: *Surface and groundwater interaction, shallow aquifer testing, and recommendations for groundwater supply development*
Sierra Botanicals, 1999 Highway 101, Buellton, Santa Barbara County, California

This memorandum provides a summary of Kear Groundwater's (KG) review of local hydrogeology, aquifer testing and stream interaction, and recommended approach for groundwater supply development at the subject parcel located west of Highway 101 south of Buellton, Santa Barbara County, California (Figures 1-4).

Our involvement with the project, conducted at your request, was to perform a review of available hydrogeologic information, visit the property and meet with key personnel, evaluate the current state of existing groundwater resources, aquifer conditions, and potential surface water interaction, and to provide recommendations for groundwater supply development that would minimize acute pumping affects for modern agriculture applications on the adjacent Nojoqui Creek.

The planned well for irrigation applications is referred to as "Al's Well," currently used for light domestic and limited irrigation. KG understands that the well is to serve an additional 16,000 to 20,000 gallons of water per week to irrigate some 3 acres of plantings.

We conclude that the pumping of the Al's Well at the property has a measurable acute effect on the adjacent creek if the pumping duration is of adequate length. Short pumping durations minimize or remove this acute effect; by timing pumping operations appropriately for modern agriculture, acute effects on creek flow can be avoided completely and/or lower than measurable via standard instrumentation and methods. The limited extent of the shallow alluvium, connection to surface water flow, and the exposure of bedrock in the creek bottom where alluvium is absent suggests a complete and reciprocal interaction with surface and alluvial

groundwater in the property area. Deeper bedrock aquifers, some of which contain groundwater under adequate pressure to flow via artesian wells, lacks the direct connection to surface water resources, and appear to be an alternative means to develop groundwater resources to meet modern agriculture demands without directly affecting surface water flow when longer pumping durations be required.

Based on the data reviewed, KG concludes that a regime of limited pumping periods for irrigation purposes, with adequate recovery intervals, will result in no measurable acute impact on Nojoqui Creek. Daily pumping for domestic use may continue at present volumes, provided recovery to static conditions occurs prior to the start of irrigation pumping cycles. This regime should be subjected to field testing and monitoring as a condition of approval for utilizing Al's Well for modern agricultural irrigation purposes.

Details of our testing and evaluation follow.

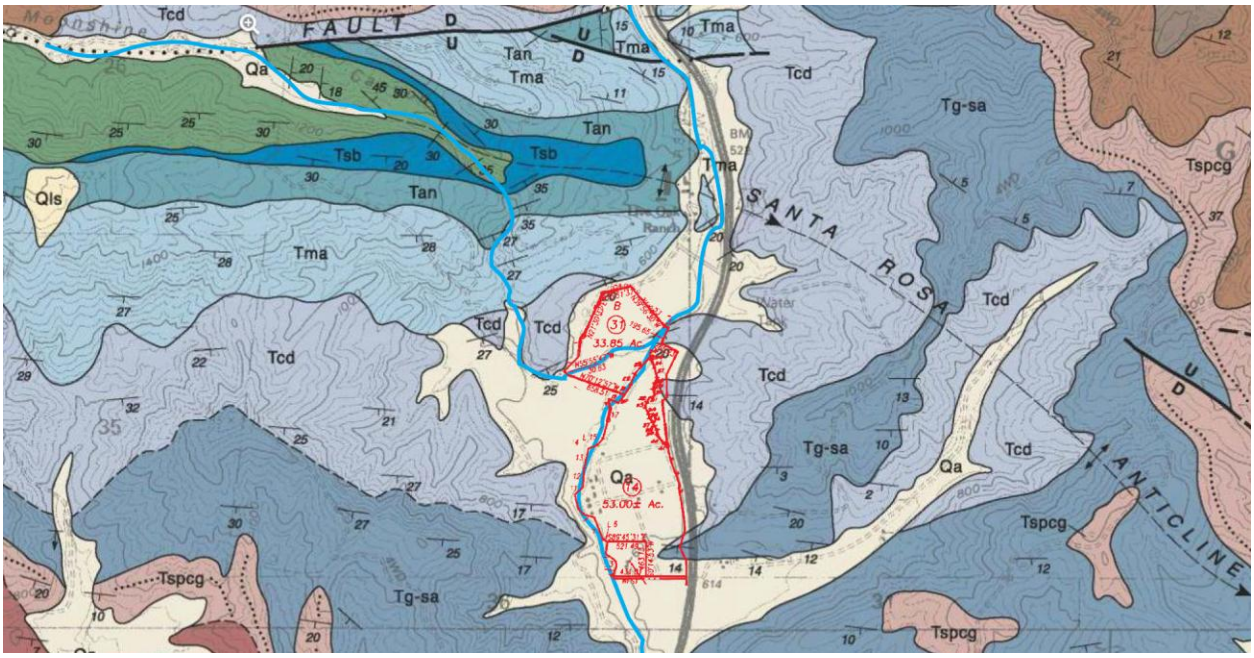

Figure 1 – Geologic Map with Moonshine Creek, Nojoqui Creek, and the discussed parcel (southwestern-most of shown) superimposed (After Dibblee, 1988).

Between August 22 and September 4, 2018, Kear Groundwater (KG) conducted a field study to evaluate the nature and extent of groundwater-surface water interactions between Nojoqui Creek and a shallow well field less than approximately 110 feet from the creek (Figure 2). Solinst Leveloggers were deployed in the pumping well, nearby observation wells, a holding pond

receiving overflow from the tank to which the pump discharges, and at two locations in Nojoqui Creek: one approximately 70 feet downstream from the pumping well and another approximately 0.6 mile downstream. Figure 2 presents the locations of monitored points near the pumping well. KG personnel monitored the stream and wells during periods of pumping and collected water level data. These data indicate that there is clearly a hydrologic connection between the pumping well and Nojoqui Creek. The magnitude of the connection is small over typical pumping durations: 107 minutes of pumping induced 0.02 feet of drawdown in the creek 80 feet from the well. No acute discernable effects were observed at the downstream monitoring location.

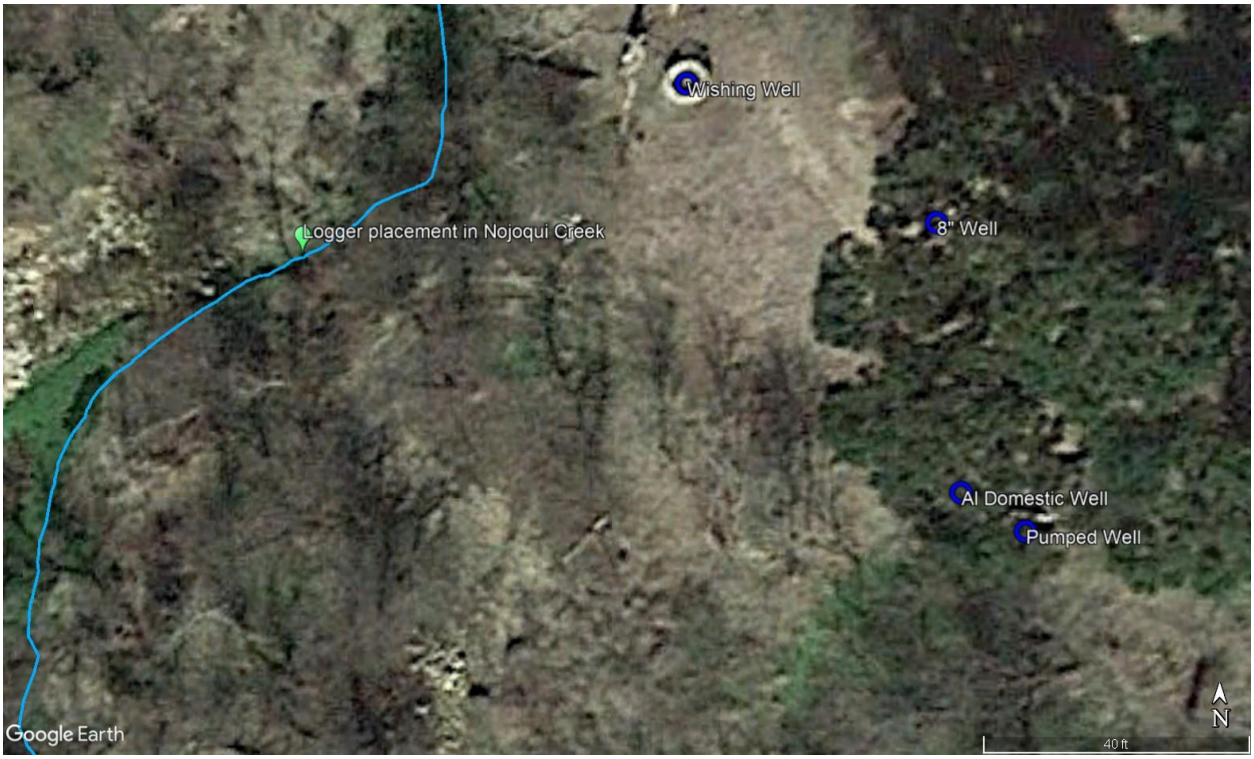

Figure 2 – Locations of tested wells and creek area, on subject parcel. KG Loggers were placed in the pumping well, the 8" Well, and the Wishing Well, but no access to the Al Domestic Well was feasible.

Site Geology

The subject parcel is located in southwestern Santa Barbara County, approximately four miles south of the City of Buellton. The subject parcel is bordered on the west by Nojoqui Creek and to the east by parcels adjacent to Highway 101 (Figure 1). The main ridgeline of the transverse Santa Ynez Mountain Range lies between the Ranch and the Pacific Ocean, routing local drainage to the northward toward the Santa Ynez River.

Borehole logs and geologic maps indicate that the parcels directly overly Quaternary alluvial deposits, varying in thickness up to approximately 200 feet. Tertiary Cozy Dell Shale outcrops adjacent east and west to the property, and Tertiary Matilija Sandstone outcrops to the north and underlies the property at depth. The Tertiary Gaviota-Sacate Formation underlies the property at depth to the south and outcrops to the south. If alluvial aquifers are found to be inadequate for future water needs, these formations may yield water; the Matilija formation being the primary target, with several locations on the property being accessible at various depths (increasing southward). Postulated bedrock well locations are shown in cross section view in Figure 3.

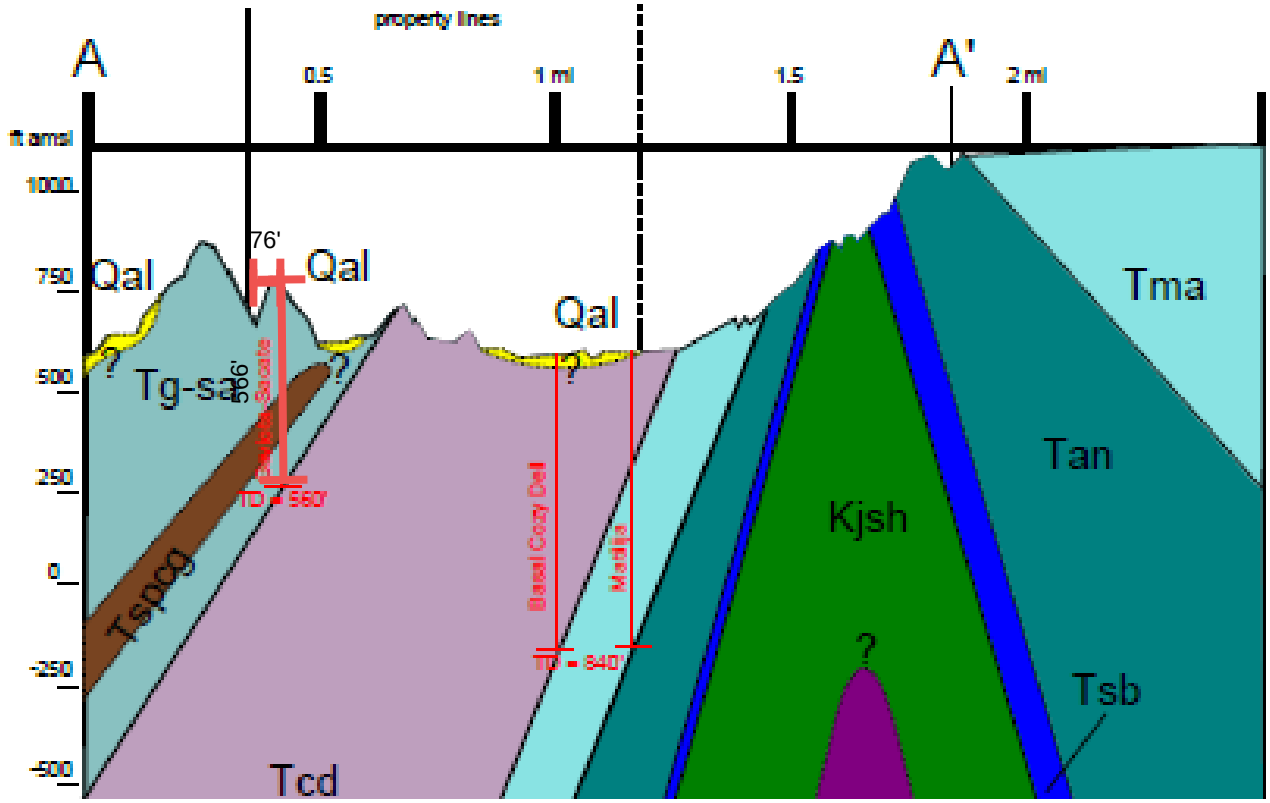

Figure 3 – Schematic cross section indicating bedrock geology, targets Tma (Matilija Formation) most feasible and isolated from creek flow.

Field Methods

In order to estimate the extent and magnitude of groundwater-surface water interactions between Nojoqui Creek and the Pumped Well, a shallow well approximately 80 feet from the

creek, KG conducted several pumping tests between August 22 and September 4, 2018. Solinst Leveloggers were deployed in the pumping well, two nearby observation wells which lacked pumps, and in two locations in Nojoqui Creek, one approximately 80 feet from the pumping well and a second 0.6 mile downstream to the north. A logger was also installed in the reservoir which receives pumped water once the storage tank is full. The response in the creek stage was anticipated to be small, so KG deployed a Solinst Barologger in the pumping well to compensate water level changes for changes in atmospheric pressure. Natural diurnal variation due to evaporation and transpiration was also anticipated, so several days of background data were collected to discern the net effects of pumping alone. Loggers were in place for 13 days, spanning the pump tests and several days of background observations.

Two pumping periods lasting approximately 1 hour 47 minutes were observed. The first, on August 23, commenced at 9:45 am, and the second at 11:00 am on August 24. KG personnel observed the pumping and recorded pumping volumes as reported by a totalizer located near the wellhead. The pump is equipped with a "soft start" feature that gradually increases the pump rate during the first 45 minutes of pumping, with the rate leveling off at ~268 gallons per minute thereafter. Data from these observations are presented in the Table 1 and several figures. Following these tests, water needs on the Ranch necessitated one hour of pumping per day, which was scheduled for 4pm to maximize recovery and allow natural background conditions to be observed daily during the 9am – 3pm pump test and recovery interval. All water level data was compensated for changes in atmospheric pressure, and changes during the pumping interval were compared to the natural trend during the same time on non-pumping days.

Table 1 – Pumping Rates at pumped well during initial observations August 23, 2018

Time of Day	Time (min)	Totalizer (gal x100)	Interval Rate (gpm)	Average Rate (gpm)
9:45	0	475054	0	0
9:59	14	475083	207.1	207.1
10:10	25	475115	290.9	244.0
10:20	35	475139	240.0	242.9
10:30	45	475165.8	268.0	248.4
11:10	85	475272	265.5	256.5
11:25	100	475312	266.7	258.0
11:32	107	475331	271.4	258.9

Additionally, field observations were recorded at the downstream monitoring location during the August 24 pump test. Several times per hour, stream velocity was recorded and discharge calculated at a natural weir located where Nojoqui Creek is confined by sandstone and shale (bedrock) outcrops. Location is just north of the confluence of Moonshine Creek (dry at the time) where a Ranch road crosses the Nojoqui Creek. These data are presented on Table 2.

Table 2 – Nojoqui Creek velocity and discharge estimates, August 24, 2018 pumping time (at 34°33.597'N 120°11.577'W)

Time of Day	Velocity (ft/s)	est. Q (cfs)
9:10	2.2	0.16
9:20	2.2	0.16
10:35	2.2	0.16
11:20	2.2	0.16
11:30	2.5	0.18
11:45	2.5	0.18
12:00	2.5	0.18
12:10	2.5	0.18
12:20	2.5	0.18
12:30	2.5	0.18
12:40	2.5	0.18
12:50	2.5	0.18
13:00	2.5	0.18
13:10	2.1	0.15
13:20	2.4	0.17
13:30	2.4	0.17
13:42	2.3	0.16
13:50	2.3	0.16
14:00	2.3	0.16
14:12	2	0.14
14:20	2.2	0.16
14:30	2	0.14
14:40	2.2	0.16
15:15	2	0.14

Results and Analysis

Background and Diurnal Variation

Water loss due to evaporation and transpiration is expected to peak in the early afternoon as sunlight becomes the most intense. This expected diurnal variation in creek flow was observed in both Nojoqui Creek monitoring locations. At the North location, approximately 0.6 miles downstream, this regular cycle was observed independent of pumping, as seen in Figure 3. Low water coincides with high water temperature, highlighting the inverse relationship between insolation and water level. At the South location near the pumping well, enhanced drawdown did occur during pumping, but decrease in stage also occurred midday without any pumping influence (Figure 4).

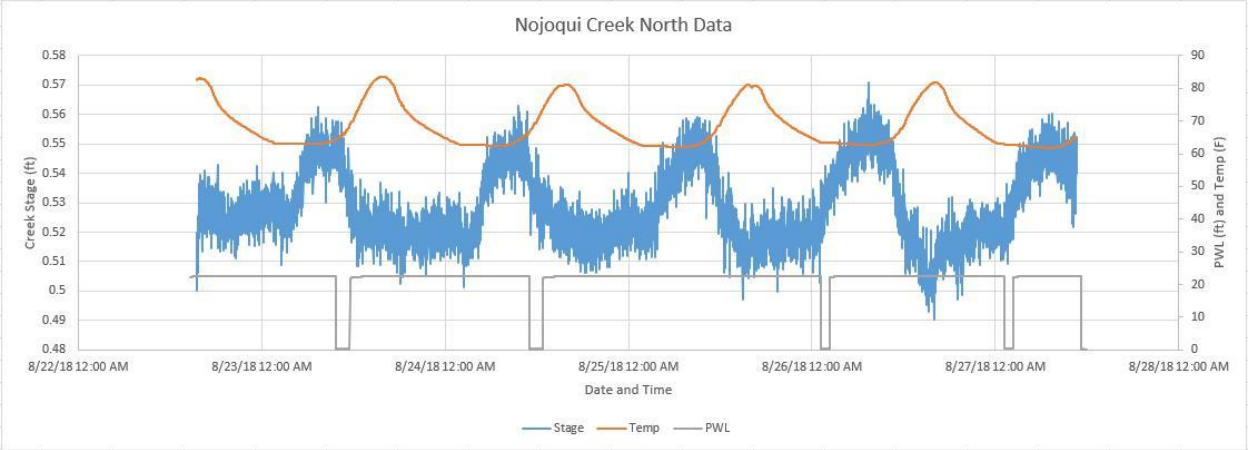

Figure 3 – Nojoqui Creek North Location Diurnal Variations. *Note that the daily decline in creek stage precedes the pumping periods and occurred on August 26 and 27 with no change in magnitude, despite no pumping occurring at that time on those dates (PWL on graph).*

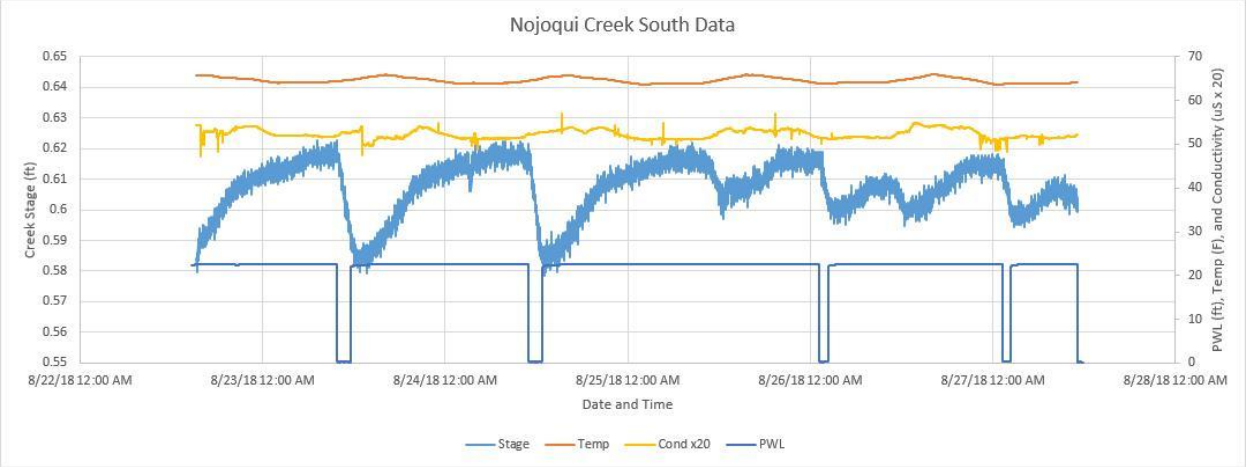

Figure 4 – Nojoqui Creek South Pumping Effects and Diurnal Variations*. Note that the daily decline in creek stage roughly coincides with the pumping periods but also occurred on August 26 and 27, despite no pumping occurring at that time on those dates. The magnitude, however, was much smaller, indicating that the observed creek drawdowns on August 23 and August 24 include components of both natural diurnal cycling and pumping-induced effects.*

Pumping Test Data

Logger data were compensated for atmospheric pressure changes and compared to background creek data to discern pumping effects from natural diurnal cycles. As seen in Figures 5 – 7, drawdown at the South creek location during pumping exceeded the natural midday decrease in water level during both pumping tests. At the downstream North creek location, no acute pumping effects were observed.

Because the natural diurnal cycle causes a midday drawdown, the observed pumping drawdown in the creek were corrected to remove naturally occurring midday drawdown. The pumping effects from the two tests were averaged and plotted against the base-10 log of time since pumping began (Figure 8). Because the creek can be viewed as a proxy for the water table level, drawdown versus log (time) is expected to trend towards a linear relationship. The later portion of this data, during constant pumping after the initial "soft start" ramp up, was separated and a linear regression fit to the data. This regression line was used to predict drawdown caused by longer pumping periods. 3 hours and 6 hours pumping periods respectively are predicted to cause 0.030 and 0.044 feet of drawdown at the South Nojoqui Creek location.

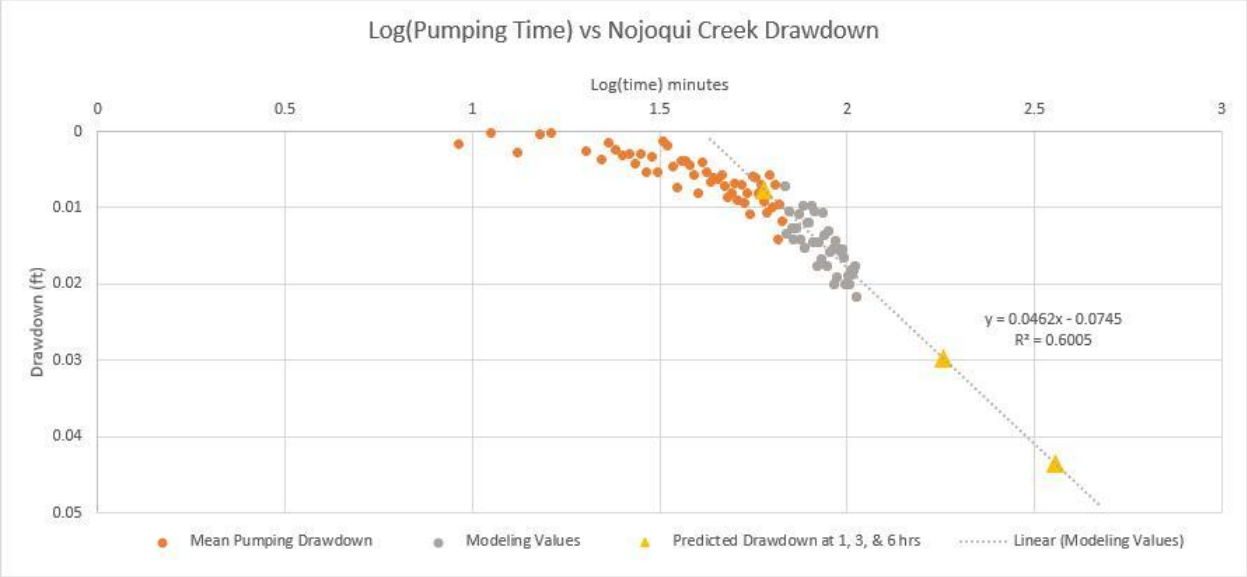

Figure 8 – Composite Corrected Pump Test Data. Pump test 1 and 2 averaged, with natural diurnal effects removed. Late-time data fit with regression line to predict drawdown at 3 and 6 hours pumping time.

Testing Conclusions

Acute pumping of the tested well at Nojoqui Farms parcels clearly and consistently has a measurable effect on surface water nearby in Nojoqui Creek. The acute magnitude of this effect is small, at less than 0.05 feet during the longest anticipated pumping period. Such acute effects are not as clearly measurable 0.6 miles downstream, near where Nojoqui Creek exits the property, but the cumulative effects will likely be considered in review of pumping programs. If 0.05 feet drawdown were to occur at the downstream weir location, this would constitute a reduction in depth of approximately 10 percent under August 2018 hydrologic conditions. Natural diurnal cycles do cause daily variation in stream flow of the similar magnitude at both monitored Nojoqui Creek locations, which were not significantly interrupted by the test pumping periods at the upstream well.

To augment water production to the parcels, new wells should be constructed in the northern portion of the main parcel where the Matilija Formation would be encountered at depth.

Wells screened in the alluvium an pumped for extended durations may cause effects on surface water, while the deeper bedrock wells can be sealed from potential direct connections.

The multiple datalogger locations allow multiple hydrogeologic pump test methods to be applied, providing a range of estimates for aquifer properties. All aquifer tests rely on a variety of assumptions that may or may not be fully representative of reality, so obtaining results from multiple methods allowed for confirmation of the results' internal consistency. Furthermore, endmember results were used to estimate the most extreme possible outcomes in order to formulate the most conservative pumping regime.

Two aquifer properties were estimated using three different mathematical pump test solutions. These results are summarized in Table 3. Transmissivity, measured in feet squared per minute, is a measure of the rate of flow in an aquifer. Storativity is a unitless term related to the volume of water available in an aquifer, quantifying the aquifer's response to change in head. Together, these variables were used to estimate the radius of influence (ROI) of Al's Well after a specified pumping time (Equation 1). The radius of influence is defined as the distance at which pumping causes measurable drawdown in an aquifer; these analyses allow us to optimize pumping so that the ROI does not exceed the distance from the pumping well to the creek.

Table 3 – Mathematical summary of Pumping Test Results

Method	Well(s) data used	Est. T (ft^2/min)	Est. S (unitless)
Time-Recovery	Pumping Well	**9.54**	N/A
Cooper-Jacob	8" Well	5.03	0.1
Cooper-Jacob	Wishing Well	7.09	**0.04**
Distance-Drawdown	8" + Wishing Well + Creek	5.84	0.08

From the four estimates of transmissivity (T) and three of storativity (S), the largest transmissivity and smallest storativity were selected in order to maximize the ROI for a

given pumping time. The ROI of interest is known: the distance from Al's Well to the creek, which is 99 feet. Thus, the equation is rearrange to solve for the time at which pumping will influence the creek (Equation 2).

Equation 1 – Bear (1979) derivation of radius of influence of a pumping well at time *t*.

$$ROI(t) = 1.5 * \left(\frac{Tt}{S}\right)^{\frac{1}{2}}$$

Equation 2 – Bear (1979) equation, solving for time t.

$$t = \left(\frac{ROI}{1.5}\right)^{2} * \frac{S}{T}$$

Results

Inputting the largest estimated transmissivity (9.54 ft^2/min), the smallest storativity (0.04), and the known distance to the creek (99 ft), KG estimates that Al's Well can be pumped for approximately 18 minutes without causing measurable drawdown in the aquifer at the distance to Nojoqui Creek. As described above, this is a conservative estimate. Computing *t* for all combinations of estimated parameters, a maximum of 86 minutes is calculated, an average of 49 minutes, and a median of 47 minutes is obtained from the twelve estimates. These results are presented in Table 4.

Table 4 – Summary of estimated pumping time before occurrence of measurable creek drawdown

Method	Estimated Time (minutes)
Most Conservative	18.3
Average of all Results	49.2
Least Conservative	86.6

Recommendations

KG recommends that these calculated estimates be used to guide a trial pumping test of several days to ensure that irrigation pumping does not cause measurable drawdown in Nojoqui Creek. The most conservative estimate should be utilized to maximize the success of the operation. The 18-minute pumping duration estimate provided by the Bear equation provides a good starting point for this test. Other semi-empirical equations exist to estimate the ROI (solutions by Weber, Kusakin), but Bear's method provides the most conservative results, so KG recommends its use. Upon satisfactory conclusion of this test, a permit would be sought to approve use of Al's Well for modern agriculture irrigation purposes. Some form of long-term monitoring may be required as a condition of this permit.

Recommended Pumping Regime

Currently, KG understands that Al's Well operates for approximately 1 hour every night by pumping into a storage tank to provide water for domestic use on the property. Data from nearby wells indicates rapid recovery (99% recovery within 150% of total pumping time), so a rest period of three times the pumping period would ensure full recovery. After full recovery, we recommend a regime of pumping for 15 minutes, followed by 45 minutes to allow recovery prior to the next pumping cycle. During testing, KG personnel will monitor water levels to ensure full recovery between pumping periods, and adjust the rest period as necessary. An outline of this pumping regime is shown in Table 5. This regime should be maintained and monitored for approximately seven days to test for cumulative effects possibly altering the aquifer response. Such a test would need to occur during a period with no forecasted precipitation, as any runoff entering Nojoqui Creek could prevent detection of small changes caused by pumping.

The proposed pumping regime includes twenty 15-minute irrigation pumping periods per day, for a total of 300 minutes of irrigation pumping in a 24-hour period. Producing at approximately 20 gallons per minute, this yields 6,000 gallons per day. KG understands that this volume surpasses anticipated irrigation needs, thus the test pumping regime may be altered if needed to include shorter pumping periods and/or longer rest periods while still meeting water demands. This information may be useful in obtaining a permit to irrigate with water from Al's Well; if KG can demonstrate that pumping in excess of irrigation needs causes no measurable

impact on surface water in Nojoqui Creek, it will bolster the case for allowing limited irrigation use.

Table 5 – Proposed daily test pumping regime		
Time of Day	**Pump Status**	**Period Length**
12:00 AM	Domestic Pumping	1 hour
1:00 AM	Rest Period	3 hours
4:00 AM	Irrigation Pumping	15 minutes
4:15 AM	Rest Period	45 minutes
5:00 AM	Irrigation Pumping	15 minutes
5:15 AM	Rest Period	45 minutes
…	cycles continue throughout day	…
…		…
11:00 PM	Irrigation Pumping	15 minutes
11:15 PM	Rest Period	45 minutes
12:00 AM	Domestic Pumping	

We look forward to our continued involvement with the subject parcels: our subsequent tasks may include testing observations under the recommended pumping regime and later assistance in the solicitation of firm drilling bids and contracting, permitting support, and field support during drilling, construction, development, and testing at postulated new well(s).

Please do not hesitate to contact us with any questions.

Best Regards,

Jordan Kear
Principal Hydrogeologist
Professional Geologist No. 6960
California Certified Hydrogeologist No. 749

Statement of Limitations

The services described in this report were performed in a manner consistent with our agreement with the client and in accordance with generally accepted professional consulting principles and practices. Opinions and recommendations contained in this report apply to conditions existing at certain locations when services were performed and are intended only for the specific purposes, locations, time frames, and project parameters indicated. We cannot be responsible for the impact of any changes in standards, practices, or regulations after performance of services.

Hydrogeologic analyses for this report relied solely on available background data obtained from the property owner, Santa Barbara County, the State of California, and/or published geologic reports. No independent subsurface exploration or geophysical surveying was conducted by our firm for this study. No guarantee of water quantity or quality from an attempted well, nor sustained production from an existing well, can be offered. Because the efforts to implement recommendations contained herein rely on the skill of outside contractors, our liability is limited to the dollar value of our professional efforts. Professional hydrogeologic review of pilot hole data is imperative to implementing the recommendations of this report.

Any discussions of fault activity herein are offered as they relate to groundwater resource development only. This report does not substitute a geotechnical analysis to support earthwork or construction. Discussions of water rights presented herein reflect professional hydrogeologic experience and are not intended to replace qualified legal opinions as should be solicited from a California-licensed attorney specializing in water rights.

Any use of this report by a third party is expressly prohibited without a written, specific authorization from the client. Such authorization will require a signed waiver and release agreement.