



Hydrology Report to Determine Area of Influence for Cultivation Irrigation Wells

for

Lake Coco Farms

Project Site Location:

APN: 005-006-07 & 005-013-01
3547 & 3417 Hendricks Road
Lakeport, CA 95453

December 21, 2021

Prepared for:

Lake County
Community Development Department
255 North Forbes Street
Lakeport, CA 95453





INTRODUCTION

The purpose of this study is to provide adequate information of the water usage and the impacts to the surrounding area for a proposed commercial cannabis cultivation site. The site is proposing a maximum 287,320 sq.ft. (6.59 acre) of commercial cannabis canopy area.

The parcels on which the project and wells are located are owned and managed by Lake Coco Holdings LLC which is owned by Micheal Sebour and Jolene Strange.

This report estimates the amount of water available and recharge rate during a drought year from the existing well. In addition, this report estimates the radius of influence to the surrounding area and estimates the cumulative impacts where interference is with existing wells.

This report has been prepared to comply with the County of Lake Ordinance 3106, "AN URGENCY ORDINANCE REQUIREING LAND USE APPLICANTS TO PROVIDE ENHANCED WATER ANALYSIS DURING A DECLARED DROUGHT EMERGENCY" approved by the Lake County Board of Supervisors on July 7, 2021.

STUDY LIMITATIONS

The yield of wells cannot be estimated with precision because of the uncertainty with the aquifer and the amount of rain percentage of rainfall that percolates through the ground. Therefore, conservative estimates and assumptions are used in this report.

This study is based on the following information and assumptions.

- Cooper - Jacob well equation
- Well Completion Reports obtained from Lake County EHD and CA Dept. of Water Resources Database
- Well Yield Test and Drillers Reports
- Rainfall for a drought year is 20% of annual precipitation
- Aquifer is uniform throughout the wells area of influence



WELL

Well #1 is the well that will be used for irrigating the proposed cultivation project. A 1000 ft radius was placed around the radius of influence of well #1. A radius of influence was calculated for all wells that fell within the 1000 ft radius. In this case, well #2 did not have a well drillers report on file with the state or county. Therefore, an assumed conservative 300' radius was used. Well #3 fell just outside the 1000' radius but did have a well drillers report on file, so for data gathering purposes, a radius of influence was calculated for that well. See Well Area of Influence Map in Appendix B.1 and see the Surrounding Area Map in Appendix B.2. All wells were located using information gathered via site visit, the County of Lake Environmental Health Department, and the CA Department of Water Resources. See well descriptions below.

WELL #1

- Southern vicinity of APN: 005-013-01.
- See Appendix B for well maps.
- Total drill depth of 52 feet.
- The capacity of the well is at least 120 gpm.
- Use: "Lake Coco Farms" Commercial Cannabis Irrigation.

WELL #2

- Western vicinity of APN: 005-013-21.
- See Appendix B for well maps.
- Total drill depth is N/A.
- The capacity of the well is N/A.
- Use: Domestic.

WELL #3

- Northwest vicinity of APN: 005-014-26.
- See Appendix B for well maps.
- Total drill depth is estimated at 300 feet.
- The capacity of the well is 10 gpm.
- Use: Domestic.



WELL RADIUS OF INFLUENCE

The well radius of influence (cumulative impact) is estimated by the Cooper-Jacob equation:

$$R_{(well)} = \sqrt{\frac{2.24584Tt}{S}}$$

Where,

$R_{(well)}$ = Radius of Influence (m)

t = time (days)

T = transmissivity (m² / day)

S = water storage capacity (%) unitless

$$T = K * b$$

Where,

K = 2.0 E-4 m/s for Basalt porosity

b = (Total Drill Depth of Well) - (pump depth below clay layer)

t = 1 day = 86,400 sec

S = 0.15

Therefore;

$R_{(1)} \Rightarrow 44 \text{ m} = 143 \text{ feet}$

$R_{(2)} \Rightarrow 91 \text{ m} = 300 \text{ feet}$

$R_{(3)} \Rightarrow 137 \text{ m} = 449 \text{ feet}$

There is no intersection between the radius of influence of any well. See Well Area of Influence Map in Appendix B.1.



WATER USAGE

The proposed project has a total canopy area of 287,320 sq.ft. (6.59 acre), 10,000 sq.ft (0.23 acre) immature plant area, and a 80'x120' processing facility for 5 employees during grow season and 10 employees during harvest season. These values were used for calculating the total water usage in gallons per year. See calculations below.

WATER USAGE FOR WELL #1

The total water usage of the canopy area is estimated by the square footage of the canopy multiplied by the ft/year needed for a single cannabis plant. The ft/yr is estimated to be similar to a tomato plant, which is 20in/year or 1.66 ft/year. For immature plants, that value is cut in half from 1.66 ft/year to 0.83 ft/year. For processing buildings, a harvest season is defined to be a 13-week period, therefore, there is a 39-week non-harvest period per year.

$$W_{\text{Irrigation}} = A * (\text{ft/yr})$$

$$W_{\text{Irrigation}} = (6.59 \text{ acres}) * (43,560 \text{ sf/acre}) * (1.66 \text{ ft/year}) * (7.48 \text{ gal/cf})$$
$$W_{\text{Irrigation}} = \mathbf{3,564,371 \text{ gal/year}}$$

$$W_{\text{Irrigation Immature Plant}} = (0.23 \text{ acres}) * (43,560 \text{ sf/acre}) * (0.83 \text{ ft/year}) * (7.48 \text{ gal/cf})$$
$$W_{\text{Irrigation Immature Plant}} = \mathbf{62,200 \text{ gal/year}}$$

$$W_{\text{Processing Building (Harvest)}} = (10 \text{ employees}) * (15 \text{ (gals/employee)/day}) * (5 \text{ days/week}) * (13 \text{ weeks/year}) = 9,750 \text{ gal/year}$$

$$W_{\text{Processing Building (Non-Harvest)}} = (5 \text{ employees}) * (15 \text{ (gals/employee)/day}) * (5 \text{ days/week}) * (39 \text{ weeks/year}) = 14,625 \text{ gal/year}$$

$$W_{\text{Processing Building}} = 9,750 + 14,625 = \mathbf{24,375 \text{ gal/year}}$$

$$\text{Total Water Usage} = W_{\text{Irrigation}} + W_{\text{Irrigation Immature Plant}} + W_{\text{Processing Building}}$$
$$= 3,564,371 \text{ gal/year} + 62,200 \text{ gal/year} + 24,375 \text{ gal/year}$$
$$= \mathbf{3,650,946 \text{ gal/year}}$$



AQUIFER RECHARGE

The proposed project has an estimated total annual water usage of 3,650,946 gallons per year.

The calculations of Aquifer Recharge are based on the tributary area to the radius of influence of Well #1. Per Well Recharge Area Map shown in Appendix B.3, the total recharge area is 1,556,024 sf.

Given: Annual Precipitation, $P = 32$ inches per year, assume a drought year is 20% of the annual precipitation, yields 6.4" (0.54165 ft) of rainfall. (Note: Rainfall of 2021 was 9" per NOAA for Lake County)

Volume of water for recharge = Area x Drought Precipitation x Coefficient of Seepage.

$$V = (1,556,024 \text{ sf}) \times (0.54165 \text{ ft/yr}) \times (7.48 \text{ gal/cf}) \times (0.7)$$

$$V = 4,413,007 \text{ gal/year}$$

$4,413,007 > 3,650,946$ therefore the well is adequate to handle the 6.59 acres of cultivation in a drought year.

CONCLUSION

Per our calculations and assumptions, the project has more than adequate water supply for the proposed irrigation use. Even in a drought year, our estimates show that the well has the capacity to handle the proposed water irrigation needs of the project, without impacting the surrounding neighbor's wells.

DISCLAIMER

Our calculations are based on data that has been made available to Vanderwall Engineering through state and county records as of 12/21/2021. All supporting data has been provided in this report. There is no way to guarantee future conditions. If new supporting data is provided, calculations would need to be redone to take into account for said data.



Appendix

A. Well Pump Test and Well Location/Plot Plans

B. Maps

- B1. Well Area of Influence Map
- B2. Surrounding Aerial Map
- B3. Well Recharge Area

Appendix

A

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA

Do Not Fill In
N^o 107967

State Well No. _____
Other Well No. 14/10-10

WELL #1

(2) LOCATION OF WELL:

County LAKE Owner's number, if any—
R. F. D. or Street No. T14N, R10W, SEC 10
EAST OF MARSHALL RANCH
HOME

(3) TYPE OF WORK (check):

New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Dug Well ☐

(6) CASING INSTALLED:

SINGLE ☒ DOUBLE ☐
From 0 ft. to 53 1/2 ft. 108 " 3/4 or 1/2 Wall

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring 3/8 X 1/2
Describe joint BUTT WELD

(7) PERFORATIONS:

Type of perforator used FACTORY
Size of perforations 3 in., length, by 11/8 in.
From 40 ft. to 52 ft. 6 Perf. per row 4 Rows per ft.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? ☐ Yes ☒ No To what depth _____ ft.

Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata

From _____ ft. to _____ ft.

Method of Sealing _____

(9) WATER LEVELS:

Depth at which water was first found 28 ft.

Standing level before perforating _____ ft.

ding level after perforating 15 ft.

(10) WELL TESTS:

Was a pump test made? ☐ Yes ☒ No If yes, by whom? BAILEY

Yield: 120 gal./min. with 2 ft. draw down after 12 hrs.

Temperature of water Cold Was a chemical analysis made? ☐ Yes ☒ No

Was electric log made of well? ☐ Yes ☒ No

(11) WELL LOG:

Total depth 52 ft. Depth of completed well 52 ft.

Formation: Describe by color, character, size of material, and structure.

0 ft. to 5 ft. SOIL
" " "
5 " 24 " BROWN CLAY / SOME
" " ROCKS
" " "
24 " 28 " SOFT BROWN CLAY
" " "
28 " 32 " BROWN HARD PAN
" " "
32 " 38 " BROWN CLAY
" " "
38 " 39 " BROWN HARD PAN
" " "
39 " 52 " CEMENTED GRAVEL

CONFIDENTIAL LOG
Water Code Sec. 7080

Work started 8/14/67 Completed 8/14 1967

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J.W. HUTTON
(Person, firm, or corporation) (Typed or printed)

Address LAKEPORT

[SIGNED] J.W. Hutton Well Driller

License No. 153912 Dated 8/15, 1967



Cramer Enterprises
977 20th st.
Lakeport, CA 95453 US
(707) 349-8575
eric.cramer@yahoo.com
<http://www.cramerent.com>

Invoice 2622

WELL #1

BILL TO	SHIP TO
Jolene Strange	Jolene Strange
Lake Coco Holdings LLC	Lake Coco Holdings LLC
4260 North State St	3547 Hendricks Rd
Ukiah, CA 95482 USA	Lakeport, CA 95453 USA

DATE
03/27/2020

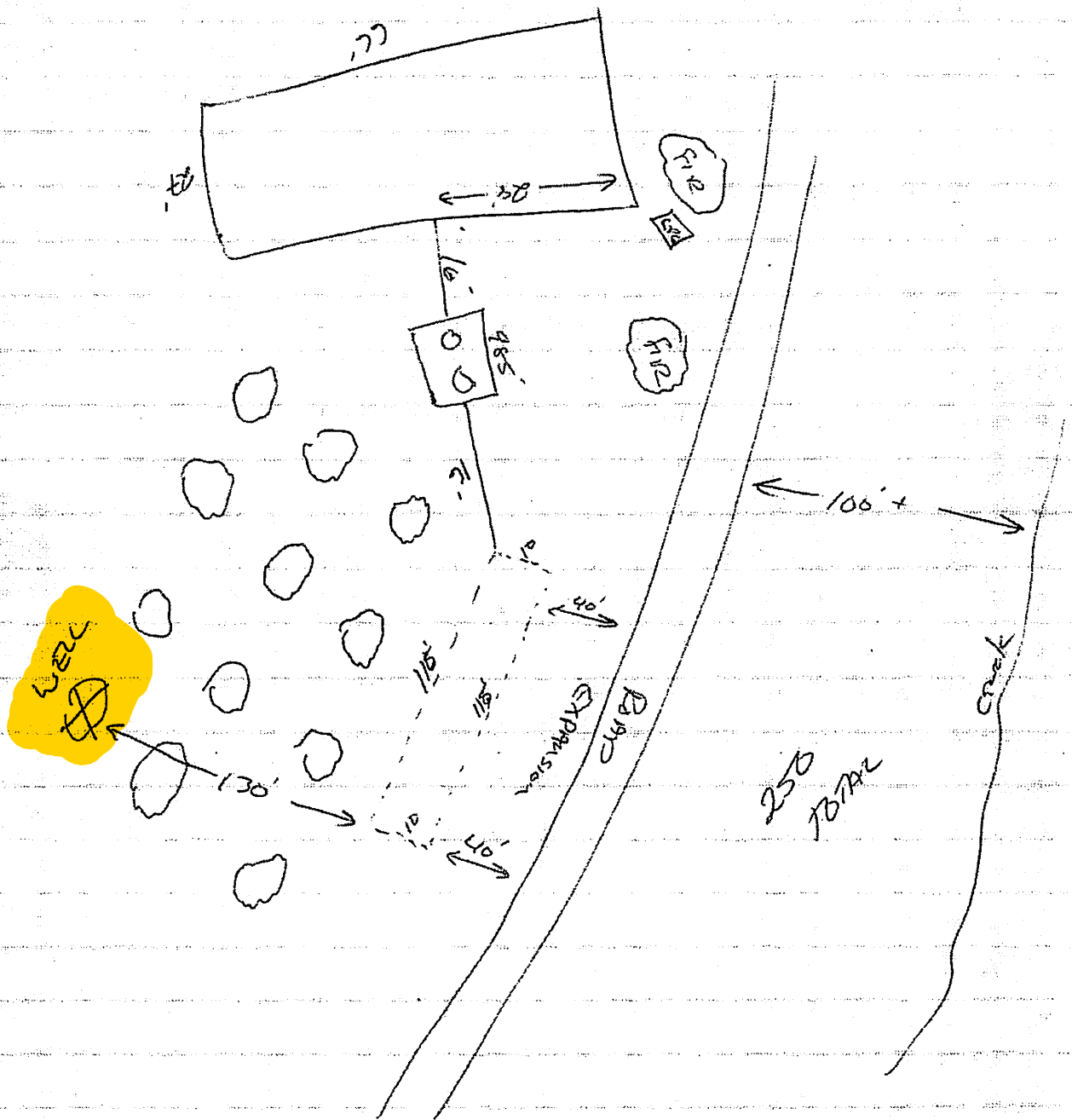
PLEASE PAY
\$3,187.62

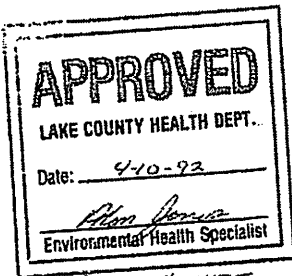
DUE DATE
04/03/2020

DESCRIPTION	QTY	RATE	AMOUNT
Wants us to do a well inspection. Would like to be emailed regarding whether or not the Ag suitability tests for boron, and would like to know if she needs to be on site for the inspection.	1	1,200.00	1,200.00
Arrived on site on 4/2/20 and performed two well tests per realtor Iris Angeleri. She is calling customer for permission and asked for Ag suitability, nitrate, bacti, and a production test for both wells. She said that the customer would like to put a rush on the test results and doesn't care how much it costs. Started the test on Ag/House well. It is a 12" steel well that also has a 1HP pump for the main house. Used a 5HP 3 phase 230v pump for the Ag to do the test in the same well. Performed the well test at 102 Gpm and the well only drew down to 10' from a static of 7' and it fully recovered in 7 seconds.			
Well yield test log is attached			
HP: 5 hp 230 3 phase. Diameter: 12". Static: 7'. Depth: 88'. Iron: 2.0. Hardness: 10. Ph: 6.5.			
4/2/20 Went to second well to perform the other test and found that the well gives water to the guest house. It is a 12" steel well with a static of 7.6 and a draw down of only 8.7 at 30 Gpm. It is a 1 HP pump in this well and at the end of the test it fully recovered in 22 seconds.	1	650.00	650.00
Well yield test log is attached			
HP: 1 hp sub. Diameter: 12. Static: 7.6. Depth: 77'. Iron: 20. Hardness: 11. Ph: 6.8.			
Agricultural Suitability Water Analysis - Rushed	2	495.00	990.00T
Bacti water sample - Rushed	2	85.00	170.00T

Eric Cramer - 

WELL #1



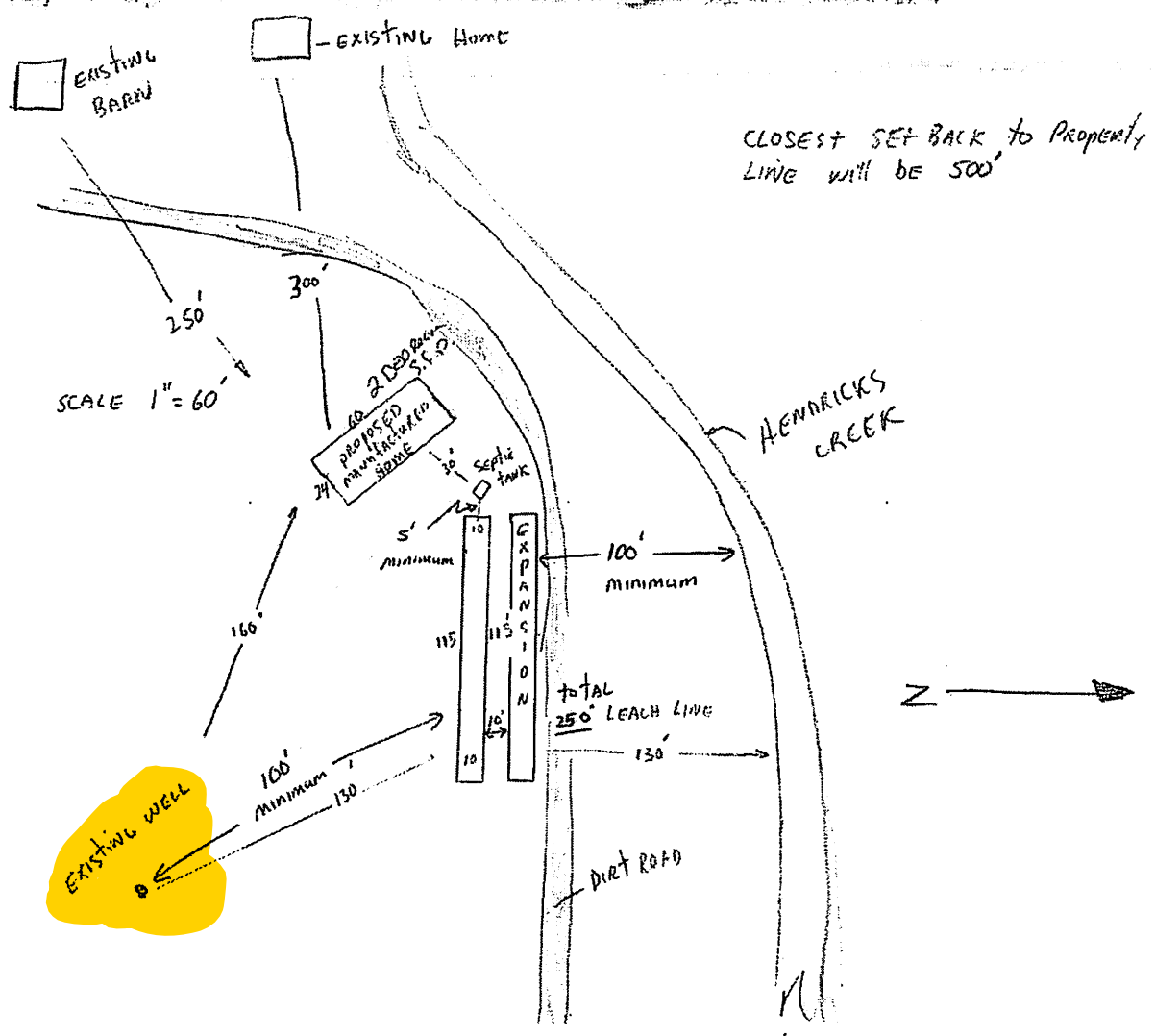
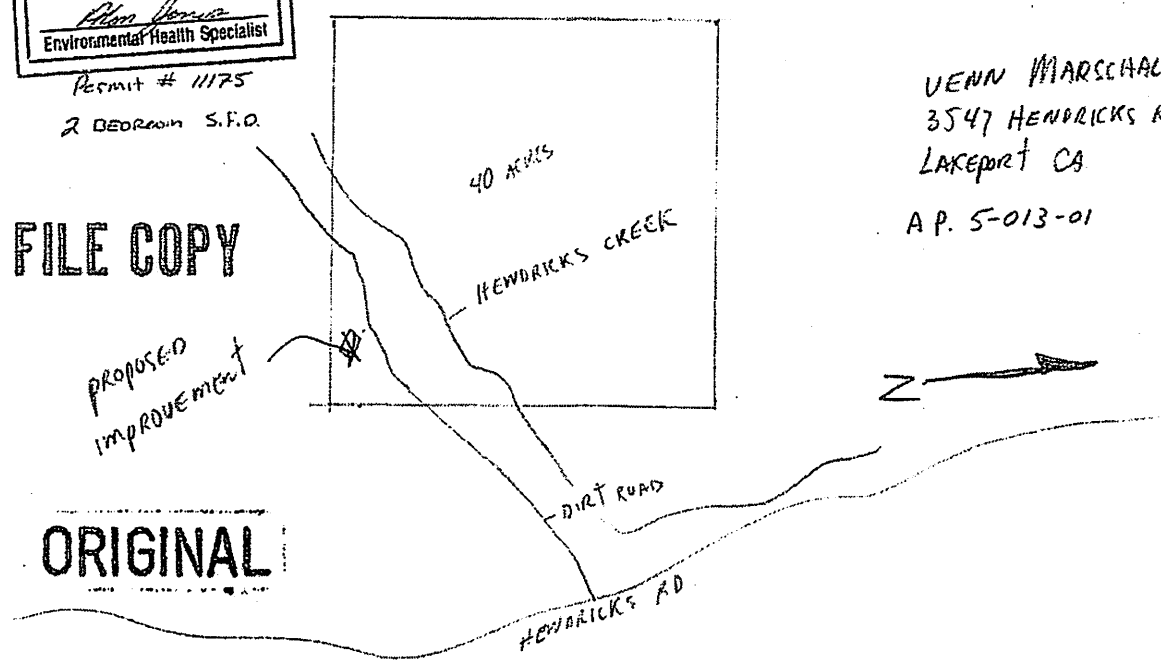


LOCATION MAP Not to SCALE

VERN MARSHALL
3547 HENDRICKS RD
LAKEPORT CA
A.P. 5-013-01

FILE COPY

ORIGINAL



ORIGINAL
File with DWR

RECEIVED

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

Page ____ of ____

Owner's Well No. _____

MAR 29 1999

No. 705635

Date Work Began 10-10-98

Ended 10-15-98

Local Permit Agency

Lake County Environmental Health

Permit No. WE1599

Permit Date

10-9-98

DWR USE ONLY — DO NOT FILL IN

14N/10W-10M

STATE WELL NO./STATION NO.

LATITUDE

LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION () ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY)

DRILLING METHOD Rotary FLUID Air

DEPTH FROM SURFACE	DESCRIPTION
Ft. to Ft.	
0 to 4	Brn. Gravelly Soil
4 to 63	Red Gravelly Clay
63 to 80	Blue Shale
80 to 92	Purple Shale
92 to 115	Blue-gray + Black Shale
115 to 145	Hard Gray Shale
145 to 156	Purple Shale
156 to 222	Green Shale
222 to 226	Blue-gray gritic clay
226 to 268	Purple Shale
268 to 300	Gray + Green Shale

TOTAL DEPTH OF BORING 300 (Feet)

TOTAL DEPTH OF COMPLETED WELL 300 (Feet)

WELL #3

WELL LOCATION

Address 3075 Hendrix Rd.

City Lakeport

County Lake

APN Book 005 Page 014 Parcel 26

Township 14N Range 10W Section 10

Latitude _____ Longitude _____

DEG. MIN. SEC. NORTH WEST

DEG. MIN. SEC. EAST

LOCATION SKETCH

NORTH

WEST

EAST

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY ()

☒ NEW WELL

MODIFICATION/REPAIR

☐ Deepen

☐ Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES ()

WATER SUPPLY

☒ Domestic ☐ Public

☐ Irrigation ☐ Industrial

MONITORING

TEST WELL

CATHODIC PROTECTION

HEAT EXCHANGE

DIRECT PUSH

INJECTION

VAPOR EXTRACTION

SPARGING

REMEDIATION

OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 280 (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____

ESTIMATED YIELD 10 (GPM) & TEST TYPE Air Lift

TEST LENGTH 1 (Hrs.) TOTAL DRAWDOWN _____ (Ft.)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	CASING (S)						DEPTH FROM SURFACE	ANNULAR MATERIAL			
		TYPE ()	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE		CE-MENT ()	BEN-TONITE ()	FILL ()	FILTER PACK (TYPE/SIZE)
0 to 63	9	☒	PVC F480	4 1/2	SDR26		0 to 21	☒				
63 to 260	7	☒	PVC F480	4 1/2	SDR26		21 to 300				Pea Gravel	
260 to 300	7	☒	PVC F480	4 1/2	SDR26	2 x 1/8						

MAR 30 1999

ATTACHMENTS ()

- ☐ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analyses
- ☐ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Don Mc Muller Well Drilling

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 1487 Old Long Valley Rd. CITY Charlevoix STATE CA ZIP 95423

Signed Don Mc Muller DATE SIGNED 11-20-98 C-57 LICENSE NUMBER 533152

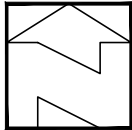
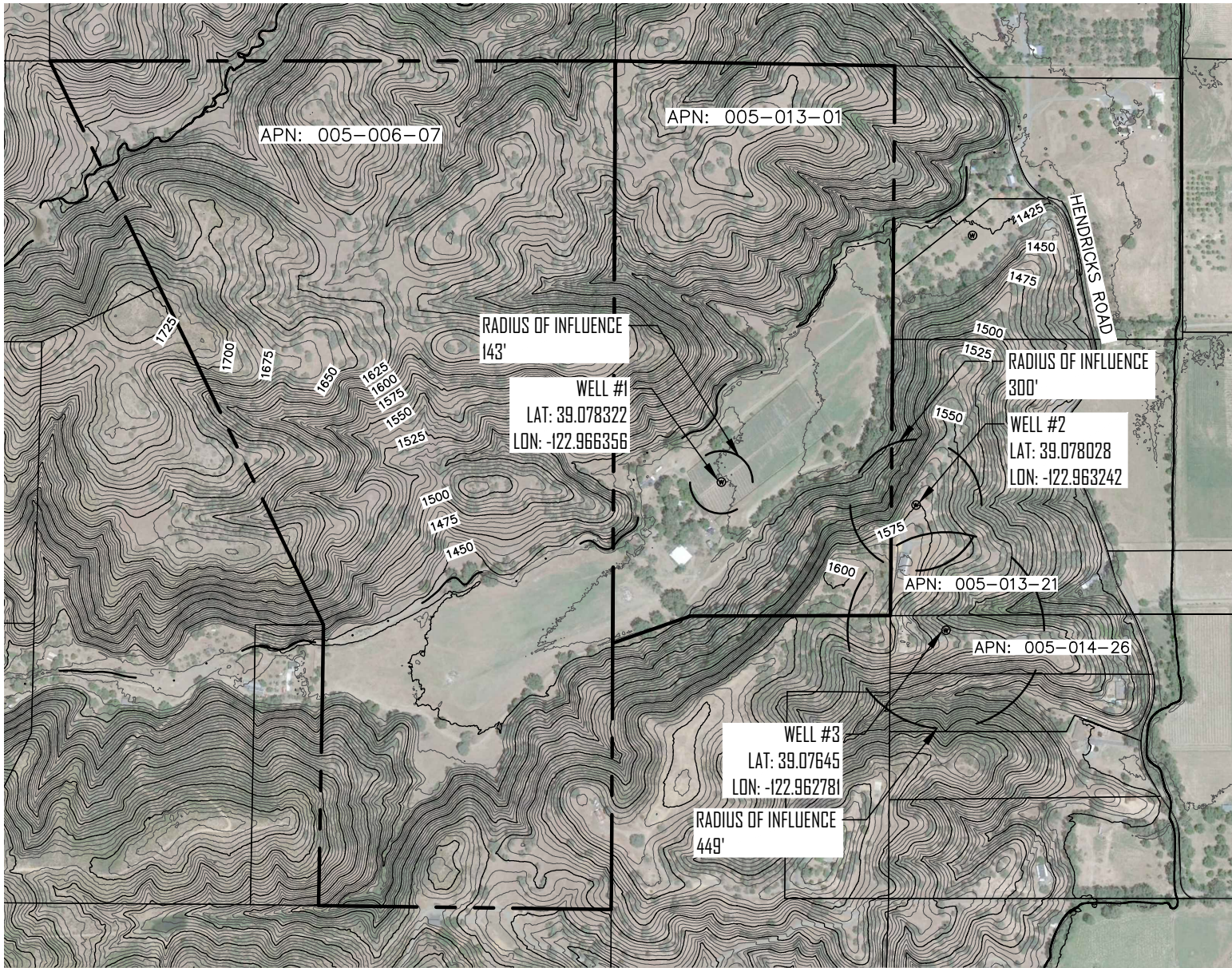
WELL DRILLER/AUTHORIZED REPRESENTATIVE

Appendix

B

Well Area of Influence Map

APPENDIX B.1



5' MINOR AND 25' MAJOR CONTOUR INTERVAL



SUBMITTED TO:
LAKE COUNTY COMMUNITY
DEVELOPMENT DEPT.
COUNTY OF LAKE
LAKEPORT, CA

PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

VanDerWall
Engineering, Inc.

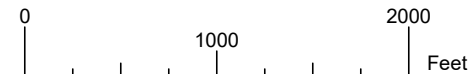
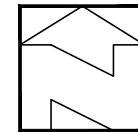
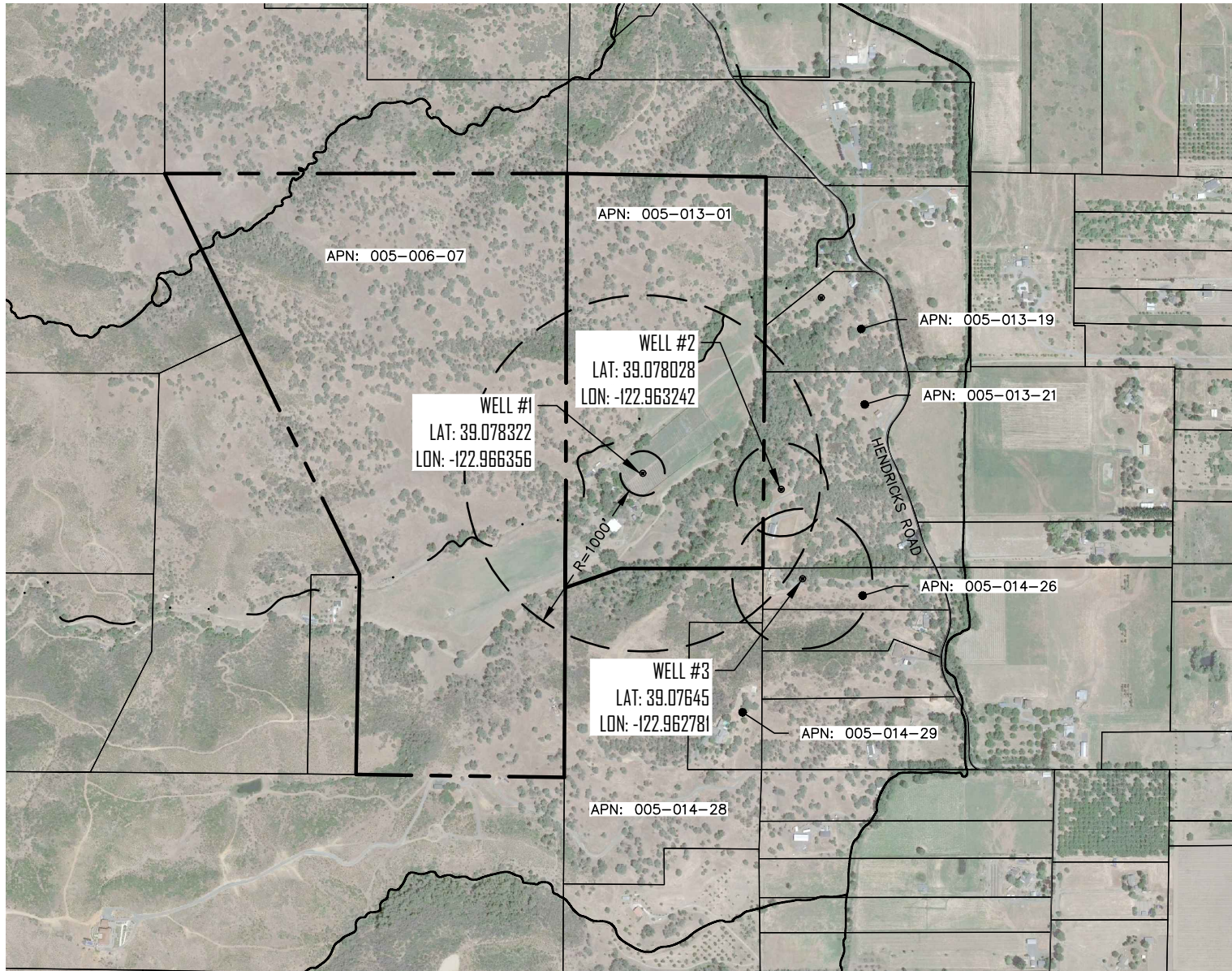
WELL AREA OF INFLUENCE MAP
APN's: 005-006-07 & 005-013-01
3547 & 3417 HENDRICKS ROAD
LAKEPORT, CALIFORNIA



VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
0 1/2"	
DATE	DEC 2021
PROJ	21-79
DWG	
APPENDIX	B.1

Surrounding Area Map

APPENDIX B.2



SUBMITTED TO:
LAKE COUNTY COMMUNITY
DEVELOPMENT DEPT.
COUNTY OF LAKE
LAKEPORT, CA

PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

**VanDerWall
Engineering, Inc.**

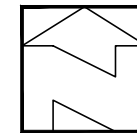
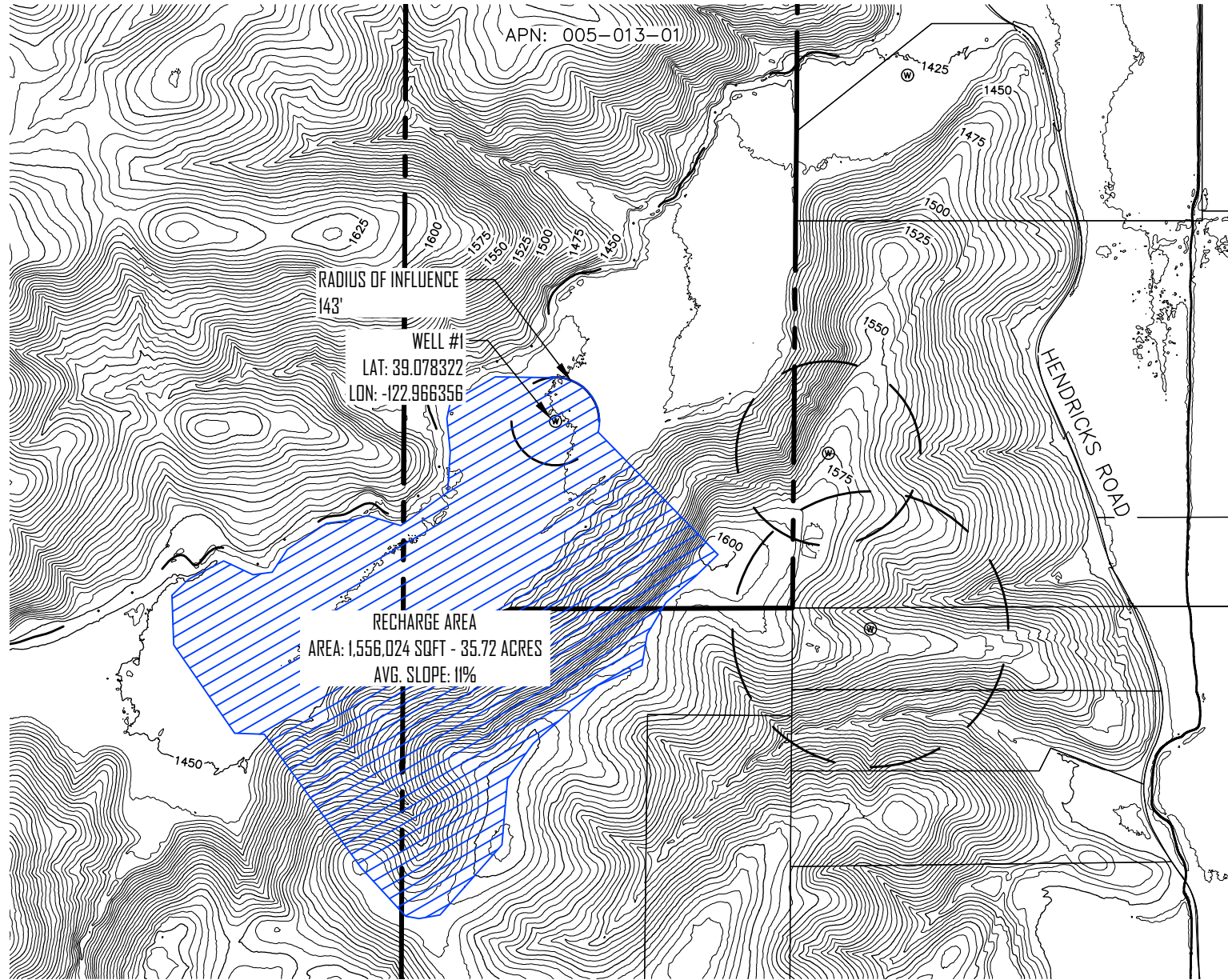
SURROUNDING AREA MAP
APN's: 005-006-07 & 005-013-01
3547 & 3417 HENDRICKS ROAD
LAKEPORT, CALIFORNIA



VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
0	1/2"
DATE	DEC 2021
PROJ	21-79
DWG	
APPENDIX	B.2

Well Recharge Area Map

APPENDIX B.3



SUBMITTED TO:
LAKE COUNTY COMMUNITY
DEVELOPMENT DEPT.
COUNTY OF LAKE
LAKEPORT, CA

PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

**VanDerWall
Engineering, Inc.**

WELL RECHARGE AREA MAP
APN's: 005-006-07 & 005-013-01
**3547 & 3417 HENDRICKS ROAD
LAKEPORT, CALIFORNIA**



VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DEC 2021
PROJ	21-79
DWG	
APPENDIX	B.3

DROUGHT MANAGEMENT PLAN

LAKE COCO FARMS

The Urgency Ordinance approved by the Lake County Board of Supervisors on July 27th, 2021 (Ordinance No. 3106) requires applicants to provide a plan depicting how the applicants plan to reduce water use during a declared drought emergency. The proposed commercial cannabis cultivation operation would be composed of five A-Type 3 “Medium Outdoor” Lake County License Types, with up to 205,800 ft² of combined cannabis canopy. All water for the proposed cultivation operation would come from an existing onsite groundwater well located at Latitude 39.07832° and Longitude -122.96637° on APN 005-013-01. The proposed cultivation operation would have an annual water use requirement of approximately 9.7 to acre-feet (3,165,866 gallons).

Per the Water Conservation and Use requirements outlined in the State Water Resources Control Board’s Cannabis General Order, the Applicant shall implement the following Best Practical Treatment and Control (BPTC) measures to conserve water resources:

- Regularly inspect the entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks;
- Apply weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss;
- Implement water conserving irrigation methods (drip or trickle and micro-spray irrigation);
- Maintain daily records of all water used for irrigation of cannabis. Daily records will be calculated by using a measuring device (inline water meter) installed on the main irrigation supply line between the water storage area and cultivation area(s);
- Install float valves on all water storage tanks to keep them from overflowing onto the ground.

With the Water Conservation and Use requirements outlined above, the proposed cultivation operation would efficiently use water resources at all times. Additionally, Article 27 Section 27.11 of the Lake County Zoning Ordinance requires commercial cannabis cultivators using water from a groundwater well to install a water level monitor on their water supply well, and to regularly record readings from the continuous water level monitor. Well water level monitoring and reporting shall be performed as follows:

Seasonal Static Water Level Monitoring

Seasonal monitoring of well water levels provides information regarding long-term groundwater elevation trends. The water level in the onsite groundwater well shall be measured and recorded prior to the start of the cultivation season (April/May), and once in the fall (November) after the cultivation season has ended. Data reported to the Lake County Community Development Department as part of the Project’s annual reporting requirements shall include a hydrograph plot of all seasonal water level measurements for the onsite groundwater well.

Water Level Monitoring During Extraction

The purpose of monitoring the water level in a well during extraction is to evaluate the performance of the well to determine the effect of the pumping rate on the water source during each cultivation season. This information can be used to determine the capacity and yield of the onsite groundwater well for determining pump rates and the need for water storage. The frequency of water level monitoring will depend on the source, the source's capacity, and the pumping rate. It is recommended that initially the water level be monitored twice per week or more, and that the frequency be adjusted as needed depending on the impact the pumping rate has on the well water level. Data reported to the Lake County Community Development Department as part of the Project's annual reporting requirements shall include a hydrograph plot of the water level readings during the cultivation season.

In addition to the monitoring and reporting described above, the Project's annual report shall include an analysis of the water level monitoring data, demonstrating whether or not use of the onsite groundwater well is causing significant drawdown and/or impacts to the surrounding area and what measures were taken to reduce impacts. If there are impacts, a revised Water Management Plan shall be prepared and submitted to the Lake County Community Development Department, for review and approval, demonstrating how the project will mitigate the impacts in the future.

DROUGHT EMERGENCY RESPONSE

When a drought emergency has been declared for the area of the proposed cultivation operation, the Applicant may implement the following additional measures, as needed or appropriate to the site, to reduce water use and ensure both success of the cultivation operation and decreased impacts to surrounding areas:

- Install moisture meters to monitor how much water is in the soil at the root level and reduce watering to only what is needed to avoid excess;
- Cover the soil and drip lines with removable plastic mulch to reduce evaporation;
- Irrigate only in the early morning hours or before sunset;
- Cover plants with shaded meshes during peak summer heat to reduce plant stress and water needs;
- Add a soil amendments/ingredients to growing medium that retains water in a way to conserve water and aid plant growth/health. Soil amendments/ingredients such as peat moss, coco coir, compost, perlite, and vermiculite retain water and provide a good environment for cannabis to grow.

Additionally, to ensure both success and decreased impacts to the surrounding areas, the Applicant plans to reduce the aggregate canopy area and water usage by 10 percent or more, when a drought emergency has been declared for the region. To reduce water usage by 10 percent or more, the Applicant will not plant 20,580 ft² or more of the proposed canopy areas. The canopy areas to be left fallow will depend on when a drought emergency is declared (before or after the proposed canopy areas have been planted), and the Applicant will prioritize the preferred canopy areas over less desirable canopy areas, based on cultivation experience. By implementing the Drought Management Plan outlined above, the estimated annual water demand for the proposed cultivation operation would be reduced from approximately 3,165,866 gallons to 2,849,279 gallons during periods of drought.