

# Water Use Management Plan

## **Purpose and Overview**

Ursa Valley, LLC (Ursa Valley) is seeking a Major Use Permit and an Early Activation of Use Permit from the County of Lake, for a proposed commercial cannabis cultivation operation at 10950 Bachelor Valley Road near Witter Springs, California on Lake County APNs 002-046-15 and 16 (Project Parcels). Ursa Valley's proposed commercial cannabis cultivation operation will be composed of twelve (12) 43,560 ft<sup>2</sup> A-Type 3 "Medium Outdoor" cultivation/canopy areas, an 8' X 20' (160 ft<sup>2</sup>) Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage container), and a 10' X 12' (120 ft<sup>2</sup>) Security Center/Shed (proposed wooden building). The growing medium of the proposed outdoor cultivation/canopy area(s) will be an amended native soil mixture at or below grade, with drip irrigation systems covered in white plastic mulch (to conserve water resources). All water for the proposed cultivation operation will come from five existing onsite groundwater wells.

This Water Use Management Plan (WUMP) is designed to conserve Lake County's water resources and to ensure that the proposed cultivation operation's water use practices are in compliance with applicable County, State, and Federal regulations at all times. This WUMP focuses on designing a water efficient delivery system and irrigation practices, and the appropriate and accurate monitoring and reporting of water use practices. Also included in this WUMP is a description of the Water Resources of the Project Property, and a Water Availability Analysis.

## **Description of Water Resources**

### **Surface Water**

The Project Property is located in the northeastern portion of Bachelor Valley, within the Lower Scotts Creek Watershed (HUC 12). An unnamed intermittent Class III watercourse (NHD/DFG Water ID: 156361727) flows from north to south, through the eastern third of the Project Parcels. Two ephemeral Class III watercourses form in the northern half of the Project Property and flow south into the unnamed intermittent Class III watercourse. Additionally, there is a pond/off-stream water storage reservoir in the southwestern corner of the Project Property, that was developed in 2004/2005 (from satellite imagery) and now has some fringe hydrophytic vegetation. All cultivation areas and associated facilities of the proposed cultivation operation will be located more than 100 feet of any surface waterbody.

## Groundwater

Soils of the Project Parcel are identified as Lupoyoma silt and Still loams by the NRCS Web Soil Survey (attached), and characterized as well-drained alluvium derived from sandstone and shale. The United States Geological Survey Map of the Ukiah Sheet defines the area in the vicinity of the Project Property as Quaternary Alluvium surrounded by hills and mountains of the Franciscan Formation. The Project Property is located in the Upper Lake Valley Groundwater Management Plan Area and Upper Lake Groundwater Basin as identified in the 2006 Lake County Groundwater Management Plan. The Upper Lake Basin is composed of three valleys: Middle Creek Valley, Clover Valley, and Bachelor Valley. Bachelor Valley is in the Scott's Creek Inventory Unit, which is bounded primarily by the Franciscan Formation, and by Middle Creek Valley to the southeast. Groundwater recharges the Upper Lake Basin at the mouths of canyons and around the periphery of the basin, and from stream channels during the wet season. Groundwater levels in the Upper Lake Basin are shallow and have remained relatively constant for decades, with water levels in the basin rising to within 10 feet of the ground surface each spring.

There are seven existing groundwater wells on the Project Property, five of which will serve as the primary water sources for the proposed cultivation operation (please see the attached Site Plans for well locations). The Well Completion Report for groundwater well "GW-1", located at Latitude: 39.193043° and Longitude: -122.966172°, indicates that it was drilled in 2003, through soft brown clay with some imbedded gravels and into blue and black shale, to a depth of 71 feet below ground surface (Well Completion Report attached). At the time it was drilled, this well had an estimated yield of 20 gallons per minute. A recent test of this groundwater well concluded that this well can still produce at least 6 gallons per minute. The Well Completion Report for the groundwater well "GW-2", located at Latitude: 39.194465° and Longitude: -122.963735°, indicates that it was drilled in 2016, through brown silt with some imbedded gravels, fractured sandy rock, and into shale, to a depth of 100 feet below ground surface (Well Completion Report attached). At the time it was drilled, this well had an estimated yield of 30 gallons per minute. A recent test of this groundwater well concluded that this well can still produce at least 22 gallons per minute. The Well Completion Report for the groundwater well "GW-3", located at Latitude: 39.193879° and Longitude: -122.965919°, indicates that it was drilled in 2020, through soft brown clay with some imbedded gravels and into shale, to a depth of 71 feet below ground surface (Well Completion Report attached). At the time it was drilled, this well had an estimated yield of 14 gallons per minute. A recent test of this groundwater well concluded that this well can still produce at least 14 gallons per minute. The Well Completion Report for the groundwater well "GW-4", located at Latitude: 39.194529° and Longitude: -122.966134°, indicates that it was drilled in 2020, through soft brown clay with some imbedded gravels, olive colored soft sticky clay with imbedded gravels, and into shale, to a depth of 74 feet below ground surface (Well Completion Report attached). At the time it was drilled, this well had an estimated yield of 7 gallons per minute. A recent test of this groundwater well concluded that this well can still produce at least 7 gallons per minute. The Well Completion Report for the groundwater well "GW-5", located at Latitude: 39.193254° and Longitude: -122.964859°, indicates that it was drilled in 2020, through clay and shale, to a depth of 71 feet below ground surface (Well Completion Report attached). At the time it was drilled, this well had an estimated yield of 12

gallons per minute. A recent test of this groundwater well concluded that this well can still produce at least 12 gallons per minute.

### **Water Resources Protection**

Ursa Valley will maintain existing, naturally occurring, riparian vegetative cover (e.g., trees, shrubs, and grasses) in aquatic habitat areas to the maximum extent possible to maintain riparian areas for streambank stabilization, erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, wildlife support, and to minimize waste discharges. Access roads and parking areas are/will be graveled to prevent the generation of fugitive dust, and vegetative ground cover will be preserved and/or re-established as soon as possible throughout the entire site to filter and infiltrate stormwater runoff from the access roads, parking areas, and the proposed cultivation operation. Personnel will have access to the portable restroom facilities at all times when onsite, and those restroom facilities will be established in a location that is at least 100 feet from any surface water body, and serviced regularly.

The Project Parcel was enrolled for coverage under the State Water Resources Control Board's Cannabis General Order (Order No. WQ-2019-0001-DWQ), as a Tier 2 Low Risk Discharger on September 9<sup>th</sup>, 2020. Site Management and Nitrogen Management Plans will be developed for the proposed cultivation operation, and submitted to the Central Valley Regional Water Quality Control Board (CVRWQCB) for review, prior to planting. Each year, prior to March 1<sup>st</sup>, an Annual Monitoring Report will be prepared and submitted to the CVRWQCB, demonstrating measures taken over the course of the previous year to comply with the Cannabis General Order. Ursa Valley will maintain compliance with the Cannabis General Order for the protection of water resources for as long as the proposed cultivation operation is operating.

### **Water Sources and Storage**

All water for the proposed cultivation operation will come from five of the seven existing onsite groundwater wells. NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meters and Well Watch 670 sonic water level meters equipped with data logging capabilities, will be installed on the water supply groundwater wells prior to operation. In September and December of 2020, a series of tests were performed to thoroughly evaluate the production capacity of the groundwater wells. The results and conclusions of these tests are summarized in the table below.

<b>Well ID</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Estimate Yield</b>
“GW-1”	39.193043°	-122.966172°	6 GPM
“GW-2”	39.194465°	-122.963735°	22 GPM
“GW-3”	39.193879°	-122.965919°	14 GPM
“GW-4”	39.194529°	-122.966134°	7 GPM
“GW-5”	39.193254°	-122.964859°	12 GPM

Ursa Valley will use the existing onsite pond/off-stream water storage reservoir with an estimated capacity of one acre-foot (325,851 gallons), to store water from the five groundwater wells outlined above, for the proposed cultivation operation.

### **Irrigation**

Ursa Valley proposes use the existing onsite pond/off-stream water storage reservoir with an estimated capacity of one acre-foot (325,851 gallons), to store water from the five groundwater wells outlined above, for the proposed cultivation operation. Ursa Valley may develop additional water storage on the Project Parcel, in the form of heavy-duty plastic water storage tanks, should it be needed to support the irrigation and fire protection needs of the proposed cultivation operation. Water storage tanks will be equipped with float valves to shut off the flow water from the wells and prevent the overflow and runoff of irrigation water when full. HDPE water supply lines will feed irrigation water from the pond/off-stream water storage reservoir to the irrigation systems of the proposed cultivation/canopy area(s). The water supply lines will be equipped with safety valves, capable of shutting off the flow of water so that waste of water and runoff is prevented/minimized when leaks occur and the system needs repair, and inline water meters compliant with California Code of Regulations, Title 23, Division 3, Chapter 2.7. Ursa Valley will maintain daily water meter readings records for a minimum of five years, and will make those records available to Water Boards, CDFW, and Lake County staff upon request. The irrigation system of the proposed cultivation/canopy areas will be composed of PVC piping and drip tapes/lines under white plastic mulch (to conserve water resources).

### **Water Availability Analysis**

All water for the proposed cultivation operation will come from five of the seven existing groundwater wells of the Project Property. NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meters and Well Watch 670 sonic water level meters equipped with data logging capabilities, will be installed on the water supply groundwater wells prior to operation. In September of 2020, a series of tests were performed by AAA Pump Service (License No. 644864) to thoroughly evaluate the production capacity of groundwater wells "GW-1" and "GW-2". The results and conclusions of these tests, indicate that groundwater well "GW-1", (located at Latitude 39.193043° and Longitude -122.966172°) can produce over 6 gallons per minute; and that groundwater well "GW-2" (located at Latitude 39.194465° and Longitude -122.963735°) can produce at least 22 gallons per minute (please see the attached AAA Pump Test Reports). In December of 2020, a series of tests were performed by Hutton Drilling (License No. 522306) to thoroughly evaluate the production capacity of groundwater wells "GW-3", "GW-4", and "GW-5". The results and conclusions of these tests, indicate that groundwater well "GW-3" (located at Latitude: 39.193879° and Longitude: -122.965919°) can produce at least 14 gallons per minute; that groundwater well "GW-4" (located at Latitude: 39.194529° and Longitude: -122.966134°) can produce at least 7 gallons per minute; and that groundwater well "GW-5"

(located at Latitude: 39.193254° and Longitude: -122.964859°) can produce at least 12 gallons per minute (please see the attached Hutton Drilling Pump Test Reports).

Another Lake County Commercial Cannabis Cultivation Operation that uses very similar cultivation practices to that of Ursa Valley's proposed cultivation practices (outdoor cultivation in amended native soil with drip tapes/lines under white plastic mulch) used ~880,000 gallons of water to irrigate 83,000 ft<sup>2</sup> of cultivation/canopy area throughout the 2019 cultivation season (please see attached 2019 Water Use Report). Based on this empirical data, Ursa Valley expects to use approximately 462,000 gallons of water each year/cultivation season per acre of outdoor cultivation/canopy area, with a total expected water usage of 5,544,000 gallons (or ~17 acre-feet) each year/cultivation season for their proposed cultivation operation. The cultivation season for the proposed cultivation operation will begin in May and end in November of each year. The following table presents the expected water use of the proposed cultivation operation by month during the cultivation season in gallons and acre-feet.

May	June	July	Aug	Sept	Oct	Nov
277,000	880,000	977,500	1,075,000	1,303,000	815,000	228,000
0.8	2.7	3.0	3.3	4.0	2.5	0.7

The peak anticipated daily demand for water of the proposed cultivation operation is ~43,500 gallons per day, with an average daily water demand of ~26,400 during the cultivation season. Ursa Valley's five existing onsite groundwater wells can produce at least 60 gallons per minute (combined), or 86,400 gallons per day. Two of the seven existing onsite groundwater wells, in conjunction with the existing onsite pond/off-stream water storage reservoir, have been used to irrigate an approximately 24-acre walnut orchard on the Project Property for last four years. There is no doubt that the existing onsite groundwater wells of the Project Property, with the water storage capacity of pond/off-stream water storage reservoir, will be able to provide enough water for the proposed cultivation operation on the hottest driest days in the latest part of the summer when irrigation water is needed most.

### **Water Conservation**

Per the Water Conservation and Use requirements outlined in the SWRCB's Cannabis General Order, the following Best Practical Treatment and Control (BPTC) measures will be implemented 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 areas.
- Install float valves on all water storage tanks to keep them from overflowing onto the ground.

### **Monitoring and Reporting**

NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meters and a Well Watch 670 sonic water level meters equipped with data logging capabilities will be installed on the existing water supply groundwater wells prior to operation. Inline water meters compliant with California Code of Regulations, Title 23, Division 3, Chapter 2.7 will be installed on the main water supply lines running between the pond/off-stream water storage reservoir and the proposed cultivation operation. Ursa Valley's staff will record daily water meter readings, and will maintain those records onsite for a minimum of five years. Ursa Valley will make those records available to Water Boards, CDFW, and Lake County staff upon request.

MAR 23 2016

## Well Completion Report

Page 1 of 1

Owner's Well Number #1

No. e0303742

Date Work Began 02/16/2016

Date Work Ended 2/18/2016

Local Permit Agency Lake County Environmental

Permit Number WE-4673

Permit Date 1/22/16

DWR Use Only - Do Not Fill In

16N		10W		34	
State Well Number/Site Number					
Latitude			Longitude		
APN/TRS/Other					

## Geologic Log

Orientation ☒ Vertical ☐ Horizontal ☐ Angle Specify \_\_\_\_\_

Drilling Method Direct Rotary

Drilling Fluid Polymer mud

## Depth from Surface

## Description

Feet to Feet

Describe material, grain size, color, etc

0	10	Brown silt, sand and gravel
10	12	Wet clayee tan gravel
12	18	Brown silt
18	24	Fractured brown sandy rock
24	92	Dark blue sandy rock with fractures at 84' to 86'
92	100	Shale

## Well Location

Address 10950 Bachelor Valley Road

City Witter Springs

County Lake

Latitude 39 11 716 N Longitude 12 57 826 W  
Dea. Min. Sec. Dea. Min. Sec.

Datum \_\_\_\_\_ Decimal Lat. \_\_\_\_\_

Decimal Long. \_\_\_\_\_

APN Book 002 Page 046

Parcel 150

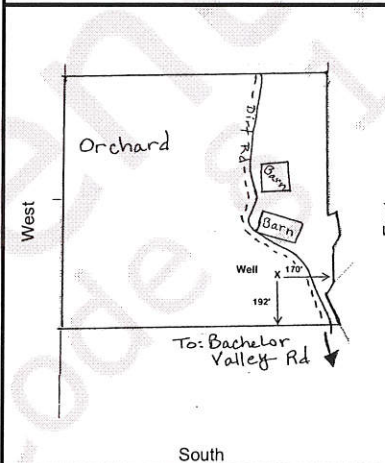
Township 16N Range 10W

Section 34

## Location Sketch

(Sketch must be drawn by hand after form is printed.)

North



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

## Activity

- ☒ New Well  
☐ Modification/Repair  
☐ Deepen  
☐ Other \_\_\_\_\_  
☐ Destroy  
 Describe procedures and materials under "GEOLOGIC LOG"

## Planned Uses

- ☒ Water Supply  
☒ Domestic ☐ Public  
☒ Irrigation ☐ Industrial  
☐ Cathodic Protection  
☐ Dewatering  
☐ Heat Exchange  
☐ Injection  
☐ Monitoring  
☐ Remediation  
☐ Sparging  
☐ Test Well  
☐ Vapor Extraction  
☐ Other \_\_\_\_\_

Total Depth of Boring 100 Feet

Total Depth of Completed Well 98 Feet

## Water Level and Yield of Completed Well

Depth to first water 18 (Feet below surface)

Depth to Static \_\_\_\_\_

Water Level 5 (Feet) Date Measured 02/18/2016

Estimated Yield \* 30 (GPM) Test Type Air Lift

Test Length 2.0 (Hours) Total Drawdown 84 (Feet)

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

## Casings

Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	20	11					
20	100	8					
0	18		Blank	PVC Sch. 40	SDR21	5	
18	58		Screen	PVC Sch. 40	SDR21	5	Milled Slots 0.032
58	78		Blank	PVC Sch. 40	SDR21	5	
78	98		Screen	PVC Sch. 40	SDR21	5	Milled Slots 0.032

## Annular Material

Depth from Surface Feet to Feet	Fill	Description
0	15	Bentonite
15	98	Filter Pack 3/8 Pea Gravel

## 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 Weeks Drilling & Pump Co.

Person, Firm or Corporation

P.O. Box 176

Sebastopol

CA 95473

Address

City

State

Zip

Signed

June Dringolini  
C-57 Licensed Water Well Contractor

3/11/16

177681

Date Signed

C-57 License Number



ORIGINAL  
File with DWR

Page 1 of 1 AUG 12 2003

Owner's Well No.

Date Work Began 3/19/03, Ended 3/31/03 No. 797713

Local Permit Agency LAKE

Permit No. Permit Date 3/18/03

STATE OF CALIFORNIA  
WELL COMPLETION REPORT  
Refer to Instruction Pamphlet

DWR USE ONLY - DO NOT FILL IN

16N/10W-344

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

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

DRILLING METHOD CABLE FLUID

DEPTH FROM SURFACE			DESCRIPTION
Ft.	to	Ft.	
0	3		SOIL
3	37		SOFT BROWN CLAY
37	60		" " " + SOME
60	65		IMBEDDED GRAVEL
65	71		BLUE SHALE
			BLACK "
TOTAL DEPTH OF BORING 71 (Feet)			
TOTAL DEPTH OF COMPLETED WELL 60 (Feet)			

WELL LOCATION

Address 10960 BACHELOR VALLEY RD

City WITTER SPRINGS

County LAKE

APN Book 002 Page 046 Parcel 09

Township 15N Range 10W Section 3/34

Latitude 16N Longitude 10W

DEG. MIN. SEC. NORTH WEST

LOCATION SKETCH

WITTER SPRINGS RD BACHELOR VALLEY RD

WELL

SEC 3

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 37 (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 3 (Ft.) & DATE MEASURED 3/31/03

ESTIMATED YIELD 20 (GPM) & TEST TYPE BAIL

TEST LENGTH 3 (Hrs.) TOTAL DRAWDOWN 25 (Ft.)

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

DEPTH FROM SURFACE			BORE- HOLE DIA. (Inches)	CASING (S)					ANNULAR MATERIAL								
				TYPE (≦)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE					
				BLANK	SCREEN	CON- DUCTOR	FILL PIPE					CE- MENT (≦)	BEN- TONITE (≦)	FILL (≦)	FILTER PACK (TYPE/SIZE)		
Ft.	to	Ft.															
1	30	12		✓			STEEL	8	1/8	—	0	21	✓				
30	60	12		✓			✓	✓	✓	1/8x4 DBL	21	60			✓	P. GRAVEL	

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 J.W. HUTTON

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

1466 PITNEY LANE UPPER LAKE, CA 95485

ADDRESS CITY STATE ZIP

Signed J.W. Hutton DATE SIGNED 4/5/03 153912

WELL DRILLER AUTHORIZED REPRESENTATIVE

C-57 LICENSE NUMBER



AAA PUMP SERVICE  
3005 KEELING AVE  
LAKEPORT, CA 95453

Lic # C44864

PUMP TEST REPORT

9/22/2020

Micah Flaese

10930 ,10950 Bachelor Valley Rd

Upperlake, CA 95485

WELL DEPTH 70' STATIC DEPTH 11'8" CASING:steel

WELL DIA 8" WELL SEAL : yes TYPE: AG

TIME	STATIC	GPM	APPEARANCE
8:00	11'8"	20	dirty
8:05	12'4"	20	
8:10	13'8"	10	dirty
8:15	14'5"	10	
8:20	16'	10	
8:25	17'4"	10	
8:30	18'	10	dirty
8:40	19'4"	10	
8:50	20'5"	10	
9:00	21'5"	06	
9:30	21'4"	06	
10:00	20'9"	06	
10:30	20'2"	06	
11:00	19'	06	clearing
11:30	18'9"	06	
12:00	18'9"	06	
Recovery			
12:15	17'1"		
12:30	16'3"		
12:45	14'9"		
1:00	13'6"		
1:15	12'9"		
1:30	12'1"		

EQUIPMENT: well has a 3/4 hp pump with a pump tech pump protector  
LOCATION: well number 1 next to Koker property

AAA PUMP SERVICE  
3005 KEELING AVE  
LAKEPORT, CA 95453  
LIC # 644864

PUMP TEST REPORT

9/24/2020

Micah Flause

10930, 10950 Bachelor Valley Rd

Upperlake, CA 95485

WELL DEPTH 50\*' STATIC DEPTH 22'8" CASING: steel

WELL DIA 6"

WELL SEAL : yes

domestic

TIME	STATIC	GPM	APPEARANCE
9:00	22'8"	22	clear
9:05	22'10"	22	
9:10	22'11"	22	
9:15	22'11"	22	
9:20	22'11"	22	
9:25	22'11"	22	
9:30	22'11"	22	
9:40	22'11"	22	
9:50	22'11"	22	
10:00	22'11"	22	clear
10:30	22'11"	22	
11:00	22'11"	22	
11:30	22'11"	22	
12:00	22'11"	22	
12:30	22'11"	22	
1:00	22'11"	22	

NOTES: well has a 1/2 hp pump, Recovery 1:15 22'8"

\*could not probe depth of well, probably blocked by a torque arrester

State of California  
**Well Completion Report**  
 Form DWR 188 Submitted 1/25/2021  
 WCR2021-000926

Owner's Well Number 4-8" Date Work Began 01/21/2021 Date Work Ended 01/25/2021  
 Local Permit Agency Lake County Health Services Department - Environmental Health Division  
 Secondary Permit Agency \_\_\_\_\_ Permit Number WE-5540AG Permit Date 01/05/2021

Well Owner (must remain confidential pursuant to Water Code 13752)		Planned Use and Activity	
Name <u>Morongo Equity Partners Morongo Equity Partners</u>	Activity <u>New Well</u>		
Mailing Address <u>730 Arcady Rd.</u>	Planned Use <u>Water Supply Irrigation - Agriculture</u>		
City <u>Santa Barbara</u> State <u>Ca</u> Zip <u>93108</u>			

Well Location			
Address <u>10960 Bachelor Valley RD</u>		APN <u>002-046-09</u>	
City <u>Upper Lake</u>	Zip <u>95485</u>	County <u>Lake</u>	
Latitude <u>39</u> <u>11</u> <u>35.7136</u> <u>N</u>		Township <u>16 N</u>	
Longitude <u>-122</u> <u>57</u> <u>53.4924</u> <u>W</u>		Range <u>10 W</u>	
Dec. Lat. <u>39.1932538</u>		Section <u>34</u>	
Dec. Long. <u>-122.964859</u>		Baseline Meridian <u>Mount Diablo</u>	
Vertical Datum _____		Ground Surface Elevation _____	
Horizontal Datum <u>WGS84</u>		Elevation Accuracy _____	
Location Accuracy _____		Elevation Determination Method _____	
Location Determination Method _____			

Borehole Information		Water Level and Yield of Completed Well	
Orientation <u>Vertical</u> Specify _____	Depth to first water _____ (Feet below surface)		
Drilling Method <u>Cable Tool</u> Drilling Fluid <u>None</u>	Depth to Static _____		
Total Depth of Boring <u>71</u> Feet	Water Level <u>14</u> (Feet) Date Measured <u>01/25/2021</u>		
Total Depth of Completed Well <u>71</u> Feet	Estimated Yield* <u>12</u> (GPM) Test Type <u>Pump</u>		
	Test Length <u>6</u> (Hours) Total Drawdown <u>15</u> (feet)		
	*May not be representative of a well's long term yield.		

Geologic Log - Lite					
Depth from Surface Feet to Feet		Material Type	Material Color	Material Texture	Material Description
0	3	Soil or Organic			Soil
3	36	Clay			Brown Clay and Imbedded Gravel
36	45	Shale			Brown Fractured Shale and Clay
45	50	Shale			Blue-Brown Shaley Clay
50	53	Shale			Brown Shale
53	61	Shale			Muddy Blue Shale
61	71	Shale			Muddy Black Shale



### Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specifications	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	30	Blank	Low Carbon Steel	Grade: ASTM A53	0.188	8.625			
1	30	71	Screen	Low Carbon Steel	Grade: ASTM A53	0.188	8.625	Milled Slots	0.125	

### Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	1	Cement	10.3 Sack Mix		
1	22	Bentonite	Other Bentonite		
22	71	Filter Pack	Other Gravel Pack	Pea Gravel	

Other Observations:

### Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	71	13

### Certification Statement

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

Name HUTTON WELL DRILLING  
 Person, Firm or Corporation  
1466 B PITNEY LANE UPPER LAKE CA 95485  
 Address City State Zip  
 Signed electronic signature received 01/25/2021 522306  
 C-57 Licensed Water Well Contractor Date Signed C-57 License Number

### DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number
		N	W

Latitude Deg/Min/Sec

Longitude Deg/Min/Sec

TRS:

APN:

State of California  
**Well Completion Report**  
 Form DWR 188 Submitted 12/8/2020  
 WCR2020-016941

Owner's Well Number 2-8" Date Work Began 12/03/2020 Date Work Ended 12/08/2020  
 Local Permit Agency Lake County Health Services Department - Environmental Health Division  
 Secondary Permit Agency \_\_\_\_\_ Permit Number WE5504AG Permit Date 11/23/2020

Well Owner (must remain confidential pursuant to Water Code 13752)	Planned Use and Activity
Name <u>MORONGO EQUITY PARTNERS,</u>	Activity <u>New Well</u>
Mailing Address <u>730 Arcady Rd</u>	Planned Use <u>Water Supply Irrigation - Agriculture</u>
City <u>Santa Barbara</u> State <u>Ca</u> Zip <u>93108</u>	

Well Location	
Address <u>10960 Bachelor Valley Rd</u>	
City <u>Upper Lake</u> Zip <u>95485</u> County <u>Lake</u>	APN <u>002-046-09</u>
Latitude <u>39</u> <u>11</u> <u>37.9644</u> N Longitude <u>-122</u> <u>57</u> <u>57.3076</u> W	Township <u>16 N</u>
Deg. Min. Sec. Deg. Min. Sec.	Range <u>10 W</u>
Dec. Lat. <u>39.193879</u> Dec. Long. <u>-122.9659188</u>	Section <u>34</u>
Vertical Datum _____ Horizontal Datum <u>WGS84</u>	Baseline Meridian <u>Mount Diablo</u>
Location Accuracy _____ Location Determination Method _____	Ground Surface Elevation _____
	Elevation Accuracy _____
	Elevation Determination Method _____

Borehole Information	Water Level and Yield of Completed Well
Orientation <u>Vertical</u> Specify _____	Depth to first water _____ (Feet below surface)
Drilling Method <u>Cable Tool</u> Drilling Fluid <u>None</u>	Depth to Static _____
Total Depth of Boring <u>71</u> Feet	Water Level <u>11</u> (Feet) Date Measured <u>12/07/2020</u>
Total Depth of Completed Well <u>71</u> Feet	Estimated Yield* <u>14</u> (GPM) Test Type <u>Pump</u>
	Test Length <u>8</u> (Hours) Total Drawdown <u>20</u> (feet)
	*May not be representative of a well's long term yield. <u>31'</u>

Geologic Log - Free Form		
Depth from Surface Feet to Feet		Description
<u>0</u>	<u>31</u>	<u>Soft Brown Clay</u>
<u>31</u>	<u>60</u>	<u>Soft Brown Clay and Imbedded Gravel</u>
<u>60</u>	<u>71</u>	<u>Blue-Black Shale</u>



State of California  
**Well Completion Report**  
 Form DWR 188 Submitted 12/19/2020  
 WCR2020-017371

Owner's Well Number 3-8" Date Work Began 12/10/2020 Date Work Ended 12/18/2020  
 Local Permit Agency Lake County Health Services Department - Environmental Health Division  
 Secondary Permit Agency \_\_\_\_\_ Permit Number WE-5523 AG Permit Date 12/10/2020

<b>Well Owner (must remain confidential pursuant to Water Code 13752)</b>		<b>Planned Use and Activity</b>
Name <u>MORONGO EQUITY PARTNERS,</u>	Activity <u>New Well</u>	
Mailing Address <u>730 Arcady Rd</u>	Planned Use <u>Water Supply Irrigation - Agriculture</u>	
City <u>Santa Barbara</u> State <u>Ca</u> Zip <u>93108</u>		

<b>Well Location</b>		
Address <u>10960 Bachelor Valley RD</u>	APN <u>002-046-09</u>	
City <u>Witter Springs</u> Zip <u>95493</u> County <u>Lake</u>	Township <u>16 N</u>	
Latitude <u>39</u> <u>11</u> <u>40.3044</u> <u>N</u> Longitude <u>-122</u> <u>57</u> <u>58.0834</u> <u>W</u>	Range <u>10 W</u>	
Deg. Min. Sec. Deg. Min. Sec.	Section <u>34</u>	
Dec. Lat. <u>39.194529</u> Dec. Long. <u>-122.9661343</u>	Baseline Meridian <u>Mount Diablo</u>	
Vertical Datum _____ Horizontal Datum <u>WGS84</u>	Ground Surface Elevation _____	
Location Accuracy _____ Location Determination Method _____	Elevation Accuracy _____	
	Elevation Determination Method _____	

<b>Borehole Information</b>	<b>Water Level and Yield of Completed Well</b>
Orientation <u>Vertical</u> Specify _____	Depth to first water _____ (Feet below surface)
Drilling Method <u>Cable Tool</u> Drilling Fluid <u>None</u>	Depth to Static _____
Total Depth of Boring <u>74</u> Feet	Water Level <u>15</u> (Feet) Date Measured <u>12/18/2020</u>
Total Depth of Completed Well <u>74</u> Feet	Estimated Yield* <u>7</u> (GPM) Test Type <u>Pump</u>
	Test Length <u>6</u> (Hours) Total Drawdown <u>23</u> (feet)
	*May not be representative of a well's long term yield.

<b>Geologic Log - Free Form</b>		
Depth from Surface Feet to Feet		Description
0	21	Brown Clay
21	36	Soft Brown Clay
36	39	Sticky Brown Clay and Imbedded Gravel
39	63	Olive Color Soft Sticky Clay and Imbedded Gravel
63	74	Blue-Black Shale



### Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specifications	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	36	Blank	Low Carbon Steel	Grade: ASTM A53	0.188	8.625			
1	36	74	Screen	Low Carbon Steel	Grade: ASTM A53	0.188	8.625	Milled Slots	0.125	1/8 x 3 Double Perf

### Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	21	Cement	10.3 Sack Mix		
21	74	Filter Pack	Other Gravel Pack	Pea	Pea Gravel

Other Observations:

### Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	74	13

### Certification Statement

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

Name HUTTON WELL DRILLING  
 Person, Firm or Corporation  
1466 B PITNEY LANE UPPER LAKE CA 95485  
 Address City State Zip  
 Signed electronic signature received 12/19/2020 522306  
 C-57 Licensed Water Well Contractor Date Signed C-57 License Number

### DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

Latitude Deg/Min/Sec

Longitude Deg/Min/Sec

TRS:

APN:

**Hutton Drilling  
License # 522306  
1466 B Pitney Lane  
Upper Lake CA 95485  
(707) 275-9727**

Event Horizon Technologies inc.  
340 S. Lemon Ave #6420N  
Walnut, CA 91789

Well Location: 10960 Bachelor Valley Rd, Upper Lake

Scope of work:

12/08/2020 7:00 am began extended pump test on Well # 1 – 8".  
Pump rate was 15 GPM uninterrupted thru 1:30 pm 12/10/2020.

Following are water levels on Well # 1 – 8", Well #2 – 8" and neighbors  
concrete cased well to the west. All measurements are from TOC (top of casing)

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**12/08/2020**

Time	Well # 1 – 8"	Well # 2 – 8"	Neighbors Well
7:00 am	11.25'	14.50'	9'
9:45	21.50'	14.50'	"
10:45	"	"	not measured
1:05 pm	"	14'	not measured
3:30	21.75'	15'	9'

**12/09/2020**

9:00 am	21.50'	15'	9'
3:45	21.75'	15'	9'

**12/10/2020**

8:00 am	21.75'	15.25'	9'
10:25	"	"	"
1:15 pm	"	"	"
1:30	End Test		

**Hutton Drilling  
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1466 B Pitney Lane  
Upper Lake CA 95485  
(707) 275-9727**

Event Horizon Technologies inc.  
340 S. Lemon Ave #6420N  
Walnut, CA 91789

Well Location: 10960 Bachelor Valley Rd, Upper Lake

Scope of work:

Test Pump Report  
Well # 3 – 8"

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**12/16/2020**

Static 16.5'

Time	TOC	GPM
10:05 am	41'	11
10:15	41'	11
10:20	42'	11
10:30	42'	10
10:45	42'	10
11:00	43'	10
11:10	42.5'	8
11:25	42'	8
11:35	42'	8
12:40	42.5'	8

**12/17/20**

8:30 am	16.5	8.3
8:41	24	8.3
11:23	39.5	8
11:41	39.5	8

**Hutton Drilling  
License # 522306  
1466 B Pitney Lane  
Upper Lake CA 95485  
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1:12 pm	39.5	8
1:25	39	6
2:11	36	6

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Event Horizon Technologies inc.  
340 S. Lemon Ave #6420N  
Walnut, CA 91789

Well Location: 10960 Bachelor Valley Rd, Upper Lake

Scope of work:

Test Pump Report  
Well # 2 – 8"

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**12/07/2020**

Static 11'

Time	TOC	GPM
7:14 am	start	
7:25	28'	16
7:35	31'	16
7:58	31.5'	16
8:07	31.5'	14
8:50	32	14
9:05	32.5	14
9:11	33	14
9:15	32.5	12
9:36	32.5	12
9:41	32.5	12
10:00	32.5	12
10:03	32.5	13
10:15	31.5	13
10:36	31	12

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12:04	31	12
12:15	30.5	12
12:22	30	12
12:25	30	14
12:38	31	14
1:30 pm	30	13
3:33	29	13

**2019 WATER USE REPORT**  
**MORGAN VALLEY VENTURES MAJOR USE PERMIT UP 18-22**  
**22800 MORGAN VALLEY ROAD, LOWER LAKE, CA 95457**  
**LAKE COUTNY APNS 012-069-59 & 60**

<b>Week</b>	<b>Water Usage (Gallons)</b>
4/1 - 4/7	0
4/8 - 4/14	1000
4/15 - 4/21	1000
4/22 - 4/28	5000
4/29 - 5/5	5000
5/6 - 5/12	10000
5/13 - 5/19	10000
5/20 - 5/26	15000
5/27 - 6/2	20000
6/3 - 6/9	25000
6/10 - 6/16	30000
6/17 - 6/23	35000
6/24 - 6/30	40000
7/1 - 7/7	55000
7/8 - 7/14	20000
7/15 - 7/21	20000
7/22 - 7/28	25000
7/29 - 8/4	35000
8/5 - 8/11	45000
8/12 - 8/18	45000
8/19 - 8/25	50000
8/26 - 9/1	50000
9/2 - 9/8	50000
9/9 - 9/15	50000
9/16 - 9/22	50000
9/23 - 9/29	45000
9/30 - 10/6	45000
10/7 - 10/13	30000
10/14 - 10/20	30000
10/21 - 10/27	15000
10/28 - 11/3	15000
11/4 - 11/10	5000
11/11 - 11/17	2000
11/18 - 11/24	1000