Attachment 4

SPRUCE GROVE FARMS, LLC

APN 216-134-011

Operations & Cultivation Plan
Humboldt County #12233

Updated

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UPDATED CULTIVATION & OPERATIONS PLAN

Spruce Grove Farms LLC #12233

1.0 Project Information

Spruce Grove Farms, LLC ("Applicant") is submitting this application for a Type 3 Use Permit for 22,000 square feet of existing outdoor commercial cannabis cultivation on a 320-acre parcel, located at 1350 Bell Springs Road, approximately ½ mile on Bell Springs Road via Alderpoint Road in Garberville, CA ("Parcel"). The Applicant is in the process of legal adjoining a total of three legal (3) parcels which is a total of 320 acres and will then be APN: 216-134-010. The Parcels that will be legally adjoined is as follows: 216-134-011, 216-081-010, 223-011-003, 223-012-010 and 216-082-010. Currently, the application is under APN 216-134-011 through Humboldt County Planning and Building Department. The Applicant owns all parcels and copies of the grant deed for each property can be seen under the Exhibit "A" and Exhibit "B."

The Applicant has submitted applications for a parcel merger and lot line adjustments. The lot line adjustments will result in the property boundary following Bell Springs Road.

WATER: The Applicant is sourcing water from a permitted confined aquifer well rated at 10 gal/min, the Water Well Application (17/18-1333) and Well Completion Report (WCR2018-002696). Applicant will also source water from an unnamed spring that the Applicant has filed an Initial Statement and Water Diversion and Use (S026332), and Notice of Cannabis Irrigation Use Registration (H500795). All of which can be seen in the Other Permits, Licenses and Documents section of this Application. The Applicant has two (2) spring fed stock ponds (C005034), not used for cannabis activity. The water is pumped into the various plastic water tanks located on the Parcel, four (4) 5,000 gallon tanks and seven (7) 2,500 gallon tanks making it a total of 45,000 gallons of water storage. The Applicant plans for a proposed pond at 1,000,000 gallons (or larger). The Applicant will be using approximately 316,000 gallons of water annually.

Applicant was enrolled with a Tier 2 status under Order NO. R1-2015-0023 Waiver of Waste Discharge with the NCRWQCB (WDID 1B16730CHUM). Applicant is now enrolled with a Tier 2 status in Order NO. SWRCB ORDER WQ 2017-0023-DWQ. A Notification of Lake or Streambed Alteration Agreement has been applied for (No. 1600-2017-0288) (Final LSA expected May 2019).

STRUCTURES: There are a total of five (5) existing structures located on the Parcel. All are except the Shop, Yurts and Dry Storage are domestic buildings, and not used for any cultivation related activities. The Cabin is a 24'X24' wood structure built in 2003 and used for temporary living. The Barn is a 30'X32' wood structure, built in 2005 and is used for livestock. The lower Yurt is 24 feet in diameter, built in 2003 and is used for drying cannabis. The upper Yurt is 30 ft in diameter, built in 2018 and is used for drying and bucking cannabis. The Shop is a 30'X40' metal structure, built in 2003 and is used for drying and curing of the cannabis. The Dry Storage is a 8'x15' structure adjacent to the Cabin built in 2005, and is used for fuel storage that can be used to

fuel the backup generator on the parcel. There is a 12'x14' wood structure built in 2008 that is used for storage. An additional 30x40 shop is proposed for 2019 and will be located adjacent to the existing Shop.

GENERATORS: There are 4 generators on the property. Two generators are located at the cabin and seasonally at the Garden "CA 1" are both Honda 2000WEU series, (max decibel level 59 dB(A) @ rated load 53dB(A) ¼ load). There is a Honda EU 7000W (max decibel 58 dB(A) @ rated load, 52 dB(A) @ 1/4 load), that may be used at the cabin or shop as needed. The shop also has a MultiQuip Whisper Watt 25KV generator (max decibel 59 dB(A) @ rated load) with no onsite fuel storage. All generators run seasonally as needed. Generator data sheets are included Other Permits, Licenses and Documents section of this Application.

The Cabin generator runs as needed to supplement the Cabin's off the grid solar power system (May 1st – Nov 31st , 7pm – 10pm, 4-7 days per week).

The middle garden CA-1 generator runs to pump mix fertilizer tanks, runs seasonally May 1st – Nov 31st as needed max 15 min per day, during working hours 8am-6pm, May 1st – Nov 31st).

The Shop generator(s) runs seasonally (August 1st – 30th 7am – 7pm, and Oct 1st – Nov 31st 7am – 7pm).

Applicant has begun the process of applying with PG&E for an Ag Drop (application #114251615). The pole has been set and awaiting hook-up. The Ag drop is located near the barn and will power the pump to the groundwater well (which currently runs on solar power). Applicant has also applied for an additional PG&E Ag Drop at the Shop Location.

Per Humboldt County Planning & Building Director John Ford and the Tribal Historic Preservation Office (or Officer) (THPO) of Bear River Band of Rohnerville Rancheria (BRBRR), applicant has direction to relocate the various existing cultivation sites located throughout all parcels into one single 22,000 square foot outdoor garden on "Wedding Flat". The Cultural Resource survey identified four archeological sites that will not be affected if mitigation measures are followed. This includes the relocation of the existing cultivation areas, restoration and mitigation per tribe. Mitigation efforts have already begun, including excavation and documentation of resources by Nick and THPO. The existing locations and proposed location can be seen on Sheet PO in the Site Plan of Entire Parcel section of this Application. The Cultural Resource survey was conducted by Nick Angeloff of Archeological Research & Supply Company (see attached). Nick Angeloff was directed by John Ford to provide the county with detailed mitigation plan for specific direction to the restoration of sites.

A Prime Ag Study was also conducted by Lindberg Geologic Consulting supporting 35 acres of prime ag in the location of the proposed cultivation area (see attached).

Both study's are included under the Other Permits, Licenses and Documents section of this Application

CULTIVATION: The Applicant will plant in May and will have two harvests, the first in August the second in October. Applicant will use offsite processing facility, as well has secured a contract for 2019 to sell bulk unprocessed product. Applicant is currently exploring feasibility of machine

trimming verses machine trimming services. If necessary cannabis will be machine and/or hand trimmed in the Shop and Yurt. The Shop and Yurt will be improved to commercial standards.

STAFF: Only the Applicant, farm manager and staff will be part of the cannabis cultivation and processing activity. Farm manager and up to 2 employees may live in the Cabin seasonally (May – Nov). They may live and work on-site and travel to town up to 2xper week or as needed. Farm manager may hire additional day labor as necessary (up to 2-4 persons for 1-2 weeks in Spring and Fall).

Sanitation facilities are provided at the Cabin. The existing septic system for the cabin constructed in 2007. Applicant has applied for Septic Permit with department of Public Health & Human Services. A site evaluation was completed. Applicant was told that permit is pending cabin structure building permit. Portable toilets will be provided at the cultivation site and Shop seasonally as needed.

The Type 3 Use Permit would achieve the following results for the Applicant:

a. Permit 23,000 square feet of Outdoor commercial cannabis cultivation activities that were in existence prior to January 1, 2016, in compliance with the County CMMLUO; and
b. Comply with applicable standards for water quality maintenance and watershed protection through the Waiver of Waste Discharge requirements of the North Coast Regional Water Quality Control Board ("Water Board") and California Department of Fish and Wildlife ("Fish and Wildlife"). Enrolled (WDID 1B16730CHUM), current with annual reporting and permit fees are paid.
c. Comply with CDFA State Annual Cultivation License requirements for CEQA and local jurisdiction authority. Applicant currently holds temps and has annual applications submitted for two Small Mixed Light T1 licenses (LCA18-0003203/TML18-0008824 & LCA18-0003204/TML18-0008825).

2.0 Project Location

The Applicant's Parcel is located at 1350 Bell Spring Road in the inland zone of Humboldt County near Garberville, CA. The Parcel is comprised of 320-acres and is identified by Assessor's Parcel Number ("APN") 216-134-011, 216-081-010, 223-011-003, 223-012-010, 216-082-010.

Determination of Status Letter is included in Exhibit "A".

Zoning Classification

The County's Zoning Classification of the Parcel is AE-B-5(160) with a Current General Plan of AG (FRWK). The CMMLUO permits existing Outdoor commercial cannabis cultivation on land zoned as AE with cultivation sites between 10,000 square feet and 43,560 square feet with a Type 3 Use Permit.

2.1 Site Topography

A map of the Parcel's topography is included as Attachment "A."

3.0 Easements

The following information is taken from Exhibit "A" of the recorded Grant Deed, a copy of which is included in the Evidence of Ownership and Authorization section of this Application.

"Exhibit "A"

DESCRIPTION

That real property situate in the County of Humboldt, State of California, described as follows:

PARCEL ONE:

The West Half of the Northeast Quarter and the Southeast Quarter of the Northeast Quarter of Section 25, Township 4 South, Range 4 East, Humboldt Meridian; and

The Southwest Quarter of the Northwest Quarter of Section 30, Township 4 South, Range 5 East, Humboldt Meridian, as contained in the Patent recorded in Book 2 of Patents, Page 507, Humboldt County Records.

PARCEL TWO

The Northwest Quarter of the Northwest Quarter and the South Half of the Northwest Quarter of Section 25; and

The Northeast Quarter of the Northeast Quarter of Section 26, Township 4 South, Range 4 East, Humboldt Meridian, as contained in the Patent recorded in Book 5 of Patents, Page 44, Humboldt County Records.

PARCEL THREE

The Southeast Quarter of the Southeast Quarter of Section 23; and

The South Half of the Southwest Quarter of Section 24; and

The Northeast Quarter of the Northwest Quarter of Section 25, Township 4 South, Range 4 East, Humboldt Meridian, as contained in the Patent recorded in Book 5 of Patents, Page 44, Humboldt County Records.

PARCEL THREE

The Southeast Quarter of the Southeast Quarter of Section 23; and

The South Half of the Southwest Quarter of Section 24; and

The Northeast Quarter of the Northwest Quarter of Section 25, Township 4 South, Range 4 East, Humboldt Meridian, as contained in the Patent recorded in Book 6 of Patents, Page 440, Humboldt County Records.

"Exhibit "B"

ROAD EASEMENT DESCRIPTION #2 OVER THE TOOBY RANCH

An unnamed road from the Bell Springs County Road southeasterly to the South Line of the Northeast ¼ of Section 25 in T 4 S, R 4 E, Humboldt Meridian.

A Easement 70 feet in width lying 35 feet on each side of the following described centerline in the East ½ of Section 25 in Township 4 South, Range 4 Eats, Humboldt Meridian, in the County of Humboldt, State of California, more particularly described as follows:

Commencing at a point hereinafter referred to as Point "AA" which is marked by an aluminum cap in a well stamped "CA HPGN DENSIFICATION STA. 01-KD 1993" located on the west side of State Highway 101 at the south end of the Town Garberville established and published by the National Geodetic Survey of the National Ocean and Atmospheric Administration as a Densification Station of the High Precision Geodetic Network.

Thence N 82' 16' 48" E 29,448.21' to a 2" GIP marking the Northeast Corner of Section 23 of said Township 4 South, Range 4 East and shown as Note #37 on Book 32 of Records of Surveys at Page 116 and Note #10 on Book 38 of Records of Surveys at Page 1.

Thence S 32' 49' 41" E 8,565.00' to a point referred to as Point "NN", being the intersection of the Bell Springs County Road with an existing unnamed road running southeasterly and the Point of Beginning.

Thence along the center of said existing road the following courses.

Thence S 33 degrees 33' 40" E 216.42'

Thence S 62 degrees 02' 13" E 129.84

Thence S 09 degrees 47' 14" E 70.01'

Thence S 89 degrees 08' 17" W 68.53'

Thence N 71 degrees 48' 33" W 147.08'

Thence N 86 degrees 47' 19" W 139.42'

Thence S 70 degrees 27' 26" W 274.68'

Thence S 35 degrees 01' 54" W 120.39'

Thence S 87 degrees 21' 43" E 74.24'

Thence N 14 degrees 27' 32" W 98.75'

Thence S 66 degrees 45' 20" E 69.90'

Thence S 32 degrees 35' 59" W 210.18'

Thence S 42 degrees 57' 54" W 141.83'

Thence S 70 degrees 11' 23" W 140.32'

Thence S 55 degrees 13' 05" W 265.42'

Thence S 24 degrees 54' 27" E 115.25'

Thence S 74 degrees 56’ 15” W 98.54’

Thence N 51 degrees 50’ 45” E 134.95’

Thence S 66 degrees 26’ 09” E 90.16 to a point which bears S 82 degrees 51’ 50” E 33,262.53’ from said Point “AA”.

Thence continuing along the existing centerline said road S 14 degrees 38’ 28” E 80.45’ to the South Line of the Northeast of said Section 25 and the TERMINUS of the Parcel.”

4.0 Natural Waterways

There are three (3) Unnamed Watercourses and one (1) Class II watercourse that cross the parcel. The spring is located at the headwaters of Rancheria Creek.

5.0 Location and Area of Proposed Cultivation and Areas to be Decommissioned

The parcel has pre-existing cultivation of 23,000 square feet square feet. The pre-existing cultivation sites are proposed to be restored. The applicant proposes to relocate cultivation on prime agricultural soil. Due to the definition of outdoor verses mixed light and size of the state permits available the applicant is reducing the total square feet to 22,000.

The 22,000 square feet of Outdoor cannabis cultivation will occur in one (1) location on the parcel. There are five (5) Areas to be decommissioned located on the parcel.

Proposed Outdoor Cultivation

Proposed Cultivation Area #1

Proposed Cultivation Area #1 is located near the center of the parcel on a natural flat. It consists of existing 23,000 square feet of outdoor cannabis cultivation. This area is comprised of all five (5) decommissioned areas in order to comply with the Bear River Tribes mitigation measures as a direct and immediate result of the Cultural Resource Survey.

Areas to Decommission

All five (5) areas are being decommissioned are:

Area to be Decommissioned #1

Area to be Decommissioned #1 is located in the eastern section of the parcel on native ground. It consists of approximately 5,000 square feet of outdoor cannabis cultivation.

Area to be Decommissioned #2

Area to be Decommissioned #2 is located in the southern section of the parcel on native ground. . It consists of approximately 4,700 square feet of outdoor cannabis cultivation.

Area to be Decommissioned #3

Area to be Decommissioned #3 is located southeast of Area to be Decommissioned #4 on a native ground. It consists of approximately 4,000 square feet of outdoor cannabis cultivation.

Area to be Decommissioned #4

Area to be Decommissioned #4 is located northwest of Area to be Decommissioned #1 on a native ground. It consists of approximately 3,500 square feet of outdoor cannabis cultivation.

Area to be Decommissioned #5

Area to be Decommissioned #5 is located in the southeastern section of the parcel on a natural flat. It consists of approximately 5,500 square feet of outdoor cannabis cultivation.

6.0 Setbacks of Proposed Cultivation Area

Proposed Cultivation Area #1

Proposed Cultivation Area #1 is setback from the eastern parcel line by more than 55 feet.

7.0 Access Roads

The Parcel is located off Bell Springs Road.

The interior roads leading into the parcel are in fairly good condition however there are several existing ranch roads that will be decommissioned to bring back to its natural state. All roads on the property are pre-existing gravel surfaced road and there are two culverts on the neighbor's access road that runs through the lower southeast corner of the Parcel which will re-sloped.

The applicant proposes to re-open an existing access closer to the proposed cultivation area off of Bell Springs Road. Applicant will apply for an encroachment permit and pave an apron for the new driveway and the shop driveway. This will be the main access road for the cultivation activity. The old ranch roads will be unused but seasonally available to the cattle ranchers that lease the property. See plot plan in Attachment "A".

The Road Evaluation Report has been submitted; Bell Springs Road is the access Road and is a class 4 road. The Road Evaluation Report is included in the Other Permits, Licenses and Documents section of this Application.

8.0 Graded Flats

There are no existing graded flats located on the parcel that are identified to require permitting.

9.0 Existing and Proposed Buildings

Cabin

The Cabin is an existing 24'x24' structure that is used for temporary living. It is not used for any cultivation related activities. It was constructed in 2003 and will require permitting with the Humboldt County Building Department.

There is an existing septic that services the cabin that was constructed in 2004 and will require permitting with the Humboldt County Department of Environmental Health. Applicant has submitted the OWTS application and site inspection. Septic permit is on hold pending building application for cabin.

Barn

The Barn is an existing 30'x32' structure that is used for livestock shelter and storage. It is not used for any cultivation related activities. It was constructed in 2005 and will require permitting with the Humboldt County Building Department.

Yurts

There is a Yurt, 24 feet in diameter and is currently used for drying cannabis. It was constructed in the 2003 and will require permitting with the Humboldt County Building Department.

The other Yurt is 30 feet in diameter and is currently used for drying and processing cannabis. It was constructed in 2018 and will require permitting with the Humboldt County Building Department.

Shop

The Shop is an existing 30'X40' metal structure and is used for the drying and curing of the cannabis. It was constructed in the 2003 and will require permitting with the Humboldt County Building Department.

An additional and identical 30x40 metal structure is proposed for construction in 2019/2020 for the drying and curing of cannabis, as well as an immature plant area upon PG&E Ag drop to service these structures. It will require permitting with the Humboldt County Building Department.

Dry Storage

There is an existing 8'X14' wood structure attached to the Cabin and is used for storing the fuel for the backup generator. It was constructed in the 2005 and will require permitting with the Humboldt County Building Department.

There is an existing 14x16 wood structure that is used for storage. It is not used for any cultivation related activities. It was constructed in 2008 and will require permitting with the Humboldt County Building Department.

10.0 Water Source, Storage, Irrigation Plan and Projected Water Usage

10.1 Water Source

All water is sourced from the Applicants spring that is on the Parcel in addition to a permitted confined aquifer well rated at 10 gallons per minute.

10.2 Water Storage

There are four (4) 5,000-gallon plastic water tanks and seven (10) 2,500-gallon plastic water tanks giving a total of 45,000gallons of water storage. The Applicant will be increasing their water storage with a proposed 1,000,000-gallon pond.

The existing ponds are stock ponds and not used for irrigation.

10.3 Irrigation Plan

All irrigation of cannabis is completed by a timed, metered, drip irrigation system preventing any over watering or runoff. Hand-watering will also be done as needed.

10.4 Projected Water Use

The amount of water used for the cultivation of cannabis will vary throughout the year, with peak periods of water use occurring during the summer months. The Applicant's cultivation and water use is outlined in the Cultivation and Water Usage Table, below.

Cultivation and Water Use

MONTH	STAGE OF CULTIVATION			CULTIVATION Space per Stage (square footage)	WATER USE (gallons/month)
	Veg	Flower	Harvest		
January					0
February					0
March					0
April	X			Vegging starts 1,000 sq ft Immature plant area	5,000
May	X	X		Planting 1st run 22,000 sq ft	51,000
June		X		Flowering 22,000 sq ft Vegging starts 1,000 sq ft Immature plant area	51,000
July		X		Harvesting 22,000 sq ft	51,000
August	X			Planting 2nd run 22,000 sq ft	51,000
September	X	X		Flowering 22,000 sq ft	51,000
October		X	X	Harvesting 2nd run 22,000 sq ft	51,000
November					5,000
December					0

All water used for cultivation is sourced from the permitted, confined aquifer well and spring. The Applicant estimates their annual water use to be 316,000 gallons.

11.0 Site Drainage, Runoff, Erosion Control Measures and Watershed Protection

There are three (3) Unnamed Watercourses and one (1) Class II watercourse that cross the parcel.

The included Monitoring and Reporting form states that the following items do not currently meet the Standard Conditions and will require the remediation outlined in the Water Resource Protection Plan:

- Site Maintenance, Erosion Control and Drainage Features (estimated date of compliance, 10/2019);

The following items do meet the Standard Conditions and will require no remediation:

- Stream Crossing Maintenance;
- Riparian and Wetland Protection and Management;
- Cultivation Related Wastes;
- Refuse and Human Waste;
- Spoils Management;
- Water Storage and Use;
- Irrigation Runoff;
- Fertilizers and Soil Amendments; and
- Petroleum Products and Other Chemicals.

12.0 Distances from Significant Landmarks

There are no schools, school bus stops, state parks, places of worship within 600 feet of the cultivation site. The CRS indicated that there are Tribal Cultural Resources on the property. A report submitted by Nick Angeloff of Archeological Research and Supply Company that outlines support for the relocation of the cultivation sites within cultural site boundaries and the mitigation measures required. The report is included in the Other Permits, Licenses and Documents section of this Application. Per John Ford, Mr. Angeloff will send county detailed mitigation plan. The proposed re-location has been approved by the Bear River Tribe.

1.0 Materials Storage

Currently, there are no pesticides or herbicides registered specifically for use directly on cannabis. The Applicant will be using items that were accepted under Legal Pest Management Practices for Marijuana Growers in California.

All fertilizers and amendments brought in as needed to the Parcel. Fertilizers and amendments are placed on the shelves and floor where any spill will be contained. All labels are kept and directions are followed when nutrients are applied. The storage area will have posted instructions for cleaning up spills and a spill kit that contains a container, gloves, towels, absorbent socks and an absorbent material (kitty litter).

The Applicant has two 2 KW Honda generators (at Cabin and Garden CA 1 depending on need), and a 7KW Honda generator (at Shop or Cabin depending on need) and 5 gallon gas cans located in the Dry Storage. There is also one MultiQuip Whisperwatt 25KV generator with no onsite fuel storage located at the Shop. Recycling and solid waste is stored in cans with locking lids and will be disposed to Redway Transfer Station weekly or as needed.

2.0 Cultivation Activities

Plants are brought into the 30'x40' (Shop) immature plant area to vegetate, and will be planted in the outdoor cultivation area. Cultivation activities typically begin sometime during May when cannabis plants are brought to the Parcel for planting in Mid April. The outdoor cultivation will be use light deprivation greenhouses to accomplish 2 harvests per year, the first in August and the second in October.

The immature plant area will be located in the Shop which has an impervious floor (concrete slab). There are 12, 1000W Gavidta grow lights. The airflow is electric fans. Fans and lights are powered by one MultiQuip 25KV generator with no onsite fuel storage. It will run seasonally from April 1st to June 1st.

The existing cultivation areas vary in size and total the 23,000 square feet. Due to the size and definition of mixed light verses outdoor the applicant will reduce the square footage to 22,000 square feet. The relocated cultivation area will be planted into 11, 20x100ft greenhouses with soil bags. The greenhouses are metal hoops with woven poly tarps and a permeable floor on geo-textile fabric over native soil. The black-out plastic will be hand pulled. Only natural sunlight will be used, no lights/wattage will be used in the greenhouses. The greenhouses are the measurable identifiable boundary, not to exceed 22,000 square feet. The greenhouses will have a 5 foot spacing to allow for working access. The total fenced cultivation plot will be approximately 130 feet x 260 feet. The 10, 20x100 ft greenhouses measure 22,000 sq ft exactly.

3.0 Processing Practices

Plants will be harvested one at a time using hand shears and taken to the Shop where it will be dried and cured. The product will be sent to an off-site processing facility and or be sold untrimmed in bulk. If necessary the product will be machine trimmed on site in the Shop. Only applicant, family or farm manager and/or a third party contract service (transporter, distributor, etc) will be part of the cannabis activity.

All work surfaces and equipment are maintained in a clean, sanitary condition. Protocols to prevent the spread of mold are strictly followed. The final cannabis product is stored in a secure location on site.

All cultivation related waste is stored in water tight trash containers, allowed to liquefy and composted. The applicant composts on site in a 10x10 foot compost pile located near the cultivation area (see plot plan in Attachment "A").

The Applicant will be utilizing any Track and Trace program the County seeks to implement, abiding by all appropriate record keeping practices. Applicant was registered with Cal Origins in 2018 and will be enrolled in Metrc upon issuance of State Annual License.

4.0 Security Measures

The access to the parcel is gated and locked. There are security cameras placed over the gate, buildings and cultivation areas. A barbed-wire 6ft field fence will be installed around the perimeter of the new proposed garden. A guard and security dogs will be on duty seasonally. A view block from the road will be accomplished by shade cloth on the fence, landscaping and potentially using spoils from the proposed pond to create a dirt berm.

Applicant, Farmer Manager, and visitors will sign in and wear security ID's badges.

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

RIGHT TO DIVERT AND USE WATER

REGISTRATION *H500795* CERTIFICATE *H100102*

Right Holder: *Shanon Taliaferro*
PO Box 991
Redway, CA 95560

The State Water Resources Control Board (State Water Board) authorizes the diversion and use of water by the right holder in accordance with the limitations and conditions herein SUBJECT TO PRIOR RIGHTS. The priority of this right dates from *04/05/2018*. This right is issued in accordance with the State Water Board delegation of authority to the Deputy Director for Water Rights (Resolution 2012-0029) and the Deputy Director for Water Rights redelegation of authority dated October 19, 2017.

The Deputy Director for Water Rights finds that this registration meets the requirements for registration of small irrigation use appropriation. (Wat. Code, § 1228 et seq.)

Right holder is hereby granted a right to divert and use water as follows:

1. Location of point*(s)* of diversion **(Coordinates in WGS 84)**

Name of Diversion	Source	Tributary To:	Thence	Latitude	Longitude	County	Assessor's Parcel Numbers (APN)
Unamed Spring	Rancheria Creek	East Branch South Fork Eel River	Eel River	40.091025	-123.680411	Humboldt	216-082-010

2. Purpose of Use and 3. Place of Use

2. Purpose of Use	3. Place of Use		
	County	Assessor's Parcel Numbers (APN)	Acres
Irrigation, Fire Protection	Humboldt	216-082-010	9580
Irrigation, Fire Protection	Humboldt	216-134-011	7330
Irrigation, Fire Protection	Humboldt	216-081-010	4870

Note: Assessor's Parcel Numbers provided are based on the user's entries in this portal on *06/21/2018*.
The place of use is shown on the map filed on *06/21/2018* with the State Water Board.

4. Quantity and Season:

The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 2.03 **acre-feet per year** to be collected from 01/01 to 12/31 and as permitted in the diversion season specified in the current version of the State Water Board's Cannabis Policy, whichever is more restrictive. The total storage capacity shall not exceed 1.176 acre-feet. The rate of diversion to storage shall not exceed **42,000 gallons per day (gpd) or the diversion rate specified in the current version of the State Water Board's Cannabis Policy, whichever is more restrictive.**

5. No water shall be diverted or used under this right unless the water right holder is in compliance with all applicable

conditions, including the numeric and narrative instream flow requirements, of the current version of the State Water Board's Cannabis Policy, except as follows:

Right holders enrolled under Regional Water Quality Control Board Order R1-2015-0023 or Order R5-2015-0113 shall comply at all times with requirements related to flow, diversion, storage, and similar requirements of Attachment A of the Cannabis Policy identified by the Division of Water Rights below in this condition. This condition remains in effect until July 1, 2019, or when the right holder enrolls under the statewide Cannabis General Order, whichever comes first, at which time right holders shall comply with all applicable conditions and requirements of Attachment A of the Cannabis Policy.

- Section 1 – Term Numbers 4, 15, 17, 24, 26, and 36.
- Section 2 – Term Numbers 23, 63, 64, 66, 69 – 78, 82 – 94, 96, and 98 – 103.
- Section 3 – All Instream Flow Requirements for Surface Water Diversions (Requirements 1 – 7) and the Gage Installation, Maintenance, and Operation Requirements.
- Section 4 – All requirements and conditions.

The current version of the State Water Board's *Cannabis Policy* is available online at: https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy.pdf.

6. No water shall be diverted or used under this right, and no construction related to such diversion shall commence, unless right holder has obtained and is in compliance with all necessary permits or other approvals required by other agencies.

7. Diversion works shall be constructed and water applied to beneficial use with due diligence.

8. No water shall be diverted under this right unless right holder complies with all lawful conditions required by the California Department of Fish and Wildlife. (Wat. Code, § 1228.6, subd. (a)(2).)

9. No water shall be diverted under this right unless it is diverted in accordance with the information set forth in the completed registration form as to source, location of point of diversion, purpose of use, place of use, quantity, and season of diversion. This information is reproduced as conditions 1 through 4 of this certificate.

10. No water shall be diverted under this right unless right holder complies with all applicable state, city, county, and local laws, regulations, ordinances, permits, and license requirements including, but not limited to those for cannabis cultivation, grading, construction, and building.

11. Pursuant to Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this right, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

12. The State Water Board reserves jurisdiction over this registration to change the season of diversion and rate of diversion based on later findings of the State Water Board concerning availability of water and the protection of beneficial uses. Any action to change the authorized season of diversion and rate of diversion will be taken only after notice to interested parties and opportunity for hearing.

13. Right holder shall grant, or secure authorization through right holder's right of access to property owned by another party, the staff of the State Water Board, and any other authorized representatives of the State Water Board the following:

    a. Entry upon property where water is being diverted, stored, or used under a right issued by the State Water Board or where monitoring, samples and/or records must be collected under the conditions of this right;

    b. Access to copy any records at reasonable times that are kept under the terms and conditions of a right or other order issued by the State Water Board;

    c. Access to inspect at reasonable times any project covered by a right issued by the State Water Board, equipment (including monitoring and control equipment), practices, or operations regulated by or required under this right; and,

    d. Access to photograph, sample, measure, and monitor at reasonable times for the purpose of ensuring compliance with a right or other order issued by the State Water Board, or as otherwise authorized by the Water Code.

14. Diversion of water under this right is subject to prior rights. Right holder may be required to curtail diversion or release water stored during the most recent collection season should diversion under this right result in injury to holders of legal downstream senior rights. If a reservoir is involved, right holder may be required to bypass or release water through, over, or around the dam. If release of stored water would not effectively satisfy downstream prior storage rights, right holder may be required to otherwise compensate the holders of such rights for injury caused.

15. This right shall not be construed as conferring right of access to any lands or facilities not owned by right holder.

16. All rights are issued subject to available flows. Inasmuch as the source contains treated wastewater, imported water from another stream system, or return flow from other projects, there is no guarantee that such supply will continue.

17. If storage or diversion of water under this right is by means of a dam, right holder shall allow sufficient water at all times to pass through a fishway or, in the absence of a fishway, allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist below the dam; provided that, during a period of low flow in the stream, upon approval of the California Department of Fish and Wildlife, this requirement will be satisfied if sufficient water is passed through a culvert, waste gate, or over or around the dam to keep in good condition any fish that may be planted or exist below the dam if it is impracticable or detrimental to pass the water through a fishway. In the case of a reservoir, this provision shall not require the passage or release of water at a greater rate than the unimpaired natural inflow into the reservoir. (Fish & G. Code, § 5937.)

18. The facilities for diversion under this right shall include satisfactory means of measuring and bypassing sufficient water to satisfy downstream prior rights and any requirements of the California Department of Fish and Wildlife and the State Water Board's Cannabis Policy.

19. This right does not authorize any act which results in the taking of a threatened, endangered, or candidate species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code section 2050 et seq.) or the federal Endangered Species Act (16 U.S.C.A. section 1531 et seq.). If a "take" will result from any act authorized under this water right, the right holder shall obtain authorization for an incidental take prior to construction or operation of the project. Right holder shall be responsible for meeting all requirements of the state and Federal Endangered Species Acts for the project authorized under this right.

20. This right is subject to the submittal of an annual report of water use and satisfactory renewal, on forms to be furnished by the State Water Board, including payment of the then-current annual renewal fees. (Wat. Code, § 1228.5.)

21. This right shall be totally or partially forfeited for nonuse if the diversion is abandoned or if all or any part of the diversion is not beneficially used for a continuous period of five years.

22. This right is subject to enforcement, including but not limited to revocation, by the State Water Board if 1) the State Water Board finds that the right holder knowingly made any false statement, or knowingly concealed any material fact, in the right; 2) the right is not renewed as required by the conditions of this certificate; or 3) the State Water Board finds that the right holder is in violation of the conditions of this right. (Wat. Code, § 1228.4 et seq.)

23. The State Water Board intends to develop and implement a basin-wide program for real-time electronic monitoring and reporting of diversions, withdrawals, releases, and streamflow in a standardized format if and when resources become available. Such real-time reporting will be required upon a showing by the State Water Board that the program and the infrastructure are in place to accept real-time electronic reports. Implementation of the reporting requirements shall not necessitate amendment to this right.

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

This certificate was issued automatically as a result of the registrant self-certifying submittal of a water right registration filing in substantial compliance with Water Code §1228.3.

Dated: 06/21/2018 10:57:31

F&W; TRIBE

SPRUCE GROVE FARMS LLC

WATER RESOURCE PROTECTION PLAN

This document serves as the water resource protection plan for site Spruce Grove Farms Inc, located on Bell Springs Road, Garberville, CA 95542 (APN 216-134-011, 216-081-010, 223-011-003, 223-012-010, 216-082-010) pursuant to Order No. R1-2015-0023.

On August 13, 2015, the North Coast Regional Water Quality Control Board (Regional Water Board) adopted a General Waiver of Waste Discharge requirements and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects in the North Coast Region, Order No. R1-2015-0023. One of the requirements of the order is to prepare a water resource protection plan (WRPP) for all sites that are enrolled under Tier 2 of the order, including all of the elements listed below. Applicant has used the sample water resource protection plan provided on the NCRWQCB website. Applicant is working with Green Road Consulting who have conducted a site visit in March 2017, to help identify and recommend corrective action for this WRPP. Applicant is requesting a Tier 2* status.

1. *Legible map(s) of the property identifying the following items where applicable* – Maps were created by applicant with Humboldt County Web GIS. Green Road Consulting will be providing an additional site map. Both an aerial photo and topographic map are provided.

a. Site topography

b. Perimeter of land owned

c. Perimeter of land leased

d. Buildings with use identified

e. Storage locations of chemicals used, if any (i.e. fertilizer, pesticide, petroleum)

f. Production area(s) perimeter (e.g. Cultivation areas, greenhouses)

g. Cleared and developed areas

h. Surface watercourses and water conveyances (e.g. ditches, piping)

i. Drainage patterns & flow path directions

j. Roads, including specific markings for all stream crossings

k. Features scheduled for upgrade, cleanup, remediation, and restoration

l. Points of diversion of water sources

m. Locations of water pumps and associated facilities

n. Water storage type and location (storage tanks, ponds, bladders)

o. Unstable features

p. Human waste facilities (e.g. septic tanks and leach fields, privy, composting toilet)

q. Map legend

Insert map here – See attachment for maps

2. Applicant has assessed the current conditions of the site (as applicable to the standard conditions of the order) and has included the features, as indicated on the map, needing improvements in the table below. Also included is a detailed list of specific management practices designed to meet standard conditions, incorporating applicable standard BMPs, and any improvement work needed to bring site features into compliance with the standard conditions. Future site improvements are included in Table 1 with a prioritization and implementation schedule for corrective action based on potential impacts to the beneficial uses of water. Applicant is requesting a Tier 2* status.

Management practices include the following:

Controllable sediment delivery sites: There are several existing ranch roads that will be abandoned and decommissioned with fallen logs to block access, water bars installed and seed/mulch applied to bring back to natural state.

Riparian protection: The cabin and all existing gardens are currently located (G1 – Cabin 1,500 ft, G2 – 175 ft, G3 – 812 ft, G4 – 264 ft) respectively from a stream course. The four separate garden sites will be combined and relocated more than 300 ft setback from stream course.

Road construction and maintenance: All roads on property are pre-existing gravel surfaced roads. Driveways are out sloped, with no in board ditches. The neighbor's access road that runs through the lower south east corner of the property, has inboard ditches that feed two culverts. The plan is to out slope and improve ditch relief. The road leading to current Yurt location will be abandoned and decommissioned with fallen logs to block access, water bars installed and seed/mulch applied to bring back to natural state. Roads are routinely inspected and maintained with surface gravel and water bars.

Spoils storage and disposal: Applicants are working with Green Road consultants to design and engineer a rainwater exclusive ag pond (see map for proposed location), spoils storage and disposal will be included in the engineered plan.

Chemical handling and management: There is one large capacity (250gal) propane tank on the property that services and is located just above the main gate, near the barn, below the Cabin. Cabin is off the grid and solar powered with batteries located in dry storage on concrete pads. Gasoline to power back-up generators are stored in 5 gallon gas cans in dry storage at the Cabin. No chemicals are used in the organic farming operation. Fertilizer use is detailed in item 4 below.

Waste handling and disposal: All refuse is stored in cans with locking lids, and removed weekly and/or as needed. All recycling is separated and refuse is taken to the Redway Transfer station.

Human waste: see attached for schematic of existing septic system located at Cabin. An additional septic will be designed and engineered by Green Road to be located at the new garden location.

Irrigation runoff: no runoff, meets standard conditions. Gardens are heavily mulched with drip irrigation on timers, a low water consumption strategy is implemented.

Water storage and use is detailed in item 6 below.

SpruceGroveFarmsLLCMap3Yurt

Humboldt County Planning and Building Department

Points
Override 1

Lines
Override 1

Areas
Override 1
Override 3

Highways and Roads
Principal Arterials
Minor Arterials
Major Collectors
Minor Collectors
Local Roads

Private or Unclassified
Major River or Stream

Blue Line Streams
Perennial 1-3
Perennial >4

Intermittent
Subsurface
City Boundary
Counties
Parcels

0 180 360 720 Feet
0 0.0325 0.065 0.13 Miles
RF= 1:4,514 1 in = 376 ft

Printed: May 12, 2017

Web AppBuilder 2.5 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Source: NRCS, Humboldt County GIS, USGS, Healthy Rural Roads, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, FRAP, FEMA, USGS

Applicant is working with Green Road Consulting to ensure full compliance with all necessary permits and requirements. A site visit was conducted in March 2017 and will continue consultation for future improvements to meet standard conditions and ensure BMP's are being met.

Applicants are encouraged by the Consultant's recommendation to abandon the four existing ~ 10,000 sq ft garden sites and consolidate to a single 44,000 sq ft garden, for more efficient use of land, reduce impact to roads, increase water quality, simplify security, and overall efficiency.

Any proposed work in streams and wetlands that require site-specific review to determine if the work requires a permit by the Army Corps of Engineers and a Water Quality Certification by the Water Board will be acquired. Additionally, any future proposed work in streams and wetlands shall be designed by a qualified registered professional and shall incorporate applicable standard BMPs. All relevant permit information for coverage of proposed work in or near streams or wetlands will be submitted with reporting documentation.

Table 1: Features that need improvement

Unique Map Point(s)	Map Point Description	Associated Standard Condition	Temporary BMP	Permanent BMP	Priority for action	Time Schedule for completion of Permanent BMP	Completion Date
R1	Neighbor Access Road	1.A.1.c	Existing culverts	Re-slope and surface rock	3	Oct 2018	
R2	Yurt Road	1.A.1.a	Rolling dips	Abandoned	1	Oct 2018	
G1	Garden Consolidation & Relocation	1.A.12	Proposed	Proposed	5	Oct 2018	
P1	Upper Pond - existing	1.A.5.f		Armored spillway	2	Oct 2018	
P2	Lower Pond - existing	1.A.5.f		Armored spillway	2	Oct 2018	
C 1 & 2	Culverts 1 & 2	1.A.2.a	Meets Standard condition	Meets Standard condition			
P3	Ag Pond – proposed	1.A.2.c, 2f		Engineered rainwater catchment pond	4	2019	

3. *Applicable design drawings and schematics for watercourse structures, fish passages, roads, septic tanks, fill prisms, pads, ponds, or any other constructed feature that has been designed or engineered.*

The applicants are working with Green Road Consulting to engineer an agriculture exclusive (~250,000 gallon) pond, as well as a septic system that will service the garden and processing facility. Still to be determined.

There are two other un-lined spring fed ponds that were pre-existing as stock ponds from the Tooby Ranch. See Appendix A & B for pond schematics.

One existing septic tank that services the cabin. See Appendix C for schematic.

4. *List of chemicals stored onsite, and information about use (e.g., quantities used and frequency applied).*

All fertilizer is organic, is purchased and used as needed, no long term storage on site. All chemicals and fertilizer will be securely stored in metal building or shed.

Liquid organic fertilizer applied weekly per manufactures directions. Soil Amendments – are purchased and applied immediately in the spring.

Fertilizer use per year			
	Manufactures Directions		
Type	**lbs/100sq. ft**	**40,000 sq. ft**	**# bags**
Worm Castings	10	4,000	80
Fish/Bone Meal	1.1	452	8
Chicken Manure	12.5	5,000	160
Bat Guano	3	1,200	40
Green Sand	10	4,000	12
Trace Minerals	10	4,000	12
Rock Phosphate	4	1,600	12
Dr. Earth	1.8	720	12

5. *Monitoring element to ensure that BMPs are being implemented and to evaluate their effectiveness. Include a plan to inspect the site to evaluate the effectiveness of corrective action and identify where additional work may be needed.*

Property owner will inspect site quarterly and during heavy storms to ensure standard conditions are maintained. This includes inspection of all drainages, roads, ponds, tanks and gardens to ensure no erosion, slides or discharge concerns occur. Immediate action of mulch, rock, ditch or culvert clearing will be implemented if any problems are found.

6. *Water Use: Plan shall record water source, relevant water right documentation, and amount used monthly.*

Water Source: All water is sourced from an unnamed spring at the headwaters of Rancheria Creek. The spring fills 4 x2,500 gallon poly tanks and is pumped with a solar SQ flex pump. There

are also two spring fed ponds. Additional storage tanks are located at the cabin and metal building. Applicant is working with Green Road Consulting to design an additional large capacity rainwater ag pond to be located near the new garden site (see attached). Existing water tanks have a combined capacity totaling 41,000 gallons. Applicants plan to add 20,000 gallon capacity rainwater catchment tanks (4 x 5,000 gal) located at the cabin by 2018. The existing ponds have a total combined 140,000 gallon capacity. The proposed pond will provide an additional ~250,000 gallons.

Water Right Documentation: The fresh water for the Cabin is supplied by a pump from the spring box. A Small Domestic Use Appropriation and Initial Statement of Use, application was filed with the SWRCB on May 17, 2017 for domestic use and irrigation. Applicants were told by Bob McKee who subdivided the Tooby Ranch in 2002, that the property came with pre-1914 water rights for the pre-existing historic stock ponds that supported the cattle.

Amount Used Monthly:

Jan – 15,000 Feb – 15, 000 Mar – 15, 000 Apr – 15, 000 May – 120,000 June – 120,000

Jul – 120,000 Aug – 120,000 Sep – 120,000 Oct – 120,000 Nov – 15, 000 Dec – 15,000

Water Conservation Measures: include low flow faucets, storage for low flow months (May – Oct), drip irrigation and timers, heavy mulching. Weekly inspection for leaks, and weekly monitoring water levels in tanks and pond.

- No surface water diversions ever.
- Water diversion pursuant to a local plan that is protective of in-stream beneficial uses.

Name of legally responsible person (LRP): Shanon Taliaferro

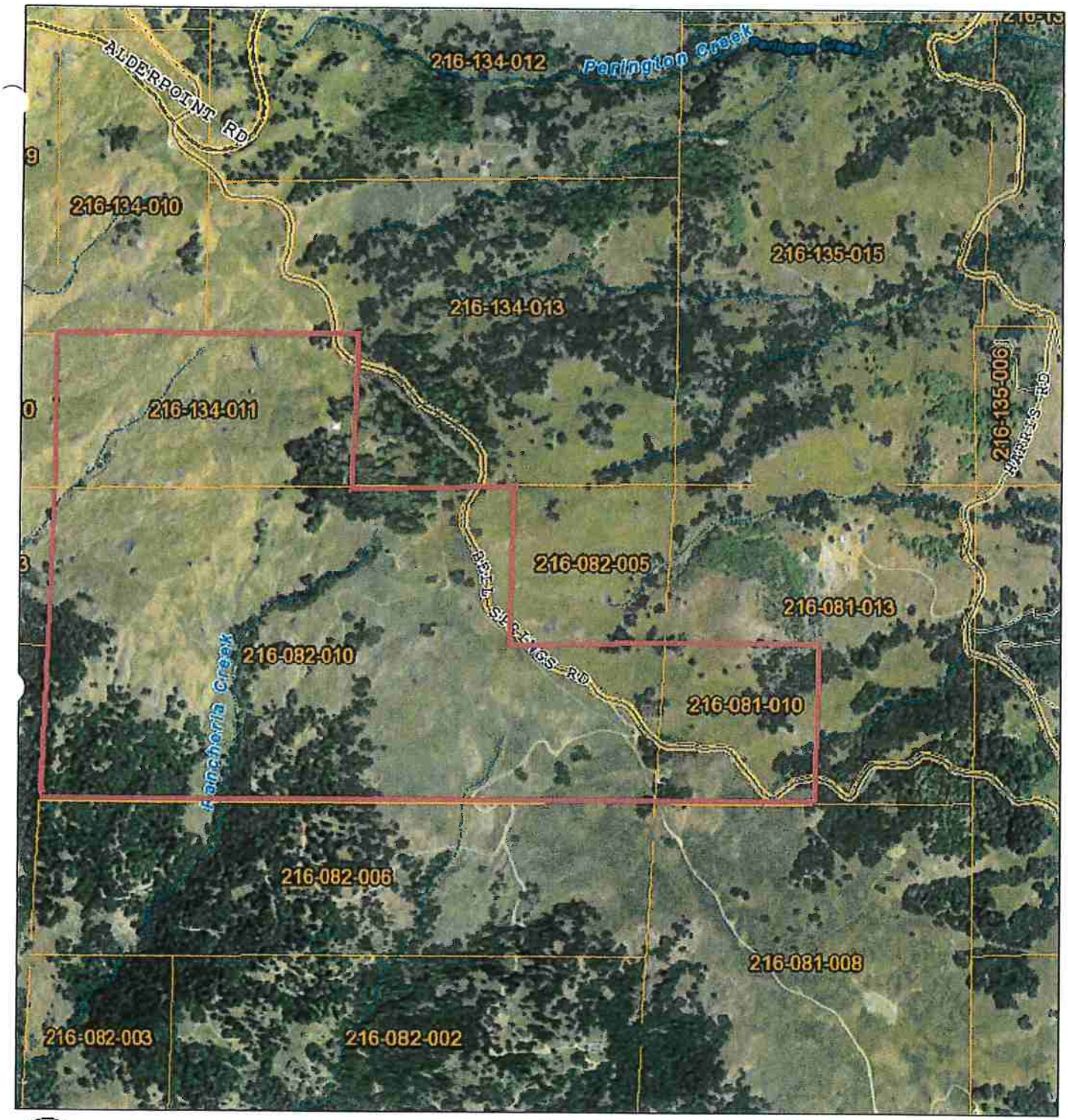
Title (owner, lessee, operator, etc.): Spruce Grove Farms, Inc

Signature:_____ Date: _____

WRPP prepared by (if different from LRP): _____

WRPP prepared on (Date): January 23, 2017

Signature: _____ Date: _____



SpruceGroveFarmsLLCMap1

Humboldt County Planning and Building Department

Lines
- Override 1

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors

Local Roads
Private or Unclassified
Major River or Stream

Blue Line Streams
- Perennial 1-3

Intermittent
Subsurface
City Boundary
City Boundary (750K)
Counties
Parcels

0 700 1,400 2,800 Feet
0 0.125 0.25 0.5 Miles
RF= 1:18,056 1 in = 1,505 ft

N W E S

Printed: May 12, 2017 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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SpruceGroveFarmsLLCMap2NewGarden

Humboldt County Planning and Building Department

0 180 360 720 Feet

0 0.0325 0.065 0.13 Miles

RF= 1:4,514 1 in = 376 ft

N W E S

Printed: May 12, 2017 Web AppBuilder 2.0 for ArcGIS

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SpruceGroveFarmsLLCMap4CabinG1

Humboldt County Planning and Building Department

0 40 80 160 Feet

0 0.0075 0.015 0.03 Miles

RF= 1:1,128 1 in = 94 ft

N W E S

Areas
Override 3
Override 4

Highways and Roads
Principal Arterials
Minor Arterials
Major Collectors
Minor Collectors
Local Roads
Private or Unclassified
Major River or Stream

Blue Line Streams
Perennial 1-3
Perennial >4
Intermittent
Subsurface

City Boundary
Counties
Parcels

Printed: May 12, 2017 Web AppBuilder 2.0 for ArcGIS

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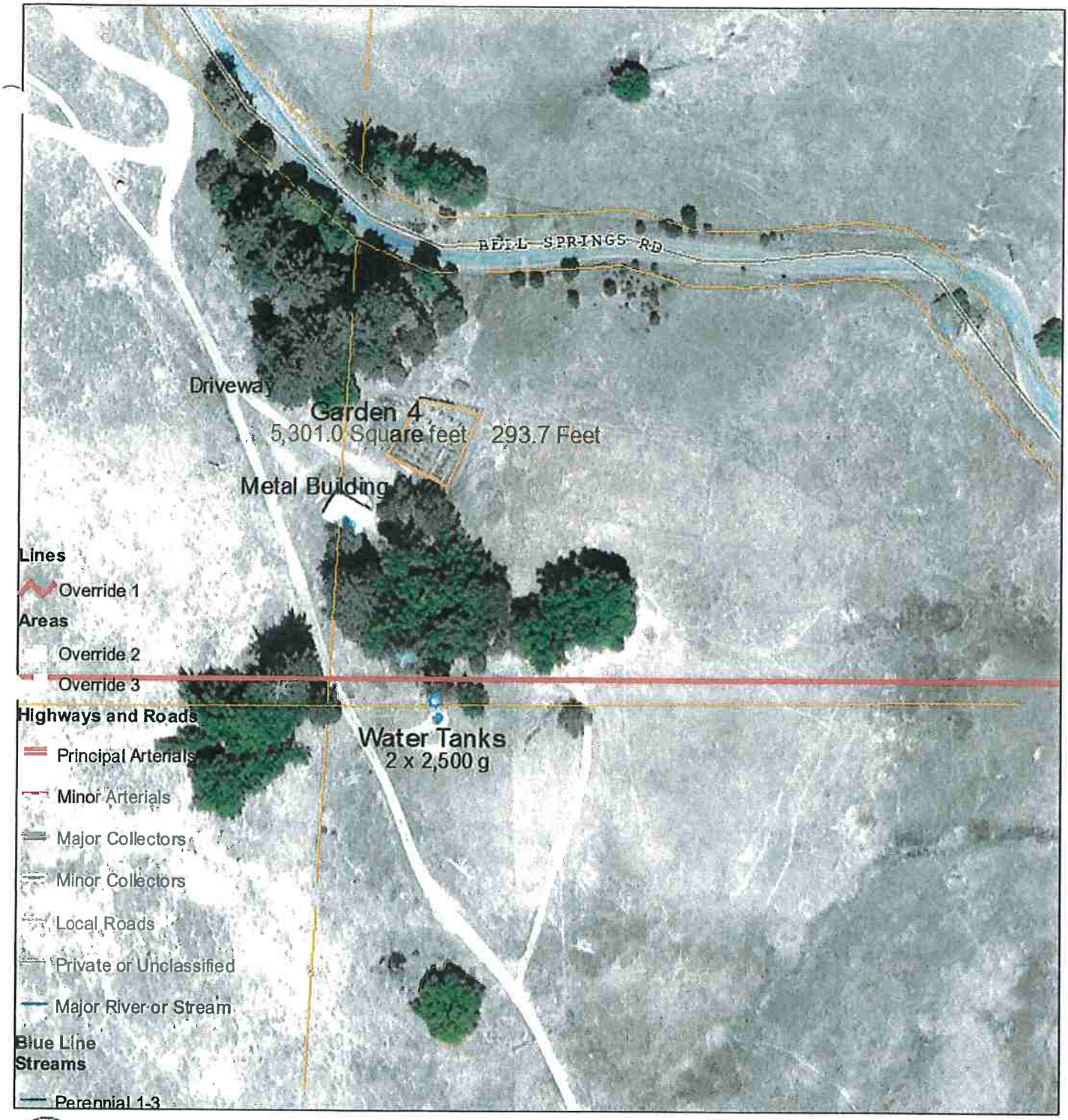

SpruceGroveFarmsLLCMap5MetalBuildingG4

Humboldt County Planning and Building Department

0 87.5 175 350 Feet

0 0.015 0.03 0.06 Miles

RF= 1:2,257 1 in = 188 ft

Printed: May 12, 2017 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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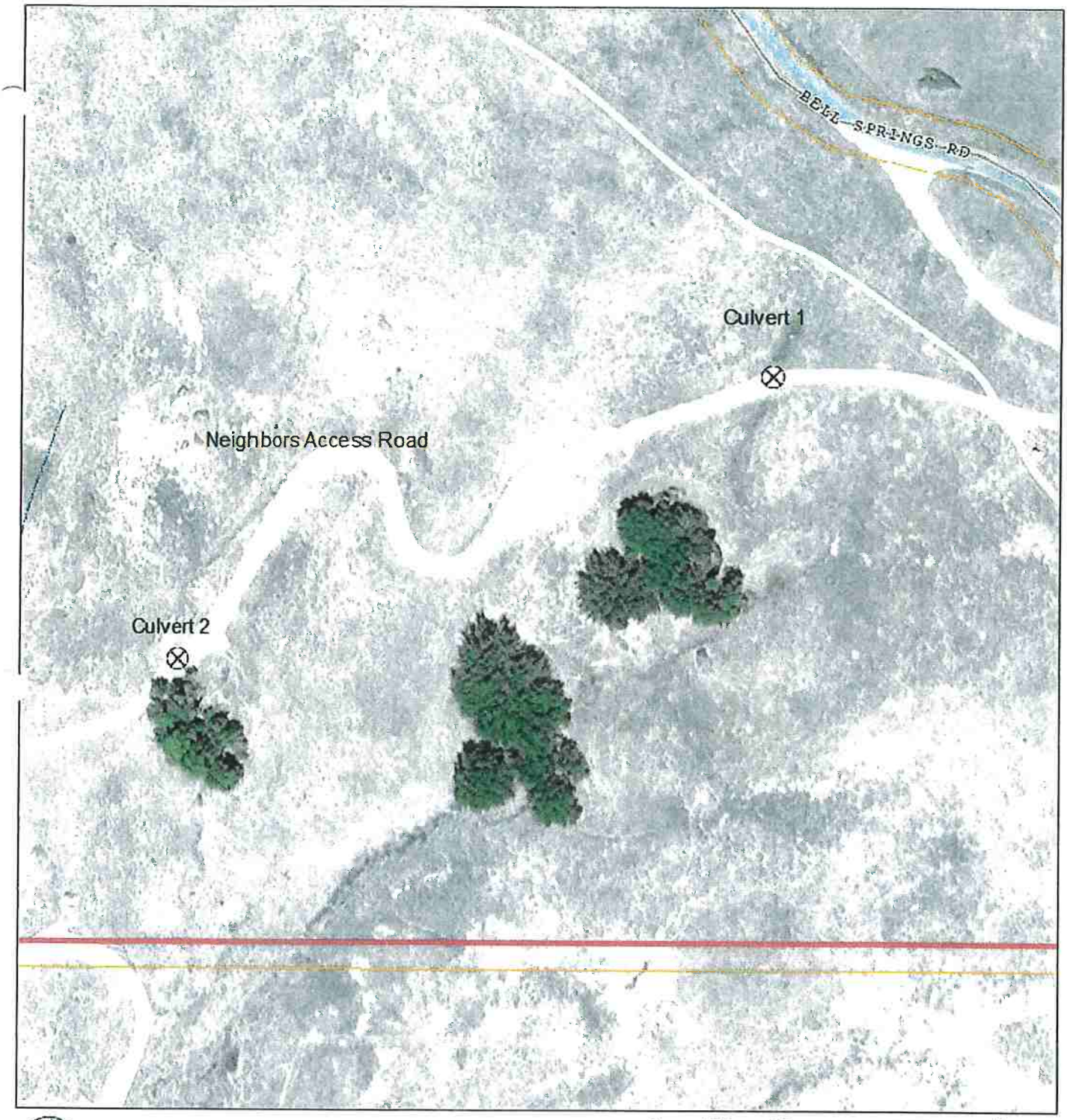

SpruceGroveFarmsLLCMap6NeighborRoad

Humboldt County Planning and Building Department

0 87.5 175 350 Feet

0 0.015 0.03 0.06 Miles

RF= 1:2,257 1 in = 188 ft

N W E S

Printed: May 12, 2017 Web AppBuilder 2.0 for ArcGIS

Points
- Override 2

Lines
- Override 1

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary

Counties

Parcels

Map Disclaimer:
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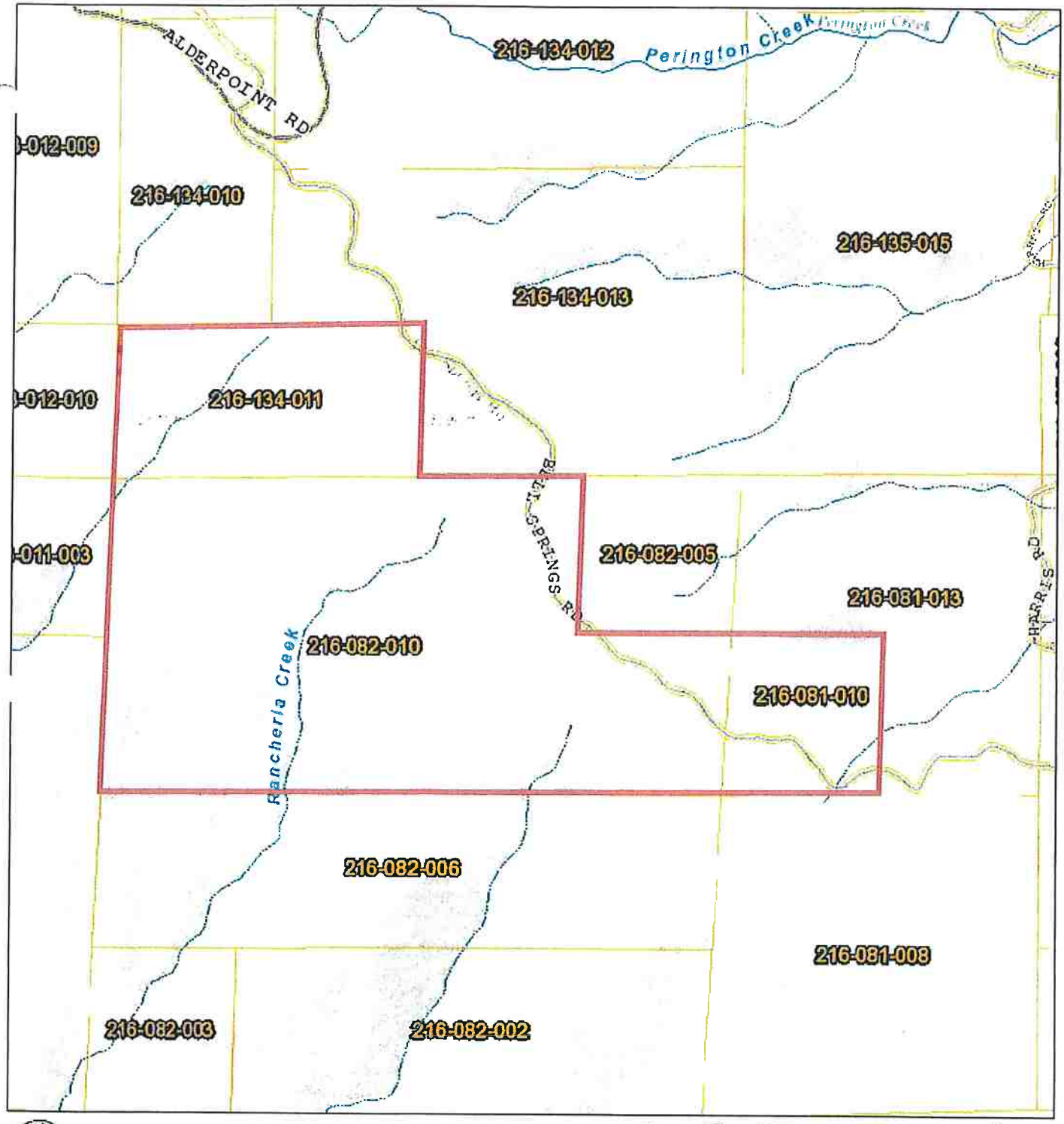

SpruceGroveFarmsLLCMap7Topo

Humboldt County Planning and Building Department

0 700 1,400 2,800 Feet

0 0.125 0.25 0.5 Miles

RF= 1:18,056 1 in = 1,505 ft

N W E S

Printed: May 12, 2017 Web AppBuilder 2.0 for ArcGIS

Lines
- Override 1

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- City Boundary (750K)
- Counties
- Parcels

Map Disclaimer:
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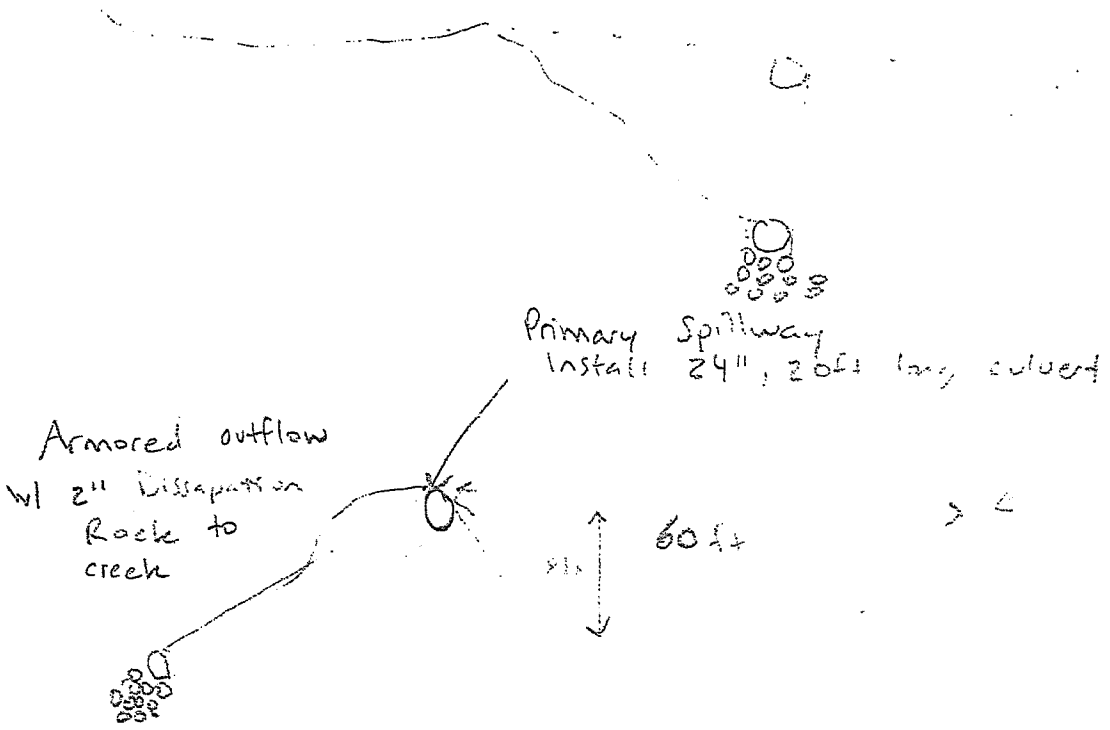
Source: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, NRCS, Humboldt County GIS, USGS, Healthy Rural Roads, FRAP, FEMA, USGS

Appendix B: Pond Upper Schematic

Spruce Grove farms LLC
Bell Springs Road
Garberville CA 95542
APN 216-134-011
216-081-010
216-082-010

Pond Capacity ~60,000 gal
- 8 ft max depth
Spring fed - unlined

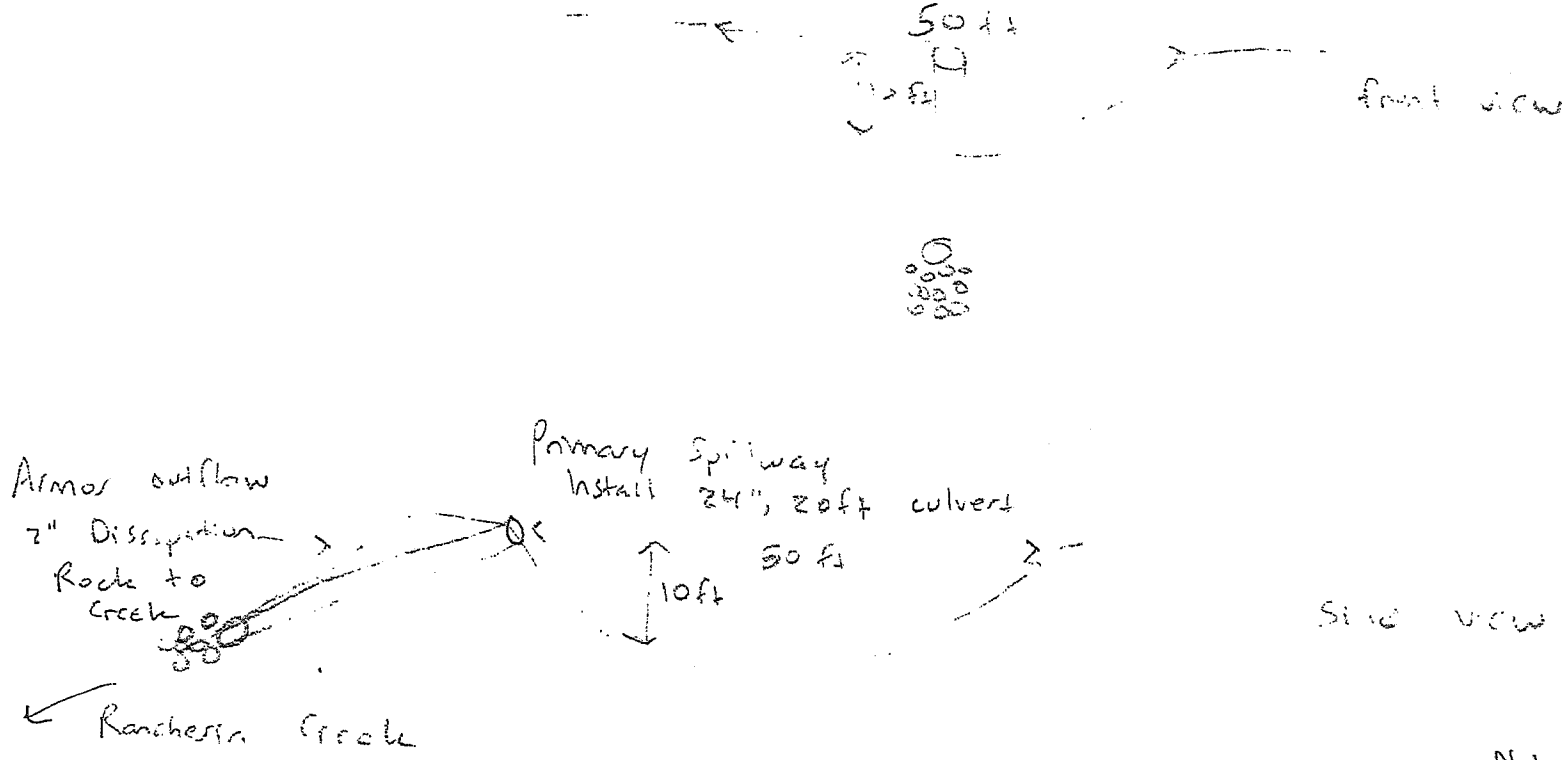


Not to Scale

Appendix A: Lower Pond Schematic

Spruce Grove Farms LLC
Bell Springs Road
APN - 216-134-011
216-081-010
216-082-010

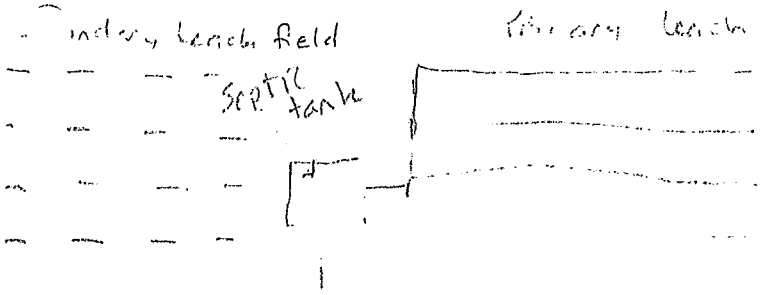
Pond Capacity ~ 80,000 gal
~10 ft max depth
Spring fed - unlined



Not to Scale

Appendix C: Septic Schematic

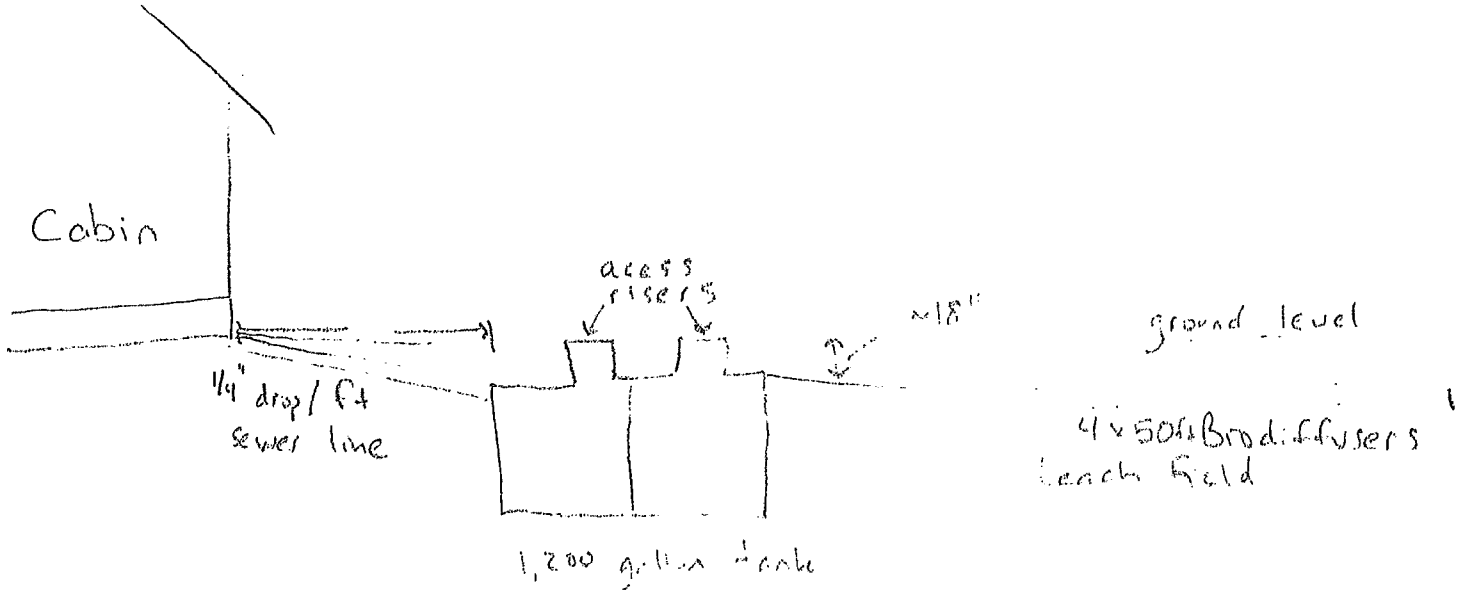
Spruce Grove Farms LLC
Bell Springs Road
Garberville, CA 95542
APN 216-134-011
216-081-010
216-082-010



Cabin

driveway

greenhouse



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 1 – NORTHERN REGION
619 Second Street
Eureka, CA 95501

STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2017-0288-R1
Unnamed Tributaries to Rancheria Creek, Tributary to East Branch South Fork Eel River, Tributary to South Fork Eel River, Tributary to Eel River and the Pacific Ocean

Shanon Taliaferro
Taliaferro Water Diversion and Pond Project
3 Encroachments

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Shanon Taliaferro (Permittee).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittee initially notified CDFW on May 22, 2017, that the Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, the Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, the Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project to be completed is located within the South Fork Eel River watershed, approximately 6 miles east of the town of Garberville, County of Humboldt, State of California. The project is located in Section 25, T4S, R4E, Humboldt Base and Meridian; in the Harris U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Number 216-082-010; latitude 40.0911 N and longitude 123.6802 W at point of diversion 1 (POD 1).

PROJECT DESCRIPTION

The project is limited to 3 encroachments (Table 1). One encroachment is for water diversion from a spring, an unnamed tributary to Rancheria Creek. Water is diverted for

domestic, irrigation, and livestock use. Work for the water diversion will include use and maintenance of the water diversion infrastructure, and any work required to bring water diversion infrastructure into compliance with this Agreement.

The two other proposed encroachments are for water diversion from two existing, spring-fed ponds, repair and reconstruction of pond outlets, and maintenance of the ponds. Work for these encroachments will include excavation, placement of new, properly sized outlet culverts, backfilling and compaction of fill, and rock armoring as necessary to minimize erosion.

The notification also disclosed a new groundwater well, three existing, adequately-sized stream crossing culverts, and a Class III ford crossing on a road used only during the dry season.

Table 1. Project Encroachments with Description

ID	Latitude/Longitude	Description
POD 1 (Spring)	40.0911, -123.6802	Water diversion from a spring using a spring box. Water is diverted for domestic, irrigation and livestock use. Work will include use and maintenance of water diversion infrastructure, and any work required to bring water diversion infrastructure into compliance with this Agreement.
POD 2 (Pond 1)	40.0909, -123.6804	Water diversion from an existing spring-fed pond, reconstruction of pond outlet, and maintenance of the pond. Water is diverted for livestock use only.
POD 3 (Pond 2)	40.0906, -123.6800	Water diversion from an existing spring-fed pond, reconstruction of pond outlet, and maintenance of the pond. Water is diverted for livestock use only.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include Chinook Salmon (*Oncorhynchus tshawytscha*), Coho Salmon (*O. kisutch*), Steelhead Trout (*O. mykiss*), Pacific Lamprey (*Entosphenus tridentata*), Southern Torrent Salamander (*Rhyacotriton variegatus*), Pacific Giant Salamander *(Dicamptodon tenebrosus)*, Foothill Yellow-legged Frog *(Rana boylii)*, Northern Red-legged Frog (*Rana aurora*), Coastal Tailed Frog (*Ascaphus truei*), Western Pond Turtle (*Actinemys marmorata marmorata*) amphibians, reptiles, aquatic invertebrates, mammals, birds, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include:

Impacts to water quality:
increased water temperature;
reduced instream flow;
temporary increase in fine sediment transport;

Impacts to bed, channel, or bank and direct effects on fish, wildlife, and their habitat:
loss or decline of riparian habitat;
direct impacts on benthic organisms;

Impacts to natural flow and effects on habitat structure and process:
cumulative effect when other diversions on the same stream are considered;
diversion of flow from activity site;
direct and/or incidental take;
indirect impacts;
impediment of up- or down-stream migration;
water quality degradation; and
damage to aquatic habitat and function.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

The Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. The Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. The Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of the Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Adherence to Existing Authorizations. All water diversion facilities that the Permittee owns, operates, or controls shall be operated and maintained in accordance with current law and applicable water rights.

1.4 Change of Conditions and Need to Cease Operations. If conditions arise, or change, in such a manner as to be considered deleterious by CDFW to the stream or wildlife, operations shall cease until corrective measures approved by CDFW are taken. This includes new information becoming available that indicates that the bypass flows and diversion rates provided in this agreement are not providing adequate protection to keep aquatic life downstream in good condition or to avoid "take" or "incidental take" of federal or State listed species.

1.5 Notification of Conflicting Provisions. The Permittee shall notify CDFW if the Permittee determines or learns that a provision in the Agreement might conflict

with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact the Permittee to resolve any conflict.

1.6 Project Site Entry. The Permittee agrees to allow CDFW employees access to any property it owns and/or manages for the purpose of inspecting and/or monitoring the activities covered by this Agreement, provided CDFW: a) provides 24 hours advance notice; and b) allows the Permittee or representatives to participate in the inspection and/or monitoring. This condition does not apply to CDFW enforcement personnel.

1.7 CDFW Notification of Work Initiation and Completion. The Permittee shall contact CDFW within the seven-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW no later than seven (7) days after the project is fully completed.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, the Permittee shall implement each measure listed below.

2.1 Permitted Project Activities. Except where otherwise stipulated in this Agreement, all work shall be in accordance with the Permittee Notification received on May 22, 2017, with revisions received on September 15, 2017 and March 17, 2019, together with all maps, BMP's, photographs, drawings, and other supporting documents submitted with the Notification.

2.2 Incidental Take. This Agreement does not allow for the take, or incidental take of any state or federal listed threatened or endangered listed species.

Project Timing

2.3 Work Period. All work, not including diversion of water, shall be confined to the period **June 15 through October 1** of each year. Work within the active channel of a stream shall be restricted to periods of **dry weather**. Precipitation forecasts and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease and all necessary erosion control measures shall be implemented prior to the onset of precipitation.

2.4 Work Completion. The proposed work shall be completed by no later than **October 1, 2020**. A notice of completed work, including photographs of each site, shall be submitted to CDFW within seven (7) days of project completion.

2.5 Extension of the Work Period. If weather conditions permit, and the Permittee wishes to extend the work period after October 1, a written request shall be made to CDFW at least 5-working days before the proposed work period variance.

Written approval (letter or e-mail) for the proposed time extension must be received from CDFW prior to activities continuing past October 1.

2.6 Avoidance of Nesting Birds. Vegetation maintenance/removal as necessary within the scope of the project shall be confined to the period commencing August 16 and ending February 28, of any year in which this Agreement is valid, provided the work area is outside of the actively flowing stream. Work may continue during precipitation events provided stream flows have not risen into work areas and sediment delivery will not result.

Vegetation Management

2.7 Minimum Vegetation Removal. No native riparian vegetation shall be removed from the bank of the stream, except where authorized by CDFW. Permittee shall limit the disturbance or removal of native vegetation to the minimum necessary to achieve design guidelines and standards for the Authorized Activity. Permittee shall take precautions to avoid damage to vegetation outside the work area.

2.8 Vegetation Management. Permittee shall limit vegetation management (e.g., trimming, pruning, or limbing) and removal for the purpose of stream crossing or diversion infrastructure placement/maintenance to the use of hand tools. Vegetation management shall not include treatment with herbicides.

Water Diversion

2.9 Maximum Diversion Rate for all PODs. The maximum instantaneous diversion rate from the water intake shall not exceed **five (5) gallons per minute** (gpm) at any time.

2.10 Bypass Flow for POD 1. The Permittee shall pass **80% of the flow** at all times to keep all aquatic species including fish and other aquatic life in good condition below the point of diversion.

2.11 Seasonal Diversion Minimization for POD 1. No more than **300 gallons per day** shall be diverted during the low flow season from **May 15 to November 15** of each year. Water shall be diverted only if the Permittee can adhere to conditions 2.9 and 2.10 of this Agreement.

2.12 Bypass Flow and Seasonal Diversion Minimization for POD 2 and POD 3. To minimize adverse impacts to native pond breeding amphibians (when present) the following diversion minimizations apply: From November 1 to March 31, the Permittee shall divert water at a rate no greater than the rate of water flowing into the pond (i.e., water diversion shall not decrease the pond depth). From April 1 – September 1, when native larval amphibians are present, the Permittee shall cease diverting water once the pond volume is one third of the maximum pond volume. To comply with this measure; the Permittee shall establish a fixed visual marker(s) (e.g., stage plate) in the pond as a reference for water level thresholds.

2.13 Measurement of Diverted Flow. Permittee shall install and maintain an adequate measuring device for measuring the instantaneous and cumulative rate of diversion. This measurement shall begin as soon as this Agreement is signed by the Permittee. The device shall be installed within the flow of diverted water. The Permittee shall maintain records of diversion, and provide information including, but not limited to the following:

2.13.1 The date diversion occurred.

2.13.2 The amount of water used per day for cannabis cultivation separated out from the amount of water used for other irrigation purposes and other uses of water (e.g., domestic use or fire protection).

2.13.3 Permittee shall make available for review at the request of the department the daily diversion records required by the State Water Resources Control Board (Board) in Attachment A to the Board's Cannabis Cultivation Policy (October 17, 2017), No. 84, pages 40-41 (see Cal. Code Regs., tit. 23, § 2925).

2.14 Water Management Plan. The Permittee shall submit a Water Management Plan no later than **sixty days** from the time this Agreement is made final that describes how compliance will be achieved under this Agreement. The Water Management Plan shall include details on water storage, water conservation, or other relevant material to maintain water needs in coordination with forbearance and bypass flow requirements. The Water Management Plan shall include a brief narrative describing water use on the property, photographs to support the narrative, and water use calculations to ensure compliance with this Agreement. The Water Management Plan shall be submitted to CDFW at 619 Second Street, Eureka, CA 95501.

Water Diversion Facility Retrofit

2.15 Intake Structure. No polluting materials (e.g., particle board, plastic sheeting, bentonite) shall be used to construct or screen, or cover the diversion intake structure.

2.16 Intake Structure Placement. Infrastructure installed in the streambed (e.g., cistern or spring box) shall not exceed 10 percent of the active channel width and shall not be located in the deepest portion of the channel. The depth of the intake shall be no greater than one foot (12 inches) below the streambed.

2.17 Intake Screening. The Permittee shall regularly inspect, clean, and maintain screens in good condition.

2.17.1 The water intake screens shall be securely attached (e.g., threaded or clamped) to the intake line and have a minimum wetted area of 0.25 square feet and a minimum open area of 27%.

2.17.2 A water intake screen with round openings shall not exceed 3/32-inch diameter; a screen with square openings shall not exceed 3/32-inch measured diagonally; and a screen with slotted openings shall not exceed 0.069 inches in width. Slots must be evenly distributed on the screen area.

2.17.3 The water intake screen may be constructed of any rigid material, perforated, woven, or slotted. Stainless steel or other corrosion-resistant material is recommended to reduce clogging due to corrosion. Care should be taken not to use materials deemed deleterious to aquatic species.

2.17.4 The water intake screen shall be placed in fast moving water with the long axis of the screen parallel to the streamflow. The water intake shall not be placed in pool habitat.

2.18 Intake Shall Not Impede Aquatic Species Passage. The water diversion structures shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life.

2.19 Exclusionary Devices. Permittee shall keep the diversion structures (e.g. cistern) covered at all times to prevent the entrance and entrapment of amphibians and other wildlife.

2.20 Diversion Infrastructure Plan (DIP). The Permittee shall submit a DIP for CDFW review and approval prior to diverting water. The DIP shall include a narrative describing the different elements of the water diversion infrastructure, supporting photographs and/or diagrams, and justification of how compliance with the CDFW Fish Screen Criteria will be achieved under this Agreement.

2.21 Diversion Intake Removal. Permittee shall plug, cap, block (e.g., with a shut-off valve), or remove all intakes at the end of each diversion season.

2.22 Heavy Equipment Use. No heavy equipment shall be used in the excavation or replacement of the existing water diversion structure. The Permittee shall use hand tools or other low impact methods of removal/replacement. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.

Diversion to Storage

2.23 Water Storage. All water storage facilities (WSFs) (e.g., reservoirs, storage tanks, mix tanks, and bladders tanks) must be located outside the active 100-year floodplain and outside the top of bank of a stream. Covers/lids shall be securely affixed to water tanks at all times to prevent potential entry by wildlife. Permittee shall cease all water diversion at the point of diversion when WSFs are filled to capacity.

2.24 Water Storage Maintenance. WSFs shall have a float valve to shut off the diversion when tanks are full to prevent overflow. The Permittee shall install any other measures necessary to prevent exorbitant use or waste of water. Water shall not leak, overflow, or overtop WSFs at any time. Permittee shall regularly inspect all WSFs and infrastructure used to divert water to storage and use and repair any leaks.

2.25 Reservoirs. Shall be appropriately designed, sized, and managed to contain any diverted water in addition to precipitation and storm water runoff, without overtopping.

2.26 Limitations on Impoundment and Use of Diverted Water. The Permittee shall impound and use water in accordance with a valid water right, including any limitations on when water may be impounded and used, the purpose for which it may be impounded and used, and the location(s) where water may be impounded and used.

2.27 Water Conservation. The Permittee shall make best efforts to minimize water use, and to follow best practices for water conservation and management.

2.28 State Water Code. This Agreement does not constitute a valid water right. The Permittee shall comply with State Water Code sections 5100 and 1200 et seq. as appropriate for the water diversion and water storage. The application for this registration is found at: http://www.swrcb.ca.gov/waterrights/publications_forms/forms/docs/sdu_registration.pdf.

Reservoirs

2.29 No Stocking. Stocking of fish, wildlife, or plant of any kind, in any Waters of the State, including reservoirs, shall be prohibited without written permission from the department pursuant to Section 6400 of the Fish and Game Code.

2.30 Invasive Species Management for Reservoirs. Permittee shall implement an invasive species management plan prepared by a Biologist for any existing or proposed reservoir. The plan shall include, at a minimum, an annual survey for invasive aquatic species, including the American bullfrog (*Lithobates catesbeianus = Rana catesbeiana)*. The Biologist, if appropriate, shall implement eradication measures if invasive aquatic species are identified as part of the survey.

2.30.1 Bullfrog Management Plan. If bullfrogs are observed, they shall be appropriately managed. Management of bullfrogs, including annual draining and drying of ponds, shall follow the guidelines in Exhibit A. A copy of the annual monitoring report, shall be submitted to CDFW in accordance with the reporting measures described in Exhibit A and below (Reporting Measure 3.5)

2.31 Off-stream reservoirs. Shall be appropriately designed, sized, and managed to contain any diverted water in addition to precipitation and storm water runoff, without overtopping. The Permittee shall install an overflow spillway that will withstand a 100-year flood event, designed with a dispersal mechanism, or low-impact design, that discourages channelization and promotes dispersal and infiltration of flows to prevent surface overflow from reaching waters of the State. The spillway shall be designed and placed to allow for a minimum of two-feet of freeboard.

2.32 Wildlife Entrapment Prevention. The Permittee shall install several exit ramps to prevent wildlife entrapment. Exit ramps shall meet the following requirements: installed at no greater than 2:1 slope, securely fixed at the upslope end, made of solid material (e.g. wood), and be a minimum length of 1.5 times the radius of the pond. A notice of completed work, with supplemental pictures, shall be submitted to CDFW by December 31, 2019.

2.33 Foothill Yellow-legged Frog Avoidance

2.33.1 No pond outlet construction/reconstruction shall occur if water is present, unless a visual encounter survey is conducted for all life-stages of FYLF by a qualified individual (knowledgeable of all life stages of FYLF and similar species) within the project area no more than two weeks prior to operations.

2.33.2 Visual encounter surveys shall consist of walking the entire survey reach and visually scanning in the water and on the banks. Any frog species encountered shall be recorded and submitted to the Department along with the work completion report. Observation reports shall be recorded on a CNDDB report form found at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data

2.34 Project Inspection. The Project shall be inspected by a licensed engineer to ensure that the pond outlets were installed as designed. A copy of the inspection report, including photographs of each site, shall be submitted to CDFW within 90 days of completion of this project.

Erosion Control and Pollution

2.35 Erosion Control. Permittee shall use erosion control measures throughout all work phases where sediment runoff threatens to enter a stream, lake, or other Waters of the State.

2.36 Seed and Mulch. Upon completion of construction operations and/or the onset of wet weather, Permittee shall stabilize exposed soil areas within the work area by applying mulch and seed. Permittee shall restore all exposed or disturbed areas and access points within the stream and riparian zone by applying local native and weed free erosion control grass seeds. Locally native wildflower and/or shrub

seeds may also be included in the seed mix. Permittee shall mulch restored areas using at least two to four inches of weed-free clean straw or similar biodegradable mulch over the seeded area. Alternately, Permittee may cover seeding with jute netting, coconut fiber blanket, or similar non-synthetic monofilament netting erosion control blanket.

2.37 Erosion and Sediment Barriers. Permittee shall monitor and maintain all erosion and sediment barriers in good operating condition throughout the work period and the following rainy season, defined herein to mean October 15 through June 15. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged sediment fencing, coir logs, coir rolls, and/or straw bale dikes. If the sediment barrier fails to retain sediment, Permittee shall employ corrective measures, and notify the department immediately.

2.38 Prohibition on Use of Monofilament Netting. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not use any erosion control materials that contain synthetic (e.g., plastic or nylon) monofilament netting, including photo- or biodegradable plastic netting. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves.

2.39 Site Maintenance. Permittee shall be responsible for site maintenance including, but not limited to, re-establishing erosion control to minimize surface erosion and ensuring drainage structures and altered streambeds and banks remain sufficiently armored and/or stable.

2.40 Cover Spoil Piles. Permittee shall have readily available erosion control materials such as wattles, natural fiber mats, or plastic sheeting, to cover and contain exposed spoil piles and exposed areas in order to prevent sediment from moving into a stream or lake. Permittee shall apply and secure these materials prior to rain events to prevent loose soils from entering a stream, lake, or other Waters of the State.

2.41 No Dumping. Permittee shall not deposit, permit to pass into, or place where it can pass into a stream, lake, or other Waters of the State any material deleterious to fish and wildlife, or abandon, dispose of, or throw away within 150 feet of a stream, lake, or other Waters of the State any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, litter, refuse, waste, debris, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

3. Reporting Measures

3.1 Work Completion. The proposed work shall be completed by no later than **October 1, 2020**. A notice of completed work (condition 2.4), with supplemental photos, shall be submitted to CDFW **within seven (7) days** of project completion.

3.2 Measurement of Diverted Flow. Copies of the **Water Diversion Records** (condition 2.13) shall be submitted to CDFW at 619 Second Street, Eureka, CA 95501 no later than **December 31** of each year beginning in **2019**.

3.3 Water Management Plan. The Permittee shall submit a **Water Management Plan** (condition 2.14) within **60 days** from the effective date of this agreement. The Water Management Plan shall be submitted to CDFW at 619 Second Street, Eureka, CA 95501.

3.4 Diversion Infrastructure Plan. The Permittee shall **allow 60 days for CDFW review and approval** after submittal of a Diversion Infrastructure Plan (condition 2.20). This document shall be submitted to CDFW at the 619 Second Street, Eureka, CA 95501.

3.5 Invasive Species Management for Reservoirs. The Permittee shall submit all required documents described in the Invasive Species Management for Reservoirs (condition 2.30) including subsection 2.30.1, **Bullfrog Management Plan** (Exhibit A) no later than **December 31** of each year. The Bullfrog Management Plan shall be submitted to CDFW at 619 Second Street, Eureka, CA 95501.

3.6 Wildlife Entrapment Prevention. A notice of completed work, with supplemental pictures (condition 2.32), shall be submitted to CDFW at 619 Second Street, Eureka, CA 95501, by **December 31, 2019**.

3.7 Project Inspection. The Permittee shall submit the **Project Inspection Report** (condition 2.34) to CDFW, LSA Program at 619 Second Street, Eureka, CA 95501.

CONTACT INFORMATION

Written communication that the Permittee or CDFW submits to the other shall be delivered to the address below unless the Permittee or CDFW specifies otherwise.

To Permittee:

Shanon Taliaferro
PO Box 991
Redway, CA 95560
(707) 223-0494
wedigit@mateel.org

To CDFW:

Department of Fish and Wildlife
Northern Region
619 Second Street
Eureka, California 95501
Attn: Lake and Streambed Alteration Program
Notification #1600-2017-0288-R1

LIABILITY

The Permittee shall be solely liable for any violation of the Agreement, whether committed by the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require the Permittee to proceed with the project. The decision to proceed with the project is the Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety this Agreement if it determines that the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide the Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide the Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to the Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against the Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

The Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and the Permittee. To request an amendment, the Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by the Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, the Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), the Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, the Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If the Permittee fails to submit a request to extend the Agreement prior to its expiration, the Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC section 1605(f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after the Permittee signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall **expire five years** from date of execution, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. The Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

EXHIBIT

The document listed below is included as an exhibit to the Agreement and incorporated herein by reference.

A. Exhibit A: Bullfrog Management Plan

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of the Permittee, the signatory hereby acknowledges that he or she is doing so on the Permittee's behalf and represents and warrants that he or she has the authority to legally bind the Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If the Permittee begins or completes a project different from the project the Agreement authorizes, the Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR Shanon Taliaferro

Shanon Taliaferro — Date: 4-23-19

FOR DEPARTMENT OF FISH AND WILDLIFE

For Scott Bauer — Date: 4-29-19
Senior Environmental Scientist Supervisor

Prepared by: Angela Liebenberg, Senior Environmental Scientist Specialist, April 10, 2019, revised 4/18/2019

EXHIBIT A.

BULLFROG MONITORING AND MANAGEMENT PLAN FOR 1600-2017-0288-R1

GENERAL BULLFROG INFORMATION

The American bullfrog (*Lithobates catesbeianus* = *Rana catesbeiana*); hereafter bullfrog, is an invasive non-native species in California and poses a significant threat to California's native fish and wildlife resources. Bullfrogs were introduced in California over 100 years ago from eastern parts of the United States as a food supply, but have since caused substantial ecological consequences. Bullfrogs are considered highly invasive and are well documented to be prey upon a variety of fish and wildlife species, including some that are rare, threatened, and endangered. Human modifications to the environment provide favorable conditions to bullfrogs such as artificially created agricultural ponds, canals and ditches where warm still water occurs. As a result bullfrogs have spread throughout California.

Efforts to control bullfrogs have met with varying degrees of success because: 1) bullfrogs can be difficult to detect and go dormant from fall through winter, 2) bullfrogs often take cover in difficult areas to manage (e.g. dense vegetation), 3) they can travel long distances to colonize and re-colonize areas, 4) they have high reproductive output, 5) they are wary and readily flee perceived threats, and 6) they can survive physical trauma remarkably well. CDFW scientific staff recognizes there is an urgent and immediate need to develop improved bullfrog management strategies to protect California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. Public support and implementation of bullfrog control in California is an important conservation strategy that will help protect natural resources for future generations.

MONITORING

The Project reservoir(s) shall be monitored for bullfrog presence on an annual basis with a minimum of five total surveys, no less than two weeks apart, throughout the months of May-July

- All pond survey efforts must be made by a person knowledgeable in bullfrog identification (see Appendix A for reference photos);
- Survey efforts shall include listening for bullfrog calls and slowly walking the complete perimeter of the pond at night* (dusk or later) while shining a flashlight to detect movement and eye-shine

If bullfrogs are not detected upon completion of five total surveys, or at any other time of the year incidentally, removal efforts are not required that year.

*Day time monitoring can also be conducted to aid detection but is not required under this plan.

SUCCESS CRITERIA

The level of effort needed to successfully manage bullfrog populations varies with infestation levels. This plan shall be considered successfully implemented if sufficient effort is provided to prevent adult bullfrogs from reproducing in the reservoir(s) each year, and no bullfrog life-stages can be detected. Bullfrogs are capable of traveling long distances over-land, and ongoing

efforts will be required to ensure dispersing bullfrogs do not colonize the reservoir(s) at a future time.

OPTIONS FOR MANAGEMENT

Two management methods may by employed for controlling bullfrogs under this plan and include:

- Manual direct removal
- Reservoir de-watering (Hydro-modification)

Implementing both reservoir dewatering and manual direct removal is currently believed to be the most effective method of managing bullfrog infestations. For reservoirs that are heavily infested with juvenile bullfrogs and/or tadpoles, reservoir dewatering may be necessary to break the bullfrog's life cycle and prevent ongoing reproduction. Prior to conducting reservoir dewatering activities, please coordinate with CDFW Senior Environmental Scientist Specialist Angela Liebenberg at Angela.Liebenberg@wildlife.ca.gov.

Direct Removal

All direct removal efforts must be made by a person knowledgeable in bullfrog identification.

- Removal efforts must occur during, but are not be limited to the active/breeding season, occurring May – July;
- A minimum of ***five*** efforts throughout the season are considered necessary;
- Direct removal efforts are typically most effective when conducted at night with use of lights but can also be conducted during the day;
- Direct removal must include working the entire perimeter of the reservoir;
- A rubber raft or small boat may be necessary to successfully remove some individuals;
- A team of two individuals or more is often helpful, one person for shining lights and/or operating a boat and the other person to perform removal efforts;
- Bullfrog tadpoles must be removed and dispatched and must not be relocated or kept as pets.

Management Authorization

Take of bullfrogs is specifically allowed in the California Code of Regulations (CCR), Title 14 (T-14) section 5.05(a)(28), under the authority of a sport fishing license. There is no daily bag limit, possession limit or hour restriction, but bullfrogs can only be taken by hand, hand-held dip net, hook and line, lights, spears, gigs, grabs, paddles, bow and arrow or fish tackle.

Alternatively, FGC Section 5501 allows CDFW, as limited by the commission, to issue a permit to destroy fish that are harmful to other wildlife. The regulations have addressed this under Section CCR T-14 226.5 Issuance of Permits to Destroy Harmful Species of Fish in Private Waters for Management Purposes. This allows the CDFW to issue free permits to destroy harmful aquatic species by seining and draining.

Pond Dewatering

Pond dewatering may be appropriate if the reservoir can be successfully dewatered without adversely affecting stream resources. Careful planning and coordination with CDFW, is necessary to ensure potential impacts to stream resources can be addressed, prior to commencing with pond draining. Discharge of polluted water to waters of the state may require permitting from other agencies with permitting authority, such as the Regional Water Quality Control Board.

In general, bullfrog tadpoles require two years to develop into frogs, whereas native amphibians only require one year. Therefore, draining a reservoir every year is intended to interrupt bullfrog tadpole development, dramatically decrease bullfrog populations and allow for reduced efforts as a measure of adaptive management. Typically in Northern California, reservoir draining should occur in September through October to avoid impacts to sensitive native amphibian and fishery resources. While draining occurs, direct removal efforts should be employed as described above if possible.

REPORTING

A written log shall be kept of monitoring and management efforts and shall be provided to CDFW **each year** by December 31. The written log shall include: 1) date and time of each monitoring and management effort, 2) approximate number of each bullfrog life stage detected and/or removed per effort, and 3) amount of time spent for each monitoring and management effort.

APPENDIX A. BULLFROG REFERENCE PHOTOS

This is a photo of a Bullfrog tadpole. (Photo taken by Mike van Hattem).

The photos shown in this Appendix demonstrate a medium sized adult bullfrog that was removed from Ten Mile Creek, Mendocino County. Note the bullfrog has a large tympanum, (circular ear drum shown with an arrow) and **does not** have distinct ridges along its back (dorsolateral folds). Photo taken by Wes Stokes.

The bullfrog has somewhat distinct mottling and **the underside of the bullfrogs hind legs are not shaded pink or red.**

State of California

Well Completion Report

Form DWR 188 Submitted 4/9/2018

WCR2018-002969

.ner's Well Number: 1 | Date Work Began: 03/27/2018 | Date Work Ended: 03/29/2018

Local Permit Agency: Humboldt County Department of Health & Human Services - Land Use Program

Secondary Permit Agency: | Permit Number: 17/18-1333 | Permit Date: 01/29/2018

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: WE DIG IT, SHANNON TALIAFERRO

Mailing Address: 776 ORCHARD LN.

City: REDWAY | State: CA | Zip: 95560

Planned Use and Activity

Activity: New Well

Planned Use: Water Supply Irrigation - Agriculture

Well Location

Address: 631 BELL SPRINGS RD

City: GARBERVILLE | Zip: 95542 | County: Humboldt

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat.: 40.0943140 | Dec. Long.: -123.6803510

Vertical Datum: | Horizontal Datum: WGS84

Location Accuracy: | Location Determination Method:

APN: 216-134-011-000

Township: 04 S

Range: 04 E

Section: 24

Baseline Meridian: Humboldt

Ground Surface Elevation: 3023

Elevation Accuracy: 10 Ft

Elevation Determination Method: GPS

Borehole Information

Orientation: Vertical | Specify:

Drilling Method: Downhole Rotary Hammer | Drilling Fluid: Air

Total Depth of Boring: 190 Feet

Total Depth of Completed Well: 190 Feet

Water Level and Yield of Completed Well

Depth to first water: 125 (Feet below surface)

Depth to Static Water Level: 102 (Feet) | Date Measured: 03/29/2018

Estimated Yield*: 10 (GPM) | Test Type: Air Lift

Test Length: 4 (Hours) | Total Drawdown: 0 (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	6	Soil or Organic	Brown	Organic	TOP SOIL
6	18	Claystone	Brown	Clayey	CLAYSTONE WITH COBBLE STONE
18	115	Claystone	Gray	Very Hard	VERY HARD BLUE SHALESTONE NO WATER
115	125	Claystone	Blue	Layered	SHALESTONE WITH BASALT WATER BEARING STRINGERS
125	180	Conglomerate	Blue	Water Bearing	BASALT WITH QUATZ AND WATER BEARING
180	190	Claystone	Gray	Very Hard	SHALESTONE VERY HARD

APN 216-134-011-000
190' EST - 10 G.P.M's
STATIC - 102'
BOREHOLE - 10"
CASING - 4.5" Curtaloc PVC
SEAL - 24'

Form DWR 188 rev. 12/19/2017

Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specificatons	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
	0	100	Blank	PVC	OD: 4.950 in. | SDR: 17 | Thickness: 0.291 in.	0.291	4.95			
1	100	170	Screen	PVC	OD: 4.950 in. | SDR: 17 | Thickness: 0.291 in.	0.291	4.95	Milled Slots	32	.032 SLOT
1	170	190	Blank	PVC	OD: 4.950 in. | SDR: 17 | Thickness: 0.291 in.	0.291	4.95			W/ 4.5\" CAP

Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	24	Bentonite	Non Hydrated Bentonite	3/8 BETONITE CHIPS	ADDED WATER WHILE DUMPING CHIPS
24	190	Filter Pack	Other Gravel Pack	3/8 PEA GRAVEL	PRE CLEANED 3/8 PEA GRAVEL

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	190	10.63

Certification Statement

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

Name: VICS WELL DRILLING INC (Person, Firm or Corporation)

3807 SIERRA HWY UNIT #6 (Address) | ACTON (City) | CA (State) | 93510 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 04/09/2018 (Date Signed) | 886439 (C-57 License Number)

Attachments

DRILLERS REPORT.docx - Other

SHANON WELL PLOT PLAN #1.jpg - Location Map

shannon permit.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

DRILLERS REPORT VIC'S WELL DRILLING INC.

BY: CHAD L. WIEGAND 4/2/2018

- DRILLING CONTRACTOR: VIC'S WELL DRILLING INC.
- CONTRACTOR LICENSE NUMBER: 886439
- CONTRACTOR BOND NUMBER: G60211942106
- DRILLER: CHAD WIEGAND (530) 990-3138
- PROPERTY OWNER: SHANNON TALIAFERRO
- PROPERTY OWNER CONTACT INFO: P.O BOX 991 REDWAY, CA. 95560 (707) 223-0494
- PROPERTY OWNERS MAILING ADDRESS: N/A
- PARCEL # OR A.P.N: 216-134-011-000
- PERMIT #: 17/18-1333 ISSUED DATE: 1 / 29 /2018
- WELL ADDRESS OR NEAREST CROSS ST: ALDERPOINT RD.
- WELL LOACTION: DEC. LAT. =40.094314 DEC. LONG. = -123.680351
- ALTITUDE= 3,023'
- DRILLING COMINCED: 3 / 27 /2018
- DRILLING COMPLETED: 3 / 29 /2018
- DRILLING FORMATIONS:

  0' – 6' = TOP SOIL CLAYSTONE BLUE SHALESTONE BASALT WATER BEARING

  6' – 18' = BROWN CLAYSTONE W/ COARSE BROWN SAND

  18' – 115' = BLUE SHALESTONE VERY HARD

  115' – 125' = BLUE SHALESTONE W/ BASALT STINGERS WATER BEARING

  125' – 180' = BASALT WATER BEARING

  180 - 190' = SHALESTONE

  SEAL INFO: 24' SANITARY SEAL DONE WITH 3/8 BETONITE CHIPS. WATER WAS ADDED WHILE CHIPS WHERE DUMP INTO 10 5/8" WELL BORE

- BORE HOLE: 10 5/8" BORE HOLE DRILLED WITH AIR HAMMER.

- P.V.C CASING INFO:

  CASING INFO: 0' - 100' = 4.5" SDR 17 CERTLOK BLANKS

  CASING INFO W/ SLOTS: 100' -170' = 4.5"SDR 17 SCRN .032" CERTALOK INSTALLED.

CASING INFO: 170' - 190' = 4.5" SDR 17 CERTLOK BLANK W/4.5" CAP

- **GRAVEL PACK: 8 YARDS 3/8" PRE WASHED PEA GRAVEL**
- **ESTIMATED WATER G.P.M'S = 10 GALLONS PER. MINUTE**
- **STATIC WATER LEVEL: 102'**
- **RECOMMENDATIONS: I RECOMMEND A 6 GALLON PER MINUTE GRUNDFOS PUMP SET AT 180'. I RECOMMEND YOU PUMP FROM WELL TO A STORAGE TANK AS CLOSE TO WELL AS POSSIBLE SO YOU DO NOT STRESS PUMP.**

LINDBERG GEOLOGIC CONSULTING
David N. Lindberg, CEG
Post Office Box 306
Cutten California 95534
(707) 442-6000

County Copy

February 14, 2018

Project: 0171.01

Shannon and Casandra Taliaferro
Post Office Box 991
Redway, California 95560

Subject: Engineering-Geologic Prime Agricultural Soils Exploration Letter-Report
Bell Springs Road, Garberville, APN's 216-134-011, -013, and 216-082-010

Dear Mr. and Mrs. Taliaferro:

In accordance with our agreement, we have conducted an engineering-geologic field reconnaissance of your above-noted parcels (Figure 1), and we have reviewed information available from the Humboldt County Community Development Department and the Humboldt County Assessor regarding the subject property. We understand that a lot-line adjustment is currently underway to merge these parcels. While on-site we collected five soil samples for analysis at a local, certified materials testing laboratory. Our exploration was focused on determining if the soils at your location could be classified as "Prime Agricultural Soils" for potential cannabis cultivation. Prime Agricultural Soils have been defined in Humboldt County Ordinance No. 2559 as follows:

"Prime Agricultural Soils" means all lands which qualify for rating as Class I or Class II in the Soil Conservation Service land use capability classifications or qualify for rating 80 through 100 in the Storie Index Rating. Additionally, where determined through site-specific fieldwork prepared by a qualified professional, soils meeting these characteristics may be recognized as prime."

Site-specific fieldwork, including excavation of five test holes, and collection of five samples of the surface soils, was conducted by a Certified Engineering Geologist from our office on January 23, 2018. An annotated copy of the relevant Humboldt County Assessor's parcel maps are attached to this report as Figure 2. Textural Analysis was conducted on all five samples taken from apparently-undisturbed locations on the subject parcel. The sample collection locations, noted on the attached Figure 3, were determined in the field using GPS technology. Approximate parcel boundaries of the future resultant merged parcel are presented in Figure 1. Samples were collected in the south ½, of the southwest ¼, of Section 24, and from within a portion of the north ½ of Section 25, T4S R4E, Humboldt Baseline and Meridian.

Samples were collected at the following locations (± 9.8'):

Sample Taliaferro-1: at 40.945° north latitude, and 123.68132° west longitude.

Sample Taliaferro-2: at 40.09074° north latitude, and 123.67885° west longitude.

Sample Taliaferro-3: at 40.6768° north latitude, and 123.88575° west longitude.

Sample Taliaferro-4: at 40.085335° north latitude, and 123.6713° west longitude.

Sample Taliaferro-5: at 40.08584° north latitude, and 123.67629° west longitude.

Our five soil samples were collected and composited from the upper two feet of the profile, minus approximately 2-inches of surface vegetation and roots. Samples were hand-delivered to a certified material testing laboratory in Eureka for textural analysis. Laboratory analytical results are attached and show: sample Taliaferro-1 consists of **Loamy Sand**, and samples Taliaferro-2 through Taliaferro-5 consist of **Sandy Loam**, per the United States Department of Agriculture soil classification system.

The Storie Index (University of California, 1948), as revised in 1978, is a method of soil rating based on the soil characteristics that govern the land's potential utilization and productive capacity. To calculate the Storie Index, percentage values are assigned to the various characteristics of the soil, including the soil profile (Factor A), the texture of the surface soil (Factor B), and the slopes (Factor C). Other conditions of the soil including; drainage, nutrient level, erosion and microrelief are combined as a fourth factor (Factor X).

Percentage values for each of these four factors are multiplied to obtain the Storie Index. Based on the index, soils in California have been divided into six soil grades, with Grade 1 being excellent, with a range of Storie Index from 80 to 100 percent. Thus Grade 1 excellent soils are, by the definition in Ordinance 2559, Prime Agricultural Soils.

Sample Taliaferro-1

Factor A was valued at 100 percent because the area sampled and characterized on this part of parcel 216-134-011 is located in an upland area underlain by softly consolidated material at four to six feet, or more (Factor A: IX). Based on the laboratory textural analysis (attached) the Taliaferro-1 soil is **Loamy Sand**, a medium-textured soil. Loamy Sand is treated as Sandy Loam for the purpose of this report. For Sandy Loam, the Storie Index assigns Factor B a value of 95 percent. Based on the particle-size distribution in the textural analysis, this Loamy Sand is so close to being a Sandy Loam that the Storie Index factor of 95 percent for Sandy Loam was used. Factor C was also assigned a value of 95 percent because the site, as outlined on Figure 3, is nearly level to gently sloping, and gently undulating (Factor C: A-C, AA), as determined by field observation and clinometer.

Factor X's six sub-factors have soil drainage rated at 95 percent; soils in our sampling hole were observed to be well drained to fairly well-drained. Alkalinity was rated at 100 percent because of the low percentage of clay, and alkaline soils are uncommon in this moist region. Nutrient level was assigned a value of 100 percent due to the fact that historically, this area has long been used agriculturally; for livestock grazing. Acidity was assigned a value of 95 percent because the soils were estimated to have a near-neutral pH and thus a low degree of acidity. No erosion was observable; the erosion factor was determined to be 100 percent. Microrelief is smooth and was rated 100 percent. The resultant product of the six subfactors of Factor X is therefore 90 percent.

The Storie Index is the product of the four Factors (A, B, C and X), with Factor X itself the product of the six additional soil conditions outlined above. In mathematical terms, the Storie Index for this parcel equals A times B times C times X, as shown:

100% x 95% x 95% x (95% x 100% x 100% x 95% x 100% x 100%)], or
(90 x 0.90) = 0.81, or 81%

A Storie Index of 81 percent means the site soil is a Grade 1 (excellent) soil, which is suitable for a wide range of crops (University of California, 1948). Because these soils have a Storie Index greater than 80 percent, they meet the definition of "Prime Agricultural Soils" in the Ordinance. Based on site-specific fieldwork, certified laboratory analysis, and our professional experience, it is our opinion these site soils qualify as, and may be recognized as, prime agricultural soils for the purposes of the Humboldt County cannabis cultivation ordinance.

Sample Taliaferro-2

Storie Index Factor A was assigned a value of 100 percent, the area sampled and characterized on this part of parcel 216-082-010 is located in an upland area underlain by softly consolidated material at four to six feet, or more (Factor A: IX). Based on the laboratory textural analysis, the soil at Taliaferro-2 is **Sandy Loam**, a medium-textured soil. For Sandy Loam soils such as Taliaferro-2, the Storie Index assigns Factor B a value of 95 percent. Factor C was assigned a value of 95 percent because the site, as outlined on Figure 3, is nearly level to gently sloping, and gently undulating (Factor C: A-C, AA), as determined by field observation and clinometer.

Factor X's six sub-factors have soil drainage rated at 95 percent; soils in our sampling hole were observed to be well drained to fairly well-drained. Alkalinity was rated at 100 percent because of the low percentage of clay, and alkaline soils are uncommon in the region. Nutrient level was assigned a value of 100 percent due to the fact that historically, this area has long been used for livestock grazing and haying. Acidity was assigned a value of 95 percent because the soils were estimated to have a near-neutral pH and thus a low degree of acidity. No erosion was observable; the erosion factor was determined to be 100 percent. Microrelief is smooth and was rated 100 percent. The resultant product of the six subfactors of Factor X is therefore 90 percent.

The Storie Index is as shown:

[100% x 95% x 95% x (95% x 100% x 100% x 95% x 100% x 100%)], or

(0.90 x 0.90) = 0.81, or 81%

With a Storie Index of 81 percent, this soil is a Grade 1 (excellent) soil, which is defined as suitable for a wide range of crops, including alfalfa, orchard, truck, and field crops (University of California, 1948). Because these soils have a Storie Index greater than 80 percent, they meet the definition of "Prime Agricultural Soils" in Ordinance No. 2559. Additionally, based on our site-specific fieldwork, certified laboratory analysis, and our professional experience, it is our opinion that the site soils qualify as, and therefore may be recognized as, prime agricultural soils for the purposes of the Humboldt County cannabis cultivation ordinance.

Sample Taliaferro-3

Factor A was valued at 100 percent because the area sampled and characterized on this part of parcel 216-082-010 is located in an upland area underlain by softly consolidated material at four to six feet, or more (Factor A: IX). Based on the laboratory textural analysis (attached) the Taliaferro-3 soil is **Sandy Loam**, a medium-textured soil. For Sandy Loam, the Storie Index assigns Factor B a value of 95 percent. Factor C was assigned a value of 95 percent because the site, as outlined on Figure 3, is nearly level to gently sloping, and gently undulating (Factor C: A-C, AA), as determined by field observation and clinometer.

Factor X's six sub-factors have soil drainage rated at 95 percent; soils in our sampling hole were observed to be well drained to fairly well-drained. Alkalinity was rated at 100 percent because of the low percentage of clay, and alkaline soils are uncommon in the region. Nutrient level was assigned a value of 100 percent due to the fact that historically, this area has long been used agriculturally; for livestock grazing. Acidity was assigned a value of 95 percent because the soils were estimated to have a near-neutral pH and thus a low degree of acidity. No erosion was observable; the erosion factor was determined to be 100 percent. Microrelief is smooth and was rated 100 percent. The resultant product of the six subfactors of Factor X is therefore 90 percent.

The Storie Index is as shown below:

$$100\% \times 95\% \times 95\% \times (95\% \times 100\% \times 100\% \times 95\% \times 100\% \times 100\%)], \text{ or}$$

$$(0.90 \times 0.90) = 0.81, \text{ or } 81\%$$

A Storie Index of 81 percent means the site soil is a Grade 1 (excellent) soil, which is suitable for a wide range of crops (University of California, 1948). Because these soils have a Storie Index greater than 80 percent, they meet the definition of "Prime Agricultural Soils" in the Ordinance. Based on site-specific fieldwork, certified laboratory analysis, and our professional experience, it is our opinion these site soils qualify as, and may be recognized as, prime agricultural soils for the purposes of the Humboldt County cannabis cultivation ordinance.

Sample Taliaferro-4

Storie Index Factor A was assigned a value of 100 percent; the area sampled and characterized on this part of parcel 216-082-010 is located in an upland area underlain by softly consolidated material at four to six feet, or more (Factor A: IX). Based on the laboratory textural analysis the soil at Taliaferro-4 is **Sandy Loam**, a medium-textured soil. For Sandy Loam soils such as at Taliaferro-4, the Storie Index assigns Factor B a value of 95 percent. Factor C was assigned a value of 95 percent because the site, as outlined on Figure 3, is nearly level to gently sloping, and gently undulating (Factor C: A-C, AA), as determined by field observation and clinometer.

Factor X's six sub-factors have soil drainage rated at 95 percent; soils in our sampling hole were observed to be well drained to fairly well-drained. Alkalinity was rated at 100 percent because of the low percentage of clay, and alkaline soils are uncommon in the region. Nutrient level was assigned a

value of 100 percent due to the fact that historically, this area has long been used for livestock grazing. Acidity was assigned a value of 95 percent because the soils were estimated to have a near-neutral pH and thus a low degree of acidity. No erosion was observable; the erosion factor was determined to be 100 percent. Microrelief is smooth and was rated 100 percent. The resultant product of the six subfactors of Factor X is therefore 90 percent.

The Storie Index is as shown:

[100% x 95% x 95% x (95% x 100% x 100% x 95% x 100% x 100%)], or

(0.90 x 0.90) = 0.81, or 81%

With a Storie Index of 81 percent, the Sample Taliaferro-4 site soil is a Grade 1 (excellent) soil, and is defined as suitable for a wide range of orchard, truck, and field crops (University of California, 1948). Because these soils have a Storie Index greater than 80 percent, they meet the definition of "Prime Agricultural Soils" in the Ordinance (Humboldt County, California - Ordinance No. 2559). Additionally, based on our site-specific fieldwork, certified laboratory analysis, and our professional experience, it is our opinion that the site soils qualify as, and therefore can be recognized as, prime agricultural soils for the purposes of the Humboldt County cannabis cultivation ordinance.

Sample Taliaferro-5

Factor A was valued at 100 percent because the area sampled and characterized on this part of parcel 216-082-010 is located in an upland area underlain by softly consolidated material at four to six feet, or more (Factor A: IX). Based on the laboratory textural analysis (attached) the Taliaferro-5 soil is **Sandy Loam**, a medium-textured soil. For Sandy Loam, the Storie Index assigns Factor B a value of 95 percent. Factor C was assigned a value of 95 percent because the site, as outlined on Figure 3, is nearly level to gently sloping, and gently undulating (Factor C: A-C, AA), as determined by field observation and clinometer.

Factor X's six sub-factors have soil drainage rated at 95 percent; soils in our sampling hole were observed to be well drained to fairly well-drained. Alkalinity was rated at 100 percent because of the low percentage of clay, and alkaline soils are uncommon in the region. Nutrient level was assigned a value of 100 percent due to the fact that historically, this area has long been used for livestock grazing and haying. Acidity was assigned a value of 95 percent because the soils were estimated to have a near-neutral pH and thus a low degree of acidity. No erosion was observable; the erosion factor was determined to be 100 percent. Microrelief is smooth and was rated 100 percent. The resultant product of the six subfactors of Factor X is therefore 90 percent.

The Storie Index is as shown:

100% x 95 % x 95% x (95% x 100% x 100% x 95% x 100% x 100%)], or

(0.90 x 0.90) = 0.81, or 81%

A Storie Index of 81 percent means the site soil is a Grade 1 (excellent) soil, which is suitable for a wide range of crops (University of California, 1948). Because these soils have a Storie Index greater than 80 percent, they meet the definition of "Prime Agricultural Soils" in the Ordinance. Based on site-specific fieldwork, certified laboratory analysis, and our professional experience, it is our opinion these site soils qualify as, and may be recognized as, prime agricultural soils for the purposes of the Humboldt County cannabis cultivation ordinance.

Parcel 216-134-011, when combined with a portion of 216-134-013, and 216-082-010, will total approximately 400 acres. Following the anticipated lot-line adjustment, we estimate this newly-created parcel will include more than 34.8 acres of Prime Agricultural Soil, as defined by the ordinance. The four areas outlined on Figure 4, do not account for any property line setbacks, easements, or portions of the parcels which could be within designated streamside management areas. Note that our estimate of area is not based on any formal surveying. LGC is available to further delineate in the field our interpretation of the extents of prime agricultural soils on these parcels. Again, our estimate of area does not account for any potential setbacks or other exclusionary zones.

Please contact me at the number above if you have any concerns or questions. Thank you for your business.

Sincerely,

David N. Lindberg

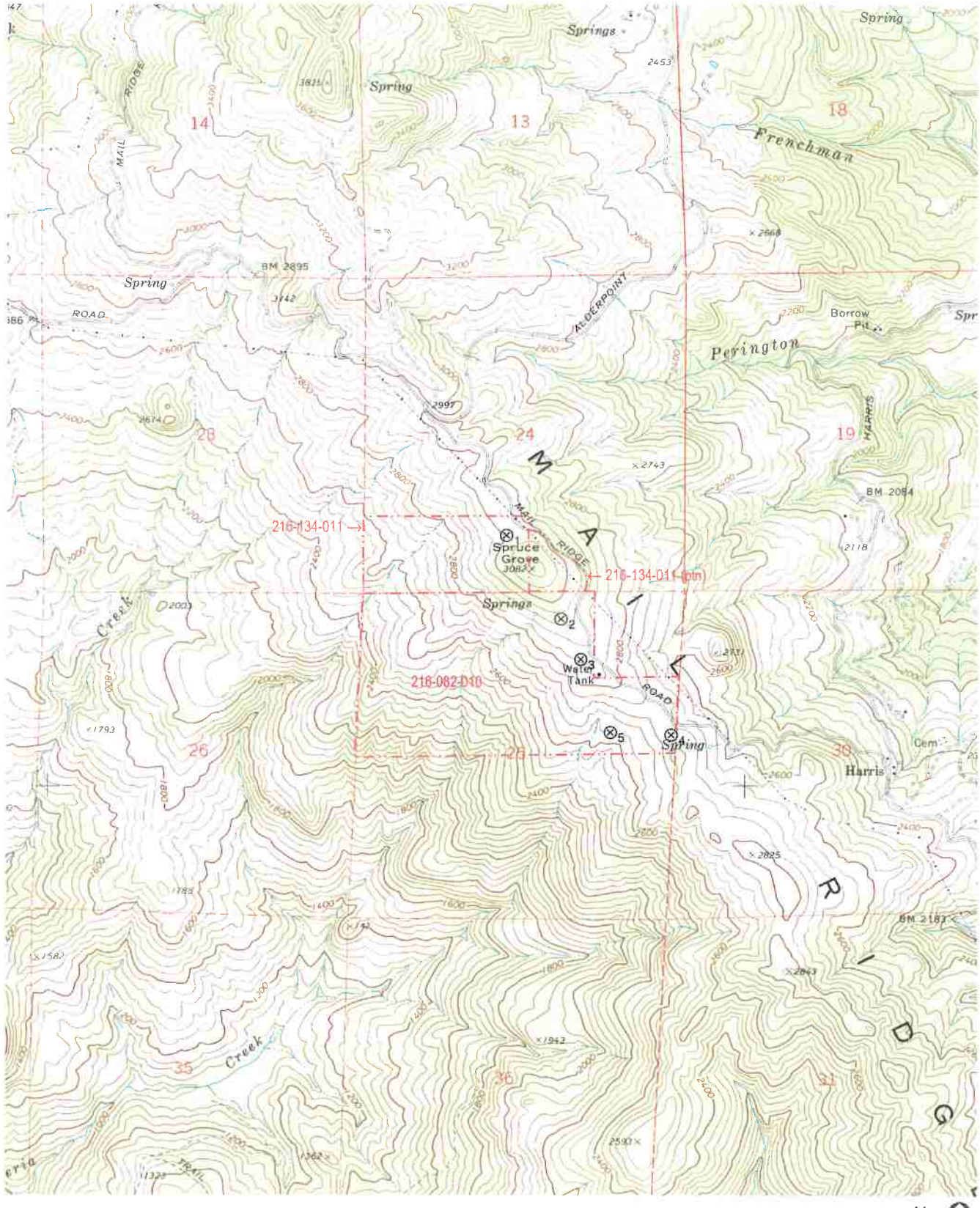
David N. Lindberg, CEG 1895
Lindberg Geologic Consulting

CERTIFIED ENGINEERING GEOLOGIST
DAVID N. LINDBERG
No. 1895
EXP. 02/29/20
DNL
STATE OF CALIFORNIA

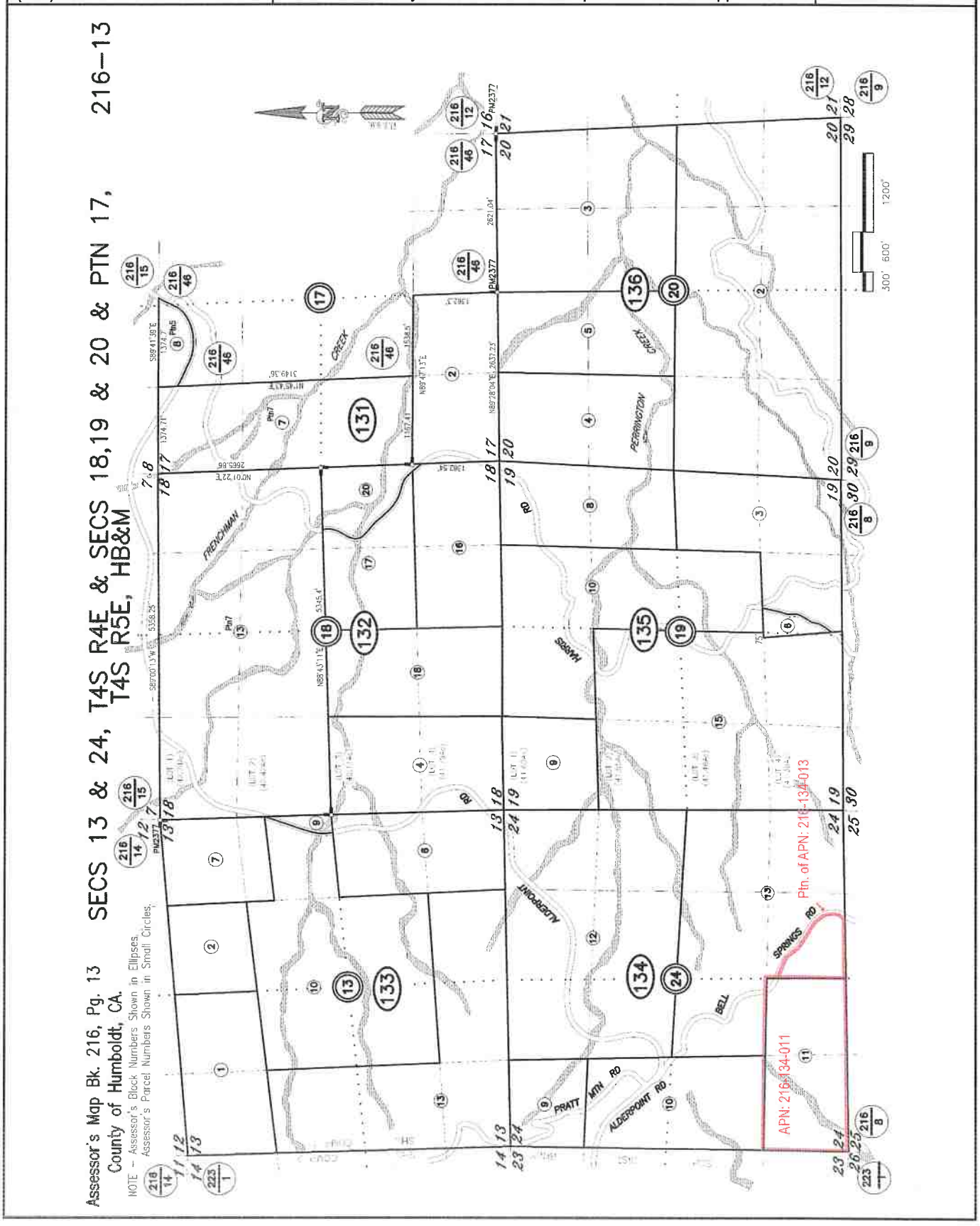
DNL:sll

University of California, 1948, Storie, R., Earl, and Walter W. Weir, Manual for Identifying and Classifying California Soil Series, with Supplement, 1958, and revised December 1978, (Special Publication 3203), Published by the Associated Students' Store, University of California, Berkeley.

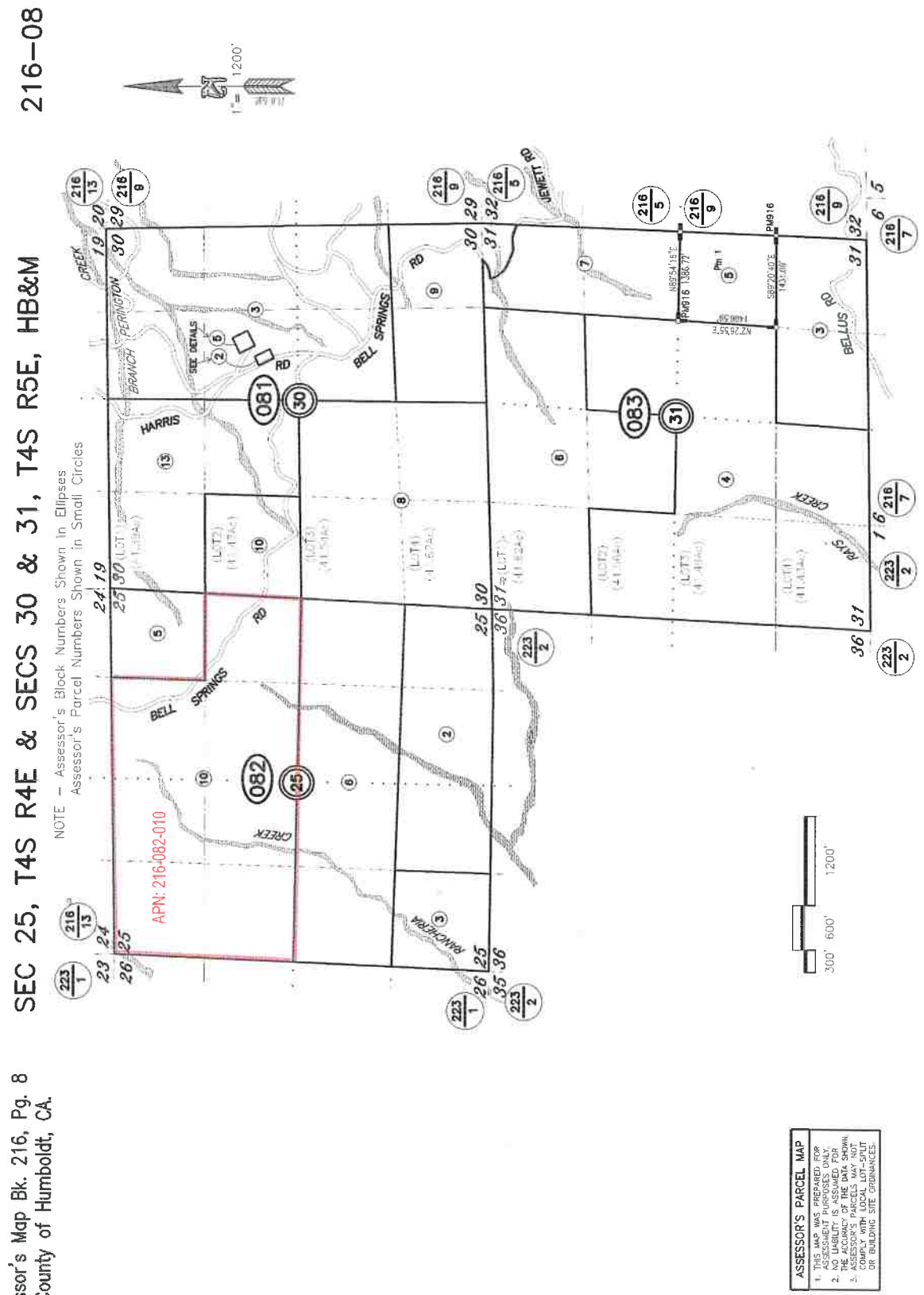
Lindberg Geologic Consulting	Engineering-Geologic Prime Soils Explorations Report	Figure 1
Post Office Box 306	Bell Springs Road, Garberville, Humboldt County, California	February 14, 2018
Cutten, CA 95534	APNs 216-134-011, -013, and -082-010, Spruce Grove Farm, Client	Project 0171.01
(707) 442-6000	Topographic Map Project Area - All Locations Approximate	1 inch ≅ 2,300 feet



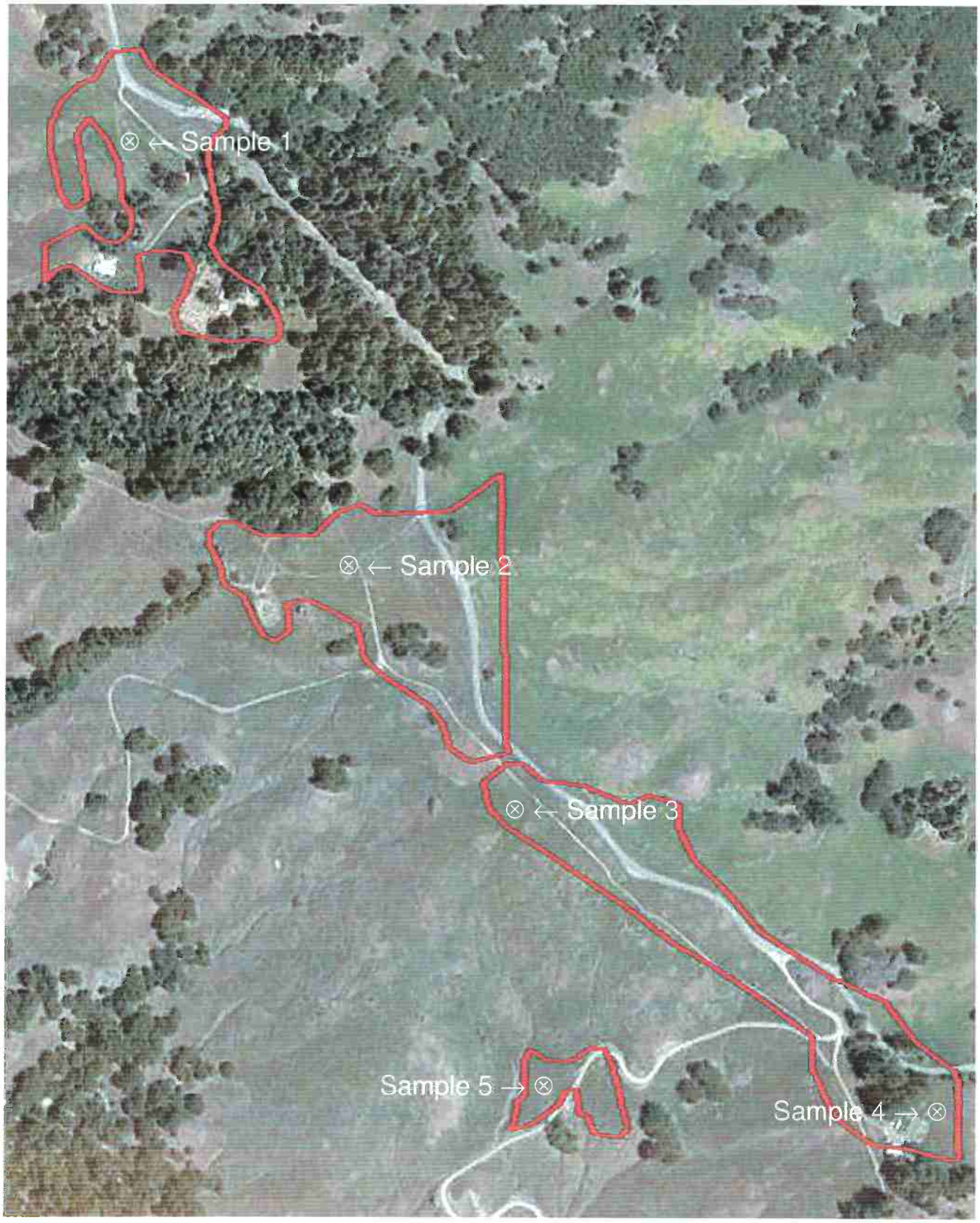
Lindberg Geologic Consulting	Engineering-Geologic Prime Soils Explorations Report	Figure 2
Post Office Box 306	Bell Springs Road, Garberville, Humboldt County, California	February 14, 2018
Cutten, CA 95534	APN 216-134-011, and APN 216-134-013, Spruce Grove Farm, Client	Project 0171.01
(707) 442-6000	Humboldt County Assessor's Parcel Map - All Locations Approximate	Scale as Shown



Lindberg Geologic Consulting	Engineering-Geologic Prime Soils Explorations Report	Figure 3
Post Office Box 306	Bell Springs Road, Garberville, Humboldt County, California	February 14, 2018
Cutten, CA 95534	APN 216-082-010, Spruce Grove Farm, Client	Project 0171.01
(707) 442-6000	Humboldt County Assessor's Parcel Map - All Locations Approximate	Scale as Shown



Lindberg Geologic Consulting	Engineering-Geologic Prime Soils Explorations Report	Figure 4
Post Office Box 306	Bell Springs Road, Garberville, Humboldt County, California	February 14, 2018
Cutten, CA 95534	APNs 216-134-011, -013, and -082-010, Spruce Grove Farm, Client	Project 0171.01
(707) 442-6000	Prime Soils Areas- All Locations Approximate	1 inch ≅ 2,300 feet



Modified from Google Earth Imagery of May 28, 2014. N ≅

CONSULTING ENGINEERS & GEOLOGISTS, INC.
812 W.Wabash Eureka,CA 95501-2138 Tel:707/441-8855 FAX:707/441-8877 E-mail:shninfo@shn-engr.com

Reference: 018007

January 31, 2018

David Lindberg
Lindberg Geologic Consulting
P.O. Box 306
Cutten, CA 95534

SOIL PERCOLATION SUITABILITY / TEXTURAL ANALYSIS RESULTS

Job Name: Taliaferro **Sampled By: DNL-CEG**
Date Sampled: 01/23/18 **Date Tested: 01/25/18**
Date Received: 01/25/18 **AP Number: 216-082-010**

Sample ID	Depth	% Sand	% Clay	% Silt	% Coarse Fragments by Volume	Zone	Bulk Density
1		75.4	7.1	17.5	11.3	2	*
	Material: **Loamy Sand**						
2		59.4	14.6	26.0	4.9	2	*
	Material: **Sandy Loam**						
3		73.4	8.3	18.3	6.2	2	*
	Material: **Sandy Loam**						
4		52.8	17.6	29.6	6.6	2	*
	Material: **Sandy Loam**						
5		57.4	16.7	25.9	9.2	2	*
	Material: **Sandy Loam**						

* = no peds provided

Regional Water Quality Control Board Zone Descriptions:

Zone 1 - Soils in this zone are very high in sand content. They readily accept effluent, but because of their low silt and clay content they provide minimal filtration. These soils demand greater separation distances from groundwater.

Zone 2 - Soils in this zone provide adequate percolation rates and filtration of effluent. They are suitable for use of a conventional system without further testing.

Zone 3 - Soils in this zone are expected to provide good filtration of effluent, but their ability to accept effluentat at a suitable rate is questionable. These soils require wet-weather percolation tests to verify their suitability for effluent disposal by conventional leachfield methods.

Zone 4 - Soils in this zone are unsuitable for a conventional leachfield because of their severe limitations for accepting effluent.

AP
3246'
268'
490'
PLAN
APN 216-134-010
LICENSE STAMP
REV#
REVISION NOTE
DATE
greenway
Solving community challenges
GREENWAY PARTNERS
1385 8TH STREET, SUITE 201 ARCATA, CA 95521
(707) 822-0597
SITE PLAN
SHANNON TALIAFERRO
PO BOX 991
REDWAY, CA 95560
SHANNAON TALIAFERRO
DATE:
5/12/16
Drawn By:
KB
Checked By:
SS
Last Revised:
Scale:
1"=600'
DRAWING NUMBER
S-1

DEPARTMENT OF PUBLIC WORKS
COUNTY OF HUMBOLDT
MAILING ADDRESS: 1106 SECOND STREET, EUREKA, CA 95501-0579
AREA CODE 707

ARCATA-EUREKA AIRPORT TERMINAL
McKINLEYVILLE
FAX 839-3596
AVIATION 839-5401

PUBLIC WORKS BUILDING
SECOND & L ST., EUREKA
FAX 445-7409

ADMINISTRATION	445-7491	NATURAL RESOURCES	445-7741
BUSINESS	445-7652	NATURAL RESOURCES PLANNING	267-9540
ENGINEERING	445-7377	PARKS	445-7651
FACILITY MAINTENANCE	445-7493	ROADS & EQUIPMENT MAINTENANCE	445-7421

CLARK COMPLEX
HARRIS & H ST., EUREKA
FAX 445-7388
LAND USE 445-7205

ROAD EVALUATION REPORT INSTRUCTIONS

PURPOSE: The *Road Evaluation Report* is intended as a way for an applicant to document the condition of the access road(s) serving the subject property for cannabis projects that require a Conditional Use Permit (CUP), Special Permit (SP), or Zoning Clearance Certificate (ZCC). This report is not intended to be used for any other type of Planning & Building Department permit application. This will enable Public Works staff to determine if the existing roadway network [excluding on-site driveway(s)] is suitable to accommodate the proposed use on the subject property.

In rural areas, a category 4 road is usually adequate for most uses. If the road is paved and has a centerline stripe it is considered by the Department to be a category 4 road. In urban and suburban areas, the road may also need to accommodate other road users (pedestrians, bicycles, equestrians, etc.). When roads meet or exceed this standard, the roadways can typically accommodate increased traffic. This evaluation is accomplished by the applicant completing Part A of the *Road Evaluation Report.*

When the roadways do not meet a category 4 standard, there is a question that road may not be able to accommodate traffic from the proposed use. The goal is to evaluate roads that do not meet road category 4 standards in order to determine if the roads can accommodate increased traffic. This evaluation is accomplished by the applicants engineer completing Part B of the *Road Evaluation Report.*

In lieu of constructing road improvements to meet a category 4 road standard, the Department may approve a *Neighborhood Traffic Management Plan.* A neighborhood traffic management plan may include (but is not limited) the following elements: restricting the times that project traffic will use the road to off-peak hours; combining trips to reduce the volume of project traffic; carpooling to reduce the volume of project traffic; the use of signs and CB radios to coordinate traffic using the road(s); etc. The Department's criteria for approving a *Neighborhood Traffic Management Plan* is based upon site specific conditions; sound engineering judgment; the proposed ADT and DHV of the roads; the need to accommodate other road users (pedestrians, bicycles, equestrians, and other cannabis projects using the road, etc.); and the frequency and quantity of traffic associated with the proposed use. The applicant's Civil Engineer can address this in Part B of the *Road Evaluation Report.*

There may be other cannabis projects that use the same access road(s) as your project. Part B of the *Road Evaluation Report* needs to address the cumulative impacts from your project and all other cannabis projects that will also use the same road(s). There may be benefits of applicants collectively working together with one engineer to complete the *Road Evaluation Reports* for all of the projects.

(continued on next page)

REFERENCES:

- Humboldt County *Road Design Manual*, Chapter 7, Design Standards for Roadway Categories.
- American Association of State Highway and Transportation Officials (AASHTO) *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400).*
- American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (AKA "Green Book")
- Institute of Transportation Engineers (ITE) *Trip Generation*

INSTRUCTIONS: The *Road Evaluation Report* consists of two parts. The first part (Part A) *may* be completed by the applicant. If the second part (Part B) is needed, it *must* be completed by a Civil Engineer licensed by the State of California. The .pdf version of this document provides fields that can be filled in.

A separate *Road Evaluation Report* is required for each road. **Save Time: before completing these forms consult with the Land Use Division at 707.445.7205 to make sure you are evaluating all of the necessary roads for your project; that other cannabis projects in the vicinity have been included; and to make sure that you understand what is needed.**

Special instructions to the applicant's Civil Engineer in completing Part B:

- Engineer will need to contact the Department for a list of other cannabis projects that may be using all or some of the same roads in the roadway network.
- Engineer will need to determine which of these projects utilize the roads within the same roadway network by personally reviewing the cannabis project applications at the Planning & Building Department. Many of the cannabis project applications are incomplete; therefore the engineer may need to directly contact other applicants to determine how these other cannabis projects will utilize the roads in question.
- Engineer may propose a master plan in which any required roadway improvements are incrementally divided among several cannabis projects. However, the master plan must be designed so that improvements to the road(s) will be adequate when constructed incrementally.

// END //

HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS
ROAD EVALUATION REPORT

PART A: *Part A may be completed by the applicant*

Applicant Name: Spruce Grove Farms LLC APN: 216-134-011, 216-681-010

Planning & Building Department Case/File No.: #12233 223-011-003, 223-012-010, 216-082-010

Road Name: Bell Springs Road *(complete a separate form for each road)*

From Road (Cross street): Alderpoint Rd

To Road (Cross street): Redwood Drive

Length of road segment: ± 0.25 miles miles Date Inspected: _____

Road is maintained by: ☑ County ☐ Other _____
(State, Forest Service, National Park, State Park, BLM, Private, Tribal, etc)

Check one of the following:

Box 1 ☑ The entire road segment is developed to Category 4 road standards (20 feet wide) or better. If checked, then the road is adequate for the proposed use without further review by the applicant.

Box 2 ☐ The entire road segment is developed to the equivalent of a road category 4 standard. If checked, then the road is adequate for the proposed use without further review by the applicant.

An equivalent road category 4 standard is defined as a roadway that is generally 20 feet in width, but has pinch points which narrow the road. Pinch points include, but are not limited to, one-lane bridges, trees, large rock outcroppings, culverts, etc. Pinch points must provide visibility where a driver can see oncoming vehicles through the pinch point which allows the oncoming vehicle to stop and wait in a 20 foot wide section of the road for the other vehicle to pass.

Box 3 ☐ The entire road segment is not developed to the equivalent of road category 4 or better. The road may or may not be able to accommodate the proposed use and further evaluation is necessary. Part B is to be completed by a Civil Engineer licensed by the State of California.

The statements in PART A are true and correct and have been made by me after personally inspecting and measuring the road.

Signature

May 17, 2018
Date

Sharon Taliaferro
Name Printed

Important: Read the instructions before using this form. If you have questions, please call the Dept. of Public Works Land Use Division at 707.445.7205.

No re-refer needed

PART B: Only complete Part B if Box 3 is checked in Part A. *Part B is to be completed by a Civil Engineer licensed by the State of California. Complete a separate form for each road.*

Road Name: ____________________ Date Inspected: __________ APN: __________

From Road: ____________________ (Post Mile ________) Planning & Building Department Case/File No.:

To Road: ____________________ (Post Mile ________) __________

1. What is the Average Daily Traffic (ADT) of the road (including other known cannabis projects)?

   Number of other known cannabis projects included in ADT calculations:
   (Contact the Planning & Building Department for information on other nearby projects.) ________

   ADT: ____________ Date(s) measured: ____________________

   Method used to measure ADT: ☐ Counters ☐ Estimated using ITE *Trip Generation* Book

   Is the ADT of the road less than 400? ☐ Yes ☐ No

   If **YES**, then the road is considered very low volume and shall comply with the design standards outlined in the American Association of State Highway and Transportation Officials (AASHTO) *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400). Complete sections 2 and 3 below.*

   If **NO**, then the road shall be reviewed per the applicable policies for the design of local roads and streets presented in AASHTO *A Policy on Geometric Design of Highways and Streets*, commonly known as the "Green Book". Complete section 3 below.

2. Identify site specific safety problems with the road that include, but are not limited to: (Refer to Chapter 3 in AASHTO *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400)* for guidance.)

   A. Pattern of curve related crashes.
      Check one: ☐ No. ☐ Yes, see attached sheet for Post Mile (PM) locations.

   B. Physical evidence of curve problems such as skid marks, scarred trees, or scarred utility poles
      Check one: ☐ No. ☐ Yes, see attached sheet for PM locations.

   C. Substantial edge rutting or encroachment.
      Check one: ☐ No. ☐ Yes, see attached sheet for PM locations.

   D. History of complaints from residents or law enforcement.
      Check one: ☐ No. ☐ Yes (☐ check if written documentation is attached)

   E. Measured or known speed substantially higher than the design speed of the road (20+ MPH higher)
      Check one: ☐ No. ☐ Yes.

   F. Need for turn-outs.
      Check one: ☐ No. ☐ Yes, see attached sheet for PM locations.

3. Conclusions/Recommendations per AASHTO. Check one:

   ☐ The roadway can accommodate the cumulative increased traffic from this project and all known cannabis projects identified above.

   ☐ The roadway can accommodate the cumulative increased traffic from this project and all known cannabis projects identified above, if the recommendations on the attached report are done. (☐ check if a *Neighborhood Traffic Management Plan* is also required and is attached.)

   ☐ The roadway cannot accommodate increased traffic from the proposed use. It is not possible to address increased traffic.

A map showing the location and limits of the road being evaluated in PART B is attached. The statements in PART B are true and correct and have been made by me after personally evaluating the road.

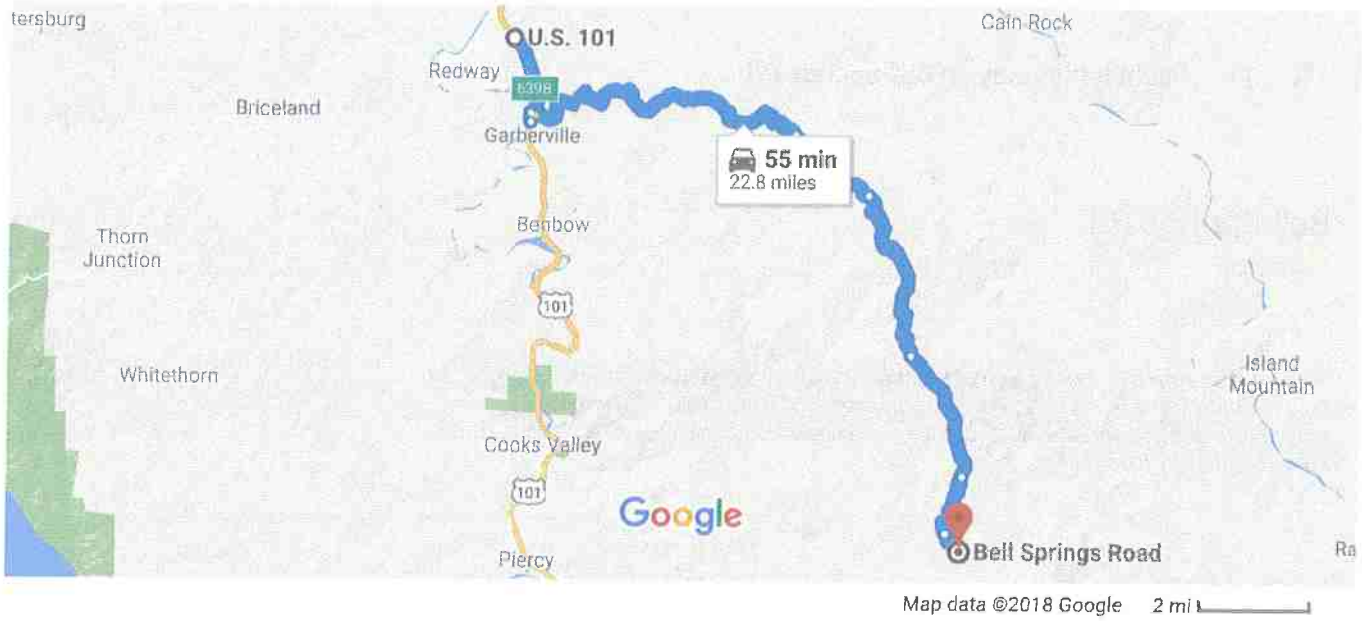
(SEAL)

______________________________ ____________________

Signature of Civil Engineer Date

Important: Read the instructions before using this form. If you have questions, please call the Dept. of Public Works Land Use Division at 707.445.7205.

Google Maps US-101 to Bell Springs Rd, California Drive 22.8 miles, 55 min



US-101

Take Alderpoint Rd to Bell Springs Rd

19 min (10.2 mi)

1. Head southeast on US-101 S — 1.8 mi
2. Take exit 639B toward Redway — 0.2 mi
3. Turn right onto Redwood Dr — 0.2 mi
4. Turn right onto Alderpoint Rd — 8.0 mi

Drive to Bell Springs Rd in Mendocino County

36 min (12.6 mi)

5. Turn right onto Bell Springs Rd — 1.4 mi
6. Keep left to stay on Bell Springs Rd — 1.2 mi
7. Turn right to stay on Bell Springs Rd — 4.7 mi
8. Slight left to stay on Bell Springs Rd — 3.2 mi

9. Keep right to stay on Bell Springs Rd — 0.8 mi

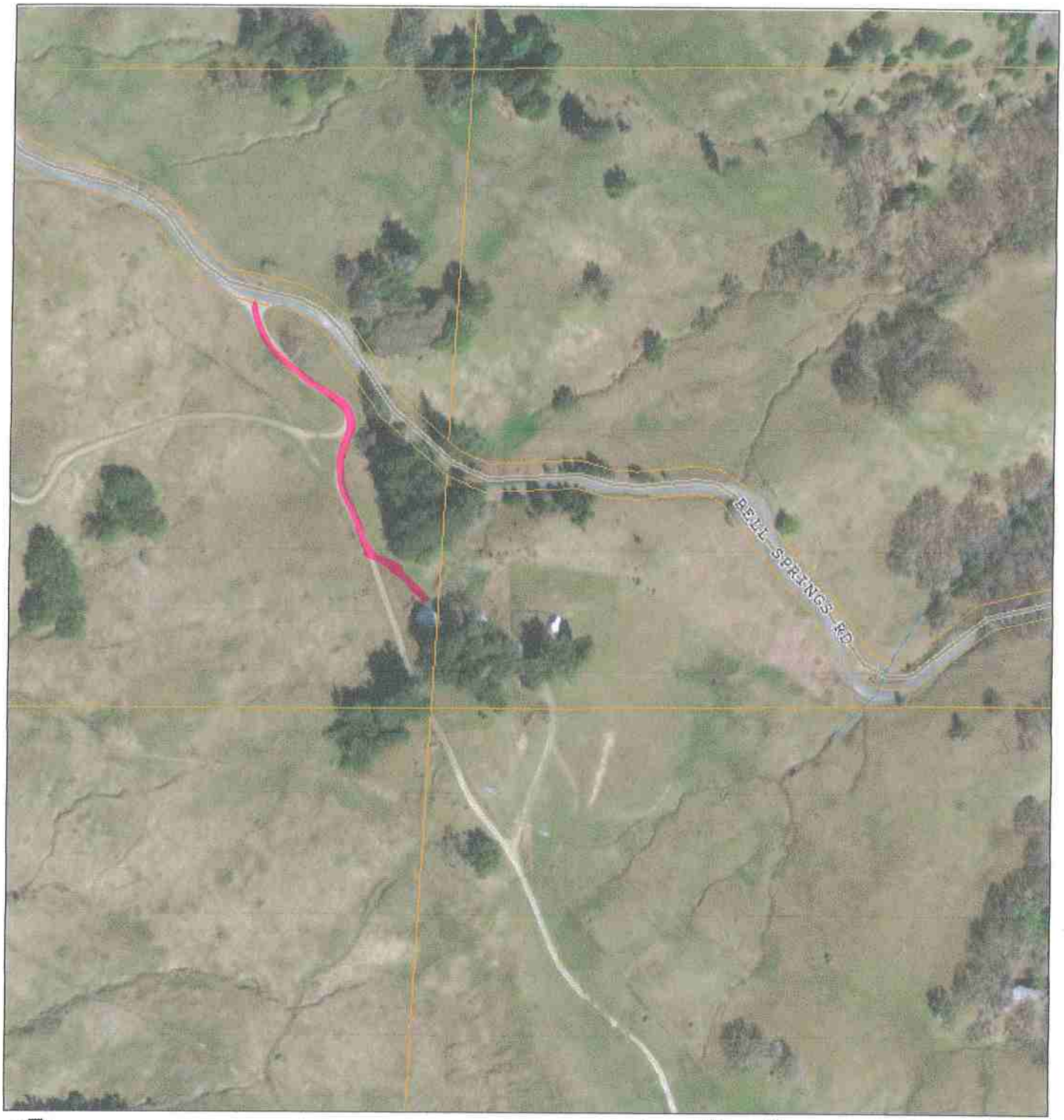
10. Turn right to stay on Bell Springs Rd — 0.8 mi

11. Slight left to stay on Bell Springs Rd — 0.6 mi

Bell Springs Rd

California

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.



ArcGIS Web Map - Shop

Humboldt County Planning and Building Department

0 180 360 720 Feet

0 0.0325 0.065 0.13 Miles

RF = 1:4,514 1 In = 376 ft

N W E S

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

Private or Unclassified
Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4

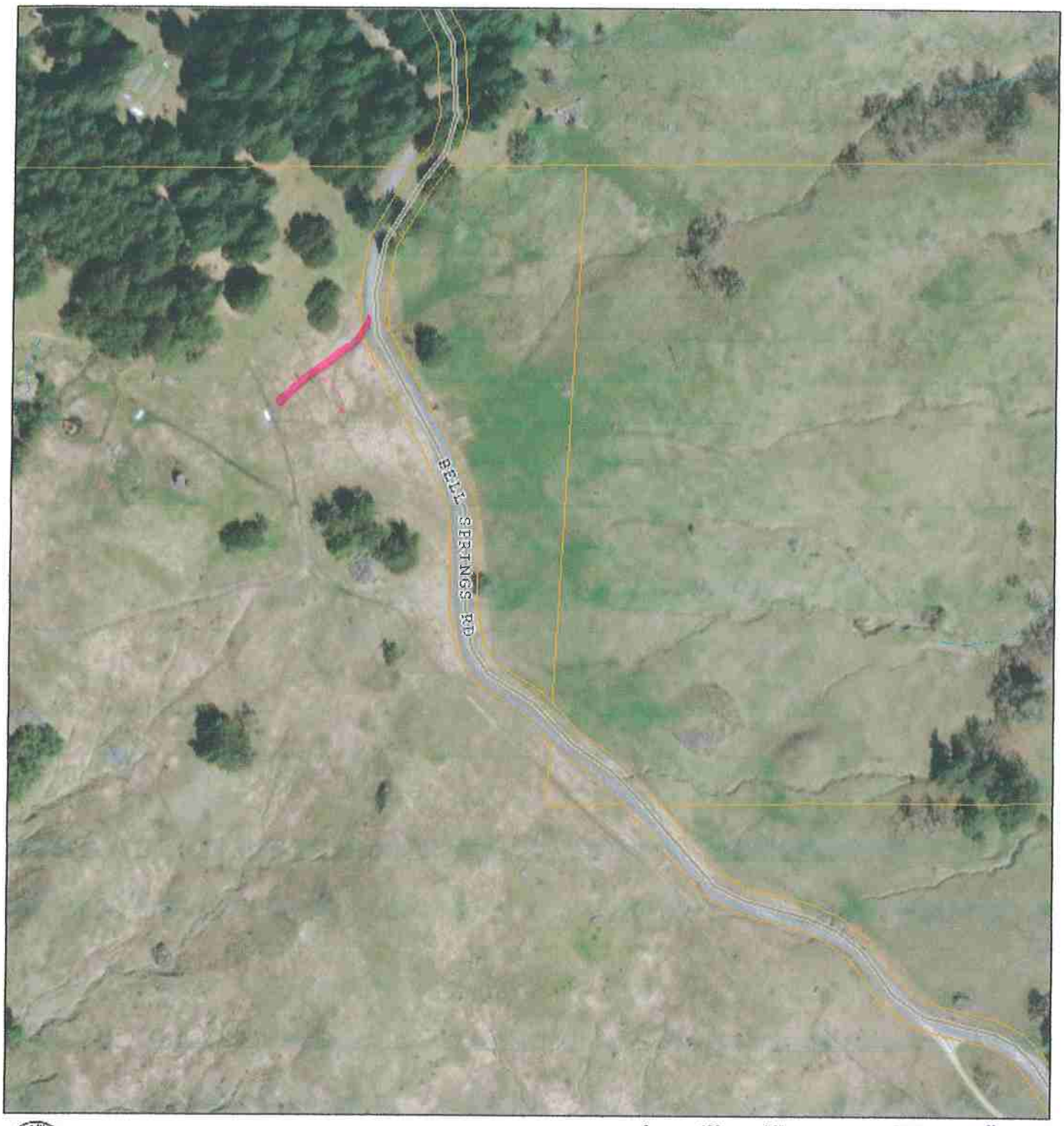
Intermittent
Subsurface
City Boundary
Counties
Parcels (no APN labels)

Driveway

Printed: May 17, 2018 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Source: NRCS, Humboldt County GIS, Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



ArcGIS Web Map - Garden

Humboldt County Planning and Building Department

0 180 360 720 Feet

0 0.0325 0.065 0.13 Miles

RF= 1:4,514 1 In = 376 ft

N W E S

Printed: May 17, 2018 Web AppBuilder 2.0 for ArcGIS

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Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- Counties
- Parcels (no APN labels)

Driveway

ArcGIS Web Map - Cabin

Humboldt County Planning and Building Department

0 180 360 720 Feet

0 0.0325 0.065 0.13 Miles

RF= 1:4,514 1 in = 376 ft

N W E S

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

Private or Unclassified
Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4

Intermittent
Subsurface
City Boundary
Counties
Parcels (no APN labels)

Driveway

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Department Public Works
1106 2nd St
Eureka CA 95501