

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

RECEIVED

AUG 23 2017

CDFW - EUREKA



**STREAMBED ALTERATION AGREEMENT**  
NOTIFICATION No. 1600-2017-0209-R1  
Eel River Tributary to the Pacific Ocean

Mr. Andrew Smyth and Mr. Marcus Fung  
Smyth and Fung Water Diversion and Stream Crossings Project  
3 Encroachments

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Mr. Andrew Smyth and Mr. Marcus Fung (Permittees).

#### RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittees initially notified CDFW on April 18, 2017, that the Permittees intend 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 Permittees have reviewed the Agreement and accept its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, the Permittees agree to complete the project in accordance with the Agreement.

#### PROJECT LOCATION

The project to be completed is located within the Eel River watershed, approximately 0.42 miles northwest of the town of Fort Seward, County of Humboldt, State of California. The project is located in Section 5, T3S, R5E, Humboldt Base and Meridian; in the Fort Seward U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Number 216-301-18; latitude 40.2264 N and longitude 123.6475 W at the parcel center.

#### PROJECT DESCRIPTION

The project is limited to three encroachments (Table 1). One encroachment is for water diversion from a well hydrologically connected to the Eel River for domestic use and irrigation. Work for the water diversion will include use and maintenance of the water diversion infrastructure. The two other encroachments are to upgrade undersized culverts and remove abandoned metal debris from the stream. Work for these

encroachments will include excavation, removal of existing culverts and abandoned metal debris, installation of new culvert, backfilling and compaction of fill, and rock armoring as necessary to minimize erosion.

Table 1. Project encroachments with descriptions.

ID	Latitude/Longitude	Description
POD	40.2255, -123.6481	Existing well that is hydrologically connected to the Eel River.
Crossing-1	40.2252, -123.6471	1. Replace undersized and rusted 18" diameter culvert with minimum 24" diameter culvert. 2. Remove scrap metal abandoned in the stream located downstream from the culvert outlet.
Crossing-2	40.2250, -123.6457	1. Replace undersized 24" diameter culvert with minimum 48" diameter culvert. 2. Remove scrap metal abandoned in the stream located downstream from the culvert outlet.

## PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: Foothill Yellow-legged Frog (*Rana boylii*), Chinook Salmon (*Oncorhynchus tshawytscha*), Coho Salmon (*O. kisutch*), Steelhead Trout (*O. mykiss*), River Lamprey (*Lampetra ayersi*), Western Brook Lamprey (*Lampetra richardsoni*), Central California Roach (*Lavinia symmetricus symmetricus*), Pacific Lamprey (*Entosphenus tridentate*), 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 Permittees shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. The Permittees 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 Permittees 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 Permittees, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Adherence to Existing Authorizations. All water diversion facilities that the Permittees own, operate, or control 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 Permittees shall notify CDFW if the Permittees determine or learn 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 Permittees 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 Permittees or representatives to participate in the inspection and/or monitoring. This condition does not apply to CDFW enforcement personnel.



## **2. Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, the Permittees 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 initial and revised Permittees notifications received on April 18, 2017 and June 6, 2017, respectively, together with all maps, BMP's, photographs, drawings, and other supporting documents submitted with the Notification.
- 2.2 Maximum Diversion Rate. The maximum instantaneous diversion rate from the water intake shall not exceed 10 gallons per minute (gpm) at any time.
- 2.3 Bypass Flow. The Permittees shall pass sufficient flow at all times to keep all aquatic species including fish and other aquatic life in good condition below the point of diversion.
- 2.4 Seasonal Diversion Minimization. No more than 300 gallons per day shall be diverted for domestic use only during the low flow season from August 1 to September 30 of any year. Water shall be diverted only if the Permittees can adhere to conditions 2.2 and 2.3 of this Agreement.
- 2.5 Measurement of Diverted Flow. The Permittees shall install a device acceptable to CDFW for measuring the quantity of water diverted from each POD. Measurement(s) shall begin as soon as this Agreement is signed by the Permittees. The Permittees shall record the quantity of water pumped to and from the system on a weekly basis. Alternatively, the Permittees can record the frequency of pumping and the time to fill storage. The report shall be submitted to CDFW in accordance with the reporting measures described below.
- 2.6 Water Management Plan. The Permittees shall submit a Water Management Plan that describes how forbearance will be achieved under this Agreement. The Water Management Plan shall include details on water storage, water conservation, or other relevant material to maintain irrigation 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 report shall be submitted to CDFW in accordance with the reporting measures described below.
- 2.7 Water Storage. All water storage (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.

- 2.8 Water Conservation. The Permittees shall make best efforts to minimize water use, and to follow best practices for water conservation and management.
- 2.9 Water Storage Maintenance. Storage tanks shall have a float valve to shut off the diversion when tanks are full to prevent overflow from being diverted when not needed. The Permittees shall install any other measures necessary to prevent overflow of tanks resulting in more water being diverted than is used.
- 2.10 State Water Code. This Agreement does not constitute a valid water right. The Permittees 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](http://www.swrcb.ca.gov/waterrights/publications_forms/forms/docs/sdu_registration.pdf).

### **Stream Crossings**

- 2.11 Work Period. All work, not including water diversion, shall be confined to the period **June 15 through October 1** of each year and all projects must be completed by **October 1, 2018**. 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.
- 2.12 Extension of the Work Period. If weather conditions permit, and the Permittees wish 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.
- 2.13 Stream Protection. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other deleterious material from project activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the stream. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.
- 2.14 Equipment Maintenance. Refueling of machinery or heavy equipment, or adding or draining oil, lubricants, coolants or hydraulic fluids shall not take place within stream bed, channel and bank. All such fluids and containers shall be disposed of properly off-site. Heavy equipment used or stored within stream bed, channel and bank shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.



- 2.15 Hazardous Spills. Any material, which could be hazardous or toxic to aquatic life and enters a stream (i.e. a piece of equipment tipping-over in a stream and dumping oil, fuel or hydraulic fluid), the Permittees shall immediately notify the California Emergency Management Agency State Warning Center at 1-800-852-7550, and immediately initiate clean-up activities. CDFW shall be notified by the Permittees within 24 hours at 707-445-6493 and consulted regarding clean-up procedures.
- 2.16 Excavated Fill. Excavated fill material shall be placed in locations where it cannot deliver to a watercourse. To minimize the potential for material to enter the watercourse during the winter period, all excavated and relocated fill material shall be tractor contoured (to drain water) and tractor compacted to effectively incorporate and stabilize loose material into existing road and/or landing features.
- 2.17 Runoff from Steep Areas. The Permittees shall make preparations so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential or contained behind erosion control structures. Erosion control structures such as straw bales and/or siltation control fencing shall be placed and maintained until the threat of erosion ceases. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.
- 2.18 Culvert Installation.
- 2.18.1 Existing fill material in the crossing shall be excavated down vertically to the approximate original channel and outwards horizontally to the approximate crossing hinge points (transition between naturally occurring soil and remnant temporary crossing fill material) to remove any potential unstable debris and voids in the older fill prism.
- 2.18.2 Culvert shall be installed to grade, aligned with the natural stream channel, and extend lengthwise completely beyond the toe of fill. If culvert cannot be set to grade, it shall be oriented in the lower third of the fill face, and a downspout or energy dissipator (such as boulders, rip-rap, or rocks) shall be installed above or below the outfall as needed to effectively control stream bed, channel, or bank erosion (scouring, headcutting, or downcutting).
- 2.18.3 Culvert bed shall be composed of either compacted rock-free soil or crushed gravel. Bedding beneath the culvert shall provide for even distribution of the load over the length of the pipe, and allow for natural settling and compaction to help the pipe settle into a straight profile. The crossing backfill materials shall be free of rocks, limbs, or other debris that could allow water to seep around the pipe, and shall be compacted.

2.18.4 Culvert inlet, outlet (including the outfall area), and fill faces shall be armored where stream flow, road runoff, or rainfall energy is likely to erode fill material and the outfall area.

2.18.5 Permanent culverts shall be sized to accommodate the estimated 100-year flood flow [i.e.  $\geq 1.0$  times the width of the bankfull channel width or the 100-year flood size, whichever is greater], including debris, culvert embedding, and sediment loads.

## 2.19 Rock Armor Placement.

2.19.1 No heavy equipment shall enter the wetted stream channel.

2.19.2 No fill material, other than clean rock, shall be placed in the stream channel.

2.19.3 Rock shall be sized to withstand washout from high stream flows, and extend above the ordinary high water level.

2.19.4 Rock armoring shall not constrict the natural stream channel width and shall be keyed into a footing trench with a depth sufficient to prevent instability.

## 2.20 Dewatering.

2.20.1 Stream Diversion. Only when work in a flowing stream is unavoidable (e.g., perennial streams), Permittees shall divert the stream flow around or through the work area during construction operations. Stream flow shall be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses.

2.20.2 Maintain Aquatic Life. When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, Permittees shall allow sufficient water at all times to pass downstream to maintain aquatic life below the dam pursuant to Fish and Game Code §5937.

2.20.3 Stranded Aquatic Life. The Permittees shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets and by hand. Captured aquatic life shall be released immediately in the closest body of water adjacent to the work site. This condition does not allow for the take or disturbance of any State or federally listed species, or State listed species of special concern.

2.20.4 Cofferdams. Prior to the start of construction, Permittees shall divert the stream around or through the work area and the work area shall be isolated from the flowing stream. To isolate the work area, water tight coffer dams

shall be constructed upstream and downstream of the work area and water diverted, through a suitably sized pipe, from upstream of the upstream coffer dam and discharge downstream of the downstream coffer dam. Cofferdams shall be constructed of a non-erodible material which does not contain soil or fine sediment. Cofferdams and the stream diversion system shall remain in place and functional throughout the construction period. Cofferdams or stream diversions that fail for any reason shall be repaired immediately.

2.20.5 Restore Normal Flows. Permittees shall restore normal flows to the effected stream immediately upon completion of work at that location.

2.21 Project Inspection. The Project shall be inspected by Timberland Resource Consultants or a licensed engineer before October 1 during the year when the project was completed to ensure that stream crossing(s) were installed as designed. A copy of the inspection report, including photographs of each site, shall be submitted to CDFW in accordance with the reporting measures described below.

### 3. Reporting Measures

- 3.1 Measurement of Diverted Flow. To comply with Condition 2.5, the Permittees shall **submit a copy of the water diversion records, no later than December 31 of each year beginning in 2017**, to CDFW at 619 Second Street, Eureka, CA 95501.
- 3.2 Water Management Plan. To comply with Condition 2.6, the Permittees shall **submit a Water Management Plan no later than September 15, 2017**, to CDFW at the 619 Second Street, Eureka, CA 95501.
- 3.3 Project Inspection. To comply with Condition 2.21, the Permittees shall **submit the Project Inspection Report, within 90 days of completion of this project** to CDFW, LSA Program at 619 Second Street, Eureka, CA 95501.

### CONTACT INFORMATION

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

#### To Permittees:

Mr. Andrew Smyth and Mr. Marcus Fung  
P.O. Box 112  
Blocksburg, California 95514  
707-223-6767 (Smyth)  
[captainkalik@gmail.com](mailto:captainkalik@gmail.com)



To CDFW:

Department of Fish and Wildlife  
Northern Region  
619 Second Street  
Eureka, California 95501  
Attn: Lake and Streambed Alteration Program  
Notification #1600-2017-0209-R1

**LIABILITY**

The Permittees shall be solely liable for any violation of the Agreement, whether committed by the Permittees or any person acting on behalf of the Permittees, 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 Permittees 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 Permittees or any person acting on behalf of the Permittees, 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 Permittees 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 Permittees an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to the Permittees, 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 Permittees 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 Permittees or any person acting on behalf of the Permittees, 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 Permittees or any person acting on behalf of the Permittees, 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 Permittees 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 Permittees may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and the Permittees. To request an amendment, the Permittees 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 Permittees 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 Permittees 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 Permittees 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 Permittees 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 Permittees fail to submit a request to extend the Agreement prior to its expiration, the Permittees 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 Permittees signatures; 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](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 Permittees 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.

## AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of the Permittees, the signatories hereby acknowledge 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

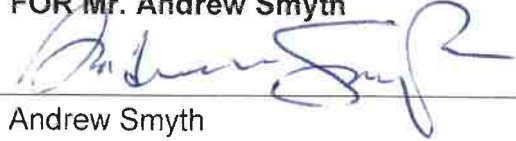
This Agreement authorizes only the project described herein. If the Permittees begin or completes a project different from the project the Agreement authorizes, the Permittees may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.



## CONCURRENCE

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

**FOR Mr. Andrew Smyth**

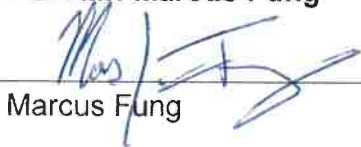


Andrew Smyth

8-15-17

Date

**FOR Mr. Marcus Fung**



Marcus Fung

8/12/17

Date

**FOR DEPARTMENT OF FISH AND WILDLIFE**



Scott Bauer

Senior Environmental Scientist Supervisor

8/25/17

Date

Prepared by: Ryan Bourque, Senior Environmental Scientist Specialist, July 25, 2017



State of California – Department of Fish and Wildlife  
**NOTIFICATION OF LAKE OR STREAMBED ALTERATION**  
**FISH AND GAME CODE SECTION 1602**  
DFW 2023 (REV. 10/01/16) Page 1

FOR DEPARTMENT USE ONLY				
Date Received	Amount Received	Amount Due	Date Complete	Notification No.
	\$	\$		
Assigned to:				

## NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete **EACH** field, unless otherwise indicated, following the enclosed instructions and submit **ALL** required enclosures. Attach additional pages, if necessary.

### 1. APPLICANT PROPOSING PROJECT

Name	ANDREW SMYTH & MARCUS FUNG			
Business/Agency				
Mailing Address	PO BOX 112			
City, State, Zip	BLOCKSBURG, CA 95514			
Telephone	707-223-6761 (SMYTH)	Fax		
Email	captainkalik@gmail.com			

### 2. CONTACT PERSON (Complete only if different from applicant)

Name	Chris Carrol @ Timberland Resource Consultants			
Street Address	165 South Fortuna Blvd			
City, State, Zip	Fortuna, CA. 95540			
Telephone	707-725-1897	Fax		
Email	carroll@timberlandresource.com			

### 3. PROPERTY OWNER (Complete only if different from applicant)

Name				
Street Address				
City, State, Zip				
Telephone		Fax		
Email				

### 4. PROJECT NAME AND AGREEMENT TERM

A. Project Name		APN 216-301-018		
B. Agreement Term Requested		<input checked="" type="checkbox"/> Regular (5 years or less) <input type="checkbox"/> Long-term (greater than 5 years)		
C. Project Term		D. Seasonal Work Period		E. Number of Work Days
Beginning (year)	Ending (year)	Start Date (month/day)	End Date (month/day)	



## 5. AGREEMENT TYPE

Check the applicable box. If box B, C, D, E, or F is checked, complete the specified attachment.

A.	<input checked="" type="checkbox"/> Standard (Most construction projects, excluding the categories listed below)	
B.	<input type="checkbox"/> Gravel/Sand/Rock Extraction (Attachment A)	Mine I.D. Number: _____
C.	<input type="checkbox"/> Timber Harvesting (Attachment B)	THP Number: _____
D.	<input type="checkbox"/> Water Diversion/Extraction/Impoundment (Attachment C)	SWRCB Number: _____
E.	<input type="checkbox"/> Routine Maintenance (Attachment D)	
F.	<input checked="" type="checkbox"/> Remediation of Marijuana Cultivation Sites (Attachment E)	
G.	<input type="checkbox"/> Department Grant Programs	Agreement Number: _____
H.	<input type="checkbox"/> Master	
I.	<input type="checkbox"/> Master Timber Operations	

## 6. FEES

See the current fee schedule to determine the appropriate notification fee. Itemize each project's estimated cost and corresponding fee. **Note: The Department may not process this notification until the correct fee has been received.**

A. Project		B. Project Cost	C. Project Fee
1	2 crossing upgrades	<\$5,000	\$1122
2			
3			
4	Remediation Fee		\$3,000
5			
6			
7			
8			
9			
10			
		D. Base Fee (if applicable)	
		E. TOTAL FEE*	\$4,122

\* Cash, check, and Visa or MasterCard payments are accepted. When payment is made by Visa or MasterCard, the "Total Fee Enclosed" must include an additional credit card processing fee of 1.6%. Credit card payment must be submitted with a completed Credit Card Payment Authorization Form (DFW 1443b (Rev. 8/15)) available online at: <https://www.wildlife.ca.gov/Conservation/LSA/Forms> or at a Department regional office.





## 7. PRIOR NOTIFICATION AND ORDERS

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, the Department for the project described in this notification?		
<input type="checkbox"/> Yes ( <i>Provide the information below</i> ) <input checked="" type="checkbox"/> No		
Applicant	Notification Number	Date
B. Is this notification being submitted in response to a court or administrative order or notice, or a notice of violation (NOV) issued by the Department?		
<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes ( <i>Enclose a copy of the order, notice, or NOV. If the applicant was directed to notify the Department verbally rather than in writing, identify the person who directed the applicant to submit this notification and the agency he or she represents, and describe the circumstances relating to the order.</i> )		
<input type="checkbox"/> Continued on additional page(s)		

## 8. PROJECT LOCATION

A. Address or description of project location. ( <i>Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway</i> )				
245 SEWARD DRIVE FORT SEWARD 95553  See attached Location Map.  <input type="checkbox"/> Continued on additional page(s)				
B. River, stream, or lake affected by the project.		Class II watercourses		
C. What water body is the river, stream, or lake tributary to?		Eel River		
D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
E. County	Humboldt			
F. USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section
Fort Seward, CA	3S	5E	5	SW
<input type="checkbox"/> Continued on additional page(s)				
K. Meridian ( <i>check one</i> )	<input checked="" type="checkbox"/> Humboldt <input type="checkbox"/> Mt. Diablo <input type="checkbox"/> San Bernardino			
L. Assessor's Parcel Number(s)				
216-301-018  <input type="checkbox"/> Continued on additional page(s)				



M. Coordinates (If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes)			
Latitude/Longitude	Latitude: See Addendum 8M		Longitude:
	<input type="checkbox"/> Degrees/Minutes/Seconds	<input checked="" type="checkbox"/> Decimal Degrees	<input type="checkbox"/> Decimal Minutes
UTM	Easting:	Northing:	<input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11
Datum used for Latitude/Longitude or UTM		<input type="checkbox"/> NAD 27	<input checked="" type="checkbox"/> NAD 83 or WGS 84

### 9. PROJECT CATEGORY

WORK TYPE	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR-MAINTAIN-OPERATE EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bank stabilization – rip-rap/retaining wall/gabion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat dock/pier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat ramp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel clearing/vegetation management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culvert	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Debris basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filling of wetland, river, stream, or lake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geotechnical survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat enhancement – revegetation/mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low water crossing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road/trail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sediment removal: pond, stream, or marina	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
flood control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm drain outfall structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary stream crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utility crossing: horizontal directional drilling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
jack/bore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
open trench	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water diversion without facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water diversion with facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



#### 10. PROJECT DESCRIPTION

- A. Describe the project in detail. Include photographs of the project location and immediate surrounding area.
- Written description of all project activities with detailed step-by-step description of project implementation.
  - Include any structures (e.g., rip-rap, culverts) that will be placed or modified in or near the stream, river, or lake, and any channel clearing.
  - Specify volume, and dimensions of all materials and features (e.g., rip rap fields) that will be used or installed.
  - If water will be diverted or drafted, specify the purpose or use.
  - Enclose diagrams, drawings, plans, and maps that provide all of the following: site specific construction details; dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; overview of the entire project area (i.e., "bird's-eye view") showing the location of each structure and/or activity, significant area features, stockpile areas, areas of temporary disturbance, and where the equipment/machinery will access the project area.

See Addendum 10

☐ Continued on additional page(s)

- B. Specify the equipment and machinery that will be used to complete the project.

Excavator and dump truck

☐ Continued on additional page(s)

- C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).

☒ Yes ☐ No (Skip to box 11)

- D. Will the proposed project require work in the wetted portion of the channel?

☒ Yes (Enclose a plan to divert water around work site)  
☐ No





### 11. PROJECT IMPACTS

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

See Addendum 10

☐ Continued on additional page(s)

B. Will the project affect any vegetation?

☒ Yes (Complete the tables below) ☐ No (Include aerial photo with date supporting this determination)

Vegetation Type	Temporary Impact	Permanent Impact
See Addendum 10	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)
See Addendum 10		

☐ Continued on additional page(s)

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

☒ Yes (List each species and/or describe the habitat below) ☐ No ☐ Unknown

Anadromous salmonids downstream

☐ Continued on additional page(s)

D. Identify the source(s) of information that supports a "yes" or "no" answer above in Box 11.C.

CNDDB

☐ Continued on additional page(s)

E. Has a biological study been completed for the project site?

☐ Yes (Enclose the biological study) ☒ No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.



F. Has a hydrological study been completed for the project or project site?

☐ Yes (*Enclose the hydrological study*) ☒ No

*Note: A hydrological study or other information on site hydraulics (e.g., flows, channel characteristics, and/or flood recurrence intervals) may be required to evaluate potential project impacts on hydrology.*

G. Have fish or wildlife resources or waters of the state been mapped or delineated on the project site?

☐ Yes (*Enclose the mapped results*) ☒ No

*Note: Check "yes" if fish and wildlife resources or waters of the state on the project site have been mapped or delineated. "Wildlife" means and includes all wild animals, birds, plants, fish, amphibians, reptiles and related ecological communities, including the habitat upon which the wildlife depends." (Fish & G. Code, § 89.5.) If "yes" is checked, submit the mapping or delineation. If the mapping or delineation is in digital format (e.g., GIS shape files or KMZ), you must submit the information in this format for the Department to deem your notification complete. If "no" is checked, or the resolution of the mapping or delineation is insufficient, the Department may request mapping or delineation (in digital or non-digital format), or higher resolution mapping or delineation for the Department to deem the notification complete.*

## 12. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES

A. Describe the techniques that will be used to prevent sediment from entering watercourses during and after construction.

Soil Stabilization Measures attached. The Applicant shall adhere to CDFW's standard measures for stream crossings, which consist of: Work within the active channel of a stream shall be restricted to periods of dry weather; Excavated fill material shall be placed in upland locations where it cannot deliver to a watercourse; and ensuring runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential or contained behind erosion control structures.

☐ Continued on additional page(s)

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

Crossings shall be upgraded/installed per attached BMPs, which are taken from the California Salmonid Stream Habitat Restoration Manual & Handbook for Forest, Ranch and Rural Roads.

☐ Continued on additional page(s)

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

The crossing upgrades are expected to minimize baseline sedimentation levels entering the watershed from the property, and will avoid potential significant impacts associated with total crossing failure. Other sources of potential sedimentation shall be addressed via the preparation and implementation of the WRPP.

☐ Continued on additional page(s)



### 13. PERMITS

List any local, State, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

- A. Water Quality Control Board Order No. 2015-0023 ☐ Applied ☐ Issued
- B. Commercial Medical Marijuana Land Use Ordinance ☐ Applied ☐ Issued
- C. \_\_\_\_\_ ☐ Applied ☐ Issued
- D. Unknown whether ☐ local, ☐ State, or ☐ federal permit is needed for the project. (Check each box that applies)

☐ Continued on additional page(s)

### 14. ENVIRONMENTAL REVIEW

A. Has a draft or final document been prepared for the project pursuant to the California Environmental Quality Act (CEQA) and/or National Environmental Protection Act (NEPA)?

- ☒ Yes (Check the box for each CEQA or NEPA document that has been prepared and enclose a copy of each.)
- ☐ No (Check the box for each CEQA or NEPA document listed below that will be or is being prepared.)

- ☐ Notice of Exemption  
☐ Initial Study  
☐ Negative Declaration  
☐ THP/ NTMP

- ☒ Mitigated Negative Declaration  
☐ Environmental Impact Report  
☐ Notice of Determination (Enclose)  
☐ Mitigation, Monitoring, Reporting Plan

☐ NEPA document (type): \_\_\_\_\_

B. State Clearinghouse Number (if applicable) No. 2015042074

C. Has a CEQA lead agency been determined? ☒ Yes (Complete boxes D, E, and F) ☐ No (Skip to box 14.G)

D. CEQA Lead Agency California Regional Water Quality Control Board North Coast

E. Contact Person Mathias St. John

F. Telephone Number 707-570-3762

G. If the project described in this notification is not the "whole project" or action pursuant to CEQA, briefly describe the entire project (Cal. Code Regs., tit. 14, § 15378).

See Addendum 10's discussion of California Regional Water Quality Control Board North Coast Region Order No. 2015-0023, 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.

☐ Continued on additional page(s)

H. Has a CEQA filing fee been paid pursuant to Fish and Game Code section 711.4?

- ☐ Yes (Enclose proof of payment) ☒ No (Briefly explain below the reason a CEQA filing fee has not been paid)

Note: If a CEQA filing fee is required, the Lake or Streambed Alteration Agreement may not be finalized until paid.





**15. SITE INSPECTION**

Check one box only.

- ☐ In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.
- ☒ I request the Department to first contact (insert name) Chris Carrol  
at (insert telephone number) 707-725-1897 to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay the Department's determination as to whether a Lake or Streambed Alteration Agreement is required and/or the Department's issuance of a draft agreement pursuant to this notification.

**16. DIGITAL FORMAT**

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?

- ☐ Yes (Please enclose the information via digital media with the completed notification form)
- ☒ No

**17. SIGNATURE**

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, the Department may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless the Department has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

Chris Caroll  
Signature of Applicant or Applicant's Authorized Representative

4-15-17  
Date

Chris Carroll  
Print Name

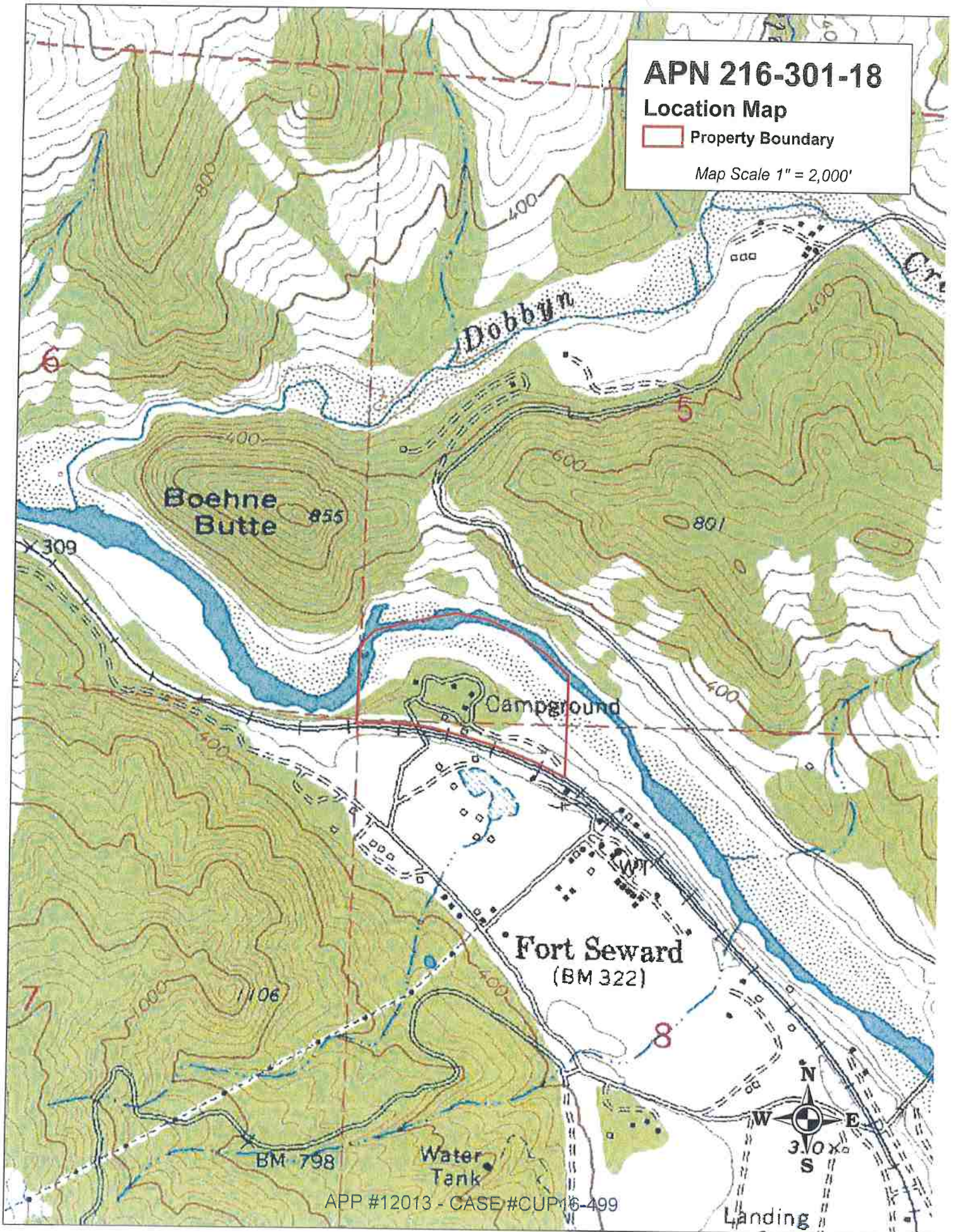


**APN 216-301-18**

**Location Map**

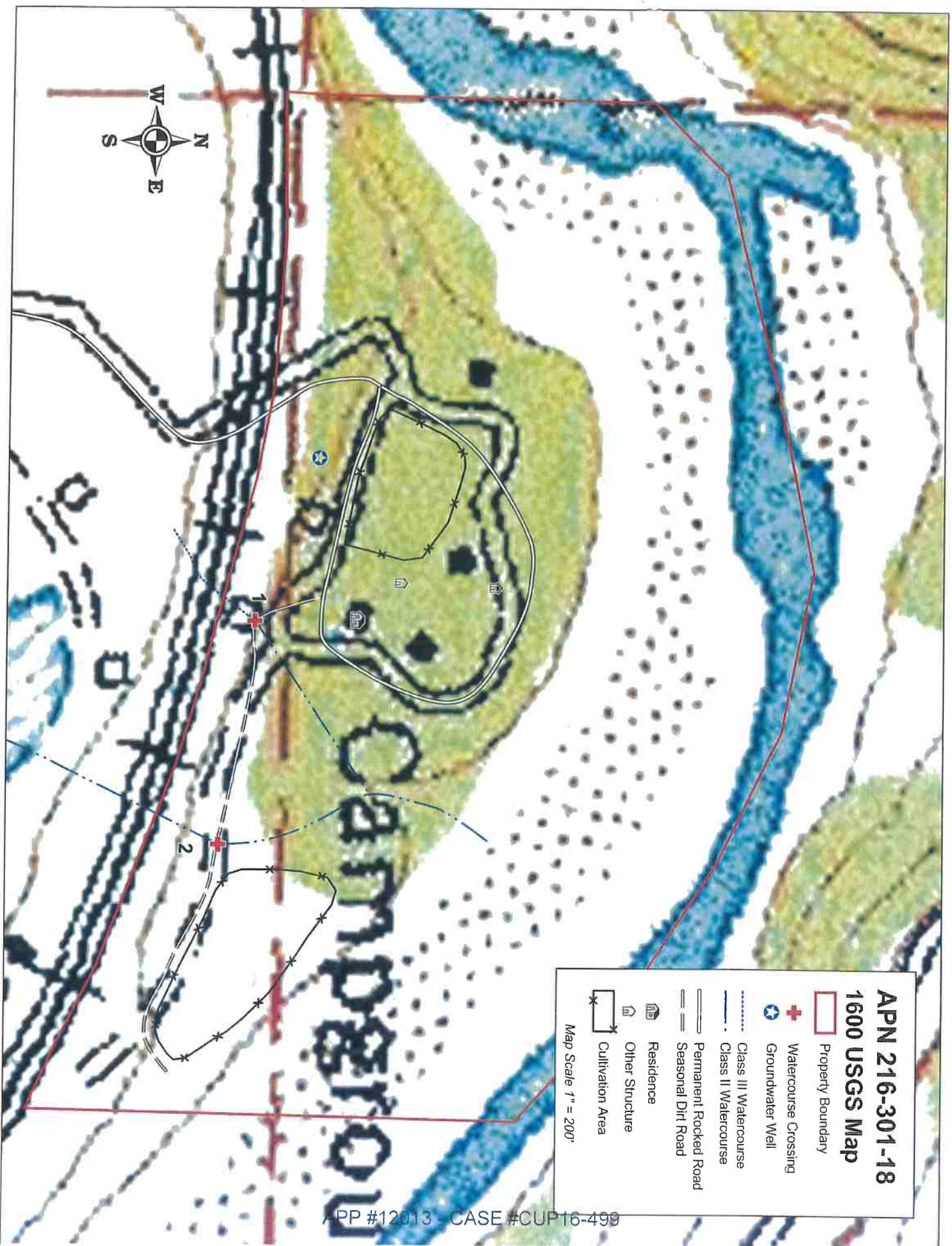
 Property Boundary

Map Scale 1" = 2,000'



APP #12013 - CASE #CUP 16-499



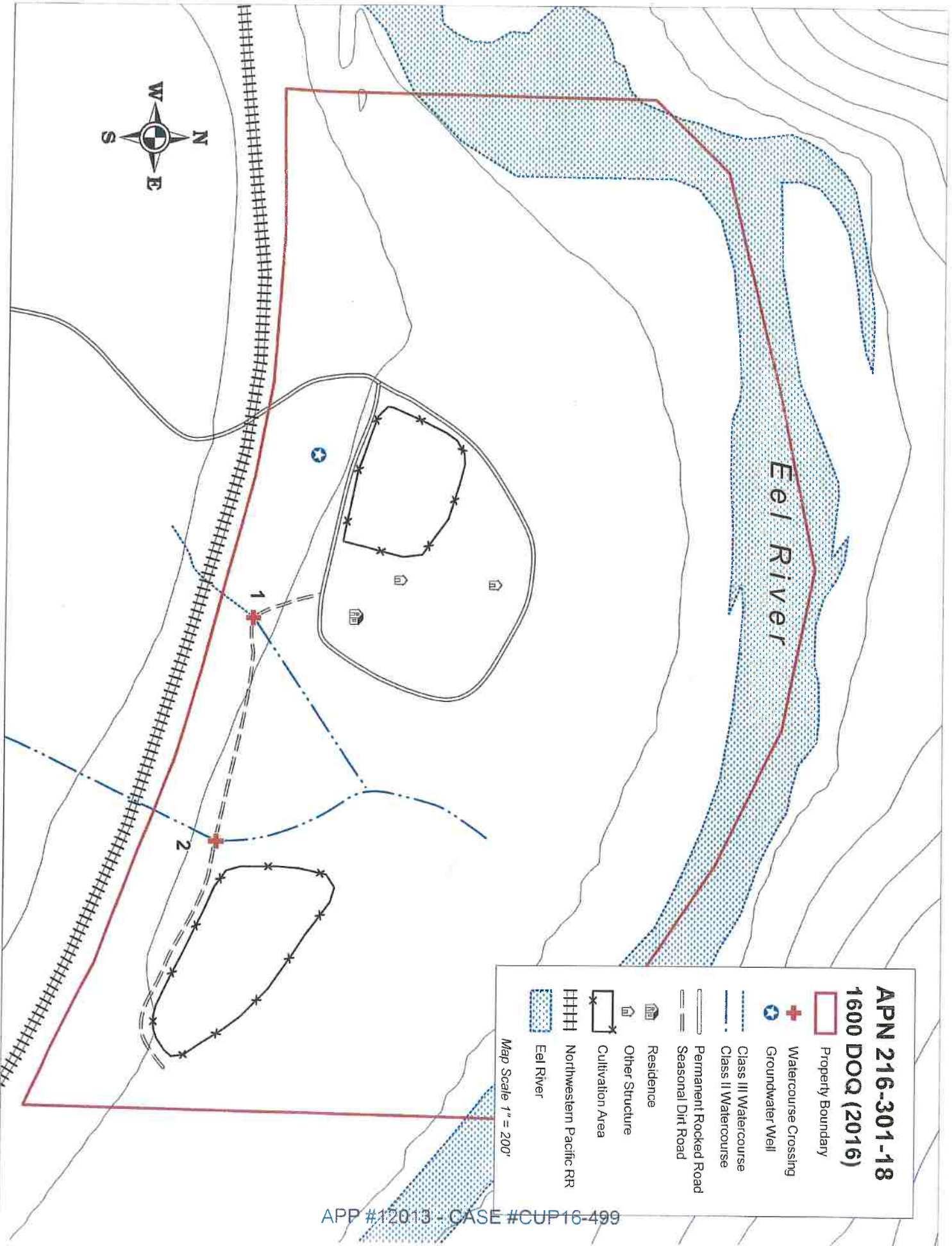


**APN 216-301-18**  
**1600 USGS Map**

- Property Boundary
- Watercourse Crossing
- Groundwater Well
- Class III Watercourse
- Class II Watercourse
- Permanent Rocked Road
- Seasonal Dirt Road
- Residence
- Other Structure
- Cultivation Area

Map Scale 1" = 200'



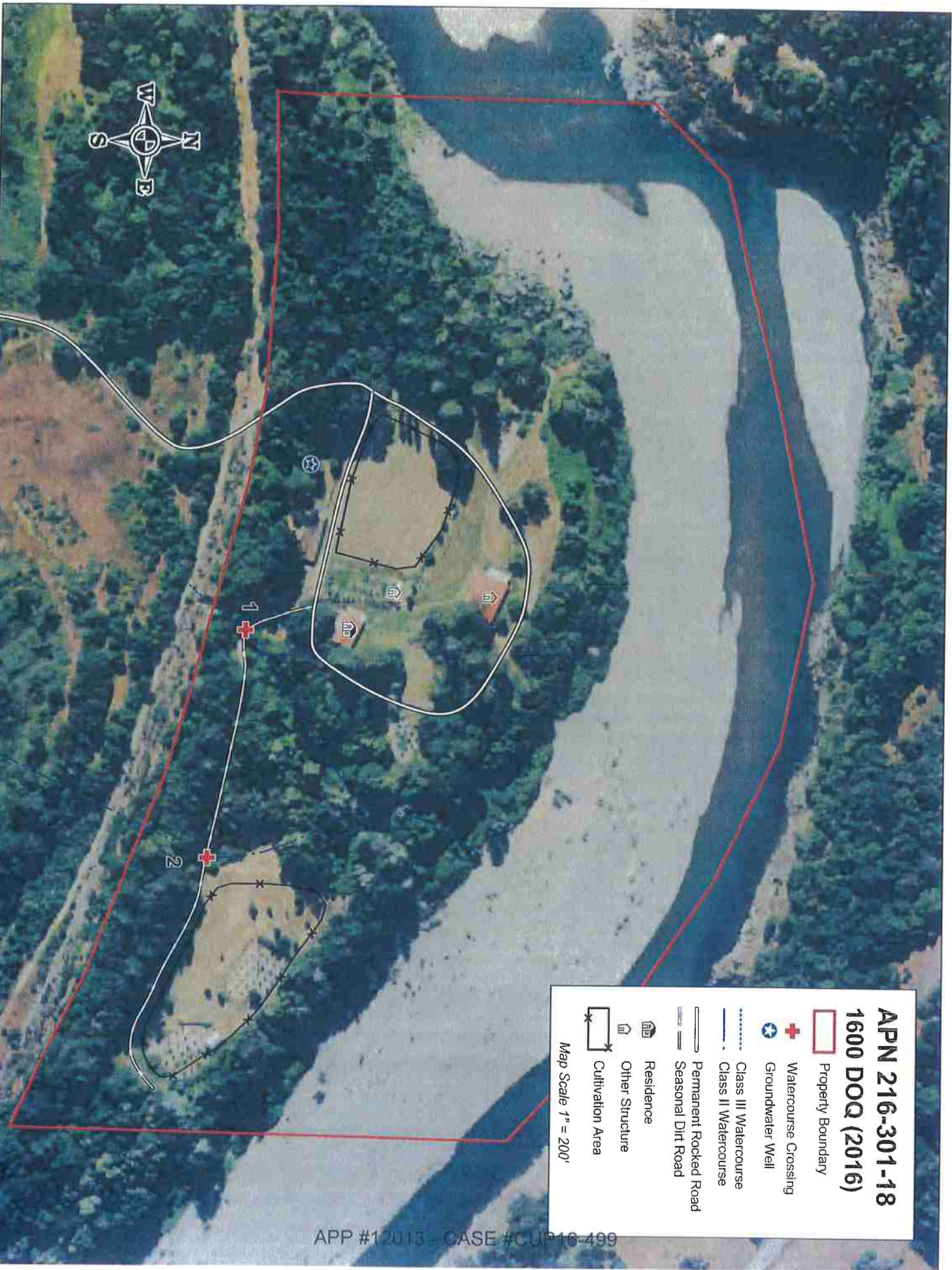


**APN 216-301-18**  
**1600 DOQ (2016)**

- Property Boundary
- Watercourse Crossing
- Groundwater Well
- Class III Watercourse
- Class II Watercourse
- Permanent Rocked Road
- Seasonal Dirt Road
- Residence
- Other Structure
- Cultivation Area
- Northwestern Pacific RR
- Eel River

Map Scale 1" = 200'





APN 216-301-18  
1600 DOQ (2016)

- Property Boundary
- Watercourse Crossing
- Groundwater Well
- Class III Watercourse
- Class II Watercourse
- Permanent Rocked Road
- Seasonal Dirt Road
- Residence
- Other Structure
- Cultivation Area

Map Scale 1" = 200'



## **Addendum 8M – Coordinates (NAD 83 DECIMAL DEGREES)**

**CROSSING 1:** -123.6470890°; 40.22518360°

**CROSSING 2:** -123.6457104°; 40.22502593°

## **Addendum 10**

This notification consists of two existing stream crossing upgrades as follows.

**Crossing #1:** 18-inch diameter metal culvert on a Class III watercourse. The culvert is undersized and rusted. The culvert outlet extends approximately 20 feet past the base of the fill in extremely dense poison oak and blackberry. There is old discarded scrap steel and metal in the stream channel near the culvert outlet that shall be removed concurrent with the culvert replacement. This crossing shall be upgraded to a minimum 24-inch diameter culvert. The replacement of this culvert shall require the excavation and temporary displacement of approximately 22 cubic yards of fill (30 feet long by 4 feet deep by 5 feet wide) and 150 ft<sup>2</sup> of overall disturbance (30-foot length and 4 feet width). This crossing requires the loss of poison oak, blackberry, and native forbs and grasses.

**Crossing #2:** 24-inch diameter metal culvert on a Class II watercourse. The culvert is undersized. There is old discarded scrap steel and metal in the stream channel near the culvert outlet that shall be removed concurrent with the culvert replacement. This crossing shall be upgraded to a minimum 48-inch diameter culvert. The replacement of this culvert shall require the excavation and temporary displacement of approximately 107 cubic yards of fill (40 feet long by 12 feet deep by 6 feet wide) and 240 ft<sup>2</sup> of overall disturbance (40-foot length and 9 feet width). This crossing requires the loss of a 2-inch dbh Pacific willow, 2-inch dbh tanoak, and California hazelnut at the inlet, and 2-inch dbh Douglas-fir, poison oak, and blackberry at the outlet.

## **Addendum 10E –Cofferdam Construction and Use Specifications**

The stream crossings proposed for upgrading may have surface flow present during the June 1 through October 31 work period. Consequently, this project shall require the installation of a temporary diversion structure, so clean water above the work site can be isolated from the construction zone and transported around the work area so it can be discharged to the stream channel with minimal effects on surface flow rates and water quality. In addition, "dirty" water generated within the construction area will be collected and transported off site and discharged in a safe location where it can settle out sediment or infiltrate into soils or gravel and not deliver contaminants to a watercourse. Crossings shall be drained using either gravity fed pipe diversions or pump diversions based upon stream channel and work site conditions. See Cofferdam Specifications appended to this agreement, which is taken from *Weaver, W.E., Weppner, E.M. and Hagans, D.K., 2014, Handbook for Forest, Ranch and Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining and Closing Wildland Roads, Mendocino County Resource Conservation District, Ukiah, California, 416 p.*



## **Addendum 10 (Cont.)**

All roads and developed sites were assessed for compliance with CDFW, which includes jurisdictional 1600 sites and potential California Fish and Game Code Section 5650 violations. The Owner/Applicant is self-enrolled into *California Regional Water Quality Control Board North Coast Region Order No. 2015-0023, 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.*

## **Remediation Plan**

As described above, there two watercourse crossings proposed for remediation. The combined disturbance to remediate these sites is 390 ft<sup>2</sup>. Per Item II of Attachment E, the Owner/Applicant is in the process of preparing an application to be submitted to Humboldt County for Commercial Cultivation, Processing, Manufacturing and Distribution of Cannabis for medical use. The proposed application is for 40,000 ft<sup>2</sup>. The source of water for the irrigation of cannabis and domestic use is a permitted groundwater well. No surface diversions occur on the property or are proposed as part of this notification.

## Addendum 10 – Pictures



Picture 1: Crossing #1's inlet. Photo date 4-11-2017.



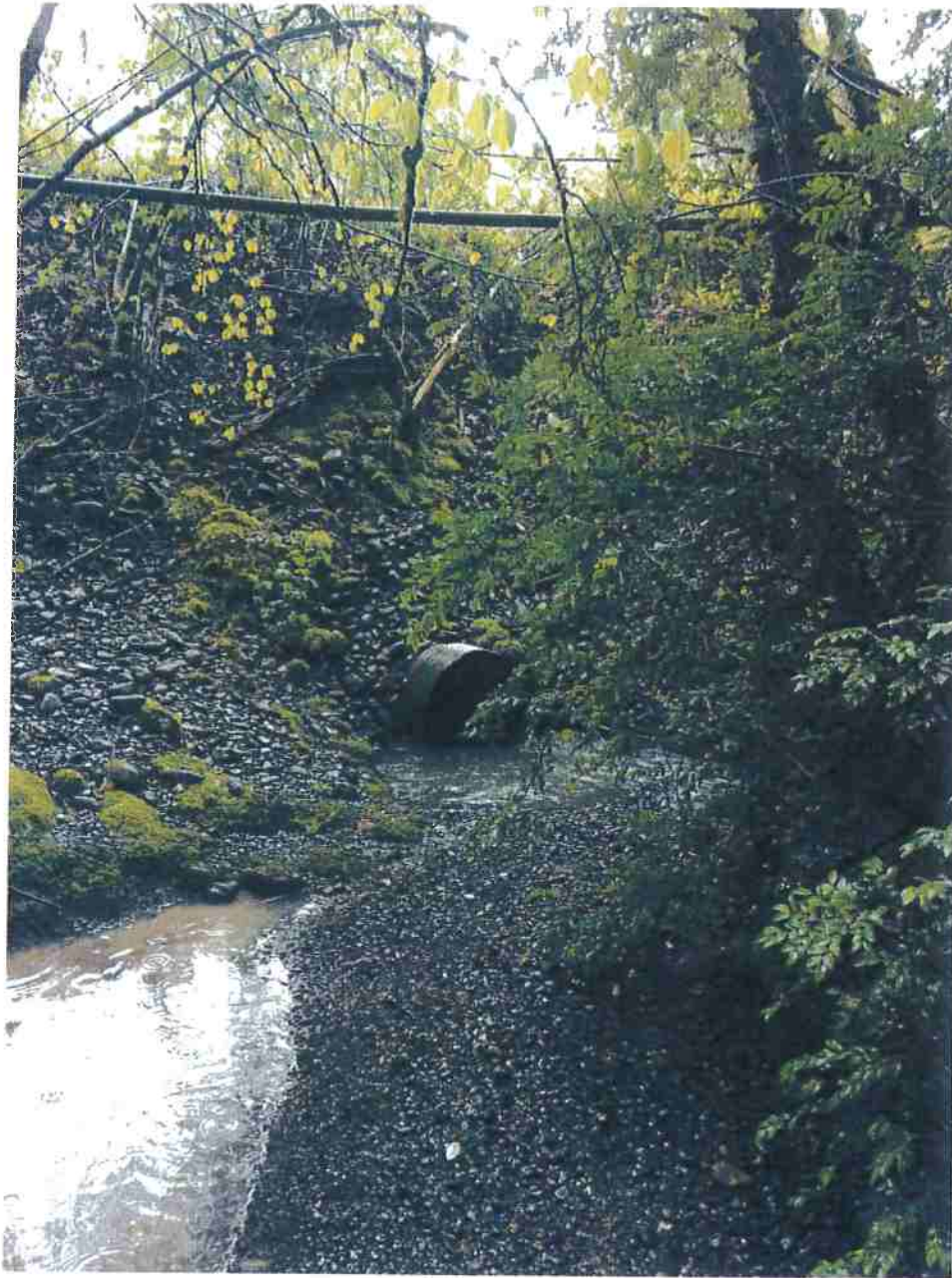
## Addendum 10 – Pictures



Picture 2: Crossing #1's outlet. Photo date 4-11-2017.



**Addendum 10 – Pictures (Cont.)**



Picture 3: Crossing #2's inlet. Photo date 4-11-2017.



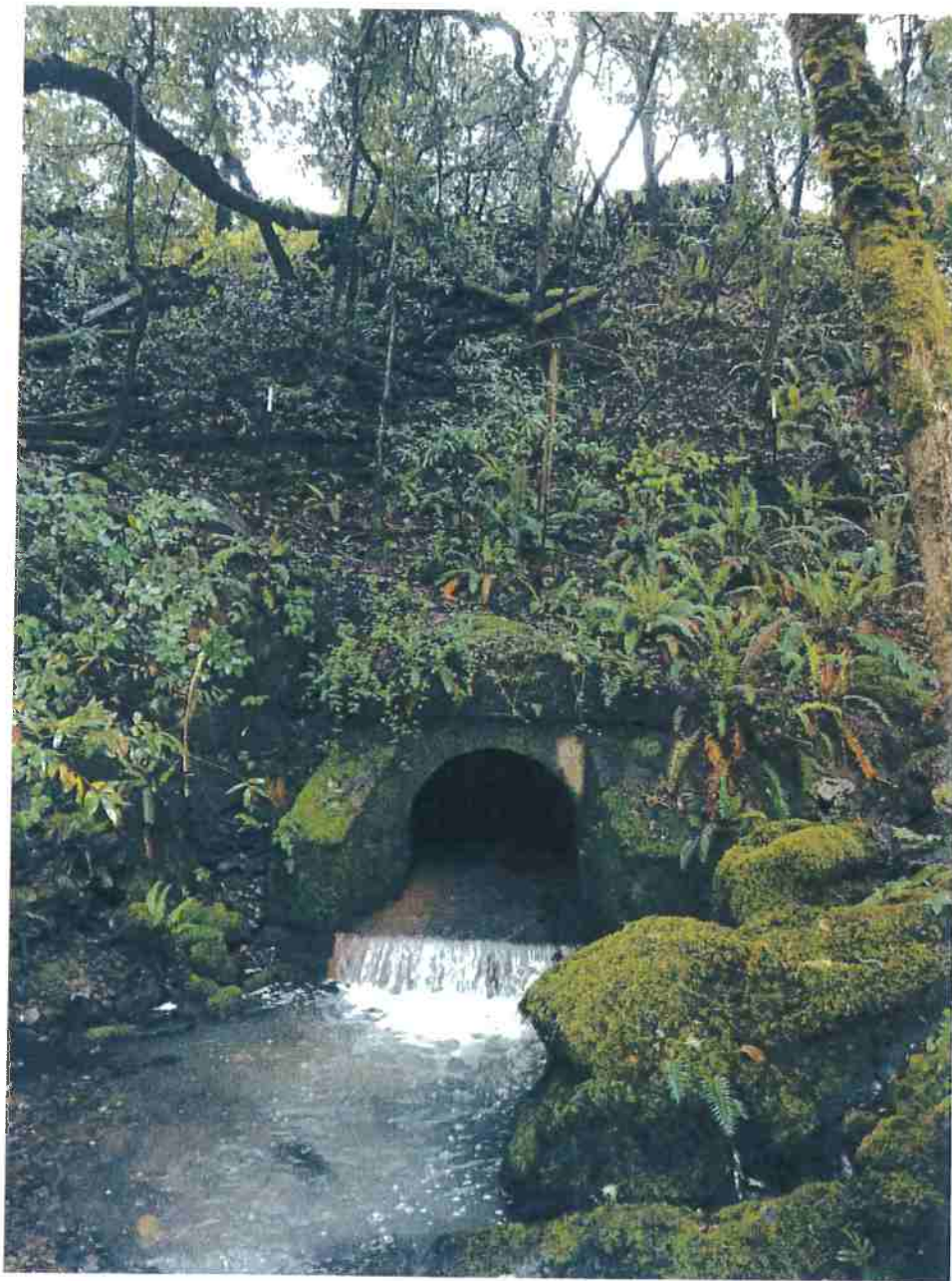
## Addendum 10 – Pictures



Picture 4: Crossing #2's outlet. Photo date 4-11-2017.



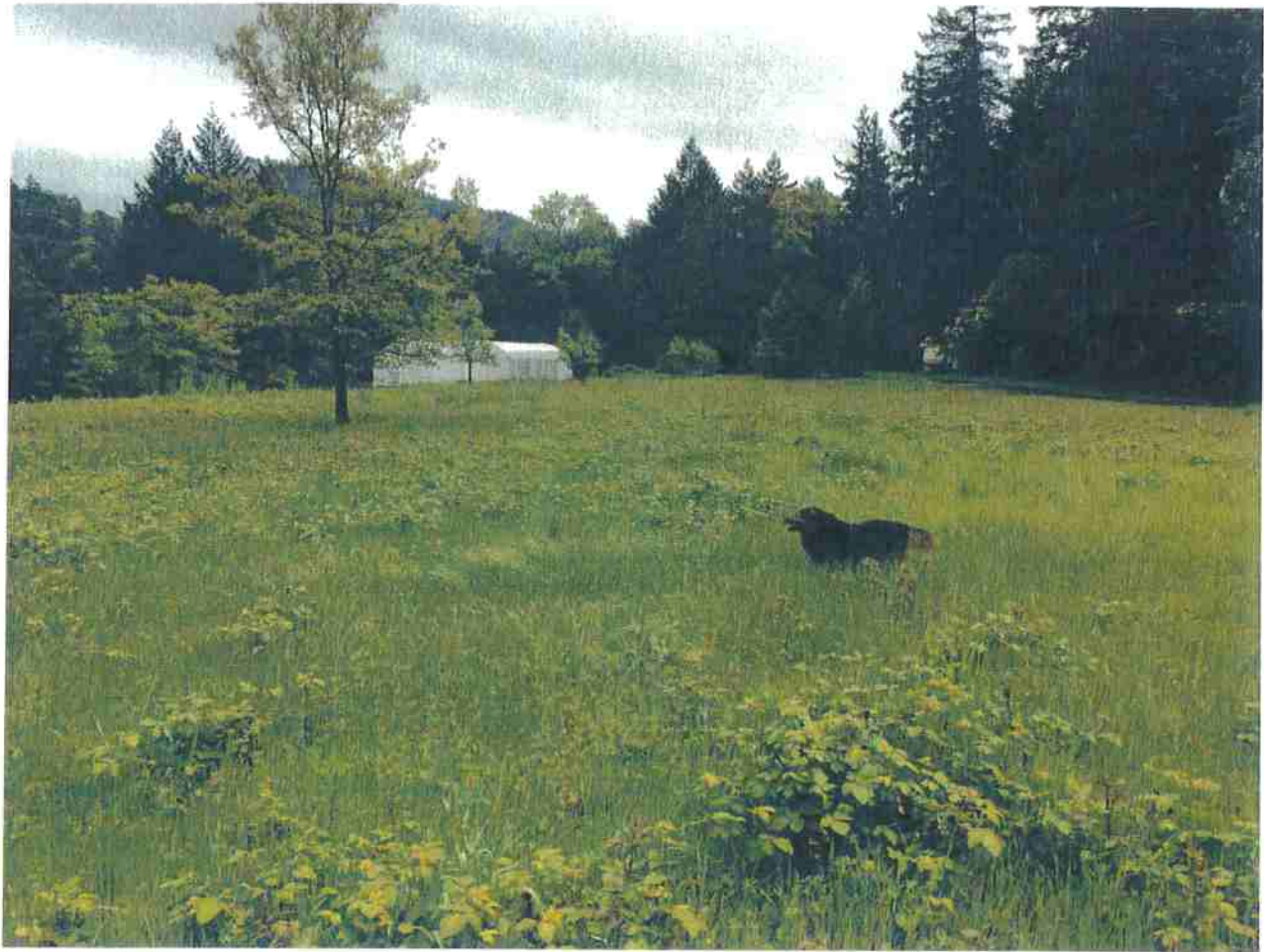
## Addendum 10 – Pictures



Picture 5: Outlet of Class II rail road crossing located upstream of Crossing #2. Photo date 4-11-2017.

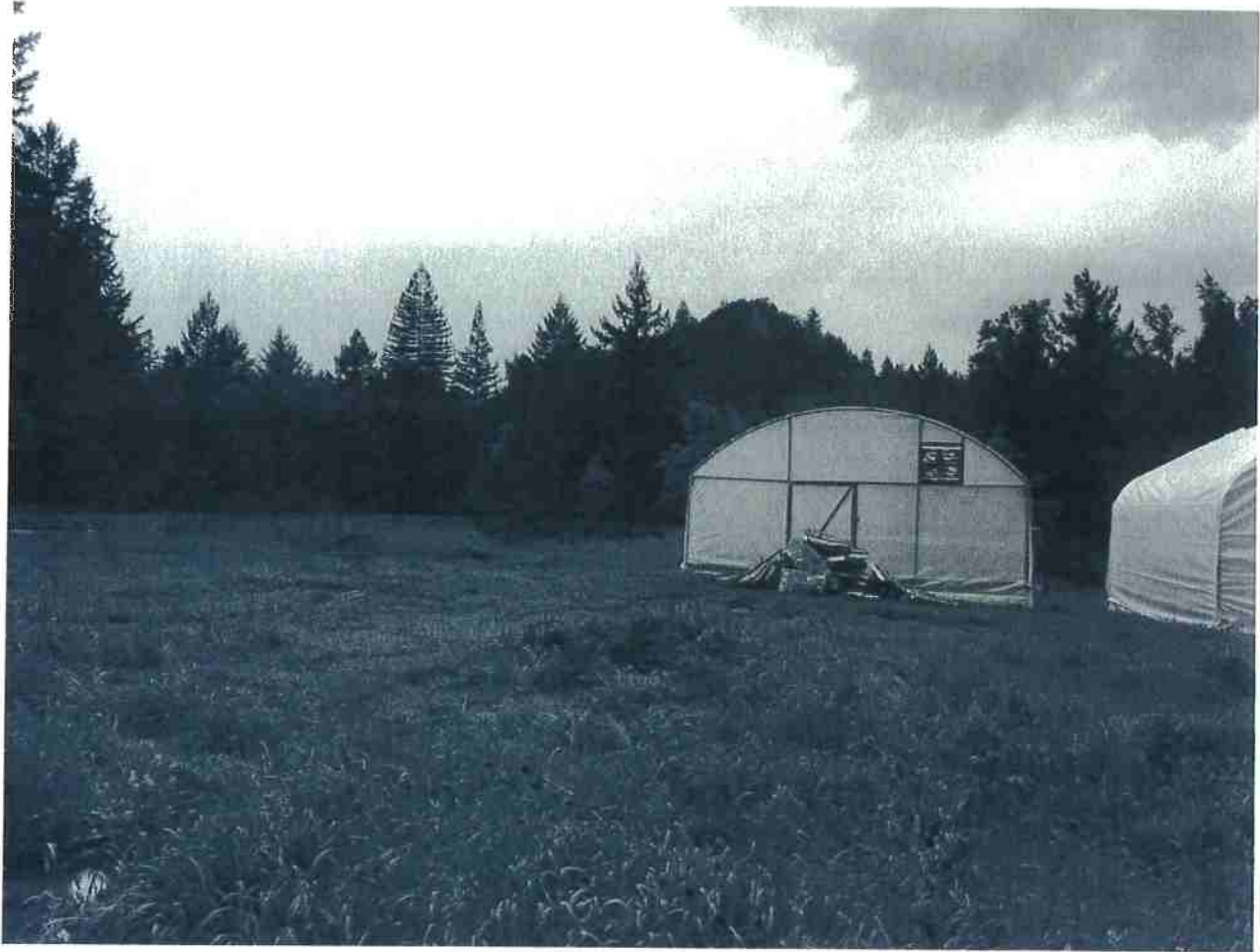


## Addendum 10 – Pictures



Picture 6: Eastern cultivation site. Photo facing east. Photo date 4-11-2017.

## Addendum 10 – Pictures



Picture 7: Eastern cultivation site. Photo facing west. Photo date 4-11-2017.



## Addendum 10 – Pictures



Picture 8: Western cultivation site. Photo facing east. Photo date 4-11-2017.

**Addendum 10 – Pictures (Cont.)**



Picture 9: Residence. Photo date 4-11-2017.



**Addendum 10 – Pictures (Cont.)**



Picture 10: Ground water well. Photo date 4-11-2017.

## Addendum 11F – Hydrologic Study

The permanent culvert upgrade has been sized for 100-year flood flow utilizing methods recommended in "Designing Watercourse Crossings for Passage of 100-year Flood Flows, Wood, and Sediment". 2004 Peter Cafferata, Thomas Spittler, Michael Wopat, Greg Bundros, and Sam Flanagan. This report recommends that the Rational Method be limited to watersheds less than 100 acres, which applies to Crossing #1. Crossing #2 was sized using both Magnitude and Frequency Method and StreamStats.

The 100-year Return-Period precipitation data is from:

[http://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html?bkmrk=ca](http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ca). Average annual precipitation data from derived from StreamStats.

Rational Method for 100-year flood flow (A < 200 acres)				APN 216-301-018			
$T_c = 60((11.9 \times L^3)/H)^{0.385}$				$Q_{100} = CIA$			
Crossing	Channel length (to top of basin) (mi) <i>L</i>	Elevation difference (ft) <i>H</i>	Concentration time (min) <i>T<sub>c</sub></i>	Runoff coefficient <i>C</i>	100-year Return-Period Precipitation (in/hr) <i>i*</i>	Area (acres) <i>A</i>	100-yr flood flow (cfs) <i>Q<sub>100</sub></i>
1				0.35	2.8	5	4.9

Location: APN 216-301-18

(Enter data in fields with red-colored headings. Other data fields will be calculated automatically.)

Magnitude and Frequency Method for 100-year flood flow								100-yr flood flow $Q_{100}$ (cfs)			
No.	Crossing	Area (acres) A	Basin maximum elevation (ft)*	Crossing elevation (ft)*	Area (mi <sup>2</sup> ) A	Avg. Annual Precipitation (in/yr) P	Elevation (ft/1000) H	North Coast <sup>(1)</sup> (NC)	Sierra <sup>(2)</sup> (S)	North-east <sup>(3)</sup> (NE)	Central Coast <sup>(4)</sup> (CC)
1	2	169	1640	280	0.264	53	0.96	136.3	328.9	57.0	173.7

For determining minimum culvert size, the Manning equation spreadsheet was used with a Hydraulic Radius = More than Half Full Flow. To account for a 0.67 HW/D ratio (ensure the culvert will accommodate the 100 year flow and debris load), the equation used 67% of pipe diameter as "depth of flow". To be conservative, the assumption for new pipe installations are corrugated pipes, and culverts set to grade. For this project, culverts that are set to grade will result in a slope steepness of at least 10%. Please note that all of the culvert sizes proposed in this notification are greater than the minimum culvert size calculated using the Manny equation.



## Addendum 11F – Hydrologic Study

### StreamStats Output Report for Crossing #2

State/Region ID CA  
 Workspace ID CA20170411225409421000  
 Latitude 40.22517  
 Longitude -123.6455  
 Time 4/11/2017 9:55:10 PM

#### Parameters

Parameter Code	Parameter Name	Value	Unit
DRNAREA	Area that drains to a	0.2	square miles
PRECIP	Mean Annual Precip	52.7	inches

#### Peak-Flow Statistics | 100 Percent 2012 5113 Region 1 North Coast

Parameter Code	Parameter Name	Value	Min Limit	Max Limit
DRNAREA	Drainage Area	0.2	0.04	3200
PRECIP	Mean Annual Precip	52.7	20	125

#### Peak-Flow Statistics | 100 Percent 2012 5113 Region 1 North Coast

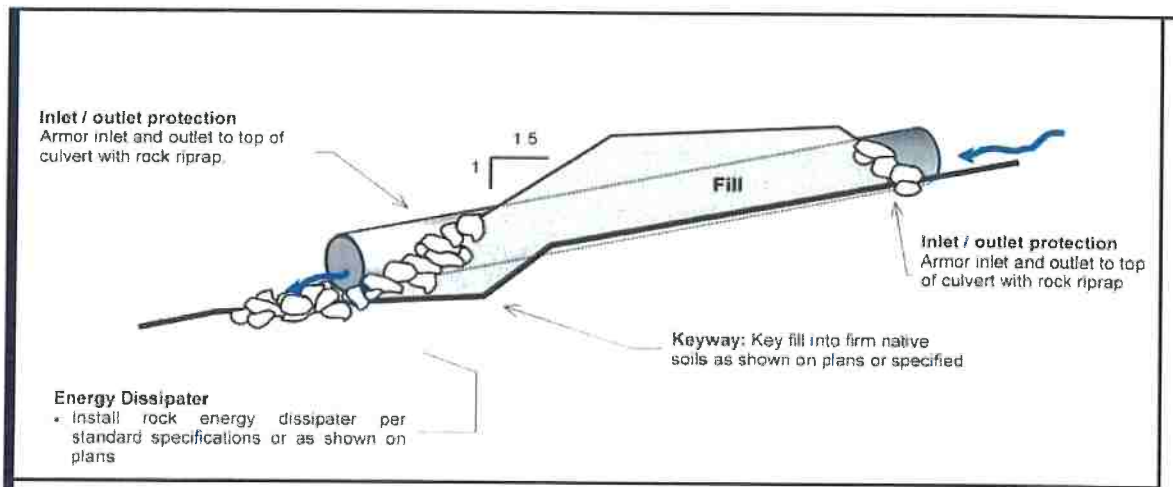
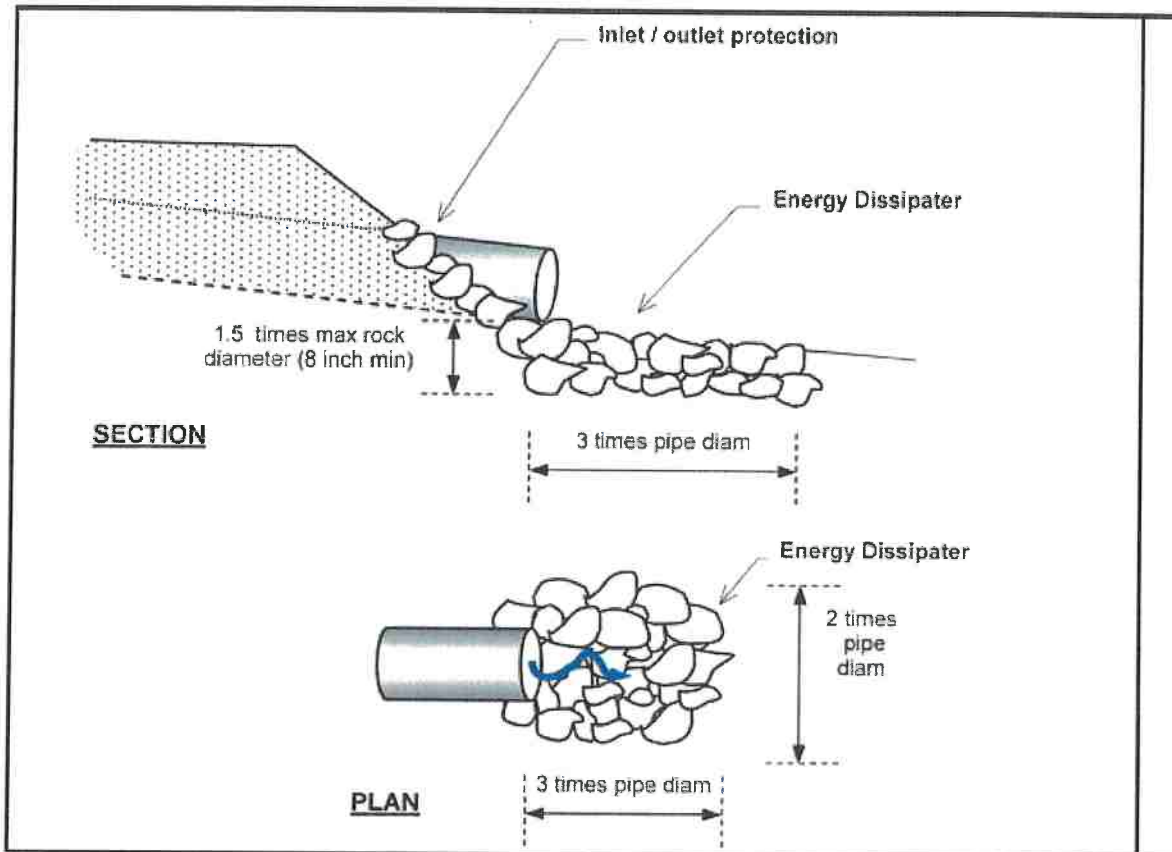
Statistic	Value	Unit	Average standard err	Lower Prediction Inte	Upper Prediction Inte
2 Year Peak Flood	20.9	ft <sup>3</sup> /s	58.6	8.42	52
5 Year Peak Flood	41.5	ft <sup>3</sup> /s	47.4	19.5	88.4
10 Year Peak Flood	56.7	ft <sup>3</sup> /s	44.2	27.6	116
25 Year Peak Flood	76.8	ft <sup>3</sup> /s	42.7	38.6	153
50 Year Peak Flood	92.5	ft <sup>3</sup> /s	42.7	46.3	185
100 Year Peak Flood	109	ft <sup>3</sup> /s	44.3	53.2	224
200 Year Peak Flood	125	ft <sup>3</sup> /s	44.4	60.7	257
500 Year Peak Flood	146	ft <sup>3</sup> /s	46	69.2	308

## **Addendum 12A – Erosion Control Measures**

1. Timing for soil stabilization measures within the 100 feet of a watercourse or lake: For areas disturbed from May 1 through October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface. For areas disturbed from October 16 through April 30, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.
2. Within 100 feet of a watercourse or lake, the traveled surface of logging roads shall be treated to prevent waterborne transport of sediment and concentration of runoff that results from operations. Treatment may consist of, but not limited to, rocking, outsloping, rolling dips, cross drains, waterbars, slope stabilization measures, or other practices appropriate to site-specific conditions.
3. The treatment for other disturbed areas within 100 feet of a watercourse or lake, including: (A) areas exceeding 100 contiguous square feet where operations have exposed bare soil, (B) road cut banks and fills, and (C) any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water, shall be grass seeded and mulched with straw. Grass seed shall be applied at a rate exceeding 100 pounds per acre. Straw mulch shall be applied in amounts sufficient to provide at least 2- 4-inch depth of straw with minimum 90% coverage. Slash may be substituted for straw mulch provided the depth, texture, and ground contact are equivalent to at least 2 – 4 inches of straw mulch. Any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of operations.
4. Within 100 feet of a watercourse or lake, where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from sediment introduction, the ground shall be treated with slope stabilization measures described in #3 above per timing described in #1 above.
5. Sidecast or fill material extending more than 20 feet in slope distance from the outside edge of a roadbed, which has access to a watercourse or lake, shall be treated with slope stabilization measures described in #3 above. Timing shall occur per #1 above unless outside 100 feet of a watercourse or lake, in which completion date is October 15.
6. All roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following operations and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within 100 feet of a watercourse or lake protection, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.

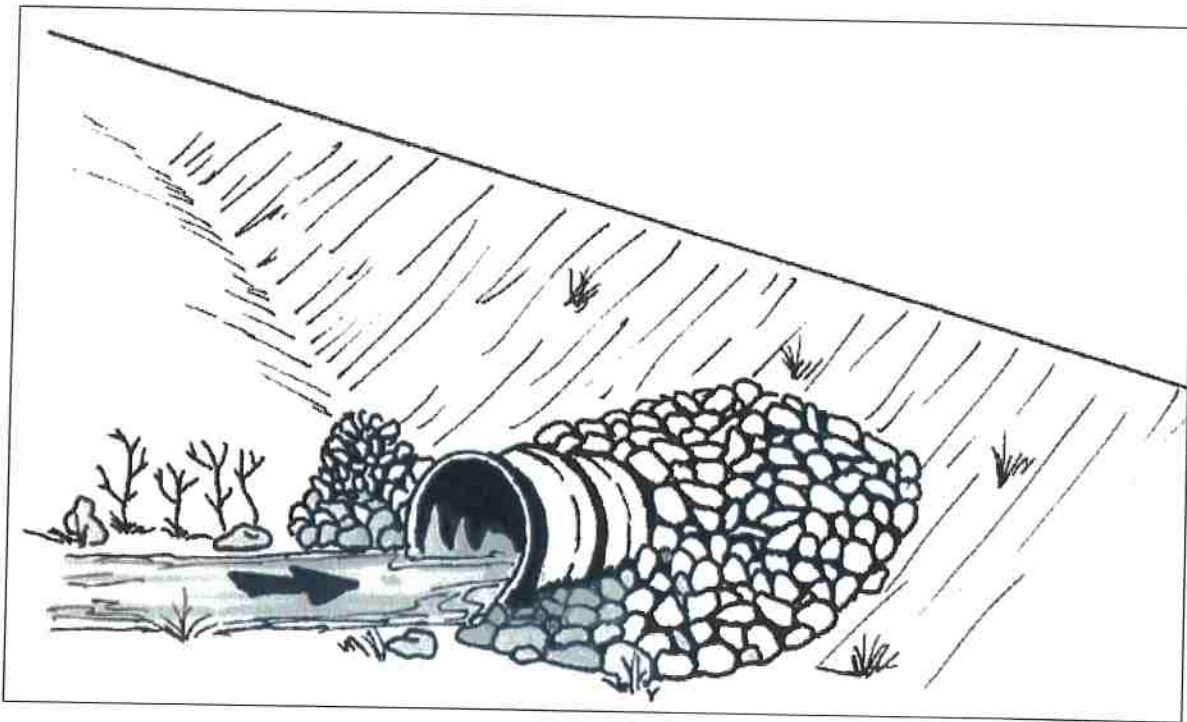


## Culvert Installation Specifications



Riprap installed to protect the inlet and outlet of a stream crossing culvert from erosion or for energy dissipation should be keyed into the natural channel bed and banks to an approximate depth of about 1.5x the maximum rock thickness. Riprap should be placed at least up to the top of the culvert at both the inlet and outlet to protect them from splash erosion and to trap any sediment eroded from the newly constructed fill slope above.

## Culvert Installation Specifications



*Rock armor used for inlet and outlet protection (i.e., not as energy dissipation) does not have to be sized to protect against high velocity scour. If the culvert is properly sized and its length is adequate, it should be able to transmit flood flows without scouring the inlet or eroding the outlet around the culvert. Armor shown here is designed to protect the culvert outlet and basal fill from splash erosion and from occasional submergence and currents within standing water (at the inlet) when the culvert plugs. Importantly, inlet and outlet armor also serves to trap sediment that has been eroded or slides down the new constructed fill face in its first several years, until the slope becomes well vegetated.*



## Culvert Installation Specifications

- New culvert installations shall be sized to accommodate a 100-year storm.
- New culverts shall be placed at stream gradient, or have downspouts, or have energy dissipaters at outfall.
  - Align culverts with the natural stream channel orientation to ensure proper function, prevent bank erosion and minimize debris plugging.
  - Place culverts at the base of the fill and at the grade of the original streambed or install a downspout past the base of the fill. Downspouts should only be installed if there are no other options.
  - Culverts should be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
  - Culvert beds should be composed of rock-free soil or gravel, evenly distributed under the length of the pipe.
  - Compact the base and sidewall material before placing the pipe in its bed.
  - Lay the pipe on a well-compacted base. Poor basal compaction will cause settling or deflection in the pipe and can result in separation at a coupling or rupture in the pipe wall.
  - Backfill material should be free of rocks, limbs or other debris that could dent or puncture the pipe or allow water to seep around the pipe.
  - Cover one end of the culvert pipe, then the other end. Once the ends are secure, cover the center.
  - Tamp and compact backfill material throughout the entire process, using water as necessary for compaction.
  - Backfill compacting will be done in 0.5 – 1.0 foot lifts until 1/3 of the diameter of the culvert has been covered.
  - Push layers of fill over the crossing to achieve the final design road grade, at a minimum of one-third to one-half the culvert diameter.
- Critical dips shall be installed on culvert crossings to eliminate diversion potential.
- Road approaches to crossings shall be treated out to the first drainage structure (i.e. waterbar) or hydrologic divide to prevent transport of sediment.
- Road surfaces and ditches shall be disconnected from streams and stream crossings to the greatest extent feasible. Ditches and road surfaces that cannot be feasible disconnected from streams or stream crossings shall be treated to reduce sediment transport to streams.
- If downspouts are used they shall be secured to the culvert outlet and shall be secure on fill slopes.
- Culverts shall be long enough so that road fill does not extend or slough past the culvert ends.
- Inlet of culverts and associate fill shall be protected with appropriate measures that extend at least as high as the top of the culvert.
- Outlet of culverts shall be armored with rock if road fill sloughing into channel can occur.
- Armor inlets and outlets with rock, or mulch and seed with grass as needed (not all stream crossings need to be armored).
- Where debris loads could endanger the crossing a debris catchment structure shall be constructed upstream of the culvert inlet.
- Bank and channel armoring may occur when appropriate to provide channel and bank stabilization.
- Stabilize the site pursuant to Addendum 12A.





## Cofferdam Specifications



**FIGURE 197.** Flex pipe stream diversion around a road construction site. The inlet to this 6 inch diameter flex pipe inlet collects clear streamflow from a retention dam above the project site and gravity feeds it around the project area and back into the natural channel downstream from construction work (see photo).



**FIGURE 198.** Sand bag retention dam on this small stream was used to pond streamflow so it could be pumped around a culvert installation site. The green intake hose is screened to keep out rocks and debris while the red pump hose extends several hundred feet around the project work area.



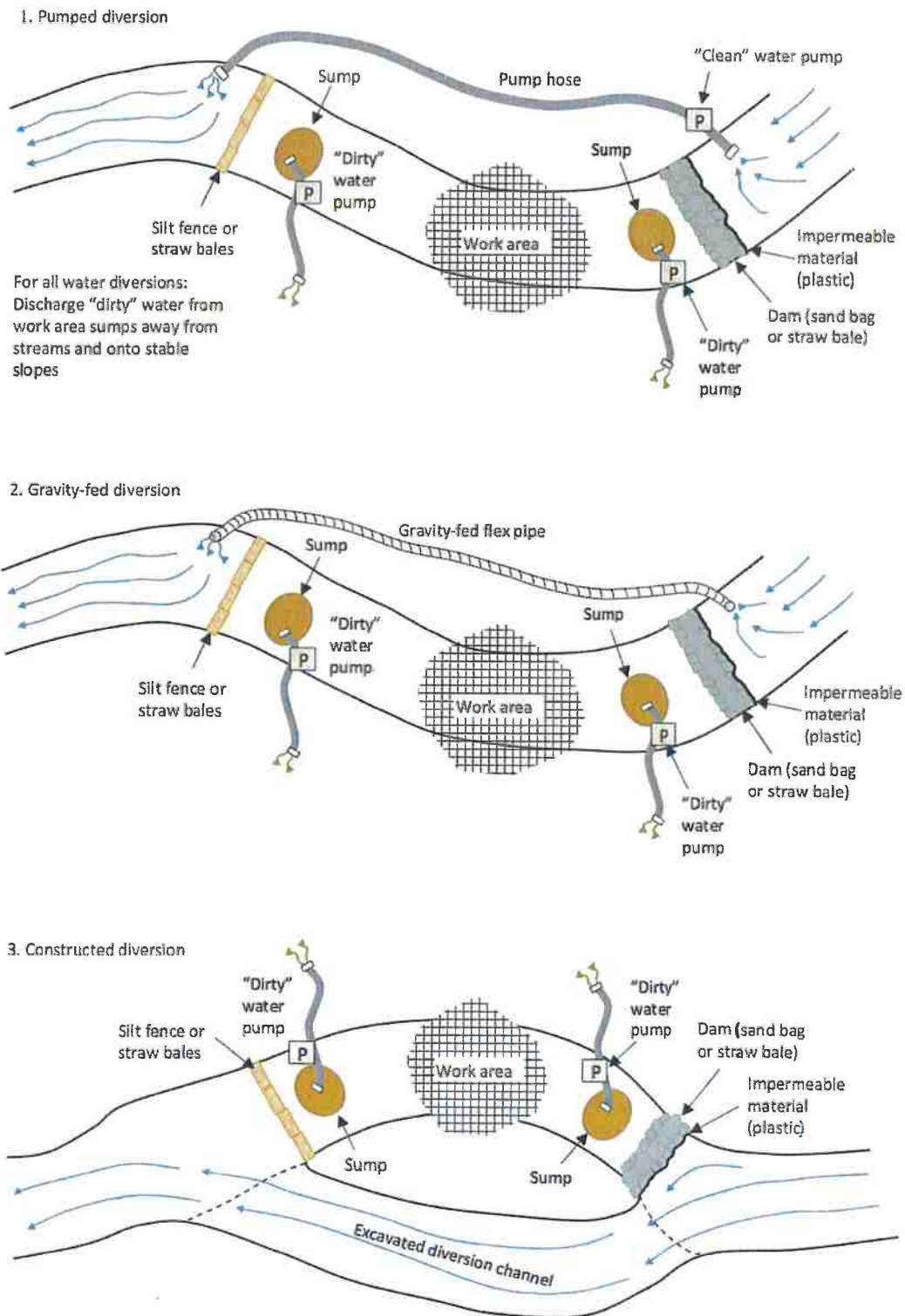
**FIGURE 199.** For larger streams, pump trucks, large pumps or multiple small pumps can be used to pump streamflow around project work sites. Here, a pump truck is used to temporarily divert flow in a fish bearing stream where dual culverts are being replaced with a railcar bridge. Young fish were removed from this fish bearing stream before project work started.



# Cofferdam Specifications

**FIGURE 196.**

Examples of water diversions.



## **ADDITIONAL INFORMATION**





Applicant Name: ANDREW SMYTH & MARCUS FUNG

Project Name: APN 216-301-018

## ATTACHMENT E

### Remediation of Marijuana Cultivation Sites

Complete this attachment *if* the primary purpose of the project is to remediate a marijuana cultivation site and submit the attachment with the notification form (DFW 2023) and fee in Section IV. "Remediate" means to perform work that reduces or eliminates the direct and indirect adverse impacts on fish and wildlife and their habitat caused by a project or activity the Department views as unlawful.

#### I. ORDER OR NOTICE

Are you required to perform the work described in the notification pursuant to a court or administrative agency notice or order?

☐ Yes (Enclose a copy of the order or notice) ☒ No

Did you receive a notice of violation (NOV) from the Department that relates to the work described in the notification?

☐ Yes (Enclose a copy of the NOV) ☒ No

#### II. ORDINANCE OR PERMIT

What is the name of the town/city and county where the marijuana cultivation site that requires remediation is located?

Town/City: FORT SEWARD County: HUMBOLDT

Does the town/city or county named above have a rule, ordinance, or other regulation or law that governs or otherwise regulates the cultivation of marijuana within its boundaries?

☐ Yes: Town/City ☒ Yes: County ☐ No ☐ Unknown

Are you required to have a permit or some other type of written authorization (permit) from the city/town and/or county named above to cultivate marijuana within the city/town and/or county?

☒ Yes (Enclose a copy of the permit) ☐ No ☐ Unknown

#### III. REMEDIATION AREA

Identify the total size of the remediation area in square feet. To calculate the total size of the remediation area, calculate each area that requires any type of remediation and add each area together to calculate the total area.

Remediation area in total: ~390 square feet



#### IV. FEE

Submit the applicable fee below based on the total size of the remediation area. The remediation fee is in addition to the notification fee and **must** be submitted by **separate** check or other method of payment (Cal. Code Regs., tit. 14, § 699.5, subd. (i)(3)(A)).

☒ \$3,000 if the total remediation area is less than or equal to 1,000 square feet

☐ \$5,000 if the total remediation area is greater than 1,000 square feet

#### V. REMEDIATION PLAN

Has a plan to remediate the area(s) been completed?

☒ Yes (Enclose the plan)

☐ No

**Note:** If "yes" is checked, the remediation plan **must** be enclosed with the notification. If "no" is checked, or the Department determines the remediation plan enclosed with the notification is inadequate or incomplete, the Department may require you to have a licensed engineer or qualified environmental consultant amend the plan or submit a new plan for your notification to be complete.

Have you consulted with or retained a licensed engineer or environmental consultant to address your Cannabis cultivation?

☒ Yes (Provide the information below)

☐ No

Name of Company	Name of Engineer or Consultant	Business Telephone
TRC	Chris Carroll	707-725-1897

#### VI. WATER SUPPLY

How is water supplied to the marijuana cultivation site(s) that require remediation?

☒ Diversion, obstruction, extraction, or impoundment of a river, stream, or lake.  
If this box is checked, you **must** also complete Attachment C.

☐ Spring(s).  
If this box is checked, you **must** also complete Attachment C.

☐ Private well(s).  
If this box is checked, provide well log information with this attachment.

☐ Public water system.  
Name of public water system: \_\_\_\_\_

☐ Water hauling.  
Name of water hauler: \_\_\_\_\_

☐ Other.  
Specify: \_\_\_\_\_

☐ Continued on additional page(s)



TRIPLICATE  
Owner's Copy

Page      of     

Owner's Well No.     

Date Work Began Aug 10 14 Ended Aug 10 14

Local Permit Agency     

Permit No. 16/17 2104

Permit Date Aug 2

STATE OF CALIFORNIA  
**WELL COMPLETION REPORT**

Refer to Instruction Pamphlet

No. **1087866**

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

**GEOLOGIC LOG**

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

DRILLING METHOD RUDRY

FLUID     

**DESCRIPTION**

Describe material, grain size, color, etc

DEPTH FROM SURFACE

FL to FL

0-5 Top Soil  
5-20 Red Clay  
20-30 Brn Compulay  
27-45 River Run  
45-55 Blu shale  
55-65 Solid Blu sandstone  
65-120 Grey shale

**WELL OWNER**

Name Andrew Smith

Mailing Address Box 112

City Blockberg CA

STATE 95514 ZIP     

**WELL LOCATION**

Address 243 SEWARD DRIVE

City Highpoint CA

County Wash

APN Book      Page      Parcel 210301 011

Township      Range      Section     

Lat      DEG. MIN. SEC. N Long      DEG. MIN. SEC. W

**LOCATION SKETCH**

NORTH

WEST

EAST

SOUTH

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

**ACTIVITY (✓)**

- ☒ NEW WELL
- MODIFICATION/REPAIR
- ☐ Deepen
  - ☐ Other (Specify)
- ☒ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")
- USES (✓)
- WATER SUPPLY
- ☐ Domestic ☐ Public
  - ☐ Irrigation ☐ Industrial
- MONITORING ☐
- TEST WELL ☐
- CATHODIC PROTECTION ☐
- HEAT EXCHANGE ☐
- DIRECT PUSH ☐
- INJECTION ☐
- VAPOR EXTRACTION ☐
- SPARGING ☐
- REMEDIATION ☐
- OTHER (SPECIFY)

**WATER LEVEL & YIELD OF COMPLETED WELL**

DEPTH TO FIRST WATER 30 (FL) BELOW SURFACE

DEPTH OF STATIC

WATER LEVEL 25 (FL) & DATE MEASURED Aug 10 14

ESTIMATED YIELD 4 (GPM) & TEST TYPE     

TEST LENGTH 1 (Hrs.) TOTAL DRAWDOWN      (FL)

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

TOTAL DEPTH OF BORING 120 (Feet)

TOTAL DEPTH OF COMPLETED WELL 120 (Feet)

DEPTH FROM SURFACE FL to FL	BORE-HOLE DIA. (Inches)	CASING (S)						DEPTH FROM SURFACE FL to FL	ANNULAR MATERIAL TYPE			
		TYPE (✓)	MATERIAL GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	CE- MENT (✓)		BEN- TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)	
0-20	9"	✓	F415	5"	300		0-20	✓				
20-30	1"	✓				.030	20-120				3/8" M	
30-120		✓				.030						

**ATTACHMENTS (✓)**

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

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS

**CERTIFICATION STATEMENT**

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

NAME Bryan J. Senter  
(PERSON, FIRM OR CORPORATION) (TYPED OR PRINTED)

ADDRESS     

CITY     

STATE     

ZIP     

Signed     

C 57 LICENSE WATER WELL CONTRACTOR

DATE SIGNED     

C 57 LICENSE NUMBER



RECEIVED

AUG 2 2016

Environmental Health

100 H Street, Suite 100, Eureka, CA 95501

HUMBOLDT CO. DIVISION  
OF ENVIRONMENTAL HEALTH

phone: (707) 445-6215 fax: (707) 441-5699

## WATER WELL APPLICATION

16/17-0104

## CONSTRUCTION – REPAIR – DESTRUCTION

The Well Permit will be returned to the property owner when approved by  
Humboldt County Division of Environmental Health (DEH)

## Instructions:

1. Complete pages 1 and 2 of the application and submit the required fee with the Well Permit application, including Well Driller's signature and property owner's signature.
2. Work on the well shall not be started prior to approval of the Well Permit Application by DEH.
3. Any changes made to the location of a new well shall be approved by DEH prior to commencement of drilling.
4. DEH shall be notified by the Well Driller a minimum of 24 hours prior to sealing the annular space.

Site Address	245 SEWARD DRIVE	APN	216 301 018
City/State/Zip	Alderpoint Ca 95511	CA	
Directions to Site	36 → Bridgeville Rt Alderpoint Rd. to Port Seward Rd Rt Seward Drive		
Applicant	Bushnell ENTERPRISES	Contact	George
Mailing Address	649 Bear Creek rd	Work Phone	(707) 923-2104
City/State/Zip	Garberville, CA. 95542	Cell Phone	(707) 498-3437
Property Owner	Andrew Smyth / Marcus Fung	Home Phone	707 926 9491
Mailing Address	Box 112 Blocksburg Ca 95514	Work Phone	707 223 6761
City/State/Zip		Cell Phone	
I hereby grant 'right-of-entry' for inspection purposes			
Drilling	C-57		
Contractor	George Bushnell	License #	403708
I hereby agree to comply with all laws and regulations of the County of Humboldt and the State of California Department of Water Resources Bulletin 74 pertaining to water well construction. I will contact Humboldt County Division of Environmental Health (DEH) when I commence work. Within 15 days after completion of work, I will furnish DEH a report of the work performed.			
Well Driller Signature:			
Would driller like a copy of approved application?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> U.S. Mail address:	649 Bear Creek rd Garb, CA. 95542		
<input type="checkbox"/> Email address:			
Type of Application:	Construction:	Intended Use:	
<input checked="" type="checkbox"/> Construction	Estimated Depth (ft.)	<input type="checkbox"/> Domestic - private	
<input type="checkbox"/> Destruction	Diameter (in.)	<input type="checkbox"/> Community Supply	
<input type="checkbox"/> Repair/Modification	Depth of Seal (ft.)	<input type="checkbox"/> Irrigation	
	Sealing Material	<input type="checkbox"/> Other	



Estimated Work Dates:

Casing:

Type of Sewage System:

Start \_\_\_\_\_

Diameter (in.) \_\_\_\_\_

☐ Community Sewer

Completion \_\_\_\_\_

Material \_\_\_\_\_

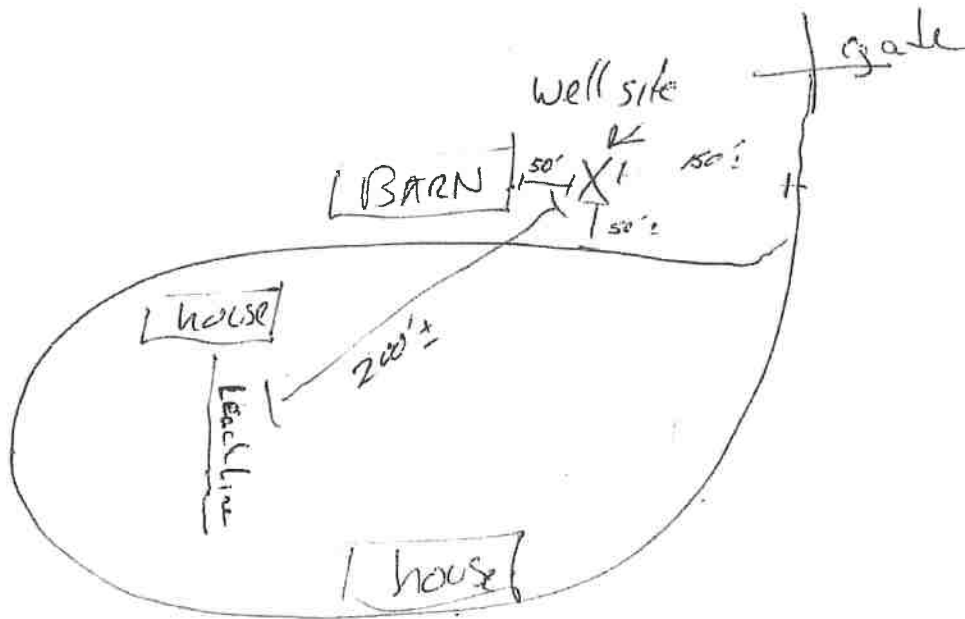
☐ OWTS (Septic)

Distance from well site  
to OWTS \_\_\_\_\_

Special Requirements/Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PLOT PLAN



FOR OFFICE USE ONLY

Fee: 373.00  
Date: 8/2/16  
Receipt: 917094  
Project #: \_\_\_\_\_

Site Approved by: \_\_\_\_\_  
Site Finaled Date: \_\_\_\_\_  
Sealed to Depth of: \_\_\_\_\_  
Seal observed: \_\_\_\_\_  
Final Approved Date: \_\_\_\_\_

☐ Yes ☐ No

# Crossing #1

Partially Full Pipe Flow Calculations - U.S. Units

II. Calculation of Discharge, Q, and average velocity, V  
for pipes more than half full

Instructions: Enter values in blue boxes. Spreadsheet calculates values in yellow boxes

## Inputs

Pipe Diameter, D = 24 in

Depth of flow, y = 16 in  
(must have y ≥ D/2)

Full Pipe Manning roughness, n<sub>full</sub> = 0.025

Channel bottom slope, S = 0.1 ft/ft

## Calculations

Pipe Diameter, D = 2 ft

Pipe Radius, r = 1 ft

Circ. Segment Height, h = 0.667 ft

Central Angle, θ = 2.46 radians

Cross-Sect. Area, A = 2.22 ft<sup>2</sup>

Wetted Perimeter, P = 3.8 ft

Hydraulic Radius, R = 0.58 ft

Discharge, Q = 25.06 cfs

Ave. Velocity, V = 11.26 ft/sec

pipe % full [(A/A<sub>full</sub>)\*100%] = 70.8%

## Calculations

n/n<sub>full</sub> = 1.166667

Partially Full Manning roughness, n = 0.029

Equations used for calculations:

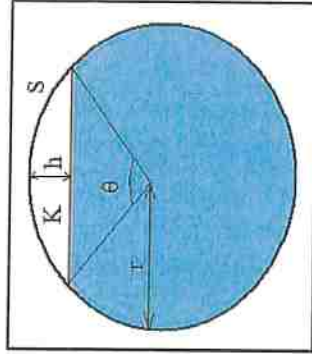
$$r = D/2$$

$$h = 2r - y$$

$$\theta = 2 \arccos \left( \frac{r-h}{r} \right)$$

$$A = \pi r^2 - \frac{r^2(\theta - \sin \theta)}{2}$$

$$P = 2\pi r - r * \theta$$



Partially Full Pipe Flow Parameters  
(More Than Half Full)

$$R = A/P \quad (\text{hydraulic radius})$$

$$Q = (1.49/n)(A)(R^{2/3})(S^{1/2}) \quad (\text{Manning Equation})$$

$$V = Q/A \quad P$$



## Crossing #2

Partially Full Pipe Flow Calculations - U.S. Units

II. Calculation of Discharge, Q, and average velocity, V

for pipes more than half full

**Instructions:** Enter values in blue boxes. Spreadsheet calculates values in yellow boxes

### Inputs

Pipe Diameter, **D** =  in

Depth of flow, **y** =  in  
(must have  $y \geq D/2$ )

Full Pipe Manning  
roughness, **n<sub>full</sub>** =

Channel bottom  
slope, **S** =  ft/ft

### Calculations

**n/n<sub>full</sub>** =

Partially Full Manning  
roughness, **n** =

### Calculations

Pipe Diameter, **D** =  ft

Pipe Radius, **r** =  ft

Circ. Segment Height, **h** =  ft

Central Angle, **θ** =  radians

Cross-Sect. Area, **A** =  ft<sup>2</sup>

Wetted Perimeter, **P** =  ft

Hydraulic Radius, **R** =  ft

Discharge, **Q** =  cfs

Ave. Velocity, **V** =  ft/sec

pipe % full  $[(A/A_{full}) * 100\%]$  =

Equations used for calculations:

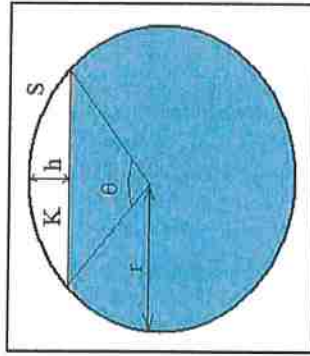
$$r = D/2$$

$$h = 2r - y$$

$$\theta = 2 \arccos \left( \frac{r-h}{r} \right)$$

$$A = \pi r^2 - \frac{r^2(\theta - \sin \theta)}{2}$$

$$P = 2\pi r - r * \theta$$



Partially Full Pipe Flow Parameters  
(More Than Half Full)

$$R = A/P \quad (\text{hydraulic radius})$$

$$Q = (1.49/n)(A)(R^{2/3})(S^{1/2}) \quad (\text{Manning Equation})$$

$$V = Q/A \quad P$$



**TIMBERLAND RESOURCE CONSULTANTS**

165 S. FORTUNA BLVD., SUITE 4  
FORTUNA, CA 95540  
PH. 707-725-1897

COAST CENTRAL CREDIT UNION  
90-7224/3211

11162

4/17/2017

PAY TO THE  
ORDER OF

California Dept. of Fish & Wildlife

\$ \*\*3,000.00

Three Thousand and 00/100\*\*\*\*\*

DOLLARS

California Dept. of Fish & Wildlife  
619 Second Street  
Eureka, CA 95501

*Laurie Kepon*  
AUTHORIZED SIGNATURE

MEMO

⑈01162⑈ ⑈32172248⑈

125400915753⑈

TIMBERLAND RESOURCE CONSULTANTS

California Dept. of Fish & Wildlife

APN 216-301-018 1600-Remediation Fee

4/17/2017

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3,000.00

Coast Central Checkin

3,000.00

TIMBERLAND RESOURCE CONSULTANTS

California Dept. of Fish & Wildlife

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4/17/2017

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