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August 9, 2016

The Humboldt Cure  
Attn: Joe Bilandzija  
P.O. Box 262  
Alderpoint, CA 95511

RE: California Regional Water Quality Control Board Order No. 2015-0023

Dear Joe,

Thank you for enrolling in our Third Party Program. Enclosed you will find your final Water Resource Protection Plan (WRPP) which includes our Assessment of Standard Conditions. It is your responsibility to review the document and follow the recommendations for sites requiring remediation.

Your enrollment has been processed by the Water Board and your Site WDID # is 1B16264CHUM. Your TRC representative is Ron Pelletier, please contact him to discuss the requirements of your WRPP.

Sincerely,



Chris Carroll, RPF #2628  
Timberland Resource Consultants

Enclosure

**Water Resource Protection Plan  
For  
WDID #1B16264CHUM**

*Submitted to:*

The Humboldt Cure  
P.O. Box 262  
Alderpoint, California 95511

*Prepared by:*

Timberland Resource Consultants  
165 South Fortuna Blvd  
Fortuna, CA 95540

8-9-2016

## Purpose

This Water Resource Protection Plan (WRPP) has been prepared on behalf of the discharger, by agreement and in response to the California Water Code Section 13260(a), which requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the state, other than into a community sewer system, shall file with the appropriate regional water board a Report of Waste Discharge (ROWD) containing such information and data as may be required by the Regional Water Board. The Regional Water Board may waive the requirements of Water Code section 13260 for specific types of discharges if the waiver is consistent with the Basin Plan and in the public interest. Any waiver is conditional and may be terminated at any time. A waiver should include monitoring requirements to verify the adequacy and effectiveness of the waiver's conditions. Order R1-2015-0023 conditionally waives the requirement to file a ROWD for discharges and associated activities described in finding 4.

## Scope of Report

Order No. R1-2015-0023 states that "Tier 2 Dischargers and Tier 3 Dischargers who intend to cultivate cannabis before, during, or following site cleanup activities shall develop and implement a water resource protection plan that contains the elements listed and addressed below. Dischargers must keep this plan on site, and produce it upon request by Regional Water Board staff. Management practices shall be properly designed and installed, and assessed periodically for effectiveness. If a management measure is found to be ineffective, the plan must be adapted and implemented to incorporate new or additional management practices to meet standard conditions. Dischargers shall certify annually to the Regional Water Board individually or through an approved third party program that the plan is being implemented and is effectively protecting water quality, and report on progress in implementing site improvements intended to bring the site into compliance with all conditions of this Order."

## Methods

The methods used to develop this WRPP include both field and office components. The office component consisted of reviewing aerial photography of the area, the Fort Seward Quadangle Geologic Map, and a search for any overlapping or nearby timber harvesting documents. The field component included identifying and accurately mapping all watercourses, wet areas, and wetlands located downstream of the cultivation areas, associated facilities, and all appurtenant roads accessing such areas. An accurate location of the Waters of the State is necessary to make an assessment of whether potential and existing erosion sites/pollution sites have the potential to discharge waste to an area that could affect waters of the State (including groundwater). Next, all cultivation areas, associated facilities, and all appurtenant roads accessing such areas were assessed for discharges and related controllable water quality factors from the activities listed in Order R1-2015-0023, Finding 4a-j. The field assessment also included an evaluation and determination of compliance with the Standard Conditions per Provision I.B of Order No. R1-2015-0023. The water resource protection plans required under Tier 2 are meant to describe the specific measures a discharger implements to achieve compliance with standard conditions. Therefore, all required components of the water resource protection plan per Provision I.B of Order No. R1-2015-0023 were physically inspected and evaluated. A comprehensive summary of each Standard Condition as it relates to the subject property is appended.

### Identified Sites Requiring Remediation

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
1	Existing 36 inch culvert class II watercourse crossing (undersized).	A(2)	N/A	Rock Armor the inlet, construct a rock armored outfall. Monitor and maintain especially during heavy rain. If this culvert appears close to being overtopped or in need of being replaced for any reason such as age, rust, holes, etc., it should be upsized in diameter. Exact culvert diameter will be stated in the CDFW Streambed Alteration Permit that is required for instream work. It is anticipated that this upsized diameter would be a 60 inch diameter culvert.	3	11/15/17	
2	Proposed 18 culvert class III watercourse crossing	A(2)	N/A	Install 18 inch culvert at Map Point 2. CDFW Streambed Alteration Permit is required for instream work.	3	11/15/17	
3	Inside ditch in need of cross drain	A(1)(b) A(1)(d)	N/A	Re-connect inside ditch with drainage way on inside of road at Map Point 3 (Priority 2). Upon completion of the conversion exemption operations below the road at Map Point 3, a cross drain should be installed in a location that will not create drainage problems in the yet to be developed area below the road (Priority 4).	2 4	11/15/16  Shortest time possible, no later than 5 years.	
Recent Conversion Exemption Areas	Conversion operations in progress as of 8/4/16.	A(1)(e)	N/A	Monitor the newly constructed terraces, roads, and flats on the property. These operations were not complete as of the date of this report.	2	11/15/16	
Developed Area within 100 feet of Class II Watercourse (Near house and garage).	Area developed long ago, within 100 feet of Class II Watercourse.	A(3)	N/A	Maintain 30 to 40 foot wide area next to the watercourse as undisturbed. Monitor runoff coming from the developed portion of the 100 foot buffer area during winter storms to ensure sediment or other pollutants are not reaching the watercourse. Cover or remove things with the potential to be carried or leached into the watercourse by surface flow during storms.	2	11/15/16	
House	Septic system tied to house	A(11)	N/A	Ensure septic system meets applicable County health standards, local agency management plans and ordinances, and/or the Regional Water Board's Onsite Wastewater Treatment System (OWTS) policy.	4	Shortest time possible, no later than 5 years.	

Treat Priority: The time frame for treatment of the site. (1) would indicate a very high priority with treatment being planned to occur immediately. (2) would indicate a high priority site with treatment to occur prior to the start of the winter period (Nov. 15). (3) would indicate a moderate priority with treatment being planned to occur within a year 1, or prior to the winter period (Nov. 15) of the 2<sup>nd</sup> season of operations. (4) would indicate a low priority with treatment being planned to occur in the shortest time possible, but no later than the expiration of this Order (five years).

## Monitoring Plan

Tier 2 Dischargers shall include a monitoring element in the water resource protection plan that at a minimum provides for periodic inspection of the site, checklist to confirm placement and efficacy of management measures, and document progress on any plan elements subject to a time schedule. Tier 2 Dischargers shall submit an annual report (Appendix C) by March 31 of each year that documents implementation and effectiveness of management measures during the previous year. Tier 2 annual reporting is a function that may be provided through an approved third party program.

Monitoring of the site includes visual inspection and photographic documentation of each feature of interest listed on the site map, with new photographic documentation recorded with any notable changes to the feature of interest. At a minimum, all site features must be monitored annually, to provide the basis for completion of the annual re-certification process. Additionally, sites shall be monitored at the following times to ensure timely identification of changed site conditions and to determine whether implementation of additional management measures is necessary to iteratively prevent, minimize, and mitigate discharges of waste to surface water: 1) just prior to October 15 to evaluate site preparedness for storm events and storm water runoff, 2) following the accumulation of 3" total precipitation or by November 15, whichever is sooner, and 3) following any rainfall event with an intensity of 3" precipitation in 24 hours. Precipitation data can be obtained from the National Weather Service Forecast Office (e.g. by entering the zip code of the parcel location at <http://www.srh.noaa.gov/forecast>).

Inspection Personnel Contact Information:

Ron Pelletier  
Timberland Resource Consultants  
165 South Fortuna Blvd, Fortuna CA 95540  
707-725-1897

## Monitoring Plan Reporting Requirements

Order No. R1-2015-0023, Appendix C must be submitted to the Regional Water Board or approved third party program upon initial enrollment in the Order (NOI) and annually thereafter by March 31. Forms submitted to the Regional Water Board shall be submitted electronically to [northcoast@waterboards.ca.gov](mailto:northcoast@waterboards.ca.gov). If electronic submission is infeasible, hard copies can be submitted to: North Coast Regional Water Quality Control Board, 5550 Skylane Boulevard, Suite A, Santa Rosa, CA 95403.

**STATEMENT OF CONTINGENT AND LIMITING CONDITIONS CONCERNING THE PREPARATION  
AND USE OF WATER RESOURCE PROTECTION PLAN**

**Prepared by Timberland Resource Consultants**

1. This Water Resource Protection Plan has been prepared for the property within APN 216-381-021 at the request of the Client.
2. Timberland Resource Consultants does not assume any liability for the use or misuse of the information in this Water Resource Protection Plan.
3. The information is based upon conditions apparent to Timberland Resource Consultants at the time the inspection was conducted. Changes due to land use activities or environmental factors occurring after this inspection, have not been considered in this Water Resource Protection Plan.
4. Maps, photos, and any other graphical information presented in this report are for illustrative purposes. Their scales are approximate, and they are not to be used for locating and establishing boundary lines.
5. The conditions presented in this Water Resource Protection Plan may differ from those made by others or from changes on the property occurring after the inspection was conducted. Timberland Resource Consultants does not guarantee this work against such differences.
6. Timberland Resource Consultants did not conduct an investigation on a legal survey of the property.
7. Persons using this Water Resource Protection Plan are advised to contact Timberland Resource Consultants prior to such use.
8. Timberland Resource Consultants will not discuss this report or reproduce it for anyone other than the Client named in this report without authorization from the Client.



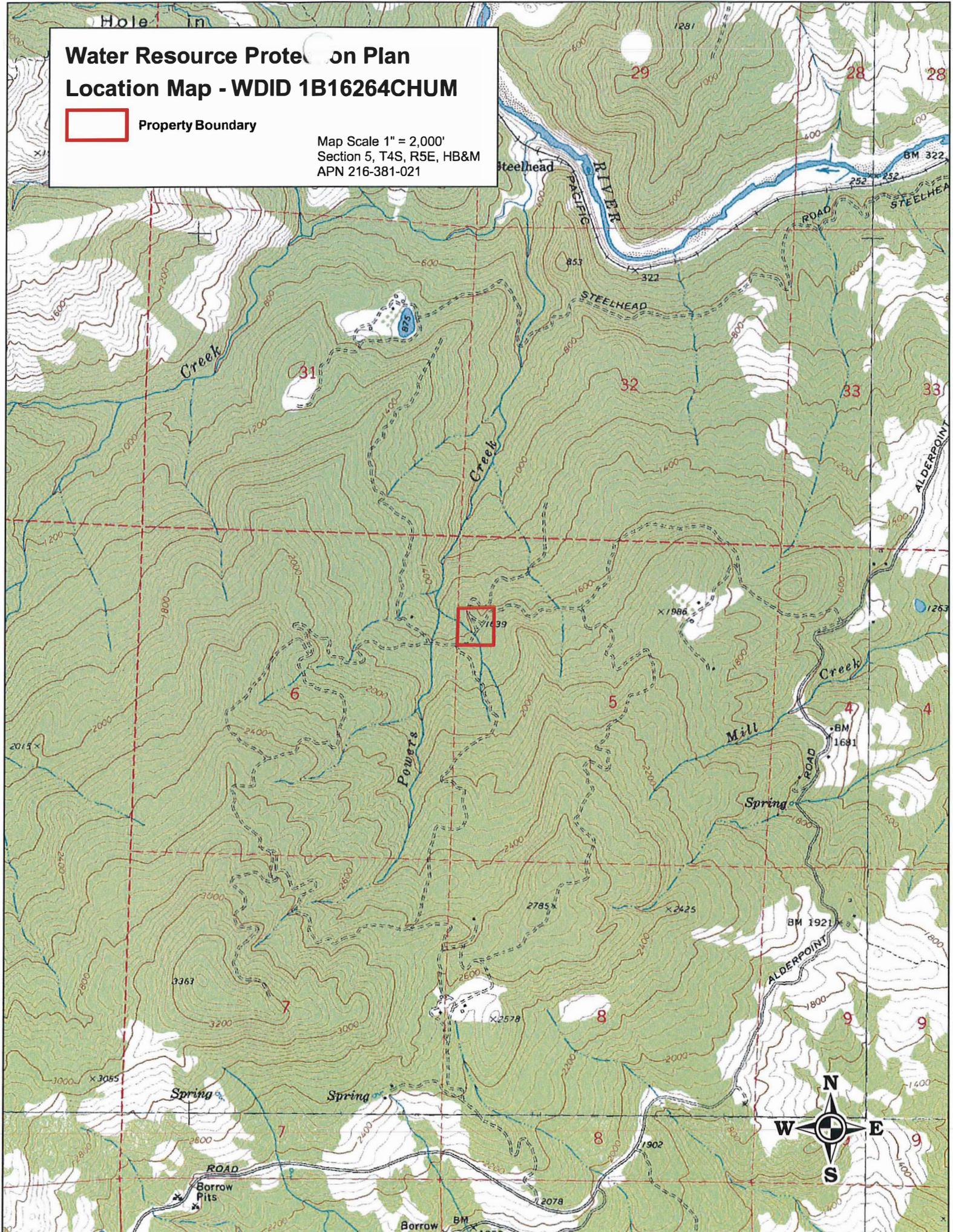
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Ron Pelletier  
Timberland Resource Consultants

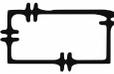
# Water Resource Protection Plan Location Map - WDID 1B16264CHUM

 Property Boundary

Map Scale 1" = 2,000'  
Section 5, T4S, R5E, HB&M  
APN 216-381-021



# Water Resource Protection Plan WRPP Map - WDID 1B16264CHUM

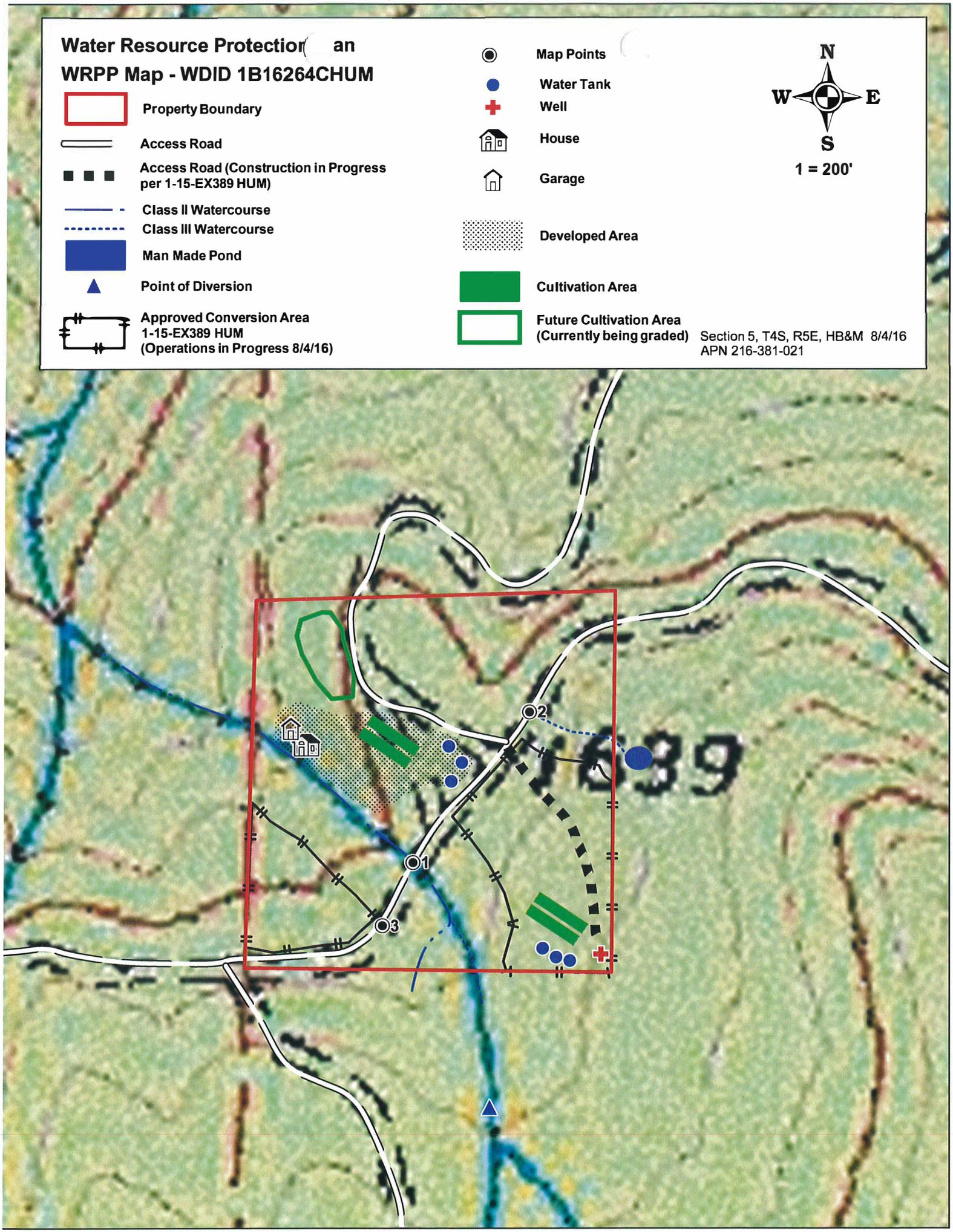
-  Property Boundary
-  Access Road
-  Access Road (Construction in Progress per 1-15-EX389 HUM)
-  Class II Watercourse
-  Class III Watercourse
-  Man Made Pond
-  Point of Diversion
-  Approved Conversion Area  
1-15-EX389 HUM  
(Operations in Progress 8/4/16)

-  Map Points
-  Water Tank
-  Well
-  House
-  Garage
-  Developed Area
-  Cultivation Area
-  Future Cultivation Area  
(Currently being graded)

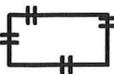


1 = 200'

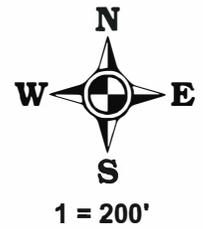
Section 5, T4S, R5E, HB&M 8/4/16  
APN 216-381-021



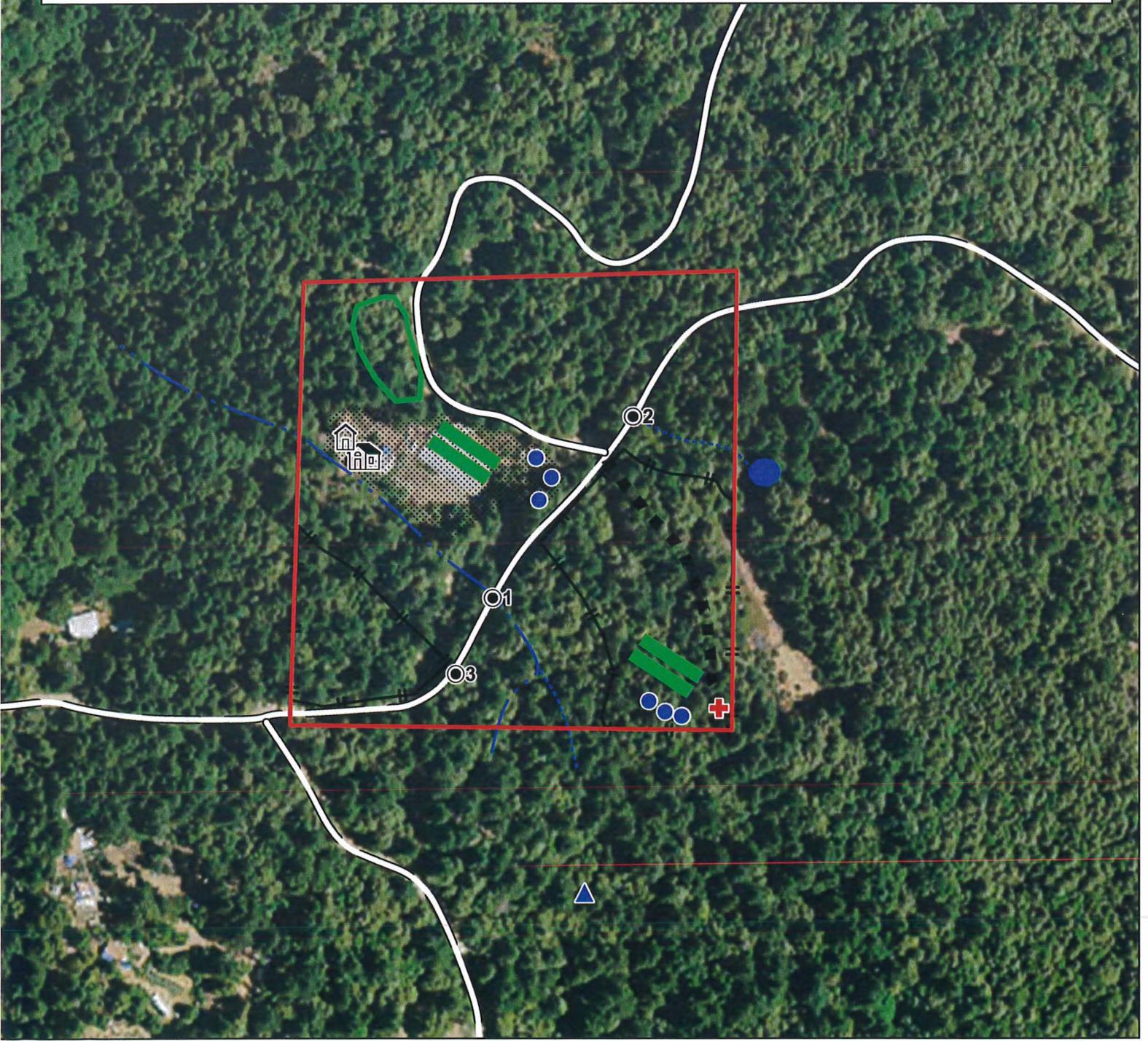
# Water Resource Protection Plan WRPP Map - WDID 1B16264CHUM

-  Property Boundary
-  Access Road
-  Access Road (Construction in Progress per 1-15-EX389 HUM)
-  Class II Watercourse
-  Class III Watercourse
-  Man Made Pond
-  Point of Diversion
-  Approved Conversion Area  
1-15-EX389 HUM  
(Operations in Progress 8/4/16)

-  Map Points
-  Water Tank
-  Well
-  House
-  Garage
-  Developed Area
-  Cultivation Area
-  Future Cultivation Area  
(Currently being graded)



Section 5, T4S, R5E, HB&M 8/4/16  
APN 216-381-021



# Water Resource Protection Plan

## Assessment of Standard Conditions for APN 216-381-021 – WDID #1B16264CHUM

### A. Standard Conditions, Applicable to All Dischargers

#### 1. Site maintenance, erosion control and drainage features

- a. Roads shall be maintained as appropriate (with adequate surfacing and drainage features) to avoid developing surface ruts, gullies, or surface erosion that results in sediment delivery to surface waters.

**This is a ten acre parcel in the Rancho Sequoia Subdivision near Alderpoint, CA. The roads that access this parcel, as well as located within this parcel, are private roads that are shared by many other landowners in the area. Access roads to this parcel crosses approximately 25 (+-) other private parcels between Alderpoint Road and this property. There may be as many as twice that in the number of parcels located beyond this parcel, whose access is via the roads through this parcel. These roads are not routinely maintained and typically experience surface erosion in winter due to this lack of maintenance combined with heavy traffic use. This was the case for the roads accessing this parcel on 1/20/16. Through experience working in this area for other projects, during summer, traffic use increases and the road surfaces become washboard and very dusty.**

**During a preliminary inspection of this parcel and its roads on 1/20/16, the road surfaces within this parcel were in surprisingly good shape and were not delivering sediment to surface waters because of ruts or gullies. There are however, locations of road related sediment delivery occurring within this parcel, other than from road surface erosion. These are discussed below.**

- b. Roads, driveways, trails, and other defined corridors for foot or vehicle traffic of any kind shall have adequate ditch relief drains or rolling dips and/or other measures to prevent or minimize erosion along the flow paths and at their respective outlets

**Two road segments within this parcel have lengthy inside ditches that experienced downcutting and delivered sediment to the watercourse at Map Point 1 during heavy rainfall in December and January. The lengthy road segment located on the property southwest of Map Point 1, does not have any ditch relief until it eventually drains into the watercourse crossing at Map Point 1. This segment of inside ditch experienced downcutting during the last winter. The other segment begins at Map Point 2 where a small Class III watercourse is intercepted by the road inside ditch and is diverted along the inside ditch until it reaches the larger watercourse crossing at Map Point 1. This segment had not experienced downcutting. Both of these road segments are part of the historic road system in the area and have been in existence for a very long time.**

**The inside ditch on this property that runs from the southwest corner of the property to the watercourse crossing at Map Point 1 needs to be relieved via a cross drain installation. However, the landowner currently has an approved less than three acre conversion exemption on the property below this road segment. As of the date of this report, operations were not yet completed and the area was yet to be graded. Cross drain installation for this segment of road should not occur until the completion of the conversion and the establishment of the potential building site so that ditch drainage is not cross drained to an area where it will become a**

problem. At Map Point 3 there is a point where the inside ditch can be relieved by way of a shallow, vegetated drainage way that exists on the inside of the road, and continues to the watercourse approximately 20 to 30 feet upstream of Map Point 1. There is evidence of this drainage way being connected to the inside ditch in the past, but in recent years has become disconnected allowing the flow to remain in the immediate inside ditch all the way to Map Point 1. Reconnecting this drainage way is a better alternative to the inside ditch because it widens out into a vegetated flat before entering the watercourse. This will act as a filter strip prior to flow entering the watercourse in comparison with the current inside ditch configuration. The inside ditch should be reconnected to this inside drainage way, as a means of filtering out some road fine sediments prior to entering the watercourse. Upon completion of the less than three acre conversion exemption activities below the road, a cross drain should be installed in a location that will not create drainage problems in the yet to be developed area below the road.

At Map Point 2 where the small Class III watercourse is intercepted by the inside roadside ditch, a watercourse crossing is proposed. Installation of a culverted watercourse crossing at Map Point 2 will eliminate the current watercourse diversion that is taking place. The small Class III watercourse will be directed into a suitable swale that appears to be a more natural location. A description of the existing crossing at Map Point 1 and the proposed crossing at Map Point 2 are described below.

- c. Roads and other features shall be maintained so that surface runoff drains away from potentially unstable slopes or earthen fills. Where road runoff cannot be drained away from an unstable feature, an engineered structure or system shall be installed to ensure that surface flows will not cause slope failure.

**Physical reconnaissance of the property revealed no unstable areas per 14CCR 895.1. Slopes were gentle and the area is mostly timbered and heavily vegetated. Runoff from roads and developed areas on the property are not being directed towards unstable slopes or earthen fills.**

- d. Roads, clearings, fill prisms, and terraced areas (cleared/developed areas with the potential for sediment erosion and transport) shall be maintained so that they are hydrologically disconnected<sup>1</sup>, as feasible, from surface waters, including wetlands, ephemeral, intermittent and perennial streams.

<sup>1</sup> Connected roads are road segments that deliver road surface runoff, via the ditch or road surface, to a stream crossing or to a connected drain that occurs within the high delivery potential portion of the active road network. A connected drain is defined as any cross-drain culvert, water bar, rolling dip, or ditch-out that appears to deliver runoff to a defined channel. A drain is considered connected if there is evidence of surface flow connection from the road to a defined channel or if the outlet has eroded a channel that extends from the road to a defined channel. ([http://www.forestsandfish.com/documents/Road\\_Mgmt\\_Survey.pdf](http://www.forestsandfish.com/documents/Road_Mgmt_Survey.pdf))

**Two segments of road on the property have lengthy inside ditches that are connected to the watercourse at Map Point 1. The installation of ditch relief as discussed above, and the installation of the watercourse crossing at Map Point 2 will result in a road that is as hydrologically disconnected as feasible.**

- e. Ditch relief drains, rolling dip outlets, and road pad or terrace surfaces shall be maintained to promote infiltration/dispersal of outflows and have no apparent erosion or evidence of soil transport to receiving waters.

**Portions of this property were currently under construction under an approved less than three acre conversion exemption and a dead, dying, and diseased tree removal exemption. Grading of new terrace areas was in progress and not complete on the date of the last assessment, 8/4/16. An assessment of these areas could not be fully conducted because grading was not complete, nor was slash treatment. The roads and skidtrails are required by the forest practice rules to be drained prior to the winter period. A chipper was onsite and a large pile of mulch was located**

**on one of the landings to be used onsite for erosion control. Monitoring of these newly constructed terrace areas and conversion areas will be a very important part of keeping this property in compliance with the order once they are completed. The Monitoring Plan section of the Water Resource Protection Plan states specific dates rainfall events when inspections are to be conducted.**

- f. Stockpiled construction materials are stored in a location and manner so as to prevent their transport to receiving waters.

**A large portion of the developed area on the property is located within the 100 foot buffer along the Class II Watercourse. Materials related to cultivation are sometimes stored just within this buffer. As stated, this area is developed, flat, and used as a residence as well. Stored materials located on this flat, within the 100 foot wide buffer do not pose a risk of entering the watercourse.**

## 2. Stream Crossing Maintenance

- a. Culverts and stream crossings shall be sized to pass the expected 100-year peak streamflow.
- b. Culverts and stream crossings shall be designed and maintained to address debris associated with the expected 100-year peak streamflow.
- c. Culverts and stream crossings shall allow passage of all life stages of fish on fish-bearing or restorable streams, and allow passage of aquatic organisms on perennial or intermittent streams.
- d. Stream crossings shall be maintained so as to prevent or minimize erosion from exposed surfaces adjacent to, and in the channel and on the banks.
- e. Culverts shall align with the stream grade and natural stream channel at the inlet and outlet where feasible.<sup>2</sup>
- f. Stream crossings shall be maintained so as to prevent stream diversion in the event that the culvert/crossing is plugged, and critical dips shall be employed with all crossing installations where feasible.<sup>3</sup>

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<sup>2</sup>At a minimum, the culvert shall be aligned at the inlet. If infeasible to align the culvert outlet with the stream grade or channel, outlet armoring or equivalently effective means may be applied.

<sup>3</sup>If infeasible to install a critical dip, an alternative solution may be chosen.

**There is currently one existing watercourse crossing (Map Point 1), and one proposed watercourse crossing (Map Point 2) on this property.**

**Map Point 1 is an existing 36 inch culvert watercourse crossing of a large Class II watercourse. This existing culvert is undersized when compared to the size required for the calculated 100 year peak flow. The culvert size required for a predicted 100 year peak flow would require a culvert size of either 60 or 72 inches at this location. This indicates that the existing culvert is grossly undersized. Physical examination of the inlet and outlet did not give any indication of a grossly undersized culvert. The channel width at this location ranges between 30 inches and 36 inches in width which would indicate an undersized culvert, but not grossly undersized as the calculations indicate. There is no indication of the culvert ever being overtopped. The rust line on the inside of the culvert extends only up to about a third of the way up the sides. The landowner has stated that during very high winter flows the culvert has never been overtopped. The culvert is maintained and there was little to no bare, exposed areas at the inlet and outlet. This culvert is aligned with the natural watercourse channel and grade at the inlet. The outlet was not installed to grade. It is shotgunned and flow drops approximately 5 to 6 feet below the outlet into a large pool. This culvert location is in a low spot in the road and there is no potential for watercourse diversion down the road should the culvert become obstructed.**

Although grossly undersized when compared to the 100 year peak flow calculation, replacement of this functioning culvert does not appear necessary at this time. The landowner does not control road use at this location. It is on a road used by many others for property access. As an alternative to culvert replacement at this time, the landowner should construct a rocked outfall at the culvert outlet and rock armor the inlet. Also, this culvert should continue to be maintained and monitored by the landowner especially during heavy rains. If in the future this culvert appears close to being overtopped or in need of being replaced for any reason such as age, rust, holes, etc., it should be upsized in diameter. Exact culvert diameter will be stated in the CDFW Streambed Alteration Permit that is required for culvert replacement. It is anticipated that this upsized diameter would be a 60 inch diameter culvert. See the Pictures of the inlet and outlet of this culvert below. Although currently functioning and not in need of replacement due to age, rust, etc., it does not meet Standard Condition A. 2. a. because it is not adequately sized when compared to the calculated 100 year peak streamflow.

Map Point 2 is a location where a small Class III watercourse is intercepted by the road inside ditch and is directed to the watercourse crossing at Map Point 1. This Class III watercourse drains a very small, 6 acre area above the proposed culvert location. This is causing delivery of sediment into the watercourse at Map Point 1. The new permanent watercourse crossing at this location will be a permanent 18 inch culvert. This culvert size was determined by calculating the expected 100 year peak streamflow for this watercourse. Culvert calculations can be provided upon request. A permanent culvert at this location is appropriate given the heavy amount of traffic that uses this road. The location of the proposed outlet will direct flows into a natural swale. An approved Lake and Streambed Alteration Agreement from the California Dept of Fish and Wildlife is required prior to installation of this crossing.

### 3. Riparian and Wetland Protection and Management

- a. For Tier 1 Dischargers, cultivation areas or associated facilities shall not be located within 200 feet of surface waters. While 200 foot buffers are preferred for Tier 2 sites, at a minimum, cultivation areas and associated facilities shall not be located or occur within 100 feet of any Class I or II watercourse or within 50 feet of any Class III watercourse or wetlands. The Regional Water Board or its Executive Officer may apply additional or alternative<sup>4</sup> conditions on enrollment, including site-specific riparian buffers and other BMPs beyond those identified in water resource protection plans to ensure water quality protection.
- b. Buffers shall be maintained at natural slope with native vegetation.
- c. Buffers shall be of sufficient width to filter wastes from runoff discharging from production lands and associated facilities to all wetlands, streams, drainage ditches, or other conveyances.
- d. Riparian and wetland areas shall be protected in a manner that maintains their essential functions, including temperature and microclimate control, filtration of sediment and other pollutants, nutrient cycling, woody debris recruitment, groundwater recharge, streambank stabilization, and flood peak attenuation and flood water storage.

<sup>4</sup>Alternative site-specific riparian buffers that are equally protective of water quality may be necessary to accommodate existing permanent structures or other types of structures that cannot be relocated.

**This is a ten acre parcel within the Rancho Sequoia subdivision near Alderpoint, CA. The Rancho Sequoia subdivision created hundreds of 10 acre parcels in this area, in the early 1970's. This lot like many of the others, was developed many years ago and utilized its available level**

ground and favorable location for the creation of a home site. Development of this lot took place long prior to the recognition for the need to maintain 100 foot wide buffers on Class II watercourses. A house, garage, and open, useable space are all located within the 100 foot wide buffer at this time. For several years prior to 2016, cannabis cultivation had been occurring on the flat, open, developed portion of this lot within the 100 foot wide buffer of the Class II watercourse.

The permanent garage, house, and a flat, cleared area exist within the 100 feet wide Class II buffer. In recent months, cultivation green houses have been removed from this area as well as storage of materials related to cultivation. Along the previously developed portion of the 100 wide Class II buffer, the discharger should refrain from cultivation activities including of storage of materials that could leach or be carried into the watercourse. The inner 30 to 40 feet of the 100 foot wide buffer is undeveloped, heavily vegetated, and bermed up. This narrow undeveloped area acts as a filter strip / barrier between the developed portion of the property and the watercourse. The discharger should continue to maintain this 30 to 40 foot wide area next to the watercourse as undisturbed. The discharger should monitor runoff coming from the developed portion of the 100 foot buffer area during winter storms to ensure sediment or other pollutants are not reaching the watercourse. Minor modifications to reduce potential pollutants from entering the watercourse should be undertaken by the discharger. These could be things such as covering or removing things with the potential to be carried or leached into the watercourse by surface flow during storms.

The discharger is in the process of operating on an approved less than three acre conversion exemption. These conversion areas were all planned and located to remain outside of the 100 foot and 50 foot buffers as stated in 3. a. above. Cultivation activities in these conversion areas in the future will be located outside of the stated buffer widths, and be monitored as required in the Monitoring Plan.

#### 4. Spoils Management

- a. Spoils<sup>5</sup> shall not be stored or placed in or where they can enter any surface water.
- b. Spoils shall be adequately contained or stabilized to prevent sediment delivery to surface waters.
- c. Spoils generated through development or maintenance of roads, driveways, earthen fill pads, or other cleared or filled areas shall not be sidecast in any location where they can enter or be transported to surface waters.

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<sup>5</sup> Spoils are waste earthen or organic materials generated through grading or excavation, or waste plant growth media or soil amendments. Spoils include but are not limited to soils, slash, bark, sawdust, potting soils, rock, and fertilizers.

**On the inspection dates occurring on 1/20/16 and 8/4/16, cultivation related soil spoils or spent soil were not being stored on the parcel. In order to remain in compliance with Standard Condition 4. a. and b. of the Order, soil spoils will be stored, contained, or stabilized to prevent delivery to surface waters.**

One location was noted where spoils generated through the development or maintenance of the flat had been sidecast near a break in slope within the outside edge of the 100 foot wide buffer to the Class II watercourse. This was considered at the time as a fairly low risk site due its proximity away from the watercourse and the very dense vegetation located below the sidecast material. This material appears to be stable and is currently vegetated with grass. Removal does not appear necessary at this time and could possibly result in more of an erosion risk at this time.

## 5. Water Storage and Use:

- a. Size and scope of an operation shall be such that the amount of water used shall not adversely impact water quality and/or beneficial uses, including and in consideration with other water use by operations, instream flow requirements and/or needs in the watershed, defined at the scale of a HUC-12<sup>6</sup> watershed or at a smaller hydrologic watershed as determined necessary by the Regional Water Board Executive Officer.
- b. Water conservation measures shall be implemented. Examples include use of rainwater catchment systems or watering plants with a drip irrigation system rather than with a hose or sprinkler system.
- c. For Tier 2 Dischargers, if possible, develop off-stream storage facilities to minimize surface water diversion during low flow periods.
- d. Water is applied using no more than agronomic rates.<sup>7</sup>
- e. Diversion and/or storage of water from a stream should be conducted pursuant to a valid water right and in compliance with reporting requirements under Water Code section 5101.
- f. Water storage features, such as ponds, tanks, and other vessels shall be selected, sited, designed, and maintained so as to insure integrity and to prevent release into waters of the state in the event of a containment failure.

<sup>6</sup>See definition and link to maps at: <http://water.usgs.gov/GIS/huc.html>

<sup>7</sup>"Agronomic rates" is defined as the rates of fertilizer and irrigation water that a plant needs to enhance soil productivity and provide the crop or forage growth with needed nutrients for optimum health and growth, without having any excess water or nutrient percolate beyond the root zone.

**There are currently two sources of water on the property. In recent months, a well was drilled on the property. This well provides all of the water necessary for the irrigation of the cultivation areas on the property. A surface water diversion on an unnamed Class II tributary to Powers Creek is used by the property for domestic use and serves the residence on the property. The surface diversion on this property is being conducted pursuant to a Small Domestic Use Appropriation that was applied for in July 2015 and in compliance with the reporting requirements under Water Code section 5101. Additionally, a Notification of Streambed Alteration Agreement will be submitted to the CA Dept. of Fish and Wildlife that will include the existing diversion as well as the instream work proposed at the watercourse crossings. On the inspection date of 8/4/16 there were approximately 20,000 gallons of storage tanks on the property.**

**Water conservation is implemented where possible by use of drip irrigation, and water is applied at agronomic rates. Water storage tanks are located on flat, stable surfaces, away from watercourses. See Best Management Practices 107 – 113, Appendix B of the Order.**

## 6. Irrigation Runoff

Implementing water conservation measures, irrigating at agronomic rates, applying fertilizers at agronomic rates and applying chemicals according to the label specifications, and maintaining stable soil and growth media should serve to minimize the amount of runoff and the concentration of chemicals in that water. In the event that irrigation runoff occurs, measures shall be in place to treat/control/contain the runoff to minimize the pollutant loads in the discharge. Irrigation runoff shall be managed so that any entrained constituents, such as fertilizers, fine sediment and suspended organic particles, and other oxygen consuming materials are not discharged to nearby watercourses. Management practices include, but are not limited to, modifications to irrigation systems that reuse tailwater by constructing off-stream retention basins, and active (pumping) and or passive (gravity) tailwater recapture/redistribution systems. Care shall be taken to ensure that irrigation tailwater is not discharged towards or impounded over unstable features or landslides.

**The discharger states that he does not irrigate to the point of irrigation water leaving the site. Excessive irrigation was not observed on the second assessment date of 8/4/16. The landowner's cultivation sites are located primarily in four greenhouses located on developed flat areas. The total greenhouse space on the property is approximately 13,500 square feet. There is no risk to watercourses nearest the cultivation sites being contaminated with irrigation tail water leaving the cultivation areas.**

## 7. Fertilizers and Soil Amendments

- a. Fertilizers, potting soils, compost, and other soils and soil amendments shall be stored in locations and in a manner in which they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater.
- b. Fertilizers and soil amendments shall be applied and used per packaging instructions and/or at proper agronomic rates.
- c. Cultivation areas shall be maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest.

**On the inspection date of 8/4/16, potting soils were not being stored within the portion of the developed area of the property that is within the 100 foot wide buffer of the Class II watercourse. If stored uncovered in this area, there is potential for runoff from these types of materials to enter the watercourse during heavy rainfall. Although no longer being stored within this area, a thin veneer of potting soil remnants are located in small amounts on the ground within the developed area, from the past. Also there is the potential, although seemingly slight, that nutrients or pollutants could be leached into groundwater during heavy rainfall. There is covered storage space available on the property for storage of nutrients. The discharger keeps storage shed space for nutrients separate from storage shed space dedicated to petroleum products. In order to remain in compliance with Standard Condition 7. a., stored fertilizers, potting soils, compost, and soil amendments shall be stored in covered areas or tarped in a manner in which they cannot be transported into surface waters and such that they cannot be leached into groundwater. In order to be in compliance with Standard Condition 7. b. and c., fertilizers and soil amendments shall be applied according to the packaging instructions and applied at proper agronomic rates, and cultivation areas shall be maintained so as to prevent nutrients from leaving the site during, and after the growing season. The discharger stated that he intends to place mulch around cultivation beds in order to further contain fertilizers and amendments.**

## 8. Pesticides/Herbicides

At the present time, there are no pesticides or herbicides registered specifically for use directly on cannabis and the use of pesticides on cannabis plants has not been reviewed for safety, human health effects, or environmental impacts. Under California law, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue tolerance requirements and either registered and labeled for a broad enough use to include use on cannabis or exempt from registration requirements as a minimum risk pesticide under FIFRA section 25(b) and California Code of Regulations, title 3, section 6147. For the purpose of compliance with conditions of this Order, any uses of pesticide products shall be consistent with product labeling and any products on the site shall be placed, used, and stored in a manner that ensures that they will not enter or be released into surface or ground waters.

**The discharger does not presently use chemical pesticides or herbicides. Pesticides and herbicides used on the property are made of natural ingredients. Any pesticide or herbicide products used on this property in the future shall be consistent with product labelling, and used and stored in a manner that ensures that they will not enter or be released into the surface or ground waters.**

## 9. Petroleum products and other chemicals

- a. Petroleum products and other liquid chemicals, including but not limited to diesel, biodiesel, gasoline, and oils shall be stored so as to prevent their spillage, discharge, or seepage into receiving waters. Storage tanks and containers must be of suitable material and construction to be compatible with the substance(s) stored and conditions of storage such as pressure and temperature.
- b. Above ground storage tanks and containers shall be provided with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation.
- c. Dischargers shall ensure that diked areas are sufficiently impervious to contain discharged chemicals.
- d. Discharger(s) shall implement spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.
- e. Underground storage tanks 110 gallons and larger shall be registered with the appropriate County Health Department and comply with State and local requirements for leak detection, spill overflow, corrosion protection, and insurance coverage.

**The majority of the property is hooked up to PG and E supplied electricity. A portable gas generator currently supplies electricity to the newly installed water well on the property. The landowner uses 5 gallon portable gas cans for refueling of portable generators and power tools. Five gallon gas cans are kept under cover of storage sheds when not in use. The discharger is aware of the requirement stated of 9.b. above and intends to comply with it. Items 123-136 in Appendix B of the Order lists measures to prevent spillage and discharge of petroleum and other chemicals to surface or ground waters.**

## 10. Cultivation-related wastes

Cultivation-related wastes including, but not limited to, empty soil/soil amendment/ fertilizer/pesticide bags and containers, empty plant pots or containers, dead or harvested plant waste, and spent growth medium shall, for as long as they remain on the site, be stored<sup>8</sup> at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwaters.

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<sup>8</sup> Plant waste may also be composted, subject to the same restrictions cited above for cultivation-related waste storage.

**Cultivation related waste such as empty soil/soil amendment/ fertilizer/pesticide bags and containers, empty plant pots or containers, dead or harvested plant waste, and spent growth medium were not being stored on the property on the dates that this assessment occurred. Dead and harvested plant waste is sometimes piled and burned in a cleared area on the property, or sometimes composted. Burn piles and/or compost piles for cultivation plant waste shall be located outside of the 100 foot Class II watercourse buffer. In order to be in compliance with Standard Condition 10., all cultivation-related wastes listed above shall be stored where they will not enter or be blown into surface waters, or removed from the site and disposed of properly. Cultivation-related wastes that contain residues or pollutants shall be stored in a manner that ensures that those materials do not leach into surface or groundwaters. This can be achieved by covering or tarping these types of cultivation related wastes prior to winter. See Appendix B, Items 137 through 139, of the Order.**

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11. Refuse and human waste

- a. Disposal of domestic sewage shall meet applicable County health standards, local agency management plans and ordinances, and/or the Regional Water Board's Onsite Wastewater Treatment System (OWTS) policy, and shall not represent a threat to surface water or groundwater.
- b. Refuse and garbage shall be stored in a location and manner that prevents its discharge to receiving waters and prevents any leachate or contact water from entering or percolating to receiving waters.
- c. Garbage and refuse shall be disposed of at an appropriate waste disposal location.

**Sewage disposal on the property is a functioning septic system connected to the house. Waste water disposal on the property currently does not appear to be a threat to surface or ground water and was not causing a nuisance on the property. In order to be in full compliance with Standard Condition 11.a., the septic system on the property needs to meet applicable County health standards, local agency management plans and ordinances, and/or the Regional Water Board's Onsite Wastewater Treatment System (OWTS) policy. See Appendix B. Item 142 of the Order.**

**Garbage and refuse is presently being piled for short term storage within the developed area and is periodically loaded and taken to Eel River Resource Recovery's transfer station located in Alderpoint or Redway. In order to be in compliance with Standard Condition 11., refuse and garbage shall be stored in a location and manner that prevents its discharge to receiving waters and prevents any leachate or contact water from entering or percolating to receiving waters.**

12. Remediation/Cleanup/Restoration Remediation/cleanup/restoration activities may include, but are not limited to, removal of fill from watercourses, stream restoration, riparian vegetation planting and maintenance, soil stabilization, erosion control, upgrading stream crossings, road outsloping and rolling dip installation where safe and suitable, installing ditch relief culverts and overside drains, removing berms, stabilizing unstable areas, reshaping cutbanks, and rocking native-surfaced roads. Restoration and cleanup conditions and provisions generally apply to Tier 3 sites, however owners/operators of Tier 1 or 2 sites may identify or propose water resource improvement or enhancement projects such as stream restoration or riparian planting with native vegetation and, for such projects, these conditions apply similarly. Appendix B accompanying this Order includes environmental protection and mitigation measures that apply to cleanup activities such as: temporal limitations on construction; limitations on earthmoving and construction equipment; guidelines for removal of plants and revegetation; conditions for erosion control, limitations on work in streams, riparian and wetland areas; and other measures.

**Mitigation measures are listed in the Water Resource Protection Plan and also noted above in the document.**

## Pictures



Picture 1: This is a photograph of the outlet of the culvert at Map Point 1. This culvert diameter is 36 inches and calculations for the 100 year peak flow should be at least a 60 inch diameter culvert. Physical examination did not show signs of an undersized culvert. As an alternative to culvert replacement at this time, a rocked outfall should be installed at this location. Rock armoring should extend from the bottom of the steambed up to the edge of the road surface. Photo date 8-4-2016.

## Pictures



Picture 2: This is a photograph of the inlet of the culvert at Map Point 1. This culvert diameter is 36 inches and calculations for the 100 year peak flow indicate that it should be at least a 60 inch diameter culvert. Physical examination did not show signs of an undersized culvert. As an alternative to culvert replacement at this time, installation of rock armor at the inlet should take place. Rock armoring should extend from the sides and top of the culvert up to the edge of the road surface. Photo date 8-4-2016.

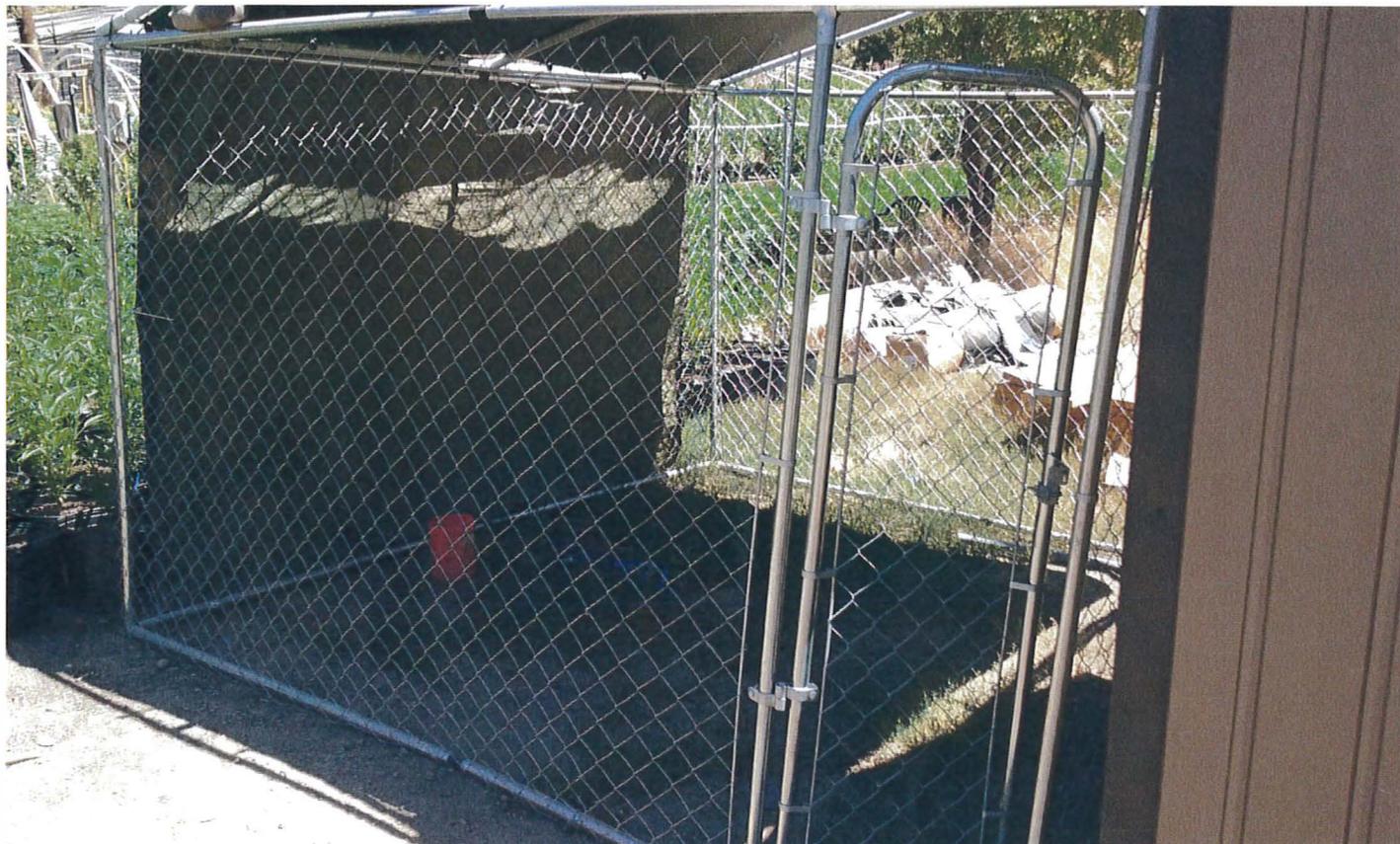
## Pictures



Picture 3: This is a photograph of the well on the property. It was installed within the last several months and is located within one of the yet to be completed less than three acre conversion exemption areas. Photo date 8-4-2016.

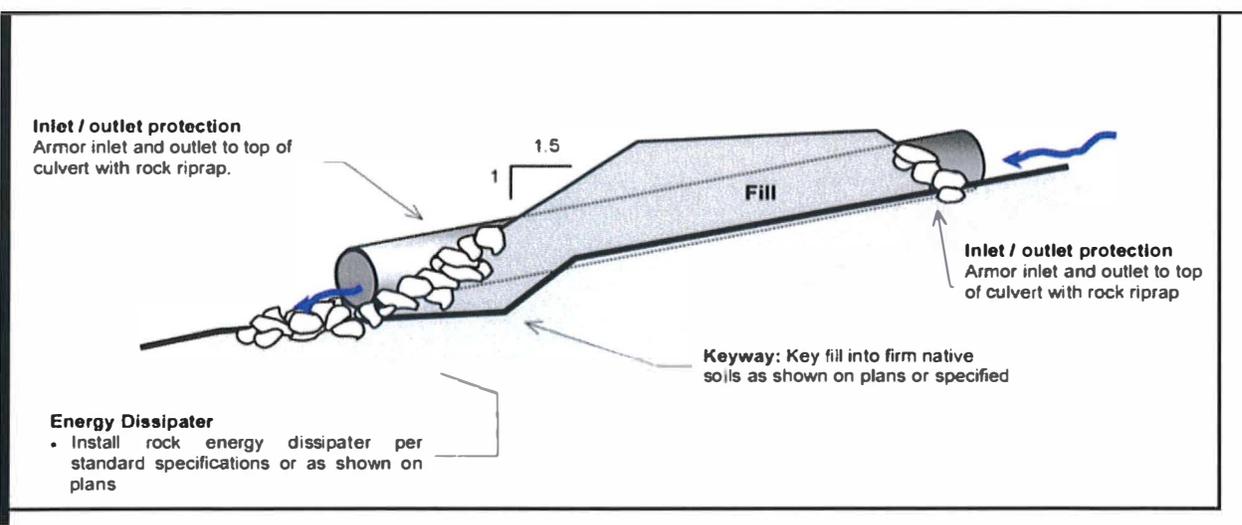
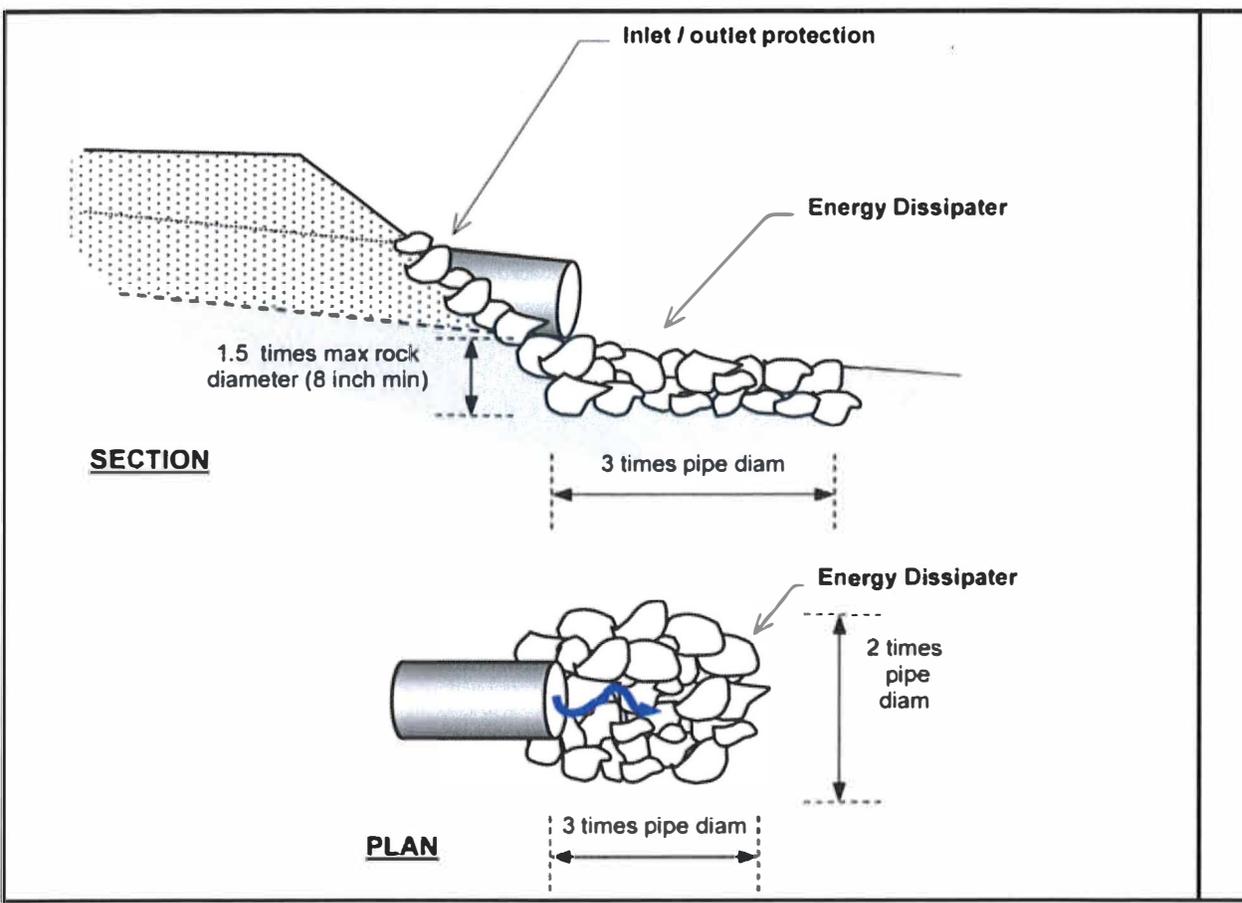
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## Pictures



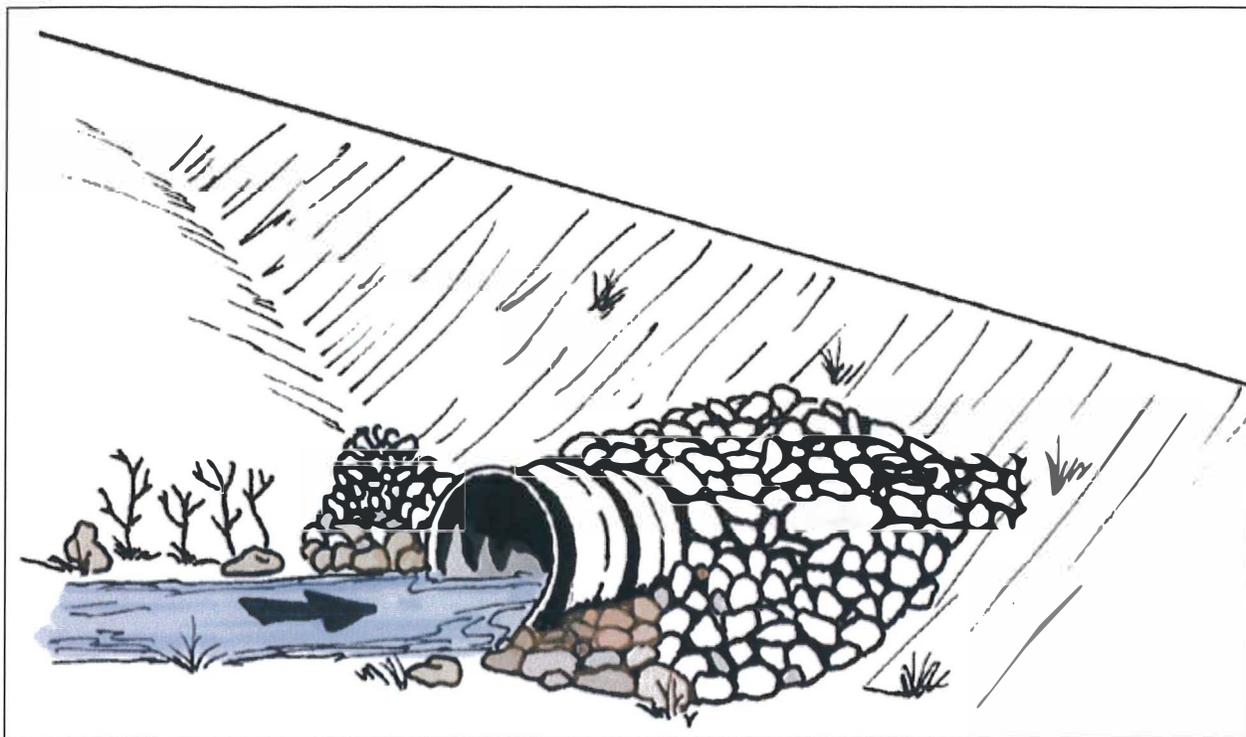
Picture 4: This is a photograph of a portable, covered dog kennel on the property that is used as a covered storage area for storing garbage. It was empty on the day of the photo. Photo date 8-4-2016.

### 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



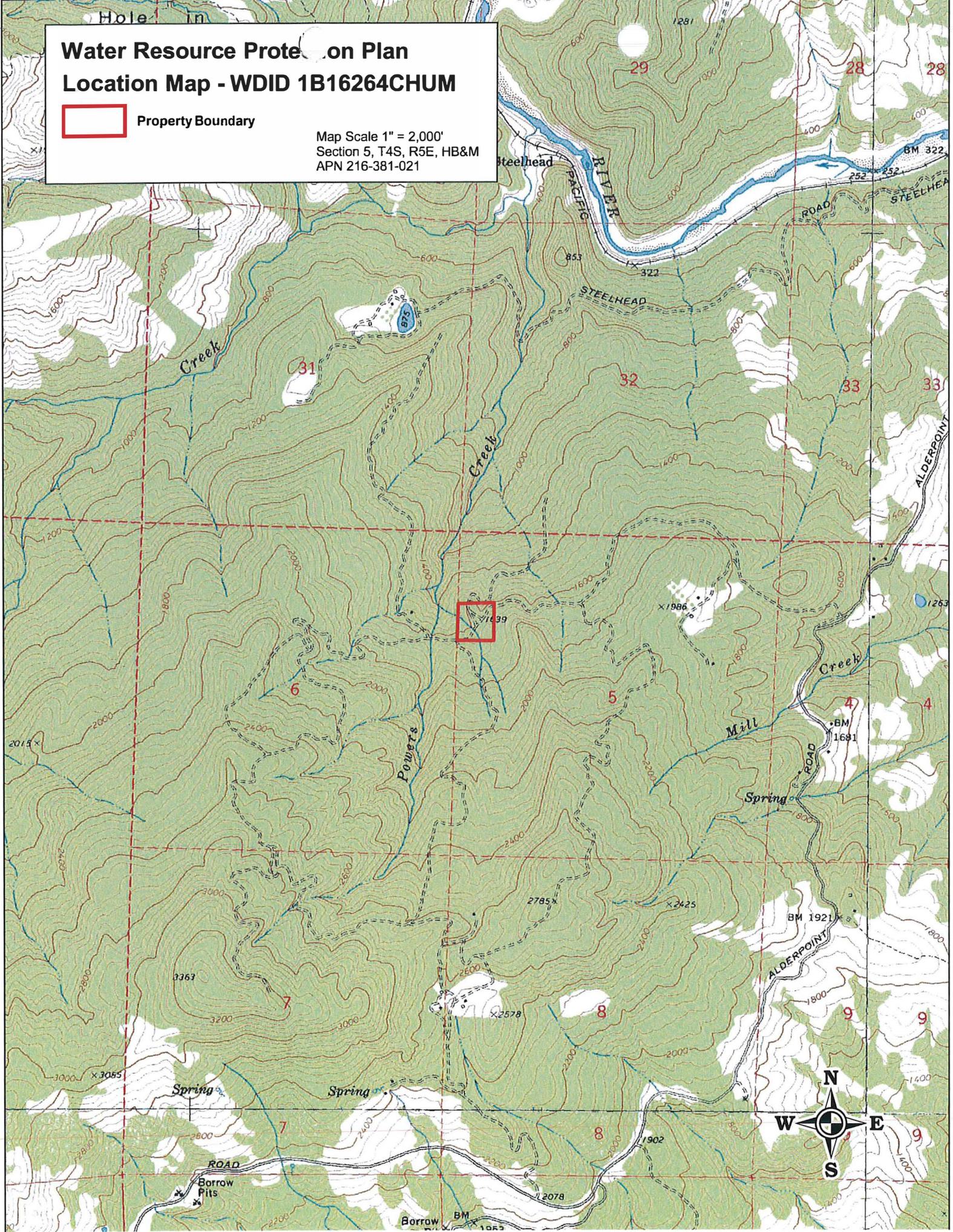
Rock armor used for inlet and outlet protection (i.e., not as energy dissipation) does not have to be sized to protect against high velocity scour. If the culvert is properly sized and its length is adequate, it should be able to transmit flood flows without scouring the inlet or eroding the outlet around 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.

# Water Resource Protection Plan Location Map - WDID 1B16264CHUM



Property Boundary

Map Scale 1" = 2,000'  
Section 5, T4S, R5E, HB&M  
APN 216-381-021



# Water Resource Protection Plan WRPP Map - WDID 1B16264CHUM



Property Boundary



Access Road



Access Road (Construction in Progress  
per 1-15-EX389 HUM)



Class II Watercourse



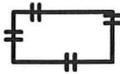
Class III Watercourse



Man Made Pond



Point of Diversion



Approved Conversion Area  
1-15-EX389 HUM  
(Operations in Progress 8/4/16)



Map Points



Water Tank



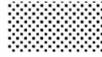
Well



House



Garage



Developed Area



Cultivation Area

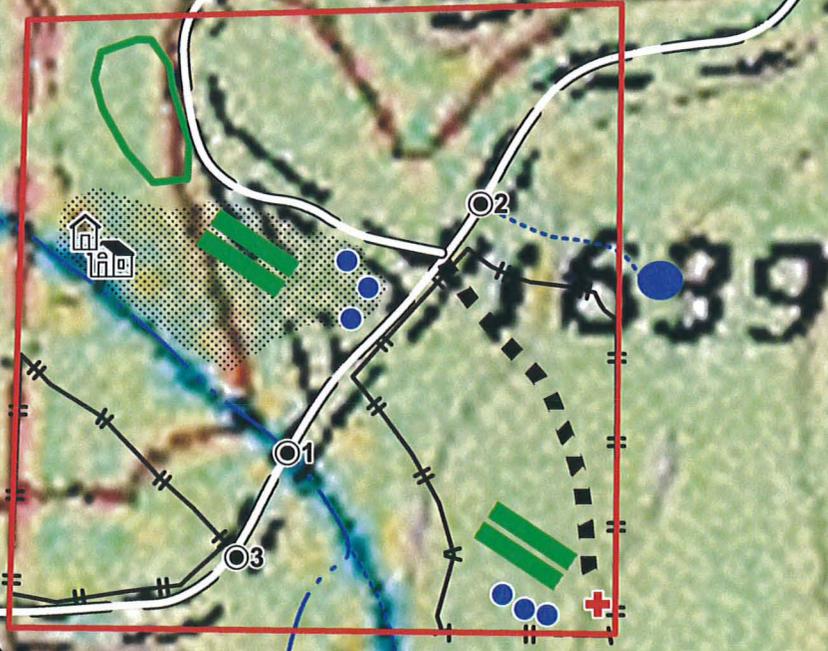


Future Cultivation Area  
(Currently being graded)



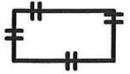
1 = 200'

Section 5, T4S, R5E, HB&M 8/4/16  
APN 216-381-021



# Water Resource Protection Plan

## WRPP Map - WDID 1B16264CHUM

-  Property Boundary
-  Access Road
-  Access Road (Construction in Progress per 1-15-EX389 HUM)
-  Class II Watercourse
-  Class III Watercourse
-  Man Made Pond
-  Point of Diversion
-  Approved Conversion Area 1-15-EX389 HUM (Operations in Progress 8/4/16)
-  Map Points
-  Water Tank
-  Well
-  House
-  Garage
-  Developed Area
-  Cultivation Area
-  Future Cultivation Area (Currently being graded)



Section 5, T4S, R5E, HB&M 8/4/16  
APN 216-381-021

