

Site Management Plan

(Tier 2, Moderate Risk)

WDID # - 1_12CC417086



Humboldt County
APN: 216-073-002 & 216-073-007

Prepared by:



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Arrangement of Document Contents

- Purpose
- Tier Designation
- Scope of Report
- Methods
- Property Description
- Project Description
- General Location Map
- Additional Project Permitting
- General Compliance Guide for Cannabis Cultivators
 - Land Development and Maintenance, Erosion Control, and Drainage Features
 - Cleanup, Restoration, and Mitigation
 - Stream Crossing Installation and Maintenance
 - Soil Disposal and Spoils Management
 - Riparian and Wetland Protection and Management
 - Water Storage and Use
 - Fertilizers, Pesticides, and Petroleum Products
 - Cultivation Related Waste
 - Refuse and Domestic Waste
 - Annual Winterization Measures
- Statement of Limitations
- Site Maps
- Implementation Schedule
- Mitigation Report tables
- Applicable BPTC's (BMP's)
- Monitoring Plan
- Attachments
- Applicable Technical Documents
 - Site Management Plan (SMP)
 - Site Erosion and Sediment Control Plan
- Pictures



Purpose

This Site Management Plan (SMP) has been prepared on behalf of the cannabis cultivator for the Humboldt County property identified as assessor parcel numbers 216-073-002 & 216-073-007, by agreement and in response to the State Water Resources Control Board Cannabis Cultivation Policy (Cannabis Policy), in congruence with Order WQ 2017-0023-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order). The General Order implements the Cannabis Policy requirements, specifically those requirements that address waste discharges associated with cannabis cultivation activities. Cannabis cultivators covered under the General Order are subject to the requirements of the Cannabis Policy in its entirety. The Cannabis Policy provides a statewide tiered approach for permitting discharges and threatened discharges of waste from cannabis cultivation and associated activities, establishes a personal use exemption standard, and provides conditional exemption criteria for activities with a low threat to water quality.

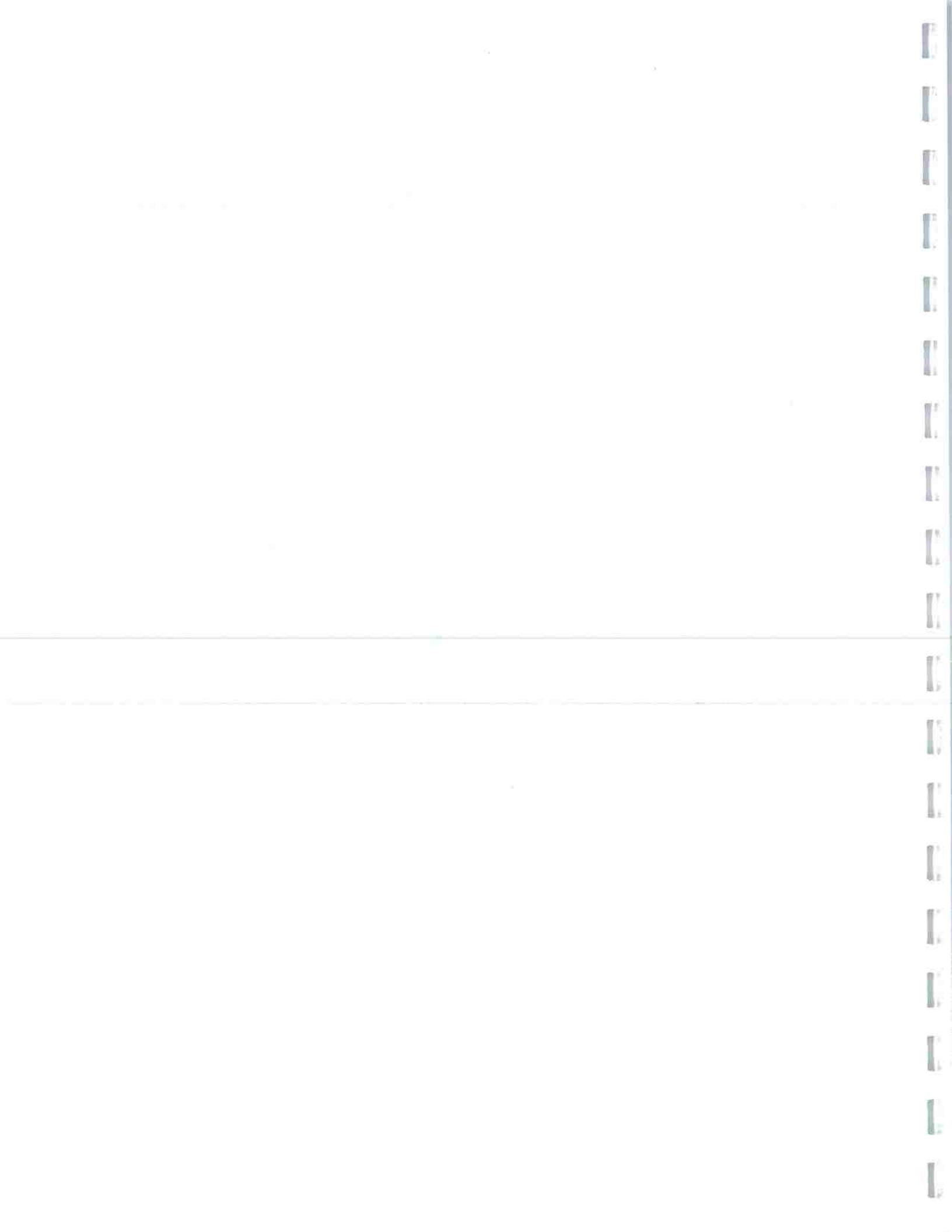
Tier Designation

Tiers are defined by the amount of disturbed area. Tier 1 outdoor commercial cultivation activities disturb an area equal to or greater than 2,000 square feet and less than 1 acre (43,560 square feet). Tier 2 outdoor commercial cultivation activities disturb an area equal to or greater than 1 acre. Risk designation for Tier 1 and Tier 2 enrollees under the Cannabis Policy is based on the slope of disturbed areas and the proximity to a surface water body. Characterization is based on the risk designation summarized in Table 1 below.

Table 1: Summary of Risk Designation

Low Risk	Moderate Risk	High Risk
<ul style="list-style-type: none"> • No portion of the disturbed area is located on a slope greater than 30 percent, and • All of the disturbed area complies with the setback requirements. 	<ul style="list-style-type: none"> • Any portion of the disturbed area is located on a slope greater than 30 percent, and • All of the disturbed area complies with the setback requirements. 	<ul style="list-style-type: none"> • Any portion of the disturbed area is located within the setback requirements.

Thorough assessment of the project area including roads, disturbed areas, legacy features, and cultivation areas classify this enrollment into the **Tier 2, Moderate Risk** designation.



Scope of Report

Tier 1 and Tier 2 cannabis cultivators are required to submit and implement a Site Management Plan that describes how they are complying with the Requirements listed in Attachment A. The description shall describe how all applicable Best Practicable Treatment or Control (BPTC) measures are implemented. Cannabis cultivators within the North Coast Regional Water Quality Control Board jurisdiction are required to submit and implement Site Management Plans that describe how the Requirements are implemented property-wide, to include legacy activities. The SMP includes an Implementation Schedule to achieve compliance, but all work must be completed by the onset of the Winter Period each year. Projects designated as Moderate Risk are also required to have a Site Erosion and Sediment Control (plan) to achieve the goal of minimizing the discharge of sediment off-site. Projects designated as High Risk are also required to have a Disturbed Area Stabilization Plan to achieve the goal of stabilizing the disturbed area to minimize the discharge of sediment off-site and comply with the setback requirements. The cannabis cultivator shall ensure that all site operating personnel are familiar with the contents of the General Order and all technical reports prepared for the property. Projects which have over one acre of cannabis cultivation (total canopy area) are also required to have a Nitrogen Management Plan to describe how nitrogen is stored, used, and applied to crops in a way that is protective of water quality. A copy of the General Order, and technical reports required by the General Order, shall be kept at the cultivation site. Electronic copies of these documents are acceptable. Either format of maintained documents kept on site must be immediately presentable upon request.

Methods

The methods used to develop this SMP include both field and office components. The office component consisted of aerial photography review and interpretation, existing USGS quad map review, GIS mapping of field data, review of on-site photography points, streamflow calculations, general planning, and information gathered from the cannabis cultivator and/or landowner. The field component included mapping of all access roads, vehicle parking areas, Waters of the State, stream crossings, drainage features, cultivation sites, buildings, disturbed areas, and all other relevant site features within the project area and surrounding areas (as feasible). Cultivation areas, associated facilities, roads, and other developed and/or disturbed areas were assessed for discharges and related controllable water quality factors from the activities listed in the General Order. The field assessment also included an evaluation and determination of compliance with all applicable BPTC's per Section 2 of the General Order.

Property Description

The property assessed consists of a 300-acre ownership located in primarily conifer timberland. Watercourses on the property are tributaries of Tom Long Creek, a tributary of the East Branch South Fork Eel River. The property is located in Section 5 & 6, T5S, R5E, HB&M, Humboldt County, from the Harris 7.5' USGS Quad Map and is approximately 2 miles south of Harris, CA. Access to the property is from CA Highway 101 to Alderpoint Road to Bell Spring Road than via private drive.

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Site Management Plan

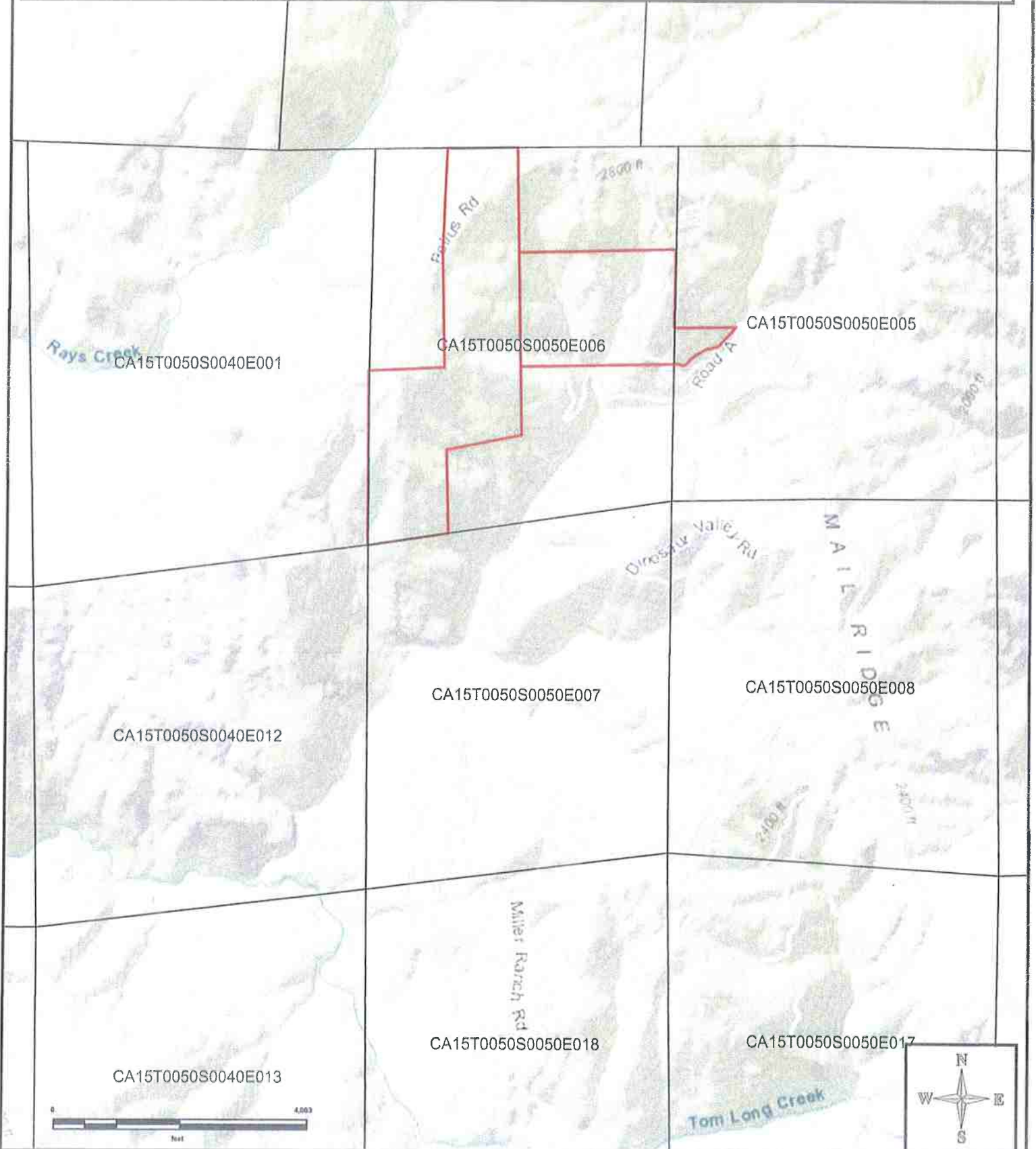
General Location Map [WDID - 1_12CC417086]

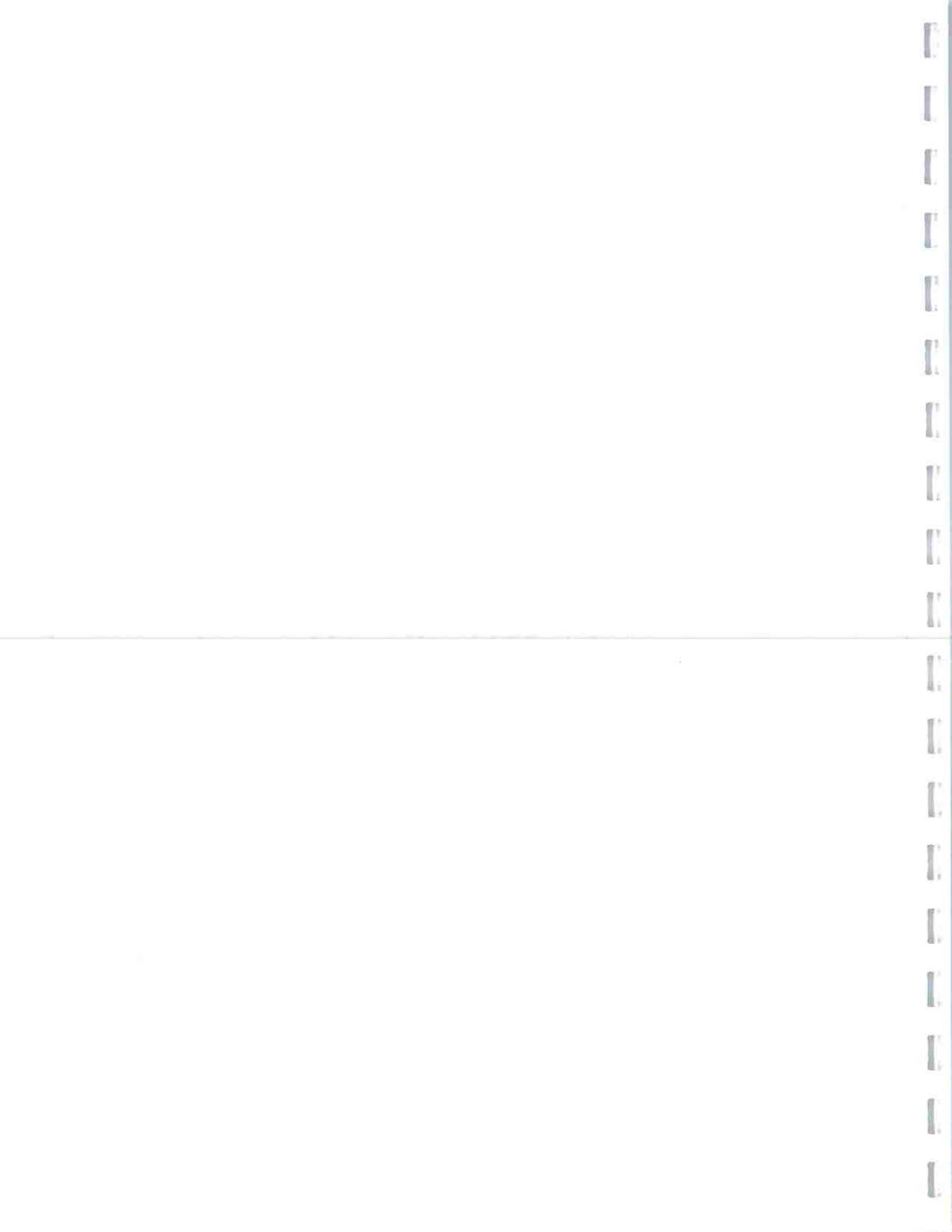


 Property Boundary

Located in Section 05 and 06, T5S, R5E, HB&M, Humboldt County, from the Harris 7.5' USGS Quad Map

TRC - 43 & 44



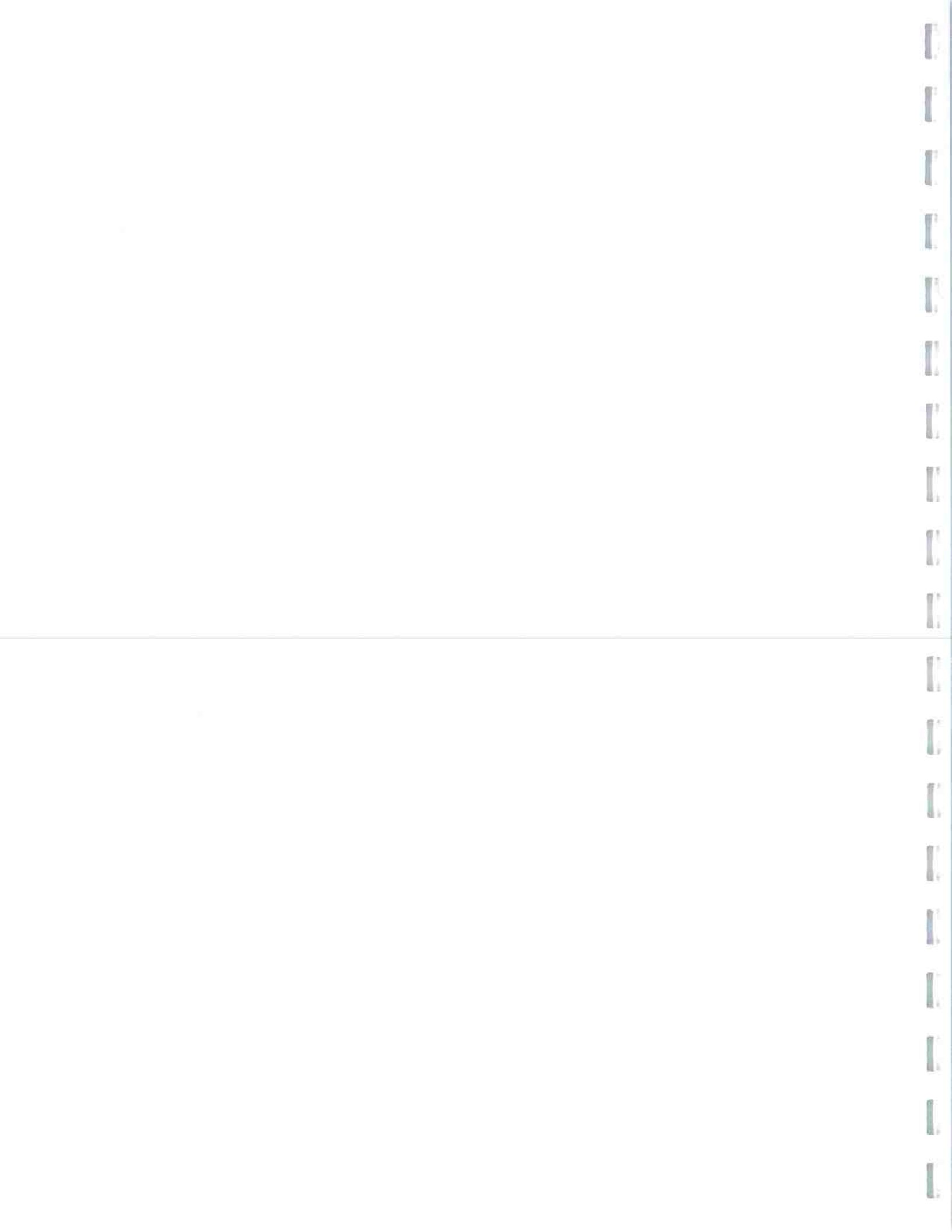


Project Description

Cultivation on the property is comprised of two cultivation areas, referenced as Cultivation Areas A, and B. Cannabis cultivation on the property consists of several greenhouses with the discharger being permitted to grow up to a total of 72,960 ft² of outdoor cultivation under Humboldt County Permit 11457 and 11458. Current cannabis cultivation by site and the associated disturbed areas are detailed in Table 1 below.

Table 1: Cultivation Site Parameters.

Cultivation Area	Land Disturbance Area (ft ²)	General Cultivation Area (ft ²)	Adjoining Hillslopes (% Grade)
A	116,400	43,560	10-30
B	56,460	29,400	25-50
Totals:	172,860	72,960	~



Baseline Assessment of Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation

This project was previously enrolled in the North Coast Regional Water Quality Control Board Order No. 2015-0023. A Water Resource Protection Plan (WRPP) was prepared by Timberland Resource Consultants in 2017. Some mitigations prescribed in the WRPP have since been completed. A new baseline assessment of the project was conducted in 2019.

Land Development and Maintenance, Erosion Control, and Drainage Features

Project Compliance Y/N

Road classification description, surface, native material and erodibility

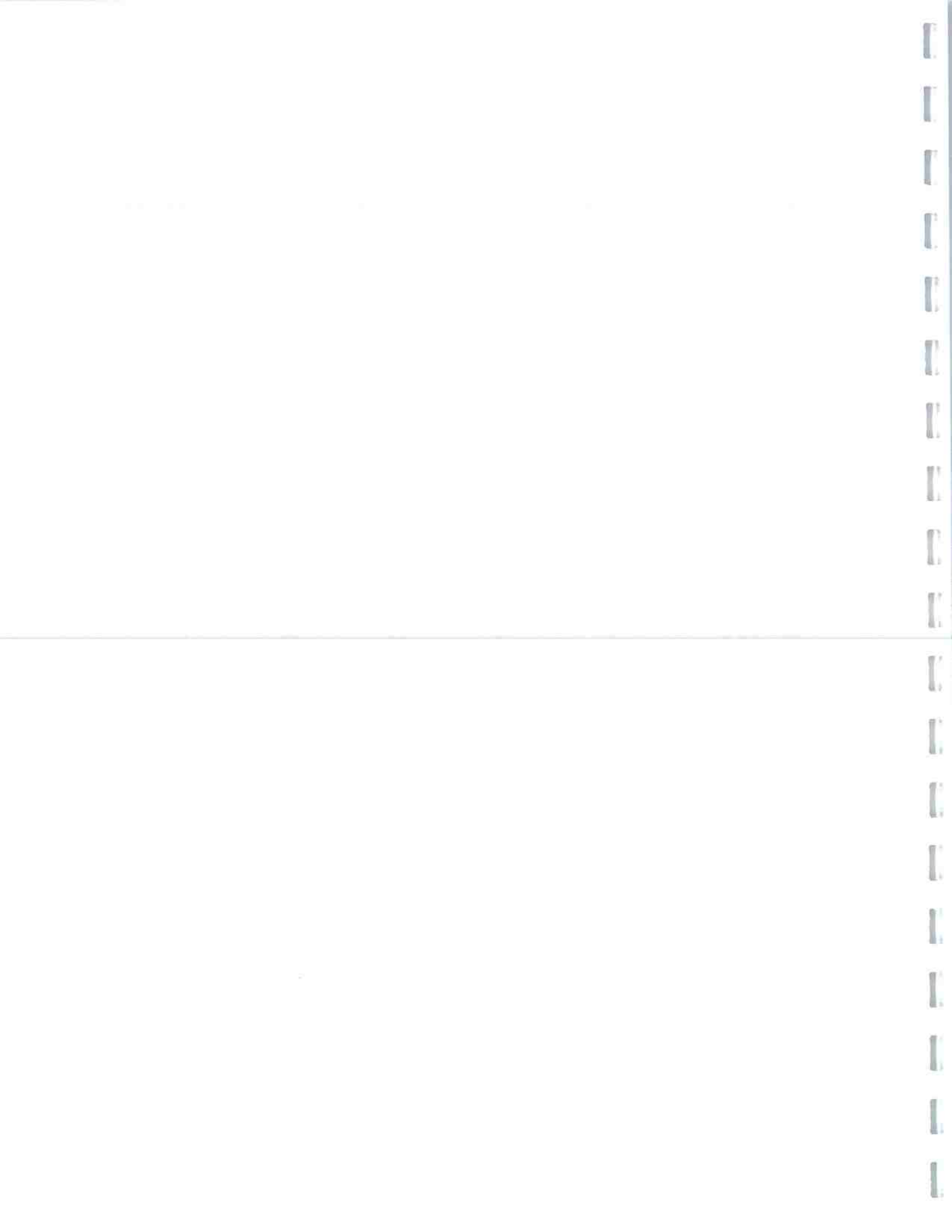
Roads within the project area appear to have a moderate native rock component and, based on observations of surface erosion relative to current surface drainage break frequency, are being classified as having moderate erodibility. This classification will be utilized to determine surface/ditch-line drainage break frequency based on Table 19 of the Handbook for Forest Ranch and Rural Roads, 2014.

TABLE 19. Recommended maximum rolling dip and ditch relief culvert spacing, in feet, based on road gradient and soil erodibility ^{1,2}

Soil erodibility	Road gradient (%) and drainage structure spacing (feet)				
	0-3	4-6	7-9	10-12	>12
High to moderate	250	160	130	115	100
Low	400	300	250	200	160

Roads are being classified as “Permanent” (being used year-round), “Seasonal” (being used primarily during summer months), and “Trail” (4x4 or TAV us only). This property has approximately 2.2 miles of road with grades ranging 0-15% with isolated steep pitches of up to 30%.

Permanent roads are rocked and well drained. These roads serve as the access to a residence on the property as well as cultivation areas and associated facilities, and as access by other landowners to other ownerships. Seasonal roads have appropriate and adequately spaced drainage structures, currently being drained primarily by annually maintained waterbars. This practice is adequate, however grading the road with rolling dips would require less annual maintenance.

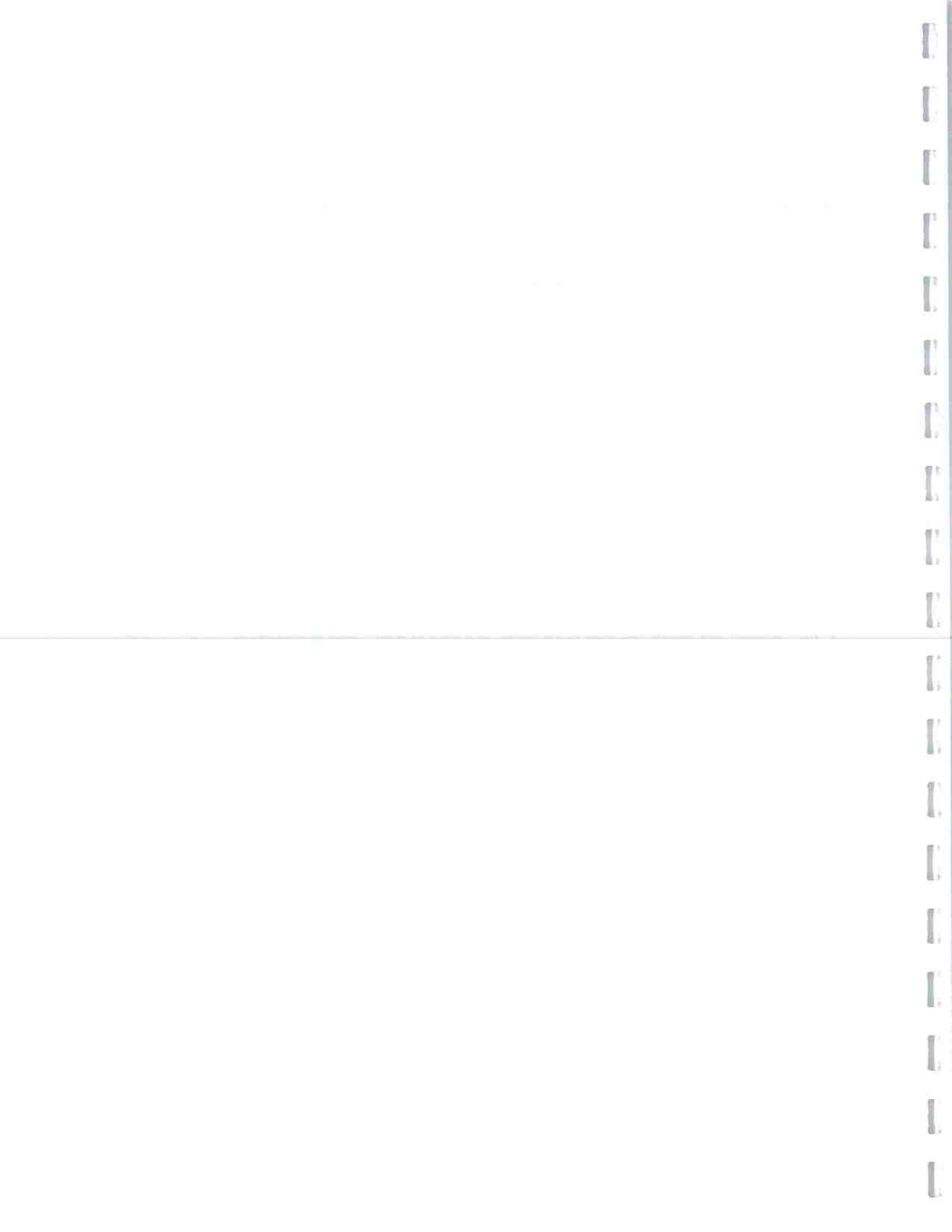


Cultivation Area A occurs on a broad open ridge top that has been graded into a series of flat pads. The average grade of the disturbed areas is 5%, with fill slopes ranging from 5-20%. The disturbed area is limited to the areas immediately around the greenhouses where farming practices are occurring. These areas are all low gradient (<5%) and where found to be well maintained. The western portion of the cultivation area drains to a natural swale in the south-west portion of the cultivation area (Site 09). This swale is well vegetated and no evidence of water channelization, erosion, or irrigation overflow was observed. The discharger installed a silt fence along the slope below the disturbed area a preventative measure, though no evidence of siltation was observed. The eastern portion of the cultivation area drains off at Sites 10 and 11. Here, water concentrating from the disturbed areas was forming minor rills along the access road where it is drained across the road via a hand dug water bar. The discharge location was suitable, as it dissipated in dense vegetation and poses no threat to watercourses. However this riling will likely accelerate if not controlled. New drainage structures are proposed at Sites 10 and 11 to better control run-off from this area.

Cultivation B occurs on a graded mid-slope bench. The average grade of the disturbed areas is 10%, with fill slopes ranging from 5-40%. The disturbed area is limited to the areas immediately around the greenhouses where farming practices are occurring. These areas are all low gradient (<5%) and where found to be well maintained. At the primary access to the cultivation area, the seasonal road captures surface run-off from portions of the cultivation area and drains them off the road via annual hand dug waterbars (**Sites 02 and 03**). These features are adequate, however would function better if they were re-graded into rolling dips.

At the western portion of the cultivation area, a broad V-ditch captures seasonal bank seepage from the adjoining native slope. This, along with apparent **overland flow from the cultivation area collects into a poorly defined inside ditch that is actively down-cutting the road surface.** This ditch is drained via a hand dug water bar across the road before delivering to the inside ditch that connects to Site 01. The **broad ditch (Site 03.1) shall be maintained as a broad, vegetated ditch for approximately 100 feet to Site 03.2.** Here a ditch relief culvert is to be installed. This new drc shall be installed with a downspout to Site 03.3. At Site 03.3, a rocked head wall shall be installed to act as a energy dissipater from flow resulting from the down-spouted culvert. Flow shall be directed to the existing inside ditch to Site 01. This ditch shall be maintained as is, approximately 125 feet, as a vegetated ditch directed to the inlet of Site 01. Lastly, the **access road and disturbed area in from of the greenhouses at the eastern portion of the cultivation area shall be rocked.** Rock shall consist of a minimum of **4"- base and at depth of 6 inches.** This will raise the road slightly, effectively disconnecting drainage of the cultivation area into the ditch system and preventing any potential site runoff.

At **Site 04, a portion of the cut bank is expressing minor slumping.** This appears to be due to its angle (65%+). Based on field observations, it appears that this slumping will likely continue periodically as the slope reaches an angle of repose. Portions of this cut bank are competent sandstone and are holding up well. The **slumping material builds up just to the north of the greenhouses and needs to be removed to facilitate cultivation activities.** Currently this is done either by hand or with a small skid-steer style tractor.



This is a good practice and should continue. There are no watercourses, ditches or other drainage features at this location and as such this feature poses no threat to water quality. However, being that this site will require periodic maintenance in form of removing the material, recommendations are being made to ensure that the problem does not get worse (by over cutting into the toe of the cut bank) and that spoiled material is located in a suitable location.

Cleanup, Restoration, and Mitigation:

Project Compliance Y/N

No cleanup, restoration or mitigation is needed for this project.

Stream Crossing Installation and Maintenance:

Project Compliance Y/N

There are five watercourse crossings associated with this project. Four of these crossing require replacement as described in the Mitigation Report. All of the crossings were sized form 100-year storm flow using the rational method and have been permitted under a LSA [1600-2018-0858-R1]. See the Mitigation Report for site specific details.

Soil Disposal and Spoils Management:

Project Compliance Y/N

Any/all future spoils generated through development or maintenance of roads, driveways, earthen fill pads, or other cleared or filled areas shall be stored in a location where they cannot enter or be transported to surface waters. These are locations that are outside of the riparian setbacks. [e.g. Site 04] Any/all future spoils generated as a result of any future construction projects that are to be stored on the property shall be done so in accordance with the BTPC.

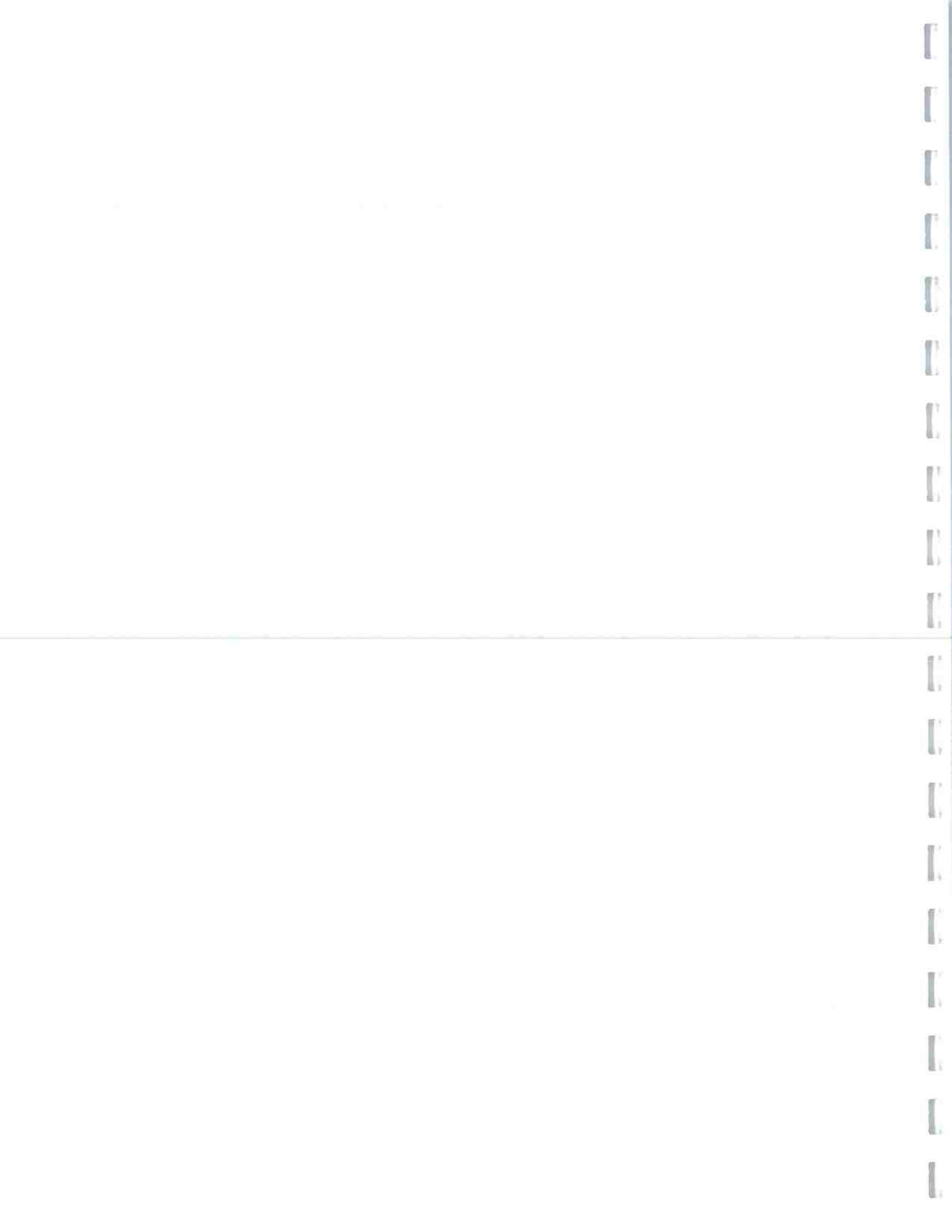
Riparian and Wetland Protection and Management:

Project Compliance Y/N

No disturbed areas were determined to be within the riparian setbacks.

Table 4: Riparian and Wetland Protection and Management

Cultivation Area	Cultivation and Disturbance Area Distances and Riparian Setbacks ²				
	Class I [Setback: 100']	Class II [Setback: 100']	Class III [Setback: 50']	Perennial Spring or Wetland [Setback: 50']	Disturbed Area Within Setbacks [ft ²]
A	>200'	>200'	>150'	>200'	0
B	>200'	>200'	>60'	>200'	0
Total =					0



Water Storage and Use:Project Compliance Y/N

There is one historical surface diversion on the property referenced as the Point of Diversion (POD). This POD is permitted under a LSA and registered water right. This diversion is the sole water source for domestic use only.

All cultivation water is sourced from a 1,500,000 gallon rain catchment pond. Water is pumped from the pond to various holding tanks were it is used for cultivation.

The discharger has implemented several water conservation technique options include drip systems, mulching base of plant, watering early in the morning (before 10a.m) or later in the evening (after 6 p.m.), repairing leaky pipes and fittings, and utilizing water conserving soil amendments.

Irrigation Runoff:

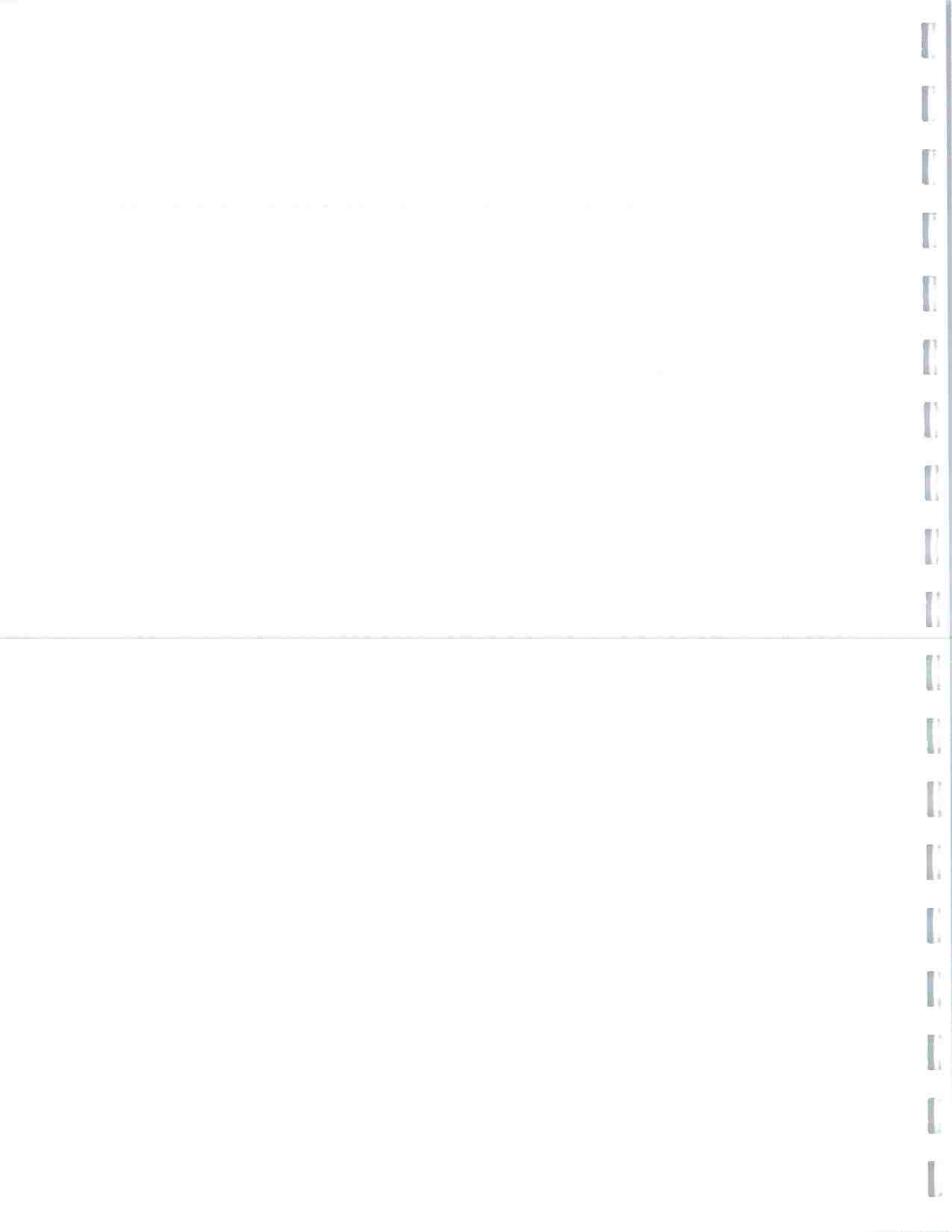
During visits to the property, no irrigation runoff, or evidence of such runoff, was observed at any of the cultivation areas.

Fertilizers, Pesticides, and Petroleum Products:Project Compliance Y/N

Fertilizers, potting soils, compost, and other soils and soil amendments are to be currently stored in structures on the property in a manner in which they will not enter or be transported into surface waters and so that nutrients or other pollutants will not be leached into groundwater. Fertilizers and soil amendments are applied and used per the manufacturers guidelines. Cultivation areas are currently maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest. The use of pesticide products is consistent with product labeling and all products on the property are to be currently stored in closed structures to ensure that they do not enter or are released into surface or ground waters.

A 1,000 gallon fuel tank is located near Cultivation Area A. The tank is installed over a containment basin but lacks cover. Fuel is used to for generators, power tools, and equipment. Portable gas cans, oil containers and other petroleum products are stored within an enclosed structure with proper containment. A spill prevention kit is located on site.

The installation of sufficient cover of the fuel tanks containment basin to prevent any/all precipitation from entering said secondary containment vessel shall satisfy compliance with this section. On site storage of petroleum products, or other fuels used for commercial activities may require registration as hazardous materials through the California Environmental Reporting System (CERS). Additionally, any waste oil generated from commercial activities (generators) is considered by the state hazardous waste and requires addition reporting. This cannabis cultivator is advised to contact local agencies to find out if such reporting is applicable to currently operations.



Cultivation-Related Wastes:Project Compliance Y /N

This property was well maintained with little to no cultivation related waste observed at the time of inspection. The discharger relayed that waste is collected in a central area and disposed of in a timely manner by collecting it in a trailer and disposing at a waste disposal facility. The cannabis cultivator shall continue to gather and properly dispose of cultivation-related wastes and ensure that wastes are adequately contained from scavenging wildlife, and cannot be transported away from storage areas by wind or surface runoff.

Organic cultivation-related wastes are collected from the cultivation areas and either disposed of properly with general waste, or composted or burned. The cannabis cultivator shall ensure that the locations where organic wastes are stored, composted, or burned are minimized in number and are sited outside of watercourse riparian areas and away from any form of surface runoff.

Refuse and Domestic Waste:Project Compliance Y /N

Domestic garbage and refuse are stored on the property within lidded trash cans and garbage bags and are disposed of regularly at the nearest solid waste transfer station. The cannabis cultivator shall continue to gather and properly dispose of refuse and ensure that refuse is adequately contained from scavenging wildlife, and cannot be transported away from storage areas by wind or surface runoff.

Human waste is managed by a portable toilet and the residence (septic system). The service interval for the portable toilet is twice a month.

Annual Winterization Measures

Winterization measures consist of general cleanup and winter-preparation activities that both prepare for, and utilize, anticipated, local winter weather. In project areas that may become inaccessible during periods, or the entirety, of the winter, additional winterization procedures and precautions may be required due to the potential absence of winter monitoring.


- Any exposed soils resulting from winterization activities shall be seeded and straw mulched.
- Any/all areas of exposed soils in and around cultivation areas shall be seeded and straw mulched.
- All existing culvert inlets, interiors, and outlets shall be cleared of any existing or potential obstructions to include; debris upstream of the culvert such as sediment, loose, moveable rocks, and raftable, small, woody debris.
- Damage or wear resulting from vehicular use to road surfaces (such as rutting or wheel tracks) and/or road surfacing (such as rock) that would impair road surface drainage or drainage features (such as outsloping, waterbars, rolling dips, etc.) shall be repaired prior to the Winter Period.

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**STATEMENT OF CONTINGENT AND LIMITING CONDITIONS CONCERNING
THE PREPARATION AND USE OF REPORTS ADDRESSING GENERAL
WASTE DISCHARGE REQUIREMENTS UNDER ORDER WQ 2017-0023-DWQ**

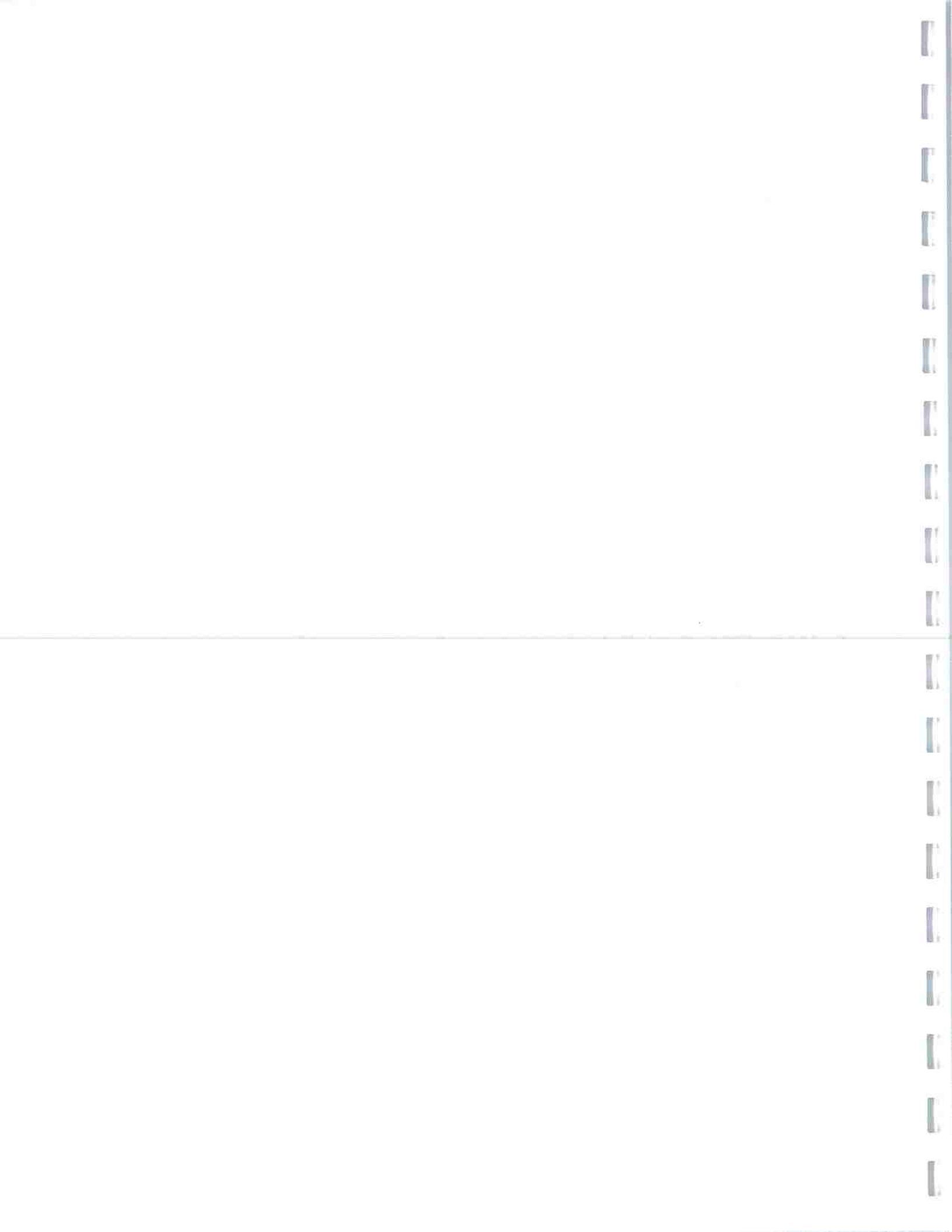
Prepared by Timberland Resource Consultants

1. This document has been prepared for the property within APN 216-073-002 & 216-073-007, in Humboldt County, for enrollment in the General Waste Discharge Order WQ 2017-0023-DWQ.
2. Timberland Resource Consultants does not assume any liability for the use or misuse of the information in this document.
3. The information is based upon conditions apparent to Timberland Resource Consultants at the time inspection(s) were conducted. Changes due to land use activities or environmental factors occurring after inspection, have not been considered in this document.
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 document may differ from those made by others or from changes on the property occurring after inspections were 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.
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Nick Robinson
















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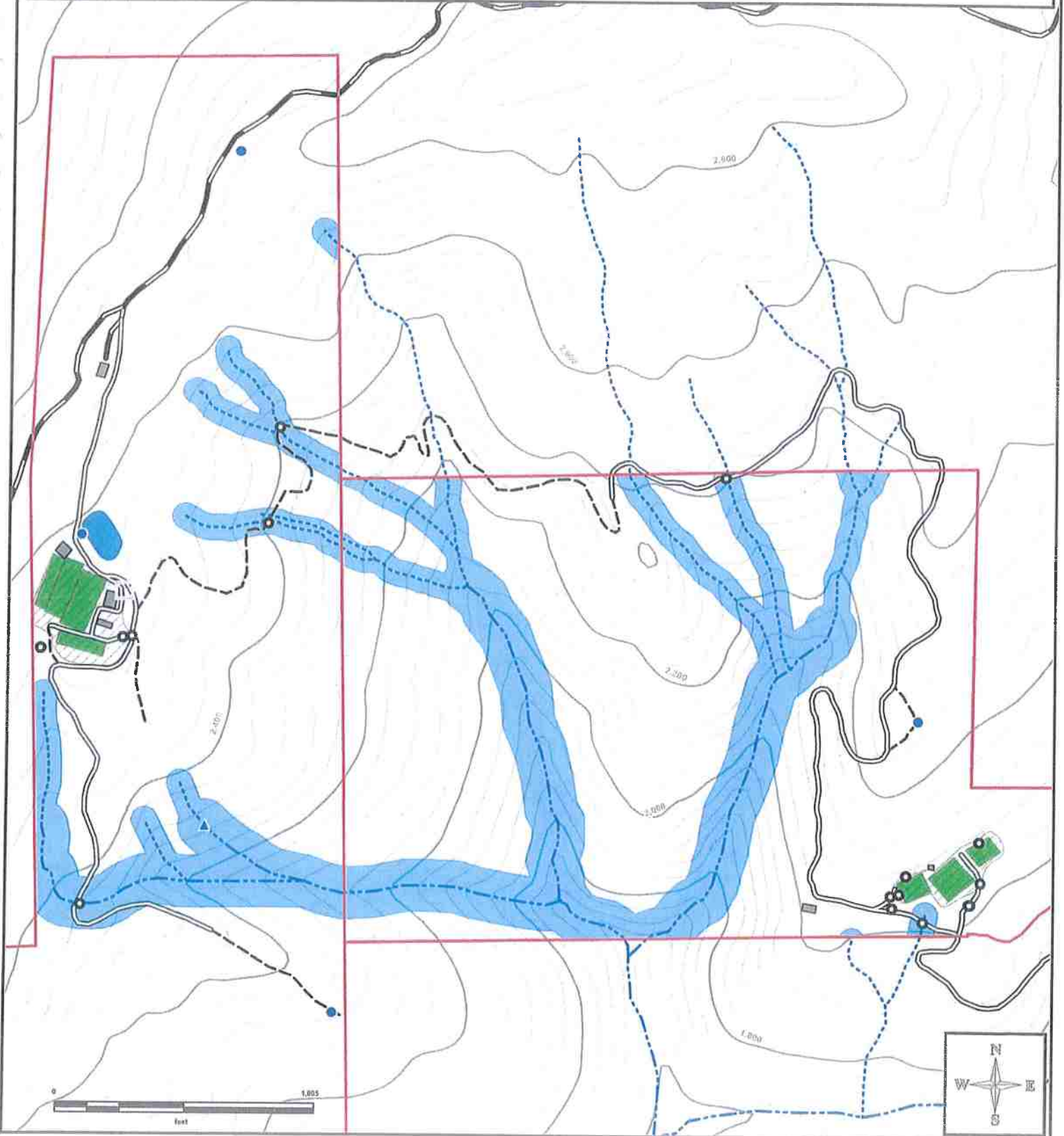
Site Management Plan

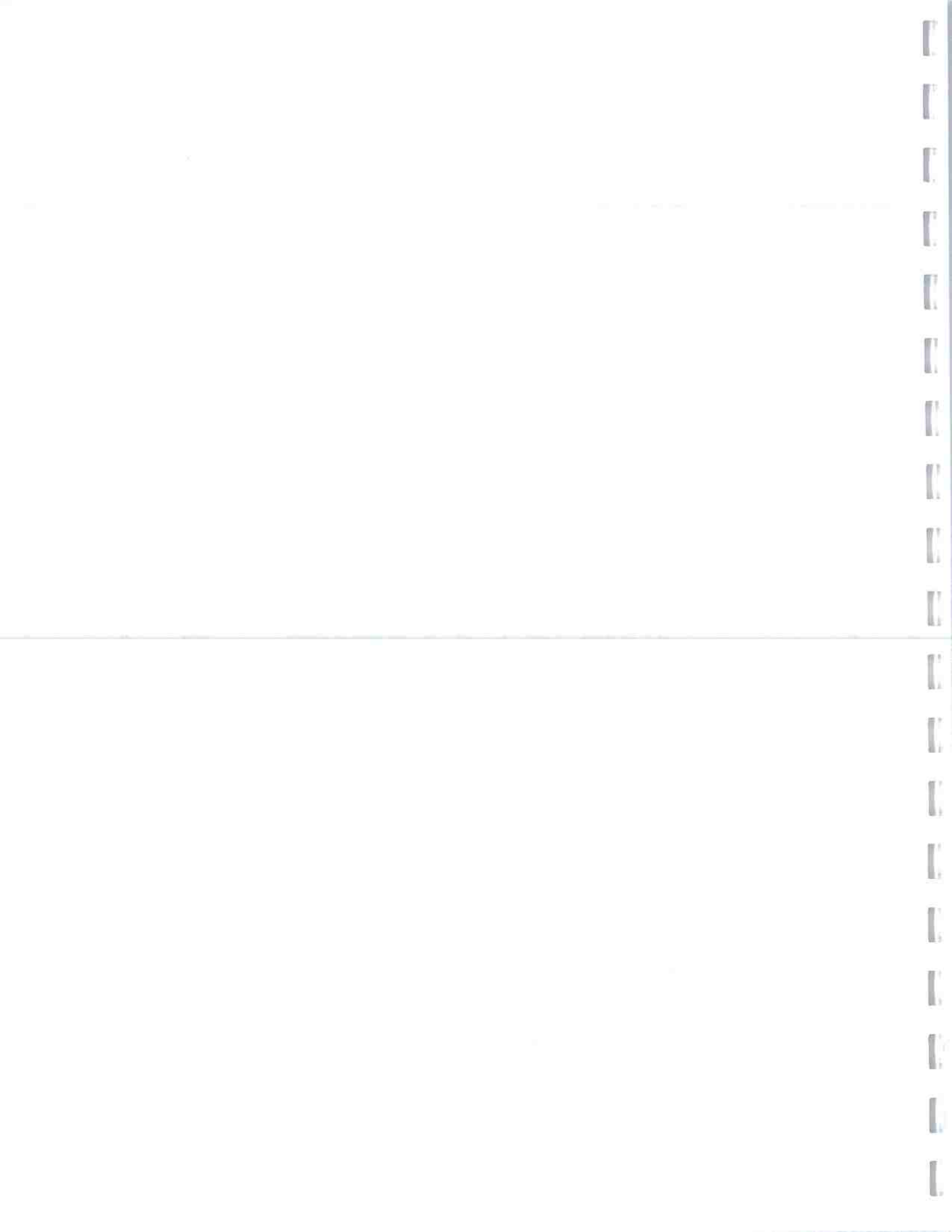
Site Overview Map [WDID - 1_12CC417086]



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|--|---|---|--|
|  Property Boundary | Watercourses | Roads |  Site |
|  Cultivation Area |  Class II |  Permanent |  POD |
|  Disturbed Area |  Class III |  Seasonal |  Tank |
|  Structure |  Riparian Area |  Trail |  Fuel |
| |  Pond | | |

TRC- 43 & 44





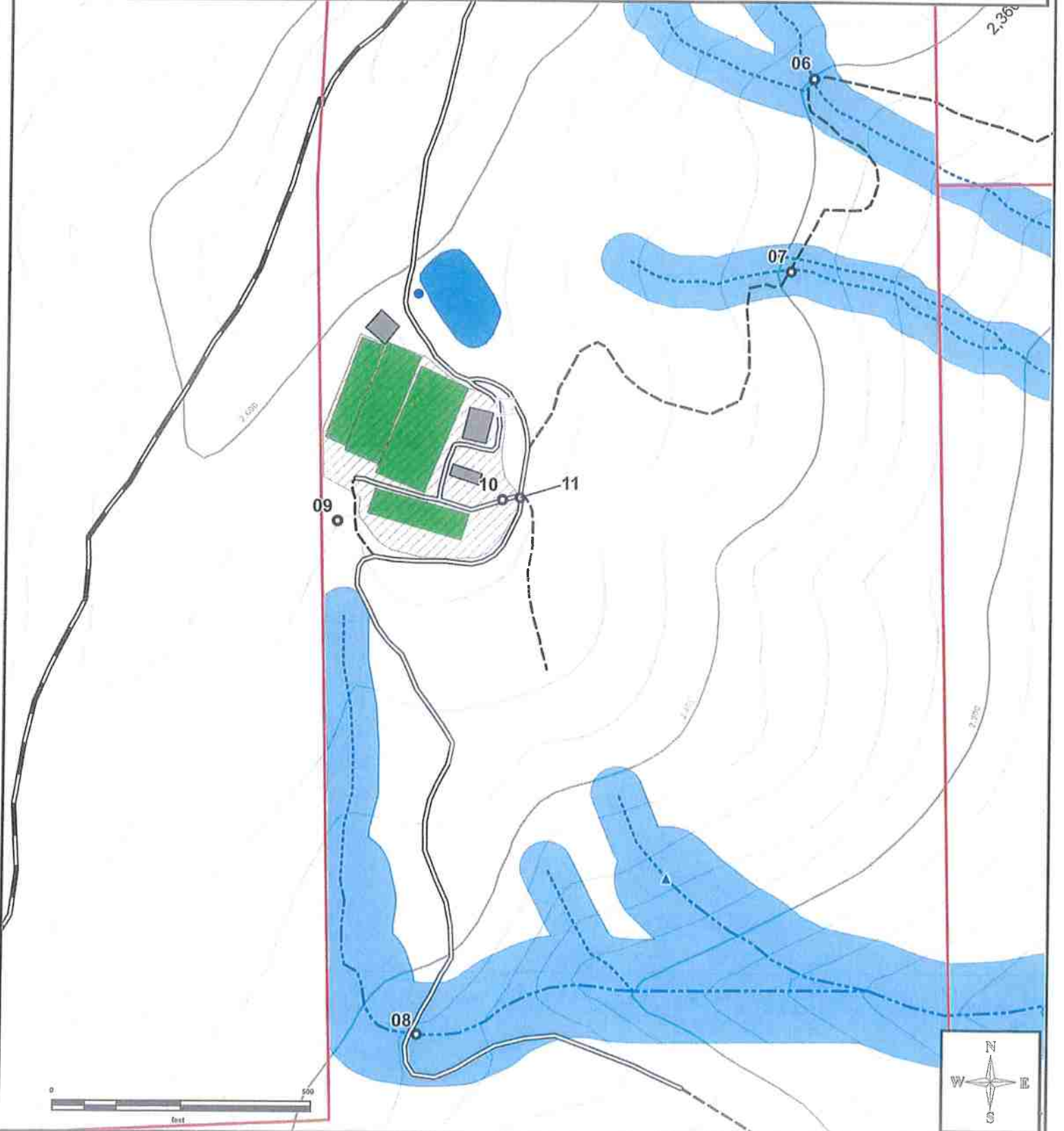
Site Management Plan

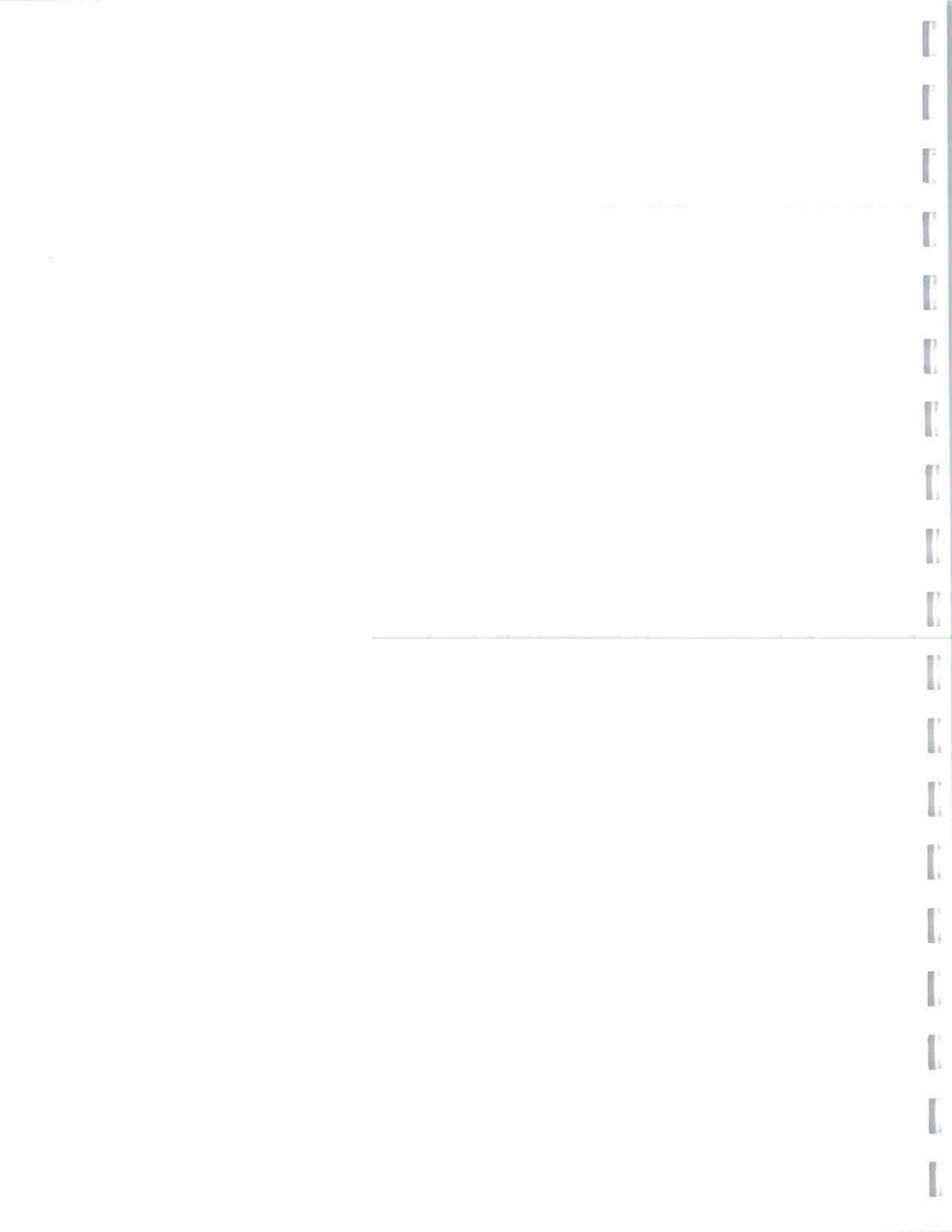
Site Map [Cultivation Area A]



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|-------------------|---------------------|--------------|------|
| Property Boundary | Watercourses | Roads | Site |
| Cultivation Area | Class II | Permanent | POD |
| Disturbed Area | Class III | Seasonal | Tank |
| Structure | Riparian Area | Trail | Fuel |
| | Pond | | |

TRC- 43 & 44




















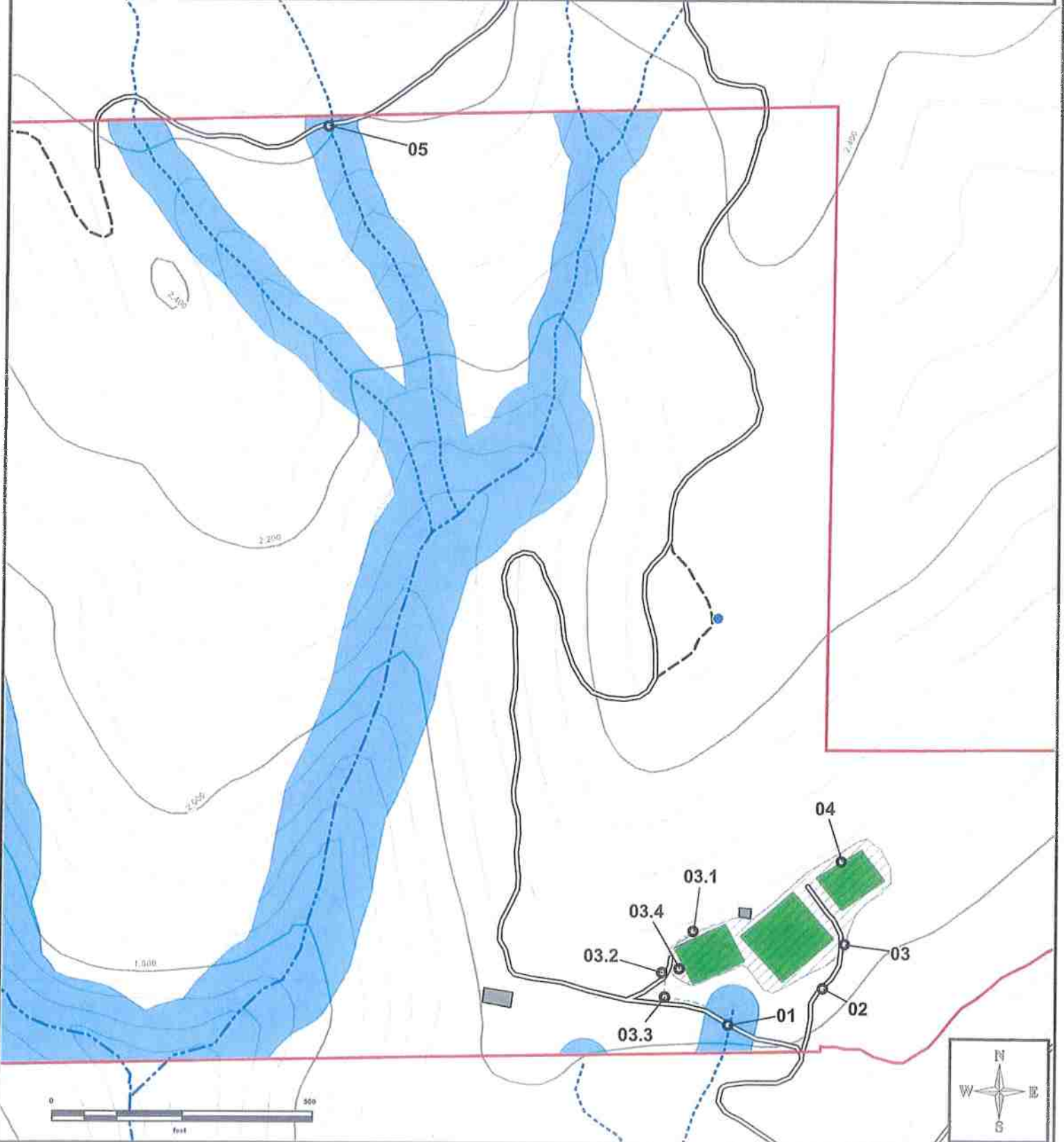
Site Management Plan

Site Map [Cultivation Area B]



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|  Property Boundary | Watercourses | Roads |  Site |
|  Cultivation Area |  Class II |  Permanent |  POD |
|  Disturbed Area |  Class III |  Seasonal |  Tank |
|  Structure |  Riparian Area |  Trail |  Fuel |
| |  Pond | | |

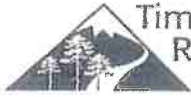
TRC- 43 & 44





Treatment Implementation Schedule

Unique Point	Proposed Work Completion Date
2020-2021	
Site 1	As soon as feasible, but no later than 10/15
Site 2	As required
Site 3	As required
Site 3.1	As required
Site 3.2	Prior to 10/15/21
Site 3.3	Prior to 10/15/21
Site 3.4	Prior to 10/15/21
Site 4	As required
Site 5	Prior to 10/15/21
Site 6	Prior to 10/15/21
Site 7	Prior to 10/15/21 pending the approval of any required permits
Site 8	Prior to 10/15/21 pending the approval of any required permits
Site 9	Prior to 10/15/21
Site 10	Prior to 10/15/21
Site 11	Prior to 10/15/21
Fuel	Prior to 10/15/20
Generators and Gas Powered Pumps	As required
Liquid Petroleum Products	As required



Timberland
Resource
Consultants

SMP - Mitigation Report

WDID# - 1_12CC417086

Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 1	-123.651635 40.052841	Seasonal	X	X	X	As soon as feasible, but no later than 10/15	
Current Condition: 24" Plastic culvert on CIII watercourse. Installed and sided correctly. Blackberry vegetation may be obstructing the outlet. [AKA LSA#1]						Prescribed Action: Remove vegetation from outlet of the culvert.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 2	-123.650988 40.053034	Seasonal	X	X	-	As required	
Current Condition: Existing Rolling Dip						Prescribed Action: Maintain as required.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 3	-123.65084 40.053269	Seasonal	X	X	-	As required	
Current Condition: Existing Rolling Dip						Prescribed Action: Maintain as required.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 3.1	-123.651876 40.053333	-	-	X	-	As required	
Current Condition: A broad v-ditch drains the cut bank to Site 3.2. Ditch is low gradient and vegetated.						Prescribed Action: Maintain as required.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 3.2	-123.652089 40.053117	-	X	X		Prior to 10/15/21	
Current Condition: Proposed ditch relief culvert location.						Prescribed Action: Install a 15" min. DRC, draining the ditch originating from Site 3.1. This DRC shall be installed with a downspout to Site 3.3.	



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WDID# - 1_12CC417086

Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 3.3	-123.652068 40.052986	-	X	X	-	Prior to 10/15/21	
Current Condition: Proposed discharge location for Site 3.3. Also the start of a inside ditch that drains to Site 1.						Prescribed Action: Install a rocked headwall to receive the waters originating from Site 3.2 (downspout). Maintain ditch as required to Site 1.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 3.4	-123.651969 40.053137	Seasonal	X	X	-	Prior to 10/15/21	
Current Condition: Unsurfaced access road to Cultivation B with minor erosion.						Prescribed Action: This access road shall be rocked. Rock shall consist of a minimum of 4"- base and at a depth of 6" inches. Surface rocking shall include the road and the parking area at the foot of the greenhouses.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 4	-123.650866 40.053703	-	X	X	-	As required	
Current Condition: Steep cut bank with minor slumping.						Prescribed Action: Maintain by removing cut bank slough as necessary. Ensure that removed material is stored in stable location out side any watercourse set back.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 5	-123.654431 40.057567	Trail	X	X	X	Prior to 10/15/21	
Current Condition: Existing ford on Class III watercourse. [AKA LSA#2].						Prescribed Action: Install a 30-inch diameter culvert.	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 6	-123.660638 40.058082	Trail	X	X	X	Prior to 10/15/21	
Current Condition: Existing Ford of two Class III watercourses. [AKA LSA#4]. Two watercourses cross the road at this location. Currently this ford is poorly defined.						Prescribed Action: Install a 36-inch diameter culvert at the flagged location [lower channel]. Additionally, a rocked ditch shall be contracted to capture the secondary channel and direct it to the newly installed culvert. This ditch shall extend approximately 65 feet to the west.	



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SMP - Mitigation Report

WDID# - 1_12CC417086

Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 7	-123.660789 40.057055	Trail	X	X	X	Prior to 10/15/21 pending the approval of any required permits	
<p>Current Condition: Existing Ford on a Class III watercourses. [AKA LSA#5]. It appears that a pile of vegetation/slash was pushed off road and inadvertently cause the watercourse to divert slightly above the road. As result, the watercourse has entered the road higher than the original existing ford and caused some minor erosion.</p>						<p>Prescribed Action: A 30-inch diameter culvert shall be installed at this location. Additionally, the slash material just above the inlet shall be removed, and any soil obstructing the watercourse shall be removed. This shall be done in such a way as to ensure that the watercourse is directed into its natural channel and that there is no further diversion potential following installation.</p>	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 8	-123.663335 40.05298	Seasonal	X	X	X	Prior to 10/15/21 pending the approval of any required permits	
<p>Current Condition: Existing Rock Ford on a Class II watercourse. [AKA LSA Site#6] Ford is constructed fairly high, which creates a substantial headwall above the inlet of the feature. This poses a sedimentation and failure risk.</p>						<p>Prescribed Action: Install a 48-inch diameter culvert at this location.</p>	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 9	-123.663925 40.055711	-	-	X	X	Prior to 10/15/21	
<p>Current Condition: This location represents a broad natural swale that drain the western portion of Cultivation Area A. A silt fence is installed along the toe of the fill slope. The fill slope is vegetated and no erosion is occurring. This is a excellent location for drainage.</p>						<p>Prescribed Action: This site shall be monitored over time for performance in dispersing drainage from the cultivation area. If evidence of down cutting occur from water concentration in this area further action may be required to prevent down slope discharge.</p>	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 10	-123.662783 40.055828	Seasonal	X	X	X	Prior to 10/15/21	
<p>Current Condition: Surface runoff concentrates on the road at this location and is creating minor riling of the road surface.</p>						<p>Prescribed Action: Install a rock lined ditch along the road to Site 11.</p>	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Site 11	-123.66266 40.055839	Trail	X	X	X	Prior to 10/15/21	
<p>Current Condition: A water bar directing flows across the road at this location.</p>						<p>Prescribed Action: This section of the road shall be reconfigured to include a ditch relief culvert draining the newly installed ditch from Site 10. The outlet of the DRC shall be set in such a way as to prevent any potential discharge from being captured by the adjacent trail to the east.</p>	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed



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SMP - Mitigation Report

WDID# - 1_12CC417086

Fuel	-123.662774 40.056322	-	X	X	-	Prior to 10/15/20	
Current Condition: 1,000g fuel tank. This tank has a secondary containment basin but lacks cover and side wind protection.						Prescribed Action: Install cover over tank to prevent containment basin from catching rainwater.	



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SMP - Mitigation Report

WDID# - 1_12CC417086

Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Generators and Gas Powered		-	-	-	-	As required	
<p>Current Condition: All liquid petroleum powered generators and pumps require secondary containment, and cover from precipitation during the wet season. Adequate quantities of absorbent materials shall also be stored at all locations where the generators and gas powered pumps are used and stored.</p>						<p>Prescribed Action: Any/all liquid petroleum powered generators or pumps (large or small) shall be stored in secondary containment (e.g. plastic totes, sealed metal boxes, drip pans, pre-fabricated portable containment berms or fabricated and lined containment basins) while being stored long term or not in immediate use, wherever these materials are used anywhere on the property. Adequate quantities of absorbent materials shall be stored at all locations where these types of materials are used and stored. Should a spill of these materials occur, absorbent materials will be applied immediately and allowed enough time to absorb as much material as possible. Following treatment, absorbent materials applied as well as any contaminated soil will be removed and disposed of appropriately for the spilled material. See attached BMPs: Generator, Fuel, and Oil Management for further details.</p>	
Unique Point	Lat-Long NAD 83	Road Type	Mitigation Planned	Monitor	1600	Treatment Priority	Date Completed
Liquid Petroleum Products		-	-	-	-	As required	
<p>Current Condition: All liquid petroleum products (e.g. any size container of any petroleum product) requires secondary containment while not in immediate use and cover from precipitation during the wet season. Adequate quantities of absorbent materials shall also be stored at all locations where these types of materials are used and stored.</p>						<p>Prescribed Action: Any/all liquid petroleum products and their containers shall be stored in secondary containment (e.g. plastic totes or sealed metal boxes) while being stored long term or not in immediate use, wherever these materials are used anywhere on the property. Adequate quantities of absorbent materials (e.g. purpose made materials for oil and fuel spills, cat litter) shall be stored at all locations where these types of materials are used and stored. Should a spill of these materials occur, absorbent materials will be applied immediately and allowed enough time to absorb as much material as possible. Following treatment, absorbent materials applied as well as any contaminated soil will be removed and disposed of appropriately for the spilled material. See attached BMPs: Generator, Fuel, and Oil Management for further details.</p>	

BMP: Winterization and Interim Treatments for Erosion Control

- **Roads**
 - Existing or newly installed road surface drainage structures such as water bars, rolling dips, ditch relief culverts, and intentionally in/out-sloped segments of road shall be maintained to ensure continued function of capturing and draining surface runoff.
 - Hand tool kick-outs (lead out ditch) for existing wheel rut, surface run-off confinement.
 - Temporary waterbar/cross-wattles installed on road/trail sections of concentrating surface runoff.
 - Clean existing ditch relief culvert inlets, outlets, and contributing ditch lines of current and potential blockage debris by hand.
 - Hand place energy dissipating rock/small woody debris at ditch relief culvert outlets where erosion is occurring.
 - Wattles/straw bales placed at road runoff delivery sites.
 - Touch-up with hand tools of existing surface drainage structures (kick-outs, rolling dips, and waterbars).
 - Seed and straw un-used, or to be abandoned, road surfaces where erosion is occurring.
 - Frequent use of un-surfaced roads should be avoided, particularly when road surfaces are soft/saturated.

- **Crossings**
 - Clean inlets, outlets, and channels above of current and potential blockage debris by hand.
 - Hand place energy dissipating rock/small woody debris at ditch relief culvert outlets.
 - Hand placement of rock armor around culvert inlets.
 - Install staked wattles along the outboard road edge of out-sloped watercourse crossings where direct delivery of road surface runoff is occurring.
 - Hand placement of rock on crossing fill faces where erosion is/may occur as a result of poor crossing construction.

- **Cultivation Areas**
 - Use hand tools to capture cultivation related soils that are not contained (soil from post-harvest plant removal, soil/planter removal, general spillage).
 - Treat beds, pots, new soil storage piles, spent soil piles, and soil disposal piles with cover crops for soil stability and potentially nitrogen fixing/soil amendment.
 - Bagged potting soil should be covered.
 - Install staked wattles or an earthen berm around cultivation soils piles prior to the winter period, annually.
 - Any soil amendment, fertilizer, herbicide, or pesticide that is not 100% sealed should be stored under cover.
 - Cultivation sites with poor or concentrating drainage can have wattles or bales installed prior to winter to help prevent sediment and nutrients from leaving the site.
 - Plastic netting shall be disposed of or stored where it is inaccessible to wildlife.
 - Tarps/dep covers shall be stored so they cannot be blown away.
 - General waste from growing season gathered up and disposed of.
 - Exposed soil surfaces in the cultivation area, as well as graded fill slopes should be seeded, strawed, mulched, jute netted as needed.

- **General Areas**
 - Remove all refuse prior to leaving property for the season.
 - Back fill pit toilets to be abandoned.

BMP: General Recommendations

- **Fertilizers, soil amendments, and pesticides**
 - Fertilizer, soil amendments, and pesticide use it to be recorded in such a manner that cumulative annual totals are recorded for annual reporting.
 - Store in-use fertilizers in a securable storage container, such as a tote or deck box, adjacent to the mixing tanks.

- **Petroleum products and hazardous materials**
 - Utilize spill trays/containment structures and cover over the containment when using, fueling, changing oil on portable generators or petroleum powered water pumps to prevent the potential for leeching, seepage or spillage of petroleum products.
 - It is recommended that all petroleum products and other chemicals are registered with the California Environmental Reporting System (CERS) to satisfy future licensing requirements.

- **Water storage and Use**
 - Water use shall be designed and metered such that water used for the irrigation of cannabis will be recorded separately from domestic use. Water use for the irrigation of cannabis is to be recorded monthly for annual reporting.
 - Ensure lids are secured on all water storage tanks to prevent wildlife from becoming entrapped within the tank.
 - Install float valves, or implement another equivalent system, on all applicable water storage and transfer tanks to prevent unnecessary water diversion and the overflowing of water tanks.

BMP: General Operations BMPs

- If operations require moving of equipment across a flowing stream, such operations shall be conducted without causing a prolonged visible increase in stream turbidity. For repeated crossings, the operator shall install a bridge, culvert, or rock-lined crossing.
- During construction in flowing water, which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, temporary diversion channel or other suitable means. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life below the dam. Equipment may be operated in the channel of flowing live streams only as necessary to construct the described construction.
- Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portion of any stream channel shall be restored to as near their original condition as possible. Restoration shall include the mulching of stripped or exposed dirt areas at crossing sites prior to the end of the work period.
- Structures and associated materials not designed to withstand high seasonal flow shall be removed to areas above the high-water mark before such flows occur.
- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washing, oil or petroleum products, or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high-water mark of any stream.

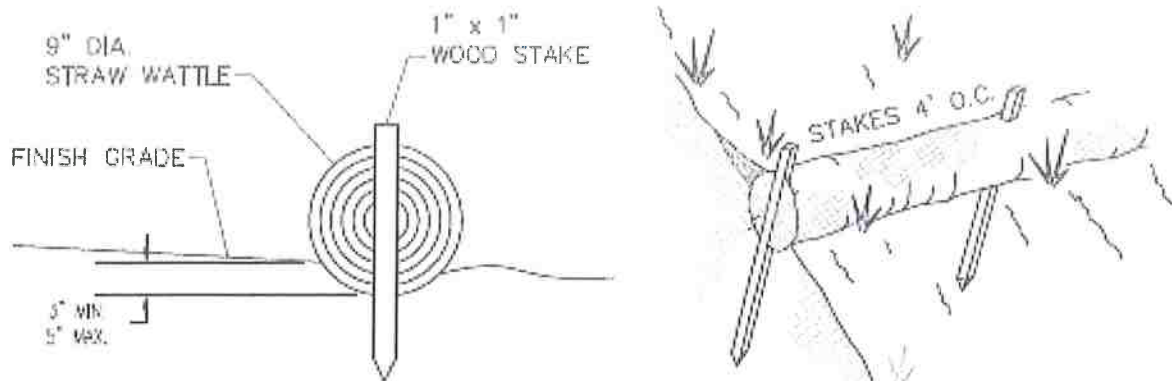
BMP: General Erosion Control

- 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.
- 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, out sloping, rolling dips, cross drains, water bars, slope stabilization measures, or other practices appropriate to site-specific conditions.
- 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) approaches to road watercourse crossings out to 100 feet or the nearest drainage facility, whichever is farthest, (C) road cut banks and fills, and (D) 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 or fine slash. 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.
- Within 100 feet of a watercourse or lake, where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from operations, the ground shall be treated with slope stabilization measures described in #3 above per timing described in #1 above.
- Side cast or fill material extending more than 20 feet in slope distance from the outside edge of a landing 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.
- 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.

BMP: General Erosion Control (Cont.)

- Erosion control and sediment detention devices and materials shall be incorporated into the cleanup/restoration work design and installed prior to the end of project work and before the beginning of the rainy season. Any continuing, approved project work conducted after October 15 shall have erosion control works completed up-to-date and daily.
- Erosion control materials shall be, at minimum, stored on-site at all times during approved project work between May 1 and October 15.
- Approved project work within the 5-year flood plain shall not begin until all temporary erosion controls (straw bales or silt fences that are effectively keyed-in) are installed downslope of cleanup/restoration activities.
- Non-invasive, non-persistent grass species (e.g., barley grass) may be used for their temporary erosion control benefits to stabilize disturbed slopes and prevent exposure of disturbed soils to rainfall.
- Upon work completion, all exposed soil present in and around the cleanup/restoration sites shall be stabilized within 7 days.
- Soils exposed by cleanup/restoration operations shall be seeded and mulched to prevent sediment runoff and transport.
- Straw Wattles (if used) shall be installed with 18 or 24-inch wood stakes at four feet on center. The ends of adjacent straw wattles shall be abutted to each other snugly or overlapped by six inches. Wattles shall be installed so that the wattle is in firm contact with the ground surface.

BMP: General Erosion Control (Cont.)

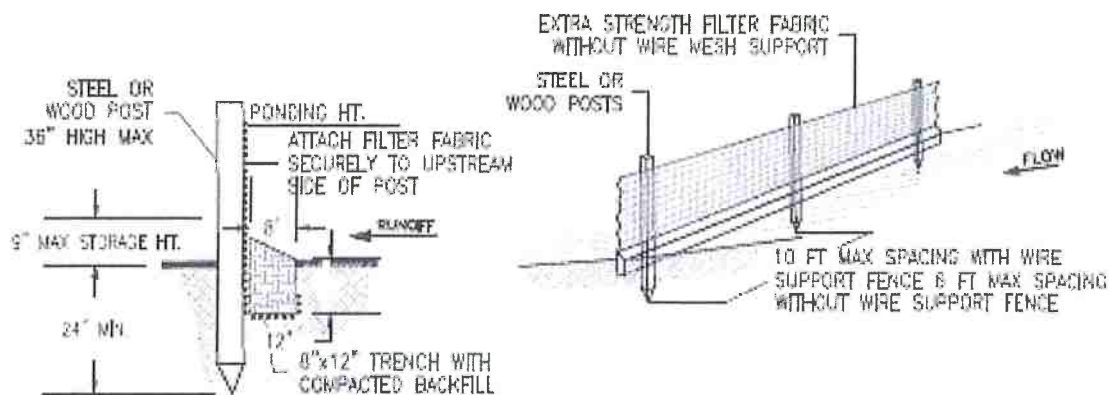


STRAW WATTLE NOTES:

1. STRAW WATTLES SHALL BE INSTALLED WITH 18 OR 24 INCH WOOD STAKES AT FOUR FEET ON CENTER. THE ENDS OF ADJACENT STRAW WATTLES SHALL BE ABUTTED TO EACH OTHER SNUGLY OR OVERLAPPED BY SIX INCHES.
2. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND THE ROLL.

STRAW WATTLE INSTALLATION DETAIL

NTS



SILT FENCE NOTES:

1. THE CONTRACTOR SHALL INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT
2. CONTRACTOR SHALL REMOVE SEDIMENT AS NECESSARY. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND IN AN AREA THAT CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE DETAILS

NTS

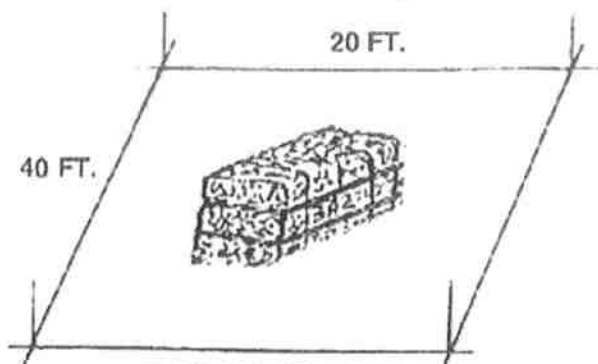
BMP: General Erosion Control (Cont.)



BMP: General Erosion Control (Cont.)

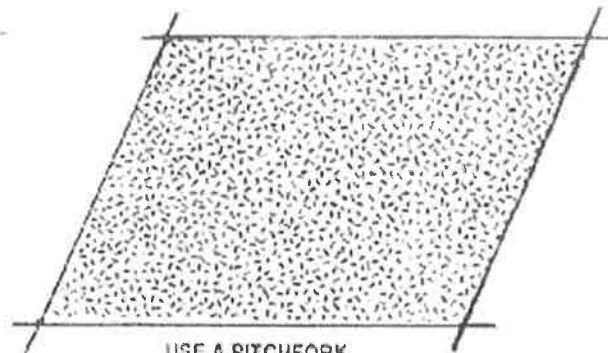
SPREAD THE STRAW

MARK OFF 800 SQ FT. PLOTS



PLACE ONE STRAW BALE PER PLOT (-74 POUNDS). THIS IS EQUIVALENT TO 2 TONS PER ACRE.

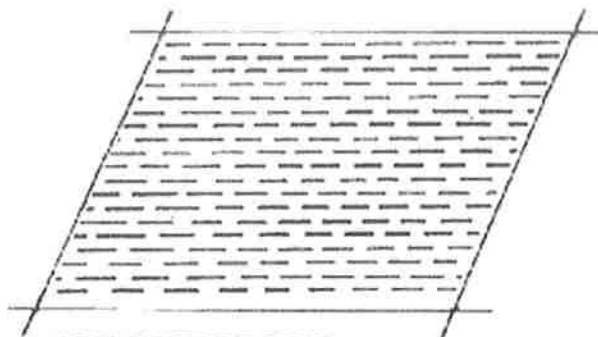
SPREAD EVENLY



USE A PITCHFORK, SPADING FORK, OR BY HAND

ANCHOR THE STRAW

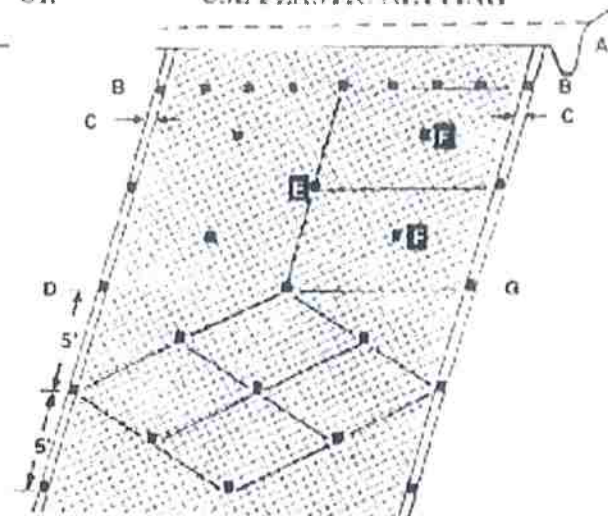
CRIMP BY HAND



WORK ACROSS THE SLOPE. PUNCH STRAW 4 INCHES DEEP. A SQUARE END SPADE WORKS WELL. MAKE PUNCH EVERY 12 INCHES.

OR

USE PLASTIC NETTING

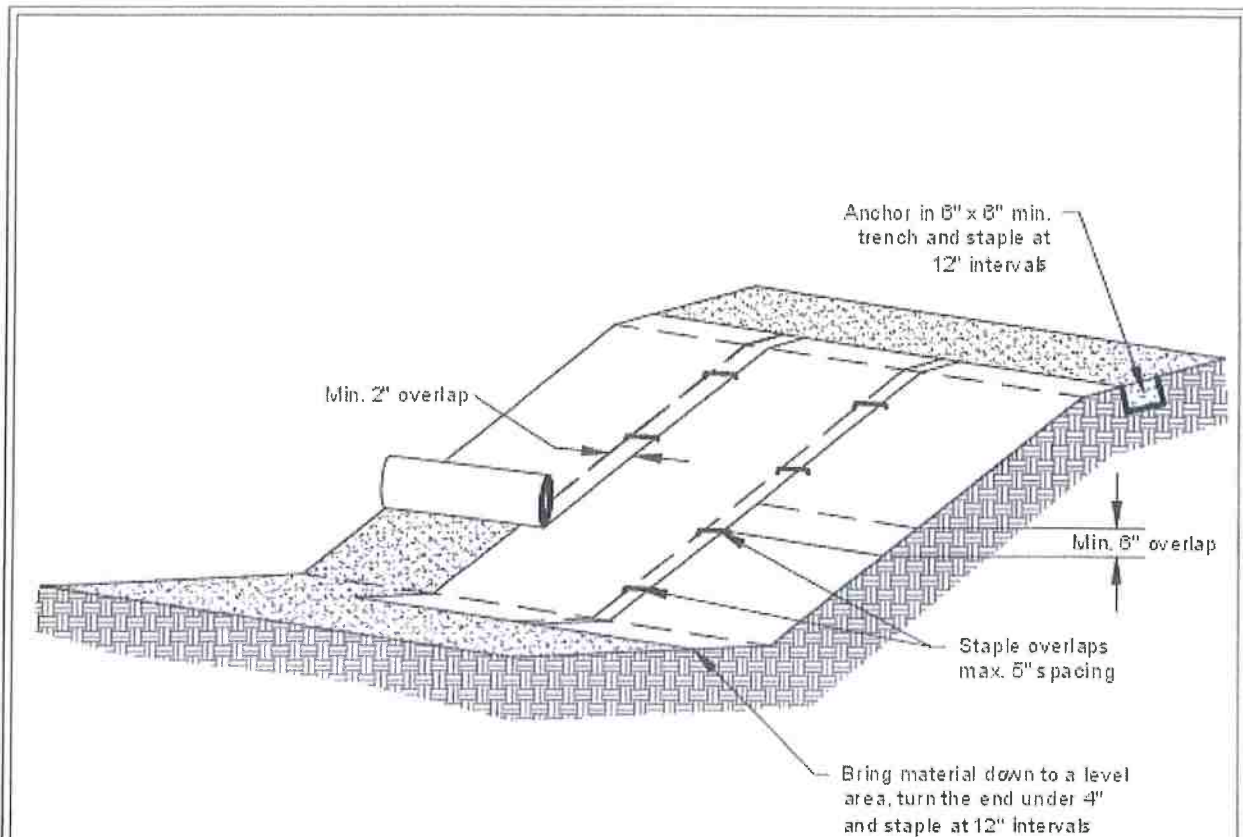


- A. LAY BIRD CONTROL NETTING OR SIMILAR MATTING IN STRIPS DOWN THE SLOPE OVER THE STRAW. BURY UPPER END IN 6-8 INCH DEEP AND WIDE TRENCH. MOST NETTING COMES IN 14 TO 17 FT. WIDE ROLLS.
- B. SECURE THE UPPER END WITH STAKES EVERY 2 FEET.
- C. OVERLAP SEAMS ON EACH SIDE 4-5 INCHES.
- D. SECURE SEAMS WITH STAKES EVERY 5 FEET.
- E. STAKE DOWN THE CENTER EVERY 5 FEET.

- F. STAKE MIDDLES TO CREATE DIAMOND PATTERN THAT PROVIDES STAKES SPACED 4-5 FEET APART.
- G. USE POINTED 1X2 INCH STAKES 8 TO 9 INCHES LONG. LEAVE 1 TO 2 INCH TOP ABOVE NETTING, OR USE "U" SHAPED METAL PINS AT LEAST 9 INCHES LONG.

NOTE: WHEN JOINING TWO STRIPS, OVERLAP UPPER STRIP 3 FEET OVER LOWER STRIP AND SECURE WITH STAKES EVERY 2 FEET LIKE IN "B" ABOVE

BMP: General Erosion Control (Cont.)



Notes:

1. Slope surface shall be smooth before placement for proper soil contact.
2. Stapling pattern as per manufacturer's recommendations.
3. Do not stretch blankets/matting tight - allow the rolls to mold to any irregularities.
4. For slopes less than 3H:1V, rolls may be placed in horizontal strips.
5. If there is a berm at the top of the slope, anchor upslope of the berm.
6. Lime, fertilize, and seed before installation. Planting of shrubs, trees, etc. should occur after installation.

NOT TO SCALE



DEPARTMENT OF
ECOLOGY
State of Washington

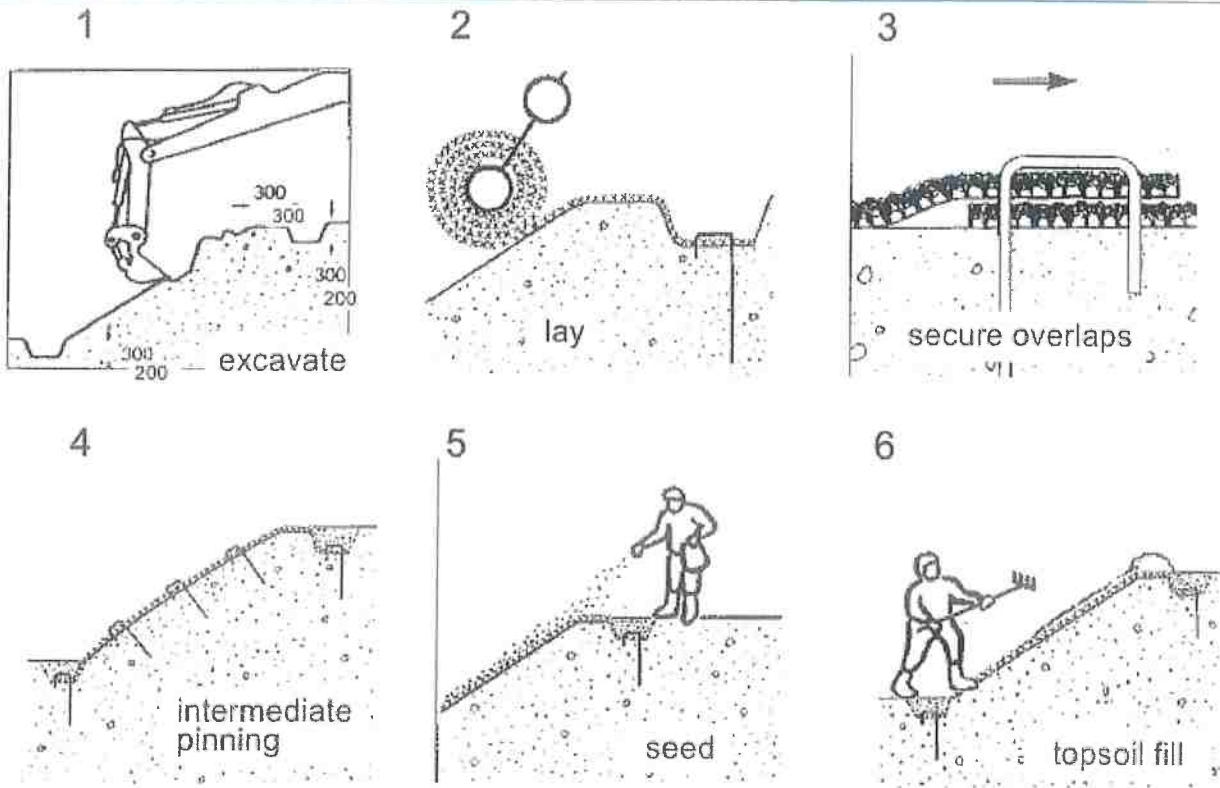
Slope Installation

Revised June 2016

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BMP: General Erosion Control (Cont.)

Installation of a geosynthetics mat - Enkamat



Erosion Control Measures (Cont.)

Erosion Control Matting & Silt Fencing



Jute netting & Straw-wattles



BMP: General Erosion Control (Cont.)**TABLE 34. Guidelines for erosion and sediment control application**

Timing of application	Technique	Portion of road and construction area treated
Erosion control during construction	Hydromulching, hydroseeding	Road fill slopes, cut slopes, bare soil areas
	Dry seeding	Road fill slopes, cut slopes, bare soil areas
	Wood chip, straw, Excelsior or tackified mulch	Road fill slopes, cut slopes, bare soil areas
	Straw wattles	Road fill slopes and cut slopes
	Gravel surfacing	Road, landing and turnout surfaces
	Dust palliative	Road surfaces
	Minimize disturbance (soil and vegetation)	All areas peripheral to construction
Sediment control during construction	Sediment basin	Roadside ditches, turnouts and small stream crossings
	Sediment traps (e.g., silt fences, straw bales barriers, woody debris barriers)	Road fill slopes, cutbanks, bare soil areas and ditches
	Straw bale dams	Ditches and small streams
	Sumps and water pumps	Stream channels and stream crossings
	Streamflow diversions (e.g., temporary culverts, flex pipe, etc.)	Stream channels and stream crossings
	Surface diversion and dispersion devices (pipes, ditches, etc.)	All disturbed bare soil areas
	Road shaping	Road and landing surfaces
Permanent erosion control	Gravel surfacing	Road, landing and turnout surfaces
	Bituminous or asphalt surfacing	Road surface
	Rolling dips	Road surface
	Ditch relief culverts	Roadbed and road fill
	Downspouts and berm drains	Road fill slopes
	Waterbars	Road and landing surfaces
	Berms	Road surface and roadside areas
	Ditches	Road and landing surfaces
	Riprap	Road fill slopes, stream crossing fills, cutbanks, stream and lake banks
	Soil bioengineering	Road fill slopes, cut slopes, stream crossings, streambanks
	Tree planting	Road fill slopes, cutbanks, bare soil areas, stream crossings, streambanks

BMP: Permanent Culvert Crossing

- New culvert installations shall be sized to accommodate flows associated with a 100-year storm event.
- If the new culvert is replacing a poorly installed old culvert, the crossing may need to be abandoned to the following standard:
 - When fills are removed they shall be excavated to form a channel that is as close as feasible to natural watercourse grade and orientation, and that is wider than the natural channel.
 - Excavated banks shall be laid back to a 2:1 (50%) or natural slope.
- 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. See Figure 97 below.
 - 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, road fill above the culvert should be no less than one-third to one-half the culvert diameter at any point on the drivable surface.
- Critical dips shall be installed on culvert crossings to eliminate diversion potential. Refer to Figure 84 below.
- Road approaches to crossings shall be treated out to the first drainage structure (i.e. waterbar, rolling dip, 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.

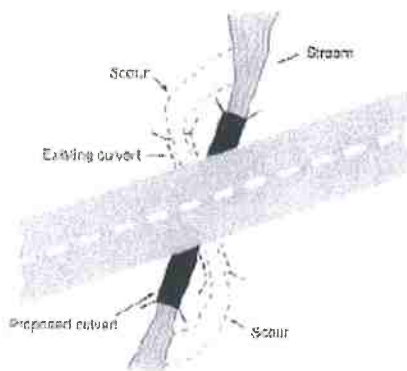


FIGURE 97. Culvert alignment should be in relation to the stream and not the road. It is important that the stream enters and leaves the culvert in a relatively straight horizontal alignment so streamflow does not have to turn to enter the inlet or discharge into a bank as it exits. This figure shows a redesigned culvert installation that replaces the bending alignment that previously existed. Channel turns at the inlet increase plugging potential because wood going through the turn will not align with the inlet. Similarly, channel turns at the inlet and outlet are often accompanied by scour against the channel banks (Wisconsin Transportation Information Center, 2004).

BMP: Permanent Culvert Crossing Design (Critical Dip and Hydrologic Disconnect Placement)

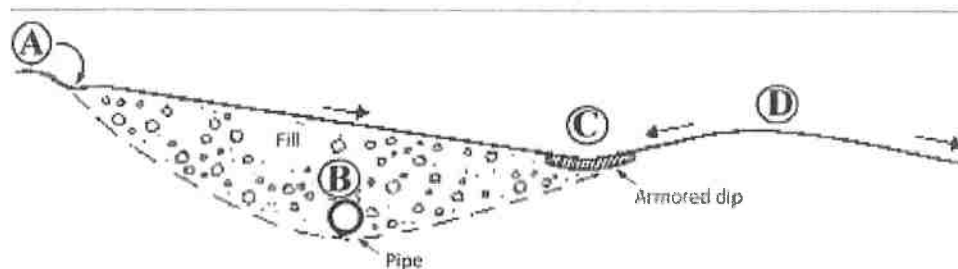
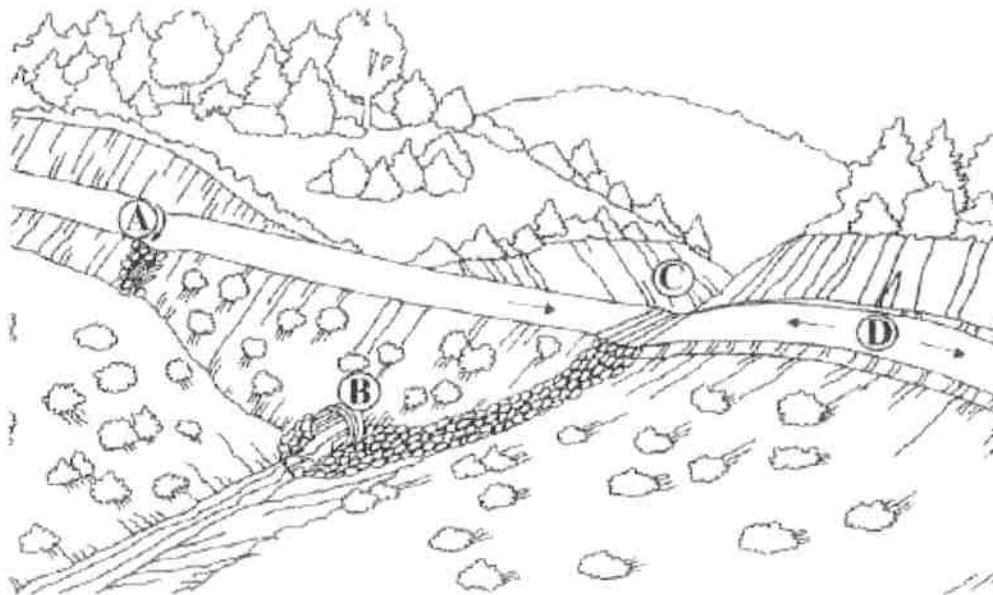
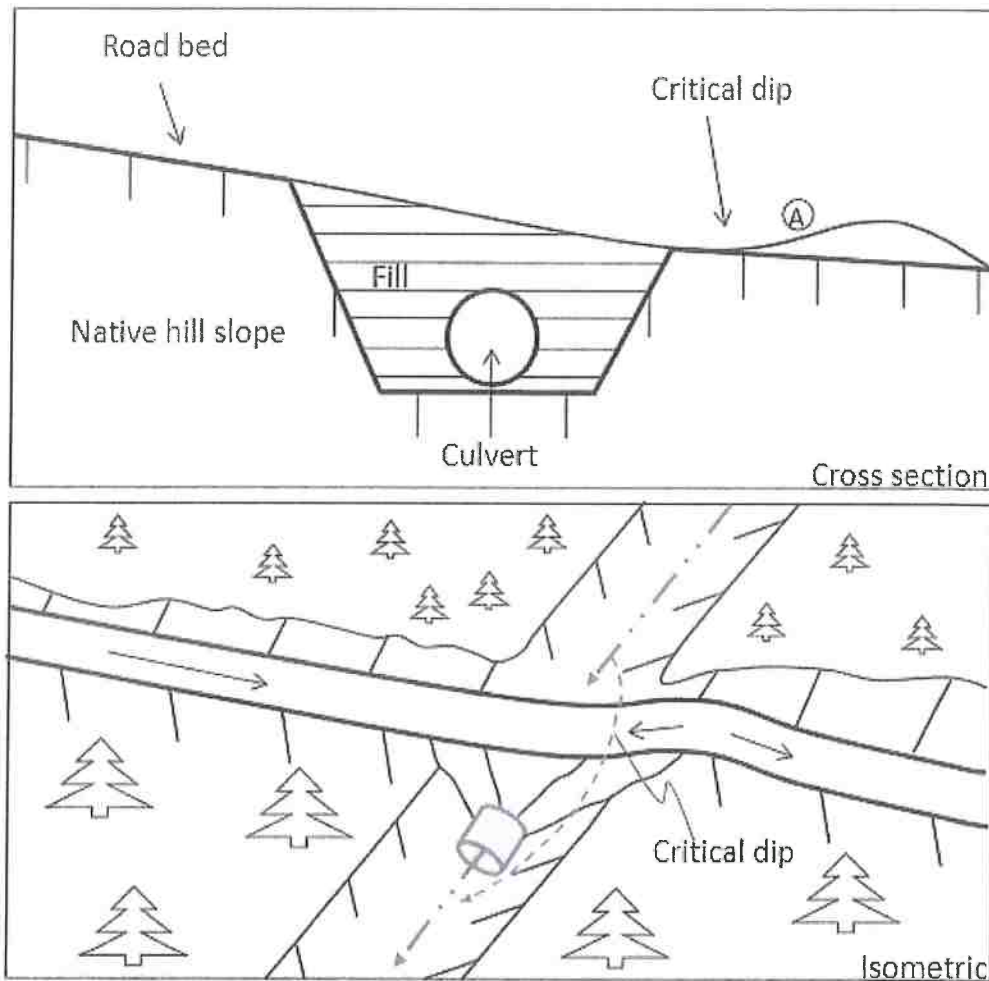


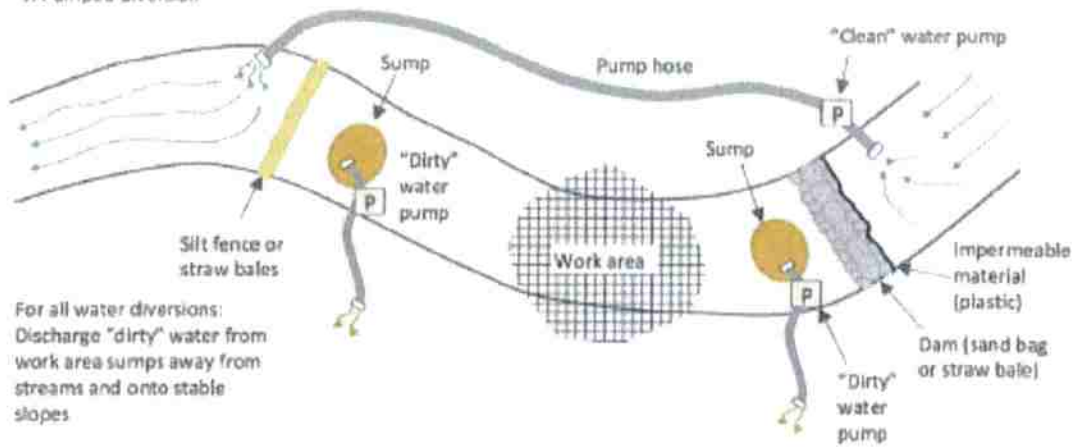
FIGURE 84. Critical dips or dipped crossing fills should be centered near a stream crossing's down-road hinge line, not over the centerline of the crossing where overtopping could cause washout or severe erosion of the fill. If the stream crossing culvert (B) plugs, water will pond behind the fill until reaching the critical dip or low point in the crossing (C) and flowing back down into the natural stream channel. The down-road ditch must be plugged to prevent streamflow from diverting down the ditch line. For extra protection in this sketch, riprap armor has been placed at the critical dip outfall and extending downslope to the stream channel. This is only required or suggested on stream crossings where the culvert is highly likely to plug and the crossing fill overtopped. The dip at the hinge line is usually sufficient to limit erosional damage during an overtopping event. Road surface and ditch runoff is disconnected from the stream crossing by installing a rolling dip and ditch relief culvert just up-road from the crossing (A) (Keller and Sherar, 2003).

BMP: Permanent Culvert Crossing Design (Critical Dip)**Typical Critical Dip Design for Stream Crossings
with Diversion Potential****Critical Dip Construction:**

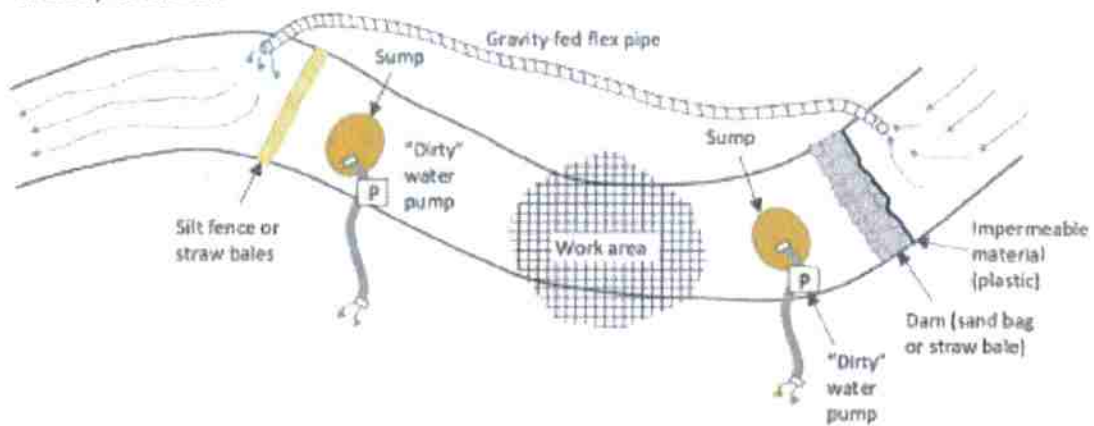
1. Critical dip will be constructed on the lower side of crossing.
2. Critical dip will extend from the cutbank to the outside edge of the road surface. Be sure to fill inboard ditch, if present.
3. Critical dip will have a reverse grade (A) from cutbank to outside edge of road to ensure flow will not divert outside of crossing.
4. The rise in the reverse grade will be carried for about 10 to 20 feet and then return to original slope.
5. The transition from axis of bottom, through rising grade, to falling grade, will be in the road distance of at least 15 to 30 feet.
6. Critical dips are usually built perpendicular to the road surface to ensure that flow is directed back into the stream channel.

BMP: Permanent Culvert Crossing Design (Cofferdam Construction and Use Specifications)

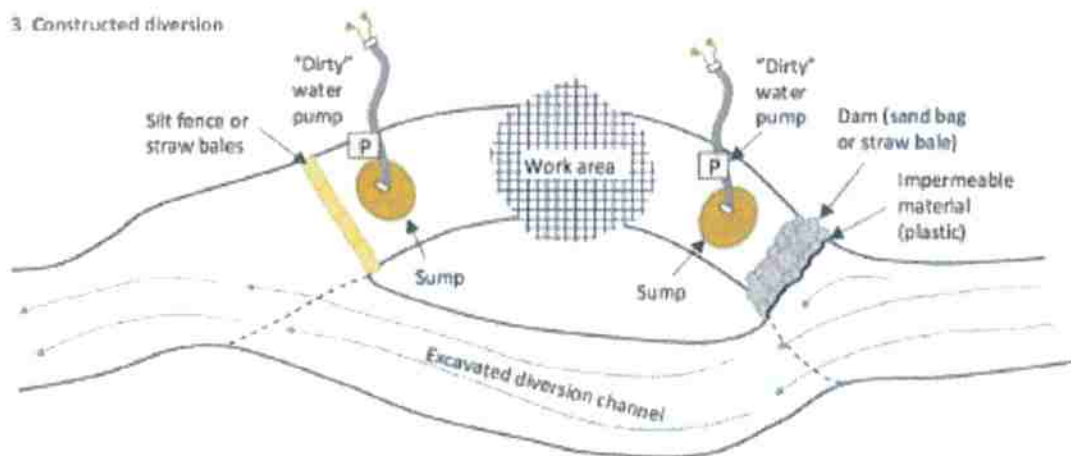
1. Pumped diversion



2. Gravity-fed diversion



3. Constructed diversion



Soil Erosion Control	Report any indications of soil erosion (e.g. gullyng, turbid water discharge, landslide, etc.)
Sediment Capture	Report the status of sediment capture measures (e.g. silt fence, fiber rolls, settling basin, etc.)
Erosion/Sediment Capture Maintenance	Report maintenance activities to maintain the effectiveness of erosion control and sediment capture measures (e.g. reinstallation of straw mulch, hydroseeding, tarp placement, removal or stabilization of sediment captured, removal of settled sediment in a basin, etc.)
Stabilization of Disturbed Areas	Dischargers characterized as high risk (with any portion of the disturbed area within the riparian setbacks), shall provide a status report describing activities performed to stabilize the disturbed area within the setback
Material(s) Storage Erosion/Spills Prevention	Report materials delivered or stored at the site that could degrade water quality if discharged off-site (e.g. potting soil, manure, chemical fertilizer, gasoline, herbicides, pesticides, etc.)
Holding Tank, Septic Tank, or Chemical Toilet Servicing	Septic tank, or chemical toilet servicing report the dates, activity, and name of the servicing company for servicing holding tanks or chemical toilets

Please note the following information for the table below:

1. Constituents shall be monitored with a calibrated instrument.
2. Samples shall be representative of storm water discharging from the disturbed area.
3. Monitoring shall be performed during all months in which activity is occurring at the site until winterization is complete. Monitoring is not required after winterization is complete for unoccupied sites during the winter months.

The following monitoring and reporting activities are required on a monthly basis for **ALL MONTHS** until winterization procedures are completed:

Constituent	Frequency
Turbidity	Once per calendar month when precipitation exceeds 0.25 in/day or when storm water runoff from the site is generated
pH	Once per calendar month when precipitation amount is forecast to exceed 0.25 in/day

Annual Reporting

Annual Reports shall be submitted to the North Coast Regional Water Quality Control Board by March 1st following the year being monitored. The first Annual Report for this enrollment shall be submitted by March 1, 2020 and report on monitoring done during the 2019 calendar year. Annual reporting is required each subsequent year of enrollment.

Implementation of Applicable BPTC Measures

Assessment of applicable BPTC measures consisted of a field examination on May 05, 2019. Anywhere applicable BPTC measures are not met on the property, descriptions of the assessments and the prescribed treatments are outlined following each associated section below.

Summary of BPTC Measures Compliance

1. Sediment Discharge BPTC Measures Y☒/N☐
2. Fertilizer, Pesticide, Herbicide, and Rodenticide BPTC Measures Y☒/N☐
3. Petroleum Product BPTC Measures Y☒/N☐
4. Trash/Refuse, and Domestic Wastewater BPTC Measures Y☐/N☒
5. Winterization BPTC Measures Y☒/N☐

1. Sediment Discharge BPTC Measures

1.1. Site Characteristics

- 1.1.1. Provide a map showing access roads, vehicle parking areas, streams, stream crossings, cultivation site(s), disturbed areas, buildings, and other relevant site features.

See attached Site Map.

- 1.1.2. Describe the access road conditions including estimating vehicle traffic, road surface (e.g., paved, rocked, or bare ground), and maintenance activities. Describe how storm water is drained from the access road (e.g., crowned, out slope, armored ditch, culverts, rolling dips, etc.).

See Land Development and Maintenance, Erosion Control, and Drainage Features above. Roads are in overall good condition and require minimal maintenance. Roads are drained with a combination of out-sloping, rolling dips and water bars.

This property is accessed by 20 people during peak season.

- 1.1.3. Describe any vehicle stream crossing including the type of crossing (e.g., bridge, culvert, low water, etc.).

See Mitigation report for stream crossing descriptions.

- 1.1.3.1. For Region 1 Dischargers, identify, discuss, and locate on the site map any legacy waste discharge issues that exist on the property.

- 1.2. Sediment Erosion Prevention and Sediment Capture (Moderate risk Tier 1 or Tier 2 Dischargers are required to submit a Site Erosion and Sediment Control Plan. Those Dischargers may refer to that plan rather than repeat it here)

1.2.1. Erosion Prevention BPTC Measures

- 1.2.1.1. Describe the BPTC measures that have been, or will be implemented to prevent or limit erosion. Provide an implementation schedule for BPTC measures that have not yet been implemented. Identify the erosion prevention BPTC measures on a site map.

See the Mitigation Report, Treatment Implementation Schedule, and Site Map to follow for site specific details.

- 1.2.1.1.1. The description shall address physical BPTC measures, (e.g., placement of straw mulch, plastic covers, slope stabilization, soil binders, culvert outfall armoring, etc.) and biological BPTC measures (vegetation preservation/replacement, hydro seeding, etc.).

Not applicable.

1.2.2. Sediment Control BPTC Measures

- 1.2.2.1. Describe the BPTC measures that have been, or will be implemented to capture sediment that has been eroded. Provide an implementation schedule for BPTC measures that have not yet been implemented. Identify the sediment control BPTC measures on a site map.

Implementation schedule attached

- 1.2.2.1.1. The description shall address physical BPTC measures, (e.g., placement of silt fences, fiber rolls, or settling ponds/areas, etc.) and biological BPTC measures (vegetated outfalls, hydro seeding, etc.).

Not applicable.

1.2.3. Maintenance Activities - Erosion Prevention and Sediment Control

- 1.2.3.1. Describe how the erosion prevention and sediment control BPTC measures will be monitored and maintained to protect water quality.

Road drainage features will be monitored to ensure that sediment accumulation does not occur at such an amount as to allow the feature to be overtopped, rendering it ineffective. Road drainage features will be maintained by clearing any deposited sediment with a shovel or

similar tool, to allow the features to function properly and keep the roads free of surface water flows.

All seeding that is to take place will be monitored to ensure that the vegetation is taking root to bind the soil in place. These seeding locations will be maintained by continuously seeding and straw mulching until vegetation does take root.

- 1.2.3.2. Describe how any captured sediment will be either stabilized in place, excavated and stabilized on-site, or removed from the site.

Any sediment that is captured in road drainage features will be excavated via hand tools, and relocated to gently-sloped ground that is outside of the riparian setbacks. The soil will then be spread thinly, and seeded and straw mulched to ensure the vegetation binds the soil in place, preventing any possible transport into Waters of the State.

- 1.2.4. Erosion control BPTC measures: Describe the interim soil stabilization, if applicable and long-term BPTC measures implemented to prevent sediment transport at each identified disturbed area(s) and improperly constructed features.

None.

2. Fertilizer, Pesticide, Herbicide, and Rodenticide BPTC Measures

- 2.1. Provide a summary table that identifies the products used at the site, when they are delivered to the site, how they are stored, and used at the site. If products are not consumed during the growing season, describe how they are removed from the site or stored to prevent discharge over the winter season.

See fertilizer table attached to this report.

- 2.2. Provide a site map that locates storage locations.

See attached Site Map.

- 2.3. Describe how bulk fertilizers and chemical concentrates are stored, mixed, applied, and how empty containers are disposed.

All fertilizers and chemical concentrates are stored in fully contained metal storage containers on site. All products are mixed and applied using the manufacturers specifications. Empty containers are stored temporarily in a metal storage container before being removed off-site and disposed.

- 2.4. Describe procedures for spill prevention and cleanup.

Fertilizer, pesticides, and herbicide products are stored in a purpose-built structure or within the agricultural storage structure over winter. The cannabis cultivator shall obtain adequate quantities of absorbent materials and ensure that they are stored at all locations where the materials above are used, stored, or mixed. Should a spill of these materials occur, absorbent materials will be applied

immediately and allowed enough time to absorb as much material as possible. Following treatment, absorbent materials applied will be removed and disposed of appropriately as per the manufacturer's guidelines.

3. Petroleum Product BPTC Measures

3.1. Provide a summary table that identifies the products used at the site, when they are delivered to the site, how they are stored, and used at the site. If products are not consumed during the growing season, describe how they are removed from the site or stored to prevent discharge over the winter season.

3.2. Provide a site map that locates storage locations.

See Site Map for fuel storage location.

3.3. Describe how fuels, lubricants, and other petroleum products are stored, mixed, applied, and empty containers are disposed.

Petroleum Products

Products used on site	When they are delivered to site	How they are stored and used	How removed or stored
Gasoline	Brought to site as needed.	Stored in a 1,000 gallon tank and in multiple portable storage container stored separately from fertilizers in the storage structure. Used to fuel equipment and back-up generators.	Stored in its own area away from fertilizers as shown on the site map, as well as within a dedicated storage container (for portable fuel canisters and oil).

3.4. Describe procedures for spill prevention and cleanup.

Any/all fuel canisters and motor oil containers shall be stored in secondary containment (e.g. plastic totes or sealed metal boxes) while being stored long term or not in immediate use, wherever these materials are used anywhere on the property. Adequate quantities of absorbent materials are stored at all locations where these types of materials are used, stored, or mixed. Should a spill of these materials occur, absorbent materials will be applied immediately and allowed enough time to absorb as much material as possible. Following treatment, absorbent materials applied as well as any contaminated soil will be removed and disposed of appropriately for the spilled materials.

4. Trash/Refuse, and Domestic Wastewater BPTC Measures

4.1. Describe the types of trash/refuse that will be generated at the site. Describe how the material is contained and properly disposed of.

Trash generated on the site includes organic and inorganic wastes from both agricultural and domestic activities. Trash is properly stored on the property, and

disposed of via the Cultivator at Eureka Recology station or Humboldt Sanitation & Recycling as needed.

4.1.1. Provide a site map that locates the trash/refuse storage locations.

Trash is collected in a trailer and taken to the authorized transfer station. There is no specific location for this trailer.

4.2. Describe the number of employees, visitors, or residents at the site.

There are approximately 20 employees during peak season. There is one full time residence at the property.

4.2.1. Describe the types of domestic wastewater generated at the site (e.g., household generated wastewater or chemical toilet).

Household generated wastewater

4.2.2. Describe how the domestic wastewater is disposed.

OWTS

4.2.2.1. Permitted onsite wastewater treatment system (e.g., septic tank and leach lines).

Septic and leach field.

4.2.2.2. Chemical toilets or holding tank. If so, provide the name of the servicing company and the frequency of service.

Chemical toilets are provided by "B&B" and are served bi-weekly.

4.2.2.3. Outhouse, pit privy, or similar. Use of this alternative requires approval from the Regional Water Board Executive Officer; include the approval from the Executive Officer and any conditions imposed for use of this alternative.

4.2.2.3.1. Provide a site map that locates any domestic wastewater treatment, storage, or disposal area.

5. Winterization BPTC Measures

5.1. Describe activities that will be performed to winterize the site and prevent discharges of waste. The description should address all the issues listed above.

See Mitigation Report and Annual Winterization Measures for prescribed general winterization measures that will be performed prior to each Winter Period, and site specific interim measures that will be performed prior to the Winter Period until permanent, prescribed treatments can be executed.

5.2. Describe maintenance of all drainage or sediment capture features (e.g., drainage culverts, drainage trenches, settling ponds, etc.) to remove debris, soil blockages, and ensure adequate capacity exists.

Existing drainage structures will be repaired as feasible and necessary with hand tools during annual winterization and winter monitoring. Prescribed repair and maintenance will be executed in accordance with the Mitigation Report and Treatment Implementation Schedules.

- 5.3. Describe any revegetation activities that will occur either at the beginning or end of the precipitation season.

See attached Mitigation Report and Treatment Implementation Schedule above.

- 5.4. If any BPTC measure cannot be completed before the onset of Winter Period, contact the Regional Water Board to establish a compliance schedule.

See attached Mitigation Report and Treatment Implementation Schedule above.

- 5.5. For Region 1 Dischargers, describe any activities that will be performed to address legacy waste discharge issues. Region 6 Dischargers should consult with Regional Water Board staff to confirm if any other activities in addition to BPTCs are necessary to address legacy waste discharge issues.

See attached Mitigation Report and Treatment Implementation Schedule above.

Site Erosion and Sediment Control Plan

(Tier 2, Moderate Risk)

1. Site Description

1.1. Describe the site (e.g., topography, vegetation, elevation, historic precipitation patterns, soil types, surface waterbodies, etc.).

See the Project Description in the above pages.

1.2. Site Disturbances – Provide a site map that shows the location of all of the applicable following items. For each mapped item, provide a description of the item.

See the Site Map and Mitigation Report in the above pages.

1.2.1. Historic (Existing) Disturbances (e.g., access/site roads, buildings, stream crossings, disturbed areas, graded areas, cultivation areas, vehicle parking areas, disturbed vegetation areas, etc.).

See the Site Map and Mitigation Report identifying and describing existing disturbed areas in the above pages.

1.2.2. Recent or Planned Disturbances (e.g., access/site roads, buildings, disturbed areas, graded areas, cultivation areas, vehicle parking areas, vegetation removal areas, etc.).

There are no planned disturbances, outside of road mitigations. Recent grading around the periphery of all cultivation sites consisted of minor grading to improve drainage. Fill slopes and cut banks were seeded and found to be moderately vegetated. At Site 04 minor cut bank slumping is occurring just above the greenhouses. This location does not pose a threat to water quality.

1.2.3. Areas of Special Concern (e.g., describe any existing or planned stream or wetland crossing, any culverts, any slope that shows evidence of past failure, or evidence of instability (e.g., cracks in retaining walls, surface cracks in soil, bulging soil, groundwater discharge areas, sunken road beds, downslope leaning trees or utility poles, etc.).

See 1.2.2 above

1.2.4. Describe and show on the site map, the storm water runoff sampling locations.

No sampling locations being defined at this time as there is no threat to water quality.

1.3. Erosion Prevention BPTC Measures

1.3.1. Describe the BPTC measures that have been, or will be implemented to prevent or limit erosion. Provide an implementation schedule for BPTC measures that have not yet been implemented. Identify the erosion prevention BPTC measures on a site map.

See the Mitigation Report, Treatment Implementation Schedule, and Site Map to follow for site specific details.

1.3.1.1. The description shall address physical BPTC measures, (e.g., placement of straw mulch, plastic covers, slope stabilization, soil binders, culvert outfall armoring, etc.) and biological BPTC measures (vegetation preservation/replacement, hydro seeding, etc.).

See Site Management Plan for project wide descriptions.

1.4. Sediment Control BPTC Measures

1.4.1. Describe the BPTC measures that have been, or will be implemented to capture sediment that has been eroded. Provide an implementation schedule for BPTC measures that have not yet been implemented. Identify the sediment control BPTC measures on a site map.

No capture structure are proposed.

1.4.1.1. The description shall address physical BPTC measures, (e.g., placement of silt fences, fiber rolls, or settling ponds/areas, etc.) and biological BPTC measures (vegetated outfalls, hydro seeding, etc.).

No such measures are proposed.

1.5. Maintenance Activities - Erosion Prevention and Sediment Control

1.5.1. Describe how the erosion prevention and sediment control BPTC measures will be monitored and maintained to protect water quality.

See Site Management Plan for project wide descriptions. Winter monitoring will be done to identify and address any drainage, erosion, or instability issues not present during the assessment.

1.5.2. Describe how any captured sediment will be either stabilized in place, excavated and stabilized on-site, or removed from the site.

Not applicable.

2. Winterization

2.1. Prevention

2.1.1. Describe the BPTC measures that will be implemented before winter precipitation occurs to prevent erosion of disturbed areas, including the cultivation area.

See Site Management Plan for project wide descriptions. Based on conditions at the time of the assessment, no site specific winterization measures are being prescribed at this time for the area of special concern.

2.1.2. Describe maintenance of all drainage or sediment capture features (e.g., drainage culverts, drainage trenches, settling ponds, etc.) to remove debris, soil blockages, and ensure adequate capacity exists.

See Site Management Plan for project wide descriptions.

2.1.3. Describe any revegetation activities that will occur either at the beginning or end of the precipitation season.

See Site Management Plan for project wide descriptions. Based on conditions at the time of the assessment, no site specific revegetation measures are being prescribed at this time for the area of special concern.

Photographs

Cultivation Area A



Cultivation Area B



APN# 216-073-007

WDID#:

2019 Soil Amendment & Chemical Use

Product Type/Name	Annual Amount Applied (Gallons or Pounds)	Nutrient Content/N-P-K Ratio
Chicken manure	26,040 lbs	3-2-2
Archipelago Bat Guano	9950	0-7-0
Steamed Bone meal	2520	3-15-0
Soft Rock phosphate	650	0-3-0
Azomite	650	0-0-0.2
Gypsum	3900	Calcium Sulphate Dihydrate 97%
Sulphate potash	325	0-0-22
Epsom Salt	325	Magnesium Sulphate 0-0-0
Seaweed powder	74	0-0-16
Molasses	29 gal	1-0-5

APN # 216-073-002

①

WDID#:

2019 Soil Amendment & Chemical Use

Product Type/Name	Annual Amount Applied (Gallons or Pounds)	Nutrient Content/N-P-K Ratio
Chicken Manure	35,460 lbs.	3-2-2
Nitrogen Bat Guano	1940	9-2-1
Nitrogen Bat Guano	375	7-2-1
Archipelago Bat Guano	14,650	0-7-0
Steamed Bone Meal	3480	3-15-0
Soft Rock phosphate	990	0-3-0
Azomite	990	0-0-0.2
Gypsum	5950	Calcium Sulphate Dihydrate 97%
Sulphate potash	495	0-0-22
Epsom Salt	990	Magnesium Sulphate 0-0-0
Diatomeaceous Earth	700	Silica 100% 0-0-0
Seaweed powder	102	0-0-16

APN # 216-073-002

Monthly Water Tracking 2019



WDID#:

Month	Total Surface Water Diversion	Water input to Storage by Source (gallons)	Water use by Source (gallons)
January	400,000 gal	Pond / 400,000 gal	8,000 / Pond
February	300,000	Pond / 300,000	10,000 / Pond
March	300,000	Pond / 300,000	10,000 / Pond
April			17,000 / Pond
May			42,000 / Pond
June			65,000 / Pond
July			93,000 / Pond
August			90,000 / Pond
September			60,000 / Pond
October			18,000 / Pond
November	200,000	Pond / 200,000	16,000 / Pond
December	300,000	Pond / 300,000	10,000 / Pond

Pond total capacity 1.5 million gallons.
Rain water collection only.

APN # 216-073-007

Monthly Water Tracking 2019

WDID#:



Month	Total Surface Water Diversion	Water input to Storage by Source (gallons)	Water use by Source (gallons)
January		Pond located on adjacent property	0
February		with water easement. (216-073-002)	0
March			0
April			0
May			40,000 / Pond
June			60,000 / Pond
July			85,000 / Pond
August			80,000 / Pond
September			65,000 / Pond
October			35,000 / Pond
November			0
December			0