Attachment 4.B

GREEN ROAD CONSULTING

Site Management Plan

WDID: 1_12CC402455

Prepared for:

State Water Resources Control Board (SWRCB)

North Coast Regional Water Quality Control Board (NCRWQCB)

Prepared by:

Green Road Consulting
1650 Central Ave., Suite C, Mckinleyville CA, 95519
(707) 630-5041

Date of completion:

8/01/2018

General Site Information

Discharger: Marin Stoilov

Land Owner: Mariya Stoilova

Site Address: 33096 St HWY 36, Bridgeville, CA 95526

Mailing Address: 33096 St HWY 36, Bridgeville, CA 95526

Parcel Number: 210-051-079 & 210-051-080

General Plan Designation: RA20-160 (Both Parcels)

Zone: FR-B-5(20) (Both Parcels)

Parcel Size: 40 acres

HUC12 Watershed: 180101050901 Butte Creek watershed & 180101050905 Hoagland Creek-Van Duzen River watershed

Disturbed Area: 0.87 acres

Cultivation Area: 0.39 acres

Risk Level: Moderate

Tier Level: 1

Abbreviations

CA	**Cultivation Area**
CPP	**Corrugated Plastic Pipe**
CMP	**Corrugated Metal Pipe**
CDFW	**California Department of Fish and Wildlife**
DRC	**Ditch Relief Culvert**
GRC	**Green Road Consulting**
IBD	**In-board Ditch**
NCRWQCB	**North Coast Regional Water Quality and Control Board**
PWA	**Pacific Watershed and Associates**
SWRCB	**State Water Resources and Control Board**
STX	**Stream Crossing**

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1. Introduction

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Green Road Consulting (**GRC**) has made an initial assessment of this parcel through field work as well as through a variety of County, State, and private websites (e.g. USDA web soil survey, USGS stream stats program, Google Earth, Humboldt County Web GIS). The site was surveyed with a GPS unit (2 to 4-meter accuracy) to document roads, buildings, cultivation sites, watercourses, and areas requiring remediation. Maps were created using the software ESRI ArcMap.

2. Site Characteristics

2.1. General

The site is located in southeastern Humboldt County, approximately 8.5-miles east of the City of Bridgeville and can be accessed from CA SR 36. The elevation of the site is approximately 2,680 feet above sea level. The parcel is located on a ridge with unnamed tributaries that mainly flow from south to north into Little Larabee Creek which is a tributary to the Van Duzen River. The Van Duzen River is listed on the USEPA's Section 303(d) list for impairment or threat of impairment to water quality associated with elevated sediment levels. The Van Duzen River is known to have anadromous fish (Chinook Salmon, Coho Salmon, and Steelhead) which are designated as a Federally and State threatened species. Slopes on the site range from 5%-30%. The hillslopes in the region are known to have high instability. The site geology is part of the Franciscan Complex which is primarily composed of Late Cretaceous to Pliocene sandstone, shale and minor conglomerate. The region was historically logged with legacy logging roads and landings throughout the site. Locations of areas that need remediation are denoted as Map Points **(MP)** in the Site Overview Map.

2.2. Site Overview

The two (2) approximately 40-acre properties have (1) one permitted groundwater well. The site also utilizes rain water catchment to reduce the amount of water drawn in the summer. There are two residences located on each parcel. Accessory structures on the parcels include three (3) storage sheds, and two (2) privies that will be removed. Water for cultivation and domestic use is drawn from the well and from rain catchment. There were two locations on the site where trash and chemicals were not stored appropriately.

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The site currently has four (4) locations where cultivation takes place. Cultivation areas are delineated as **CA1** and **CA2** on the upper parcel 210-051-079, and **CA3** and **CA4** on the lower parcel 210-051-080. **CA2** was near a wet seep area with potential to be a wetland. A qualified professional should conduct a wetland delineation here if the site is to be developed or used for cannabis cultivation but as of now the land owner plans to permanently discontinue cultivation at **CA2**. The total garden area across these sites totals 16,950-ft^2. Vegetation removal and or exposed earth were observed adjacent to some garden areas and were mapped as disturbed area. The site had approximately 37,950-ft^2 (including cultivation area) of disturbed area that was located outside of the watercourse buffers. Some of the disturbed areas were located on slopes greater than 30%. The site was determined to be Tier 1 Moderate Risk. Proper adherence to the erosion and sediment control measures specified in the "Erosion Prevention and Sediment Capture" section of this report will be necessary to ensure that these areas are sufficiently stabilized.

Table 1 Cultivation area overview.

Cultivation Area (CA)	Cultivation Area (ft^2)	Natural Slope (%)	Distance to Water Body (ft)	Water Body Classification
Area 1 (CA1)	6,500	29	190	Class II
Area 2 (CA2)	2,375	36	135	Class II
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Area 4 (CA4)	7,400	17	205	Class III

2.3. Access Roads

The site has 0-miles of permanent roads, approximately 0.75-miles of seasonal access roads, and 0-miles of skid roads. The seasonal roads are native surface with sections of roads that are in-sloped with a ditch relief culvert or out-sloped. The seasonal access roads are drained via rolling dips, ditch relief culverts, and out-sloping. The seasonal access roads on the site were not fully stable according to the Pacific Watershed Associates (PWA) "Handbook for Forest, Ranch, and Rural Roads". There were two locations where the road drainage did not meet the standard. Rolling dips will be installed at **MP2** and just east of **MP6** as shown on the Overview Map. The access road also had a failing 5-inch ditch relief culvert that will be replaced with an 18-inch pipe (**MP3**). For location of disturbed areas requiring stabilization see the Disturbed Area Map.

Short sections of the access roads on the site had slopes that approached 17%. These sections will be armored with crushed angular rock. The access roads on the site are maintained when needed. The roads are only used during cultivation season by the land owner, May through October. The main access road at the site is shared with a neighboring parcel. The roads are used minimally by workers navigating the site and bringing in supplies. Workers are on the site daily and most supplies are brought in the beginning of the season. Vehicles are primarily parked near either residence on each parcel. Stabilization of existing roads will be addressed in the Site Erosion and Sediment Control Plan.

2.4. Stream Crossings

There is one (1) stream crossing on the property that is the responsibility of the property owner (**MP1**). The stream crossing consisted of a 24-inch corrugated plastic pipe (CPP) on a class III stream, which

received flow from two in-board ditches. The ditches will be rock lined for approximately 25-ft from the watercourses on either side. The culvert is not sized for the 100-yr storm event and will be replaced with a minimum 30-inch culvert. All stream crossing work will be permitted through the appropriate agencies (e.g CDFW, NCRWQCB) before work commences.

Table 2: Overview of stream crossings on the property.

Label	Size (inch)	Type	Watercourse Class	Condition
STX1	24	CPP	Class III	Ok, but undersized for 100-yr storm

2.5. Legacy Waste Discharges

The site was historically logged with main logging roads, skid roads, and log landings on the property. The site utilized the existing infrastructure from logging practices which required minimal grading and brush clearing. Skid roads on the site were in stable condition with no major erosion or sediment delivery to any watercourse.

3. Erosion Prevention and Sediment Capture

The disturbed areas consisted of the cultivation areas, soils/amendment piles, unstable road segments, and a processing area as shown on the Disturbed Area Map. For details on erosion prevention and sediment capture, see the Site Erosion and Sediment Control Plan.

4. Water Uses

Water for cannabis irrigation and domestic is sourced from a groundwater well. All irrigation infrastructure will be regularly inspected for leaks and immediately repaired if any are found. Weed free mulch or straw will be used in cultivation areas that do not have ground cover to reduce evaporation and conserve water. Water conservation such as water timing and drip irrigation will be implemented to ensure water is applied at agronomic rates. The cultivator will record daily irrigation water usage and maintain records on site for a minimum of 5 years. Since the site sources water from a confined aquifer there are no forbearance restrictions. The estimated annual water use is summarized below.

Table 3: Annual estimated water uses on the parcel for cannabis cultivation.

Source	Use	Start Date	End Date	To Storage (gallons)	To Use (gallons)
Rain Catchment	Cannabis	Apr. 1	Nov. 1	224,000	
Well	Cannabis	Apr. 1	Nov. 1		160,000
Rain-Catchment Storage	Cannabis	Apr. 1	Nov. 1		224,000

The site has 224,000-gallons of water storage available which is summarized in Table 3. Water meters will be installed to monitor use. To conserve water, a straw or mulch ground cover should be applied to reduce

water evaporation. Water conservation methods such as watering method and timing will be employed to ensure water is applied at agronomic rates.

Table 4: Summary of water storage on the parcel.

Water Storage Type	Size (gallons)	Number	Total (gallons)
Hard Tank	2,500	6	15,000
Hard Tank	5,000	1	5,000
Hard Tank	2,000	1	2,000
Hard Tank	1,000	2	2,000
Concrete Tank	100,000	1	100,000
Bladder	50,000	2	100,000
	Total		**224,000**

The water bladders did not have proper containment and were not permitted (**MP4 & MP5**). The water bladder will require a berm 1.5 times higher than the water bladder when full. The water bladders will be removed from the site within the next two years and will likely be replaced with more water storage if necessary. The water bladders will be disposed of at an appropriate waste facility.

5. Fertilizers, Pesticides and Herbicides

5.1. Application, Storage and Disposal

All fertilizers, Pesticides, Herbicides and Rodenticides will be mixed or prepared in locations where they cannot enter a waterbody (surface or groundwater). Fertilizers, Pesticides, Herbicides and Rodenticides shall be applied at agronomic rates specified on the product label. The enrollee will keep a log of their fertilizers, pesticides and herbicides use for annual reporting. All labels will be kept, and directions followed when amendments and fertilizers are applied. All liquid chemicals will be stored in ***separate*** secondary containment. During the off season all chemicals will be stored in a locked building. **Agricultural chemicals will not be applied within 48-hr of a predicted rain event with a 50% or greater chance of 0.25-inches.** Disposal of unused products will be consistent with labels on containers. Empty containers will be disposed of at an authorized recycling center. A spill clean-up kit will be stored in the garage/shop. No restricted materials or pesticides will be used or stored on site. No greater than 319 pounds of nitrogen per acre per year shall be applied. A summary of fertilizers, pesticides, and herbicides used annually are listed below.

Table 2: Overview of annual chemical/fertilizer use.

Product Name	Chemical/Fertilizer Type	N-P-K or Active Ingredient	Annual Use (lbs. or gallons)
North Coast Plant Therapy	Insecticide	Soybean Oil, Peppermint Oil, Citric Acid	1.25 gallons of concentrate

Product Name	Chemical/Fertilizer Type	N-P-K or Active Ingredient	Annual Use (lbs. or gallons)
Pure Neem Oil	Pesticide	Azadirachtin	.25 gallons
Ed Rosenthal's Zero Tolerance	Fungicide	Potassium Bicarbonate, Cinnamon, Thyme	10 gallons
MAXSEA Plant Food	Fertilizer	16-16-16	15 gallons
Cal-Mag	Fertilizer	2-0-0	15 gallons
Dyna-Gro Bloom	Fertilizer	3-12-6	15 gallons
Dyna-Gro Bloom	Fertilizer	7-9-5	15 gallons
Chicken Manure	Fertilizer	1.1-0.8-0.5	500 lbs
Fish Powder	Fertilizer	12-1-1	50 lbs

5.2. Spill Prevention and Clean Up

A spill cleanup kit will be in the storage buildings near each residence. In case of a major spill of fertilizers, or any petroleum products, the cannabis cultivator shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and initiate cleanup activities for all spills before they enter a waterbody or degrade groundwater.

6. Petroleum

6.1. Use, Storage, and Disposal

The site is not grid tied and uses generators that require storage of petroleum products. Generators are only used as a backup system and are not the primary power source. A large fuel containment system had the appropriately sized containment but did not have a cover (**MP7**). The fuel container will get a cover and will be permitted with the Department of Environmental Health. The site also had two (2) locations where used oil was inappropriately stored on the bare soil (**MP6** & **MP5**). Trash and used oil will be stored in sheds temporarily before being removed to the appropriate waste facility. While in use, the generators will need to be stored with drip containment outside of riparian setbacks. Fueling of the generators, as well as any other equipment or vehicles, will also take place outside of the riparian setbacks. All equipment containing petroleum derivatives will be inspected regularly for leaks. When the generators are not in use they will be stored in a covered building.

Table 3: Overview annual petroleum usage.

Product	Chemical Type	Annual Use (lbs. or gallons)
Gasoline	Petroleum	150 gallons
Motor Oil	Petroleum	45 gallons

7. Cultivation Waste, Trash/Refuse and Domestic Wastewater

7.1. Trash/Refuse Overview

All trash will be stored in a shed near each residence. Trash will be removed on a weekly basis to an authorized landfill. No trash or debris will be allowed to enter a watercourse or riparian setback area. Compostable cultivation waste will be stored in a location and manner where it cannot be transported to surface waters. The site had multiple cultivation soil piles that will require a perimeter control and cover when not in use. Spent growth medium (e.g. soil) shall either be reused, disposed of at an appropriate waste site, or be spread outside of riparian setbacks and planted with native vegetation.

7.2. Domestic Wastewater BPTC Measures

It is unknown if the site has a permitted septic system. The site was historically using pit toilets for human waste disposal. Pit toilets will be filled in immediately. Portable toilets will be brought onto the site until a permitted septic system can be obtained. Portable toilets will be serviced regularly and located outside of riparian setbacks and away from unstable areas.

8. Winterization Measures

8.1. Summary

It is required that winterization measures be completed annually before the onset of the winter rainy season. The SWRCB has defined the winter season as beginning **November 1st** and concluding **April 1st**. Winterization measures apply to cultivation areas, any additional disturbed areas including roads, and stream crossings. These measures aim to prepare the site for an extended period of heavy precipitation during which frequent access, monitoring, and maintenance can be challenging or infeasible. The end goal is to reduce the erosion of unstable areas and prevent the delivery of eroded sediment to sensitive waterways.

One of the primary techniques of winterization consists of stabilizing all bare soils with straw and seed. Fiber rolls shall additionally be installed at grade breaks and along slopes of disturbed areas to break up flow paths, thereby reducing the speed and erosive energy of runoff. No heavy machinery shall be used during the winter season to avoid the degradation of saturated roadways and unstable surfaces. Soil stock piles shall be guarded before the onset of winter with a cover and/or perimeter controls such as fiber rolls. Culverts shall be inspected and maintained to ensure integrity during winter. This includes clearing inlets and outlets of sediment and/or debris and ensuring that sufficient energy dissipation exists at outlets to reduce bank erosion. Seasonal access roads shall be locked to ensure that roads are

not in use during the wet season by trespassers.
Aside from the erosion control components to winterization, a general and thorough site cleanup will be performed to remove all refuse from the site. Additionally, all fertilizers and petroleum products to be left on site will be stored in secondary containment and locked in the shipping container to avoid spillage and discharge to surface or groundwater.

9. Monitoring

Monitoring is broken up into 3 reports; Facility Status, Site Maintenance, and Storm Water Runoff Monitoring. For **Low Risk sites** the only monitoring report required is the Facility Status Report. For **Moderate and High-Risk sites** all three monitoring reports need to be completed. See "Site Erosion and Sediment Control Plan" for details on the Site Maintenance and Storm Water Runoff Monitoring.
Annual reports for the cultivation site will be submitted to the North Coast Regional Water Quality and Control Board (NCRWQCB) prior to March 1 of the following year. The annual report shall include the following:
Facility Status, Site Maintenance, and Storm Water Runoff Monitoring
Name and contact information for the person responsible for operation, maintenance, and monitoring.
Reporting documents can be emailed to northcoast@waterboards.ca.gov or mailed to ***5550 Skylane Blvd., Ste. A, Santa Rosa, CA 95403.***

Table 4: Facility status monitoring requirements.

Monitoring Requirement	Description
Winterization Measures Implemented	Report winterization procedures implemented, any outstanding measures, and the schedule for completion.
Tier Status Confirmation	Report any change in tier status. (Stabilization of disturbed areas may change the tier status of a facility. Contact the Regional Water Board if a change in status is appropriate.)
Third Party Identification	Report any change in third party status as appropriate.
Nitrogen Application	Report monthly and annual total nitrogen use for bulk, solid, and liquid forms of nitrogen. Provide the data as lbs./canopy acre/time (month or year) as described in Nitrogen Management Plan.

Table 5 Summary of remediation measures and expected compliance date.

Map Point (MP)	Topic	Issue	Remediation Measure	Treatment Priority	Expected Completion Date	Actual Completion Date
MP1	Stream Crossing Maintenance	A 24" culvert on a Class II stream that is hydrologically connected to the road system	Install an adequately sized culvert with proper alignment, at stream grade, rock line ~30-ft of in-board ditch, and install a rolling dip ~75-ft before the culvert (See LSAA for details)	High	October 2019 Dependent on permitting from CDFW	
MP2	Erosion, drainage and Sediment Control	Poor road drainage with potential to deliver sediment to watercourse.	Install a rolling dip at MP2 and just east of MP6 to disperse runoff of road.	High	October 2018	
MP3	Erosion, drainage and Sediment Control	A 4-inch ditch relief culvert is undersized and is failing.	Install an 18-inch ditch relief culvert.	Low	October 2018	
MP4	Water Storage and Use	Water Bladder without adequate containment.	Obtain appropriate permits and create a berm 1.5 times taller than the bladder or remove bladders.	Moderate	October 2018	
MP5	Water Storage and Use	Water Bladder without adequate containment.	Obtain appropriate permits and create a berm 1.5 times taller than the bladder or remove bladders.	Moderate	October 2018	
MP6	Petroleum Products and other chemicals	Chemicals (used motor oil) and trash inappropriately stored.	Remove / dispose of chemicals and trash at the appropriate waste disposal facility.	High	October 2018	
MP7	Petroleum Products and other chemicals	Large fuel container with containment but no cover and chemicals (used motor oil) inappropriately stored.	Obtain a cover for fuel storage and dispose of used motor oil.	Low	October 2018	

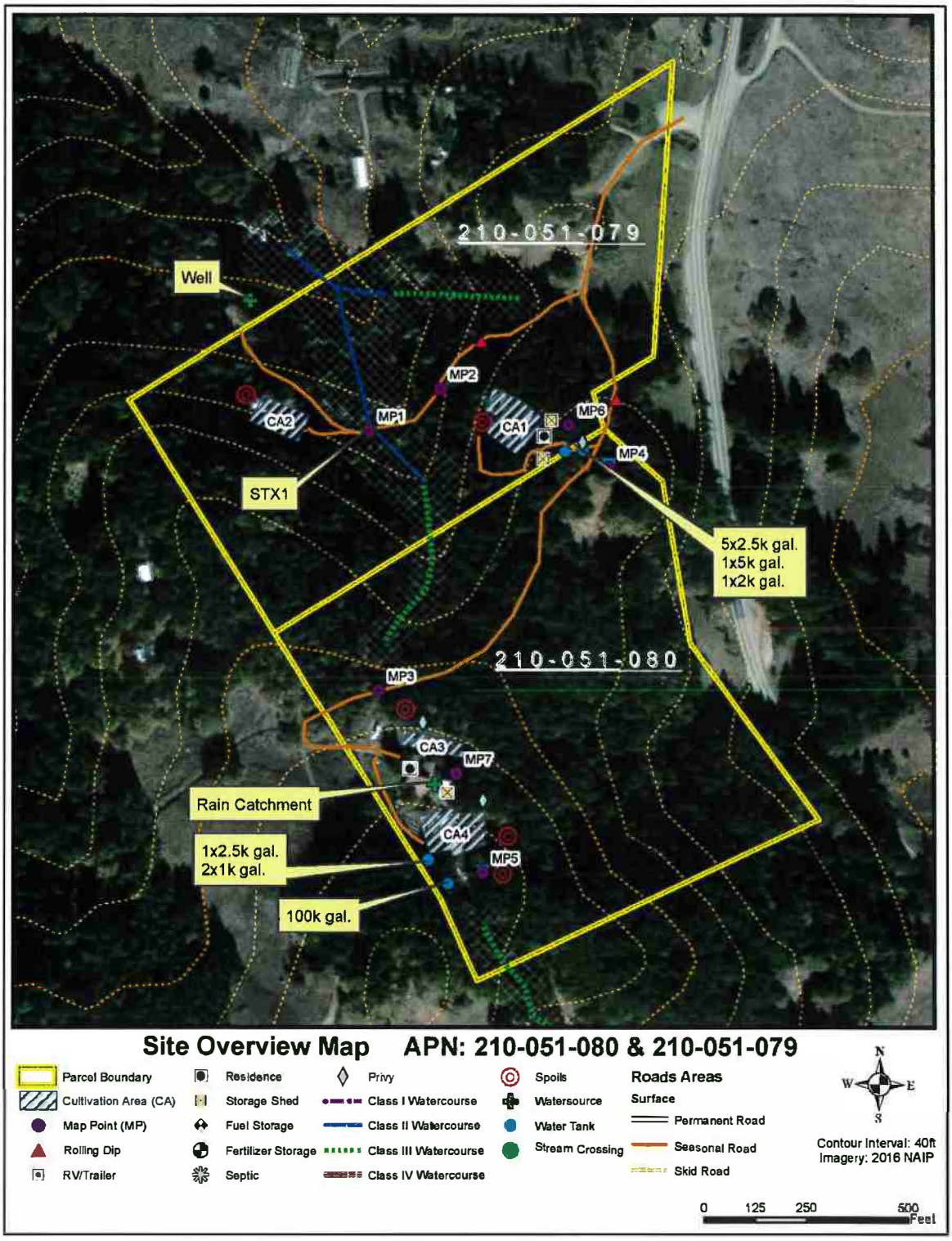

Figure 1 Site Overview Map.

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5. Fertilizers, Pesticides and Herbicides

5.1. Application, Storage and Disposal

All fertilizers, Pesticides, Herbicides and Rodenticides will be mixed or prepared in locations where they cannot enter a waterbody (surface or groundwater). Fertilizers, Pesticides, Herbicides and Rodenticides shall be applied at agronomic rates specified on the product label. The enrollee will keep a log of their fertilizers, pesticides and herbicides use for annual reporting. All labels will be kept, and directions followed when amendments and fertilizers are applied. All liquid chemicals will be stored in ***separate*** secondary containment. During the off season all chemicals will be stored in a locked building. **Agricultural chemicals will not be applied within 48-hr of a predicted rain event with a 50% or greater chance of 0.25-inches.** Disposal of unused products will be consistent with labels on containers. Empty containers will be disposed of at an authorized recycling center. A spill clean-up kit will be stored in the garage/shop. No restricted materials or pesticides will be used or stored on site. No greater than 319 pounds of nitrogen per acre per year shall be applied. A summary of fertilizers, pesticides, and herbicides used annually are listed below.

Table 2: Overview of annual chemical/fertilizer use.

Product Name	Chemical/Fertilizer Type	N-P-K or Active Ingredient	Annual Use (lbs. or gallons)
North Coast Plant Therapy	Insecticide	Soybean Oil, Peppermint Oil, Citric Acid	1.25 gallons of concentrate

Product Name	Chemical/Fertilizer Type	N-P-K or Active Ingredient	Annual Use (lbs. or gallons)
Pure Neem Oil	Pesticide	Azadirachtin	.25 gallons
Ed Rosenthal's Zero Tolerance	Fungicide	Potassium Bicarbonate, Cinnamon, Thyme	10 gallons
MAXSEA Plant Food	Fertilizer	16-16-16	15 gallons
Cal-Mag	Fertilizer	2-0-0	15 gallons
Dyna-Gro Bloom	Fertilizer	3-12-6	15 gallons
Dyna-Gro Bloom	Fertilizer	7-9-5	15 gallons
Chicken Manure	Fertilizer	1.1-0.8-0.5	500 lbs
Fish Powder	Fertilizer	12-1-1	50 lbs

5.2. Spill Prevention and Clean Up

A spill cleanup kit will be in the storage buildings near each residence. In case of a major spill of fertilizers, or any petroleum products, the cannabis cultivator shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and initiate cleanup activities for all spills before they enter a waterbody or degrade groundwater.

6. Petroleum

6.1. Use, Storage, and Disposal

The site is not grid tied and uses generators that require storage of petroleum products. Generators are only used as a backup system and are not the primary power source. A large fuel containment system had the appropriately sized containment but did not have a cover (**MP7**). The fuel container will get a cover and will be permitted with the Department of Environmental Health. The site also had two (2) locations where used oil was inappropriately stored on the bare soil (**MP6** & **MP5**). Trash and used oil will be stored in sheds temporarily before being removed to the appropriate waste facility. While in use, the generators will need to be stored with drip containment outside of riparian setbacks. Fueling of the generators, as well as any other equipment or vehicles, will also take place outside of the riparian setbacks. All equipment containing petroleum derivatives will be inspected regularly for leaks. When the generators are not in use they will be stored in a covered building.

Table 3: Overview annual petroleum usage.

Product	Chemical Type	Annual Use (lbs. or gallons)
Gasoline	Petroleum	150 gallons
Motor Oil	Petroleum	45 gallons

7. Cultivation Waste, Trash/Refuse and Domestic Wastewater

7.1. Trash/Refuse Overview

All trash will be stored in a shed near each residence. Trash will be removed on a weekly basis to an authorized landfill. No trash or debris will be allowed to enter a watercourse or riparian setback area. Compostable cultivation waste will be stored in a location and manner where it cannot be transported to surface waters. The site had multiple cultivation soil piles that will require a perimeter control and cover when not in use. Spent growth medium (e.g. soil) shall either be reused, disposed of at an appropriate waste site, or be spread outside of riparian setbacks and planted with native vegetation.

7.2. Domestic Wastewater BPTC Measures

It is unknown if the site has a permitted septic system. The site was historically using pit toilets for human waste disposal. Pit toilets will be filled in immediately. Portable toilets will be brought onto the site until a permitted septic system can be obtained. Portable toilets will be serviced regularly and located outside of riparian setbacks and away from unstable areas.

8. Winterization Measures

8.1. Summary

It is required that winterization measures be completed annually before the onset of the winter rainy season. The SWRCB has defined the winter season as beginning **November 1st** and concluding **April 1st**. Winterization measures apply to cultivation areas, any additional disturbed areas including roads, and stream crossings. These measures aim to prepare the site for an extended period of heavy precipitation during which frequent access, monitoring, and maintenance can be challenging or infeasible. The end goal is to reduce the erosion of unstable areas and prevent the delivery of eroded sediment to sensitive waterways.

One of the primary techniques of winterization consists of stabilizing all bare soils with straw and seed. Fiber rolls shall additionally be installed at grade breaks and along slopes of disturbed areas to break up flow paths, thereby reducing the speed and erosive energy of runoff. No heavy machinery shall be used during the winter season to avoid the degradation of saturated roadways and unstable surfaces. Soil stock piles shall be guarded before the onset of winter with a cover and/or perimeter controls such as fiber rolls. Culverts shall be inspected and maintained to ensure integrity during winter. This includes clearing inlets and outlets of sediment and/or debris and ensuring that sufficient energy dissipation exists at outlets to reduce bank erosion. Seasonal access roads shall be locked to ensure that roads are

not in use during the wet season by trespassers.
Aside from the erosion control components to winterization, a general and thorough site cleanup will be performed to remove all refuse from the site. Additionally, all fertilizers and petroleum products to be left on site will be stored in secondary containment and locked in the shipping container to avoid spillage and discharge to surface or groundwater.

9. Monitoring

Monitoring is broken up into 3 reports; Facility Status, Site Maintenance, and Storm Water Runoff Monitoring. For **Low Risk sites** the only monitoring report required is the Facility Status Report. For **Moderate and High-Risk sites** all three monitoring reports need to be completed. See "Site Erosion and Sediment Control Plan" for details on the Site Maintenance and Storm Water Runoff Monitoring.
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Table 4: Facility status monitoring requirements.

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Table 5 Summary of remediation measures and expected compliance date.

Map Point (MP)	Topic	Issue	Remediation Measure	Treatment Priority	Expected Completion Date	Actual Completion Date
MP1	**Stream Crossing Maintenance**	A 24" culvert on a Class II stream that is hydrologically connected to the road system	Install an adequately sized culvert with proper alignment, at stream grade, rock line ~30-ft of in-board ditch, and install a rolling dip ~75-ft before the culvert (See LSAA for details)	**High**	**October 2019** Dependent on permitting from CDFW	
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MP4	**Water Storage and Use**	Water Bladder without adequate containment.	Obtain appropriate permits and create a berm 1.5 times taller than the bladder or remove bladders.	**Moderate**	**October 2018**	
MP5	**Water Storage and Use**	Water Bladder without adequate containment.	Obtain appropriate permits and create a berm 1.5 times taller than the bladder or remove bladders.	**Moderate**	**October 2018**	
MP6	**Petroleum Products and other chemicals**	Chemicals (used motor oil) and trash inappropriately stored.	Remove / dispose of chemicals and trash at the appropriate waste disposal facility.	**High**	**October 2018**	
MP7	**Petroleum Products and other chemicals**	Large fuel container with containment but no cover and chemicals (used motor oil) inappropriately stored.	Obtain a cover for fuel storage and dispose of used motor oil.	**Low**	**October 2018**	

Map Point (MP)	Topic	Issue	Remediation Measure	Treatment Priority	Expected Completion Date	Actual Completion Date
NA	**Cultivation Soil**	Cultivation soil did not have an appropriate containment or cover.	Cultivation soil will be stored with perimeter controls and a cover.	**Low**	**October 2018**	
NA	**Domestic Wastewater**	Uncertainty if the septic system is permitted and the use of pit toilets for workers.	Install portable toilets until a permitted septic system can be obtained.	**High**	**October 2019**	

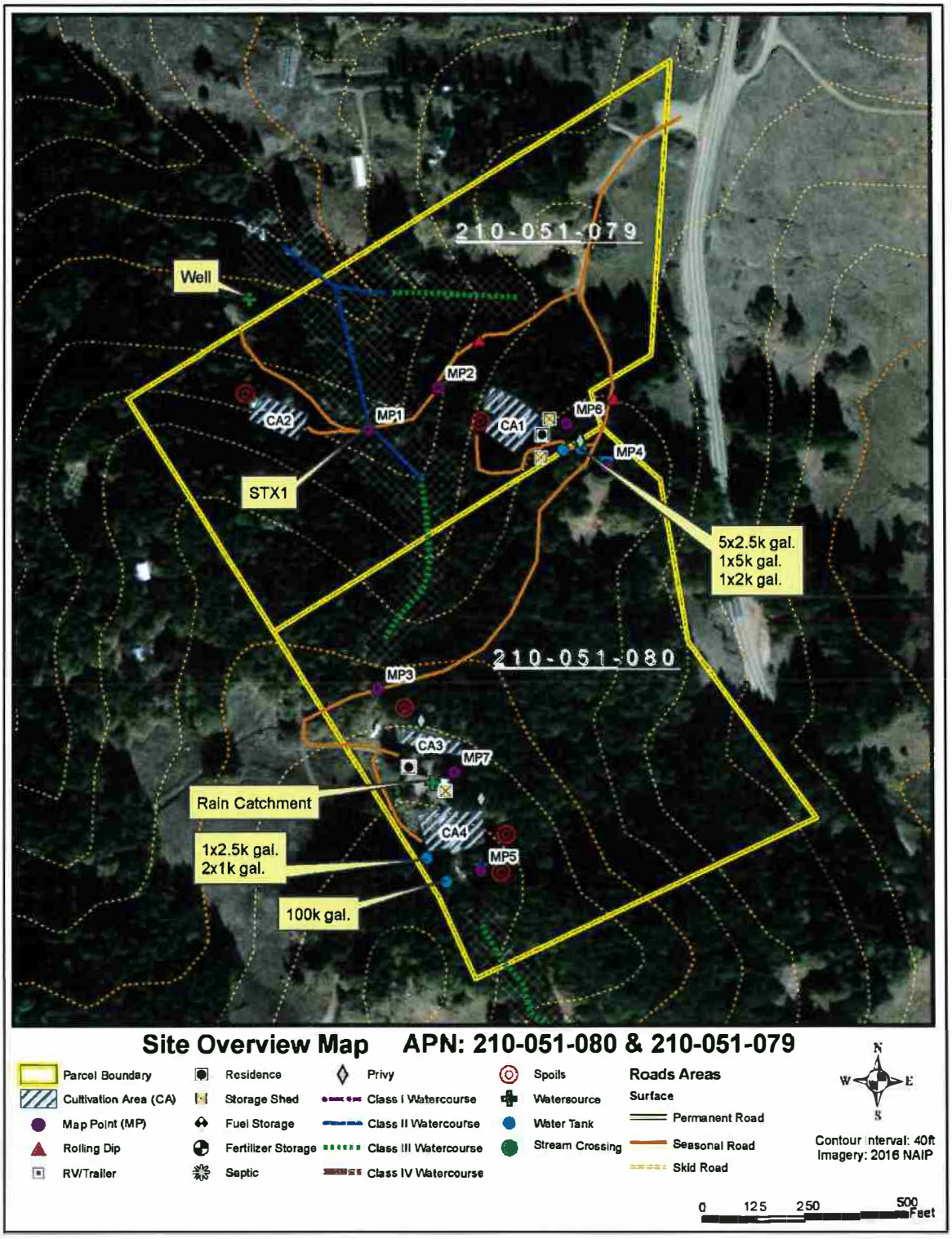

Figure 1 Site Overview Map.

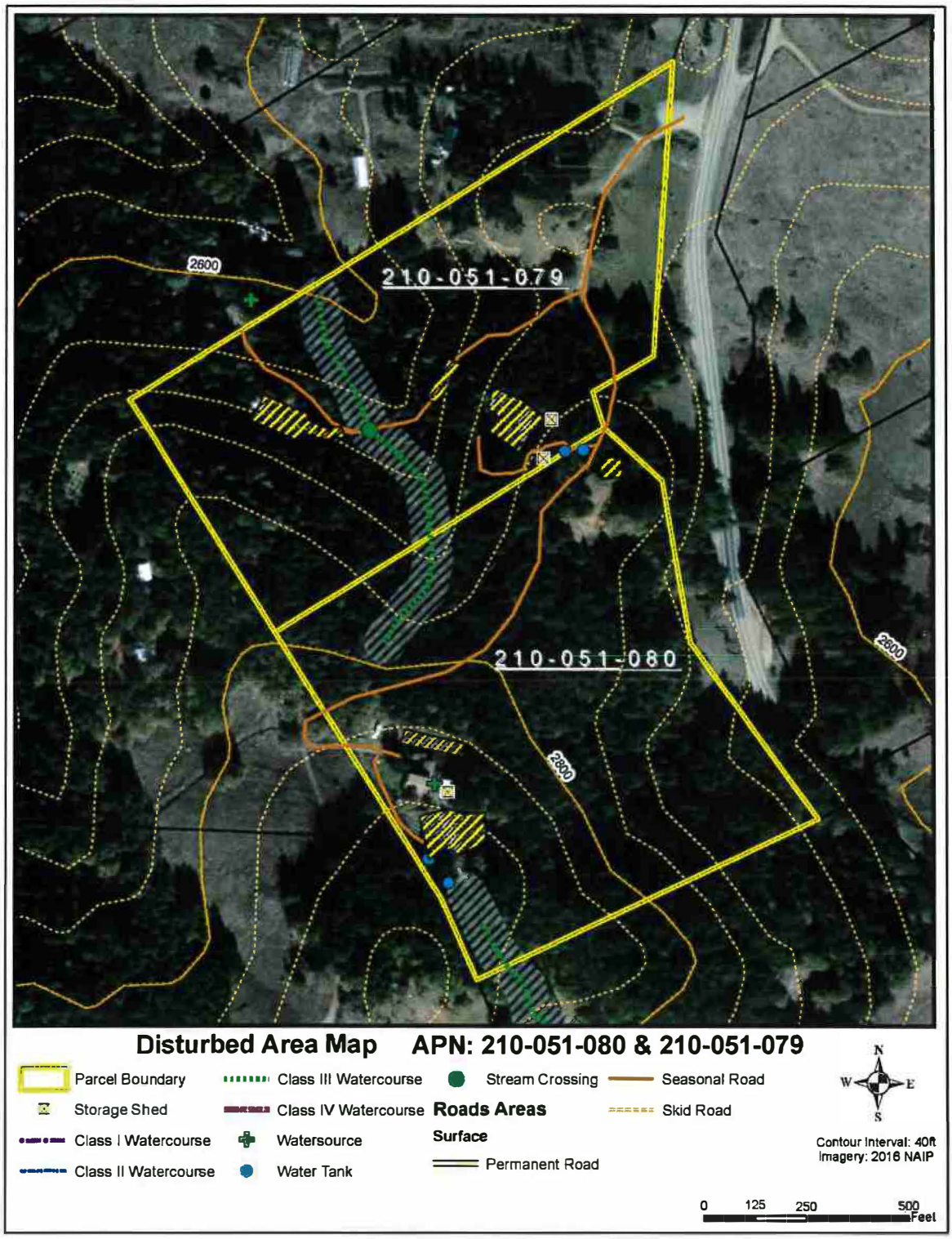

Figure 2 Disturbed Area Map.

Site Management Plan

WDID: 1_12CC402455

Prepared for:

State Water Resources Control Board (SWRCB)

North Coast Regional Water Quality Control Board (NCRWQCB)

Prepared by:

Green Road Consulting
1650 Central Ave., Suite C, Mckinleyville CA, 95519
(707) 630-5041

Date of completion:

8/01/2018

General Site Information

Discharger: Marin Stoilov

Land Owner: Mariya Stoilova

Site Address: 33096 St HWY 36, Bridgeville, CA 95526

Mailing Address: 33096 St HWY 36, Bridgeville, CA 95526

Parcel Number: 210-051-079 & 210-051-080

General Plan Designation: RA20-160 (Both Parcels)

Zone: FR-B-5(20) (Both Parcels)

Parcel Size: 40 acres

HUC12 Watershed: 180101050901 Butte Creek watershed & 180101050905 Hoagland Creek-Van Duzen River watershed

Disturbed Area: 0.87 acres

Cultivation Area: 0.39 acres

Risk Level: Moderate

Tier Level: 1

Abbreviations

CA	**Cultivation Area**
CPP	**Corrugated Plastic Pipe**
CMP	**Corrugated Metal Pipe**
CDFW	**California Department of Fish and Wildlife**
DRC	**Ditch Relief Culvert**
GRC	**Green Road Consulting**
IBD	**In-board Ditch**
NCRWQCB	**North Coast Regional Water Quality and Control Board**
PWA	**Pacific Watershed and Associates**
SWRCB	**State Water Resources and Control Board**
STX	**Stream Crossing**

Table of Contents

1. Introduction

This document was prepared by Green Road Consulting (GRC) for Marin Stoilov; parcel numbers 210-051-079 & 210-051-080, as required by the SWRCB Order WQ 2017-0023-DWQ[1]. The purpose of the order is to provide a regulatory structure for cannabis cultivation that reduces contributions to existing water quality issues and prevents additional adverse impacts to water resources throughout California. The purpose of the Site Management Plan is to identify conditions present on a parcel that may pose a threat to water quality and resources and establish a plan to meet or surpass requirements set forth in the order.

Green Road Consulting (**GRC**) has made an initial assessment of this parcel through field work as well as through a variety of County, State, and private websites (e.g. USDA web soil survey, USGS stream stats program, Google Earth, Humboldt County Web GIS). The site was surveyed with a GPS unit (2 to 4-meter accuracy) to document roads, buildings, cultivation sites, watercourses, and areas requiring remediation. Maps were created using the software ESRI ArcMap.

2. Site Characteristics

2.1. General

The site is located in southeastern Humboldt County, approximately 8.5-miles east of the City of Bridgeville and can be accessed from CA SR 36. The elevation of the site is approximately 2,680 feet above sea level. The parcel is located on a ridge with unnamed tributaries that mainly flow from south to north into Little Larabee Creek which is a tributary to the Van Duzen River. The Van Duzen River is listed on the USEPA's Section 303(d) list for impairment or threat of impairment to water quality associated with elevated sediment levels. The Van Duzen River is known to have anadromous fish (Chinook Salmon, Coho Salmon, and Steelhead) which are designated as a Federally and State threatened species. Slopes on the site range from 5%-30%. The hillslopes in the region are known to have high instability. The site geology is part of the Franciscan Complex which is primarily composed of Late Cretaceous to Pliocene sandstone, shale and minor conglomerate. The region was historically logged with legacy logging roads and landings throughout the site. Locations of areas that need remediation are denoted as Map Points **(MP)** in the Site Overview Map.

2.2. Site Overview

The two (2) approximately 40-acre properties have (1) one permitted groundwater well. The site also utilizes rain water catchment to reduce the amount of water drawn in the summer. There are two residences located on each parcel. Accessory structures on the parcels include three (3) storage sheds, and two (2) privies that will be removed. Water for cultivation and domestic use is drawn from the well and from rain catchment. There were two locations on the site where trash and chemicals were not stored appropriately.

[1] Order entitled "STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2017-0023-DWQ GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES"

The site currently has four (4) locations where cultivation takes place. Cultivation areas are delineated as **CA1** and **CA2** on the upper parcel 210-051-079, and **CA3** and **CA4** on the lower parcel 210-051-080. **CA2** was near a wet seep area with potential to be a wetland. A qualified professional should conduct a wetland delineation here if the site is to be developed or used for cannabis cultivation but as of now the land owner plans to permanently discontinue cultivation at **CA2**. The total garden area across these sites totals 16,950-ft^2. Vegetation removal and or exposed earth were observed adjacent to some garden areas and were mapped as disturbed area. The site had approximately 37,950-ft^2 (including cultivation area) of disturbed area that was located outside of the watercourse buffers. Some of the disturbed areas were located on slopes greater than 30%. The site was determined to be Tier 1 Moderate Risk. Proper adherence to the erosion and sediment control measures specified in the "Erosion Prevention and Sediment Capture" section of this report will be necessary to ensure that these areas are sufficiently stabilized.

Table 1 Cultivation area overview.

Cultivation Area (CA)	Cultivation Area (ft^2)	Natural Slope (%)	Distance to Water Body (ft)	Water Body Classification
Area 1 (CA1)	6,500	29	190	Class II
Area 2 (CA2)	2,375	36	135	Class II
Area 3 (CA3)	4,375	22	222	Class III
Area 4 (CA4)	7,400	17	205	Class III

2.3. Access Roads

The site has 0-miles of permanent roads, approximately 0.75-miles of seasonal access roads, and 0-miles of skid roads. The seasonal roads are native surface with sections of roads that are in-sloped with a ditch relief culvert or out-sloped. The seasonal access roads are drained via rolling dips, ditch relief culverts, and out-sloping. The seasonal access roads on the site were not fully stable according to the Pacific Watershed Associates (PWA) "Handbook for Forest, Ranch, and Rural Roads". There were two locations where the road drainage did not meet the standard. Rolling dips will be installed at **MP2** and just east of **MP6** as shown on the Overview Map. The access road also had a failing 5-inch ditch relief culvert that will be replaced with an 18-inch pipe (**MP3**). For location of disturbed areas requiring stabilization see the Disturbed Area Map.

Short sections of the access roads on the site had slopes that approached 17%. These sections will be armored with crushed angular rock. The access roads on the site are maintained when needed. The roads are only used during cultivation season by the land owner, May through October. The main access road at the site is shared with a neighboring parcel. The roads are used minimally by workers navigating the site and bringing in supplies. Workers are on the site daily and most supplies are brought in the beginning of the season. Vehicles are primarily parked near either residence on each parcel. Stabilization of existing roads will be addressed in the Site Erosion and Sediment Control Plan.

2.4. Stream Crossings

There is one (1) stream crossing on the property that is the responsibility of the property owner (**MP1**). The stream crossing consisted of a 24-inch corrugated plastic pipe (CPP) on a class III stream, which

received flow from two in-board ditches. The ditches will be rock lined for approximately 25-ft from the watercourses on either side. The culvert is not sized for the 100-yr storm event and will be replaced with a minimum 30-inch culvert. All stream crossing work will be permitted through the appropriate agencies (e.g CDFW, NCRWQCB) before work commences.

Table 2: Overview of stream crossings on the property.

Label	Size (inch)	Type	Watercourse Class	Condition
STX1	24	CPP	Class III	Ok, but undersized for 100-yr storm

2.5. Legacy Waste Discharges

The site was historically logged with main logging roads, skid roads, and log landings on the property. The site utilized the existing infrastructure from logging practices which required minimal grading and brush clearing. Skid roads on the site were in stable condition with no major erosion or sediment delivery to any watercourse.

3. Erosion Prevention and Sediment Capture

The disturbed areas consisted of the cultivation areas, soils/amendment piles, unstable road segments, and a processing area as shown on the Disturbed Area Map. For details on erosion prevention and sediment capture, see the Site Erosion and Sediment Control Plan.

4. Water Uses

Water for cannabis irrigation and domestic is sourced from a groundwater well. All irrigation infrastructure will be regularly inspected for leaks and immediately repaired if any are found. Weed free mulch or straw will be used in cultivation areas that do not have ground cover to reduce evaporation and conserve water. Water conservation such as water timing and drip irrigation will be implemented to ensure water is applied at agronomic rates. The cultivator will record daily irrigation water usage and maintain records on site for a minimum of 5 years. Since the site sources water from a confined aquifer there are no forbearance restrictions. The estimated annual water use is summarized below.

Table 3: Annual estimated water uses on the parcel for cannabis cultivation.

Source	Use	Start Date	End Date	To Storage (gallons)	To Use (gallons)
Rain Catchment	Cannabis	Apr. 1	Nov. 1	224,000	
Well	Cannabis	Apr. 1	Nov. 1		160,000
Rain-Catchment Storage	Cannabis	Apr. 1	Nov. 1		224,000

The site has 224,000-gallons of water storage available which is summarized in Table 3. Water meters will be installed to monitor use. To conserve water, a straw or mulch ground cover should be applied to reduce

water evaporation. Water conservation methods such as watering method and timing will be employed to ensure water is applied at agronomic rates.

Table 4: Summary of water storage on the parcel.

Water Storage Type	Size (gallons)	Number	Total (gallons)
Hard Tank	2,500	6	15,000
Hard Tank	5,000	1	5,000
Hard Tank	2,000	1	2,000
Hard Tank	1,000	2	2,000
Concrete Tank	100,000	1	100,000
Bladder	50,000	2	100,000
	Total		**224,000**

The water bladders did not have proper containment and were not permitted (**MP4 & MP5**). The water bladder will require a berm 1.5 times higher than the water bladder when full. The water bladders will be removed from the site within the next two years and will likely be replaced with more water storage if necessary. The water bladders will be disposed of at an appropriate waste facility.

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All fertilizers, Pesticides, Herbicides and Rodenticides will be mixed or prepared in locations where they cannot enter a waterbody (surface or groundwater). Fertilizers, Pesticides, Herbicides and Rodenticides shall be applied at agronomic rates specified on the product label. The enrollee will keep a log of their fertilizers, pesticides and herbicides use for annual reporting. All labels will be kept, and directions followed when amendments and fertilizers are applied. All liquid chemicals will be stored in ***separate*** secondary containment. During the off season all chemicals will be stored in a locked building. **Agricultural chemicals will not be applied within 48-hr of a predicted rain event with a 50% or greater chance of 0.25-inches.** Disposal of unused products will be consistent with labels on containers. Empty containers will be disposed of at an authorized recycling center. A spill clean-up kit will be stored in the garage/shop. No restricted materials or pesticides will be used or stored on site. No greater than 319 pounds of nitrogen per acre per year shall be applied. A summary of fertilizers, pesticides, and herbicides used annually are listed below.

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NA	**Cultivation Soil**	Cultivation soil did not have an appropriate containment or cover.	Cultivation soil will be stored with perimeter controls and a cover.	**Low**	**October 2018**	
NA	**Domestic Wastewater**	Uncertainty if the septic system is permitted and the use of pit toilets for workers.	Install portable toilets until a permitted septic system can be obtained.	**High**	**October 2019**	

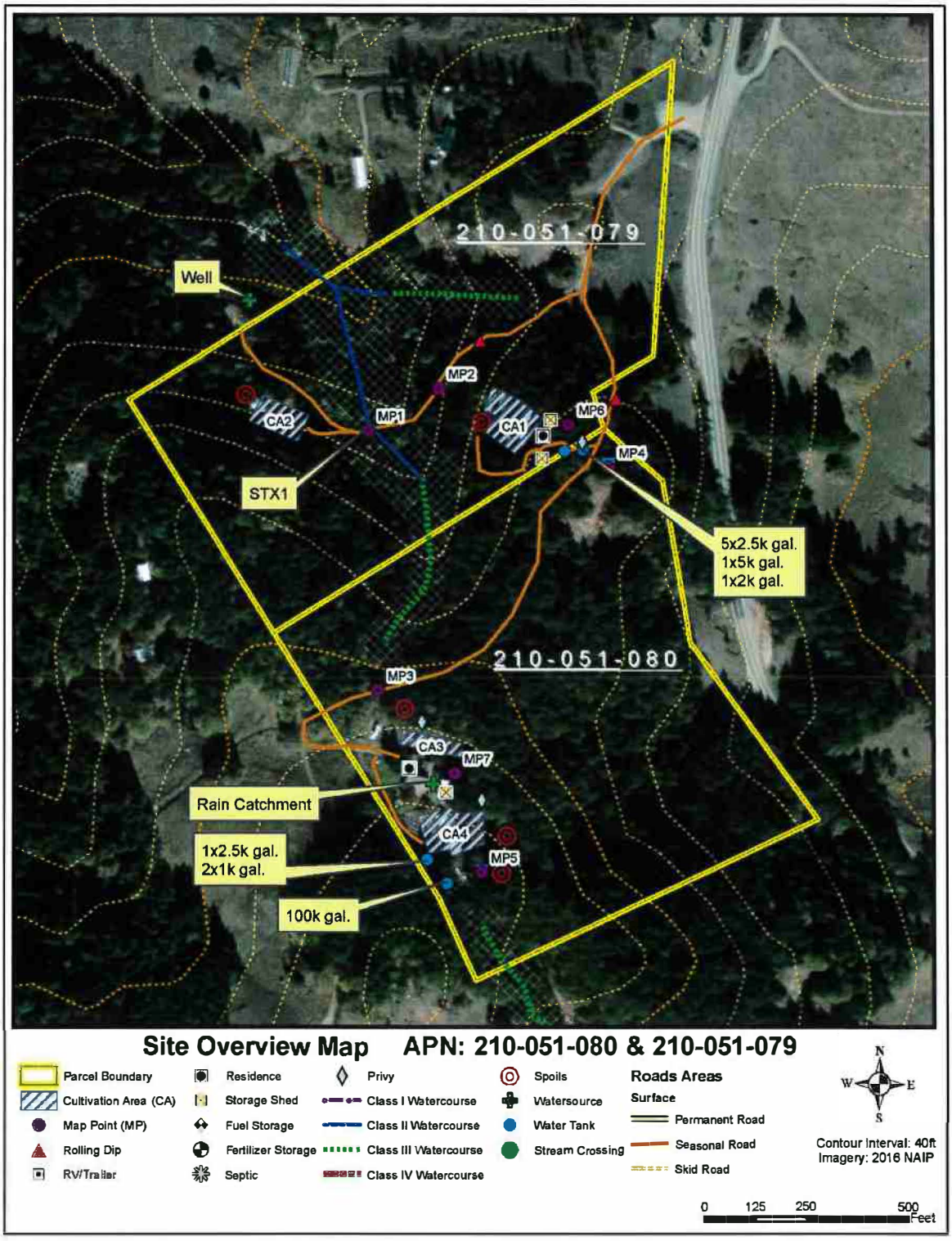


Figure 1 Site Overview Map.

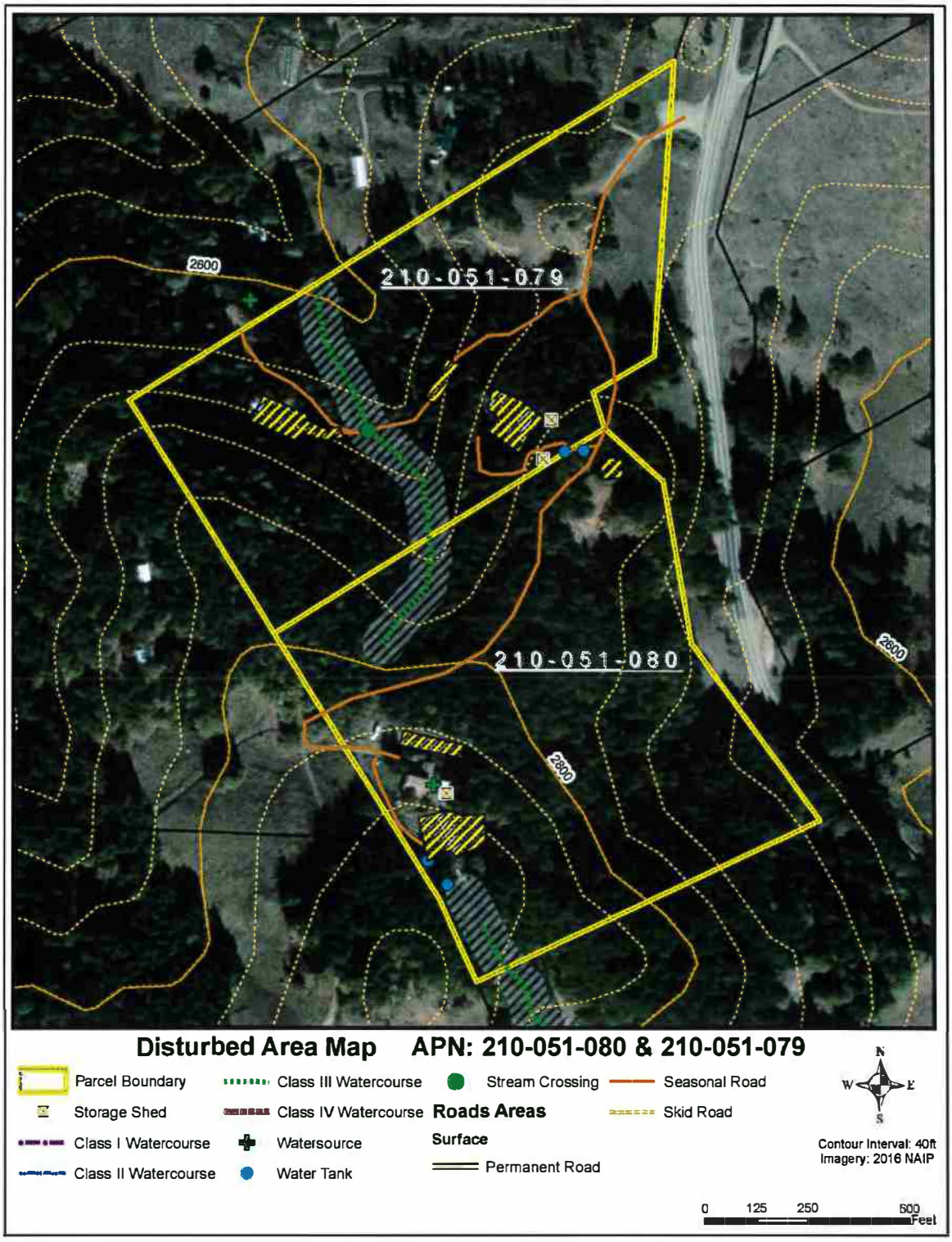
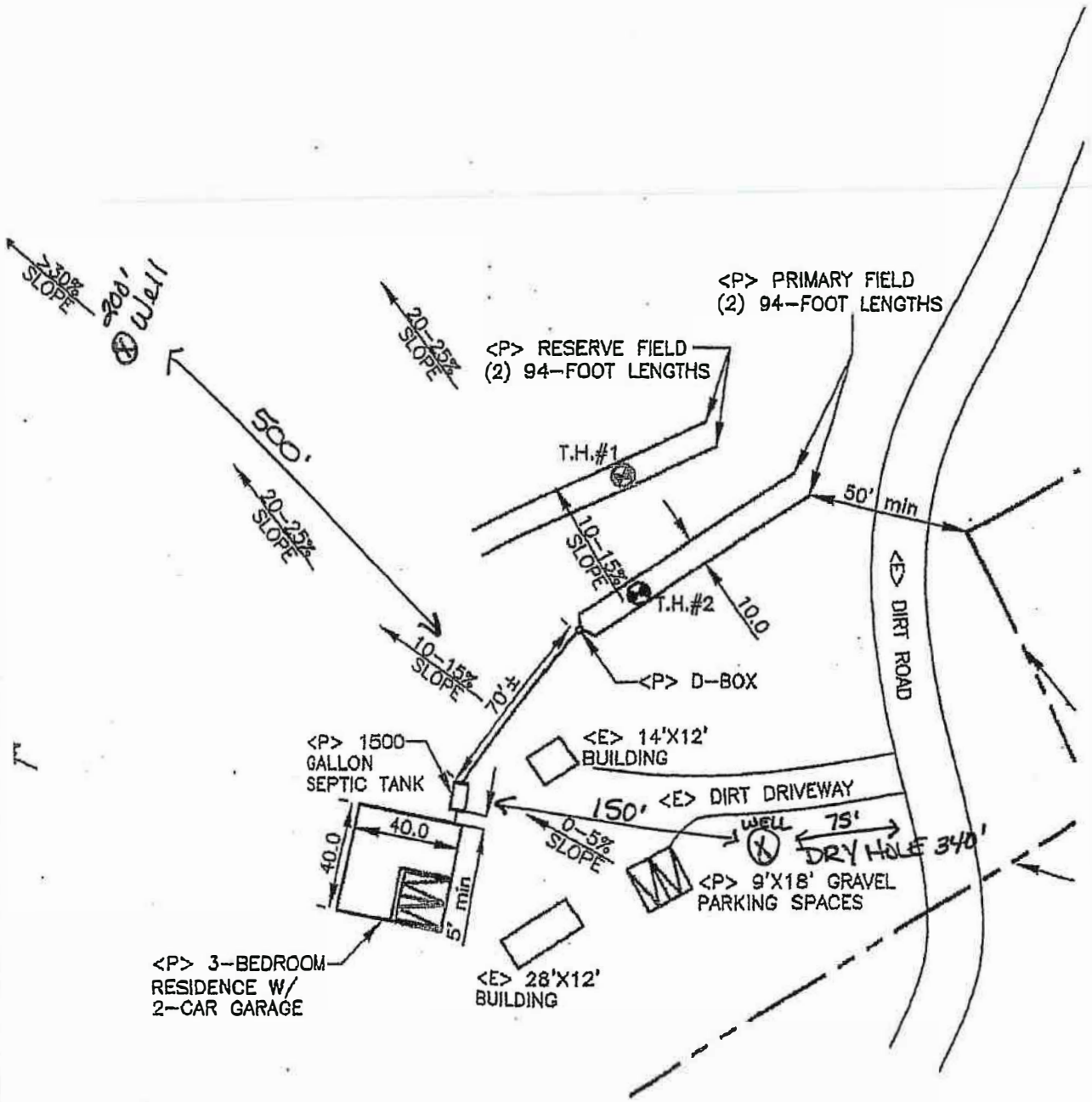


Figure 2 Disturbed Area Map.



ENLARGED SITE PLAN

SCALE: N.T.S.
1" APPROX. 50 FEET

6-27-

No.
EXP. 1