



Site Management Plan

Prepared For: Michael Benson

Location: 3598 Thomas Rd Miranda, CA 95553

Application #: 15220 APN: 221-081-001

Prepared by

Vanessa Valare



General Site Information

Discharger: Benson, Michael

Land Owner: Benson, Michael

Address: 3598 Thomas Rd. Miranda CA 95553

GPS: 40.2075, -123.9286

Physical Address: 3598 Thomas Rd. Miranda, CA 95553

Parcel Number: 221-081-001-000

General Plau Designation: RA40

Zone: U

Parcel Size: 41.26 acres

HUC12 Watershed: Mattole River

Disturbed Area: approx. 10,000 sq. ft.

Cultivation Area and Type: 5,000 sq. ft of outdoor light deprivation cultivation

Tier Level: 1

Risk Level: low

1. Site Characteristics

1.1 General

Michael Benson is minimizing and avoiding any negative impact to the rural community and natural environment surrounding this parcel. This would include eliminating light pollution, noise pollution, or any other adverse effect to neighbors. Michael Benson adheres to BMP in protecting the environment and will work closely with county and state agencies to keep in compliance and run a safe clean farm.

A. The applicant's plans are to use natural soils and only organic amendments to fortify the soil as needed.

B. Soil samples will be taken and analyzed to ensure proper balance of nutrients are being used.

C. Branches harvested during fuel reduction are chipped and

used in swales, pathways, and remediation buffers to prevent nutrient runoff, reduce soil temperature, store carbon, and promote a healthy soil microbial community;

D. Soil fertility is closely monitored to prevent excess use of fertilizers;

E. Only organic products are used in the cultivation of cannabis;

F. Cultivated soils are cover cropped and mulched in the off season to enhance soil fertility and eliminate runoff; and

G. The entire site is monitored to identify and correct any potential sources of environmental degradation and maintain a protective riparian buffer. Additionally, we monitor and manage land per the guidelines set forth in a site-specific water resources protection plan designed by Compliant Farms Certified to exceed requirements established by North Coast Regional Water Quality Control Board.

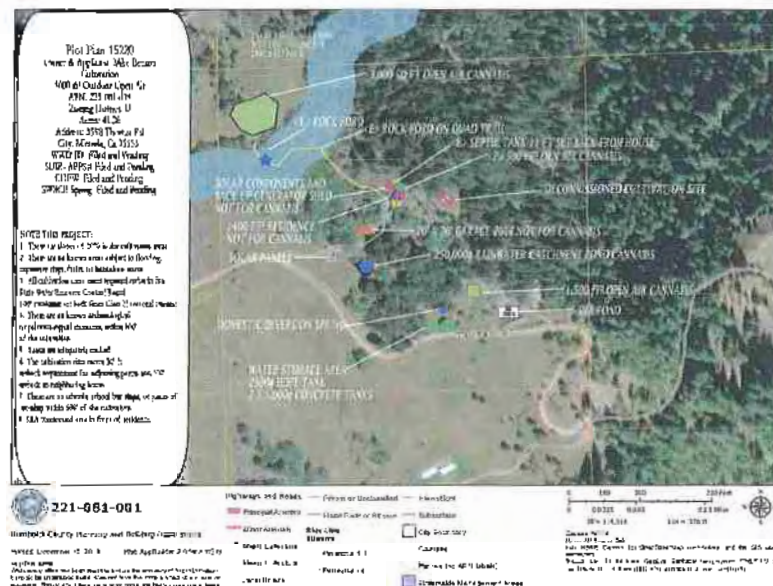


Figure 1: A diagram of the main structural features and active cultivation areas of the property

1.2 Site Overview

The property assessed consists of one parcel with vegetation consisting of oak woodlands and Douglas fir forest types. This property is approximately 4.8 miles northwest of Miranda, CA, accessed via Thomas Road. One seasonal unnamed Watercourse is located on the property. The un-named watercourse eventually drains into the Mattole River.

1.2.1 Access Roads

The Property is accessed via Thomas Road, which is a county-maintained road.

1.2.2 Stream Crossings

There are no stream crossings on this property. There is one 12" ditch relief culvert, at the end of the driveway.

1.3 Electricity

The greenhouses will use solar power for ventilation fans.

2. Cultivation Plan

2.1 Grow Areas

The Cultivation activities consist of one active area referenced as Cultivation Area. The property owner has applied for 5,000 ft² for the county permit which only includes the canopy area from Cultivation Area. There is one year-round use residence and one personal storage structure.

2.2 Harvesting

Michael Benson will conduct all cultivation, harvesting, and maintenance and requires no outside employment. However, processing will be handled off site by a county and state licensed facility. Michael Benson will implement and exercise the following processing practices on site:

- A. All work services and equipment will be maintained in a clean and sanitary condition.
- B. Prevention against contamination, mold, and mildew growth on processed cannabis.
- C. When processing cannabis, Michael Benson will use personal protective gear (PPE), such as facemasks and gloves, and PPE will be in good operable condition.
- D. Employees/Workers will wash hands appropriately when handling cannabis and will wear gloves.
- E. Drying of the harvested cannabis will occur in the garage which will be heated and dehumidified.
- F. Adequate ventilation and lighting will be provided.
- G. Processing will be done utilizing hand shears in an area provided specifically for this type of processing.
- H. Processed cannabis is then weighed, packaged, and labeled. The packaged cannabis will then be distributed to licensed dispensaries.

3. Water

3.1 Source and System Water for this project comes exclusively from the 250,000-gallon rainwater catchment pond

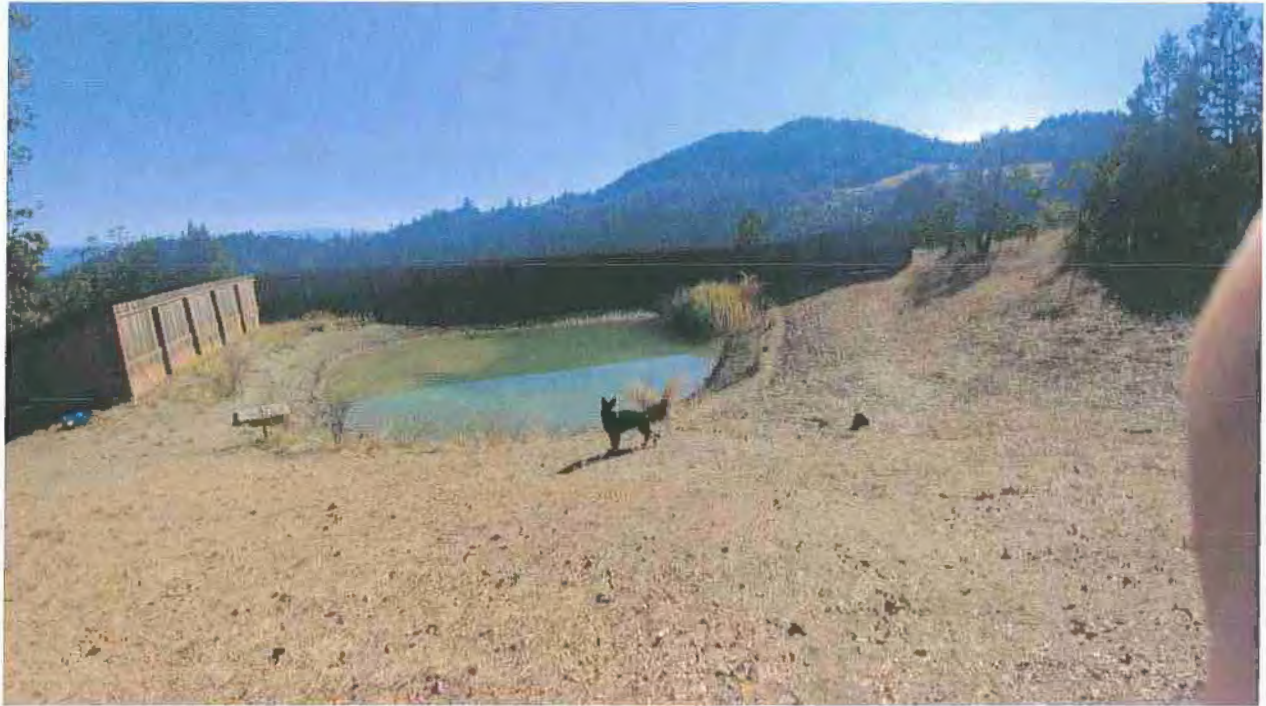


Figure 2: This is an off-stream reservoir used year-round

3.1.1 Storage

There are approx. 250,000 gallons of off stream storage in the pond.

3.2 Use

The landowner relayed that they use approximately 82,350 gallons of water yearly on the average for agricultural irrigation.

3.3 Conservation Methods Employed

Michael Benson recognizes water conservation as one of the most important water management techniques. Michael Benson does this by implementing drip irrigation as well as metering water use. Michael Benson has a water usage log that tracks water usage and can detect leaks in the water system. The soil contains cocoa fibers to help hold moisture and reduce water usage. An electric pump will be used to provide water pressure to the greenhouses.

3.4 System Maintenance

The entire water system will be inspected weekly for leaks and for places that may need maintenance. Any component in the system observed to not be operating as efficiently as possible will be repaired or replaced. A general observation of above ground pipes will take place daily to ensure there is no leak.

4. Erosion and Sedimentation

4.1 Cultivation

Michael Benson's cultivation site is located on a flat plain with minimal erosion probability. Michael Benson will maintain ground cover of grass or wood chips to eliminate any exposed soil.

Month	Cannabis Use in Gallons	Domestic Use
Jan	0 (zero)	6,820
Feb	0 (zero)	6,160
Mar	0 (zero)	6,820
Apr	6,750	6,600
May	13,950	6,820
June	13,500	6,600
July	13,950	6,820
Aug	13,950	6,820
Sept	13,500	6,600
Oct	6,750	6,820
Nov	0 (zero)	6,600
Dec	0 (zero)	6,820
Total	82,350	80,300

4.1.1 Disturbed Areas *Estimated water use, in gallons. Total annual water use is estimated to be 162,650 gallons*

The total disturbed area for this project is approx. 10,000 sq. ft.

4.1.2 Remediation Measures

The cultivation site has proper setbacks from both property lines and water courses. Michael Benson has met the required 30 ft setbacks from property lines. Natural vegetation is in place between the cultivation site and property lines. No schools, bus stops, places of worship, public parks, or tribal cultural resources are within 600 ft of cultivation site

Cultivation Area is outside of the preferred riparian buffer zones. Cultivation site is more than 100 ft from Class II seasonal watercourse. Cultivation Area Although all areas are outside of the preferred riparian zone, mitigation actions have been recommended to further prevent sediment and run-off from becoming hydrologically connected.

4.1.3 Soil/Spoils Management

Michael Benson uses permaculture techniques which greatly reduces the need for chemical additives to the soil. The additives and fertilizers used are organic and every precaution is made to ensure zero runoff for protection of nearby watershed and habitat.

- A. Michael Benson uses permaculture techniques such as mulching and cover crops, which greatly reduce the need for chemical additives to the soil. The additives and fertilizers used are organic and every precaution is made to ensure zero runoff for protection of nearby watershed and habitat.
- B. Used soil is contained in an area where it can be recycled for future use. Mulching and cannabis waste products are added to this used soil to enhance composting and rejuvenation of the soil. Cover crops will be used in the off season to also rejuvenate the soil in the beds of the greenhouses reducing the need for new soil.

No spoils were noted on the property. If spoiling material is required, such as from road grading, the discharger shall follow the Best Management Practices (BMPs) in Appendix 10.1 of the Order, under Spoil Management. Spoil sites shall be located outside any standard width riparian area (50' for Class III and 100' for Class III) and shall be stabilized and contained as per the BMPs.

4.1.4. Maintenance

Wood chips are used around the cultivation area to eliminate groundwater runoff. Additionally, any bare soils are mulched and seeded to protect the soil surface from erosion and promote infiltration of rainwater.

4.2 Roads

Roads are being classified as "permanent" (being used year-round) and "seasonal" (being used primarily during summer months), and "trail" (being rarely used for occasional access to features on the property). This property has approximately 0.7 miles of road with grades ranging from 0-20%.

4.2.1 Maintenance

The permanent road is used to access the year around use residence and an agricultural storage structure. The permanent road was well rocked with appropriate and adequately spaced drainage structures. No mitigative actions have been recommended for this section of road.

No spoils were noted on the property. If spoiling material is required, such as from road grading, the discharger shall follow the BMPs in Appendix 10.1 or the Order, under Spoil Management. Spoil sites shall be located outside any standard width riparian area (50' for Class III and 100' for Class III) and shall be stabilized and contained as per the BMPs.

5. Herbicides and Pest Management

5.1.1 Storage

All fertilizers and nutrients are stored in a secure garden shed with secondary containment. Each supplement is properly labeled and used per direction by manufacturer. Great care is taken in the handling and application of these supplements. PPE is available and used during application. Instructions for use are posted and adhered to for maximized results. Michael Benson reserves the right to increase or decrease nutrient use for optimum plant growth.

Fertilizers, potting soils, compost, and other soils and soil amendments are 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. All fertilizer and nutrient containers will be recycled at an appropriate facility.

5.1.2 Use and Application

Fertilizers and soil amendments are applied and used per the manufacturer's guidelines. Cultivation areas are currently maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest. PPE is available and used during application.

5.3 Pest Management

This Pest Management Plan (PMP) was prepared to be in compliance with California Department of Food and Agriculture (CDFA) requirements for CalCannabis cultivation licensing. This plan describes various pest management options that Michael Benson will employ depending on conditions and circumstances. All pesticides and practices used will comply with California Department of Pesticide Regulation (DPR) and the Humboldt County Agricultural Commissioners (CAC) enforcement the use and sale of pesticides under Divisions 6 and 7 of the California Food and Agricultural Code (FAC), and Title 3 of the California Code of Regulations (CCR).

In an effort to reduce the environmental impact of the cannabis cultivation, the applicant will utilize non-chemical pest control methods whenever possible.

5.3.1 a. Biological/Physical

The applicant utilizes crop isolation, cultivations beds with optimum plant density, vegetative stripping, and spacing as a means to manage pests. A buffer around the cultivation beds is used as further means of isolation from the surrounding environment. Pest repellent companion plant species are also used in the vicinity such as marigolds, red Amaranthus, dill, cilantro, basil, chrysanthemum, and rosemary. The applicant performs routine ongoing maintenance activities for management of pests including, pruning, defoliation, thinning and topping. Irrigation and drainage are designed to eliminate standing water and runoff/pooling. Sanitation facilities are designed and located to reduce pest attraction. Additional maintenance activities include crop

residue destruction, maintenance of clean cultivation bed borders, and weed control. The timing of harvesting is also used to reduce exposure to powdery mildew infestations. Prevention and management of pests achieved through companion planting of non-invasive plants, nematodes, biodynamic farm preparations, diatomaceous earth, organic rosemary and thyme spray, ladybugs, Safer Soap Sulfur Spray 3-1 and visual inspection with hand removal of infested plants.

Pest or Disease	Physical/Mechanical Practices	Biological Practices
Spider Mites	Keep dust down by housing off plants (if dust is a problem)	Release predatory mites
Broad Mites	Inspect plants; disinfest or dispose of infested plants	Release predatory mites and six-spotted thrips
Russet Mites		Release predatory mites
Whiteflies	Hang up yellow sticky cards, Use reflective plastic mulch	
Thrips	Hang up yellow or blue sticky cards	
Aphids	Hang up yellow sticky cards (alates), Hose off plants	
Leafminers	Remove older infested leaves	Release Diglyphus parasitoids
Cutworms	Use pheromone traps to detect adults. Remove weeds, which serve as a reservoir for cutworms and other noctuids	
Flea Beetles	Use reflective mulches Plant trap crops (e.g., radish or Chinese mustard)	

5.3.1 b. Chemical

The following table contains a list of all of the chemicals will be used for pest management. The active ingredients are exempt from residue tolerance requirements and either exempt from registration requirements or registered for a use broad enough to include use on cannabis.

Pest or Disease	Pesticide Active Ingredient	Pesticide
Mites, powdery mildew, leafhoppers, aphids, whiteflies, moth larvae	Soybean Oil (39%), Sodium Lauryl Sulfate (19%), Citric Acid, and Isopropyl Alcohol	Green Cleaner Spidermite Miticide
Mites, powdery mildew, leafhoppers, aphids, whiteflies, moth larvae	Soy Oil,, Peppermint Essential Oil, Citric Acid, Plant Based Surfactant (Soap), Alcohol, Sodium Citrate, and Water	Lost Coast Plant Therapy
Mites, powdery mildew, botrytis and other pests, and fungal/mildew	Thyme Oil 14%, Clove Oil 10%, Garlic Oil 9%, Peppermint Oil 4%, Corn Oil 3%, Geraniol 3%, Citric Acid 2%, Rosemary Oil 2%, 53% Filtered Water, Soap, Isopropyl Alcohol, and Vinegar	Trifecta Crop Control

5.3.2 Storage

Pesticides and agricultural chemicals (nutrients) are stored in a secure location under a roofed structure. Pesticides and agricultural chemicals are stored in an orderly fashion on shelves and on the floor with original labels per manufacturers recommendations. The area is neat, orderly, and includes a table with measuring devices for calculating and mixing chemicals.

5.3.3 Rodent Control

Rodent control is limited to hardware cloth that lines the beds, noise activators, Tanglefoot Brand coating paste, and cayenne/cinnamon spray. Rodenticide supplies are stored in a secure location under a roofed structure. Rodenticide supplies are stored in the shed in an orderly fashion on shelves and on the floor with original labels per manufacturers recommendations

5.3.4 Fungicides

Mold and mildew pathogens controlled with sulfur, Actinovate, Safer Brand Garden Fungicide and visual inspection with removal of infected vegetative matter. Fungicides and other cannabis preventive and treatment supplies are stored in the shed, in an orderly fashion on shelves and on the floor with original labels per manufacturers recommendations.

6. Petroleum, Gas and Oil

6.1 Use

Items onsite which utilize petroleum products include a pick-up truck, an off-road vehicle, and various small garden tools such as a weed eater, rototiller, and water pump.

6.2 Storage

At the time of inspection, all petroleum products were stored in garage with cover and secondary containment.

6.3 Maintenance of Items Requiring Petroleum, Gas or Oil

Equipment maintenance and services (e.g., changing oil, antifreeze, etc.) is done offsite by a trained professional.

7. Waste

7.1 Cultivation Waste

The spent growth medium is composted and recycled onsite.

No cultivation-related wastes including, but not limited to, empty soil/soil amendment/fertilizer/pesticide bags and containers, empty plant pots or containers, dead or harvested plant waste, and spent growth medium, are stored at locations where they can enter or be blown into surface waters, or in a manner that could result in residues and pollutants within such materials to migrate or leach into surface water or groundwaters.

7.2 Trash

There will be minimal plastic that will be recycled at Eel River Resource Recovery (ERRR) in Redway, CA. There is a designated and secured area for storage of recycling and solid waste within covered containers that are stored outside the mother-in-law unit. Any garbage accumulated onsite will be hauled to the ERRR once a week; any recycling will be hauled once a month. Michael Benson will self-haul this waste to the ERRR.

7.3 Domestic Wastewater

Onsite wastewater system consists of one septic system. This system is sufficient for processing wastewater for the existing use. The system is located adjacent to the main residence. This system will process all wastewater generated onsite. Peak operations will occur during June, July, August, Sept. Additional wastewater flow from process is expected to be 0 gallons per day.

7.4 Hazardous Materials

The following is a list of cultivation/production machinery that may be present on site: Off road vehicle, & Pick-up truck.

No compressed gases are stored onsite. There is a cleaning agent, rubbing alcohol, that is stored onsite in a 1-liter container and within a secondary container to prevent leakage or spillage.

8. Monitoring and Future Plans

Remediation/Cleanup/Restoration:

General Recommendations

Put Forth by The Timberland Resource Consultant Company, Fortuna, CA

1. Existing or newly installed road surface drainage structures such as water bars, rolling dips, ditch relief culvers, and intentionally in/out-sloped segments of road shall be maintained to ensure continued function of capturing and draining surface runoff.
2. Frequent use of un-surfaced roads should be avoided, particularly when road surfaces are soft/saturated.
3. All culverts should be inspected regularly during the winter months to check for plugging, blockage, or other issues.
4. Water use shall be designed and metered such that water used for the irrigation of cannabis will be recorded. Water use for the irrigation of cannabis is to be recorded monthly for annual reporting.

Fertilizer, soil amendments, and pesticide use to be recorded in such a manner that cumulative annual totals are recorded for annual reporting (See Appendix sec. 10.2 for example)

8. Appendix

8.1 Best Practical Treatment or Control Measures

Description BMP Procedures

- a) List of record keeping, monitoring, and other measures needed for compliance.
- b) Install flow meters for Install flow meters water use and record water use weekly.
- c) Use log pages and provide additional documentation as needed.
- d) Record water use.
- e) Read flow meters weekly and record irrigation use by water source.
- f) Use log pages provide additional documentation as needed.
- g) Wet weather road inspection.
- h) Inspect road during wet weather annually.
- i) Observe water and sediment discharge.
- j) Document observations, apply corrective measures to prevent erosion as needed based on observations.
- k) Pre and post season inspection, conduct self- assessment twice annually.
- l) Use log pages provide additional documentation as needed.
- m) Keep chemical storage and use logs
- n) List chemicals stored onsite and information about quantities used and frequency applied.
- o) Record annnal fertilizer and amendment use.

8.2 Example Logbook

Pre-season Self-Assessment (to be completed after March and before April 15 each year)

Person Reporting: _____

Date: _____

☐ Yes ☐ No

All stockpiles, soil amendments, pesticides, and fertilizers have remained properly stored and/or contained and have not discharged from their storage/containment facility(ies).

Comments:

☐ Yes ☐ No

Implemented erosion and sediment controls have remained in place and functioning throughout the winter wet weather period, preventing sediment and turbid storm water from discharging to surface water bodies.

Comments:

☐ Yes ☐ No

All access roads appear to be in good condition and drainage structures have been effective in preventing road surface and fill material from discharging to any surface water bodies.

Comments:

☐ Yes ☐ No

Watercourse crossing structures remain functioning throughout the winter wet weather period and there is no evidence of crossings being plugged, overtopped, and/or discharging sediment or fill material. Comments:

☐ Yes ☐ No

All water containment structures/ponds/dams have remained effective and in good condition.

Additional Findings: Please describe pre-winter BMPs applied to the site including location and methods (attach additional pages as necessary):

Comments:

Post-Season Self-Assessment (to be completed by October 15th each year)

Person Reporting: _____

Date: _____

☐ Yes ☐ N/A

All stockpiles, soil amendments, pesticides, and fertilizers have been properly stored and/or protected per Best Management Practices (BMPs).

Comments

☐ Yes ☐ N/A

Erosion and sediment controls have been properly installed and are functioning, and all areas of exposed soil have been stabilized in preparation for the winter wet weather period.

Comments

☐ Yes ☐ N/A

Drainage structures (water bars/rolling dips) have been installed and are functioning on all access roads, and all access roads intended for use during the winter wet weather period have been weatherproofed. Comments

☐ Yes ☐ N/A

Watercourse crossing structures have been correctly installed/maintained, all fill material/exposed soil has been stabilized, and are free of debris that could plug crossings over the winter wet weather period. Comments

☐ Yes ☐ N/A

All trash/refuse has been cleaned up where it cannot pass into or be transported into any water body and empty/used containers have been properly disposed per manufacturer's instructions. Comments

☐ Yes ☐ N/A

All water containment/storage ponds/dams have been inspected and appear to be in good, stable condition.

Additional Findings/Comments:

Chemical/Pesticide/Herbicide Inventory Log

List all chemicals that you have in storage. When any new pesticides, herbicides, or chemicals are brought onto the property enter the product information in this form. An example entry is provided.

[illegible]

Chemical/Pesticide/Herbicide Application Log

Anytime a pesticide, herbicide, or any other chemical is applied to the cannabis it will be recorded on this form. An example entry is provided.

[illegible]

Soil Amendments and Fertilizer Log

Anytime an amendment or fertilizer is used in soil building, top dressing, foliar spray, or any other application - fill out this log. An example entry is provided.

[illegible]

Water Usage Log

Every week record the water used for cultivation using water meters. Fill out the annual total usage on the backside of this form at the end of the year. To calculate annual total, subtract the first meter reading of the year from the last reading of the year. An example entry is provided.

[illegible]

8.3 Emergency Contact Information

Alyeska 707 LLC/Michael Benson shall visibly post and maintain an emergency contacts list which will include at a minimum:

1. Managerial and property owner contact(s):
2. Property Owner/Manager: Michael Benson (707) 296-4340
3. Emergency responder contact(s):
 - a. EMERGENCY CALL 911
Site Address: 3690 Thomas Rd
Miranda, CA 95553
 - b. Nonemergency Sheriff: (707) 445-7251
4. Hazardous Material/Poison control contact(s):
 - a. EMERGENCY CALL 911
Site Address: 3690 Thomas Rd
Miranda, CA 95553
 - b. Poison Control Centers 1-800-222-1222
 - c. Humboldt County HazMat: (707)268-8680
 - d. Humboldt County Ag Dept: (707)234-6830