PROJECT DESCRIPTION
CANNABIS CULTIVATION OPERATIONS
APNS 007-001-31 AND 007-001-39
BENMORE VALLEY ROAD, LAKEPORT, CALIFORNIA

Date:
September 4, 2019

Prepared for:
County of Lake

Prepared by:
Annje Dodd
846 Centerville Road
Ferndale, CA 95536

Attachment 3

PROJECT DESCRIPTION

The purpose of the project location and description is to support the Site Plans submitted with this Major Use Permit application.

The proposed project is 15-acres of outdoor Cannabis cultivation on the Benmore Valley Ranch, in western Lake County, California. The subject property includes the Assessor Parcel Numbers (APNs) summarized in Table 1. Zoning is a combination of Agriculture (A) and Rural Land (RL).

Ordinance No. 3084, an ordinance pertaining to cannabis cultivation, allows for clustering of permits across multiple contiguous parcels, under the same ownership, based on the total acreage of the contiguous parcels. The total acreage is approximately 313 acres, allowing for a total of 15-acres of cultivation. The proposed cultivation activities on each parcel are illustrated on the Site Plans. The 15-acres of cultivation will be clustered on APNs 007-001-31 and 007-001-39. Four (4) of the 15-acres is in the process of being approved under Major Use Permit application numbers 19-02, 19-03, and 19-04. The remaining acres are the subject of the current Major Use Permit application.

Table 1. Assessor Parcel Numbers and Areas

APN	Size (Acres)	Street Number
007-001-30	84	3621
007-001-31	158	3561
007-001-39	51	3470
007-002-10	20	3680
Total	**313**	N/A

Benmore Valley Ranch is accessed by a private gravel road, Benmore Valley Road, which spans 2.2 miles from State Highway 175 to the Ranch entrance.

Benmore Valley Ranch is a very large landholding, the nearest residence not associated with the project, is about 1.5 miles to the southeast. There are seven (7) houses on Benmore Valley Ranch that are used by staff/workers associated with the project.

The cultivation operations have similar layouts and will share existing resources, such as access roads and water supplies. No processing, such as trimming, packaging, or extracting, is proposed at this time. A compost area will be located on APN 007-001-31. The cultivation areas will use the existing vineyard irrigation system using stored water from South Lake. Water will gravity flow to water storage tanks where it will be pumped to each site using small horsepower pumps powered by the existing PG&E service.

The facility layout will be as follows (see Site Plans for details):

- 15-acres of outdoor cannabis canopy area;

- Twenty (20) 2,000 square foot cold frame greenhouses assembled on grade, no grading or construction required. Greenhouses will be used for immature plants and curing of harvested plants;
- 6 feet high, heavy gauge wire security fences, with a steel gates and padlocks;
- Solar powered security cameras;
- Cultivation will be in ground using existing soil with mixed with amendments;
- Mixing tanks (plastic totes, 250 gallon) for making compost tea (liquid soil amendments or fertilizers);
- Drip irrigation system, consisting of a water storage tank, valves and filters, PVC pipe, black polyvinyl flexible tubes, drip emitters;
- Waterproof storage shed/Conex container or similar for storage of chemicals and hand tools;
- Minimal site preparation (no grading, and only minor vegetation clearing);
- Irrigation water supplied via existing water right from South Lake;
- Electricity will be supplied by existing PG&E service;
- Parking, portable restrooms with hand washing stations, and trash enclosures will be provided within the fenced cultivation area.

Note: A revised Property Management Plan (PMP) that meets the requirements of the revised Ordinance will be submitted electronically to the planner assigned to this project. A PMP that follows the requirements of the original ordinance was submitted with Major Use Permit application numbers 19-02, 19-03, and 19-04.

Consistency with Lake County General Plan

The subject property is designated by the Lake County General Plan as Agriculture. This land use category include areas of prime farmland, vineyard soils, and grazing lands, along with areas characterized by steep slopes and limited services. One purpose of this land use category is to protect the County's valuable agricultural resources and to prevent development that would preclude the future use in agriculture. These lands are actively or potentially engaged in crop production, including horticulture, tree crops, row and field crops, and related activities. Wineries and the processing of local agricultural products such as pears and walnuts are encouraged within this designation. These lands also provide important groundwater recharge functions. As watershed lands, these lands function to collect precipitation and provide for important filtering of water to improve water quality. They generally support the management of natural infrastructure of the watersheds. The subject sites and the proposed cannabis cultivation project are in conformance with the goals and policies of chapter 12 of the Lake County General Plan - Agricultural Resources Element.

That the project is in conformance with the applicable provisions and policies of this Code, the General Plan and any approved zoning or land use plan.

Applicant's Response:

- The project is in conformance with the applicable provisions and policies of the Lake County Zoning Ordinance and the Lake County General Plan.
- The subject site is designated by the Lake County General Plan as Agriculture. This land use category includes areas of prime farmland, vineyard soils, and grazing lands. One purpose of this land use category is to protect the County's valuable agricultural resources and to prevent development that would preclude the future use in agriculture. These lands are actively or potentially engaged in crop production, including horticulture, row and field crops, and related activities. Wineries and the processing of local agricultural products such as pears and walnuts are encouraged within this designation. These lands also provide important groundwater recharge functions. As watershed lands, these lands function to collect precipitation and provide for important filtering of water to improve water quality. They generally support the management of natural infrastructure of the watersheds.
- The Lake County General Plan also contains many goals and policies concerning economic development including - Goal LU – 1. ***To encourage the overall economic and social growth of the County while maintaining its quality of life standards.*** The project is consistent with this Lake County General Plan Goal in that a fundamental premise of the facility and its operations is to cultivate a legal cash crop, which will generate business income and regional employment opportunities, just like all other farming operations which will enhance the overall economic and social growth of the County.
- The Agriculture General Plan Designation of the site provides for *important groundwater recharge functions. As watershed lands, these lands function to collect precipitation and provide for important filtering of water to improve water quality.* The site design will support this General Plan Policy. The project will be operated in accordance with **Lake County General Plan** policies regarding maintenance of on-site drainage features to promote groundwater recharge functions and to properly manage the natural infrastructure of the watershed. There will be minimal ground disturbance activity and grading, the parking areas will be provided with non-asphalt pervious surfaces to facilitate rainwater absorption. Maintaining the farming environment and minimizing water runoff are important operational features of this project.

- Lake County General Plan Land-Use Goal LU – 4 is ***to maintain economic vitality and promote the development of commercial uses that are compatible with surrounding land uses and meet the present and future needs of Lake County residents, the regional community and visitors.*** The proposed design of the project with its light footprint, site location, and minimal impervious surfaces, are compatible with the existing and surrounding land and farming uses and will help meet the current and future needs of Lake County residents, the regional community, and visitors to the area.
- General Plan Land-Use Goal LU – 6 is to ***maintain a healthy and diverse local economy that meets the present and future employment, shopping, recreational, and service needs of Lake County.*** The development of a cultivation project on an existing agricultural farm site, is consistent with this goal. The farm business income, the generation of County revenues, the increased expenditure of employees disposable income within Lake County, will all help enhance and maintain a healthy local economy and produce jobs. The revolving of local business revenue expended here will help meet the employment, retail, recreational, and service's needs, in the region, now and into the future.
- Lake County General Plan Policy LU – 6.1 ***promotes the development of a diversified economic base by continuing to promote agriculture, recreation services and commercial development.*** Over the years Lake County has encouraged and supported agricultural, recreational and commercial/resort development and business operations. The proposed project is consistent with and promotes the agricultural sector with a high end, well designed greenhouse facility. The project is consistent with other facilities that have been approved and operated in Lake County.
- The Lake County Comprehensive Economic Development Strategy (CEDS) 2016 vision is to achieve a sustainable, resilient, and prosperous economy that provides opportunity for an economically and socially diverse labor force and entrepreneurs that are educated, trained and prepared for future changes while protecting our rural agriculture-based quality of life and environment and providing a stable base for quality public services and programs. The 2016 CEDS provides a snap shot of the economic situation in Lake County. The economy of Lake County is based on tourism and agriculture. Important trends to note are the large increases in the self-employment sector, and an ongoing resurgence in agricultural employment. Lake County recreation and tourism is based on the lakes, the outdoors, fine wines and good food, good customer service, and a lifestyle still grounded in agriculture Opportunities in this regard include promotion of sustainable agricultural practices and ag tourism attraction activities.
- The Land Use Element of the Lake County General Plan has additional policies that promote key industries including agri-tourism (Policy LU-6.8). The proposed project should help support agri-tourism, will help the County meet its goals of communicating the area's amenities and attributes, and could help meet or exceed the potential for increased tourism and enhanced visitor experiences.

PROPERTY MANAGEMENT PLAN
CANNABIS CULTIVATION OPERATIONS
APNS 007-001-31 AND 007-001-39
BENMORE VALLEY ROAD, LAKEPORT, CALIFORNIA

Date:
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Prepared for:
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Table of Contents

1.0 INTRODUCTION

This Property Management Plan has been prepared to fulfill the requirements of ***Ordinance No. 3084, an Ordinance Amending Chapter 21, Article 27 of the Lake County Code Pertaining to Cannabis Cultivation (referred to herein as "Ordinance")***.

"The intent of said plan is to identify and locate all existing cannabis and non-cannabis related uses on the property, Identify and locate all proposed cannabis and non-cannabis related uses on the property, and describe how all cannabis and non-cannabis related uses will be managed in the future. The property management plan shall demonstrate how the operation of the commercial cannabis cultivation site will not harm the public health, safety, and welfare or the natural environment of Lake County."

This Property Management Plan is intended to be a "living" document, updated as necessary, such that when operational activities or processes are modified or replaced, the applicable sub-plans are revised to reflect these changes. Relevant sub-plans should also be amended whenever the goals of the Plan are not met, whenever a significant pollution event occurs, or whenever a violation notice is issued.

2.0 PROJECT LOCATION AND DESCRIPTION

The proposed project is 15-acres of outdoor Cannabis cultivation on the Benmore Valley Ranch, in western Lake County, California. The subject property includes the Assessor Parcel Numbers (APNs) summarized in Table 1. Zoning is a combination of Agriculture (A) and Rural Land (RL). Refer to the Site Plans.

Ordinance No. 3084, an ordinance pertaining to cannabis cultivation, allows for clustering of permits across multiple contiguous parcels, under the same ownership, based on the total acreage of the contiguous parcels. The total acreage is approximately 313 acres, allowing for a total of 15-acres of cultivation. The proposed cultivation activities on each parcel are illustrated on the Site Plans. The 15-acres of cultivation will be clustered on APNs 007-001-31 and 007-001-39. Four (4) of the 15-acres is in the process of being approved under Major Use Permit application numbers 19-02, 19-03, and 19-04. The remaining acres are the subject of the current Major Use Permit application.

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Benmore Valley Ranch is accessed by a private gravel road, Benmore Valley Road, which spans 2.2 miles from State Highway 175 to the Ranch entrance. Benmore Valley Ranch is a very large landholding, the nearest residence not associated with the project, is about 1.5 miles to the southeast. There are seven (7) houses on Benmore Valley Ranch that are used by staff/workers associated with the project.

The cultivation operations have delineated into blocks and will share existing resources, such as access roads and water supplies (see Site Plans). No processing, such as trimming, packaging, or extracting, is proposed at this time. A compost area will be located on APN 007-001-31. The cultivation areas will use the existing vineyard irrigation system using stored water from South Lake. Water will be pumped to small water storage tanks (5,000 to 10,000 gallon tanks) where it will be pumped to each cultivation site using small horsepower pumps powered by the existing PG&E service.

The facility layout will be as follows (see Site Plans for details):

- 15-acres of outdoor cannabis canopy area;
- Twenty (20) 2,000 square foot cold frame greenhouses assembled on grade, no grading or construction required. Greenhouses will be used for immature plants and curing of harvested plants;
- 6 feet high, heavy gauge wire security fences, with a steel gates and padlocks;
- Solar powered security cameras;
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- Irrigation water supplied via existing water right from South Lake;
- Electricity will be supplied by existing PG&E service;
- Parking, portable restrooms with hand washing stations, and trash enclosures will be provided within the fenced cultivation area.

2.1.1. Hours and Dates of Operation

The cultivation season occurs from April 1st to November 1st. The cultivation areas will be fallow from November 1st to March 31st.

These cultivation operations are closed to the public. Visitation is only allowed when specific permission is granted.

The cultivation operation hours of operation are:

- Monday through Saturday, from 9:00 a.m. to 7:00 p.m. (during daylight hours)
- Sunday, 12:00 pm to 7:00 pm (during daylight hours)

2.1.2. Other Information

During harvest, the larger, marketable flower will be first cut off the plant and transported off-site for further drying and processing. Then, the remaining flowers will be fresh-frozen and transported off-site to be processed into oil at a manufacturing facility.

In preparation of the fallow season, plant trellises and drip irrigation will be removed and stored. The soil will then be tilled, amended, and planted with a cover crop of alfalfa or other leguminous/nitrogen fixing cover crop similar to prevent erosion of topsoil and increase fertility for the following growing season.

3.0 AIR QUALITY

3.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Air Quality:

(a) Intent: All cannabis permittees shall not degrade the County's air quality as determined by the Lake County Air Quality Management District (LCAQMD).
(b) In this section permittees shall identify any equipment or activity that which may cause, potentially cause the issuance of air contaminants including odor, and shall identify measures to be taken to reduce, control or eliminate the issuance of air contaminants, including odors.
(c) All cannabis permittees shall obtain an Authority to Construct permit pursuant to LCAQMD Rules and Regulations, prior to the construction of the facility described in the Property Management Plan.
(d) All cannabis permittees shall obtain Authority to Construct Permit pursuant to LCAQMD Rules and Regulations, if applicable, to operate any article, machine, equipment or other contrivance which causes or may cause the issuance of an air contaminant.
(e) All permittees shall maintain an Authority to Construct or Permit to Operate for the life of the project, until the operation is closed and equipment is removed.
(f) The applicant shall prepare an odor response program that includes (but is not limited to):

a. *Designating an individual(s) who is/are responsible for responding to odor complaints 24 hours per day/seven (7) days a week, including holidays.*
b. *Providing property owners and residents of property within a 1,000 foot radius of the cannabis facility, with the contact information of the individual responsible for responding to odor complaints.*
c. *Policies and procedures describing the actions to be taken when an odor complaint is received, including the training provided to the responsible party on how to respond to an odor complaint.*
d. *The description of potential mitigation methods to be implemented for reducing odors, including add-on air pollution control equipment.*
e. *Contingency measures to mitigate/curtail odor and other emissions in the event the methods described above are inadequate to fully prevent offsite nuisance conditions.*

3.2. Air Quality Setting and Potential Pollutant Sources

The project is in the Lake County Air Basin. The Lake County Air Quality Management District (LCAQMD) regulates air quality in Lake County. The U.S. Environmental Protection Agency (EPA) sets acceptable levels for seven air pollutants, and then determines — with the help of states and local air districts — where those standards are or are not met. Lake County currently meets the EPA's health standards for five of those pollutants: carbon monoxide; nitrogen dioxide; sulfur dioxide; lead; and coarse particulates. For the other two — ground-level ozone and fine particulate pollution — Lake County is considered to be a part of a regional non-attainment area. There are no sensitive receptors near the Benmore Ranch. Neighboring residences and public facilities such as schools and churches are at least 1.5 miles away.

Short-term construction emissions could include fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities from operation of tractors, tillers, etc., tilling equipment during site preparation. Site preparation incudes only minor grading and tilling.

Construction emissions could be caused by onsite or offsite activities. Onsite emissions principally consist of exhaust emissions (NOX, CO, ROG, PM10, and PM2.5) from construction equipment, motor vehicle operation, and fugitive dust (mainly PM10) from disturbed soil. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles as well as

worker commuter traffic, but they also include road dust (PM10). However, no grading and no major construction-related activities are proposed as part of the proposed cultivation operations.

Eight people will be needed to maintain growing plants for all four sites. Up to 24 people may be needed during planting and harvesting. The majority of workers will be housed on-site, thus limiting the number of trips per day during peak and around 6 to 8 trips per day during normal operations. Box trucks will be used to ship bulk cannabis off-site. Each acre will generate approximately 1.5 tons per year of bulk cannabis. Box trucks will have a capacity of 3.5 tons. Thus, approximately eight (7) truck trips would be required per year. Therefore, the project would not generate significant vehicle emissions.

Operational emission sources consist of mobile emissions and area source emissions. Mobile source emissions estimates are derived from motor vehicle traffic from staff commuting. Area source emissions estimates are derived from the consumption of propane, electricity, and consumer products, as well as emissions resulting from landscape maintenance. However, this cultivation operation does not require the use of propane, electricity, or other consumer products. Cultivation operations may generate fugitive dust emissions through ground-disturbing activities such as ground tilling, uncovered soil or compost piles, and vehicle or truck trips on unpaved roads, but these activities are minimal.

Operation of the proposed cultivation operation would generate small amounts of carbon dioxide from operation of small engines, such as tillers, and from vehicular traffic associated with staff commuting. The generation of carbon dioxide would be partially offset by the cultivation of fast-growing plants, which remove carbon dioxide in the air for photosynthesis. The proposed cultivation operations would not consume excessive amounts of energy because they utilize the natural sun for light.

CDFA (2017) concluded that cannabis cultivation activities under the CalCannabis Licensing Program would not generate a substantial number of vehicle trips and would not require intensive use of heavy equipment, and as such, would not degrade air quality or produce significant amounts of greenhouse gasses. CDFA (2017) summarizes the impacts from small cannabis cultivation operations as follows:

> "*Despite the potential air quality emission-generating sources described above that are associated with cannabis cultivation activities, it is not anticipated that the Proposed Program would conflict with or obstruct implementation of air quality plans for the numerous reasons outlined below. First, the cannabis cultivation activities under the Proposed Program would not be anticipated to generate a substantial number of vehicle trips (see Section 4.12, Transportation and Traffic) that would affect air quality. In addition, outdoor and mixed-light cultivation activities would generally occur on such small acreages that these activities would often not require intensive use of heavy equipment.*" (page 4.3-30)

The CDFA CalCannabis Program concluded that small outdoor Cannabis cultivation operations would not contribute significantly to greenhouse gas emissions because of the limited use of combustion-powered equipment and vehicles and because County ordinances limit the use of generators to emergency-use only (CDFA 2017).

3.3. Permits

As required by the Ordinance, an Authority to Construct permit will be obtained pursuant to LCAQMD Rules and Regulations, if applicable, prior to construction of facilities described in this Property Management Plan. An Authority to Construct or Permit to Operate permit shall be maintained for the life of the project.

3.4. Dust Management

Cultivation operations may generate fugitive dust emissions through ground-disturbing activities such as ground tilling, uncovered soil or compost piles, and vehicle or truck trips on unpaved roads. The following are mitigation measures that can be used to control dust. Staff should be informed of speed limits and dust pollution. The roadways may be clearly marked for limited speed to control dust. Dusty road segments can be armored with gravel. On tilled earth and stockpiles, fugitive dust can be controlled by wetting the soil with a mobile water tank and hose, or by delaying ground disturbing activities until site conditions are not windy. Water applications may be concentrated during the late summer and early fall months, when soils have the lowest moisture content or when winds are severe. BMP Fact Sheets WE-1: Wind Erosion Control and NS-1: Water Conservation Practices will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding and water equipment leaks will be repaired immediately. During windy conditions (forecast or actual wind conditions of 25 miles per hour or greater), dust control may be applied to disturbed areas, including haul roads, to adequately control wind erosion. BMP Factsheet WM-3: Stockpile Management will be implemented using silt fences and plastic covers to prevent wind dispersal of sediment from stockpiles. The minimum amount of water should be used: refer to BMP Factsheet NS-1: Water Conservation Practices.

3.5. Odor Response Program

The individual(s) that are responsible for responding to odor complaints are:

- Mark Flamer, consultant, (707) 354-1562

Benmore Valley Ranch is a very large landholding, the nearest residence not associated with the project, is about 1.5 miles to the southeast. There are six (6) houses on Benmore Valley Ranch that are used by staff/workers associated with the project.

The nearest landowners include the Hopland Rancheria, and the U.S. Bureau of Land Management. Their contact information is:

- Hopland Band of Pomo Indians, 3000 Shanel Road, Hopland, CA 95449; (707) 472-2100
- U.S. Bureau of Land Management, South Cow Mountain OVH Recreation Area, Mendo-Lake Road, Ukiah, CA 95482; (707) 468-4000

When an odor complaint is received, it will be forwarded to the manager responsible for odor control. The manager will visit the facility in question, determine any deficiencies in the odor control system, and identify and implement remedies. There should be follow-up correspondence with the person that filed the complaint, and this correspondence should communicate that remedial actions were taken.

3.5.3. Odor Mitigation

No significant odor impacts that would affect a substantial number of people are anticipated from this cultivation operation, due to the limited population in the area, the isolated nature of the property, and distances to nearest residences not associated with the project.

4.0 GROUNDS

4.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section about grounds keeping:

(a)The permittee shall establish and implement written procedures to ensure that the grounds of the premises controlled by the permittee are kept in a condition that prevents the contamination of components and cannabis products. The methods for adequate maintenance of the grounds shall include at minimum:

a. *The proper storage of equipment, removal of litter and waste, and cutting of weeds or grass so that the premises shall not constitute an attractant, breeding place, or harborage for pests.*
b. *The proper maintenance of roads, yards, and parking lots so that these areas shall not constitute a source of contamination in areas where cannabis products are handled or transported.*
c. *The provision of adequate draining areas in order to prevent contamination by seepage, foot-borne filth, or the breeding of pests due to unsanitary conditions.*
d. *The provision and maintenance of waste treatment systems so as to prevent contamination in areas where cannabis products may be exposed to such a system's waste or waste by-products.*

(b)If the lot of record is bordered by grounds outside the applicant's control that are not maintained in the manner described in subsections (i) through (iv) of this section, inspection, extermination, and other reasonable care shall be exercised within the lot of record in order to eliminate any pests, dirt, and/or filth that pose a source of cannabis product contamination.

(c)Any other information as may be requested by the Director and/or by the Planning Commission.

4.2. Storage

Excess compost will be stored within the material storage area specified and will be covered and surrounded by straw wattles to minimize loss of material.

Fertilizers will be stored in a storm-proof shed/Conex container or similar. Fertilizers will be properly labeled, and open containers sealed when stored.

Pesticides will be used according to the instructions on the label or the material safety data sheets (MSDS). County regulations also apply to listed pesticides. Pesticides will be stored in a storm-proof shed/Conex container or similar so that stormwater is not contaminated. Chemicals will be properly labeled and open containers sealed when stored.

4.3. Groundskeeping

Good housekeeping measures will be implemented. The grounds will be inspected at least once per day and any litter picked up. Trash containers will be emptied when full. Roads will be maintained so that significant erosion does not occur. This may include wetting dusty roads, armoring with gravel, patching holes, and maintaining drainage features such as water bars, culverts and side ditches. Weeds and grasses will be controlled by mulching or by cutting with a lawnmower or line trimmer. Drainage ditches and swales will be regularly mowed and cleaned, including the removal of litter, debris, and sediment. Containers and ditches will be drained so that mosquitos do not breed. Live traps may be deployed to remove rodents from operational areas. Disposable coveralls (e.g. Tyvek) can be used to increase sanitation levels and reduce vectoring of mites and other pests. A clothing changing station/mudroom will be provided in an existing building for employees so that street clothing is separated from cultivation clothing.

Property maintenance will follow Best Management Practices. The following CASQA Industrial and Commercial Handbook BMP Fact Sheets may be applicable and are provided in Appendix B:

- BG-40 Landscape Maintenance
- SC-41 Building & Grounds Maintenance
- SC-40: Contaminated or Erodible Areas
- SC-43 Parking Area Maintenance
- SC-44 Drainage System Maintenance

5.0 SECURITY

5.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Security:

(a) Intent: To minimize criminal activity, provide for safe and secure working environments, protect private property, and to prevent damage to the environment. The Applicant shall provide adequate security on the premises, as approved by the Sheriff and pursuant to this section, including lighting and alarms, to ensure the safety of persons and to protect the premises from theft.

(b) Security Plan. This section shall include at a minimum:

a. A description of the security measures to be taken to:

(1) Prevent access to the cultivation site by unauthorized personnel and protect the physical safety of employees. This includes, but is not limited to:

i. Establishing physical barriers to secure perimeter access and all points of entry (such as locking primary entrances with commercial-grade, non-residential door locks, or providing fencing around the grounds, driveway, and any secondary entrances including windows, roofs, or ventilation systems);

ii. Installing a security alarm system to notify and record incident(s) where physical barriers have been breached;

iii. Establishing an identification and sign-in/sign-out procedure for authorized personnel, suppliers, and/or visitors;

iv. Maintaining the premises such that visibility and security monitoring of the premises is possible; and

v. Establishing procedures for the investigation of suspicious activities.

(2) Prevent theft or loss of cannabis and cannabis products. This includes but is not limited to:

i. Establishing an inventory system to track cannabis material and the personnel responsible for processing it throughout the cultivation process;

ii. Limiting access of personnel within the premises to those areas necessary to complete job duties, and to those time-frames specifically scheduled for completion of job duties;

iii. Supervising tasks or processes with high potential for diversion (including the loading and unloading of cannabis transportation vehicles); and

iv. Providing designated areas in which personnel may store and access personal items.

(3) Identification of emergency contact(s) that is/are available 24 hours/seven (7) days a week including holidays. The plan shall include the name, phone number and facsimile number or email address of an individual working on the commercial cultivation premises, to whom notice of problems associated with the operation of the commercial cultivation establishment can be provided. The commercial cultivation establishment shall keep this information current at all times. The applicant shall make every good faith effort to encourage neighborhood residents to call this designated person to resolve operating problems, if any, before any calls or complaints are made to the County.

(4) The permitee shall maintain a record of all complaints and resolution of complaints and provide a tally and summary of issues the annual Performance Review Report.

(5) A description of fences, location of access points, and how access is controlled.

(6) Video Surveillance.

i. At a minimum, permitted premises shall have a complete digital video surveillance system with a minimum camera resolution of 1280 X 720 pixel. The video surveillance system shall be capable of recording all pre-determined surveillance areas in any lighting conditions.

ii. The video surveillance system shall be capable of supporting remote access by the permittee.

iii. To the extent reasonably possible, all video surveillance cameras shall be installed in a manner that prevents intentional obstruction, tampering with, and/or disabling.

iv. Areas that shall be recorded on the video surveillance system include, but are not limited to, the following:

a. The perimeter of the cannabis cultivation site and cannabis nursery,

b. Areas where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises;
c. Areas where cannabis is destroyed;
d. Limited-access areas;
e. Security rooms;
f. Areas containing surveillance-system storage devices, in which case, at least one camera shall record the access points to such an area; and
g. The interior and exterior of all entrances and exits to the cannabis cultivation sites and cannabis nursery including all buildings where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises.

v. The surveillance system shall record continuously 24 hours per day and at a minimum of 30 frames per second.
vi. All exterior cameras shall be waterproof, I-66 minimum.
vii. All interior cameras shall be moisture proof.
viii. Cameras shall be color capable.
ix. Video management software shall be capable of integrating cameras with door alarms.
x. Video recordings shall be digital.
xi. Thermal technology shall be use for perimeter fencing.
xii. All cameras shall include motion sensors that activates the camera when motion is detected.
xiii. In areas with inadequate lighting for the cameras being used, sufficient lighting shall be provided to illuminate the camera's field of vision.
xiv. All recording shall be located in secure rooms or areas of the premises in an access and environment-controlled environment which is separate from the room where the computer and monitoring equipment is located.
xv. All surveillance recordings shall be kept on the applicant's recording device or other approved location for a minimum of 30 days.
xvi. All video surveillance recordings are subject to inspection by the Department and shall be copied and sent, or otherwise provided, to the Department upon request.
xvii. The video recordings shall display the current date and time of recorded events. Time is to be measured in accordance with the U.S. National Institute Standards and Technology standards. The displayed date and time shall not significantly obstruct the view of recorded images.

(7) Fences

i. All commercial cannabis cultivation sites shall be enclosed by a fence. The fence shall include, at a minimum, the following: Posts set into the ground. The posts may be steel tubing, timber or concrete and may be driven into the ground or set in concrete. End, corner or gate posts, commonly referred to as "terminal posts", must be set in concrete footing or otherwise anchored to prevent leaning under the tension of a stretched fence. Posts set between the terminal posts shall be set at intervals not to exceed 10 feet. A top horizontal rail is required between all posts. The fence shall be attached to the posts and top horizontal rail.
ii. No barbed wire, razor wire or similar design shall be used.
iii. The cultivation area shall be screened from public view. Methods of screen may include, but is not limited to, topographic barriers, vegetation, or solid (opaque) fences.

The Ordinance also identifies these prohibited activities that are relevant to this sub-plan:

"All lights used for cannabis related permits including indoor or mixed light cultivation of cannabis shall be fully contained within structures or otherwise shielded to fully contain any light or glare involved in the cultivation process. Artificial light shall be completely shielded between sunset and sunrise.

Security lighting shall be motion activated and all outdoor lighting shall be shielded and downcast or otherwise positioned in a manner that will not shine light or allow light glare to exceed the boundaries of the lot of record upon which they are placed."

5.2. Security Measures

General security measures will consist of the following:

- A security plan, updated as needed;
- Staff screening process, including background checks;
- Personnel rules and responsibilities (to be incorporated into a employee handbook in the future);
- Physical barriers, including signage, road gates, security fencing with locked gates, and commercial-grade locks on all interior doors;
- Theft and loss control program;
- Video surveillance system.

The Security Officer(s) for the cultivation sites are:

- Mark Flamer, consultant, (707) 354-1562

Any complaints or problems associated with the operation of the commercial cultivation establishment will be directed to the Security Officer. The Security Officer shall make every good faith effort to encourage neighborhood residents to call the designated Security Officer to resolve operating problems, if any, before any calls or complaints are made to the County. The Security Officer shall maintain a record of all complaints and resolution of complaints and provide a tally and summary of issues the annual Performance Review Report. The Staff Screening Process is described in the Operations Manual subsection of this Plan.

Personnel rules and responsibilities are as follows:

- Obey the rules of the Security Plan;
- Sign in when entering the facility and sign out when exiting the facility;
- Do not carry any weapons;
- Do not engage in lengthy conversation with the public or respond directly to complaints: direct all such concerns to the Security Officer;
- Only authorized vehicles are allowed in operational areas;
- Do not bring backpacks or other unnecessary storage devices that might complicate the theft control program. Lockers will be provided for personal items; and
- Do not enter restricted areas unless authorized to do so.

Benmore Valley Ranch is accessed by a private gravel road, Benmore Valley Road, which spans 2.2 miles from State Highway 175. There are 3 locked gates between State Highway 175 and the cultivation operations (see maps in Appendix A).

These cultivation operations are closed to the public. Visitation is only allowed when specific permission is granted. All staff, all suppliers, all product transporters, and all visitor must sign the log in / log out sheet. Signage will be posted that states that the operational areas have restricted access and are closed to the public. The signage will not advertise the presence of Cannabis products.

5.3. Theft and Loss Control

The County requires an inventory system to track Cannabis material and personnel handling the material. This requirement will be fulfilled by following the requirements of the CalCannabis

Licensing Program, which creates a Track-and Trace System. Sections 8401 through 8405 (quoted in part) state:

> *"The Department shall establish a track-and-trace system for unique identifiers of cannabis and nonmanufactured cannabis products, which all licensees shall use. Each licensee shall report in the track-and-trace system the disposition of immature and mature plants, as required by Section 8402 of this Chapter, and nonmanufactured cannabis products on the licensed premises and any transfers associated with commercial cannabis activity between licensees.*
> *(a) The licensee is responsible for the accuracy and completeness of all data and information entered into the track-and- trace system. Data entered into the track-and-trace system is assumed to be accurate and can be used to take enforcement action against the licensee if not corrected.*
> *(b) Attempts to falsify or misrepresent data or information entered into the track-and-trace system is a violation and subject to enforcement.*
> *(c) Each licensee shall use the track-and-trace system for recording all applicable commercial cannabis activities. Each licensee shall do all of the following activities:*
> *(1) Establish an account in the track-and-trace system prior to engaging in any commercial cannabis activities associated with their license and maintain an active account while licensed;*
> *(2) Designate at least one of the owners or the responsible party named in the application to be the track-and-trace system administrator...."*

For these cultivation sites, the Track-And-Trace System Administrators are:

- Mark Flamer, consultant, (707) 354-1562

Personnel will be granted access within the premises to only those areas necessary to complete job duties, and to those time-frames specifically scheduled for completion of job duties. There will be supervision of tasks or processes with a high potential for diversion (including the loading and unloading of cannabis transportation vehicles). Supervision may include video surveillance and/or the requirement that the Security Officer or their designee be present.

5.4. Video Surveillance

Each cultivation site will have a comprehensive digital video surveillance system. Each camera will have the following specifications:

- minimum resolution of 1920 X 1080 pixels
- digitally record continuously 24 hours per day and at a minimum of 30 frames per second, color
- exterior cameras shall be waterproof, I-66 minimum
- interior cameras shall be moisture proof
- display the current date and time of recorded events
- sufficient lighting shall be provided to illuminate the camera's field of vision or infrared cameras will be used
- thermal (infra-red) motion sensing technology shall be used for perimeter fencing
- installed in a manner that prevents intentional obstruction, tampering, and/or disabling

The video management software shall be capable of integrating cameras with door alarms. The video surveillance system shall be capable of recording all pre-determined surveillance areas in any lighting conditions. The video surveillance system shall be capable of supporting remote access by the permittee. To the extent reasonably possible, all video surveillance cameras shall be installed in a manner that prevents intentional obstruction, tampering with, and/or disabling.

Areas that shall be recorded on the video surveillance system include, but are not limited to, the following:

a. The perimeter of the cannabis cultivation site and cannabis nursery,
b. Areas where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises;
c. Areas where cannabis is destroyed;
d. Limited-access areas;
e. Security rooms;
f. Areas containing surveillance-system storage devices, in which case, at least one camera shall record the access points to such an area; and
g. The interior and exterior of all entrances and exits to the cannabis cultivation sites and cannabis nursery including all buildings where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises.

All recording shall be located in secure rooms or areas of the premises in an access and environment-controlled environment which is separate from the room where the computer and monitoring equipment is located. All surveillance recordings shall be kept on the applicant's recording device or other approved location for a minimum of 30 days. Data transfer will be by coax cable or by WiFi router. Power supplies shall be self-contained, solar arrays and batteries.

UniFi G3 Pro Video Cameras (Model UVC-G3-Pro) or similar will be installed. These cameras meet meet the requirements listed under Section 10.1. The cameras are wireless and powered by two small solar arrays (Tycon RPSTL24M-200-320 or similar). Data transfer is via a WiFi (Ubiquiti UAP-AC-M Wifi APor similar) to a secure building where recordings are stored for a minimum of 30 days. These cameras can be remotely accessed. See Site Plans for placement and coverage.

5.5. Fencing

Each cultivation site will be enclosed with a sturdy fence. The posts will be set in the ground and will be made of steel tubing or lumber. Terminal posts will be set in concrete or otherwise anchored to prevent leaning under the tension of stretched fence panels. Post interval will not exceed 10 feet. Fence panels will consist of metal mesh "cyclone" fabric or welded wire mesh. The fenced cultivation compound will have a least two gates. The gate will consist of metal tube frame and the paneling will be the same as described above. The gates will be large enough for a service vehicle to ingress/egress. The gates will be secured with a metal padlock. Keys or lock combinations will be controlled by the Security Officer.

5.5.4. Watershed

The operational areas are in the subwatershed "South Fork Scotts Creek" (2-digit HUC code is 180201160103). The Ranch is located in a narrow valley along the ridgeline of the Mayacama Mountains, with elevations ranging from 2,420 feet in its agricultural valley to 2,920 feet on the southern ridge. Benmore Valley is an isolated watershed that is drained by an intermittent channel, Benmore Creek, and ephemeral tributaries. Benmore Creek drains to South Fork Scotts Creek, which then flows in to Scotts Creek, and then in to Clear Lake. Benmore Valley is surrounded by open land owned primarily by the U.S. Bureau of Land Management (Cow Mountain Recreation Management Area) and by the Hopland Indian Reservation. Land uses on the Benmore Valley Ranch consist of rural residences, agriculture (wine grapes, Cannabis), recreation (swimming, fishing, hiking), and open space. Land uses in the vicinity are primarily cattle ranching, hunting, off-road vehicle recreation, vineyards, timberland, and parklands. The Vimark Vineyards Baseline Report (2006) describes the historical land uses in the watershed as follows: "*The ranch has a history of active use with fire, sheep and cattle grazing, and agricultural use impacting vegetative communities. The Benmore valley floor ranch was actively grazed from the 1900's to the 1990's. In the early 1990's grazing lands in the valley bottoms were converted to vineyards. In the early 2000's some of the vineyards were removed leaving fallow fields.*" The watershed of the Benmore Valley is relatively pristine, with south-facing slopes supporting chaparral, grasslands, and oak savannas, while the north-facing slopes are dense with mixed oak and conifer forests and woodlands. Only the valley floor is altered, and consists of irrigated agricultural lands. Surface water is impounded in five reservoirs with an approximate storage capacity of 260 acre feet, and enough flow passes through to sustain healthy riparian corridors.

5.5.5. Protection of Waterbodies and Sensitive Habitats

Potential adverse impacts to water resources could occur during cultivation activities by modification or destruction of stream banks or riparian vegetation, the filling of wetlands, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. The cultivation operations are several hundred feet away from the nearest waterbody. There is no evidence that project implementation will impact any water resources. Water resource protection will be achieved by compliance with this Plan and compliance with the State Water Board's Cannabis Cultivation General Order. The project proposes a 150-foot buffer from Benmore Creek.

Note that if the total area of ground disturbance required for construction activities of the cultivation operation is greater than 1 acre, the landowner or cultivator will need to enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ) and implement a storm water pollution prevention plan.

If operational activities occur near sensitive habitats, it is recommended that signage and/or fencing be erected that identifies the resource and limits entry to these areas. Security fencing that surrounds the cultivation compounds can function as wildlife exclusion devices. It is recommended that fencing be constructed to prevent passage of wildlife through the fencing.

5.5.6. Operational Best Management Practices

The implementation of best management practices during construction and operations will ensure that biological resources are protected. The following are suggested practices and rules to be implemented:

- Restrict vehicular traffic to existing ranch roads whenever possible.
- Reduce vehicle speeds, especially on roadways.
- Minimize water usage
- Do not litter: litter attracts animals.
- Do not feed wildlife. Pets are not allowed within operational areas.
- No hunting or collecting of any animals or plants.
- Use tobacco products only in approved areas.
- Check under tires and equipment for resting animals.
- Use only designated toilet facilities.
- Implement an effective pollution prevention plan. By ensuring that potential pollutants, such as sediment and petroleum products, do not contaminate waterways or natural habitats, biological resources will be better protected.

6.0 STORM WATER MANAGEMENT

6.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Storm Water Management:

(a) Intent: To protect the water quality of the surface water and the stormwater management systems managed by Lake County and to evaluate the impact on downstream property owners.
(b) All permittees shall manage storm water runoff to protect downstream receiving water bodies from water quality degradation.
(c) All cultivation activities shall comply with the California State Water Board, the Central Valley Regional Water Quality Control Board, and the North Coast Region Water Quality Control Board orders, regulations, and procedures as appropriate.
(d) Outdoor cultivation, including any topsoil, pest management, or fertilizer used for the cultivation cannabis shall not be located within 100 feet of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool. For purposes of determining the edge of Clear Lake, the setback shall be measured from the full lake level of 7.79 feet on the Rumsey Gauge.
(e) The illicit discharge of irrigation or storm water from the premises, as defined in Title 40 of the Code of Federal Regulations, Section 122.26, which could result in degradation of water quality of any water body is prohibited.
(f) All permittees shall prepare a Storm Water Management Plan based on the requirements of the California Regional Water Quality Control Board Central Valley Region or the California Regional Water Quality Control Board North Coast Region to be approved by the Lake County Water Resources Department. In addition to those requirements, the plan shall include:

a. Identification of any Lake County maintained drainage or conveyance system that the stormwater is discharged into and documentation that the stormwater discharge is in compliance with the design parameters of those structures.
b. Identification of any public roads and bridges that are downstream of the discharge point and documentation that the stormwater discharge is in compliance with the design parameters of any such bridges.
c. Documentation that the discharge of stormwater from the site will not increase the volume of water that historically has flow onto adjacent properties.
d. Documentation that the discharge of stormwater will not increase flood elevations downstream of the discharge point.
e. Documentation that the discharge of stormwater will not degrade water quality of any water body.
f. Documentation of compliance with the requirements of Chapter 29, Storm Water Management Ordinance of the Lake County Ordinance Code.
g. Describe the proposed grading of the property.
h. Describe the storm water management system.
i. Describe the best management practices (BMPs) that will be used during construction and those that will be used post-construction. Post-construction BMPs shall be maintained through the life of the permit.
j. Describe what parameters will be monitored and the methodology of the monitoring program.

6.2. List of Responsible Parties and Contact Information

The Stormwater Manager(s) currently assigned to these cultivation operations are:

- Mark Flamer, consultant, (707) 354-1562

The stormwater manager shall have primary responsibility and significant authority for the implementation, maintenance, inspection, and amendments to the Stormwater Management Plan. Duties of the stormwater manager include but are not limited to:

- Ensuring full compliance with the Plan and the Chapter 29, Storm Water Management Ordinance of the Lake County Ordinance Code. Implementing all elements of the Plan, including but not limited to implementation of prompt and effective erosion and sediment

control measures, and implementing all non-storm water management, and materials and waste management activities (such as monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.);

- Inspections (pre-storm, during storm, and post-storm) or designating qualified personnel to do so;
- Routine inspections as specified in the cultivation operation's specifications or described in the Plan;
- Preparing any annual compliance certification;
- Ensuring elimination of all unauthorized discharges;
- The storm water manager shall be assigned authority to mobilize crews to make immediate repairs to the control measures;
- Coordinate with the landowner or cultivator to assure all the necessary corrections/repairs are made immediately, and that the project complies with the Plan and relevant permits.

6.3. Compliance

6.3.1. Setbacks and Buffers

The Ordinance requires that all cultivation operations be located at least 100 feet away from all waterbodies (i.e. spring, top of bank of any creek or seasonal stream, edge of lake, wetland or vernal pool). All sites will have a minimum setback of 150 from Benmore Creek.

Generous vegetative buffers exist between this cultivation operation and the nearest water resource. These vegetated areas will be preserved as much as possible. The exception are any fire breaks needed for wildfire protection. Areas that are covered in grasses will be regularly mowed or trimmed. Areas that are covered in natural habitats should not be trimmed.

Straw wattles or similar will be placed between the cultivation operations and Benmore Creek to further reduce the potential of erosion and runoff from the cultivation areas into Benmore Creek.

6.3.2. Water Board Permitting

This cultivation operation is enrolled as a Tier II / Low Risk cultivation operation in the State Water Resources Control Board's *Order WQ 2019-0001-DWQ General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities* (General Order).

Tier I and Tier II enrollees are required to submit technical and monitoring reports. The reports include certifying completion of winterization measures, certification of the facility tier status, and for higher risk tiers, nitrogen management status. The technical reports and monitoring reports are necessary to assure compliance with the Board's General Order. The burden and cost of preparing the reports is reasonable and consistent with the interest of the state in maintaining water quality.

The monitoring requirements or Tier II/Low Risk cultivation operations are:

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 the 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 (if cultivation area or aggregate of cultivation areas exceeds one acre)	Report monthly and annual total nitrogen use for bulk, solid, and liquid forms of nitrogen. Provide the data as pounds per canopy acre per time (month or year) as described in Attachment D, Nitrogen Management Plan. If plant tissue was collected to determine limited nitrogen availability, the results shall be submitted.

Source: Order WQ 2019-001-DWQ Attachment B: Monitoring and Reporting Program

6.3.3. Grading, Discharge Flows, and Downstream Effects

The cultivation operations will not alter the hydrology of the parcels. Establishment of these cultivation operations requires no grading because they have been located on agricultural lands (fallow vineyards and cattle pasture) that were conditioned and contoured decades ago. Establishment of these cultivation operations does not require the construction of new buildings, paved roads, or other permanent and impermeable surfaces. The existing reservoir serves to moderate stormflows and regulate stream volumes. There are no onsite flooding hazards.

Perimeter fencing and large vegetated buffers are present between the operational areas and receiving waterbodies, which allows stormwater that is discharged from operation areas to be slowed and filtered.

6.4. Storm Water Management

6.4.1. Water Pollution Control Schedule

BMPs will be deployed in a sequence to follow the progress of site preparation / tilling / cultivation. As the locations of soil disturbance change, erosion and sedimentation controls will be adjusted accordingly to control storm water runoff at the downgrade perimeter and drain inlets. BMPs will be mobilized as follows:

- Year-round:
  - The site manager or stormwater manager will monitor weather using National Weather Service reports (https://www.weather.gov/) to track conditions and alert crews to the onset of rainfall events.

- Disturbed soil areas will be stabilized with temporary erosion control or with permanent erosion control as soon as possible after grading or construction is complete.

- During the rainy season:
  - Disturbed areas will be stabilized with temporary or permanent erosion control before rain events.
  - Disturbed areas that are substantially complete will be stabilized with permanent erosion control (soil stabilization) and vegetation (if within seeding window for seed establishment).
  - Prior to forecast storm events, temporary erosion control BMPs will be deployed and inspected.
- During the non-rainy season:
  - The project schedule will sequence earth-moving activities with the installation of both erosion control and sediment control measures. The schedule will be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to grading.

Sufficient quantities of temporary sediment control materials (straw wattles or similar) will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies. This includes implementation requirements for active areas and non-active areas before the onset of rain. The following table summarizes the general schedule of implementation of site BMPs.

To minimize erosion and sediment runoff during the fallow season, the cultivation areas will be tilled, amended as needed, and planted with a cover crop of alfalfa or other leguminous/nitrogen fixing cover crop similar to prevent erosion of topsoil and increase fertility for the following growing season.

Water Pollution Control Schedule

Phase, Activity, or Milestone	Date
File any needed permit registration documents	immediately
Implementation of rainy season BMPs	October 1st of every year
Rainy season beings	October 15
Implementation of dry season BMPs	April 1st of every year
Dry season begins	April 15
Repair / replacement of erosion control devices	As needed
Site inspections	see Inspection section of this Plan
Submit Annual Report	annually, as required
Expansion / modification of cultivation operational area	modify this Plan within 30 days

6.4.2. Pollutant Source Identification

Inventory of Materials and Activities that May Pollute Storm Water

Construction or cultivation activities that have the potential to contribute sediment to storm water discharges include:

- Tilling, grading and excavation operations;
- Soil import/export operations;
- Structure installation process; and
- Paving operations.

The following table provides a list of materials that may be used and activities that may be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff.

Summary of Potential Project Pollutant Other Than Sediment

Activity/Material Type	Potential Pollutant
Vehicle lubricants and fuels, including oil, grease, diesel and gasoline, and coolants	Petroleum hydrocarbons, volatile organic compounds (VOCs)
Asphaltic emulsions associated with asphalt-concrete paving operations	Petroleum hydrocarbons, VOCs
Portland cement, masonry, and concrete products, muriatic acid, etc.	Materials with a low or high pH, materials with high alkalinity, metals
Road base and subbase material	Materials with high alkalinity or high pH, metals
Gardening materials and wastes	Pesticides, nutrient pollution (nitrates, phosphates, biological oxygen demand, etc.), metals
Treated lumber (materials and waste)	Arsenic, copper, other metals, creosote
Material packaging and site personnel	General litter (municipal solid waste, universal waste)
Portable toilets	Septic waste (fecal coliform, biological oxygen demand)

6.4.3. Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures within the project site:

- vegetated/graveled drainage swales
- straw wattles
- sufficient buffer distances between cultivation areas and drainages
- gravel armoring on driveways and roads
- culverts under roads
- rolling dips on steep road sections
- preservation of existing vegetation

6.4.4. Best Management Practices

Resources consulted for BMP selection included:

- Central Valley Region's Best Management Practices Manual for Cannabis Cultivation. Appendix A in: Waste Discharge Requirements for Cannabis Cultivation Order R5-2015-0113.
- California Stormwater Quality Association. 2011. California Stormwater Best Management Practice Handbook – Construction. California Stormwater Quality Association, Menlo Park, California 886 pp.

- California Stormwater Quality Association. 2014. Stormwater Best Management Practice Handbook Portal: Industrial and Commercial. California Stormwater Quality Association, Menlo Park, California. 474 pp.
- The California Department of Transportation's Construction Site BMPs Handbook, available electronically at http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm
- The California Department of Transportation's Construction Site BMP Fact Sheets, available electronically at http://www.dot.ca.gov/hq/construc/stormwater/factsheets.htm
- USEPA NPDES Storm Water Program's National Menu of BMPs website at http://www.epa.gov/npdes/stormwater/menuofbmps

The following subsections discuss BMPs that have been selected for implementation in this project. Implementation and location of BMPs are shown on the Water Pollution Control Drawings (WPCDs) in the map sections. Appendix A includes a list of the fact sheets of all the BMPs selected for this project.

Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will implement the following practices for effective temporary and final erosion control during construction:

- Preserve existing vegetation where required and when feasible;
- Apply temporary erosion control to exposed areas. Reapply as necessary to maintain effectiveness;
- Implement temporary erosion control measures at regular intervals throughout the defined rainy season to achieve and maintain stability. Implement erosion control prior to the defined rainy season;
- Control erosion in concentrated flow paths by applying erosion control devices.
- Divert run-on and stormwater generated from within the facility away from all erodible materials; and
- If sediment traps or basins are installed, ensure that they are working properly and emptied of accumulated sediment and litter.

Specific erosion control BMPs that can be implemented are listed here and the Construction and Industrial BMP fact sheets are included in Appendix D:

- EC-2: Preservation of Existing Vegetation
- EC-3: Hydraulic Mulch
- EC-4: Hydroseeding
- EC-5: Soil Binders
- EC-6: Straw Mulch
- EC-7: Geotextiles & Mats
- EC-8: Wood Mulching
- EC-9: Earth Dikes & Drainage Swales
- SC-33: Outdoor Storage of Raw Materials
- SC-40: Contaminated or Erodible Surfaces
- TC-30: Vegetated Swale
- TC-31: Vegetated Buffer Strip

Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported

by the force of water. This project will incorporate sediment control measures as needed.

Specific sediment control BMPs that can be implemented are listed here and the Construction BMP Fact Sheets are included in Appendix D:

- SE-1: Silt Fence
- SE-3: Sediment Trap
- SE-5: Fiber Rolls
- SE-6: Gravel Bag Berm
- SE-8: Sand Bag Barrier
- SE-9: Straw Bale Barrier
- TC-32: Bioretention

Erosion and sediment control diagrams are provided in the Maps section that indicate the recommended type and placement of sediment control devices.

Monitoring / BMP Inspection and Maintenance

Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the rainy season, to allow implementation of temporary erosion and sediment controls in the event of predicted rain, and for rapid response to failures or emergencies.

A visual monitoring (inspection) program will be implemented, and an inspection would ideally be performed prior to each qualifying rain event and contain the following focal areas:

- All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources
- All BMPs to identify whether they have been properly implemented
- Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard

Record Keeping and Reports

The site manager or storm water manager should retain records of all storm water monitoring information and copies of all reports for a period of at least three years. Each inspection event can be logged in the Inspection Log in a binder. These records include:

- The date, place, time of facility inspections, sampling, visual inspections, and/or measurements, including precipitation;
- The individual(s) who performed the facility inspections, sampling, visual inspections, and or measurements;
- The date and approximate time of analyses;
- The individual(s) who performed the analyses;
- Rain gauge readings from site inspections;
- Non-storm water discharge inspections and visual inspections and storm water discharge visual observation records;
- Visual observation and sample collection exception records; and
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual inspections, or inspections.

Visual Inspection Plan

The inspector is only required to conduct visual observations (inspections) during business hours only. The inspector should record the time, date and rain gauge reading of all qualifying

rain events. Within 2 business days (48 hours) prior to major rain events, the inspector should visually observe (inspect):

- All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources (if needed, the site manager should implement appropriate corrective actions);
- All BMPs to identify whether they have been properly implemented in accordance with the Plan (if needed, the site manager shall implement appropriate corrective actions); and
- Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

The inspector should conduct during-rain event visual observations (inspections) at regular intervals during extended storm events. The inspector shall visually observe (inspect) storm water discharges at all discharge locations. Within two business days (48 hours) after major rain events, the inspector should conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the Plan accordingly.

For the visual inspections described above, the inspector shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants. The inspector should maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

Training

A copy of the Plan will be made available to the site personnel or contractor representatives engaged in the maintenance or installation of BMPs. Site inspectors observing pollution caused by ineffective construction or cultivation practices will inform site personnel of appropriate and proper erosion and sedimentation control practices, along with special follow-up inspection for further training. The Stormwater Manager or general contractor shall organize orientation sessions with all installation, inspection, and maintenance personnel upon initiation of a specific project activity or change in key personnel. These sessions will be setup to ensure that all contractor and sub-contractor operations are implemented in accordance with this Plan. Training sessions will be included as part of regular safety meetings to familiarize works with the requirements of the Plan.

7.0 CANNABIS VEGETATIVE MATERIAL WASTE MANAGEMENT

7.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Cannabis Vegetative Material Waste Management:

The cannabis vegetative material waste management section shall include:

(1) Provide an estimate of the type and amount of cannabis vegetative waste that will be generated on an annual basis.

(2) Describe how the permittee will minimize cannabis vegetative waste generation.

(3) Describe how solid waste will be disposed.

(4) Describe the methodology on how the amount of cannabis vegetative waste that is generated on the site, the amount that is recycled, and the amount and where cannabis vegetative waste is disposed of is measured.

7.2. Cannabis Vegetative Material Waste Management

7.2.1. Types and Volumes of Green Waste

Sources of cannabis vegetative material waste on this cultivation operation may consist of leaves, stems, and root balls that remain after flower harvest, trimming and grooming during cultivation, and whole dead plants.

Volume of green waste generated by per acre is estimated to be one to two cubic yards per month, or about 90 to 180 cubic yards per year for the entire operation.

Cannabis green waste will be weighed daily, weekly, or as needed, and data shall be recorded for reporting requirements.

7.2.2. Handling and Disposal of Cannabis Vegetative Waste

There will be a dedicated area in each cultivation compound where Cannabis waste is handled. This area will be surveilled by video camera, and Cannabis waste will be weighed at regular intervals as part of the Track and Trace Program. Cannabis waste will be handled with appropriate PPE, including long-sleeved shirts, pants, boots, dust mask, eye protection, and gloves. Cannabis waste will be composted onsite.

Non-cannabis green waste will be shredded in a wood-chipper, as necessary. Vegetative waste will be mixed with soil and inoculated with humus and composted. Compost heaps should be at least one cubic yard in size to generate and sustain necessary heat for composting (to sustain aerobic digestion). Compost heaps should be segregated into batches as they age, with humus being the resulting product after several weeks of composting. Compost heaps should be turned often to encourage aeration and aerobic digestion and supplemental water added to keep the heaps moist, but not wet (to discourage anaerobic digestion). Cannabis waste should be shredded and mixed with at least an equal amount of compostable materials such as food waste, yard waste, or growing medium (to render the cannabis unconsumable). Cannabis waste must be kept inside the locked fence or other locked compound at all times.

If cannabis waste is to be disposed offsite, it should first be shredded and blended with an equal part of non-consumable material, such as cardboard. Cannabis waste must be kept inside the locked garden area or other locked compound until ready for transport. It would then be transported as solid waste to the proper disposal facility.

California Department of Food and Agriculture's CalCannabis Cultivation Licensing Program dictates specific Cannabis waste management practices, that will be adopted, as applicable, by this cultivation operation. The following draft regulations from the CalCannabis Cultivation Licensing Program are quoted as follows, and incorporated by reference:

§ 8305. Cannabis Waste Management
(a) For the purposes of this Chapter, "cannabis waste" is waste that is not hazardous waste as defined in Section 40141 of Public Resources Code, and is solid waste, as defined in Section 40191 of Public Resources Code, that contains cannabis and that has been made unusable and unrecognizable in the manner prescribed in subsection (e). A licensee may not sell cannabis waste.
(b) A licensee shall manage all waste that is hazardous waste, as defined in Section 40141 of Public Resources Code, in compliance with all applicable hazardous-waste statutes and regulations.
(c) A licensee shall dispose of cannabis waste as identified in the licensee's Cultivation Plan approved by the Department. A licensee shall not dispose of cannabis waste in an unsecured waste receptacle, whether in the control of the licensee or not.
(d) Cannabis that a licensee intends to render into cannabis waste shall be held in the designated holding area for a minimum of 72 hours. A licensee shall affix to each batch one or more documents with batch information and weight. At no time during the 72-hour hold period may the cannabis be handled, moved, or rendered into cannabis waste. The cannabis the licensee intends to render into cannabis waste is subject to inspection by the Department.
(e) A licensee shall make cannabis into cannabis waste by rendering the cannabis unusable and unrecognizable. The licensee shall render the cannabis into cannabis waste before removing the cannabis waste from the licensed premises. A licensee shall render the cannabis into cannabis waste by grinding and incorporating the cannabis with other ground material so that the resulting mixture is at least 50 percent noncannabis material by volume. A licensee shall render cannabis into cannabis waste and track that waste by batch.
(f) Cannabis that a licensee wishes to deposit at a compostable materials handling facility or at an in-vessel digestion facility may be rendered cannabis waste by incorporating any nonhazardous compostable material, as defined in Title 14 of the California Code of Regulations at Section 17852 (a)(11), that a compostable materials handling facility or in-vessel digestion facility may lawfully accept.
(g) Unless a licensee will compost onsite, after a licensee renders the cannabis into cannabis waste, a licensee shall do one of the following with the cannabis waste:
(1) Dispose of the cannabis waste at a manned and fully permitted solid waste landfill;
(2) Deposit the cannabis waste at a manned solid waste operation or a manned fully permitted compostable materials handling facility; or
(3) Deposit the cannabis waste at a manned solid waste operation or a manned fully permitted in-vessel digestion facility.
(h) In addition to all other tracking requirements set forth in Sections 8404 and 8405 of this Chapter, a licensee shall use the track-and-trace system and onsite documents to ensure the cannabis waste materials are identified, weighed, and tracked while on the licensed premises and when disposed of or deposited in accordance with subsection (g).
(i) A licensee shall enter the date and time that the cannabis was rendered cannabis waste and the weight of the resulting cannabis waste into the track-and-trace database.

(j) A licensee shall maintain accurate and comprehensive records regarding cannabis waste material that account for, reconcile, and evidence all activity related to the generation and disposal or disposition of cannabis waste. A licensee shall obtain a record from the solid waste facility evidencing the acceptance of the cannabis waste material at the facility. The record shall contain the name and address of the facility, the date, and the volume or weight of the cannabis waste accepted. These documents are records subject to inspection by the Department and shall be kept in compliance with Section 8400 of this Chapter.
(k) A licensee shall enter the date and time of the disposal or deposit of the cannabis waste at a solid waste facility, compostable materials handling facility, or an in-vessel digestion facility into the track-and-trace system.

8.0 GROWING MEDIUM MANAGEMENT

According to the Ordinance, the Property Management Plan must have a section on Growing Medium Management:

The growing medium management section shall include:

(1) Provide an estimate of the type and amount of new growing medium that will be used and amount of growing medium will be disposed of on an annual basis.

(2) Describe how the permittee will minimize growing medium waste generation.

(3) Describe any non-organic content in the growing medium used (such as vermiculite, silica gel, or other non-organic additives.

(4) Describe how growing medium waste will be disposed.

(5) Describe the methodology on how the amount of growing medium waste that is generated on the site, the amount that is recycled, and the amount and where growing medium waste is disposed of, is measured.

The CDFA CalCannabis Program describes soils handling as follows:

"*Soils used in cannabis cultivation may be treated, reused, stockpiled, and/or discarded. For reuse, soils are piled and covered with tarps for an extended period (months to a year) to allow heat from sunlight to destroy any potential soil pathogens or pests. Another practice for soil reuse is to run a compost tea through the soils between harvests to restore soil nutrients. Although it is not a direct component of the Proposed Program, another aspect of soil reuse can include laboratory testing of soil samples to identify nutrient deficiencies or other issues. Identifying such deficiencies allows the soil to be properly treated or amended with fertilizers or other soil amendments, thereby correcting these deficiencies, prior to being reused with a new cannabis crop.*" (CDFA 2017)

"*Outdoor cultivation typically involves planting rooted cannabis cuttings or seeds in the early spring and harvesting the plants in the fall (mid-September through November), after the plants flower. Soils used in the pots or grow bags are typically amended to ensure that nutrients are available to the plants throughout the growing season. Compost teas, which are created by steeping compost material in water, may also be used to fulfill nutrient needs (Ingham 2014). Water and nutrient supplement needs for outdoor cultivation may vary depending on the type of growing container selected. For example, raised beds typically require more watering and additional liquid nutrient application compared to other growing container options.*" (CDFA 2017)

For the purposes of this Plan, growing medium consists of soil and non-organic amendments (vermiculite, perlite, silica gel, etc.). It does not include fertilizers or organic amendments such as mulch, humus, worm castings. etc. See the Fertilizer subsection of this Plan for a discussion on organic amendments.

8.1.1. Types and Volumes of Growing Medium

The growing medium for this cultivation operation will be approximately 300 to 600 yards of amendment mixed with existing topsoil.

8.1.2. Growing Medium Handling, Disposal, and Waste Reduction

Growing media waste will be reduced or eliminated by composting and blending old soils with new soils and amendments. No significant amounts of growing media are expected to be disposed. Instead, media is reduced in volume yearly because it is absorbed by the plants and metabolized by soil organisms (bacteria, fungi, invertebrates). Soil staging areas and compost piles will be located inside the fenced compounds. BMPs will be employed to ensure that these piles do not contaminate stormwater or cause nuisance dust or odor issues.

9.0 WATER USE

9.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Water Resources:

(a) Intent: To conserve the County's water resources by minimizing the use of water.
(b) All permitted activities shall have a legal water source on the premises, and have all local, state, and federal permits required to utilize the water source. If the permitted activity utilizes a shared source of water from another site, such source shall be a legal source, have all local, state, and federal permit required to utilize. the water source, and have a written agreement between the property owner of the site where the source is located and the permitted activity agreeing to the use of the water source and all terms and conditions of that use.
(c) Permittee shall not engage in unlawful or unpermitted drawing of surface water.
(d) The use of water provided by a public water supply, unlawful water diversions, transported by a water hauler, bottled water, a water-vending machine, or a retail water facility is prohibited.
(e) Where a well is used, the well must be located on the premises, an adjacent parcel or piped through a dedicated easement. The production well shall have a meter to measure the amount of water pumped. The production wells shall have continuous water level monitors. The methodology of the monitoring program shall be described. A monitoring well of equal depth within the cone of influence of the production well may be substituted for the water level monitoring of the production well. The monitoring wells shall be constructed and monitoring begun at least three months prior to the use of the supply well. An applicant shall maintain a record of all data collected and shall provide a report of the data collected to the County annually.
(f) Water may be supplied by a licensed retail water supplier, as defined in Section 13575 of the Water Code, on an emergency basis. The application shall notify the Department within 7 days of the emergency and provide the following information:

a. *A description of the emergency.*
b. *Identification of the retail water supplier including license number.*
c. *The volume of water supplied.*
d. *Actions taken to prevent the emergency in the future.*

(g) All permittees shall prepare a Water Use/water availability analysis prepared by qualified individual Said plan shall:

a. *Identify the source of water, including location, capacity, and documentation that it is a legal source.*
b. *Describe the proposed irrigation system and methodology.*
c. *Describe the amount of water projected to be used on a monthly basis for irrigation and separately for all other uses of water and the amount of water to be withdrawn from each source of water on a monthly basis.*

9.2. Water Availability Analysis

The water for the project will be pumped from South Lake, which the large pond on APN 007-001-31. Benmore Valley Ranch, LLC has appropriative water rights of 142 Acre-Feet per year from South Lake (Point of Diversion ID 23400, Application ID A009868).

Water will be supplied via the existing vineyard irrigation system using the stored water from South Lake. Water will be pumped to water storage tanks (5,000 to 10,000 gallon tanks) where it will be pumped to each site using an approximately 2-horsepower pump powered by PG&E. The existing system consists of PVC pipes. Black polyvinyl flexible tubes and drip emitters will be used to irrigate plants directly.

Water use requirements for outdoor cannabis production are similar to water use requirements for other agricultural crops such as corn (CDFA 2017). CDFA (2017) reports the following regarding the water use for cannabis:

> *"According to Hammon et al. (2015), water use requirements for outdoor cannabis production (25-35 inches per year) are generally in line with water use for other agricultural crops, such as corn (20-25 inches per year), alfalfa (30-40 inches per year), tomatoes (15-25 inches per year), peaches (30-40 inches per year), and hops (20-30 inches per year). Lindsey (2012) similarly cites a University of California researcher who suggested that cannabis does well under irrigation management and, as a small-acreage crop, will use far less water than crops such as cotton. Estimates of daily water usage per cannabis plant range from 5 gallons (Live Science 2014) to 6-8 gallons (CDFW 2016)."*

CDFA (2017) concludes the following regarding groundwater impacts from small cultivation operations:

> *"Based on the relatively low quantities of water use (from 0.002 to 1.8 acre-feet per year), the likelihood that an individual cultivator or group of cultivators using groundwater from a defined alluvial aquifer would, by themselves, cause substantial groundwater overdraft is considered unlikely, for several reasons. First, groundwater overdraft is typically caused by the combination of various uses in a basin and is not typically attributable to a particular user or set of users; in other words, it is typically a cumulative issue (which is discussed in more detail in Chapter 6, Cumulative Considerations). In addition, the size limitations for cultivation sites under the Proposed Program would limit the maximum extent of water use. For instance, the highest estimate, provided by Hammon et al. (2015), would result in less than 3 acre-feet of annual usage at the largest allowable cultivation site of 1 acre. Finally, no information is available to suggest that there would be high concentrations of cultivators using groundwater from an alluvial basin in a particular location in a manner that could substantially affect neighboring wells."* (pages 4.8-34 to 4.8-35)

Average usage per acre is 1.8 acre-feet. The demand for 15 acres is approximately 27 acre-feet. The total available water, 142 acre-feet, exceeds the demand.

Note that water may be supplied by a licensed retail water supplier, as defined in Section 13575 of the Water Code, on an emergency basis. The application shall notify the Department within 7 days of the emergency and provide the following information: a description of the emergency; identification of the retail water supplier including license number; the volume of water supplied; and actions taken to prevent the emergency in the future.

Water conservation practices will be implemented, including some combination of the following strategies and actions:

- selection of plant varieties that are suitable for the climate of the region;
- the use of driplines and drip emitters (instead of spray irrigation);
- mulching to reduce evaporation;
- water application rates modified from data from soil moisture meters and weather monitoring;
- shutoff valves on hoses and water pipes;
- daily visual inspections of irrigation systems;
- immediate repair of leaking or malfunctioning equipment; and
- water metering and budgeting.

10.0 MONITORING AND REPORTING FOR COUNTY LICENSING

10.1. Requirements / Goals

According to the Ordinance, the licensee must perform annual compliance monitoring and prepare annual reports as follows:

6. Compliance Monitoring

i. A compliance monitoring inspection of the cultivation site shall be conducted annually during growing season.

ii. The permittee shall pay a compliance monitoring fee established by resolution of the Board of Supervisors prior to the inspection.

iii. If there are no violations of the permit or state license during the first five years, the inspection frequency may be reduced by the Director to not less than once every five years.

7. Annual Reports

i. Performance Review

(a) All cannabis permittees shall submit a "Performance Review Report" on an annual basis from their initial date of operation for review and approval by the Planning Commission. The Planning Commission may delegate review of the annual Performance Review Report to the Director at the time of the initial hearing or at any time thereafter. This annual "Performance Review Report" is intended to identify the effectiveness of the approved development permit, use permit, Operations Manual, Operating Standards, and conditions of approval, as well as the identification and implementation of additional procedures as deemed necessary. In the event the Planning Commission identifies problems with specific Performance Review Report that could potentially lead to revocation of the associated development or use permit, the Planning Commission may require the submittal of more frequent "Performance Review Reports."

(b) Pursuant to sub-section 6.i. above, the premises shall be inspected by the Department on an annual basis, or less frequently if approved by the Director. A copy of the results from this inspection shall be given to the permittee for inclusion in their "Performance Review Report" to the Department.

(c) Compliance monitoring fees pursuant to the County's adopted master fee schedule shall be paid by permittee and accompany the "Performance Review Report" for costs associated with the inspection and the review of the report by County staff.

(d) Non-compliance by permittee in allowing the inspection by the Department, or refusal to pay the required fees, or noncompliance in submitting the annual "Performance Review Report" for review by the Planning Commission shall be deemed grounds for a revocation of the development permit or use permit and subject the holder of the permit(s) to the penalties outlined in this Code.

11.0 LITERATURE CITED AND FURTHER READING

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Troeh, F. and J. A. Hobbs. 2003. Soil and Water Conservation for Productivity and Environmental Protection, 4th ed. Prentice Hall, Upper Saddle River, N.J.

12.0 APPENDIX A: SITE PLANS

Insert here or bind separately

13.0 APPENDIX B: CASQA INDUSTRIAL AND COMMERCIAL HANDBOOK BMP FACT SHEETS

Insert here or bind separately

14.0 APPENDIX C: MATERIAL DATA SAFETY SHEETS

Insert here or bind separately

15.0 APPENDIX D: EMPLOYEE MANUAL

Insert here or bind separately

16.0 APPENDIX E: LOG OF INSPECTIONS, RECORDS, AND DATA COLLECTION

Insert here or bind separately