

Mitigated Negative Declaration

1. **Project title: Medical Marijuana Land Use Ordinance – Phase IV – Commercial Cultivation of Cannabis for Medical Use.**

Applies Countywide
Case Nos.: **OR-15-003**

2. **Lead agency name and address:** Humboldt County Planning & Building Department, 3015 H Street, Eureka, CA 95501-4484; Phone: (707) 445-7541; Fax (707) 445-7446
3. **Contact person and phone number:** Steven Lazar, Senior Planner (707) 268-3741
slazar@co.humboldt.ca.us
4. **Project location:** This project applies within the unincorporated areas of the County of Humboldt, including the Coastal Zone.
5. **Project sponsor's name and address:** County of Humboldt, 825 5th St., Eureka, CA
6. **General plan designation:** The project applies across all land use designations
7. **Zoning:** The project applies across all Zoning Districts
8. **Description of project:** Amendments to the Zoning Ordinance intended to provide for regulation of land uses involving the commercial cultivation of cannabis for medical use. The ordinance would regulate the commercial cultivation of cannabis for medical use by licensed operators, in compliance with relevant state and local laws. This project represents the fourth phase of the Humboldt County "Medical Marijuana Land Use Ordinance" (hereinafter referred to as the "MMLUO"), which is part of ongoing local efforts to regulate land uses associated with medical marijuana in the county. The ordinance applies regulations to an existing unregulated land use to help prevent and reduce environmental impacts that are known to result from unpermitted baseline cultivation operations. The ordinance develops pathways for compliance with new and existing regulations, while providing for local review, inspection, and oversight. The ordinance seeks to establish local-level regulation, consistent with the state and regional regulation including: Cannabis Cultivation Waste Discharge Regulatory Program (hereinafter referred to as the "CCWDRP") administered by the North Coast Regional Water Quality Control Board and state licensing requirements described in the Medical Marijuana Regulation and Safety Act (SB 643, AB 266, and AB 243 enacted September 11, 2015 - hereinafter referred to as the "MMRSA"). The legislation will create the Bureau of Medical Marijuana Regulation (hereinafter referred to as the "BMMR") and amendments to the provisions of Business and Professions Code Sections 19315, 19316, 19320, 19322, 19332, and 19360 and Health and Safety Code Section 11362.777.

Following adoption of local regulations governing commercial cultivation of cannabis for medical use, existing operations will be required to come into compliance and begin work to secure all necessary permits. Permits and requirements for existing operators would vary depending on factors including: size, scale, zoning, and land characteristics, as well as the location chosen for cultivation. New operations would only be permitted if meeting rigorous standards that ensure the protection of the environment. If adopted, these amendments to the Zoning Regulations would create new Humboldt County Code Sections in the Coastal and Inland Zoning Regulations. Because the Coastal Zoning Regulations are an implementation of the Local Coastal Program (LCP), changes to the Coastal Zoning Regulations constitute an amendment to the LCP requiring certification by the California Coastal Commission before they become effective.

The proposed Zoning Ordinance amendments do not apply to the cultivation of medical marijuana for personal use, or to the cultivation by personal caregivers for no more than five qualified medical

marijuana patients on parcels of less than five acres, or to the regulation of medical marijuana dispensaries, which is the subject of other, previously adopted, sections of the MMLUO. This ordinance will have no application to or effect on the existence of the unlawful cultivation of marijuana on public or private lands that is not intended for legitimate medical use.

9. **Surrounding land uses and setting:** The project is located in Humboldt County, which includes significant portions of the Klamath River, Trinity River, Mad River, Van Duzen River, Mattole River, Eel River, and Redwood Creek watersheds. “Eighty percent of the county’s 2.3 million acres are forested. Fifty percent of this acreage is found in private commercial timberland and 35 percent is state or federal public land, including Redwood National and State Park, Six Rivers National Forest, the King Range National Conservation Area, and Humboldt Redwoods State Park. Though forests are a defining feature, agriculture is a key part of the landscape and remains an important base industry. Approximately one-quarter of Humboldt County (634,000 acres) remains agricultural.” (source: Humboldt County General Plan Update / 2015 draft) Humboldt and bordering counties Trinity and Mendocino are often referred to as “The Emerald Triangle”. With a reputation for marijuana cultivation spanning decades, this region is believed by many to be the largest producer of cannabis in the country, and possibly the world.

*From State Clearinghouse Number (SCH No.) 2015042074 (North Coast Regional Water Quality Control Board - **Adoption of General Waiver of Waste Discharge Requirements and a General Water Quality Certification for Discharges of Waste from Cannabis Cultivation and Associated Activities...**):*

“The North Coast Region is characterized by distinct temperature zones. Along the coast, the climate is moderate and foggy and the temperature variation is not great. For example, at Eureka, the seasonal variation in temperature has not exceeded 63°F for the period of record. Inland, however, seasonal temperature ranges in excess of 100°F have been recorded. Precipitation over the North Coast Region is greater than for any other part of California; portions of the Region receive 150% more rainfall than the rest of California. Flows in streams in steep watersheds can rise quickly in response to rainfall and damaging floods are a fairly frequent hazard. Particularly devastating floods occurred in the North Coast area in December of 1955, in December of 1964, in February of 1986, and December of 1997. Throughout the western parts of the region, a Mediterranean climate prevails, with nearly all of the rainfall from October through May. In the east portions of the region, lower annual rainfall and modest summer precipitation is common. Ample precipitation in combination with the mild climate found over most of the North Coast Region has provided a wealth of fish, wildlife, and scenic resources. The mountainous nature of the Region, with its dense coniferous forests interspersed with grassy or chaparral covered slopes, provides shelter and food for deer, elk, bear, mountain lion, furbearers and many upland bird and mammal species. The numerous streams and rivers of the Region contain anadromous fish, and the reservoirs, although few in number, support both coldwater and warmwater fish. Tidelands, and marshes too, are extremely important to many species of waterfowl and shore birds, both for feeding and nesting. Cultivated land and pasture lands also provide supplemental food for many birds, including small pheasant populations. Tideland areas along the north coast provide important habitat for marine invertebrates and nursery areas for forage fish, game fish, and crustaceans. Offshore coastal rocks are used by many species of seabirds as nesting areas. Major components of the economy are tourism and recreation, logging and timber milling, aggregate mining, commercial and sport fisheries, sheep, beef and dairy production, vineyards and wineries, and increasingly over the past several decades, marijuana cultivation. The North Coast’s unique geographic and climate conditions include dense forested areas receiving substantial winter precipitation with dry summers along with the sparse population have provided conditions favorable to marijuana cultivation. The counter culture of the 1960s led to the back-to-the-land movement of the 1970s and a wave of new settlers in rural areas of the north coast. Many of these settlers purchased lands previously used for timber harvesting and ranching uses and built their homes, established individual surface water diversions, and lived off-the-grid and beyond the scope of regulations, cultivating cannabis both on their own private properties or on nearby public lands.”

“A look at Google Earth over time shows a relatively recent marked increase in new development of cannabis cultivation sites on private lands, including land clearing, grading, road and stream crossing construction, and water diversion and storage. This concentration of new disturbance, in combination with ongoing impacts from already existing cultivation sites, timber harvesting and longer-time residential development appears to be leading to a new wave of cumulative impacts. Cannabis has been and continues to be cultivated widely on public lands, as well, including a reportedly growing number of illegal plantations run by foreign suppliers who have moved north of the U.S.-Mexico border where they are closer to U.S. drug markets. According to the Office of National Drug Control Policy (2015), nearly 3.6 million plants were removed from more than 5,000 illegal outdoor grow sites in the United States during calendar year 2012. More than 43 percent of the marijuana plants eradicated in 2012 were eradicated from public and tribal lands.”

In 2014, the Humboldt County Sheriff’s Department estimated that there are more than 4,000 cultivation sites throughout Humboldt County. During a recent June 2015 law enforcement action in the Island Mountain area, the Humboldt County Sheriff’s office estimated that over 26,000 plants were seized under seven inspection warrants served on seven separately owned parcels of land.

10. Other public agencies which may be involved

State Water Resource Control Board (SWRCB) – Application to Appropriate Water, Statement of Water Diversion and Use, Registration, Construction General Stormwater Permit (Responsible Agency),

North Coast Regional Water Quality Control Board (RWQCB) – Notice of Intent and monitoring report – Order No. 2015-0023 Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities,

California Department of Forestry and Fire Protection (Cal-FIRE) – Less Than 3-acre Conversion, Notice of Timberland Conversion, 150’ fire hazard clearance (Responsible Agency)

California Department of Fish and Wildlife (DFW) – Lake and Streambed Alteration Agreement (Responsible Agency)

Humboldt County Health & Human Services - Environmental Health Division – Well and on-site sewage disposal system permitting (Responsible Agency)

Pursuant to the Medical Marijuana Regulation and Safety Act, licensing, inspection, and oversight may be required through any or all of the following state agencies:

*Bureau of Medical Marijuana Regulation
Department of Consumer Affairs
Department of Food and Agriculture
Department of Pesticide Regulation
Board of Equalization
Franchise Tax Board
Department of Justice
Department of Public Health
Industrial Welfare Commission
State Board of Forestry
The Division of Occupational Safety and Health
California Environmental Protection Agency*

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology / Soils |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality |
| <input checked="" type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input checked="" type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project COULD have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project COULD have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

October 1, 2015

Date

Steven Lazar

Printed name

HCP&BD

For

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault

rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

- 2) All answers must take into account the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, “Earlier Analyses,” may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addresses. Identify which effects from the above checklist were within the scope of and adequately analyze in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plan, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats, however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue identify:
 - a) The significant criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significant.

CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Aesthetics a), b), c), and d): Less than Significant

Discussion: The geography of Humboldt County includes a diverse range of landscapes, many of which are valued for their scenic qualities. Historically, regions of the county that are known to be host to extensive marijuana cultivation are often characterized by their remote nature, rugged terrain, and isolation. All of these qualities were valued by marijuana farmers seeking to escape attention from law enforcement and others. Activities associated with the development of commercial cannabis cultivation sites can include extensive tree removal and/or clearing of vegetation, grading of terrain to create new roads (or reclaim abandoned ones), ponds, and areas for cultivation, and construction and installation of new structures including: greenhouses, water storage tanks, residential dwellings,

Under the MMRSA, medical cannabis is now defined as an agricultural product. From an aesthetic standpoint, there is nothing particularly unique about cannabis when compared with other types of commercial agricultural environments including row crops, orchards, or pastureland. What is perhaps most unique about cannabis is that it is most typically grown in areas that are either not suitable for or were previously never host to commercial crop farming efforts. Historically, marijuana cultivation sites were not chosen based on conventional agricultural priorities (terrain, soil fertility, land/lease pricing, water availability, and proximity to local markets) but instead based on their ability to host inconspicuous cultivation activities which could perpetuate and remain undetected. The landscape and location of larger-scale cannabis cultivation operations visible from contemporary and historic aerial photography is consistent with these factors. This landscape is part of the baseline condition which will be brought into compliance with the future provisions of the MMLUO (Phase IV) which will encourage the careful siting and management of commercial medical cannabis cultivation sites using best management practices for erosion control and protection of water quality, found within existing permitting paradigms (*Building Code, Humboldt County Grading Ordinance, Streamside Management Area Ordinance*) and new ones (such as the *Commercial Cannabis Waste Discharge Regulatory Program* administered by the North Coast

Regional Water Quality Control Board and new regulations to be promulgated by the Bureau of Medical Marijuana Regulation (*under forthcoming administrative regulations which will be applied and enforced through their licensing authority and oversight*).

The primary goal of the ordinance is to provide clear standards and permitting pathways to help bring baseline cultivation activities into compliance with local, regional, and state-wide regulatory schemes. Bringing baseline/legacy cultivation operations into compliance will help to attenuate potential environmental effects from existing cultivation activities, including aesthetic impacts resulting from improper operation or poor siting. Provisions of the CCWDRP “promote protection of riparian buffers, slope and stream stabilization using bioengineering techniques, streambank restoration, and road improvements that will generally improve site vegetation.” Best Management Practices (BMP’s) and Standard Conditions outlined in the CCWDRP also encourage planting and retention of appropriate trees and vegetation and retention of large woody vegetation, as these measures are known to help “provide habitat for wildlife” and are “known to enhance water quality,” and can further help reduce or soften the visibility of cultivation operations from public and private views.

Larger cultivation operations would also be subject to a discretionary permit under the ordinance, so any aesthetic impacts would be evaluated on a case-by-case basis and neighboring land owners would be given an opportunity to comment and be notified of pending permit decisions.

Therefore, impacts that adversely affect scenic vistas, substantially damage scenic resources, substantially degrade the existing visual character or quality of a site or its surroundings, or create a new source of substantial light or glare that would adversely affect day or nighttime views in the area are less than significant.	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Agriculture and Forest Resources a) and b): Less than Significant

The project involves the development of local regulations that will permit the cultivation of commercial medical cannabis in certain locations subject to specific regulatory oversight. Commercial medical cannabis is defined as an agricultural product in the MMRSA. Agricultural uses in Humboldt County include “Agricultural Land,” “Agricultural Operation,” and “Agriculture, General” as well as the “General Agriculture” and these uses are defined under the Zoning Regulations as follows:

Agricultural Land: “Agricultural Land” shall mean all real property within the boundaries of Humboldt County which is designated in the General Plan, Local Coastal Program, or any plan element (“designations” or “planned” in these regulations) and/or zoned for agricultural use. Such designations or zones shall include, but not be limited to Timber Production Zones (TPZ), Agricultural General (AG), Agricultural Exclusive (AE), and any other agricultural designations of zones which may exist or be established by the County in the future.

Agricultural Operation: “Agricultural Operation” shall mean and include, but not be limited to, the cultivation and tillage of the soil, dairying, the production, irrigation, frost protection, cultivation, growing, harvesting, and processing of any agricultural commodity, including viticulture, horticulture, timber or apiculture, the raising of livestock, fur bearing animals, fish or poultry, and any commercial operations, including preparation for market, delivery to storage or to market, or to carriers for transportation to market. This definition shall include both commercial and noncommercial activities in the designated areas or zones defined as “Agricultural Land” in this Chapter.

Agriculture, General: Farming, dairying, pasturage, timber production, tree farming, horticulture, floriculture, viticulture, apiaries, and animal and poultry husbandry, but not including stock yards, slaughter houses, hog farms, fur farms, turkey farms, frog farms, fertilizer works or plants for the reduction of animal matter.

170.1 General Agriculture. The General Agriculture Use Type includes cultivation of food and fiber such as field and tree crops, dairying, pasturage, tree farming, horticulture, floriculture, viticulture, apiaries, and animal and poultry husbandry, but not including feed lots, stock yards, slaughter houses, hog farms, fur farms, turkey farms, frog farms, fertilizer works or plants for the reduction of animal matter.

Commercial cultivation of cannabis for medical use pursuant to the ordinance would occur on lands zoned for agricultural use, given that the commercial cultivation of cannabis for medical use has been classified as an agricultural product.

Cultivation for “personal use” by a qualified patient or primary caregiver remains authorized in all zones under Ordinance #2523, which was adopted by the Board of Supervisors on October 28, 2014. Ordinance #2523 established limits on cultivation on small parcels 5 acres or less, restricting cultivation to 100 square feet of canopy on parcels less than an acre, and 200 square feet of canopy on parcels between 1-acre and 5-acres in size. This represents approximately 1/3 of all parcels within Humboldt County (private lands within unincorporated areas). Notwithstanding the restrictions imposed on small parcels (5 acres or less) under Ordinance #2523, agricultural activities enjoy strong recognition, prioritization, and protection under state law and the Humboldt County Code, including the “Right to Farm Ordinance” (section 314-43.2 of the Zoning Regulations). The proposed ordinance is consistent with the spirit of these agricultural protections while also recognizing the need to properly permit a previously unregulated activity (cultivation of a controlled substance) with potential for cumulative and project-related impacts.

The proposed ordinance is consistent with the protection of farmlands on a state-wide level and would have a less than significant impact on conversion of farmland to a non-agricultural use or conversion of forest land to a non-forest use.

Agriculture and Forest Resources b): Less than Significant

The MMLUO will require a Conditional Use Permit for all existing cultivation operations on lands under Williamson Act contract. New cultivation on lands under a Williamson Act contract will not be permitted under this ordinance. While recognized under MMRSA as an agricultural product, there remains question as to how this form of agriculture will be handled under the Land Conservation (Williamson) Act Program, and its ongoing role in helping to protect and agriculture and open space lands throughout the state. Pursuant to Board Resolution 02-53, wherein the Board adopted Revised Guidelines for Agricultural Preserves, the “Uniform Rules” allow for “other use(s) [on agricultural preserves] determined to be compatible use(s) as provided in Section 51238.1 of the Government Code by the Board of Supervisors after notice and public hearing.” The proposed ordinance will help clarify the question of compatibility of commercial medical cannabis cultivation with local Williamson Act contracts, while allowing for careful review of existing cultivation operations to ensure compliance with Williamson Act conservation principles, with the objective to ensure that commercial medical cannabis cultivation would not prevent or result in the loss of other more conventional forms of agriculture including grazing and crops. Discretionary permitting will also be subject to review and consideration by the Williamson Act committee.

Agriculture and Forest Resources c) and d): Less than Significant

The ordinance requires that an applicant obtain a discretionary permit for any existing commercial medical cannabis cultivation on lands zoned Timberland Production Zone (TPZ). New operations on TPZ-zoned land will not be permitted under this ordinance. The Zoning Regulations currently authorize “...accessory uses...[including] grazing and other agricultural uses...provided they do not significantly detract from the use of the property for, or inhibit, growing and harvesting of timber.” TPZ zoning also provides for limited conversion of forestland for residential, recreational, agricultural, and timber-related uses. “Conversion” is subject to acreage limitations under the Forest Practices Act and Zoning Regulations. Through the Use Permit process, the compatibility, scale, and impacts of cannabis cultivation on the “growing and harvesting of timber” will be addressed. The discretionary permitting process will also enable after-the-fact review and permitting of illegal conversions through the implementation of mitigation measures including restocking (where necessary) or the preparation of a notice of timberland conversion or less than 3-acre conversion, where applicable. It will also provide for review and consideration of applications by the Forestry Review Committee. Therefore, the impact to existing zoning for forest land, timberland, and TPZ is less than significant. Likewise, the ordinance is not likely to result in the loss of forest land or in the conversion of forest land to non-forest use due to the permitting process, thus the impact on this area is less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AIR QUALITY a), d): No Impact

The primary goal of the ordinance is to provide clear standards and permitting pathways to help bring baseline cultivation activities into compliance with local, regional, and state-wide regulatory schemes. The legacy and trajectory of this industry has played out over decades, long before the concept of “medical cannabis” was pioneered during voter passage of the Compassionate Use Act in 1996. Perhaps the most notorious air quality impacts have emerged following the advent clandestine cultivation that is exclusively artificially-illuminated and occurring in remote outdoor environments where access to grid-supplied electricity is scarce. The electrical demand associated with these forms of cultivation is often substantial, furnished through use of “portable” generators (often used on a stationary basis) operating for extended periods. Per kilowatt, emissions from these types of equipment often far exceeds those associated with grid-supplied energy delivered by a public utility. The MMLUO is not designed to address these forms of cultivation, which are products of a paradigm which is rapidly changing. As legitimization of the commercial cultivation of medical cannabis is secured through the development of permitting pathways for conventional (naturally-illuminated) outdoor cultivation under local and state sanction, regulation, and oversight, cultivation practices involving artificial illumination may become less attractive, given their attendant costs and considerations.

Cultivation which occurs in remote and/or rural locations can also compel vehicle trips both to and from the grow site, which increases the associated emissions with the attendant increase in average daily trips which result. The zoning of many of these properties permits private residential uses, as well as residential uses in support of agriculture or timber management. The number of potential vehicle trips associated with these uses can be viewed to be similar or greater than those occurring in association with cannabis cultivation. Therefore, the attendant emissions have been considered as part of the regulatory baseline which already anticipates and allows for private residential development within these areas. As a result, the ordinance will not conflict with or obstruct implementation of the applicable air quality plan or result in a cumulatively considerable net increase of any criteria pollutant.

AIR QUALITY b), c): Less than Significant Impact with Mitigation Incorporated

In many cases, compliance with new regulatory standards applied under the MMLUO and CCWDRP may compel restoration/cleanup/remediation activities at cultivation sites. Implementation may require earthwork and use of heavy equipment, which has the potential to generate dust, particulate matter, and exhaust, resulting in a temporary impact on air quality. Additionally, use of heavy equipment for remediation activities has the potential to result in increased vehicle emissions.

As these impacts are temporary and will in most cases be subject to Best Management Practices pursuant to the CCWDRP (and further incorporation under the MMLUO by reference), it is expected that these temporary impacts will be reduced to less than significant levels, as concluded during preparation of SCH. # 2015042074.

AIR QUALITY e): Less than Significant Impact with Mitigation Incorporated

Cannabis cultivation operations may have odors associated with them, especially during the final parts of the cultivation cycle (typically beginning in August and continuing until harvest). Generally, the larger the size of cultivation activities, the greater the potential for odor to be evident. Many of the operators who will participate in local regulation and oversight under the ordinance are located on large parcels (> 5 acres in size) where cultivation sites enjoy greater separation from neighboring land uses, and where attendant odors are less likely to be detectable from neighboring lands. Preventing nuisances associated with the odor of cannabis under cultivation was one of the primary goals of the second phase of the County’s Medical Marijuana Land Use Ordinance (Ordinance # 2523), which restricts personal use cultivation on parcels that are 5 acres or smaller in size. Under the proposed ordinance, larger cultivation operations will be subject to discretionary permits where neighboring land owners will be given an opportunity to comment and be notified of pending permit decisions. This will provide opportunity for dialogue and mitigation through careful siting and operational restrictions to address potential odor issues. With mitigation measures, potential odor presents a less than significant impact.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Environmental review (SCH. # 2015042074) performed in association with the recent adoption (8/13/15) of Order # 2015-0023, which resulted in the creation of a Cannabis Cultivation Waste Discharge Regulatory Program (CCWDRP) by the North Coast Regional Water Quality Control Board, carefully considered impacts of cannabis cultivation to Biological Resources under baseline conditions in concert with review of the “best available science” germane to this topic. Examples include: local efforts by the California Department of Fish & Wildlife to study impacts from cannabis cultivation on rural watersheds (Impacts of Surface Water Diversion for Marijuana Cultivation on Aquatic Habitat in Four Northwestern California Watersheds. PLoS one / 3/18/15), as well as the study of impacts from observed rodenticide use (Conservation Perils from Marijuana Cultivation on Public Lands – Integral Ecology Research Center / 2014). The project proposes to apply provisions of the RWQCB order (which primarily govern cultivation involving cultivation areas over 2,000 square feet in size) to larger portions of the spectrum of commercial cultivation, including operations less than 2,000 square feet in size. Consequently, adoption of the MMLUO will enable greater application of relevant mitigation for potential impacts to Biological Resources than would otherwise occur under the current scope of the order. Implementation of relevant “Standard Conditions” and “BMP’s” from the order will occur under local oversight during permitting and inspections by county staff in coordination with other state and local agencies including the Department of Fish & Wildlife, Regional Water Quality Control Board, Environmental Health Division, Planning and Building Department, and others. Relevant discussion concerning checklist conclusions (from SCH. # 2015042074) is incorporated by reference and provided below:</p>				

*“The North Coast Region is home to numerous threatened and endangered species that are among the beneficial uses most sensitive to excessive sediment and temperature and reduction in suitable habitat. The migration, spawning, reproduction, and early development of cold water fish such as coho salmon (*Oncorhynchus kisutch*), chinook salmon (*O.tshawytscha*), and steelhead trout (*O. mykiss*) are impacted in the North Coast Region due to water quality impairments and are central to numerous recovery efforts.*

The National Marine Fisheries Service (NMFS) has listed Southern Oregon/Northern California Coast (SONCC) coho salmon (1997), California Coastal Chinook salmon (1999), and Northern California steelhead (2000) as threatened under the federal Endangered Species Act. The California Fish and Game Commission also listed coho salmon as threatened in 2005.

Additionally, waterbodies covering approximately two-thirds of the area of the North Coast Region are included on the Clean Water Act Section 303(d) List of impaired waters due to excessive sediment; technical assessments and programs of implementation for these impaired waters focus on sediment and temperature control for recovery of cold freshwater habitat (COLDF) defined as uses that “support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates” (NCRWQCB, 2011).

Impacts to instream biological resources from past land uses have contributed to declining populations of sensitive species as a result of habitat impacts. Such impacts in the North Coast include those from pre-Forest Practice Act logging and road construction, mining, and ranching. These activities primarily affected riparian and forest conditions as well as instream habitat. Numerous legacy features remain on the landscape and are being addressed incrementally under non-point source regulatory requirements. This Order will require dischargers to inventory, prioritize, schedule, and repair, over time, legacy features on their properties.

Widespread unregulated cannabis cultivation in the North Coast Region is currently posing a new wave of threats to cold freshwater habitat and the dependent species (Bauer, 2015). Land disturbing activities and discharges of waste from cultivation activities can lead to increased sediment loading to streams, reduced shading and water temperature increases, increased nutrient loading, reduction in large wood inputs, and direct alterations to stream morphology due to in-channel disturbances. Excessive surface water diversion can lead to dewatering of streams. Among the biological resources at risk are species that require a full year in freshwater. Dewatering can threaten the survival of entire year classes. The Order is designed to address these impacts from cannabis cultivation and lead to an improvement in water quality and conditions associated with cold freshwater habitat.

BIOLOGICAL RESOURCES a), b), c), d): Less than Significant with Mitigation Incorporated

Discussion: The baseline conditions include legacy impacts and more recent improper site development or maintenance, including improper stream crossing design, which can result in erosion and transportable sediment, create or exacerbate unstable features, and result in temperature impacts from improper hydromodification, potential for adverse geomorphological changes, creation of habitat/migration barriers, and removal of riparian vegetation.

Inadequate riparian protection measures can result in adverse temperature increases, and can result in or increase the likelihood of pollutant discharges to surface waters, or of fill/threatened fill in streams or wetlands. If conducted improperly, soil storage and disposal can result in placement of fill in or where it can enter surface waters, controllable sediment sources, and creation or exacerbation of unstable features. Water diversion, storage, and use can result in depletion of water resources and potential impacts to or loss of beneficial uses; improper construction or maintenance of storage features or facilities can result in pollutant discharge and damage to watercourse structure and instream habitat, and can create fish and wildlife migration barriers. Irrigation runoff from marijuana cultivation and other similar growing operations can result in sediment and other pollutant transport to receiving waters, and possible exacerbation of unstable features. The Order is designed to eliminate and reduce such impacts, particularly as they relate to candidate, sensitive, or special status species, riparian habitat, and/or other sensitive natural communities, and federally-protected wetlands.

Management practices and remediation/cleanup/restoration activities at cultivation sites could have adverse effects on candidate, sensitive, or special status species, riparian habitat and/or other sensitive natural communities, and federally-protected wetlands if they are implemented in sensitive areas or areas of critical habitat. Management practices and remediation/cleanup/ restoration measures at cultivation sites could also interfere substantially with the movement of any native resident or migratory fish or wildlife

species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites. However, the results of these activities are intended to improve, rather than adversely affect these areas over time.

The pattern and range of instream flows can be affected by the timing, duration, and rate of water withdrawals. The Order contains conditions related to water storage and use that may encourage Dischargers to pursue alternate water supply to avoid direct diversions from surface streams in the summer. Increased use of management measures and practices such as water conservation measures, and increased use of off-stream storage and voluntary curtailments of water diversion, could increase dry weather instream flows, and associated habitat. This would help return dry weather flows in the watersheds to a more natural, pre-development condition. However, collection of water for storage during the rainy season may result in reductions in winter and spring flows, which could have a minor impact on salmonid species by limiting access to spawning habitat, and dewatering rearing areas. In implementing the Order, staff intends to facilitate watershed-wide coordination of diversion schedules and streamflow monitoring to inform diversion management. Generally, flow-related stresses to candidate, sensitive, or special status species are likely to be reduced by the requirements of the Order.

The Order requires development and implementation of site-specific water resource protection plans that include measures to avoid and minimize impacts on candidate, sensitive, or special status species; riparian habitat and other sensitive natural communities; and federally-protected wetlands, as well as impacts on the movement of resident or migratory fish or wildlife and migratory corridors. Such measures may include those necessary on a specific site to prevent and minimize sediment discharges from roads and developed areas, and to prevent and minimize pollutant discharges associated with cultivation and associated activities, including nutrients and pesticides.

Potential impacts to sensitive species, habitats, and wetlands due to implementation of management measures or conducting remediation/cleanup/restoration activities will be temporary and short-term. Such impacts could include increased stream temperatures as a result of decreased shade resulting from tree felling associated with equipment access to clean up sites and increases in sediment delivery from site activities. Remediation/cleanup/restoration activities necessary to bring sites into compliance with the Order could involve work to be performed within watercourses to remove fill placed during past site development or activity. The process of remediating existing impacts on wetlands and watercourses could cause hydrological impacts including interruption through the use of instream containment and diversion structures, such as cofferdams, for the protection of aquatic life and water quality. Some of the disturbances will occur in an area impacted by previous, unassociated, activities. Where correction of onsite conditions or maintenance of onsite features is necessary to attain or maintain compliance with the Order, construction BMPs, as described in Appendix B must be implemented as applicable. Specific BMPs intended to protect sensitive species and habitat include, but are not limited to project scheduling, designating no-disturbance buffer areas for sensitive species and communities while performing work, cofferdams to isolate work areas, water diversions around work areas, and general erosion and sediment control measures.

Again, the intended purpose of the Order is to improve the conditions of these sensitive areas in the long-term. The process of remediation/cleanup/restoration of any site will be temporary, and scheduled by Regional Water Board staff, as necessary, to minimize cumulative impacts within a watershed.

Collectively, the measures described above mitigate the impacts to federally-protected wetlands, riparian habitat or other sensitive natural community, and any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (DFW) or United States Fish and Wildlife Service (USFWS) to a level that is less than significant, and any potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites is mitigated to a level that is less than significant.

BIOLOGICAL RESOURCES: e) and f) Less than Significant

Discussion: Management measures and remediation/cleanup/restoration activities at cultivation sites are not expected to be on a scale large enough to result in conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

In most instances, activities would result in benefits to protecting biological resources and habitats. Therefore, conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance and with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, is less than significant.”

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>CULTURAL RESOURCES: a), b), c) d) Less than Significant</p> <p>Pursuant to §65567 of the Government Code, counties and cities are prohibited from issuance of a “building permit” unless the proposed construction is consistent with the local open-space plan. §3530 of the Humboldt County Framework Plan (Volume I of the County General Plan – Open Space Element) describes protections for Historical and Archaeological Resources. It is common practice to engage with local tribes through their Tribal Historic Preservation Officers (THPO’s), in order to identify areas of sensitivity and projects with the potential to affect cultural resources. Coordination includes site visits by THPO’s where necessary, as well as evaluations by qualified archaeological professionals where appropriate and/or necessary. Activities requiring a discretionary permit under the MMLUO may also be subject to environmental review pursuant to CEQA, where formal consultation pursuant to AB 52 may be necessary.</p> <p>By providing pathways for compliance through local and state oversight, sanction, and licensing of outdoor commercial cultivation activities, impacts from unpermitted legacy activities may finally be addressed under local review, in cooperation with participating local tribes and their representatives.</p>				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Environmental review (SCH. # 2015042074) performed in association with the recent adoption (8/13/15) of Order # 2015-0023, which resulted in the creation of a Cannabis Cultivation Waste Discharge Regulatory Program (CCWDRP) by the North Coast Regional Water Quality Control Board, closely considered the need for effective measures to address geological and soil science considerations applicable to outdoor cannabis cultivation and related uses. The MMLUO proposes to apply provisions of the RWQCB order (which primarily govern cultivation in excess of 2,000 square feet of canopy) to larger portions of the spectrum of commercial cultivation, including operations less than 2,000 square feet in size. Consequently, adoption of the MMLUO will enable greater application of relevant mitigation (for potential impacts concerning geologic issues) than would otherwise occur under the current scope of the order. Implementation of relevant “Standard Conditions” and “BMP’s” from the order will occur under local oversight during after-the-fact permitting and inspections by county staff, in coordination with other state and local agencies including the Department of Fish & Wildlife, Regional Water Quality Control Board, Environmental Health Division, Planning and Building Department, and others. Relevant discussion concerning checklist conclusions (from SCH. # 2015042074) is incorporated by reference and provided below:</p>				

GEOLOGY and SOILS a); i) through iv): Less than significant with mitigation incorporated

“Discussion: Activities that may trigger a landslide or exacerbate an existing landslide include the removal of support material at the toe of a slope, the addition of weight to the top of a slope, or the additional of water into the slope’s subsurface. Excavation or grading at slope toes, the addition of weight such as spoil piles or irrigation ponds at the tops of slopes, and the diversion of water into the subsurface of slopes may occur on existing sites; the Order includes requirements designed to remedy unstable conditions.

It is unlikely that properly implemented management measures or remediation/cleanup/ restoration activities at cultivation sites would be on a scale significant enough to result in exposure of people or structures to geologic hazards. Activities conducted in compliance with the Order are unlikely to expose people or structures to potential substantial adverse effects involving fault rupture, strong seismic ground shaking, and seismic-related ground failure such as liquefaction.

In a situation where the Order requires a cleanup plan, larger-scale work may be involved, such as re-grading of fill prisms, removal of fill from watercourses, construction of retaining walls for soil stabilization, upgrading of stream crossings, or reshaping cutbanks. If the cleanup site is located in an Alquist-Priolo Earthquake Fault Zone or an area with substantial evidence of a known fault, the cleanup plan will consider fault rupture hazard during the siting, design, and monitoring of applicable site features in order to minimize the impact to public safety. The cleanup plan shall also consider hazards associated with strong seismic ground shaking and seismic-related ground failure, including liquefaction, during the siting, design, and monitoring of applicable site features in order to minimize the impact to public safety. Additionally, the Order requires that water storage facilities be properly located and designed to minimize failure potential and catastrophic discharge to surface waters. Proper siting, design, and monitoring of relevant improvements will minimize the impacts of fault rupture and seismic effects to less than significant levels.

The Order contains provisions to mitigate the exposure of people or structures to potential substantial adverse effects related to landslides. The Order specifies that cleanup plans will be prepared by a qualified professional. The cleanup plan shall consider 1) the presence and location of identifiable existing landslides which could be affected as a result of site activities resulting from the Order and 2) slopes which may become unstable as a result of site activities resulting from the Order. Additionally, the Order requires the removal of structures or drainage features that are located on, or that drain onto, unstable features. Further, the Order requires that irrigation runoff be controlled so as to prevent it from exacerbating unstable features and conditions.

Proper siting, design, and monitoring of relevant improvements by a qualified professional will minimize the potential impacts of the Order to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides to less than significant levels.

GEOLOGY and SOILS b and c): Less than significant with mitigation incorporated

Discussion: *Improper site development or maintenance can result in erosion and transportable sediment and create or exacerbate unstable features. If conducted improperly, soil storage and disposal can result in placement of fill in or where it can create or exacerbate unstable features. Improperly sited, constructed, or maintained water storage ponds or vessels can exacerbate unstable features or fail catastrophically, causing significant erosion and/or sediment delivery to receiving waters. Irrigation runoff from marijuana cultivation and other similar growing operations can result in sediment and other pollutant transport to receiving waters, and possible exacerbation of unstable features. The Order is designed to eliminate and reduce such impacts.*

Properly implemented management measures and remediation/cleanup/restoration activities to developed sites would not result in substantial erosion or the loss of topsoil. There may be situations resulting from the Order, as part of a water resource protection or cleanup plan, where portions of a given site, either temporarily or permanently, contain exposed bare soil or disturbed soil and would, therefore, be prone to erosion or loss of topsoil. However, the water resource protection or cleanup plan will contain requirements for implementation of appropriate BMPs to prevent and minimize wind and water erosion of soils. Example BMPs to minimize substantial soil erosion or loss of topsoil are presented in Appendix B of the Order. Relevant BMPs may include installation of adequate road ditch relief drains or rolling dips only where necessary since frequent routine grading can cause erosion of a ditch; usage of sediment control devices such as check dams or sand bag barriers when necessary to disperse ditch water, which would otherwise cause further erosion; and compaction and contouring of stored soil spoil piles to mimic the natural slope contours, which reduces the potential for fill saturation and failure. Proper implementation of BMPs

required under this order reduce the potential for the Order to result in substantial soil erosion or the loss of topsoil to less than significant with mitigation incorporated.

In general, properly implemented management measures and remediation/cleanup/restoration activities at developed sites would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. There may be situations resulting from the Order, where actions required as part of a water resource protection or cleanup plan have the potential to be located on a geologic unit that is unstable, or that would become unstable as a result of the plan. For example, if the Order requires the removal of fill placed in a stream, there is potential that the fill could collapse and flow downstream during removal activities. However, as explained above, the Order specifies that site-specific water resource protection and cleanup plans will be prepared by a qualified professional.

The water resource protection or cleanup plan shall consider geologic units or soils that are unstable or that would become unstable. In many situations involving implementation of BMPs or cleanup, existing unstable geologic features or soils could be entirely avoided if preliminarily identified by a qualified professional. In situations where avoidance of unstable features is not possible, mitigation measures will be included as part of the plan.

To avoid soil collapse in the example situation where in-stream fill removal is required, the cleanup plan prepared by a qualified professional may potentially include the construction of a temporary upstream cofferdam and temporary water diversion while the in-stream fill is removed. Additionally, the Order requires the removal of structures or drainage features that are located on or that drain onto unstable features. Further, the Order requires that irrigation runoff be controlled so as to prevent it from exacerbating unstable features and conditions. Finally, the Order requires that water storage facilities be properly located and designed to minimize failure potential and catastrophic discharge to surface waters, and is also defined in the project description of this document. Proper siting, design, and monitoring of relevant improvements by a qualified professional will minimize the impacts of unstable geologic features to less than significant levels.

The potential impacts of management measures required by the Order to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse is, therefore, less than significant with mitigation incorporated.

GEOLOGY and SOILS d): Less than significant with mitigation incorporated

Discussion: *In general, properly implemented management measures and remediation/cleanup/restoration activities on developed sites would not be located on expansive soils which could create substantial risks to life or property. There may be situations where actions required as part of a water resource protection or cleanup plan have the potential to be located on expansive soils. In many cases, repairs to features including road prisms, water storage pads or ponds, swales or stream crossings damaged by expansive soils would be minor and not create a substantial risk to life or property. In some cases, a cleanup plan may involve repairs or upgrades to a feature such as a stream crossing, in which property damage resulting from expansive soils could be considered significant. However, as explained above for section 6a, the Order specifies that site-specific water resource protection plans and cleanup plans will be prepared by a qualified professional. The water resource protection plan or cleanup plan shall consider conditions such as expansive soils and include measures to minimize significant damage resulting from expansive soils if applicable. Such measures may include the removal of expansive soil and replacement with non-expansive fill, or lime treatment of expansive soil. Additionally, the Order requires that water storage facilities be properly located and designed to minimize failure potential and catastrophic discharge to surface waters. These measures will minimize the impacts of expansive soils to less than significant levels.*

GEOLOGY and SOILS e): No Impact

Discussion: Management measures and remediation/ cleanup/ restoration activities at developed sites may lead to installation of septic tanks or alternate wastewater disposal systems on individual sites. However, such systems must be sited, designed, and constructed in accordance with applicable local requirements and/or the State Water Board’s Onsite Wastewater Treatment System (OWTS) policy. Because the siting and design of wastewater disposal systems is governed by other existing requirements or policies, the effect of inadequate soils for wastewater disposal is not an impact for consideration under this Order.”

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

GREENHOUSE GAS EMISSIONS: a), b), c) d) Less than Significant

Indoor cultivation of marijuana can result in greenhouse gas emissions associated with power generation for running lights and exhaust fans. Indoor cultivation is part of the baseline condition.

The primary focus of the ordinance is the regulation, and oversight of outdoor commercial cultivation of medical cannabis. The majority of participants are expected to be individuals and organizations already practicing outdoor cultivation in Humboldt County. These operations are part of baseline conditions which will now be subject to new regulation, compliance, and oversight. Attenuation of impacts associated with baseline conditions, including greenhouse gas emissions, is expected for nearly all ranges of potential environmental impacts.

As the activity of cannabis cultivation results in the growth and management of vegetation which consumes carbon dioxide (CO₂) during its lifespan, cyclical cultivation activities established or perpetuated pursuant to these regulations will enable continuation and augmentation of a carbon sink which serves to offset local greenhouse gas emissions (CO₂).

Management measures and remediation/cleanup/restoration activities on cultivation sites may result in minor generation of greenhouse gases over brief periods due to exhaust from heavy equipment and vehicles. The impact of greenhouse gas emissions associated with remediation/cleanup/restoration activities under efforts to come into compliance with these regulations will be less than significant.

There remains a distinct possibility that rather than coming into compliance with state and local requirements and licensing, some operators will continue to cultivate without participating in regulation and oversight, while others may continue to create new clandestine illegal cultivation operations. These operations are likely to be the target of ongoing law enforcement efforts, which will be aided by the clarity provided by the legislation promulgated under the MMLUO and MMRSA.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

HAZARDS and HAZARDOUS MATERIALS a), b), and g) Less than significant with mitigation

It is not uncommon to find the storage and use of hazardous materials at locations host to cultivation activities. These can include petroleum products, fertilizers, herbicides, and pesticides, as well as automotive and machine-related fluids and products including: acids, solvents, degreasers, corrosives, antifreeze, and hydraulic fluid. Additionally, materials associated with road construction and site improvements including asphalt and oils for road surfacing, and cementitious materials may also be found. If improperly stored or utilized, all of these materials can result in potentially significant environmental effects. Pursuant to Order # 2015-0023, the North Coast Regional Water Quality Control Board has applied "Standard Conditions" to operators subject to participation and oversight under the Cannabis Cultivation Waste Discharge Regulatory Program. The applicable "standard conditions" serve to address impacts from the storage and use of hazardous materials at cultivation sites through the implementation of measures and protocols to ensure that potential impacts (resulting from careless or unauthorized use or storage) are avoided. The Order primarily applies to operations with a "cultivation area" less than 2,000 square feet in size. The MMLUO will enable greater application of relevant standard conditions than might otherwise occur under the current scope of the order. These include the following requirements:

- 1) any pesticide or herbicide product application be consistent with product labelling and be managed to ensure that they will not enter or be released into surface or ground waters (Order section I.A.8); and*
- 2) petroleum products and other liquid chemicals be stored in containers and under conditions appropriate for the chemical with impervious secondary containment and*
- 3) implementation of spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite (Order section I.A.9);and*
- 4) standard construction BMPs be used during cleanup and restoration activities; and*
- 5) plans be developed for any on-site water quality management or remediation/cleanup/restoration activities.*

Under SCH. # 2015042074, the Regional Board concludes:

"By increasing containment measures, requiring spill prevention measures, requiring appropriate application of chemicals (e.g. application of pesticides consistent with product labelling requirements), implementation of standard construction BMPs, and development of water resource protection plans and cleanup plans, the Regional Water Board anticipates that efforts to comply with the Order would generally reduce routine transport and use of chemicals. The potential risks of exposure to hazardous materials would be small, especially with proper handling and storage procedures. Therefore, the potential for the Order to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is mitigated to a less than significant level."

"Remediation and restoration activities have the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

For example, heavy equipment parked on an access or fire road could block emergency vehicle access and prevent vehicular evacuations. However, Appendix B includes a construction BMP regarding maintenance of emergency vehicle access.

Therefore, the potential for the Order to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan is less than significant with mitigation incorporated."

By widening the scope and applicability of relevant "standard conditions" developed under the order (to operations smaller than 2,000 square feet of cultivation area), impacts from Hazards and Hazardous Materials are further reduced to levels that are less than significant.

HAZARDS AND HAZARDOUS MATERIALS: c), e), f), and h) Less Than Significant

Site management measures and remediation/cleanup/restoration activities performed to pursue compliance with the CCWDRP and ordinance are unlikely to emit hazardous emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Areas host to cannabis cultivation are often located in remote rural areas, far from high traffic areas with a strong public presence (such as schools). Sites may contain small quantities, if any, of hazardous chemicals. The potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school is, therefore, less than significant.

Remediation/cleanup/restoration work may involve heavy machinery, but would not necessitate any heavy machinery sufficiently large, tall, loud, or intrusive to significantly impact airport operations or the safety of people working or residing in the area. The potential for these activities to result in a safety hazard for people residing or working within the vicinity of a private airstrip, within an airport land use plan or within two miles of a public airport is, therefore, less than significant.

It is unlikely that activities under the Order would expose people or structures to a significant risk of loss, injury or death involving wildland fires. It is possible that heavy equipment used during remediation/cleanup/restoration activities could combust. However, normal routine maintenance of such equipment would adequately address such concerns. The potential for the Order to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, is therefore less than significant.

HAZARDS AND HAZARDOUS MATERIALS: d) No Impact

It is not expected that cultivation operations proposing to continue or be initiated pursuant to the ordinance will include locations from the list of hazardous materials sites compiled pursuant to Government Code section 65962.5, therefore there is no impact.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

During environmental review (SCH. #2015042074) performed in association with the recent adoption (8/13/15) of Order # 2015-0023, which helped establish the Cannabis Cultivation Waste Discharge Regulatory Program (CCWDRP), staff from the North Coast Regional Water Quality Control Board gave careful consideration to Water Quality impacts under baseline conditions, in concert with review of the “best available science” germane to this topic.

As the agency with the greatest regulatory authority and oversight over water quality matters, the work of the North Coast RWQCB and the CCWDRP represents the most authoritative evaluation and treatment of cannabis cultivation water quality considerations to date.

The ordinance proposes to apply provisions of the RWQCB order (which primarily govern cultivation in excess of 2,000 square feet of cultivation area) to larger portions of the spectrum of commercial cultivation, including operations involving less than 2,000 square feet. Consequently, adoption of the MMLUO will enable greater application of relevant mitigation (to control potential Water Quality impacts) than would otherwise occur under the current scope of the order. Implementation of relevant “Standard Conditions” and “BMP’s” from the order will occur under local oversight during permitting and inspections by county staff, in coordination with the efforts of other state and local agencies including the Department of Fish & Wildlife, Regional Water Quality Control Board, Environmental Health Division, Planning and Building Department, and others. Relevant discussion concerning checklist conclusions (from SCH. # 2015042074) is incorporated by reference and provided below:

“Improper site development or maintenance, including improper stream crossing design, can result in erosion and transportable sediment, create or exacerbate unstable features, and result in temperature impacts from improper hydromodification, potential for adverse geomorphological changes, creation of habitat/migration barriers, and riparian vegetation removal. Improperly sited development may include features constructed within and adjacent to watercourses and surface waters, altering drainage patterns and watercourse channels, or blocking or impeding natural stream flows or floodwater flows. Inadequate riparian protection measures can result in adverse temperature increases, and can result in or increase the likelihood of pollutant discharges to surface waters, or of fill/threatened fill in streams or wetlands. If conducted improperly, soil storage and disposal can result in placement of fill in or where it can enter surface waters, creation of sediment sources, and creation or exacerbation of unstable features.

Water diversion, storage, and use can result in depletion of water resources and potential impacts to or loss of beneficial uses; improper construction or maintenance of storage features or facilities can result in pollutant discharge and damage to watercourse structure and instream habitat, and migration barriers. Irrigation runoff from marijuana cultivation and other similar growing operations can result in sediment and other pollutant transport to receiving waters, and possible exacerbation of unstable features. Improper use, storage, and disposal of chemicals including fertilizers, soil amendments, pesticides, and petroleum products and other fuels and oils can result in spills or releases of toxic substances and other pollutants to receiving waters, potentially violating various water quality objectives, impacting multiple beneficial uses, and/or contributing to listed impairments in affected receiving waters. The pattern and range of instream flows and groundwater depths can be affected by the timing, duration, and rate of water withdrawals. As

discussed further below, the Order is designed to eliminate and reduce such impacts.

HYDROLOGY AND WATER QUALITY: a) Less Than Significant with Mitigation Incorporated

Discussion: By requiring the implementation of management measures to preserve, protect and restore riparian buffers; control discharges of sediment, nutrients, pesticides, or herbicides, the proposed Order will have an overall beneficial impact on water resources in the North Coast Region. Nonetheless, certain management measures and remediation/cleanup/restoration activities at cultivation sites could potentially violate water quality standards or waste discharge requirements if not appropriately implemented. Compliance activities may involve periodic operation of heavy equipment, soil disturbance, disruption of drainage conveyances and features, activities on and near unstable features, disturbance and removal of vegetation, creation of spoils, short-term exceedance of water quality objectives associated with removing and replacing instream structures, and disturbing instream habitat, and cleanup or removal of toxic substances. Soils made unstable and toxic substances handled as a result of the Order have the potential to be mobilized in storm water or irrigation runoff and transported to surface waters, thus potentially violating water quality standards or waste discharge requirements. However, the Order requires implementation of standard construction BMPs including, but not limited to, temporal restrictions on construction; limitations on earthmoving and construction equipment; guidelines for removal of plants and revegetation; conditions for erosion and sediment control; and limitations on work in streams, as well as protection of riparian and wetland areas; implementation of secondary containment and SPCC plans, and use of a qualified, licensed professional for design of watercourse replacements and development and oversight of remediation/cleanup/restoration plans. Implementation of management measures and remediation/cleanup/restoration activities in accordance with standard conditions in the Order and incorporating appropriate BMPs mitigates the potential to violate water quality standards and waste discharge requirements to a less than significant level.

HYDROLOGY AND WATER QUALITY: b) Less Than Significant with Mitigation Incorporated

Discussion: The Order includes conditions on water storage and use that may result in some Dischargers seeking alternative water sources to avoid direct diversions from surface waters in the summer months. The Order includes Tier 1, associated with sites that present a lower threat to water quality by, in part, not withdrawing surface waters from May 15 through October 31. Tier 2 Dischargers may opt to install groundwater wells as a result of an analysis included within a water resource protection plan.

Additionally, Tier 3 cleanup plan requirements for removal of instream impoundments could influence project proponents to develop groundwater wells as an alternative water source. These potential changes in surface water use practices could indirectly result in increased groundwater pumping. This potential impact is mitigated by requirements in the Order to implement water conservation measures, irrigation at agronomic rates, and sizing of operations in consideration of other water use by operations in the same watershed. The Order requires all Tier 2 and Tier 3 dischargers to document monthly water use and to develop an approach to ensure that water use is not impacting water quality. Tier 1 dischargers must meet cultivation size restrictions and implement conservation practices. Such provisions of the Order mitigate the potential to substantially deplete groundwater supplies to a level that is less than significant.

HYDROLOGY AND WATER QUALITY: c) Less Than Significant with Mitigation Incorporated

Discussion: The Order contains standard conditions for site maintenance, erosion control, and drainage features that require roads and other graded site features to be maintained to avoid developing surface ruts, gullies, and surface erosion, and to have adequate ditch relief drains or rolling dips. Certain management practices, such as infiltration basins, field leveling or road maintenance, bioengineering and instream restoration, could potentially cause an alteration of the existing drainage pattern of a site. In most cases, however, these measures would be small and installed with appropriately designed mitigation measures, which would limit any alteration of the existing drainage pattern. Therefore, the potential impacts are less than significant.

HYDROLOGY AND WATER QUALITY: d) Less Than Significant with Mitigation Incorporated

Discussion: Existing conditions in the North Coast Region include thousands of cultivation sites, many that have already altered existing drainage patterns through the alteration of streams and site runoff by clearing forested areas and construction of impervious structures. To improve this existing condition, the

Order requires water quality management measures and remediation/cleanup/ restoration activities, which still have the potential to increase the rate or amount of surface runoff in a manner which could result in flooding on- or offsite. The potential for an increased rate of runoff from water quality management measures or resulting from remediation/cleanup/restoration activities is less than significant with implementation of standard erosion and sediment control BMPs.

The removal of instream impoundments as part of cleanup and restoration plans would reconnect streams to their watersheds and has the potential to temporarily increase flooding. However, the Order requires the development and implementation of cleanup and restoration plans for impoundment removals, which could include measures such as cofferdams and water diversions during removal, to mitigate the potential for flooding. Other possible mitigation measures to address increases in flooding potential include bank stabilization, riparian and floodplain restoration, establishment of natural riparian buffers, and upgradient soil-water management that promotes infiltration and flood peak attenuation.

The potential to increase the rate or amount of surface runoff in a manner that could result in flooding on- or offsite, to a level that is, therefore, less than significant with mitigation incorporated.

HYDROLOGY AND WATER QUALITY: e) Less Than Significant with Mitigation Incorporated

Discussion: As explained above, the Order contains standard conditions designed to remedy existing site features and operations that create or contribute runoff that would exceed storm water drainage systems, add substantial sources of polluted runoff, and substantially degrade water quality. In some cases, management measures such as the use of infiltration basins, field leveling, road maintenance, bioengineering, and in-stream restoration have the potential to cause or contribute to an increase in runoff. In most cases, however, these measures would be small and installed with appropriately designed mitigation measures to promote infiltration and minimize contribution of additional runoff.

Additionally, the Regional Water Board implements the NPDES program for storm water in the North Coast Region. Staff implementing this Order will consult with NPDES staff and other staff to ensure that no permitted projects result in the concentration of runoff that would exceed the capacity of planned storm water facilities, result in additional sources of polluted runoff or otherwise substantially degrade water quality. The potential to create or contribute to an increase in runoff, which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality is less than significant with mitigation incorporated.

HYDROLOGY AND WATER QUALITY: f) Less Than Significant with Mitigation Incorporated

Discussion: The Order requires that irrigation runoff (i.e., tailwater) be managed so that any entrained constituents, such as fertilizers, fine sediment and suspended organic particles, and other oxygen consuming materials are not discharged to nearby watercourses to the extent possible. Management practices to meet this condition may include construction of retention basins and infiltration of irrigation runoff which could, in turn, potentially result in some degradation to the underlying groundwater.

Implementing water conservation measures, irrigating at agronomic rates, properly applying fertilizers and chemicals, and maintaining stable soil and growth media should serve to prevent and minimize the amount of tailwater flows and the concentration of chemicals in that water. Because runoff volumes and chemical concentrations are relatively low, the intervening soil layer beneath the retention pond should serve to attenuate any residual pollutant concentrations. Therefore, the potential to substantially degrade the quality of ground water is less than significant.

HYDROLOGY AND WATER QUALITY: h) Less Than Significant with Mitigation Incorporated

Discussion: The Order does not permit new development so the placement of any structures at cultivation sites within a 100-year flood hazard area represents existing conditions upon enrollment in the Order.

It is possible that compliance with the Order could include placement of structures within a 100-year flood hazard area, which could impede or redirect flood flows. For example, switching from an instream diversion to offstream storage could result in a structure being placed within the floodplain. However, it is in these instances that coordination with project proponents and other agencies is best suited to reduce

potentially significant impacts.

The Order requires the establishment of riparian buffers, which provide flood hazard mitigation benefits. Cleanup and restoration plans and elements of water resource protection plans involving watercourse crossing replacements shall include consideration of site-specific conditions or features which may warrant additional special BMPs, including the proximity to 100-year floodplains.

The potential to place structures within a 100-year flood hazard area, which would impede or redirect flood flows, is less than significant with mitigation incorporated.

HYDROLOGY AND WATER QUALITY: i) Less Than Significant

Discussion: *None of the management measures in the Order contemplate the use of BMPs that would expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Existing conditions include impoundments of various types that have not been appropriately engineered or permitted. Retrofit or remediation and removal of these hazards has the potential to expose people or structures to risk; however, the Order requires these activities to be designed and overseen by licensed professionals as part of a plan approved by the Executive Officer of the Regional Water Board, and incorporating standard construction BMPs. Additionally, remediation and removal activities will be temporary. Due to 1) the temporary nature of repairs to and removals of various impoundments and 2) the implementation of such activities under the supervision of a licensed professional; the potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam is mitigated to a level that is less than significant.*

HYDROLOGY AND WATER QUALITY: g) No Impact

Discussion: *The implementation of provisions in the Order would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. The Order does not contain provisions for relocation of existing housing or the construction of new housing. As such, there would be no impact.*

HYDROLOGY AND WATER QUALITY: j) Less than Significant

Discussion: *None of the management measures identified in the Order contemplate the use of BMPs that would cause inundation by seiche, tsunami, or mudflow. Implementation of provisions in the Order is unlikely to cause or result in impacts by inundation via seiche, tsunami, or mudflow. The North Coast Region contains a vast segment of coastline which could be impacted by tsunamis, as well as bodies of water with shoreline areas that could be affected by seiches. However, the majority of sites under the purview of the Order are not located adjacent to the ocean or bodies of water and thus would be not be affected by inundation via tsunamis or seiches. The North Coast Region does contain steep terrain which would be a source of mudflow material, and it is possible that sites under the purview of the Order could be inundated by mudflows. In the event that a site does become inundated by a tsunami, seiche, or mudflow, repairs to BMPs or features required under the Order would constitute a less than significant portion of any cleanup effort. The potential to cause or be impacted from inundation by seiche, tsunami, or mudflow is, therefore, less than significant.”*

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>LAND USE PLANNING: a), b) and c) No Impact</p> <p>A primary purpose of the MMLUO is to make explicit the location, scale, and permitting requirements applicable to the commercial cultivation of medical cannabis in Humboldt County, as well the degree of local oversight and sanction. The primary thrust of this effort is being accomplished through amendments to the Land Use Code (Zoning Regulations). Subsequent amendments to the ordinance are anticipated as state and local regulatory efforts (CCWDRP, MMRSA, MMLUO) evolve. To receive local approval, baseline cultivation operations and new cultivation proposals will be required to pursue and achieve compliance with existing regulations and permitting requirements which govern many attendant activities, including: water diversion and well development, grading, construction of buildings, onsite sewage disposal, fire protection, and protection of biological resources, wetlands, watercourses, and associated riparian areas. Therefore, the ordinance will not physically divide a community, conflict with existing land use plans, policies, or regulations, or conflict with applicable conservation plans.</p>				
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Management measures and remediation/cleanup/restoration activities on developed sites will not result in loss of availability of a known mineral resource that would be of future value to the region and the residents of the state, or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.</p> <p>While in many cases grading performed in association with outdoor cannabis cultivation is generally surficial and minor in nature, some baseline sites have been subject to large volumes of excavation and fill activities. Whether minor or major, export of materials off site is not typical. Therefore activities occurring pursuant to the MMLUO would not result in the loss of potentially present mineral resources of future value to the region and residents of the state.</p>				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

NOISE: a), b), and d): Less than Significant Impact with Mitigation

The primary focus of the MMLUO is to provide permitting pathways to allow local regulation and oversight of the commercial medical marijuana sector of Humboldt County agriculture. Potential noise impacts of the regulation stem from agricultural activity conducted to prepare for planting and construction activities related to restoration/cleanup/remediation activities at cultivation sites. Regarding agricultural activity, noise attendant to agricultural activities was contemplated in the County General Plan as part of the zoning classification, thus noise from agricultural activity would be unlikely to exceed noise levels contemplated in the General Plan and related EIR.

In some cases, compliance with new regulatory standards applied under the MMLUO and CCWDRP may compel restoration/cleanup/remediation activities at cultivation sites. Implementation may require earthwork and use of heavy equipment, which has the potential to result in a temporary increase of noise level in the project vicinity. These impacts are temporary in nature and can be mitigated through the permitting process where the time for conducting the activities can be restricted to business hours.

Many of the operators who will seek a permit to cultivate commercial medical marijuana under the proposed ordinance are located on large parcels (> 5 acres in size) where cultivation sites enjoy greater separation from neighboring land uses, and where attendant noise is less likely to be observed from neighboring lands.

As these impacts are temporary and will in most cases be subject to Best Management Practices pursuant to the CCWDRP (and further incorporation under the MMLUO by reference), it is expected that these temporary impacts will be reduced to less than significant levels, as concluded under SCH. # 2015042074.

NOISE: a), b), and d): Less than Significant Impact with Mitigation (cont'd)

Under the draft ordinance, larger cultivation operations will be subject to discretionary permits where neighboring land owners will be given an opportunity to comment and be notified of pending permit decisions. This will provide opportunity for dialogue and mitigation through careful siting and operational restrictions to address potential noise issues. Other mitigation measures include the use of standard construction BMPs and operation of equipment according to a time schedule to prevent cumulative noise impacts resulting in further increased noise levels. Thus the potential to cause exposure of persons to, or generation of: noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; excessive groundborne vibration or groundborne noise levels; or a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project are less than significant with mitigation incorporated.

NOISE c): No Impact

Discussion: The proposed ordinance regulating cultivation of commercial medical marijuana would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise generation is associated with the short-term temporary use of equipment for restoration/cleanup/remediation activities at cultivation sites and the temporary land management for cultivation that is attendant to agricultural activities in general.

NOISE e), and f): Less than Significant Impact

Discussion: The proposed ordinance regulating cultivation of commercial medical marijuana on could potentially expose people residing in or working in the project area to noise for projects within the vicinity of a private airstrip or projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The use of equipment for restoration/cleanup/remediation activities at cultivation sites and the temporary land management for cultivation could result in temporary increases in existing noise levels, but the noise would not be excessive. Therefore, the impacts are less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion: The proposed ordinance authorizes is focused on bring existing commercial cannabis cultivation into compliance and would only allow new cultivation sites in very limited circumstances subject to a conditional use permit. All cultivation would occur on land that is currently zoned for agricultural uses. The proposed cultivation of commercial medical cannabis would not induce substantial population growth in an area either directly or indirectly, would not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>PUBLIC SERVICES: a) Less Than Significant Impact with Mitigation Incorporated</p> <p>The illegal, unpermitted cultivation of cannabis is currently occurring throughout the County. This baseline does have an impact on public services, particularly fire protection and police protection, given that grows often occur in remote, wooded areas and the illegal nature of the grows may result in the need for police involvement. One of the goals of the proposed ordinance is to provide an incentive for existing growers to cultivate commercial cannabis in appropriate geographic locations in the County, taking into account existing fire protection and police protection. It is anticipated that the need for fire protection and police protection will be lessened significantly from baseline levels through the proposed ordinance.</p> <p>State legislation (AB243, AB266, and SB643), if signed by the governor, would allow for the cultivation of cannabis in Humboldt County on a larger scale than proposed in the ordinance. The state legislation allows for local jurisdictions to enact ordinances that are more, but not less, restrictive than the state laws. The proposed permitting processes described in the ordinance would allow the County to examine the potential impacts of proposed cultivation on public services on a case by case basis. Absent the local regulation, the County would have no control over the local impacts of commercial medical cannabis cultivation licensed by the state.</p> <p>The local permitting process will allow for oversight and mitigation on a permit by permit basis to ensure that local public services such as schools and parks are able to accommodate any increased activity that may occur as a result of the ordinance, and would take this into consideration when determining whether or not to grant a permit. The permitting process would also allow for increased communication and coordination with police and fire agencies that operate in the county; currently it is not possible to rationally plan for police and fire involvement because of the unregulated nature of cannabis cultivation.</p> <p>Under the draft ordinance, larger cultivation operations will be subject to discretionary permits where neighboring land owners will be given an opportunity to comment and be notified of pending permit decisions. This will provide opportunity for dialogue and mitigation through careful siting and operational restrictions to address potential impacts on public services. It is anticipated that through mitigation, the impacts on public services including fire protection, police protection, schools, parks, and other public facilities, will be reduced to a less than significant impact.</p>				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RECREATION: a), b) No Impact				
This project does not increase the use of existing neighborhood and regional parks or other recreational facilities, and does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there is no impact on recreation caused by this project.				
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

TRANSPORTATION/TRAFFIC: a) , b) d) Less Than Significant

Implementation of management measures and remediation/cleanup/restoration activities on cultivation sites would not exceed the capacity of the existing circulation system or conflict with an applicable congestion management program or other standards established by the county congestion management agency for designated roads or highways. The majority of parcels where cultivation occurs are planned and zoned for private residential development or residential development in support of agriculture or timber management. As the traffic and number of trips associated with commercial cannabis cultivation often occurs concurrent with residential uses in these areas, it may viewed as in keeping with the anticipated rural development pattern and associated levels of traffic and infrastructure required. Participation and permitting under the MMLUO would not result in increased hazards due to a design feature, or necessitate sharp curves or dangerous intersections which substantially increase hazards. Therefore, the potential impacts are less than significant.

TRANSPORTATION/TRAFFIC: c) No Impact

Cultivation, cleanup, and remediation activities occurring pursuant to the MMLUO on developed sites would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

TRANSPORTATION/TRAFFIC: e) Less than Significant with Mitigation

Discussion: Management measures and remediation/cleanup/restoration activities on developed sites are unlikely to result in inadequate emergency access or conflict with adopted policies, plans, or programs supporting alternative transportation. In cases where subject to discretionary permitting, project approval may require improvements to existing public and private road systems to enable better compliance with access requirements and standards included under state and local regulations for State Responsibility Areas. Forms of common project-level mitigation may include road widening, turnouts, surfacing, grade correction. As baselines activities come into compliance with the MMLUO, existing and potential impacts are likely to attenuate under the mitigation and other compliance measures. Therefore, the impacts are less than significant with mitigation incorporated.

TRANSPORTATION/TRAFFIC: f) No Impact

Cultivation site management measures and remediation/cleanup/restoration activities on developed sites would not result in a conflict with adopted policies, plans, or programs supporting alternative transportation.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

UTILITIES AND SERVICE SYSTEMS: a), b), c), e), and g) No Impact

The majority of baseline operations are located in rural areas that do not receive public water and sewer services. Many are also located in remote areas without access to grid-supplied electricity. To receive local sanction, baseline cultivation operations and new cultivation proposals will be required to pursue and achieve compliance with existing regulations and permitting requirements which govern many attendant activities, including: water diversion and well development, grading, onsite sewage disposal, and disposal of solid waste. In many cases, cultivation sites that would be subject to the ordinance currently have onsite wastewater treatment facilities that are in need of maintenance, or may lack a system entirely. Human waste must be handled in accordance with state and local laws. Coordination and oversight by responsible agencies, including the Environmental Health Division to ensure compliance with the wastewater standards will likely improve the overall conditions over time. Therefore, there is no impact.

UTILITIES AND SERVICE SYSTEMS: d) Less Than Significant with Mitigation

Commercial cultivation of cannabis often relies upon water taken from riparian sources. Measures applicable to Tier 1 and Tier 2* participants in the RWQCB CCWRP are required to maintain adequate storage to enable forbearance of surface water withdrawal during dry summer months (May 15th through October 31st). Applying these best management practices to a larger spectrum of commercial cultivation than was specified under the order will help to preserve a sufficient supply of water in local watercourses for beneficial uses during summer months. According to the regional board:

“...through the implementation of appropriate best management practices defined in the Order, as well as in the project description (Section E.1.A.-j.), the water resources would be allocated sufficiently from existing entitlements and resources to serve the project needs, and should not affect the need for new or expanded entitlements.”

The impacts are therefore less than significant with mitigation incorporated.

UTILITIES AND SERVICE SYSTEMS: f) Less Than Significant with Mitigation

There are a number of cannabis cultivation sites where waste is being generated and accumulated without proper disposal. Remediation/cleanup/restoration efforts pursued on existing sites could result in material being delivered to local landfills. The RWQCB Order includes conditions requiring that waste be handled in accordance with state and local laws. The result could cause an influx of materials deposited at local transfer stations and thence to (primarily) out-of-Region landfills in the short term, but this is not expected to occur on a scale that would impact the capacity of landfills accepting waste. Thus the impact is less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>MANDATORY FINDINGS OF SIGNIFICANCE: a) Less Than Significant With Mitigation</p> <p>The commercial cultivation of medical marijuana has the potential to impact the fish, wildlife and plant habitat, population, communities and their range, as well as important examples of California history or prehistory. As discussed throughout this document, in order to receive a permit pursuant to the ordinance, the applicant would be required to comply with relevant state and local regulations (CCWDRP, MMRSA, and regulations as promulgated by the BMMR) so as to minimize the impacts to, and potentially result in improvements over baseline levels to, the characteristics described in section a). Also, the permitting process itself is designed to prevent negative impacts to the characteristics cited in section a). As a result, impacts can and will be mitigated to less than significant levels.</p>				
<p>MANDATORY FINDINGS OF SIGNIFICANCE: b) Less Than Significant With Mitigation</p> <p>Cumulative impacts, as defined in the CEQA Guidelines (Cal. Code Regs. Tit. 14, section 15355), refer to two or more individual effects, that when considered together, are considerable or that increase other environmental impacts. The ordinance has the potential to have impacts that are individually limited but cumulatively considerable, as discussed above. The implementation of the ordinance ensures and incentivizes compliance with internal permitting requirements as well as applicable state and local regulations (CCWDRP, MMRSA, and regulations as promulgated by the BMMR). As explained throughout this document, the ordinance would require applicants seeking to obtain a local and state permit for cultivation of medical cannabis to obtain the both required permit or zoning clearance certificate from the Planning & Building Department as defined by the size and scale of proposed cultivation, and to comply with the CCWDRP, MMRSA, and other related regulations promulgated pursuant to the BMMR. Through these actions, the potential for cumulative impacts would be avoided, minimized, and mitigated.</p>				

MANDATORY FINDINGS OF SIGNIFICANCE: b) Less Than Significant With Mitigation (cont'd)

Additionally, current baseline conditions in throughout Humboldt County have impacts associated with cannabis cultivation, which would continue along the current baselines, or further degrade, without the application of the measures required in this ordinance. The compliance measures identified in the ordinance and the analysis and public process that will occur with respect to larger cultivation sites will likely improve the current degradation of land, soils, water use, and water quality in the county, and long term beneficial effects will be realized on air quality, biological resources, geology and soils, hydrology, and noise, which would continue along the current baselines, or further degrade without the application of the measures required in this ordinance coupled with regional and state legislation. The ordinance is aimed at bringing existing cultivators into compliance and only allows new cultivation in very narrow circumstances, and subject to a discretionary permit. These safeguards are aimed at ensuring that the commercial medical cannabis cultivation in the area does not exceed the carrying capacity of the land. Thus, the cumulative impact is less than significant with mitigation incorporated.

MANDATORY FINDINGS OF SIGNIFICANCE: c) Less Than Significant With Mitigation

The commercial cultivation of medical marijuana pursuant to the ordinance could have the potential to cause substantial adverse effects on human beings, either directly or indirectly, as discussed above. Site-specific activity conducted to prepare for planting and activities related to restoration/cleanup/remediation activities at cultivation sites may result in short-term, localized, impacts, generation of dust and other particulates, disruption of localized sensitive habitat, and substantial earth movement that could potentially impact water quality, which humans rely upon, thus impacting humans. The irrigation of marijuana crops may also impact water supplies. However, with implementation of the compliance requirements contained in the ordinance, and explained contextually in each of the preceding findings sections, the potential for impacts would be avoided, minimized and mitigated.

The state assembly and senate have adopted a regulatory structure for the commercial cultivation of medical marijuana, and absent a local ordinance governing cultivation, the state-level legislation will control. A local ordinance will allow Humboldt County to minimize the adverse effects of cultivation on human beings through mitigation measures (for example, requiring compliance with all applicable state and regional regulations—including those governing water usage and storage, reviewing any plans for proposed use of pesticides and rodenticides and related storage, only permitting cultivation in certain areas of the county that are properly zoned for agricultural use, and implementing periodic inspections to ensure compliance with the regulations). While the cultivation of cannabis would necessitate irrigation of the crop, applicants will be required to demonstrate legal access to water in compliance with all applicable regulations and required to present a proper irrigation and water storage plan.

Current baseline conditions throughout Humboldt County demonstrate impacts associated with cannabis cultivation on private lands. This ordinance is designed to improve the long-term environmental effects of cannabis cultivation by providing a permitting process designed to protect the County's natural resources, which will, in turn, have a positive impact on the overall health of the environment in the County. Without the implementation of this ordinance, State law would control and Humboldt County would not be able to effectively mitigate the effects of the commercial cultivation of medical marijuana in the region. Thus, staff concludes that the impacts to humans, directly or indirectly are less than significant with mitigation incorporated.

19. DISCUSSION OF MITIGATION MEASURES, MONITORING, AND REPORTING PROGRAM

As discussed within this document, the commercial cultivation of medical cannabis has been recognized as a land use activity with the potential for environmental impacts. The primary goal of this project (The Medical Marijuana Land Use Ordinance – Phase IV) is to reduce and prevent impacts from baseline commercial cultivation which has occurred on an illegal and unregulated basis for decades. By providing incentives and permitting pathways under local guidance and oversight, the ordinance is designed to bring existing operators into compliance with relevant new requirements and protocols designed to prevent potentially significant impacts. The requirements of the ordinance work to mitigate both project-specific and cumulative watershed-level impacts through implementation of “standard conditions” and “best management practices”. Designed and currently being implemented by trustee agencies through their evolving oversight and regulation of this land use, these regulations comprise the “best available science” on this subject. The policies that have been developed are grounded scientific study and analysis of watersheds, as well as effects of the commercial cannabis industry’s operation and growth within the Emerald Triangle. Examples include applying restrictions to new and existing operators to prevent impacts from surface water diversion during the summer months, as well as requiring the implementation of measures to prevent the inadvertent delivery of nutrients and sediment into watersheds from land disturbance and activities occurring in association with development and management of outdoor cultivation operations. These mitigation concepts are covered within the language of the ordinance and the new local requirements it helps establish. The abstracted listing of mitigation embodied within the policies of the MMLUO does not effectively convey their collective utility and purpose, and can lose sight of the ultimate objective of all mitigating measures –namely, the attenuation of baseline impacts from unregulated forms of land use that have been established and increasing for decades, without local oversight. It has nevertheless been provided below under section 20. A review of the draft ordinance as well as the Standard Conditions and Appendices of the RWQCB Order # R1-2015-0023 (found on Pg.’s 15-30 and Appendices B & C in particular) encapsulates the mitigation being implemented as part of this project, consistent with the tiering concept supporting under 15152 of the California Environmental Quality Act.

20. EARLIER ANALYSES.

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 16063(c)(3)(D). In this case a discussion should identify the following on attached sheets:

- a) Earlier analyses used. Identify earlier analyses and state where they are available for review.
 1. Humboldt County General Plan & EIR
 2. Humboldt County Zoning Ordinance
 3. The Humboldt County Medical Marijuana Land Use Ordinance (Phases I-III) Ordinance #2468, Ordinance #2511, Ordinance #2523, and Ordinance #2534
 4. Regional Board MND & Cannabis Waste Discharge Program (SCH No. 2015042074)
 5. The Medical Marijuana Regulation and Safety Act

While private projects and actions by Local and Public Agencies (as defined under section 21001.1, 21062, and 21063 of CEQA) are subject to CEQA, legislative actions by the California State Assembly are not subject to CEQA. Actions by the Governor, including the signing of legislation are also not subject to CEQA (*Picayune Rancheria of Chukchansi Indians v. Edmund G. Brown, Jr.*). With the recent passage of The Medical Marijuana Regulation and Safety Act (MMRSA), the state legislature and governor have prompted implementation of a comprehensive statewide regulatory scheme that establishes the possibility of issuing licenses for commercial cultivation of up to one (1) acre of plant canopy. Considering the scale, ubiquity, and distribution of cultivation sites in the county under baseline conditions, and decades of operation without regulatory oversight and compliance, placing further limits on cultivation scale is warranted. This will help reduce impacts that might otherwise result under exclusive reliance on MMRSA licensing and regulation of state cultivation categories, which permit larger operations. It should also be

noted that notwithstanding the RWQCB Order regulating specific tiers of Cannabis Waste Discharge, the Local Regulations being pursued under this project will “occupy the field” until such time that the state is able to promulgate specific regulations for application and enforcement of the MMRSA. This may take several years or more.

Items 1, 2 and 3 are available for review at Humboldt County Planning Division.

Information associated with **Item 4** is available via the following links:

http://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/

Regional Board Mitigated Negative Declaration for Cannabis Waste Discharge Program (SCH No. 2015042074)

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_INITIAL_STUDY%20with%20revisions%20clean.pdf

Order No. R1-2015-0023: Waiver of Waste Discharge Requirements and General Water Quality Certification

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/15_0023_Cannabis_Order.pdf

Appendix A: Enrollment Form (Notice of Intent)

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix%20A_Enrollment%20Form.pdf

Appendix B: Best Management Practices

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix%20B_BMP_clean.pdf

Appendix C: Monitoring and Reporting Program

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix_C_MRP.pdf

Appendix D: Tier 2 Surface Water Correction Workplan Requirements

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix_D_Surface%20Water%20Correction%20Workplan%20Requirements.pdf

Appendix E1: Department of Pesticide Regulation Document- Legal Pest Management Practices for Marijuana Growers in California

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix_E_1_DPR_MJ%20mgmt%20practices.pdf

Appendix E2: Department of Pesticide Regulation Informational Document- Pesticide Use on Marijuana

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix_E_2_DPR_MJ%20Pesticide%20Handout.pdf

Information associated with Item 5 is available via the following links:

Assembly Bill 243 (Wood)

http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_0201-0250/ab_243_bill_20150916_enrolled.pdf

Assembly Bill 266 (Cooley)

http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_0251-0300/ab_266_bill_20150916_enrolled.pdf

Senate Bill 643 (McGuire)

http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0601-0650/sb_643_bill_20150916_enrolled.pdf

The following documents in Section 21, available at the Planning and Building Department, have adequately analyzed one or more effects of the project. Earlier analysis has been used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063 (c)(3)(D)).

b) Impacts Adequately Addressed. Some of the effects from the above checklist were within the scope of and adequately analyzed in the document(s) listed in Section 21, pursuant to applicable legal standards.

c) Mitigation Measures.

As described under Section 19 of this document, the draft ordinance combined with “Standard Conditions” and “Best Management Practices” found with the Regional Board’s Order # R1-2015-0023 and relevant appendices (found on Pg.’s 15-30 and Appendices B & C in particular), constitute the bulk of the mitigation being applied as part of this project. A list of the RWQCB’s “Standard Conditions” and Best Management Practices” is included below:

A. Standard Conditions, Applicable to All Dischargers

1. Site maintenance, erosion control and drainage features

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

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

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

d. Roads, clearings, fill prisms, and terraced areas (cleared/developed areas with the potential for sediment erosion and transport) shall be maintained so that they are hydrologically disconnected¹⁵, as feasible, from surface waters, including wetlands, ephemeral, intermittent and perennial streams.

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

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

2. Stream Crossing Maintenance

a. Culverts and stream crossings shall be sized to pass the expected 100-year peak streamflow.

b. Culverts and stream crossings shall be designed and maintained to address debris associated with the expected 100-year peak streamflow.

c. Culverts and stream crossings shall allow passage of all life stages of fish on fish-bearing or restorable streams, and allow passage of aquatic organisms on perennial or intermittent streams.

d. Stream crossings shall be maintained so as to prevent or minimize erosion from exposed surfaces adjacent to, and in the channel and on the banks.

e. Culverts shall align with the stream grade and natural stream channel at the inlet and outlet where feasible.¹⁶

f. Stream crossings shall be maintained so as to prevent stream diversion in the event that the culvert/crossing is plugged, and critical dips shall be employed with all crossing installations where feasible.¹⁷

3. Riparian and Wetland Protection and Management

a. For Tier 1 Dischargers, cultivation areas or associated facilities shall not be located within 200 feet of surface waters. While 200 foot buffers are preferred for Tier 2 sites, at minimum, cultivation areas and associated facilities shall not be located or occur within 100 feet of any Class I or II watercourse or within 50 feet of any Class III watercourse or wetlands. conditions on enrollment, including site-specific riparian buffers and other BMPs beyond those identified in water resource protection plans to ensure water quality protection.

b. Water conservation measures shall be implemented. Examples include use of rainwater catchment systems or watering plants with a drip irrigation system rather than with a hose or sprinkler system.

c. For Tier 2 Dischargers, if possible, develop off-stream storage facilities to minimize surface water diversion during low flow periods (see also footnote 11).

d. Water is applied using no more than agronomic rates.²¹

e. Diversion and/or storage of water from a stream should be conducted pursuant to a valid water right and in compliance with reporting requirements under Water Code section 5101.

f. Water storage features, such as ponds, tanks, and other vessels shall be selected, sited, designed, and maintained so as to insure integrity and to prevent release into waters of the state in the event of a containment failure.

6. Irrigation Runoff

Implementing water conservation measures, irrigating at agronomic rates, applying fertilizers at agronomic rates and applying chemicals according to the label specifications, and maintaining

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

7. Fertilizers and Soil Amendments

a. Fertilizers, potting soils, compost, and other soils and soil amendments shall be stored in locations and in a manner in which they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater.

b. Fertilizers and soil amendments shall be applied and used per packaging instructions and/or at proper agronomic rates (see footnote on previous page).

c. Cultivation areas shall be maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest.

8. Pesticides/Herbicides

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

9. Petroleum products and other chemicals

a. Petroleum products and other liquid chemicals, including but not limited to diesel, biodiesel, gasoline, and oils shall be stored so as to prevent their spillage, discharge, or seepage into receiving waters. Storage tanks and containers must be of suitable material and construction to be compatible with the substance(s) stored and conditions of storage such as pressure and temperature.

b. Above ground storage tanks and containers shall be provided with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation.

c. Dischargers shall ensure that diked areas are sufficiently impervious to contain discharged chemicals.

d. Discharger(s) shall implement spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.

e. Underground storage tanks 110 gallons and larger shall be registered with the appropriate County Health Department and comply with State and local requirements for leak detection, spill overflow, corrosion protection, and insurance coverage.

10. Cultivation-related wastes

Cultivation-related wastes including, but not limited to, empty soil/soil amendment/fertilizer/pesticide bags and containers, empty plant pots or containers, dead or harvested plant waste, and spent growth medium shall, for as long as they remain on the site, be stored²² at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwaters.

11. Refuse and human waste

a. Disposal of domestic sewage shall meet applicable County health standards, local agency management plans and ordinances, and/or the Regional Water Board's Onsite Wastewater Treatment System (OWTS) policy, and shall not represent a threat to surface water or groundwater.

b. Refuse and garbage shall be stored in a location and manner that prevents its discharge to receiving waters and prevents any leachate or contact water from entering or percolating to receiving waters.

c. Garbage and refuse shall be disposed of at an appropriate waste disposal location.

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

These protection and mitigation measures have been developed to prevent or reduce the environmental impacts and represent minimum, enforceable standards by which cleanup activities shall be conducted under this Order.

B. Water Resource Protection Plan

Tier 2 Dischargers and Tier 3 Dischargers who intend to cultivate cannabis before, during, or following site cleanup activities shall develop and implement a water resource protection plan that contains the elements listed below. Dischargers must keep this plan on site, and produce it upon request by Regional Water Board staff. Dischargers shall implement plans, including the identified management practices in a manner that is protective of water quality. If time is needed to meet standard conditions, the plan must include a timeline with measurable milestones.²³ Management practices shall be properly designed and installed, and assessed periodically for effectiveness. If a management measure is found to be ineffective, the plan must be adapted and implemented to incorporate new or additional management practices to meet standard conditions. Dischargers shall certify annually to the Regional Water Board individually or through an approved third party program that the plan is being implemented and is effectively protecting water quality, and report on progress in implementing site improvements intended to bring the site into compliance with all conditions of this Order.

Any proposed work in streams and wetlands, as described in 3-5 below shall be submitted to the Regional Water Board for review and authorization 60 days prior to commencement. (See Appendix D.) In the alternative, dischargers may opt to seek authorization for instream work through other individual or general orders.²⁴

- 1. Map of property including areas of operations, roads, water bodies, all cleared/developed areas, and including general drainage patterns and directions.*
- 2. Applicable design drawings and schematics for watercourse structures, fish passages, roads, septic tanks, fill prisms, pads, ponds, or any other constructed feature that has been designed or engineered.*
- 3. Assessment of current conditions and identification of any features needing improvements to correct the function of any roads or developed areas, drainage features or measures, encroachments into riparian buffer areas, controllable sediment delivery sites,²⁵ including stream crossings in need of correction (undersized, improperly installed, improperly maintained, or otherwise substandard).*
- 4. Detailed list of specific management practices designed to meet standard conditions in I.A., above, incorporating applicable standard BMPs from Appendix B, and any improvement work needed to bring site features into compliance with the standard conditions. Management practices must address erosion control/stability, stream crossing construction/maintenance, riparian protection, road construction and maintenance, spoils storage and disposal, chemical handling and management, waste handling and disposal, irrigation runoff, and water storage and use.*
- 5. If site problems are identified, include a prioritization and implementation schedule for corrective action based on potential impacts to the beneficial uses of water, and a plan to inspect the site to evaluate the effectiveness of corrective action and identify where additional work may be needed. Proposed work in streams and wetlands shall be designed by a qualified registered professional and shall incorporate applicable standard BMPs from Appendix B.*
- 6. List of chemicals stored onsite, and information about use (e.g., quantities used and frequency applied).*

7. *Monitoring element (see discussion at section I.D.) to ensure that BMPs are being implemented and to evaluate their effectiveness.*

8. *Water Use: Plan shall record water source, relevant water right documentation, and amount used monthly. ²⁶Plan must describe water conservation measures and document approach to ensure that the quantity and timing of water use is not impacting water quality objectives and beneficial uses (including cumulative impacts based on other operations using water in the same watershed). Water use will be presumed to not adversely impact water quality under one of the following scenarios:*

- *No surface water diversions from May 15-Oct 31.*
- *Water diversion pursuant to a local plan that is protective of instream beneficial uses.*
- *Other options: (e.g., % of flow present in stream; riffle depth; gage at bottom of Class I stream; AB2121 equations; DFW flow recommendations; promulgated flow objective in Basin Plan).*

C. Cleanup and Restoration Plan

Pursuant to Water Code section 13304, Tier 3 Dischargers shall submit to the Regional Water Board a cleanup and restoration plan, prepared by a California registered civil engineer or professional geologist, that contains the elements listed below. Once the cleanup and restoration plan is approved by the Executive Officer, the Discharger shall implement the plan, incorporating any additional conditions or monitoring and reporting provision included in the Executive Officer's approval.

1. *Map of property including areas of operations, roads, water bodies, all cleared/developed areas, all structures, and general drainage patterns and directions.*

2. *Design drawings at 1:12000 or larger scale (e.g., 1:6000) that delineate existing site conditions including existing and buried surface waters, projected restored slopes and surface waters, restoration plan work points, spoil disposal sites, re-vegetation planting areas, and any other features or site construction details to complete the scope of work; design and construction standards for earthen material compaction and stabilization and for re-planting of exposed soils with native vegetation; and erosion control methods and standards for unanticipated precipitation during remediation.*

3. *Plan and Schedule to accomplish the following:*

a. *Remove all earthen material and other discharged or placed debris from surface waters, including instream dams.*

b. *Restore the vegetative and hydrological functions of the damaged streams wetlands, and drainages to ensure the long term recovery of the affected surface waters.*

c. *Provide for free-draining, dispersed runoff from all disturbed surfaces, such that hydrologic connectivity is eliminated, gulying is prevented, and water is directed to stable slope areas. Unstable sidecast spoil materials shall be removed or stabilized so they do not fail and deliver sediment to a nearby watercourse.*

d. Replant the slopes and streamside areas with native vegetation to increase shading, prevent erosion and provide streamside protection.

e. Control erosion and sediment delivery prior to, during, and following site restoration efforts, until vegetation is established.

4. To the extent possible, all work shall be completed prior to the first winter after plan approval. Depending on the extent of the work, the timing of plan submittal and approval, need for permits by other agencies, or other restrictions, it may require more than one construction season to complete work. The plan shall provide details and specifications, both in the narrative plan and as applicable in design drawings, for site winterization as needed to minimize and control erosion and sediment delivery over winter periods while construction is underway.

5. Monitoring and reporting element to document timely completion and effectiveness of specified cleanup actions in the plan, including the implementation and effectiveness of management measures, according to the schedule approved in the plan.

6. The cleanup and restoration plan shall incorporate all applicable management measures identified in the accompanying CEQA document and Appendix B.

7. Development of the cleanup and restoration plan shall include consideration of (and make appropriate provision for) site-specific conditions or features that may warrant additional special BMPs, such as presence of expansive soils, presence of landslides and unstable features, proximity to earthquake faults or 100-year floodplains, or other unique geological or paleontological features. If the cleanup site is located in an Alquist-Priolo Earthquake Fault Zone or an area with substantial evidence of a known fault, the cleanup and restoration plan will consider fault rupture hazard during the siting, design, and monitoring of applicable site features in order to minimize the impact to public safety. The cleanup and restoration plan shall also consider hazards associated with strong seismic ground shaking and seismic-related ground failure, including liquefaction, during the siting, design, and monitoring of applicable site features in order to minimize the impact to public safety.

8. Any hazardous waste generated from the demolition of structures or impoundments shall be disposed of in designated hazardous waste landfills.

D. Monitoring and Reporting Program

Tier 1 Dischargers shall inspect their site periodically and re-certify that it meets Tier 1 characteristics and standard conditions annually (Appendix C). Annual updates to the certification shall be maintained on site with the initial certification and copy of the Tier 2 Dischargers shall include a monitoring element in the water resource protection plan that at a minimum provides for periodic inspection of the site, checklist to confirm placement and efficacy of management measures, and document progress on any plan elements subject to a time schedule. Tier 2 Dischargers shall submit an annual report (Appendix C) by March 31 of each year that documents implementation and effectiveness of management measures during the previous year. Tier 2 annual reporting is a function that may be provided through an approved third party program. Under an approved third party program, watershed-scale program effectiveness shall be reported

in a consistent/compatible manner (i.e., consistent with how other approved third party programs assisting with implementation of this Order are reporting) that enables region-wide comparison of subwatershed reports. The required summary information includes the following information:

- *Number of enrollees in each tier category, by subwatershed;*
- *Total fees charged;*
- *Compliance status (for example, how many Tier 2 Dischargers are either in the process of developing water resource protection plans, how many have developed and are implementing plans, how many are in compliance with standard conditions, how effective are BMPs, what changes or improvements are proposed to improve program effectiveness or compliance rate); and*
- *Monitoring information for each of the parameters listed in the MRP.*

Tier 3 Dischargers shall incorporate a monitoring and reporting element into their cleanup and restoration plans for approval by the Executive Officer. At a minimum, the monitoring and reporting must document completion and effectiveness of the specified cleanup actions in the plan. Tier 3 Dischargers shall also submit an annual report (Appendix C) by March 31 of each year.

Regional Water Board staff will develop and implement comprehensive activity tracking by mapping Tier 3 cleanup sites and individual stream crossings proposed for replacement under Tier 2 water resource protection plans. Staff may draw information from Geotracker and SMARTS, the North Coast Region's timber tracking database, and other available sources to help correlate cleanups activities or restoration or remediation work in streams or wetlands that are proposed and underway in individual watersheds and subwatersheds. Regional Water Board staff will direct activity timing under this Order as necessary to limit the number of individual potential construction-related impacts occurring at any given time in any given watershed. Specifically, where cleanup activities or restoration or remediation work in streams or wetlands are proposed to be implemented on several properties within a subwatershed, staff will consult with project consultants and other sources to stagger the timing of implementation.

¹⁵ Connected roads are road segments that deliver road surface runoff, via the ditch or road surface, to a stream crossing or to a connected drain that occurs within the high delivery potential portion of the active road network. A connected drain is defined as any cross-drain culvert, water bar, rolling dip, or ditch-out that appears to deliver runoff to a defined channel. A drain is considered connected if there is evidence of surface flow connection from the road to a defined channel or if the outlet has eroded a channel that extends from the road to a defined channel. (http://www.forestsandfish.com/documents/Road_Mgmt_Survey.pdf)

¹⁶ At a minimum, the culvert shall be aligned at the inlet. If infeasible to align the culvert outlet with the stream grade or channel, outlet armoring or equivalently effective means may be applied.

¹⁷ If infeasible to install a critical dip, an alternative solution may be chosen.

¹⁸ Alternative site-specific riparian buffers that are equally protective of water quality may be necessary to accommodate existing permanent structures or other types of structures that cannot be relocated.

¹⁹ Spoils are waste earthen or organic materials generated through grading or excavation, or waste plant growth media or soil amendments. Spoils include but are not limited to soils, slash, bark, sawdust, potting soils, rock, and fertilizers.

²⁰ See definition and link to maps at: <http://water.usgs.gov/GIS/huc.html>

²¹ "Agronomic rates" is defined as the rates of fertilizer and irrigation water that a plant needs to enhance soil productivity and provide the crop or forage growth with needed nutrients for optimum health and growth, without having any excess water or nutrient percolate beyond the root zone.

²² Plant waste may also be composted, subject to the same restrictions cited above for cultivation-related waste storage.

²³ Generally, compliance with standard conditions is expected in the shortest time possible, and no later than the expiration of this Order (five years). However, in recognizing the challenges associated cumulative water use and cleanup of legacy conditions (available resources, studies, additional permitting, etc.), compliance schedules for

standard condition 1.5.a, and standards for which corrective work is needed under Order section II.5.c may extend beyond Order expiration and continue through any reissuance of the Order.

²⁴ See e.g. http://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_certification.shtml

²⁵ Controllable sediment delivery sites are generally areas that are discharging or have the potential to discharge sediment to waters of the state, that are caused or affected by human activity, and may feasibly and reasonably respond to prevention and minimization management measures.

²⁶ All water sources shall be recorded, including alternative sources such as rain catchment and groundwater, and/or hauled water. Hauled water shall be documented as specified in the MRP.

Best Management Practices for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects

I. Introduction

Best management practices (BMPs) provided here may be applicable to prevent, minimize, and control the discharge of waste and other controllable water quality factors associated with site restoration/cleanup/remediation and site operations and maintenance. These BMPs are all considered enforceable conditions under the Order as applicable to a given site, and are referenced by and made conditions in the mitigated negative declaration (CEQA document) for the Order, as well.

This appendix to Order No. R1-2015-0023 includes section II. Standard BMPs for Construction, section III. BMPs for Site Maintenance and Operations (per standard conditions), and section IV. References. For additional BMP suggestions, staff encourage consultation of the various manuals listed in section IV. References, many of which are available online for free.

II. Standard BMPs for Construction

Where applicable during restoration, remediation, cleanup, or site maintenance activities, the following BMPs will be used.

A. General BMPs to Avoid or Minimize Adverse Impacts

Temporal Limitations on Construction

1. To avoid impacting migrating fish and causing erosion and sedimentation of the stream channel, the project work season shall be from May 1 to October 15. If operations are to be conducted during the winter period from October 15 to May 1, a winter period operating plan must be incorporated into the project work plan. This plan shall include specific measures to be taken in the winter operating period to avoid or substantially lessen erosion and sedimentation into surface waters.
2. A 2-day (48-hour) forecast¹ of rain shall be the trigger for temporary cessation of project activities and winterization/erosion protection of the work site.

Limitation on Earthmoving

3. Disturbance to existing grades and vegetation shall be limited to the actual site of the cleanup/remediation and necessary access routes.
4. Placement of temporary access roads, staging areas, and other facilities shall avoid or minimize disturbance to habitat.
5. Disturbance to native shrubs, woody perennials or tree removal on the streambank or in the stream channel shall be avoided or minimized. If riparian trees over six inches dbh (diameter at breast height) are to be removed, they shall be replaced by native species appropriate to the site at a 3:1 ratio. Where physical constraints in the project area prevent replanting at a 3:1 ratio and canopy cover is sufficient for habitat needs, replanting may occur at a lesser replacement ratio.
6. If shrubs and non-woody riparian vegetation are disturbed, they shall be replaced with similar native species appropriate to the site.
7. Whenever feasible, finished grades shall not exceed 1.5:1 side slopes. In circumstances where final grades cannot achieve 1.5:1 slope, additional erosion control or stabilization methods shall be applied as appropriate for the project location.
8. Spoils and excavated material not used during project activities shall be removed and placed outside of the 100-year floodplain, and stored/disposed of in compliance with Order conditions related to spoils management.
9. Upon completion of grading, slope protection of all disturbed sites shall be provided prior to the rainy season through a combination of permanent vegetative treatment, mulching, geotextiles, and/or rock, or equivalent.
10. Vegetation planting for slope protection purposes shall be timed to require as little irrigation as possible for ensuring establishment by the commencement of the rainy season.
11. Only native plant species shall be used with the exception of non-invasive, non-persistent grass species used for short-term vegetative cover of exposed soils.
12. Rock placed for slope protection shall be the minimum necessary to avoid erosion, and shall be part of a design that provides for native plant revegetation and minimizes bank armoring.

Limitations on Construction Equipment

13. Dischargers and/or their contractors shall ensure that chemical contamination (fuel, grease, oil, hydraulic fluid, solvents, etc.) of water and soils is prohibited during routine equipment operation and maintenance.
14. Heavy equipment shall not be used in flowing water. Please refer to BMPs 57 through 64 for dewatering of live streams.
15. When possible, existing ingress or egress points shall be used or work shall be performed from the top of the creek banks.
16. Use of heavy equipment shall be avoided or minimized in a channel bottom with rocky or cobbled substrate.
17. If project work or access to the work site requires heavy equipment to travel on a channel bottom with rocky or cobbled substrate, wood or rubber mats shall be placed on the channel bottom prior to use by heavy equipment.
18. Heavy equipment shall not introduce chemicals or foreign sediment to the channel (e.g., remove mud from tracks or cover channel work area with plastic sheeting prior to heavy

equipment entry).

19. The amount of time this equipment is stationed, working, or traveling within the channel shall be minimized.

20. When heavy equipment is used, any woody debris and stream bank or streambed vegetation disturbed shall be replaced to a pre-project density with native species appropriate to the site. If riparian trees over six inches dbh are to be removed, they shall be replaced by native species appropriate to the site at a 3:1 ratio per BMP 5.

21. The use or storage of petroleum-powered equipment shall be accomplished in a manner that prevents the potential release of petroleum materials into waters of the state (Fish and Game Code 5650). To accomplish this, the following precautionary measures shall be followed:

- Schedule excavation and grading activities for dry weather periods.
- Designate a contained area for equipment storage, short-term maintenance, and refueling. Ensure it is located at least 50 feet from waterbodies.
- Inspect vehicles for leaks and repair immediately.
- Clean up leaks, drips and other spills immediately to avoid soil or groundwater contamination.
- Conduct major vehicle maintenance and washing offsite (except as necessary to implement BMP 18).
- Ensure that all spent fluids including motor oil, radiator coolant, or other fluids and used vehicle batteries are collected, stored, and recycled as hazardous waste offsite.
- Ensure that all construction debris is taken to appropriate landfills and all sediment disposed of in upland areas or offsite, beyond the 100-year floodplain.
- Use dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) whenever possible. If necessary for dust control, use only a minimal amount of water.
- Sweep up spilled dry materials immediately.

Revegetation and Removal of Exotic Plants

22. The work area shall be restored to pre-project work condition or better.

23. All exposed soil resulting from the cleanup/restoration activities shall be revegetated using live planting, seed casting or hydroseeding.

24. Any stream bank area left barren of vegetation as a result of cleanup/restoration activities shall be stabilized by seeding, replanting, or other means with native trees, shrubs, and/or grasses appropriate to the site prior to the rainy season in the year work was conducted.

25. Soil exposed as a result of project work, soil above rock riprap, and interstitial spaces between rocks shall be revegetated with native vegetation by live planting, seed casting, or hydroseeding prior to the rainy season of the year work is completed.

26. The spread or introduction of exotic plant species shall be avoided to the maximum extent possible by avoiding areas with established native vegetation during cleanup/restoration activities, restoring disturbed areas with appropriate native species, and post-project monitoring and control of exotic species.

27. Removal of invasive exotic species is strongly recommended. Mechanical removal (hand tools, weed whacking, hand pulling) of exotics shall be done in preparation for establishment of native perennial plantings.

28. Revegetation shall be implemented after the removal of exotic vegetation occurs. Erosion control implementation shall be timed in accordance with BMPs 1 and 2.
29. Native plants characteristic of the local habitat shall be used for revegetation when implementing and maintaining cleanup/restoration work in riparian and other sensitive areas. Non-invasive, non-persistent grass species (e.g., barley grass) may be used for their temporary erosion control benefits to stabilize disturbed slopes and prevent exposure of disturbed soils to rainfall.
30. Annual inspections for the purpose of assessing the survival and growth of revegetated areas and the presence of exposed soil shall be conducted for three years following project work.
31. Dischargers and/or their consultant(s) or third party representative(s) shall note the presence of native/non-native vegetation and extent of exposed soil, and take photographs during each inspection.
32. Dischargers and/or their consultant(s) or third party representative(s) shall provide the location of each work site, pre- and post-project work photos, diagram of all areas revegetated and the planting methods and plants used, and an assessment of the success of the revegetation program in the annual monitoring report as required under the Order.

Erosion Control

33. Erosion control and sediment detention devices and materials shall be incorporated into the cleanup/restoration work design and installed prior to the end of project work and before the beginning of the rainy season. Any continuing, approved project work conducted after October 15 shall have erosion control works completed up-to-date and daily.
34. Erosion control materials shall be, at minimum, stored on-site at all times during approved project work between May 1 and October 15.
35. Approved project work within the 5-year flood plain shall not begin until all temporary erosion controls (straw bales or silt fences that are effectively keyed-in) are installed downslope of cleanup/restoration activities.
36. Non-invasive, non-persistent grass species (e.g., barley grass) may be used for their temporary erosion control benefits to stabilize disturbed slopes and prevent exposure of disturbed soils to rainfall.
37. Upon work completion, all exposed soil present in and around the cleanup/restoration sites shall be stabilized within 7 days.
38. Soils exposed by cleanup/restoration operations shall be seeded and mulched to prevent sediment runoff and transport.

Miscellaneous

39. During temporary stream crossing siting, locations shall be identified where erosion potential is low. Areas where runoff from roadway side slopes will spill into the side slopes of the crossing shall be avoided.
40. Vehicles and equipment shall not be driven, operated, fueled, cleaned, maintained, or stored in the wet or dry portions of a waterbody where wetland vegetation, riparian vegetation, or aquatic organisms may be impacted.
41. Riparian vegetation, when removed pursuant to the provisions of the work, shall be cut off no lower than ground level to promote rapid re-growth. Access roads and work areas built over

riparian vegetation shall be covered by a sufficient layer of clean river run cobble to prevent damage to the underlying soil and root structure. The cobble shall be removed upon completion of project activities.

42. Avoidance of earthwork on steep slopes and minimization of cut/fill volumes, combined with proper compaction, shall occur to ensure the area is resilient to issues associated with seismic events and mass wasting. If cracks are observed, or new construction is anticipated, consultation with a qualified professional is appropriate.

43. Operations within the 100-year floodplain shall be avoided. Refuse and spoils shall not be stored within the hundred-year floodplain. If roads are located within the 100-year floodplain, they shall be at grade; bridges shall have vented approaches and bridge deck shall be above anticipated 100-year flood water surface elevations. Consultation with a qualified professional is required for project work within the floodplain. .

44. Project work-related dust shall be controlled. Dust control activities shall be conducted in such a manner that will not produce sediment-laden runoff. Dust control measures, including pre-watering of excavation/grading sites, use of water trucks, track-out prevention, washing down vehicles/equipment before leaving site, and prohibiting grading/excavation activities during windy periods, shall be implemented as appropriate.

45. Short term impacts from project work-related emissions can be minimized via retrofitting equipment and use of low emissions vehicles when possible.

46. Position vehicles and other apparatus so as to not block emergency vehicle access.

B. BMPs for Specific Activities

Critical Area Planting, Channel Vegetation and Restoration and Management of Declining Habitats

The following measures shall be employed:

47. Plant materials used shall be native to the site and shall be locally collected if possible.

48. Straw mulch shall be applied at a rate of 2 tons per acre of exposed soils and, shall be secured to the ground.

49. When implementing or maintaining a critical area planting above the high water line, a filter fabric fence, straw wattles, fiber rolls and/or hay bales shall be utilized to keep sediment from flowing into the adjacent water body.

Structure for Water Control and Stream Crossings

These practices shall be used generally to replace or retrofit existing culverts and to install culverts where water control is needed at a stream crossing or road ditch to restore natural hydrology, and to reduce potential diversions and road-related erosion. In addition to the general limitations set forth in the previous section, the following measures shall be employed for these types of projects:

50. Culvert fill slopes shall be constructed at a 2:1 slope or shall be armored with rock.

51. All culverts in fish-bearing streams and in streams where fish have historically been found and may potentially re-occur, shall be designed and constructed consistent with NMFS Southwest Region's Guidelines for Salmonid Passage at Stream Crossings (NMFS 2000) and CDFG's Culvert Criteria for Fish Passage (CDFG 2002).

Limitations on Work in Streams and Permanently Poned Areas

52. If it is necessary to conduct work in or near a live stream, the work space shall be isolated to avoid project activities in flowing water.

53. Water shall be directed around the work site.

54. Ingress/egress points shall be utilized and work shall be performed from the top of the bank to the maximum extent possible.

55. Use of heavy equipment in a channel shall be avoided or minimized. Please refer to BMPs 57 through 64 for dewatering of live streams. The amount of time construction equipment is stationed, working or traveling within the creek bed shall be minimized.

56. If the substrate of a seasonal pond, creek, stream or water body is altered during work activities, it shall be returned to approximate pre-construction conditions after the work is completed.

Temporary Stream Diversion and Dewatering: All Live Streams

57. For project work in a flowing or pooled stream or creek reach, or where access to the stream bank from the channel bottom is necessary, the work area shall be isolated with the use of temporary cofferdams upstream and downstream of the work site and all flowing water shall be diverted around the work site throughout the project period.

58. Other approved water diversion structures shall be utilized if installation of cofferdams is not feasible.

59. Cofferdam construction using offsite river-run gravel and/or sand bags is preferred. If gravel materials for cofferdams are generated onsite, measures shall be taken to ensure minimal disturbance to the channel, such as careful extraction from elevated terraces. The upstream end of the upstream cofferdam shall also be reinforced with thick plastic sheeting to minimize leakage.

60. Gravity diversions are preferred to pumping as dewatering techniques. If pumping is required to supplement gravity diversions, care shall be taken to minimize noise pollution and prevent the pump or generator-borne pollution to the watercourse.

61. The diversion pipe shall consist of a large plastic HDPE or ADS pipe or similar material, of a sufficient diameter to safely accommodate expected flows at the site during the full project period.

62. The pipe shall be protected from project activities to ensure that bypass flows are not interrupted.

63. Continuous flow downstream of the work site shall be maintained at all times during project work.

64. When project work is complete, the flow diversion structure shall be removed in a manner that allows flow to resume with a minimum of disturbance to the substrate.

Protection of Sensitive Species

65. Sensitive species - Consult with federal, state and local agencies regarding location of rare, threatened or endangered species.

66. Prior to commencing work, designate and mark a no-disturbance buffer to protect sensitive species and communities.

67. All work performed within waters of the state shall be completed in a manner that minimizes impacts to beneficial uses and habitat. Measures shall be employed to minimize land disturbances that shall adversely impact the water quality of waters of the state. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete Project implementation.

68. All equipment, including but not limited to excavators, graders, barges, etc., that may have come in contact with extremely invasive animals (e.g. zebra mussels or new Zealand mud snails) or plant (e.g., *Arundo donax*, scotch broom, pampas grass) or the seeds of these plants, shall be carefully cleaned before arriving on site and shall also be carefully cleaned before removal from the site, to prevent spread of these plants.

69. Vegetation shall be established on disturbed areas with an appropriate mix of California native plants and/or seed mix. All initial plantings and seed shall be installed prior to completion of the project work.

III. BMPs for Site Maintenance and Operations (per standard conditions)

The following BMPs are intended to address compliance with the standard conditions. Individual or multiple BMPS may be selected to address compliance with a given standard condition depending on site-specific conditions. BMPs are considered enforceable conditions as applicable to a given site.

A. Site Maintenance, Erosion Control, Drainage Features

70. Drainage of roads, clearings, fill prisms, and terraced areas is critical to ensuring their integrity and to prevent or minimize sediment discharges to watercourses. Proper design and location of roads and other features is critical to ensuring that a road or other feature be adequately drained and is best accomplished through consultation with a qualified professional. If inspection identifies surface rills or ruts, surfacing and drainage likely needs maintenance.

71. Surfacing of exposed/disturbed/bare surfaces can greatly reduce erosion associated with runoff. BMP features such as vegetative ground cover, straw mulch, slash, wood chips, straw wattles, fiber rolls, hay bales, geotextiles, and filter fabric fences may be combined and implemented on exposed/disturbed/bare surfaces as appropriate to prevent or minimize sediment transport and delivery to surface waters. Non-invasive, non-persistent grass species (e.g. barley grass) may be used for their temporary erosion control benefits to stabilize bare slopes and prevent exposure of bare soils to rainfall. If utilized, straw mulch shall be applied at a rate of 2 tons per acre of exposed soils and, if warranted by site conditions, shall be secured to the ground. Consultation with a qualified professional is recommended for successful site-specific selection and implementation of such surface treatments. Guidance literature pertaining to such BMPs is referenced in section IV. of this document.

72. Road surfacing, especially within a segment leading to a watercourse, is critical to prevent and minimize sediment delivery to a watercourse and maintain road integrity for expected uses. Road surfacing can include pavement, chip-seal, lignin, rock, or other material appropriate for timing and nature of use. Steeper sections of road require higher quality rock (e.g. crushed angular versus river-run) to remain in place.

73. Road shaping to optimize drainage includes out-sloping and crowning; shaping can minimize reliance on inside ditches. Drainage structures can include rolling dips and water bars within the road surface and ditch-relief culverts to drain inside ditches. Adequate spacing of drainage structures is critical to reduce erosion associated with runoff. Generally speaking, steep slopes require greater frequency of drainage structures. The drainage structures shall be maintained to ensure capture of and capacity for expected flow. The outlets of the structures shall be placed in such a manner as to avoid discharge onto fill, unstable areas, or areas that can enter a watercourse. If site conditions prohibit drainage structures at an adequate interval to avoid erosion, bioengineering techniques² are the preferred solution (e.g. live fascines), but

other techniques may also be appropriate including armoring (i.e. rock of adequate size and depth to remain in place under traffic and flow conditions) and velocity dissipaters (e.g. gravel-filled “pillows” in an inside ditch to trap sediment). In the case that inside ditches need maintenance, grade ditches only when and where necessary, since frequent routine mechanical grading can cause erosion of the ditch, undermine banks, and expose the toe of the cutslope to erosion. Do not remove more leaves and vegetation than necessary to keep water moving, as vegetation prevents scour and filters out sediment.

74. Road drainage shall be discharged to a stable location away from a watercourse. Use sediment control devices, such as check dams, sand/gravel bag barriers, and other acceptable techniques, when it is neither practical nor environmentally sound to disperse ditch water immediately before the ditch reaches a stream. Within areas with potential to discharge to a watercourse (i.e. within riparian areas of at least 200 feet of a stream) road surface drainage shall be filtered through vegetation, slash, or other appropriate material or settled into a depression with an outlet with adequate drainage. Caution should always be exercised with catchment basins in the event of failure.

75. Any spoils associated with site maintenance shall be placed in a stable location where it cannot enter a watercourse. Sidecasting shall be minimized and shall be avoided on unstable areas or where it has the potential to enter a watercourse.

76. Do not sidecast when the material can enter the stream directly or indirectly as sediment. Sidecast material can indirectly enter the stream when placed in a position where rain or road runoff can later deliver it to a channel that connects with the stream.

77. Disconnect road drainage from watercourses (drain to hill slopes), install drainage structures at intervals to prevent erosion of the inboard ditch or gull formation at the hill slope outfall, outslope roads.

78. Ditch-relief culverts shall also be inspected regularly, and cleared of debris and sediment. To reduce plugging, 15 to 24-inch diameter pipes shall be the minimum size considered for ditch relief culverts and shall be informed by site-specific conditions.

79. Grade ditches only when and where necessary, since frequent routine mechanical grading can cause erosion of the ditch, undermine banks, and expose the toe of the cutslope to erosion. Do not remove more grass and weeds than necessary to keep water moving, as vegetation prevents scour and filters out sediment.

80. Use sediment control devices, such as check dams, sand/gravel bag barriers, and other acceptable techniques, when it is neither practical nor environmentally sound to disperse ditch water immediately before the ditch reaches a stream.

B. Stream Crossing Maintenance

81. Proper maintenance of stream crossings is critical to ensure support of beneficial uses of water. Regular inspection and maintenance is necessary to identify, in a timely manner, if problems are occurring. Crossings include rock fords³, armored fills with culverts³, and bridges³.

82. Rock fords are appropriate when temporary and minor moisture or over-land flow is expected, not typically when a bed and bank is present; exceptions may be justified if warranted by site specific conditions. Additionally, rock fords are appropriate if aquatic life is not present. An adequate layer of crushed angular rock shall be maintained at rock fords such that soil compaction is minimized under expected traffic levels.

83. Stream crossings consisting of armored fills with culverts and bridges are appropriate for streams with defined bed and bank². They shall be sized to ensure the 100-year streamflow event can pass unimpeded. Additionally, crossings shall allow migration of aquatic life during all

life stages potentially supported by that stream reach; water depth and velocity can inhibit migration of adult and juvenile fish species.

84. Stream crossing design and installation is best accomplished with the assistance of a qualified professional. Site conditions can change over time (e.g. channel filling or incision); consultation with a qualified professional is appropriate to evaluate maintenance or replacement needs and opportunities.

85. Regular inspection of the stream crossing is appropriate to identify changed conditions within the stream channel (e.g., bank erosion, headward incision, and channel filling).

- If large wood is accumulated upstream or within the crossing that could impede or deflect flow and result in erosion or debris capture, the wood should generally be removed. In some cases, it may be appropriate to re-orient debris with the streamflow.

- If sediment or debris is accumulated within a culvert and limits flow capacity, the short term solution should generally be to clean out the culvert and place the debris and sediment in a stable location with no potential to discharge into a stream. In some cases a trash rack, post, or other deflection structure at the culvert inlet can reduce plugging.

- If sediment is accumulated in a culvert without other debris accumulation and limits flow capacity, the long term solution may generally involve changing the culvert's slope, diameter, or embedment in the streambed.

86. The roadway adjacent to and over the crossing is an area of potential discharge. All road surfaces approaching a crossing shall be drained before the crossing, adequately filtered through vegetation or other material, and not discharged to a watercourse. If turbid water is discharged at a stream crossing, additional measures to control erosion at the source(s) or to remove sediment prior to discharge shall be implemented. Road surfaces shall be of rock, pavement, or other material appropriate for type and level of use.

87. If a culvert is used, the approaches and fill slopes shall be properly compacted during installation and shall be stabilized with rock or other appropriate surface protection to minimize surface erosion and slumping to the receiving waters. If possible, the road surface over the culvert shall have a critical-dip to ensure that if the culvert becomes plugged, water can flow over the road surface without washing away the fill prism. If site-specific conditions do not allow for a critical dip, alternatives such as emergency overflow culverts, oversized culverts, flared inlets, and debris racks may be warranted.

C. Riparian and Wetland Protection and Management:

88. Buffer width will be in compliance with Tier category.

89. Trees within riparian areas shall be retained for natural recruitment to streams. Large woody debris (LWD) shall be retained in stream or within riparian areas. The size of wood that can be beneficial to the stream will vary depending on the size of the stream (i.e., larger pieces of wood are necessary to withstand flows in large streams). In the event that LWD or trees are disturbed during excavation, care shall be taken to separate the LWD from soil. The pieces shall be stockpiled separately until they can be replaced in appropriate locations to enhance instream or riparian conditions. Placement of instream wood for habitat enhancement should be done under the consultation of a qualified professional and in conformance with applicable regulatory permits.

90. Avoidance of disturbance in riparian areas (within 200 feet of a watercourse) should result in protection and restoration of the quality/health of the riparian stand so as to promote: 1) shade and microclimate controls; 2) delivery of wood to channels, 3) slope stability and erosion

control, 4) ground cover, and 5) removal of excess nutrients. This recognizes the importance of the riparian zone with respect to temperature protection, sediment delivery, its importance with respect to the potential for recruitment of large wood, and removal of nutrients transported in runoff. In the event that past disturbance has degraded riparian conditions, replanting with native species capable of establishing a multi-storied canopy will ensure these riparian areas can perform these important ecologic functions.

D. Spoils Management

To ensure spoil pile stability and to reduce the potential for spoil pile slope failure or transport to waters of the state, the following measures shall be implemented when placing or disposing of spoils onsite:

91. Rip compacted soils prior to placing spoils to prevent the potential for ponding under the spoils that could result in spoil site failure and subsequent sedimentation;
92. Compact and contour stored spoils to mimic the natural slope contours and drainage patterns to reduce the potential for fill saturation and failure;
93. Ensure that spoil materials are free of woody debris, and not placed on top of brush, logs or trees.
94. Spoils shall not be placed or stored in locations where soils are wet or unstable, or where slope stability could be adversely affected.
95. Do not locate spoil piles in or immediately adjacent to wetlands and watercourses.
96. Store spoil piles in a manner (e.g. cover pile with plastic tarps and surround base of pile with straw wattle) or location that would not result in any runoff from the spoil pile ending up in wetlands and watercourses.
97. Separate organic material (e.g., roots, stumps) from the dirt fill and store separately. Place this material in long-term, upland storage sites, as it cannot be used for fill.
98. Keep temporary disposal sites out of wetlands, adjacent riparian corridors, and ordinary high water areas as well as high risk zones, such as 100-year floodplain and unstable slopes.
99. After placement of the soil layer, track walk the slopes perpendicular to the contour to stabilize the soil until vegetation is established. Track walking creates indentations that trap seed and decrease erosion of the reclaimed surfaces.
100. Revegetate the disposal site with a mix of native plant species. Cover the seeded and planted areas with mulched straw at a rate of 2 tons per acre. Apply jute netting or similar erosion control fabric on slopes greater than 2:1 if site is erosive.

E. Water Storage and Use

WATER USE

101. Conduct operations on a size and scale that considers available water sources and other water use and users in the planning watershed.
102. Implement water conservation measures such as rainwater catchment systems, drip irrigation, mulching, or irrigation water recycling. (Also see BMPs for Irrigation, below)
103. Take measures to minimize water diversion during low flow periods.
104. Options for documentation of water diversions and/or water usage may include the use of water meter devices and date-stamped photographs of water meter readings.

105. Hauled water utilized for irrigation shall be documented via receipt or similar, and show the date, name, and license plate of the water hauler, and the quantity of water purchased.

106. Apply water at agronomic rates (do not overwater plants).

WATER STORAGE

107. If using a water storage tank, do not locate the tank in a flood plain or next to equipment that generates heat. Locate the tank so it is easy to install, access, and maintain.

108. Vertical tanks should be installed according to manufacturer's specifications and placed on firm, compacted soil that is free of rocks/sharp objects and capable of bearing the weight of the tank and its maximum contents. In addition, a sand or pea gravel base with provisions for preventing erosion is highly recommended. Installation sites for tanks 8,000 gallons or more must be on a reinforced concrete pad providing adequate support and enough space to attach a tank restraint system (anchor using the molded-in tie down lugs with moderate tension, being careful not to over-tighten), especially where seismic or large wind forces are present.

109. Horizontal tanks shall be secured with bands and/or hoops to prevent tank movement.

110. Design and construct storage ponds in properly sited locations, off-stream. Plant vegetation along the perimeter of the pond. Construct berms or excess freeboard space around the perimeter of the pond to allow for sheet flow inputs.

111. Provide adequate outlet drainage for overflow of ponds, including low impact designs, to promote dispersal and infiltration of flows.

112. Place proper lining or sealing in ponds to prevent water loss.

113. Storage bladders are not encouraged for long term water storage reliability. If they are utilized, ensure that they are designed to store water, and that they are sited to minimize potential for water to flow into a watercourse in the event of a catastrophic failure. Used bladders (e.g. military surplus bladders) shall be checked for interior residual chemicals and integrity prior to use. Inspect bladder and containment features periodically to ensure integrity.

F. Irrigation Runoff

114. Irrigate at rates to avoid or minimize runoff.

115. Regularly inspect for leaks in mains and laterals, in irrigation connections, or at the ends of drip tape and feeder lines. Repair any found leaks.

116. Design irrigation system to include redundancy (i.e., safety valves) in the event that leaks occur, so that waste of water is prevented and minimized.

117. Recapture and reuse irrigation runoff (tailwater) where possible, through passive (gravity-fed) or active (pumped) means.

118. Construct retention basins for tailwater infiltration; percolation medium may be used to reduce pollutant concentration in infiltrated water. Constructed treatment wetlands may also be effective at reducing nutrient loads in water. Ensure that drainage and/or infiltration areas are located away from unstable or potentially unstable features.

119. Regularly replace worn, outdated or inefficient irrigation system components and equipment.

120. Use mulches (e.g. wood chips or bark) in cultivation areas that do not have ground cover to prevent erosion and minimize evaporative loss.

121. Leave a vegetative barrier along the property boundary and interior watercourses to act as

a pollutant filter.

122. Employ rain-triggered shutoff devices to prevent irrigation after precipitation.

G. Fertilizers, Soil Amendments, Pesticides, Petroleum Products, and Other Chemicals

123. Evaluate irrigation water, soils, growth media, and plant tissue to optimize plant growth and avoid over-fertilization.

124. Reference Department of Pesticide Regulations Guidance (see Attachments E-1 and E-2 of Order No. R1-2015-0023)

125. All chemicals shall be stored in a manner, method, and location that ensures that there is no threat of discharge to waters of the state.

126. Products shall be labeled properly and applied according to the label.

127. Use integrated pest management strategies that apply pesticides only to the area of need, only when there is an economic benefit to the grower, and at times when runoff losses are least likely, including losses of organic matter from dead plant material.

128. Periodically calibrate pesticide application equipment.

129. Use anti-backflow devices on water supply hoses, and other mixing/loading practices designed to reduce the risk of runoff and spills.

130. Petroleum products shall be stored with a secondary containment system.

131. Throughout the rainy season, any temporary containment facility shall have a permanent cover and side-wind protection, or be covered during non-working days and prior to and during rain events.

132. Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.

133. Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to rain events.

134. Have proper storage instructions posted at all times in an open and conspicuous location.

135. Prepare and keep onsite a Spill Prevention, Countermeasures, and Cleanup Plan (SPCC Plan) if applicable⁴.

136. Keep ample supply of appropriate spill clean-up material near storage areas.

H. Cultivation-Related Wastes

137. Cultivation-related waste shall be stored in a place where it will not enter a stream. Soil bags and other garbage shall be collected, contained, and disposed of at an appropriate facility, including for recycling where available. Pots shall be collected and stored where they will not enter a waterway or create a nuisance. Plant waste and other compostable materials be stored (or composted, as applicable) at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwaters.

138. Imported soil for cultivation purposes shall be minimized. The impacts associated with importation of soil include, but are not limited to increased road maintenance and the increased

need for spoils management. Use of compost increases the humic acid content and water retention capacity of soils while reducing the need for fertilizer application. In the event that containers (e.g. grow bags or grow pots) are used for cultivation, reuse of soil shall be maximized to the extent feasible.

139. Spent growth medium (i.e. soil and other organic medium) shall be handled to minimize discharge of soil and residual nutrients and chemicals to watercourses. Proper handling of spent soil could include incorporating into garden beds, spreading on a stable surface and revegetation, storage in watertight dumpsters, covering with tarps or plastic sheeting prior to proper disposal, and use of techniques to reduce polluted runoff described under Item F. Irrigation Runoff.

140. Other means of handling cultivation-related waste may be considered on a site-specific basis.

I. Refuse and Human Waste

141. Trash containers of sufficient size and number shall be provided and properly serviced to contain the solid waste generated by the project. Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers. Use lined bins or dumpsters to reduce leaking of liquid waste. Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater. Make sure trash container areas are screened or walled to prevent off-site transport of trash. Consider using refuse containers that are bear-proof and/or secure from wildlife. Refuse shall be removed from the site on a frequency that does not result in nuisance conditions, transported in a manner that they remain contained during transport, and the contents shall be disposed of properly at a proper disposal facility.

142. Ensure that human waste disposal systems do not pose a threat to surface or ground water quality or create a nuisance. Onsite treatment systems should follow applicable County ordinances for human waste disposal requirements, consistent with the applicable tier under the State Water Resources Control Board Onsite Waste Treatment System Policy⁵.

¹ Any weather pattern that is forecasted by NOAA to have a 50% or greater probability of producing precipitation in the project area. The permittee shall obtain and keep for record likely precipitation forecast information from the National Weather Service Forecast Office (e.g. by entering the zip code of the project's location at <http://srh.noaa.gov/forecast>).

² A Primer on Stream and River Protection for the Regulator and Program Manager: Technical Reference Circular W.D. 02-#1, San Francisco Bay Region, California Regional Water Quality Control Board (April 2003) http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stream_wetland/streamprotectioncircular.pdf

³ Explanation of term, available within the following document (as of the date of the Order): http://www.pacificwatershed.com/sites/default/files/handbook_chapter_download_page.pdf

⁴ SPCC plans are required for over 1,320 gallons of petroleum stored aboveground or 42,000 gallons below ground. Additionally, any type of storage container requires an SPCC if it is larger than 20,000 gallons, or if the cumulative storage capacity on-site exceeds 100,000 gallons (Health and Safety Code section 25270-25270.13) A sample SPCC can be found here: <http://www.calcupa.net/civica/filebank/blobdload.asp?BlobID=3186>

21. SOURCE/REFERENCE LIST

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