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Leading the Way in Sustainable Practices: How the Cannabis Cultivation Policy is Rethinking Water Management in California

*Joanna Hossack**

Introduction

Water has been a source of conflict in Californian politics since the state's formation. Today, with close to 40 million residents,¹ water is a critical, precious resource that is carefully managed.² Environmental changes have led to reduced supply, especially in the long, dry summers, that have helped make California an agricultural powerhouse.³ Although non-commercial medical cannabis use and possession was decriminalized by California voters in 1996, Proposition 215 did not authorize or regulate commercial cannabis activity.⁴ Despite regulatory uncertainty, cannabis cultivation proliferated through the 1990s and 2000s, often in remote areas and with little oversight from regulatory agencies.⁵ In 2015, the Blue Ribbon Commission on Marijuana Policy, Chaired by then Lieutenant Governor Gavin Newsom, released a report titled "Pathways Report: Policy Options for Regulating Marijuana in California."⁶ The report noted that California was home to a "substantial amount of cannabis cultivation."⁷ In

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1. US CENSUS BUREAU, QUICK FACTS CALIFORNIA (last visited Feb. 10, 2019, 2:00 PM), <https://perma.cc/VB62-9G8V>.

2. CAL. DEP'T OF WATER RES., 5 REASONS GROUND WATER IS VITAL TO CALIFORNIANS (Mar. 11, 2019), <https://perma.cc/L7F8-UKUN>; CAL. DEP'T OF WATER RES., WATER USE & EFFICIENCY (last visited Mar. 19, 2019), <https://perma.cc/E2K2-EJNH>.

3. UNIV. OF CA AGRIC. ISSUES CTR., WATER SUPPLY AND DEMAND (July 2009), <https://perma.cc/DSQ5-QJGG>.

4. CALIFORNIA PROPOSITION 215, THE MEDICAL MARIJUANA INITIATIVE (1996), BALLOTPEDIA (last visited Feb. 10, 2019, 2:08 PM), <https://perma.cc/9GDV-V66H>.

5. BLUE RIBBON COMM'N ON MARIJUANA POLICY, PATHWAYS REPORT: POLICY OPTIONS FOR REGULATING MARIJUANA IN CALIFORNIA (July 22, 2015), <https://perma.cc/EV56-YBFT>.

6. *Id.*

7. BLUE RIBBON COMM'N ON MARIJUANA POLICY, *supra* note 5, at 12.

2014, the League of California Cities and the California Police Chiefs Association abandoned their longtime opposition to legal cannabis and sponsored legislation, Senate Bill 1262 (“SB 1262”) to regulate commercial cannabis activity.⁸ While SB 1262 was unsuccessful, it set the stage for the passage of the Medical Marijuana Regulation and Safety Act (“MMRSA”) in 2015.⁹

In collaboration, lawmakers in both houses drafted sweeping legislation to regulate all aspects of the cannabis market from irrigation and pesticide use to advertising and product potency.¹⁰ California developed and passed a novel policy, the “Cannabis Cultivation Policy, Principles and Guidelines for Cannabis Cultivation,” that applies to water used for irrigating cannabis.¹¹ This policy reflects the legacy of small, decentralized cannabis cultivators in California.¹² The Cannabis Cultivation Policy acknowledges the current and historic realities of cannabis cultivation while also setting a high standard for the future that reflects the aspirations of many cultivators to ensure that cannabis is not only the state’s most valuable crop, but also its most sustainable.

California Cannabis Law Framework and Genesis

Assembly Bill 243, Assembly Bill 266, Senate Bill 643 (2015)

In October 2015, the historic MMRSA was approved by Governor Brown and chaptered into law.¹³ The historic law sought to legalize medicinal commercial cannabis activity in the state of California and create a comprehensive state licensing framework to regulate cannabis

8. S.B. 1262, 2013–2014 Leg., Reg. Sess. (Cal. 2014).

9. LEGISLATIVE ANALYST’S OFFICE, THE 2016–17 BUDGET: OVERVIEW OF GOVERNOR’S PROPOSALS TO IMPLEMENT THE MEDICAL MARIJUANA REGULATION AND SAFETY ACT (Feb. 18, 2016), <https://perma.cc/6UFG-QSDV>.

10. *Id.*

11. STATE WATER RESOURCES CONTROL BOARD, CANNABIS CULTIVATION POLICY PRINCIPLES AND GUIDELINES FOR CANNABIS CULTIVATION (Oct. 17, 2017), <https://perma.cc/Q7SE-GQUY>.

12. BLUE RIBBON COMM’N ON MARIJUANA POLICY, *supra* note 5, at 28.

13. Cal. Bus. & Prof. Code § 26050 (a)–(b) (2016).

businesses.¹⁴ The MMRSA is the consolidation of Assembly Bills 243 (“AB 243”)¹⁵ and 266 (“AB 266”)¹⁶ with Senate Bill 643 (“SB 643”).¹⁷

The MMRSA legalized commercial, medicinal cannabis activity and created seventeen different license classifications including: retail, cultivation, manufacturing, testing, transportation, and distribution.¹⁸ It required three state agencies to regulate different silos of the industry, including the Bureau of Medical Marijuana Regulation (“BMMR”), the California Department of Food and Agriculture (“CDFA”), and the California Department of Public Health (“CDPH”).¹⁹ The MMRSA regulated and taxed the cannabis industry and sought to bring illicit operators into the regulated market.²⁰ Cultivation license types are based on how the cannabis is grown and the size of the cultivation area.²¹

14. Cal. Bus. & Prof. § 26050 (a)–(b).

15. A.B. 243 2015–2016 Leg., Reg. Sess. (Cal. 2015).

16. A.B. 266 2015–2016 Leg., Reg. Sess. (Cal. 2015).

17. A.B. 643 2015–2016 Leg., Reg. Sess. (Cal. 2015).

18. Bus. & Prof. § 19300.

19. *Id.*

20. *Id.*

21. A.B. 266 2015–2016 Leg., Reg. Sess. (Cal. 2015), Cal. Bus. & Prof. Code § 19300.7 (g)–(i) (2016).

MMRSA Cultivation License Types²²

Type	Description	Category	Maximum Size (plant or canopy size)
1	Specialty	Outdoor	5,000 square feet or 50 plants
1A	Specialty	Indoor	5,000 square feet of canopy
1B	Specialty	Mixed Light	5,000 square feet of canopy
2	Small	Outdoor	5,001-10,000 square feet of canopy
2A	Small	Indoor	5,001-10,000 square feet of canopy
2B	Small	Mixed Light	5,001-10,000 square feet of canopy
3	Medium	Outdoor	Up to 1-acre of canopy
3A	Medium	Indoor	10,001-22,000 square feet of canopy
3B	Medium	Mixed Light	10,001-22,000 square feet of canopy
4	Nursery	Nursery	Up to 1-acre of canopy

Senate Bill 837 (2016)

In 2016, the State Legislature passed Senate Bill 837 (“SB 837”), a budget-trailer bill that requires the State Water Resources Control Board (“SWRCB”) to “adopt principles and guidelines for the diversion and use of water for cannabis cultivation” in consultation with the California Department of Fish and Wildlife (“CDFW”) and CDFG.²³ The law requires cannabis cultivators to identify their source of water supply in their license application.²⁴ The bill replaced the word “marijuana” in the MMRSA with “cannabis,” renaming the MMRSA the Medical Cannabis Regulation and Safety Act (“MCRSA”).²⁵

22. Cal. Bus. & Prof. Code § 19300.7 (a)–(j).

23. S.B. 837, 2015–2016 Leg., Reg. Sess. (Cal. 2016), Bus. & Prof. § 19332(d).

24. *Id.* § 19332.2(a).

25. S.B. 837, 2015–2016 Leg., Reg. Sess. (Cal. 2016), Bus. & Prof. § 19300.

Proposition 64 (2016)

In November 2016, California voters passed Proposition 64, the Adult-Use of Marijuana Act (“AUMA”), permitting adults over 21 to “possess, process, transport, purchase, obtain, or give away to persons 21 years of age or older without any compensation whatsoever, not more than 28.5 grams of marijuana.”²⁶ In addition, it made it legal for adults to “possess, plant, cultivate, harvest, dry, or process not more than six living cannabis plants.”²⁷ The AUMA created a state licensing framework that was almost identical to the structure contained within the MMRSA, including twenty different license types:²⁸

1. Type 1—Cultivation; Specialty outdoor; Small.
2. Type 1A—Cultivation; Specialty indoor; Small.
3. Type 1B—Cultivation; Specialty mixed-light; Small.
4. Type 1C—Cultivation; Specialty cottage; Small.
5. Type 2—Cultivation; Outdoor; Small.
6. Type 2A—Cultivation; Indoor; Small.
7. Type 2B—Cultivation; Mixed-light; Small.
8. Type 3—Cultivation; Outdoor; Medium.
9. Type 3A—Cultivation; Indoor; Medium.
10. Type 3B—Cultivation; Mixed-light; Medium.
11. Type 4—Cultivation; Nursery.
12. Type 5—Cultivation; Outdoor; Large.
13. Type 5A—Cultivation; Indoor; Large.
14. Type 5B—Cultivation; Mixed-light; Large.
15. Type 6—Manufacturer 1.
16. Type 7—Manufacturer 2.
17. Type 8—Testing laboratory.
18. Type 10—Retailer.
19. Type 11—Distributor.
20. Type 12—Microbusiness.²⁹

26. Cal. Health & Safety Code § 11362.1(a)(1) (2016).

27. Cal. Health & Safety § 11362.1(a)(3).

28. Cal. Bus. & Prof. Code § 26050(a) (2016).

29. Cal. Bus. & Prof. § 26050(a).

AUMA Cultivation License Types³⁰

Type	Description	Category	Maximum Size (plant or canopy size)
1	Specialty	Outdoor	50 plants
1A	Specialty	Indoor	5,000 square feet
1B	Specialty	Mixed-Light	5,000 square feet
2	Small	Outdoor	5,000-10,000 square feet
2A	Small	Indoor	5,000-10,000 square feet
2B	Small	Mixed-Light	5,000-10,000 square feet
3	Medium	Outdoor	Up to one acre
3A	Medium	Indoor	10,000-22,000 square feet
3B	Medium	Mixed-Light	10,000-22,000 square feet
4	Nursery	Nursery	No size limitation
5	Large	Outdoor	No size limitation ³¹
5A	Large	Indoor	No size limitation ³²
5B	Large	Mixed-Light	No size limitation ³³

Senate Bill 94 (2017)

In September 2017, Governor Brown signed Senate Bill 94 (“SB 94”), a budget trailer bill, titled the “Medicinal and Adult-Use Cannabis Regulation and Safety Act” (“MAUCRSA”).³⁴ This complex piece of legislation sought to reconcile the differences between the AUMA and the

30. Cal. Bus. & Prof. § 26050.

31. The AUMA created a larger type of cultivation license than was created by the MMRSA, the Type 5 “Large” cultivation licenses do not have a size limitation and allow for unlimited canopy. Type 5 licenses are only available after January 1, 2023. Bus. & Prof. § 26050.

32. See *supra* text accompanying note 30; see Cal. Bus. & Prof. Code § 26050 (2016).

33. Cal. Bus. & Prof. Code § 26050 (2016).

34. Cal. Bus. & Prof. Code § 26000 et seq. (2016).

MCRSA and conjoin the two laws into one unified regulatory licensing framework for the medical and adult-use commercial cannabis markets.³⁵ The MAUCRSA created a state licensing framework for regulating commercial cannabis operators. It placed the responsibility of regulating commercial cannabis retail sale, distribution and testing with the Bureau of Cannabis Control (“BCC”) within the Department of Consumer Affairs (“DCA”). It assigned the responsibility of regulating commercial cannabis cultivation with CDFA and manufacturing with CDPH.³⁶

Cannabis Cultivation Policy (2017)

The California State Legislature passed Senate Bill 837 (“SB 837”) in 2016, authorizing the SWRCB, in consultation with CDFW, to develop policies and guidelines regarding water diversion and use for cannabis cultivation.³⁷ The law requires the SWRCB to “ensure that individual and cumulative effects of water diversion and discharge associated with cultivation [of cannabis] do not affect the instream flows needed for fish spawning, migration, and rearing, and the flows needed to maintain natural flow variability.”³⁸ SB 837 authorizes the SWRCB to “develop a policy for water quality control to establish principles and guidelines for cannabis cultivation, which shall include measures to protect springs, wetlands, and aquatic habitat from negative impacts of cannabis cultivation.”³⁹

Additionally, Water Code section 13142 outlines specific requirements for a state policy for water quality control:

- (a) Water quality principles and guidelines for long-range resource planning, including ground water and surface water management programs and control and use of recycled water.
- (b) Water quality objectives at key locations for planning and operation of water resource development projects and for water quality control activities.

35. S.B. 94, 2017–2018 Leg., Reg. Sess. (Cal. 2017) at Legislative Counsel’s Digest, § (3).

36. Cal. Bus. & Prof. §26012(a)(2)–(3).

37. S.B. 837, 2015–2016 Leg., Reg. Sess. (Cal. 2016) at Legislative Counsel’s Digest, § (1).

38. Cal. Bus. & Prof. § 26060.1(b)(1).

39. Cal. Water Code § 13149(a)(1)(A) (2016).

(c) Other principles and guidelines deemed essential by the state board for water quality control.

The principles, guidelines, and objectives shall be consistent with the state goal of providing a decent home and suitable living environment for every Californian.⁴⁰

With this directive, the SWRCB drafted the Cannabis Cultivation Policy (“Cultivation Policy”) in 2017 to outline various requirements that cannabis cultivators must follow to protect water quality and supply.

There are an estimated 50,000 individual cannabis cultivators in California⁴¹ with over 30,000 in the Emerald Triangle alone.⁴² On an individual scale, many of the cultivators are not diverting a large amount of water.⁴³ However, the SWRCB found that the cumulative impact of cannabis cultivation significantly affects waterways and habitats in California (cultivators often divert flows in remote and sensitive watershed areas, exacerbating these effects).⁴⁴ It is death by a thousand cuts: if everyone takes more from the river, eventually the river stops flowing. The Cultivation Policy addresses the cumulative impact of diversions.⁴⁵ Water Code section 13149 requires the SWRCB to “adopt principles and guidelines for diversion and use of water for cannabis cultivation in areas where cannabis cultivation may have the potential to substantially affect instream flows.”⁴⁶ Cannabis cultivators are subject to “narrative instream flow requirements,” which require that, on any given day, a cannabis cultivator who diverts from a surface waterbody must first check their local compliance gauge⁴⁷ to determine if the Cultivation Policy allows them to divert water. During the wet winter season, the Policy generally allows diversion from November 1 to March 31 of the succeeding year.⁴⁸ The

40. Cal. Water Code § 13142 (2016).

41. Brooke Staggs, *So far, California has 6,000 licensed cannabis businesses. Here’s what that looks like* (Apr. 27, 2018, 5:22 PM), <https://perma.cc/S2VS-6WF9>.

42. BLUE RIBBON COMM’N ON MARIJUANA POLICY, *supra* note 5, at 12.

43. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 10 (Oct. 17, 2017).

44. *Id.*

45. *Id.*

46. Water § 13149.

47. *Online Cannabis Compliance Gage Mapping Tool*, CALIFORNIA WATER BOARDS (Oct. 10, 2018), https://www.waterboards.ca.gov/waterissues/programs/cannabis/online_mappingtool.html.

48. BLUE RIBBON COMM’N ON MARIJUANA POLICY, *supra* note 5, at 51.

Policy is not anchored by date, rather it is based on available flows and informed by minimum instream flows. Diversion is not allowed unless the daily average flow is greater than the minimum monthly instream flow requirement for a period of seven consecutive days.⁴⁹ Prior to diverting water, a cannabis cultivator must monitor the daily average flow for seven consecutive days. If the minimum benchmark is met, then they may divert.⁵⁰

In the dry-summer season, April 1 through October 31, cannabis cultivators are not permitted to divert surface water for their crops.⁵¹ Surface water instream flow requirements apply to anyone diverting water from a waterbody and includes any significant accumulation of water, such as “lakes, ponds, rivers, streams, creeks, springs, artesian wells, wetlands and canals.”⁵² As a surprise to some cultivators, well water may also be classified as “surface water” if the well water is “diverted from a subterranean stream flowing through a known and definite channel.”⁵³

During the summer, when water is scarce and many diversions occur, waterways are overtaxed, resulting in some streams completely drying up and others failing to connect with their destination, reducing hydrological connectivity.⁵⁴ The Cultivation Policy found that this causes numerous impacts including effects on water quality, habitat degradation for fish, and the decrease of instream flow.⁵⁵ Given this concern, the Cultivation Policy establishes baseline “minimum flow” levels that must be maintained to provide habitat connectivity and to guarantee safe passage for juvenile salmonid.⁵⁶ Without sufficient water, the salmon, including endangered Coho and several threatened species, cannot survive.⁵⁷ To protect necessary minimum water levels, the SWRCB requires cannabis surface water diverters to stop or “forbear” their surface water diversions during the dry season.⁵⁸ Cultivators are also required to exercise restraint and not divert

49. BLUE RIBBON COMM’N ON MARIJUANA POLICY, *supra* note 5, at 51.

50. *Id.*

51. *Id.* at 50.

52. *Id.* at 99.

53. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 10 (Oct. 17, 2017).

54. *Id.*

55. *Id.*

56. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY: ATTACHMENT A 10 (Oct. 17, 2017) [hereinafter CANNABIS POLICY: ATTACHMENT A].

57. BLUE RIBBON COMM’N ON MARIJUANA POLICY, *supra* note 5, at 10.

58. *Id.*

from a surface waterbody in the summer when doing so would have an impact on aquatic species.⁵⁹ To mitigate the challenges this policy may cause, cultivators may divert and store water during winter months for later use as irrigation water during the summer.⁶⁰ Cultivators can achieve this by obtaining a Small Irrigation Use Registration (“SIUR”) from the SWRCB.⁶¹

Cannabis Small Irrigation Use Registration Program (2017)

Senate Bill 837 paved the way for SWRCB to create the SIUR. The law creates a new appropriative water right applicable to cannabis surface water diverters that allows them to store water.⁶² The SIUR allows a cultivator to divert surface water during the wet season to storage such as water tanks or an off-stream pond.⁶³ During the summer, when cannabis cultivators are unable to divert surface water, they can use their stored supply.⁶⁴ SIUR’s may not be available for certain water bodies and have limitations on the amount of water that can be used.⁶⁵ The SIUR presents a novel approach to bridge the gap between surplus water in the wet season and widespread water scarcity in the dry season.

Wet Season Surface Water Instream Flow Requirements

In addition to minimum instream flow requirements in the summer, there are also minimum standards during the wet season in order to protect aquatic species.⁶⁶ After the 15th of December each year, cannabis surface water diverters must check their local compliance gage for seven consecutive days to monitor if the daily average flow is greater than the minimum monthly instream flow requirement.⁶⁷ Once flows exceed the

59. BLUE RIBBON COMM’N ON MARIJUANA POLICY, *supra* note 5, at 10.

60. *Id.* at 18.

61. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 18 (Oct. 17, 2017).

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.*

66. *Id.*

67. *Id.* at 11.

numeric flow requirement for seven consecutive days, then a surface water diverter may divert.⁶⁸

Groundwater Requirements

Currently, no forbearance period for groundwater exists. However, if the SWRCB finds that cannabis groundwater diversions impact surface water, they may impose one.⁶⁹ Areas that would be particularly impacted include areas with “high surface water-groundwater connectivity, large numbers of cannabis groundwater diversions; and/or groundwater diversions in close proximity to streams.”⁷⁰

Cannabis General Order

The Cannabis Policy also includes the General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities, known as the Cannabis General Order (“General Order”).⁷¹ The General Order provides a statewide tiered approach for permitting waste discharges associated with cannabis cultivation.⁷²

It also requires commercial cannabis cultivators to enroll with SWRCB and comply with standards.⁷³ The tiered approach contains different classifications, including three exemptions and two different tiers that apply to commercial cannabis activity as regulated by the MAUCRSA.

Conditional Exemption I: Personal Use

Individuals who grow cannabis for their personal use under the MAUCRSA can avoid enrollment. To be eligible for the personal use exemption, cultivators must comply with several requirements: the cultivation area must (1) be less than 1,000 square feet in aggregate total

68. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 11 (Oct. 17, 2017).

69. *Id.*

70. *Id.*

71. *Id.* at 13.

72. *Id.*

73. *Id.* at 17.

disturbed cultivation area; (2) comply with riparian setback requirements; and (3) not be located on land with a slope greater than 20-percent.⁷⁴

Conditional Exemption II: Indoor Cultivation

Indoor cultivation is defined as cultivation “within a structure with a permanent roof and relatively impermeable floor.”⁷⁵ Indoor cultivation activities generate wastewater such as irrigation tail water or hydroponic wastewater⁷⁶ that can contain excessive chemicals such as nutrients, salinity constituents, other constituents such as magnesium, zinc and boron, and may contain “biocides, bleach mixtures, or other chemical waste streams.”⁷⁷ Indoor cultivation wastewater is typically discharged into a community collection system or to an on-site wastewater treatment system such as a leach field.⁷⁸ Indoor cultivators need to apply for coverage under the General Order but can qualify for coverage under a conditional waiver.⁷⁹ To be exempt, indoor cultivators must discharge their industrial waste water to either a community sewer consistent with the sewer system requirements and permit requirements, or to an on-site wastewater treatment system, such as a separately permitted septic tank or leach field.⁸⁰ The General Order does not require monitoring or reporting for indoor cultivation activities; however, the SWRCB can impose monitoring requirements if site conditions indicate the need for a particular project.⁸¹

Conditional Exemption III: Outdoor

Small, outdoor cultivation projects that disturb less than 2,000 square feet can qualify for conditional exemption and must obtain coverage under a Waiver. To qualify as conditionally exempt, a project must have a contiguous cultivation area; the disturbed area cannot exceed 2,000 square

74. CAL. STATE WATER RES. CONTROL BD., Order WQ 2017-0023-DWQ, GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES Section 12 (Oct. 17, 2017).

75. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 17 (Oct. 17, 2017).

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

feet or be located on a grade steeper than 20%; and must comply with riparian setbacks.⁸²

Tier 1 and Tier 2: Commercial Activity

Tiers 1 and 2 apply to commercial cannabis activity regulated pursuant to the MAUCRSA.⁸³ Commercial cannabis projects require enrollment under the General Order.⁸⁴ The tiers apply to commercial cannabis operators based on risk to the environment which is determined by analyzing the slope of “disturbed areas” and their proximity to a water body.⁸⁵ Disturbed area is defined as “land areas where natural conditions have been modified in a way that may result in an increase in turbidity in water discharged from the site. Disturbed land includes areas where natural plant growth has been removed whether by physical, animal, or chemical means, or natural grade has been modified for any purpose.”⁸⁶

The Cultivation Policy determined that increased slopes “may be associated with decreased soil stability, especially when associated with vegetation removal. Storm water and excess irrigation water are more likely to runoff and discharge off-site from sloped surfaces”⁸⁷ and that “disturbed areas within the riparian setbacks are more likely to discharge waste constituents to surface water, therefore, any sites that cannot meet the riparian setback requirements are considered to be high risk sites.”⁸⁸

82. CAL. STATE WATER RES. CONTROL BD., ORDER WQ 2017-0023-DWQ, GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES Section 13 (Oct. 17, 2017).

83. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 14 (Oct. 17, 2017).

84. *Id.*

85. *Id.*

86. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 8.

87. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 17 (Oct. 17, 2017).

88. *Id.*

Technical Reports

Cannabis cultivators are required to submit technical reports to the SWRCB; the table below summarizes those requirements.⁸⁹ Individuals who cultivate for their personal use are not required to submit reports.⁹⁰

Summary of Technical Reports Required by Tier and Risk Level⁹¹

Tier	Risk Level	Technical Reports
Conditionally Exempt	Not Applicable	Site Closure Report
Tier 1	All	Site Management Plan
Tier 1	Moderate	Site Erosion and Sediment Control Plan
Tier 1	High	Disturbed Area Stabilization Plan
Tier 1	All	Site Closure Report
Tier 2	All	Site Management Plan
Tier 2	Moderate	Site Erosion and Sediment Control Plan
Tier 2	High	Disturbed Area Stabilization Plan
Tier 2	All	Nitrogen Management Plan
Tier 2	All	Site Closure Report

Requirements Applicable to Cannabis Cultivation

SWRCB drafted the General Order to address water quality impacts from cannabis cultivation.⁹² The General Order includes measures for riparian and wetland protection and management; water diversion, storage, and use; irrigation runoff; land development and maintenance, erosion control, and drainage features; soil disposal; stream crossing installation

89. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 78.

90. *Id.*

91. *Id.*

92. CAL. STATE WATER RES. CONTROL BD., ORDER WQ 2017-0023-DWQ, GENERAL WASTE DISCHARGE REQUIREMENTS AND WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WASTE ASSOCIATED WITH CANNABIS CULTIVATION ACTIVITIES 1 (Oct. 17, 2017).

and maintenance; fertilizer and soil use and storage; pesticide and herbicide application and storage; petroleum products and other chemical use and storage; cultivation-related waste disposal; refuse and human waste disposal; and winterization.⁹³ Cannabis cultivation presents unique impacts to California's environment and watersheds which the Cultivation Policy sought to analyze and understand.

Given the location of many cannabis cultivation sites in wooded areas such as Mendocino and Humboldt county, many unregulated cannabis cultivators have engaged in illegal timber conversions, whereby they clear land for cannabis cultivation by felling trees without the necessary permit.⁹⁴ The Cultivation Policy requires that, prior to clearing any trees, a cultivator must obtain a permit from CAL FIRE and use a California Licensed Timber Operator if any commercial tree species are to be removed from a cannabis cultivation site.⁹⁵

Cannabis cultivation often uses various chemicals such as pesticides, herbicides, rodenticides, fertilizer, and others that can escape into the environment. An unfortunate example occurred in Trinity county, where an unregulated cannabis cultivator allegedly spilled what CDFW believes to be Carbofuran, a pesticide banned in California, into a tributary of the Trinity River.⁹⁶ The Cannabis Policy seeks to prevent similar problems by requiring proper storage of all chemicals and requiring chemical storage to be located outside of the riparian setbacks.⁹⁷

Construction of unauthorized roads on cultivation sites can cause sedimentation of waterways.⁹⁸ Many legacy cultivation sites are located in remote areas with roads that were built without permits.⁹⁹ When vehicles drive on unpaved roads, in dry and dusty climates, sediment can fall into the river, impacting fish habitat and water quality.¹⁰⁰ The Cultivation Policy seeks to address this by: (1) requiring that all access roads are constructed

93. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 17 (Oct. 17, 2017).

94. CANNABIS ENFORCEMENT UNIT, CAL. STATE WATER RES. CONTROL BD., ENVIRONMENTAL HARM FROM CANNABIS CULTIVATION (Dec. 20, 2018), <https://perma.cc/K35Q-CBPG>.

95. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 17.

96. *Banned Pesticides Found on Private Property Marijuana Grow in Burnt Ranch, Site Quarantined*, THE TRINITY JOURNAL (Oct. 3, 2018), <https://perma.cc/GA3K-GS95>; Sharon Bernstein, *Banned Pesticides From Illegal Pot Farm Seep Into California Water*, REUTERS (Sept. 3, 2017, 3:07 AM), <https://perma.cc/WCD7-NHZC>.

97. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 44.

98. CANNABIS ENFORCEMENT UNIT, *supra* note 94.

99. *Id.*

100. *Id.*

consistently with the requirements of the California Code of Regulations; (2) that cultivators obtain the requisite permits and approvals prior to construction of any access roads; (3) that all access roads are hydrologically disconnected to receiving waters; and (4) comply with grading and slope limitations in addition to other requirements regarding the design, surfacing and features of the road.¹⁰¹

Cannabis cultivators are required to ensure that refuse and domestic waste is properly disposed.¹⁰² Cultivators must ensure that human and animal waste is disposed of correctly and if used, toilets and holding tanks must be properly maintained, located outside of the riparian setbacks, and must be sufficient to handle the conditions of usage.¹⁰³

Cannabis cultivators are required to comply with minimum riparian setbacks for all “land disturbance, cannabis cultivation activities, and facilities.”¹⁰⁴ All areas of a licensed cannabis premises that will be used for cannabis cultivation must be a minimum distance away from a waterbody.¹⁰⁵ The setbacks are measured from the waterbody’s “bankfull stage (high flow water levels that occur every 1.5 to 2 years) or from the top edge of the waterbody bank in incised channels, whichever is more conservative.”¹⁰⁶ Riparian set backs are measured differently based on the type of waterbody. Springheads are measured “from the springhead in all directions (circular buffer).”¹⁰⁷ Wetlands are measured “from the edge of wetland as delineated by a qualified professional with experience implementing the Corps of Engineers Wetlands Delineation Manual.”¹⁰⁸ Riparian setbacks vary from zero to 150-feet depending on the watercourse class.¹⁰⁹

As an additional measure, cultivators are prohibited from application of restricted pesticides to cannabis crops; nor can these pesticides even be stored at the site.¹¹⁰ Furthermore, cultivators are required to implement

101. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 31.

102. *Id.* at 47.

103. *Id.*

104. *Id.* at 25.

105. *Id.*

106. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 24.

107. *Id.*

108. *Id.* at 25.

109. *Id.* at 24.

110. *Id.* at 46.

integrated pest management protocols wherever possible to avoid or reduce use of pesticides.¹¹¹

Implementation of Water Board Policy

As of February 18, 2019, CDFG has issued 9,445 temporary state cannabis cultivation licenses pursuant to the MAUCRSA.¹¹² On August 27, 2018, there were more than 4,300 total waste discharge permit enrollments on file with SWRCB, which includes enrollment in regional waste discharge programs, as well as the state-wide General Order.¹¹³ Despite the passage of the AUMA by voter initiative, the vast majority of municipalities throughout the state ban all commercial cannabis cultivation activity.¹¹⁴ Due in part to this patchwork of localities where cannabis cultivation can legally occur, a tremendous amount of unlicensed cultivation occurs across the state of California.¹¹⁵ Various SWRCB authorities handle enforcement of the Cultivation Policy requirements. The interagency Watershed Enforcement Team (“WET”) enforces policy, performs site visits, responds to complaints, and provides public outreach

111. CANNABIS POLICY: ATTACHMENT A, *supra* note 56, at 46.

112. *CalCannabis: 2018 by the Numbers*, CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (Dec. 31, 2018), <https://perma.cc/7398-XE22>.

113. Yvonne West, Director, Office of Enforcement Cal. State Water Res. Control Bd., Address at the Environmental Law Conference at Yosemite: Water Boards’ Statewide Cannabis Cultivation Policy, Implementation, and Enforcement (Oct. 19, 2018).

114. The following counties permit commercial cannabis cultivation within their borders in some form:

Counties: Del Norte, Humboldt, Trinity, Mendocino, Lake, Sonoma, San Francisco, Alameda, San Mateo, Santa Cruz, Yolo, Monterey, Nevada, El Dorado, San Luis Obispo, Stanislaus, Mono, Inyo, Santa Barbara, Imperial.

Cities: Los Angeles, San Diego, San Jose, San Francisco, Sacramento, Long Beach, Oakland, Santa Ana, Stockton, Chula Vista, San Bernardino, Modesto, Moreno Valley, Santa Rosa, Redding, Hayward, Salinas, Gonzales, Greenfield, King City, Berkeley, Vallejo, Richmond, Santa Barbara, Carson, Merced, Bellflower, Baldwin Park, Union City, Lynwood, South San Francisco, Santa Cruz, Montebello, Lake Elsinore, La Mesa, Huntington Park, Cathedral City, West Sacramento, Watsonville, Palm Desert, Palm Springs, Ceres, San Luis Obispo, Coachella, Desert Hot Springs, Adelanto, Lompoc, Hanford, Coalinga, Needles.

115. John Schroyer, *California Begins Enforcement Against Unlicensed Marijuana Businesses*, MARIJUANA BUSINESS DAILY (Aug. 27, 2018), <https://perma.cc/EE6F-BSQ6>.

and education.¹¹⁶ SWRCB engages in extensive coordination with other state and local agencies, including CDFW and CDFG.¹¹⁷

On November 6, 2018, CDFW served a search warrant on an unlicensed cultivator in Trinity County.¹¹⁸ The property had an unpermitted water diversion, which involved a hose funneling water to storage tanks, and resulted in water pollution violations.¹¹⁹ CDFW's Watershed Enforcement Team inspected the property and detained suspects.¹²⁰ CDFW documented Fish and Game Code violations, including a "substantial water diversion" from a tributary to the South Fork Trinity River, which "provides critical breeding and juvenile rearing habitats for steelhead trout, Chinook Salmon, and several species of aquatic amphibians, including the Foothill yellow-legged frog, a candidate for state threatened species status."¹²¹ David Bess, Deputy Director and Chief of the CDFW Law Enforcement Division stated that unregulated cultivation sites:

prevent legitimized cultivators from thriving, harm California's sensitive natural resources with diverted waterways and illegal pesticides ... we support the legal cannabis market where cultivators obtain permits, take action to prevent environmental impacts and comply with applicable state and local laws.¹²²

SWRCB has several enforcement tools at its disposal, ranging from informal actions, such as verbal and written communication or a Notice of Violation letter, to formal enforcement, including a Notice to Comply letter, a technical investigation, and Cleanup and Abatement Orders.¹²³ In serious situations, a cultivator is civilly liable to pay monetary penalties for any violations.¹²⁴ SWRCB may also issue Cease and Desist Letters and Time Schedule Orders, whereby the cultivator must submit time schedules

116. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 22 (Oct. 17, 2017).

117. *Id.*

118. Janice Mackey, *CDFW Shuts Down Black-Market Marijuana Grow in Trinity County*, CDFW NEWS (Nov. 16, 2018), <https://perma.cc/3PR9-9XPT>.

119. *Id.*

120. *Id.*

121. Mackey, *supra* note 118.

122. *Id.*

123. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 22 (Oct. 17, 2017).

124. *Id.*

with a plan to address any actual or threatened discharges of waste in violation of the requirements.¹²⁵ Additionally, SWRCB may revoke a water right permit, license or registration, and may modify or rescind waste discharge requirements. Depending on the circumstances, the Water Boards may refer violations to the State Attorney General, County District Attorney, City Attorney, U.S. Attorney, or United States Environmental Protection Agency.¹²⁶

Conclusion

The Cannabis Cultivation Policy is a novel method for regulating irrigation. Described on the Senate Floor as “one of the most sweeping public policy changes in our history, dating to the very origin of our state and private property rights,” the policy has the potential to fundamentally reshape the way Californians irrigate.¹²⁷ With the basic premise of divert when there is a surplus, the Cultivation Policy rethinks water rights and irrigation in a state where water rights for irrigation have made billionaires¹²⁸ and empowered California’s farmers to produce over \$50 billion in crops in 2017.¹²⁹ In addition to its disruptive potential, the policy presents challenges and costs for licensed growers who are calling for reforms. Like any new policy, it will continue to adapt.¹³⁰ It will be interpreted, challenged, adjudicated, reformed, and amended by regulators and the legislature. California cannabis water law remains unsettled. Whether it is working to defend these groundbreaking policies, making them work on the farm, or working to reform them, the intersection between water and cannabis cultivation is an important area of focus for those with an interest in law or public policy.

125. CAL. STATE WATER RES. CONTROL BD., CANNABIS CULTIVATION POLICY 22 (Oct. 17, 2017).

126. *Id.* at 23.

127. CALIFORNIA LEGISLATIVE INFORMATION, *State Government Committee on Budget and Fiscal review: Hearing on SB-837, before the California Senate Floor* (June 16, 2016), <https://perma.cc/S5ZV-55R5> (statement of Sen. Nielsen, Member Comm. On Budget & Fiscal Review at 2 hours 21 minutes 17 seconds).

128. Chloe Sorvino, *America’s Nuttiest Billionaire Couple: Amid Drought, Stewart and Lynda Resnick Are Richer Than Ever*, FORBES (Nov. 23, 105), <https://perma.cc/G2AA-85HL>.

129. *California Agricultural Production Statistics: 2017 Crop Year*, CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (AUG. 30, 2018), <https://perma.cc/MLM3-S4WX>.

130. *See, e.g.*, CAL. STATE WATER RES. CONTROL BD., PROPOSED UPDATES TO CANNABIS CULTIVATION POLICY (Feb. 5, 2019), <https://perma.cc/Y2E5-DS4F>.

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