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August 28, 2017

Attn: Jeanine Townsend
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA. 95814

Subject: Comment Letter - Cannabis Policy and Staff Report



Dear Ms. Townsend,

Manhard Consulting has reviewed the Draft Cannabis Cultivation Policy (Policy) and Staff Report written by the State Water Resources Control Board (SWRCB.) We would like to offer comments based on the experience of our biologists, engineers, and planners.

Manhard Consulting is a civil engineering, planning, and surveying firm that serves public and private clients across the nation. Our Eureka office has been providing the North Coast with services including: water storage design and permitting, environmental compliance assistance, property assessment, planning and zoning consultation, site grading and erosion control, structural engineering, and water rights assistance. Manhard Consulting has been providing services to cannabis cultivators with permitting assistance for numerous agencies including permits associated with the *SWRCB, California Department of Fish and Wildlife, CALFire, Humboldt County Planning and Building Department, and the North Coast Regional Water Quality Control Board.* The majority of our services have been for cannabis cultivators in the North Coast region. Manhard Consulting is committed to meeting the needs of our clients through innovative and sustainable solutions in accordance with all local, regional, and state laws. We are in full support of environmental protection, water conservation, and best management practices in regards to cannabis cultivation. We are sincerely invested in SWRCB's regulations and thank you for your time drafting the Policy and Staff Report.

Generally, we are concerned that while trying to create a state-wide strategy, the Policy does not address some of the regional specifics present in Humboldt and surrounding counties, including precipitation amounts, soil types, wildlife prevalence, and operational aspects unique to rural cultivators. We feel that if a cultivator has designed and invested in their projects based on extensive dialogue with the North Coast Regional Water Quality Control Board (NCRWQCB) and are compliant with all agency regulations, that they should not have to re-design their cultivation area based on the new SWRCB Policy (i.e., the NCRWQCB's Waste Discharge requirements should remain an option to cultivators in the North Coast Region.)

Manhard Consulting's specific comments and suggestions on the "DRAFT Cannabis

Cultivation Policy: Attachment A” are summarized by section below.

Definitions

#26 – Watercourse:

The determinations in the Policy between classes of watercourses, specifically regarding seeps and springs, deviate from current standards. According to an existing SWRCB policy: Class I watercourses are perennial streams which support fish, Class II watercourses are typically perennial and support non-fish aquatic life, and Class III watercourses are ephemeral and do not support aquatic life.¹ These stream classifications are widely used by a variety of agencies to determine reasonable setbacks in the interests of wildlife and watershed health.

Currently, many springs and seeps generally fall into the Class II category or Class III category, but the Policy expressly defines springs and seeps as Class I, even though many springs and especially seeps do not support fish species or flow year-round. To re-classify both springs and seeps as Class I streams regardless of flow or fish is a deviation from current policies and would have a major economic impact on hundreds of cultivators already in compliance. **Manhard Consulting suggests utilization of the current stream classification system based on presence of aquatic life and stream flow rather than reclassifying springs and seeps as a Class I watercourse.**

Moreover, the Staff Report defines “Spring or Seep” by a single definition: “a place where water flows out of the ground;” however, springs and seeps are distinctively different (springs usually have much higher flow rates and a defined drainage area, whereas seeps percolate slowly from the ground and often have an undefined drainage area.²) **Manhard Consulting suggests that springs be defined separately in accordance with existing watercourse definitions.**

In regards to seeps specifically, it is unreasonable to classify all seeps as Class I Watercourses. A seep is defined as an area where water percolates slowly to the land surface (see footnote 2). Humboldt County and much of the North Coast Region has particularly wet soils which could be classified as seeps under the Policy.³ This change in classification would put undue burden on cultivators to modify their projects to meet the 150-200 ft. setbacks from seeps. **Manhard Consulting suggests that seeps be removed from “Watercourse Class I” definition and instead categorized from biological and botanical assessments on a case by case basis.**

General Requirements and Prohibitions

#36 – Riparian Setbacks:

¹ *Policy for Maintaining Instream Flows in Northern California Coastal Streams*. State Water Resources Control Board and California Environmental Protection Agency. September 28, 2010.

² *Glossary of Hydrologic Terms*. Department of Interior, U.S. Geological Survey, Office of Water Data Coordination. August, 1989.

³ Evenson, R.E. *Geology and Ground-Water Features of the Eureka Area – Humboldt County, California*. Prepared in cooperation with the California Dept. of Water Resources. Washington, U.S. gov. Print Off., 1959.

Manhard Consulting supports buffers between cannabis cultivation and sensitive riparian areas; however, the proposed setback changes are unreasonable. As mentioned above, seeps and wet soils are prevalent in Northern California soils and maintaining a 150-200 ft. (depending on risk pool) setback from any seep or wetland is nearly impossible. Manhard Consulting has designed and engineered cultivation sites to appropriately address runoff and erosion concerns within the current setback requirements. If these new setbacks were imposed, common watercourses like seeps and wetlands would put hundreds of currently compliant cultivators out of compliance. In many instances, cultivators would need to re-design their entire operation, causing economic hardship and potentially more land disturbance. **Manhard Consulting recommends that seeps be removed from the Class I category and be assessed on a case by case basis. We recommend 100 ft. setbacks from wetlands to be consistent with other local policies.**

Water Storage and Use:

#75 – Fuel Powered Diversion Pumps:

This section states that, “Cannabis cultivators shall *only* use fuel powered diversion pumps...” This language implies that the use of alternative power diversion pumps, such as solar or hydro, are prohibited. **Manhard Consulting recommends that the wording in this section be altered to encourage – not discourage – renewable energy-powered pumps.**

#82 – Onstream Storage:

The wording of this section is ambiguous. It states, “onstream storage reservoirs are prohibited unless the cannabis cultivator has an existing water right issued prior to January 1, 2017, that authorizes the onstream storage reservoir,” and continues on to state that “cultivators who do not have an existing water right as of January 1, 2017... are required to obtain an appropriative water right permit prior to diverting water from an onstream storage reservoir for cannabis cultivation.” This should be clarified, since the first sentence expressly forbids the second sentence. **Manhard Consulting suggests clarification of the language of this section and transparency regarding the difficulty of obtaining an appropriative water right.**

#84 – Measuring Devices:

Manhard Consulting supports documenting water use for cannabis cultivation; however, the Policy should keep in mind that due to isolated locations and adverse winter driving conditions, access to some cultivation sites is often not feasible for daily recording of diversion rates. Furthermore, many water diversion points are located in isolated locations on the property that take considerable effort to reach. **Until such time that cost efficient, automated diversion recording devices become readily available Manhard Consulting suggests that only weekly records of diversion rates be required.**

#85 – Electronic Reporting:

Manhard Consulting supports a basin-wide program for monitoring and reporting of water use for cannabis cultivation; however, the Policy should keep in mind that not every cannabis cultivator has consistent access to internet for reporting. **Manhard Consulting suggests that the off-the-grid cultivators are considered in the Policy and language**

is included to accommodate monitoring and reporting for those without internet access.

#86 – Off-stream Storage Reservoirs:

Manhard Consulting feels it is crucial to mandate some protections against wildlife entrapment in off-stream storage reservoirs and ponds.

Potential solutions to wildlife entrapment include: (1) engineering slopes at 30% or less to allow larger animals to climb out; (2) fencing off reservoir using chicken wire fencing or similarly small-holed fencing material; (3) installing floating or secured water exit devices,^{4,5} (4) lining the reservoir perimeter with jute mesh to help animals climb out; and (5) frequently assessing the reservoir and checking for wildlife. Suggested Policy language could read: *“Cannabis cultivators shall implement mechanisms to reduce wildlife entrapment in off-stream storage reservoirs. Storage reservoirs shall be fenced off using suitably small fencing to prohibit wildlife entry. Cannabis cultivators shall also implement wildlife escape mechanisms to ensure protection of endangered and threatened species, and, if possible, engineer off-stream storage reservoirs with maximum 30% slopes.”*

Additionally, Section #86 currently states, “... cultivators shall plant native vegetation along the perimeter of the off-stream storage reservoir. Manhard Consulting is concerned that cultivators could compromise the integrity of the engineered reservoir structure if native vegetation is planted randomly along the perimeter. **If the goal of this section is to promote native vegetation, then specifics of native vegetation planting techniques should be clearly defined. If the goal of this section is to discourage planting invasive species, then the Policy should state so unequivocally.**

#87 – Sufficient Freeboard for Off-stream Storage Reservoirs:

This section states that, “Cannabis cultivators shall... maintain sufficient freeboard to capture storm water runoff of a representative 25-year, 24-hour storm event.” Manhard Consulting questions the practicability of this requirement if, for instance, the off-stream storage facility is already at capacity. The new, longer forbearance period proposed will require more water storage, and this section might incentivize clients to expand their storage even larger than currently to maintain specific water levels. If cultivators must plan for “sufficient freeboard” for 25-year storm events, then their ponds could theoretically never be full. It seems that properly engineered spillways or overflow structures referenced in Section #88 would be sufficient in preparing for a 25-year flood event without having to maintain specific water levels or widen the size of their storage. **Manhard Consulting recommends removing this clause, as it discourages maximum water storage during the forbearance period and incentivizes more land clearing for even bigger storage facilities.**

#95– Water Storage Bladders:

⁴ Taylor, D., & Tuttle, M. *Water for Wildlife: A Handbook for Ranchers and Range Managers*. Bat Conservation International. 2007. <https://www.fs.fed.us/pnw/lwm/aem/docs/olson/bciwaterforwildlife.pdf>.
⁵ Wilson, Lanny O. *Guidelines and Recommendations for Design and Modification of Livestock Watering Developments to Facilitate Safe Use By Wildlife*. U.S. Department of the Interior – Bureau of Land Management. September, 1977. http://www.fwspubs.org/doi/suppl/10.3996/012016-JFWM-005/suppl_file/fwma-08-01-05_reference+s8.pdf?code=ufws-site

Section #95 states, “Water storage bladders are not encouraged for long-term use.” Manhard Consulting questions this rationale due to multiple positive benefits of water bladders, particularly on the North Coast. Clearly, cannabis cultivators will need to increase their water storage capacity to meet the new forbearance period requirements under the Policy, and in comparison with other storage devices such as ponds, properly engineered water bladders have many benefits: (1) they don’t propagate invasive species; (2) they don’t trap and kill wildlife; and (3) they often require less land disturbance to install. Additionally, many water bladders are recyclable once their life use has expired. **Rather than discouraging water bladders all together, Manhard Consulting suggests encouraging structurally sound, properly contained water storage bladders due to their ecological benefits in comparison with other storage facilities.**

#96 – Water Storage Bladder Secondary Containment:

Section #96 requires that a secondary containment system must have sufficient capacity to capture *150 percent* of storage bladder content in the event of failure. Manhard Consulting questions the logic behind requiring greater than 100% containment of the water bladder’s capacity, and is concerned this requirement will lead to more ground disturbance and excessively large excavation areas. **Manhard Consulting suggests that a properly engineered secondary containment system with the ability to capture 100% - 120% of the maximum bladder storage capacity is sufficient.**

#97 – Hauled Water:

Bulk water trucking has already been outlawed in multiple counties. Hauled water as the primary source of cultivation irrigation presents multiple issues, including: increased greenhouse gas emissions, increased pressure on infrastructure, and increased traffic in rural areas, and lack of water source accountability. Cultivating cannabis often requires hundreds of thousands of gallons of water (or more) each year, and allowing hauled water to be the primary water source for large cultivations, even with proper documentation, is inefficient and not in the best interests of state water conservation. **Manhard Consulting recommends that hauled water is allowed for emergency use only OR that hauled water is only allowed to be the primary irrigation source for small cultivation areas (<5,000 sf) to minimize the amount of trucked water and its impacts.**

Section 3 – Numeric and Narrative Instream Flow Requirements (Including Gaging):

Our suggestions regarding springs, seeps, hauled water, setbacks stated above also apply to this section. In addition, Subsection 4 states that cannabis cultivators must check a website to ensure that the real-time daily average water flow exceeds the minimum monthly instream flow requirements for their assigned gage. Unfortunately, this could be in contradiction with the lives that many compliant, off-grid cultivators in our region live. The SWRCB should consider that not every cultivator has daily, reliable internet access and it is unrealistic to expect cultivators to check a website daily. Weekly or monthly instream flow forecasts based on predicted precipitation levels would be practical and more accessible to cultivators living off-the-grid. **Manhard Consulting suggests that cultivators should be required to check weekly or monthly predicted flow levels before diverting to accommodate off-grid cultivators without daily internet access.**

Manhard Consulting appreciates the opportunity to submit comments on the Policy and Staff Report. We look forward to seeing the final Policy and working with the SWRCB in the

future. If you have any questions about suggestions made in this letter, please contact Robert Jensen, Project Manager, at rjensen@manhard.com or Natalia Nelson, Environmental Planner, at nnelson@manhard.com. Our Eureka office can be reached at (707) 444-3800.

Thank you for considering our recommendations.

Sincerely,

Praj White

Regional Manager, Manhard Consulting