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January 27, 2022

Via Electronic Mail Only

Lauren Scott Associate Planner MIG 100 Adobe Canyon Road Kenwood, CA 95452 E-Mail: lscott@migcom.com

Re: Proposed Cannabis Permit, UPC18-046, 6699 Palmer Creek Road, Healdsburg

Dear Ms. Scott:

On behalf of the Palmer Creek Association, I am submitting the enclosed analysis by Greg Kamman, Senior Ecohydrologist, into the administrative record for the pending Evergreen Acres, LLC permit application for a cannabis operation at 6699 Palmer Creek Road, Healdsburg (UPC18-046). As the analysis explains, the Project as proposed is infeasible based on mandatory setbacks due to existing waterways on the Property. The Mitigated Negative Declaration adopted by the Board of Zoning Adjustments (currently under appeal, along with the proposed use permit) is likewise deficient under the California Environmental Quality Act ("CEQA") for numerous reasons, including failure to adequately describe mitigation for water quality and biological resource impacts and to ensure such mitigation will reduce the Project's impacts to less than significant.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Joseph "Seph" Petta

Attachment

cc: Scott Orr, scott.orr@sonoma-county.org Linda Schiltgen, linda.schiltgen@sonoma-county.org

1463217.2



Hydrology | Hydraulics | Geomorphology | Design | Field Services

January 4, 2022

Mr. Joseph D. Petta, Shute, Mihaly & Weinberger LLP 396 Hayes Street San Francisco, CA 94102-4421

Subject: Review of Initial Study/Mitigated Negative Declaration SCH No. 2021040407 Evergreen Acres, LLC (UPC18-00046)

Dear Mr. Petta:

I am a hydrologist with over thirty years of technical and consulting experience in the fields of geology, hydrology, and hydrogeology. I have been providing professional hydrology and geomorphology services in California since 1989 and routinely manage projects in the areas of surface- and groundwater hydrology, water supply, water quality assessments, water resources management, and geomorphology. Most of my work has been in the Coast Range watersheds of California, including Sonoma County. My areas of expertise include: characterizing and modeling watershed-scale hydrologic and geomorphic processes; evaluating surface- and ground-water resources/quality and their interaction; assessing hydrologic, geomorphic, and water quality responses to land-use changes in watersheds and causes of stream channel instability; assisting and leading in the development of CEQA environmental compliance documents and project environmental permits; and designing and implementing field investigations characterizing surface and subsurface hydrologic and water quality conditions. I earned a Master of Science degree in Geology, specializing in sedimentology and hydrogeology as well as an A.B. in Geology from Miami University, Oxford, Ohio. I am a Certified Hydrogeologist (CHg) and a registered Professional Geologist (PG) in the state of California.

I have been retained by Shute, Mihaly & Weinberger LLP (SMW) to review the Initial Study/Mitigated Negative Declaration (IS/MND) for the Evergreen Acres, LLC cannabis cultivation project located at 6699 Palmer Creek Road, Healdsburg, California, and evaluate if the project may impact surrounding properties and the environment. As part of this work, I have reviewed the IS/MND and technical appendices. Based on my review of these materials, it is my professional opinion that the IS/MND is

539 Bret Harte Road, San Rafael, CA 94901 USA T 916.668.5244 F 916.669.8886 g.kamman@cbecoeng.com www.cbecoeng.com inadequate in evaluating the potential significant impacts of project actions on hydrology, water quality and biological resources. The rationale for this opinion is based on multiple findings presented below.

1. Inaccurate Watercourse Designations and Inadequate Minimum Riparian Setbacks

The IS/MND has designated a pair of watercourses as Class III when they should be designated Class II. In addition, all areas falling within the riparian setback zone as indicated in the IS/MND, are too narrow. The rationale for these conclusions is as follows.

The IS/MND designates the Eastern and Northeastern watercourses within the project parcel as Class III watercourses. Page 17 of Attachment A to the State Water Resources Control Board (SWRCB) Cannabis Cultivation Policy¹ provides the following definitions for watercourses.

- Intermittent watercourse (Class II):
 - 1. In the absence of diversions, water is flowing for three to nine months during a typical year,
 - 2. Provides aquatic habitat for non-fish aquatic species,
 - 3. Fish always or seasonally present within 1,000 feet downstream, and/or
 - 4. Water is flowing less than three months during a typical year and the stream supports riparian vegetation.
- Ephemeral watercourse (Class III): In the absence of diversion, water is flowing less than three months during a typical year and the stream does not support riparian vegetation or aquatic life. Ephemeral watercourses typically have water flowing for a short duration after precipitation events or snowmelt and show evidence of being capable of sediment transport.

All watercourses within the project area flow to Palmer Creek, a tributary to Mill Creek, where threatened steelhead (*Oncorhynchus mykiss*) and endangered coho salmon (*O. kisutch*) are found seasonally, if not year-round. The Mill Creek watershed is defined as a "Core" recovery area in the 2012 Coho Recovery Plan prepared by the National Marine Fisheries Service. The flow paths of the Eastern and Northeastern watercourses, occur within 1,000 feet upstream of Palmer Creek. Thus, pursuant to SWRCB Cannabis Cultivation Policy definitions, they should be designated as Class II watercourses, not the Class III designations indicated in the IS/MND and Project Site Plans.

1.1 Incorrect watercourse designation of Northeastern watercourse

Designation of the Northeastern watercourse as Class II is further substantiated by field observations and determination by California Regional Water Quality Control Board (RWQCB) staff. Per his April 18, 2019, Inspection Report, RWQCB Environmental Scientist Connor McIntee classifies

¹ State Water Resources Control Board (SWRCB), 2019, Cannabis Cultivation Policy, Principals and Guidelines for Cannabis Cultivation. As adopted by the State Water Board on February 5, 2019 and the Office of Administrative Law on April 16, 2019, 117p.

the Northeastern watercourse draining to culvert C3² as a Class II watercourse. The locations of culvert C3 and the Northeastern watercourse are indicated on Figure 1. Correcting the Northeastern watercourse designation to a Class II watercourse requires that the riparian setback be increased from 50- to 100-feet, as discussed below in Section 1.3. This change will also necessitate reevaluating impacts and design of the mixed light cultivation area and other infrastructure, which fall within a 100-foot Northeastern watercourse riparian setback.



FIGURE 1: Project Site Plan (modified from Figure 3 of IS/MND).

1.2 Incorrect watercourse designation of Eastern watercourse

As noted above, the Eastern watercourse should also be designated Class II pursuant to the SWRCB Cannabis Cultivation Policy definitions. This designation is further supported by my review of project documents that indicate the Eastern watercourse is a Class II watercourse. The IS/MND does not provide justification for designating the Eastern drainage as a Class III watercourse – it simply

² Culvert C3, a 24" diameter corrugated metal pipe, is located near the eastern property boundary where flow from the Northeastern watercourse flows off-site.

appears as such on Project Plans and IS/NMND figures with no explanation on how the designation was derived. In his initial Project referral response letter (January 24, 2019), Sonoma County Natural Resources Geologist Robert Pennington provided the following statement.

"Based on information provided in the Biotic Assessment and LiDAR derived topography of the site, the watercourses east and west of the outdoor cultivation area (which flow north into Palmer Creek) are expected to be Class I or II watercourses.

Riparian setbacks associated with these drainages are expected to limit the footprint of the proposed outdoor cultivation area. In order to define the watercourses, it is requested that a Professional Forester, Professional Geologist or qualified biologist, with experience in watercourse classification, classify all drainage features within 200 feet of the proposed cultivation areas³. In addition, a letter of concurrence from the Waterboard is requested that a accepts the proposed channel classification. In lieu of hiring a qualified professional to complete the channel classification, a site visit with a Permit Sonoma staff geologist or biologist, and Waterboard staff may serve as the basis of channel classification."

As follow up to Mr. Pennington's recommendation for a site visit to designate channel classifications, he and RWQCB Environmental Scientist Connor McIntee conducted a Project site inspection including the watercourse east of the outdoor cultivation area on March 15, 2019. In his Natural Resources Geologist Response – Use Permit letter (also dated January 24, 2019)), Mr. Pennington stated that the stream channels east and west of the proposed outdoor cultivation area have significant surface flow, bed and banks, and morphology consistent with Class II channels and recommended that these watercourses should be classified as Class II with 100-foot riparian setbacks under the SWRCB Cannabis Cultivation Policy. This recommendation and determination were included in Contract Planner Lauren Scott's Permit Sonoma Project Memo (dated May 29, 2019), which includes the following statement and directive under Section 2 (Watercourse Classification), *"The Natural Resource's Geologist concluded that the evidence indicates that the channels east and west of the proposed outdoor cultivation site should be classified as Class II watercourses, which require 100-foot riparian setbacks.*

Currently, the outdoor cultivation area is within the riparian setback for the Class II watercourse to the east. The irrigation pond is proposed within the setback for the Class II Watercourse to the west. To comply with the watercourse setbacks the project must, at a minimum, move or reduce the cultivation areas and pond to outside the riparian setbacks for the Class II watercourses."

As seen in the LIDAR imagery as provided through the Permit Sonoma ActiveMap GIS website (Figure 2), and as used by Robert Pennington for his initial watercourse classifications, the Eastern watercourse channel clearly exhibits the *"significant surface flow, bed and banks, and morphology*"

³ Mr. Pennington's request for classification of drainages within 200-feet of the outdoor cultivation area eliminates any confusion between the subject watercourse and the watercourse located further east closer to the eastern property boundary, the latter of which is located over 425-feet from the outdoor cultivation area.

consistent with Class II channels" that was confirmed in Mr. Pennington's March 15, 2019, site inspection and as stated in his subsequent findings.



FIGURE 2: Permit Sonoma LiDAR imagery of Project site.

1.3 Riparian setback widths mapped incorrectly

Page 31 of Attachment A to the State Water Board (SWRCB) Cannabis Cultivation Policy provides minimum riparian setback distances for watercourse classes per Table 1 and states that cannabis cultivators are required to comply with the minimum riparian setbacks for all land disturbance, cannabis cultivation activities, and facilities. This section of the Policy states that riparian setbacks

shall be measured from the waterbody's bankfull stage (i.e., high flow water levels that occur every 1.5 to 2.0 years) or from the top edge of the waterbody bank (i.e., top of bank) in incised channels, whichever is more conservative.

Common Name	Watercourse Class	Setback Distance*
	61055	
Perennial watercourses, waterbodies (e.g., lakes, ponds), or springs	-	150 ft.
Intermittent watercourses or wetlands	=	100 ft.
Ephemeral watercourses	====	50 ft.
Man-made irrigation canals, water supply reservoirs, or hydroelectric	IV	Established riparian
canals that support native aquatic species		vegetation zone
All other man-made irrigation canals, water supply reservoirs, or	V	N/A
hydroelectric canals		

TABLE 1: Minimum Riparian Setbacks along designated watercourses.

* - Per SWRCB Cannabis Cultivation Policy (pg. 31 of Attachment A), the riparian setbacks shall be measured from the waterbody's bankfull stage (high 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.

Based on my review, it appears that the riparian setback zones mapped on Project plans and IS/MND figures are measured from the centerline of creek alignments, not from the bankfull stage line or top of bank alignment. Thus, the riparian setback zones are narrower than if delineated using the bankfull stage line or top of bank. An example of the difference between the relative position of the creek centerline versus top of bank alignment is provided in the December 18, 2020, survey of the Western watercourse by Curtis Engineering (Figure 3). This survey maps the creek flow/center line and top of bank alignments along the Western watercourse immediately west of the proposed reservoir and outside of the Project area. It provides an example of the topographic information (i.e., delineation of top of bank) necessary to establish proper riparian setbacks. It also demonstrates that riparian setbacks would extend further from the creek centerline if the top of bank alignment is used as the setback reference point. Whether determined by ground survey or LiDAR maps, an accurate delineation of creek channel top of bank was not presented in the IS/MND for watercourses within the Project area as required to delineate riparian setbacks. If mapped correctly within the Project area, the riparian setbacks would extend further from the creek centerline and impinge on the proposed cultivation areas and possibly other proposed infrastructure, requiring these project elements be reduced in size or relocated. Therefore, the IS/MND does not accurately map riparian setbacks, which is necessary to fully identify potential project impacts within the riparian setbacks.



FIGURE 3: Survey of creek details on Western watercourse (Curtis & Associates, 2020)

2. Inadequate Analysis of Impacts on Groundwater Recharge

Based on review of on-site water well data provided in Hurvitz Environmental's (Hurvitz) Hydrogeologic Assessment Report (Mach 8, 2019), the static water level in the domestic well installed in July 2018 is at a level very close to the elevation of the nearby Palmer Creek channel. Based on my experience and expertise in hydrogeology, this suggests that groundwater beneath the project property has the potential to discharge directly into the creek and augment stream flow. This process is what maintains perennial flow in Palmer Creek. In fact, Hurvitz, acknowledging the potential for a direct hydraulic connection between well and creek, completed an analysis to evaluate how domestic well pumping would impact groundwater discharge to the creek.

However, the IS/MND does not evaluate how project-induced changes in land cover and drainage will impact recharge at the site. Under existing conditions, a portion of rainfall that falls on the site and does not run off infiltrates site soil, with a portion going to groundwater recharge. Increases in impervious surface area, accelerating runoff via drainage improvements, lining of ponds, and reduction in vegetation density are all characteristics that reduce the potential for groundwater recharge. The IS/MND does not provide any analysis on how modifying the land cover (e.g., conversion from vegetated slope to terraced cultivation areas, creation of impervious surface area, etc.) or changing the rate and volume of runoff will affect the amount of groundwater recharge. Reducing the amount of groundwater recharge at the site reduces the amount of groundwater available to augment Palmer Creek flow – a potential significant impact to the aquatic habitat beneficial use of the Creek. Thus, it is my opinion that the IS/MND should be considered incomplete as it does not address this potential impact on Palmer Creek.

3. Inadequate Analysis of Impacts on Flow and Aquatic Habitat in Palmer Creek

Like the impact of reduced groundwater recharge, the capture and consumptive use of surface water runoff by the storage pond will reduce water that otherwise would have flowed to Palmer Creek. Reduced runoff to Palmer Creek may reduce creek flow rates and have an adverse impact on aquatic habitat in the Creek, especially during summer and dry years when flows are limited in the Creek and its tributaries. The California Department of Fish and Wildlife (2004⁴) and National Marine Fisheries Service (2012⁵) have identified several factors that limit coho survival in the watershed including insufficient spring and summer baseflows. Understanding how the project may change the volume and duration of flow within Palmer Creek is important given the presence of threatened and endangered salmonids and their reliance on creek flow. However, the IS/MND does not provide any evaluation on how project-induced reductions in runoff will impact flow in Palmer Creek; HYD-1 only addresses

⁴ California Department of Fish and Game, 2004, Recovery strategy for California Coho Salmon. Report to the California Fish and Game Commission, Species Recovery Strategy 2004-1.

https://www.waterboards.ca.gov/water_issues/programs/tmdl/records/region_1/2010/ref3678.pdf ⁵ National Marine Fisheries Service, 2012, Final Recovery Plan for Central California Coast Coho Salmon Evolutionary Significant Unit, Southwest Region, Santa Rosa, California.

https://www.fisheries.noaa.gov/resource/document/recovery-plan-evolutionarily-significant-unit-centralcalifornia-coast-coho

sediment control, not impacts to water supply (see IS/MND, p. 30). Therefore, the IS/MND should be considered incomplete for not evaluating the potential significant impact of reduced creek flow on the aquatic habitat in Palmer Creek.

4. Inadequate Analysis of Drought Effects on Water Supply and Project Feasibility

The IS/MND has submitted a series of irrigation water supply assessment reports to evaluate how the off-stream storage reservoir would perform under normal and dry water year types. The first assessment report was completed by Atterbury & Associates, Inc. (Atterbury) and is dated October 9, 2018. This assessment was revised and resubmitted by Atterbury on March 6, 2019, in response to comments from NOAA, who noted that the runoff coefficient used in the original assessment (0.45) exceeded the range of 0.05-0.25 for "woodland agricultural land" as suggested by the State Water Resources Control Board in their 2011 runoff coefficient guidance document⁶. The revised March 6, 2019, analysis acknowledged this correction and applied a watershed runoff coefficient of 0.25 to the revised analysis. Neither of these studies evaluated a multi-year drought period - they only provided results for a single normal and dry year type.

On September 21, 2021, EBA Engineering (EBA) submitted a third water supply assessment report, which is intended as an addendum to Atterbury's first (October 9, 2018) irrigation water supply assessment. The EBA assessment is intended to evaluate reservoir performance through the first two years "*when the reservoir has stabilized*". The EBA assessment assumes the first two years of reservoir use occur during dry year types. However, the EBA report assumes a runoff coefficient of 0.45, which overestimates runoff supply to the reservoir and does not acknowledge the correction that prompted the 2019 Atterbury revision. Thus, the EBA water supply assessment is incorrect and does not support any associated conclusions in the IS/MND and both the EBA report and IS/MND should be rendered incomplete.

California is currently experiencing a long-term drought. In seven of the last ten years, Santa Rosa has experienced below average rainfall, with 2011 and 2021 being extremely dry. The IS/MND does not provide a valid analysis of project viability during a multi-year drought period. Atterbury's 2019 reservoir water supply assessment (which uses the correct runoff coefficient) indicates a 2.2-foot drop in pond level over a representative dry year period (January through December). This indicates that more water storage is consumed for irrigation than is replenished over a dry year. As a result, it is likely that the project will not have sufficient carry-over reservoir storage to meet the full project irrigation demands during successive dry years. This also suggests there will be no excess runoff from the reservoir drainage area available to Palmer Creek, which relates to the flow and aquatic impacts discussed in item 3 above.

⁶ State Water Resources Control Board, 2011, Runoff Coefficient (C) Fact Sheet, The Clean Water Team Guidance Compendium for Watershed Monitoring and Assessment. 5.1.3 FS-(RC), 2p. Available at: https://www.waterboards.ca.gov/water issues/programs/swamp/docs/cwt/guidance/513.pdf

5. Incomplete Analysis of Stormwater Impacts on Dam Stability and Water Quality

The IS/MND and supporting Water Supply & Wastewater Management Plan appendix prepared by Pinecrest Environmental Consulting, Inc. does not address the planning and design of a reservoir spillway or potential impacts to receiving watercourses. The IS/MND states that the project reservoir will be constructed with a piped outlet to an energy dissipator. However, small reservoir dams typically require an emergency spillway outlet to accommodate overflow when the reservoir fills and overtops during extreme rainfall events. Dam overtopping events can lead to dam erosion or failure that contribute sediment to downstream receiving waters. The storage reservoir spillway and associated potential impacts on the environment are not addressed in the IS/MND, even after the following comments to the IS/MND were raised by resource and regulatory agencies.

In his July 29, 2020 email response to the Project Wetland Delineation, the RWQCB engineer Maurice T. Washington, Ph.D. stated, "Reservoirs shall be designed with an adequate overflow outlet that is protected and promotes the dispersal and infiltration of flow and prevents channelization. All off-stream storage reservoirs and ponds shall be designed, managed, and maintained to accommodate average annual winter period precipitation and storm water inputs to reduce the potential for overflow." A comment and recommendation from CDFW personnel on the IS/MND in their May 13, 2001, letter included, "The reservoir, dam, plumbing and spillway shall be designed by a qualified professional. The design should account for 1) hydrological stability, 2) erosion prevention, and 3) any necessary infrastructure such as spillway design to account for overflow. Reservoir plans including water supply and spillway details shall be included in the ISMND."

Regardless of whether the storage reservoir is constructed to contain precipitation and runoff from an average annual winter period, there will inevitably be a large magnitude storm event that will fill and overtop the reservoir dam. The reservoir structure and dam as depicted on Project plans and IS/MND figures will be subjected to large amounts of overflow that cannot be absorbed by infiltration, resulting in discharge into site watercourses. Such large amounts of overflow will increase the likelihood of dam erosion and failure during storm events. In order to reduce dam erosion and accommodate overflow, spillway construction typically requires creation of a rock or earthen channel that contains and directs overflow into an adjacent watercourse. Outflow from the proposed project reservoir would likely be directed to the Eastern and/or Northeastern drainage, which would necessitate creation of a drainage feature through their riparian setback areas.

The IS/MND does not acknowledge such a spillway drainage feature or provide analysis or mitigation for associated impacts to riparian setback areas. Instead, the IS/MND (pg. 64, c. ii.) states, "*The water storage reservoir would be required to obtain the necessary permits from the California Division of Safety of Dams, which oversees the design, construction, and maintenance of dams.*" In the Responses to Comment C-4 ("UPC18-0046 Response to Comments", page 25), the County provides the following statement pertaining to reservoir storage design: "*The proposed 2.4-acre feet capacity reservoir is expected to have a height under 25 feet, below the threshold height regulated by the State (Water Code 6002) and will therefore be subject to County review. A grading plan, subject to review and approval by the Grading & Storm Water Section of the Permit Sonoma, will be required for the reservoir (Sec 11.14.030). The grading plan shall be designed by a civil engineer, currently registered in the State of*

California, and designed in accordance with the Sonoma County Water Agency Flood Control Design Criteria, with a spillway design flood for the 100-year design discharge, with a minimum freeboard of 2 feet." The approaches presented in these statements defer impact analysis of spillway construction, which should be addressed in the IS/MND.

6. Incomplete Analysis of Storage Reservoir Releases on Water Quality

As designed, the main source of water to the storage reservoir will be stormwater runoff from the outdoor cultivation area, as well as the residence driveway and parking area directly above the pond. Runoff from these areas will carry sediments, pesticides, fertilizer, herbicides, and vehicle oil/fluid residues into the pond. Per water operations, these constituents will be recycled through irrigation of cultivation areas, and likely carried by storm runoff back into the pond. The use of a pond liner as designed will prohibit any soil filtration and lead to concentration of undesirable water quality constituents. This will result in degraded water being discharged into the site watercourses and Palmer Creek during wet periods when water drains out of the storage reservoir. This could lead to degraded water supplies.

In the RWQCB initial *CEQA Project Review and Comment* for the Project, dated January 14, 2019, the State's antidegradation policy is presented, and states, *"The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Therefore, projects are not authorized to discharge increased concentrations of pollutants, increased volumes of treated wastewater, or adversely modify an ecosystem that may result in degradation of high-quality waters."*

Sonoma County also addresses the discharge of degraded water from cannabis activities for the Project in the January 15, 2019 *Permit Resource Management Department, Grading & Storm Water Section, Memorandum* (i.e., Condition #6). It states, *"Residue or polluted runoff from the cannabis production/processing areas/activities shall not be allowed to drain directly to the storm drain system, waterway(s) or adjacent lands. Production areas shall be covered or drain directly to a proper waste disposal system. No diversion valves shall be allowed."* A further restriction on the Project pond discharge is stated in CDFW's comment on the IS/MND, which states (page 10), *"In addition, the reservoir shall be designed to be capable of being drained completely without discharging water to any river, lake, or stream."*

The outfall for the proposed pond spillway is currently above and inside the 100-foot setbacks for the Eastern and Northeastern Class II streams. No analysis is provided in the IS/MND to show that the designated discharge area can support and absorb such frequent and large amounts of degraded

overflow, including complete draining of the pond, without discharging directly into the site watercourses and into Palmer Creek. No IS/MND discussion or review is provided of the continuous impacts of large quantities of degraded water on the high-quality waters of Palmer Creek.

7. No Analysis of Runoff Impacts to Adjacent Properties

All Project watercourses ultimately drain onto and through adjacent properties before discharging to Palmer Creek. The January 15, 2019, *Permit Resource Management Department, Grading & Storm Water Section, Memorandum* for this application includes the following conditions:

- <u>Condition #3</u> "Existing drainage patterns shall be maintained, to the maximum extent practicable, to not adversely impact adjacent properties or drainage systems. Proposed drainage improvements shall not adversely impact adjacent properties or drainage systems."
- <u>Condition #9</u> "Drainage easements are required to convey storm water runoff through any neighboring properties. Drainage easements shall be clearly shown and noted on the grading/site plans. The applicant shall be responsible for obtaining or creating drainage easements necessary for the proposed project prior to grading or building permit issuance. Any proposed drainage easements shall be private easements unless otherwise approved by the Department of Transportation and Public Works."

Based on Project plans and figures contained in the IS/MND, there are considerable proposed changes to land use, storage, and drainage patterns that will affect the magnitude and timing of runoff moving through the Project site. However, the IS/MND does not provide any hydrologic or hydraulic analyses that quantifies how these changes will impact runoff onto adjacent properties. The IS/MND also limits erosion control measures to on-site drainages and does not address how changes in runoff may impact receiving channel stability or water conveyance structures (e.g., culverts, bridges, etc.) on adjacent properties. Therefore, the IS/MND should be considered incomplete until the potential impacts of Project actions on adjacent properties are evaluated and mitigated, if necessary.

Please feel free to contact me with any questions regarding the material and conclusions contained in this letter.

Sincerely,

Dungy R. Kamm

Greg Kamman, PG, CHG Senior Ecohydrologist







North Coast Regional Water Quality Control Board

- TO: Thomas Planson, Owner/Operator Evergreen Acres, LLC thomas@evergreenacreshealdsburg.com
- FROM: Brian Fuller, P.G. 9901 Engineering Geologist <u>brian.fuller@waterboards.ca.gov</u>
- DATE: April 8, 2022

Inspection Report for March 11, 2022 Consent Inspection, Sonoma County Assessor's Parcel Number (APN) 069-040-026-000 (the "Property")

FILE: Cannabis Program Inspections, Sonoma County, 2022, Evergreen Acres, LLC, CIWQS Place ID 847681

Property information:

<u>Watershed</u>: Russian River Hydrologic Unit; Middle Russian River Hydrologic Area; Warm Springs Hydrologic Subarea (HU/HA/HSA 114.24; see Table 2-1 of the Water Quality Control Plan for the North Coast Region (Basin Plan) for beneficial uses)

Inspection information:

Date/time: March 11, 2022 / 10:00am - 1:30pm

Weather: Sunny

Type: Consent Inspection

<u>Attendance</u>:

Thomas Planson, Founder & CEO of Evergreen Acres, LLC and Property Owner Matthew Machi, P.E., EBA Engineering

Maggie Furlong, Senior Agricultural Program Assistant, Sonoma County Department of Agriculture

Mia Bianchi, Environmental Scientist, California Department of Fish and Wildlife David Kuszmar, P.E., Senior Water Resource Control Engineer, Regional Water Board Brian Fuller, P.G., Engineering Geologist, Regional Water Board

GREGORY A. GIUSTI , CHAIR | MATTHIAS ST. JOHN, EXECUTIVE OFFICER

Background/Purpose:

The Property is actively enrolled under the Water Boards Cannabis Cultivation General Order WQ 2019-0001-DWQ (Cannabis General Order). The Waste Discharge Identification (WDID) Number assigned to the enrollment is 1_49CC402610. The Discharger is Evergreen Acres, LLC. Although the enrollment has been active since May 20, 2020, it is Regional Water Board Staff's (Staff's) understanding that cannabis cultivation activities have not taken place on the Property, as the Discharger has yet to secure all the necessary permits from other state and local agencies.

The purpose of the inspection was to evaluate onsite development and to identify and assess onsite features or conditions that are causing or threaten to cause impacts to the quality and beneficial uses of waters of the state. In response to a referral received from Permit Sonoma on March 7, 2022, Staff paid special attention during the inspection to the location and classification of watercourses on the Property, and to the applicable riparian setbacks associated with those watercourses under the Cannabis General Order. Staff's response to that referral will be transmitted under separate cover.

Evergreen Acres LLC March 11, 2022 Inspection CIWQS Place ID. 847681

Inspection Map:



Figure 1: Aerial image/map showing inspection points discussed in this report.

The Inspection Map (Figure 1) shows reference locations discussed in this report. Reference marker locations are approximate and intended to assist the reader with locating features identified in the Inspection Narrative below and the Photo Appendix that appears at the end of this document. The map includes watercourse layers from the United States Geological Survey (USGS) National Hydrography Dataset,¹ the Sonoma County 2013 LiDAR Dataset,² and a layer containing watercourse segments directly observed by Staff during the inspection that were not displayed in the other data sets. Staff did not directly observe all watercourses displayed on the Inspection Map, nor did they conduct a comprehensive delineation of all watercourses on the Property. Instead, Staff focused their inspection on watercourses whose classifications appeared to be in dispute, based on previous reports and other exhibits available in Permit Sonoma's administrative record.

Inspection Narrative:

David Kuszmar and I entered the Property by vehicle from the east and parked at the entrance to a driveway near the Property's northern boundary. Participants convened and briefly discussed the history of past inspections at the site and the uncertainty regarding the classification of watercourses / streams on the Property. We expressed our intent to look at the streams in question and provide input about their classifications. I asked Mr. Planson for his consent to take photographs to document my observations and he provided it.

I observed that a rill had formed on the access driveway at WQ1 (Photo 1). I followed the rill downslope and to the east where I observed intermittent scour marks (Photo 2) and sorted sediment (Photo 3), which are indicative of erosion and sediment movement by flowing water. This Class III watercourse³ continues to the east. In the vicinity of WQ2 (Photo 4), the watercourse transitions into a Class II where the channel steepens, increases in depth and width, and displays a distinct bed and bank with a step-pool morphology – which serves as habitat for aquatic macroinvertebrates.

Farther downstream (Photo 5), the channel converges with another watercourse with similar morphology. I walked up this stream and observed a step-pool morphology with a trickle of water and observed coarse gravels in the pools that are habitat for aquatic

¹ Information about the USGS National Hydrography Dataset can be found at: <u>https://www.usgs.gov/national-hydrography/national-hydrography-dataset</u>

² Information about the Sonoma County 2013 LiDAR Dataset can be found at: <u>https://sonomavegmap.org/</u>

³ Watercourse classifications referenced in this report reflect those defined in Attachment A to the Water Boards Cannabis Cultivation Policy and General Order. Full copies of the Policy and General Order and their attachments can be found at: <u>https://www.waterboards.ca.gov/water_issues/programs/cannabis/cannabis water_qu_ality.html#general_order</u>

Evergreen Acres LLC March 11, 2022 Inspection CIWQS Place ID. 847681

macroinvertebrates (Photo 6). I observed this habitat continued upstream to WQ3 (Photo 7). Southwest of WQ3 there is evidence of scour from flowing surface water, but I did not observe features that would provide unique habitat for aquatic macroinvertebrates, which suggests WQ3 is the approximate location of the transition from a Class III to a Class II watercourse.

We then followed the combined Class II watercourse downstream to WQ4 (Photo 8), where I observed a culvert below the access road. I observed that the road to the north was hydrologically connected to the channel from WQ5 via a roadside ditch (Photo 9). I continued to follow the watercourse downstream to where it converged with another Class II watercourse and then walked up the converging watercourse and observed another culverted watercourse crossing at WQ6. This culvert inlet was adequately aligned with the channel's horizontal axis (Photo 10), but the culvert outlet was perched 3 feet above the receiving watercourse bed where I observed a scoured pool, and that the channel was locally wider (Photo 11).

We returned to the receiving watercourse for the channel culverted at WQ6 and walked upstream to WQ7 where I observed a smaller Class III tributary entering the larger Class II watercourse (Photo 12 and Photo 13). We continued following the larger watercourse upstream to where it ran along the side of a road. At WQ8 I observed a drainage ditch connecting the road to the watercourse that flows downstream toward WQ7 (Photo 14). I walked up to the road immediately above WQ8 and observed that the entire section of road between WQ8 and WQ9 appears to be hydrologically connected to the adjacent watercourse (Photo 15).

We continued walking up the road from WQ9 and I observed a side road leading to a clearing with large piles of woodchips at WQ10. The road crosses two or more watercourses (classifications not determined) in this area with culverts that have failed or are failing (Photo 16 through Photo 18). We returned to the road and walked south toward the southern property line and then back north to where springs were noted in a previous inspection report. I observed evidence of an abandoned road with two Class II watercourse crossings with failed concrete culverts at WQ11 and WQ12 (Photo 19 and Photo 20). Downstream from the abandoned road, I observed metal waste that resembles an old water heater (Photo 21), possibly related to an abandoned instream surface water diversion at this location. West of the channel I observed a developed spring at WQ13 (Photo 22).

Watercourse Classification Summary:

According to the Cannabis Cultivation Policy, Attachment A, Definitions and Requirements for Cannabis Cultivation, Definition 100:

- A perennial or Class I watercourse:
 - 1. Has water flowing for more than nine months during a typical year,
 - 2. Has finned fish always or seasonally present onsite or includes habitat to sustain fish migration and spawning, and/or

- 3. Includes springs. A spring is defined as an area where there is concentrated discharge of ground water that flows at the ground surface.
- An intermittent or Class II watercourse has flowing water for three to nine months during a typical year, provides habitat for non-fish aquatic species, and/or has flowing water less than three months during a typical year and the stream supports riparian vegetation.
- An ephemeral or Class III watercourse has flowing water less than three months during a typical year and the stream does not support riparian vegetation or aquatic life but shows evidence of being capable of sediment transport.

The reach between the road at WQ1 and the inflection point at WQ2 shows evidence of sediment transport, but does not provide aquatic habitat, so it is a Class III stream. The reaches downstream from WQ2 and WQ3 provide habitat for non-fish aquatic species and appear to have flow for more than 3 months during a typical year, so they are Class II streams. The tributary directly south of WQ7 has a channel form that would have resulted from sediment transport, but lacks aquatic or riparian habitat, so it is a Class III stream. The watercourse that passes through WQ7 and WQ10 has significant sustained flow during the spring season and is good habitat for aquatic macroinvertebrates but does not appear to support finned fish, so it is a Class II stream. Classifications of the branched tributaries upslope of WQ10 were not determined. The watercourses that pass through WQ11 and WQ12 have water present during the spring season and lenses of gravel substrate that provide habitat to aquatic macroinvertebrates and therefore are Class II streams. The perennial spring at WQ13 qualifies as a Class I feature.

Recommendations:

- Retain a licensed professional to inventory, assess, and develop a workplan and schedule to implement measures to ensure that all developed features, roads and watercourse crossings throughout the Property are corrected, restored, and/or maintained in conditions that prevent or minimize erosion, sediment transport/delivery, and adverse impacts to water quality and beneficial uses. The workplan should include measures to achieve the following:
 - a. Hydrologically disconnect the road at WQ1 from the receiving watercourse to the east, and the road segments between WQ4 and WQ5, and WQ8 and WQ9 from their respective receiving waters,
 - b. Upgrade the watercourse crossings at WQ4 and WQ6 to be aligned with the channel bed and axes and accommodate a 100-year recurrence interval flow event,
 - c. Remove stockpiles of woodchips east of WQ10 to minimize potential for these wastes to enter or be transported into receiving waters,
 - d. Decommission the road fording the watercourses at WQ10 and restore the watercourses or reconstruct new watercourse crossings, and

e. Properly decommission the abandoned road that crosses WQ11 and WQ12, and collect and dispose of the waste metal, concrete pipe and diversion infrastructure located there so as to minimize the potential for these wastes to re-enter receiving waters.

Components of the workplan and schedule described above may be incorporated into the Site Management Plan required to be submitted for this site under the terms of its Cannabis General Order enrollment.

- 2. Dispose of all development and restoration-related earthen spoils in a manner to prevent/minimize transport and delivery to receiving waters.
- Comply with requirements/directives from CDFW and the Division of Water Rights with respect to appropriate permitting/licensing for the water diversion and infrastructure at WQ13, and ensure that water diversion features are modified/maintained so as to minimize the potential for adverse impacts to water quality and beneficial uses.
- 4. Prior to conducting work in a water of the state (e.g. upgrading or decommissioning watercourse crossings, restoring streams), submit the below application and pay the required application fee for a Water Quality Certification / Waste Discharge Requirements:

https://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/pdf/20 0204/RB1 Cannabis WQC 401 App.pdf

CC: David Kuszmar, <u>david.kuszmar@waterboards.ca.gov</u> Mia Bianchi, <u>mia.bianchi@wildlife.ca.gov</u> Maggie Furlong, <u>maggie.furlong@sonoma-county.org</u> Matthew Machi, <u>mmachi@ebagroup.com</u>

Photo Appendix:



Photo 1— Looking south toward WQ1 where a rill is visible on the road surface.



Photo 2— Looking east and downhill from WQ1. Intermittent scouring across the grassy area marks the flow path of a Class III watercourse.





Photo 3— Scouring east of WQ1. A 15cm long black and yellow ruler is visible in the middle of the image and a lens of sorted gravel is visible in the lower right of the image.



Photo 4— Looking east in the vicinity of WQ2. The intermittent ephemeral (Class III) watercourse is to the back of the photographer. The flow path for the watercourse continues in front of the photographer where the channel topography steepens. Downslope from the boulder in the middle of the image, the watercourse becomes a Class II, with a clearly defined bed and bank, and habitat for aquatic macroinvertebrates.



Photo 5— Looking east from where the Class II watercourses flowing downstream of WQ2 and WQ3 converge. The resulting Class II watercourse has a distinct cobble and gravel substrate and well-defined banks.



Photo 6— Small pool within a Class II watercourse immediately northeast of WQ3. A 15cm long black and yellow ruler is visible in the middle of the image and shows that the channel is between 30cm and 50cm wide. Water is visible in the pool.



Photo 7— Looking at watercourse in the vicinity of WQ3. Upstream and to the southwest of this location the watercourse bears Class III characteristics, such as intermittent scour marks. Downslope from this location the channel bears Class II characteristics, including a step-pool morphology that provides habitat to aquatic macroinvertebrates.



Photo 8— Looking east at the inlet of a 24-inch diameter corrugated metal pipe (CMP) culvert at WQ4. A roadside ditch is entering the channel from the left of the image.



Photo 9— Looking northeast along roadside ditch that discharges to the watercourse in the previous image. The road is shaped such that stormwater will be directed into the roadside ditch. A rolling dip could be added across the road in the upper portion of the image, marked by an orange cone and by WQ5 on the Inspection Map. Installation of a rolling dip at this location would prevent road runoff from entering the watercourse.



Photo 10— Looking northeast at the inlet for a 36-inch diameter CMP in the vicinity of WQ6. The earthen fill surrounding the culvert inlet has been scoured by stormwater and the rust line inside the culvert is approximately 25% above the culvert bottom.



Photo 11— Looking northeast at the outlet for the culvert pictured in the previous image in the vicinity of WQ6. The culvert outlet is perched three feet above the channel bed and discharges into a scour pool.



Photo 12— Looking where a smaller tributary watercourse discharges into a larger stream at WQ7. The Class III tributary has a marginally defined bed and bank for a limited distance upstream, lacks flow, and is filled with leaflitter, whereas the larger Class II receiving watercourse has water flowing over cobble and gravel substrate.



Photo 13— Looking south along a Class III tributary watercourse from WQ7.



Photo 14— East side of the road at WQ8. A drainage ditch with lenses of fine sediment can be seen in the middle right of the image where stormwater from the road discharges into a watercourse out of sight in the top left of the image.



Photo 15— Looking north along road from WQ9. The road is shaped such that it will collect stormwater and discharge it to the watercourse at WQ8.



Photo 16— Looking south in the vicinity of WQ10. The watercourse (classification not determined) in the western channel is prevented from entering the road to the west by a concrete barrier behind the photographer which directs the flow to a culvert pictured in the next image.



Photo 17— Looking west from the confluence of two watercourses (classifications not determined) in the vicinity of WQ10.



Photo 18— Looking east from WQ10. The watercourse (classification not determined) is flowing over the road and eroding the road fill. Several large piles of woodchips are visible in the distance at the top of the image.



Photo 19— An 18-inch diameter concrete pipe in a Class II watercourse and other nearby refuse at WQ11.



Photo 20— Segments of 6-inch diameter concrete pipe both next to and within a ClassII watercourse at WQ12.

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Photo 21— Metal waste within a Class II watercourse downstream from WQ12.



Photo 22— A developed spring at WQ13. Springwater is flowing through an open valve extending from a wooden box constructed into a hillside. Springwater is also emanating from the ground and from below a tree in the vicinity of the spring box.



GEOLOGIC & ENVIRONMENTAL CONSULTING

June 8, 2022 Job No. 5041.03

Mr. Thomas Planson Evergreen Acres LLC 483 San Andreas Dr. Novato, CA 94945

Subject: Watercourse Classification Assessment 6699 Palmer Creek Road, Healdsburg, CA, APN 069-040-026

Mr. Planson:

Hurvitz Environmental Services, Inc. (HES) is pleased to submit this Watercourse Classification Assessment for your property located at 6699 Palmer Creek Road in Healdsburg CA. We understand that there have been some discrepancies in the water course classifications performed by others and therefore you have retained our services to provide a professional opinion on the appropriate watercourse classifications for the drainages that currently exist onsite.

Site Description

The site is located in the southwestern portion of Healdsburg in unincorporated Sonoma County, California, approximately 1.2 miles south of Mill Creek Road on Palmer Creek Road (**PLATE 1** – **SITE LOCATION MAP**). The Sonoma County Assessor's Office identified the site as Assessor's Parcel No. (APN) 069-040-026 (**PLATE 2** – **ASSESSORS PARCEL MAP**). The site lies in the California Coast Range, approximately 5.5 miles southwest of the City of Healdsburg, and approximately 5 miles northeast of the town of Guerneville. The site is a generally square shaped, 34.04-acre parcel, with a maximum width of approximately 1,000 feet and a maximum length of approximately 1,200 feet. The site is developed with one approximately 1,500 sq/ft barn building, a 100 sq/ft well shed and a small storage building totaling less than 500 sq/ft. The site has a private domestic well (project well #e0369026) and sewage disposal system. Topography is primarily sloping to the north.

Background

We understand that a conditional use permit has been approved by the Sonoma County BZA Board for the development of a cannabis cultivation facility onsite. The cultivation facility will consist of both mixed light greenhouse and outdoor cultivation, with irrigation water being derived for an engineered off-stream storage pond and from a 100,000-gallon rainwater storage tank. As part of the permitting process several environmental documents were prepared for the site and HES staff reviewed the following documents; A February 20, 2019, Biotic Resource Assessment prepared by Pinecrest Environmental Consulting, A March 15, 2019, Site Inspection Report prepared by Mr. Connor McIntee from the North Coast Regional Water Quality Control Board (NCRWQCB), a January 4, 2022, Review of Initial Study /Mitigated Negative Declaration prepared by CBEC eco engineering and a April 8, 2022, Site Inspection Letter prepared by the NCRWQCB.

Within the documents reviewed there were some variations in stream classifications made. In the older reports there were streams classified as Class III that were later re-classified as Class II in the newer reports, and vise versa. The various classifications have apparently created some confusion on what the appropriate setbacks for the proposed cannabis cultivation project should be.

HES Site Inspection

On June 7, 2022, HES performed a Site Reconnaissance for the specific purpose of identifying and classifying streams onsite. The results of our assessment were then relayed to Matthew Machi with EBA Engineering (EBA) so that modifications to the existing Site plan could be made that showed our watercourse classifications and appropriate project setbacks. The updated EBA Watercourse Exhibit is included as **Appendix A**.

During our June 2022 site reconnaissance, we identified a total of three, generally north flowing creeks or stream systems onsite. These streams originate on the steeper southern portion of the site and become more incised as they flow northerly. A fourth, small drainage was also identified near the northern portion of the site where the topography is more subtle.

The western most north flowing stream system was originally classified as Class III by Pinecrest Consulting in 2019. This stream was then reclassified by the NCRWQCB in 2019 as being a Class III stream in the upper portions and then transitioning to a Class II further downstream. Our assessment of this area is similar; however, it is our opinion that while the headwater portions of the stream are significantly less incised than the lower stream portions, the entire stream system has connectivity and should be classified as Class II. Further, the 2022 NCRWQCB inspection report noted lenses of gravel substrate on this stream system that can provide habitat to aquatic macroinvertebrates. Therefore, it is our opinion that this entire stream system should have a 100-foot setback from the proposed project.

The 2022 NCRWQCB inspection report also identified a perennial spring within the proximity of the western stream system (NCRWQCB inspection point WQ13). We observed this spring location during our site inspection. We understand that the presence of a perennial spring, by default, requires a 150-foot setback. While the spring area is proximate to the stream system it does not change the stream classification from a Class II. Therefore the 150-foot setback requirement is only related to the spring and not related to the entire stream system.

We identified a second north-flowing creek near the center of the property as being a Class II stream. This was primarily determined by the amount of erosion and channel incising (bed and bank) that was present during our reconnaissance. The significant channelization is also evident on lidar maps of the site. This stream had originally been identified as a Class III however it is our opinion that a Class II designation is more appropriate. Therefore, this stream should have a 100-foot setback from the proposed project.

The eastern most stream onsite does not appear significantly incised on the Lidar maps reviewed however it does have steep hillsides flanking both sides and likely receives significant flow during rain events. During our site reconnaissance we were unable to physically inspect this stream channel however it is located more than 150- feet from any proposed project activities and is therefore less significant to the project. However, through Lidar maps we have classified this stream as a Class III watercourse, requiring only a 50-foot setback from the proposed project. This Class III stream is a tributary to the north flowing stream system that flows across the center portion of the property. The intersection of the two creeks was inspected and occurs near the northwest corner of the site. Where the two stream intersect is classified as a Class II stream, requiring a 100-foot setback from the proposed project.

A short easterly flowing Class III drainage was also identified near the northern portion of the site as shown on the Watercourse Classification Exhibit, Appendix B. This drainage is very subtle and appears to originate from the site access road east of the barn before traveling through a grassy meadow and merging with the Class II Stream near the northeast corner of the site. Only minor channelization was observed and no defined bank was present along most of this drainage. As the drainage flows easterly across the site, it transitions to steeper terrain shortly before merging with the Class II stream. The short portion of this drainage, located in steeper terrain, has significant incising and a defined bank. It is at this point that the drainage transitions from a Class III stream to a Class II Stream. The area where the Class II and Class II stream merge is clearly defined with the appropriate setbacks from these features designated on the attached Watercourse and Project Setback Exhibit, **Appendix A**.

Conclusions

We have reviewed these documents referenced in this report and have performed a site reconnaissance. Based on our review we generally concur with the watercourse classifications outlined in the 2022, CBEC Report, and with the March 2022 assessments made by NCRWQCB staff. We have presented our findings to EBA Engineering who has revised their Site Plan and created a Watercourse and Project Setback Exhibit which we have included as **Appendix A**. The Watercourse Exhibit clearly shows the stream classifications and setbacks required and represents our assessment of the conditions that exist onsite today.

We appreciate the opportunity to provide you with these services. Please do not hesitate to contact us at your convenience, should you have any questions or comments regarding this report or our recommendations.

Sincerely, HURVITZ ENVIRONMENTAL SERVICES, IN

Jun S. H-

Lee S. Hurvitz, PG# 7573 CHG #1015 Certified Hydrogeologist

Attachments:

Plate 1,	Site Location Map
Plate 2,	Assessors Parcel Map
Appendix A,	EBA Engineering Watercourse and Project Setback Exhibit

No. 1015





Appendix A EBA Engineering Watercourse and Project Setback Exhibit

