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Governor's Office of Planning & Research

March 21, 2023

March 21 2023

STATE CLEARING HOUSE

Crystal Acker, Supervising Planner
County of Sonoma
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Subject: Sonoma County Comprehensive Cannabis Program Update, Notice of Preparation of a Draft Environmental Impact Report, SCH No. 2023020144, Sonoma County

Dear Ms. Acker:

The California Department of Fish and Wildlife (CDFW) received the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) from the County of Sonoma (County) for the Sonoma County Comprehensive Cannabis Program Update (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW is submitting comments on the NOP to inform Sonoma County, as the CEQA lead agency, of potentially significant impacts to biological resources associated with the Project.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines, § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting these comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority over the Project pursuant to the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority. (Fish & G. Code, § 1600 et seq.).

¹ CEQA is codified in the California Public Resources Code in Section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with Section 15000.

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Likewise, to the extent the Project may result in “take,” as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in “take” of plants or animals listed under CESA, either during construction or over the life of the Project. Under CESA, “take” means “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” (Fish & G. Code, § 86). If the Project will impact CESA listed species, early consultation with CDFW is encouraged, as significant modification to the Project and mitigation measures may be required to obtain an ITP. CDFW’s issuance of an ITP is subject to CEQA and to facilitate permit issuance, any such Project modifications and mitigation measures must be incorporated into the EIR’s analysis, discussion, and mitigation monitoring and reporting program.

CEQA requires a mandatory finding of significance if a project is likely to substantially impact threatened or endangered species. (Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064 & 15065). In addition, pursuant to CEQA, the lead agency cannot approve a project unless all impacts to the environment are avoided or mitigated to less-than-significant levels, or the lead agency makes and supports findings of overriding consideration for impacts that remain significant despite the implementation of all feasible mitigation. Findings of consideration under CEQA; however, do not eliminate the Project proponent’s obligation to comply with the Fish and Game Code.

Lake and Streambed Alteration

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting lakes or streams and/or associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank (including associated riparian or wetland resources); or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, drainage ditches, washes, watercourses with a subsurface flow, and floodplains is generally subject to notification requirements. In addition, infrastructure installed beneath such aquatic features, such as through hydraulic directional drilling, is also generally subject to notification requirements. Therefore, any impact to the mainstems, tributaries, or floodplains or associated riparian habitat caused by the proposed Project will likely

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require an LSA Notification. CDFW may not execute a final LSA Agreement until it has considered the final EIR and complied with its responsibilities as a responsible agency under CEQA.

Raptors and Other Nesting Birds

CDFW has authority over actions that may result in the disturbance or destruction of active bird nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include section 3503 (regarding unlawful take, possession, or needless destruction of the nests or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds of prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

PROJECT DESCRIPTION SUMMARY

Proponent: Sonoma County

Objective: The Cannabis Program Update would result in a series of zoning changes that may retain, replace, expand on, or eliminate existing provisions of the current cannabis ordinance. The primary goals of the Project are to consider the need for expanded or new cannabis land uses within the unincorporated County, further enhance neighborhood compatibility and environmental protections (which could result in restriction or elimination of cannabis land uses) and streamline the cannabis permitting process. The Cannabis Program Update is currently being developed consistent with County Resolution No. 22-0088, "Cannabis Program Update Framework". The County proposes to define prohibited versus allowed activities and what authorization is required for allowed activities by right, ministerial zoning permit, discretionary use permit, or business license. The County also proposes a general plan amendment to include cannabis within the definition of agriculture. This proposal would expand ministerial permitting of commercial cannabis cultivation in agricultural and resource zoned areas of the unincorporated county. The Project area consists of all non-coastal General Plan Land Use categories and corresponding Zoning Districts. It would not include the coastal zone.

Location: The Project encompasses all of Sonoma County, California, except for the coastal zone. The County is bordered by Mendocino County to the north, Lake and Napa counties to the east, and the Pacific Ocean to the west.

ENVIRONMENTAL SETTING

Sufficient information for meaningful review regarding the environmental setting is necessary to understand any potentially significant impacts on the environment of the proposed Project and any alternatives identified in the EIR (CEQA Guidelines, §§ 15125

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& 15360). CDFW recommends that the CEQA document prepared for the Project provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, or endangered species (CEQA Guidelines, §15380).

Habitat descriptions and species profiles included in the EIR should include robust information from multiple sources, such as aerial imagery; historical and recent survey data; field reconnaissance; scientific literature and reports; the U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation System; findings from positive occurrence databases such as the California Natural Diversity Database (CNDDDB); the California Aquatic Resource Inventory (CARI); and sensitive natural community information available through the Vegetation Classification and Mapping Program (VegCAMP). Only with sufficient data and information from the habitat assessment can the County adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols² if available.

Botanical surveys³ for special-status plant species, including those with a California Rare Plant Rank⁴, must be conducted during the appropriate season, including the blooming period for all species potentially impacted by the Project within the Project area and adjacent habitats that may be indirectly impacted by, for example, changes to hydrology, and require the identification of reference populations. More than one year of surveys may be necessary given environmental conditions.

IMPACT ANALYSIS AND MITIGATION MEASURES

The CEQA Guidelines (§15126.2) necessitate that the draft EIR discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project. This includes evaluating and describing impacts such as:

- Changes in hydrology that could alter the timing and magnitude of streamflow both during construction and operation of the Project;

² Survey and monitoring protocols and guidelines are available at <https://wildlife.ca.gov/Conservation/Survey-Protocols>.

³ Please refer to CDFW protocols for surveying and evaluating impacts to rare plants, and survey report requirements at <https://wildlife.ca.gov/Conservation/Plants>

⁴ <http://www.cnps.org/cnps/rareplants/inventory/>

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- Potential for “take” of special-status species;
- Potential for impacts to special-status species or sensitive natural communities;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alternation of soils and hydrology, and removal of habitat structural features (e.g., snags, roosts, overhanging banks);
- Encroachments into riparian habitats, drainage ditches, wetlands, or other sensitive areas;
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence;
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features;
- Water quality impacts resulting from construction and operations of the Project;
- Impacts both from construction and future operation of the Project;
- Impacts to the bed, channel, or bank and effects to other habitat structures, in the reservoirs and creeks downstream of the Project;
- Impacts to bed, channel, or bank and direct effects on fish, wildlife, and their habitat; and
- Impacts as a result of alteration of riparian habitat and resulting impacts to fish, wildlife, and water quality.

The EIR also should identify existing and reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project’s contribution to each impact (CEQA Guidelines, §15355). Although a project’s impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact – e.g., reduction of available habitat for a listed species – should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines (§§ 15021, 15063, 15071, 15126.2, 15126.4 & 15370) direct the lead agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the draft EIR, and/or mitigate significant impacts of the Project on the environment. This includes a discussion of take avoidance and

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minimization measures for special-status species, which are recommended to be developed in early consultation with the USFWS, the National Marine Fisheries Service and CDFW. These measures can then be incorporated as enforceable Project conditions to reduce potential impacts to biological resources to less-than-significant levels.

Fully protected species may not be taken or possessed at any time (Fish and G, Code § 3511). Therefore, the draft EIR is advised to include measures to ensure complete take avoidance of these fully protected species.

COMMENTS AND RECOMMENDATIONS

Comment 1: Differences in Cannabis Grows

Issue: Cannabis cultivations vary in size, type, and extent of environmental impacts. Not all grows are the same; for example, there are significant differences in impacts between outdoor cultivation sites that use conventional agriculture practices and outdoor cultivation sites that grow in pots using imported soils, placed on compacted gravel surfaces within hoop-houses enclosed in fencing and heavily reliant on plastic infrastructure. Differences in cultivation sites increase the potential for varied species and habitat impacts.

Recommendations: The draft EIR should clearly define what infrastructure will constitute an “outdoor” cannabis cultivation site in the context of the Cannabis Program Update. It should distinguish between potential different types of outdoor cultivation sites and include a robust analysis based on cultivation type in order to provide meaningful review of corresponding impacts to fish and wildlife resources. Considerations should include, but not be limited to, use of gravel hardscape, grading, paving, importation of soils, fencing, limited life-span plastic materials and lighting.

Comment 2: Inclusion and Exclusion Zones

Issue: Cannabis cultivation may have a significant adverse effect on species identified as a candidate, sensitive, or special-status species, riparian habitat, and other sensitive natural communities directly or through habitat modifications.

Recommendations: The County should create exclusion zones where cannabis cultivation cannot be eligible for a ministerial permit. To avoid or minimize impacts to species of special concern, riparian habitat, or other sensitive natural communities, exclusion zones should contain areas with CNDDDB detections with a buffer zone, wetlands, vernal pools, and other sensitive habitats.

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Comment 3: Land Use Planning

Issues: The Project has the potential to expand cultivation areas and increase the potential for species and habitat impacts. Ministerial review may not adequately account for all impacts and may potentially allow individual projects to proceed without appropriate disclosure and avoidance, minimization, and mitigation requirements.

Recommendations: The Cannabis Program Update should establish a current baseline of permitted cannabis cultivation areas and identify where new cannabis cultivation expansion may occur on a map. Geo-spatial analysis should be used at an individual property parcel scale, to exclude ministerial approval of cannabis cultivation within areas with habitat to support special-status species and where special-status species occurrences are documented within the CNDDDB. Exclusion area boundaries should be mapped at a parcel scale. In addition, species-specific protective buffer distances should be developed as part of the EIR to limit activities that can occur adjacent to mapped exclusion areas. The Project should exclude Project areas potentially impacting special-status species and their habitat in order to adequately protect these species.

Landscape level impacts should be evaluated with consideration to current and future conservation planning efforts. CDFW recognizes the Sonoma County Agricultural and Open Space District (Sonoma County District) has completed a considerable conservation analysis and planning effort in its 2021 Vital Lands Initiative. The Initiative identifies spatially mapped areas of conservation priorities which includes, but is not limited to, riparian habitat, wetlands, conifer forests, grasslands, shrublands, hardwood forests, and wildlife habitat for movement (connectivity). Those areas with highest conservation priority can be reasonably expected to have high value of fish and wildlife resources. Cannabis cultivation within those areas of highest conservation priority likely have the greatest potential for significant effects to the environment and fish and wildlife. CDFW encourages the County to incorporate conservation planning efforts by the Sonoma County District into its ordinance to the greatest extent feasible. For proposed cannabis cultivation within areas of highest conservation priority identified by the Sonoma County District, CDFW recommends separate Use Permit and individual CEQA analysis. Alternatively, CDFW supports cultivation prohibition in those areas.

Comment 4: Riparian/Wetlands Setbacks

Issue: The Project has the potential to encroach into the riparian zone of rivers, lakes and/or streams such as from development of new buildings and infrastructure as well as, land clearing and grading. Additionally, the Project has potential to increase diversion of surface water and pumping of groundwater for irrigation and also cause the delivery of sediment, nutrients, petroleum products, and pesticides into streams. All of these factors can negatively impact fish and wildlife species.

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Evidence the impact would be significant: Riparian trees and vegetation, and associated floodplains, provide many essential benefits to stream and aquatic species habitat (Moyle 2002, CDFW 2007), including thermal protection, cover, and large woody debris. Development adjacent to the riparian zone can result in fragmentation of riparian habitat and decreases in native species abundance and biodiversity (Davies et al. 2001, Hansen et al. 2005, CDFW 2007).

Wastewater discharge and runoff from cannabis cultivation activities, especially water containing pesticides, disinfectants, and/or fertilizers, may enter and alter existing streams or their function and associated riparian habitat on the Project site. Wetlands that are hydrologically connected to surface water may transport pollutants and waste material associated with cannabis cultivation.

Riparian buffers help keep pollutants from entering adjacent waters through a combination of processes including dilution, sequestration by plants and microbes, biodegradation, chemical degradation, volatilization, and entrapment within soil particles. As buffer width increases, the effectiveness of removing pollutants from surface water runoff increases (Castelle et al. 1992). There is substantial evidence showing narrow buffers are considerably less effective in minimizing the effects of adjacent development than wider buffers (Castelle et al. 1992, Brosofske et al. 1997, Dong et al. 1998, Kiffney et al. 2003, Moore et al. 2005).

Recommendations: Riparian and wetland setbacks should be as protective as or more protective than the State Water Board *Cannabis Cultivation Policy – Principals and Guidelines for Cannabis Cultivation* requirements that require the following:

Common Name	Watercourse Class ³	Distance
Perennial watercourses, waterbodies (e.g. lakes, ponds), or springs ⁴	I	150 ft.
Intermittent watercourses or wetlands	II	100 ft.
Ephemeral watercourses	III	50 ft.
Man-made irrigation canals, water supply reservoirs, or hydroelectric canals that support native aquatic species	IV	Established Riparian Vegetation Zone
All other man-made irrigation canals, water supply reservoirs, or hydroelectric canals	IV	N/A

The County should evaluate each cultivation site individually and reserve the right to require greater setbacks in some cases. Protective riparian setbacks should be established that are scientifically based. Evaluation should consider temporal changes in water demand, seasonal variations and both ongoing and future cumulative impacts.

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All sites should be evaluated for potential wetland features within the required Biological Resources Assessment. Sites with signs of wetland features should be delineated by a Qualified Professional to determine the appropriate setback distances from constructed/disturbed areas.

A site-specific analysis should discuss all direct and indirect impacts (temporary and permanent), including reasonably foreseeable impacts, that may occur with implementation of the Project (CEQA Guidelines, §§ 15126, 15126.2, & 15358).

Comment 5: Surface and Groundwater Use

Issue: The Project has the potential to deplete streamflow and other surface waters (e.g., wetlands and groundwater dependent ecosystems (GDEs)) from groundwater diversions that are interconnected. Depletion of streamflow from groundwater diversion has the potential to cause significant impacts to listed and special-status species.

Evidence of Impacts: Many Sonoma County tributaries have historically provided sustained perennial flow which supports spring, summer, and fall rearing habitat for naturally producing California freshwater shrimp (*Syncaris pacifica*), Central California Coast Coho salmon (*Oncorhynchus kisutch*), California Coastal Chinook salmon (*Oncorhynchus tshawytscha*) steelhead (*Oncorhynchus mykiss*) and other aquatic species. Available habitat for these species is limited by lack of flow, especially during the summer and early fall periods. The grow season for cannabis cultivation includes summer months (CDFW 2018) during times when stream flows are generally at their lowest (State Water Resources Control Board (SWRCB) 2010). Most Sonoma County fish-bearing tributaries are already subject to large numbers of surface and groundwater diversions that are cumulatively affecting the amount of water available for instream habitat. The exact number, location and extent of diversions are unknown. However, in many watersheds, parcels that do not have access to municipal water sources often extract water from the stream either; through direct diversion from the stream or from near stream wells that intercept subterranean stream flow; or from groundwater wells. Groundwater extraction has the potential to impact GDE resources and reduce streamflow, especially during the late spring and summer months which is a critical time period for the state federally endangered coho salmon and federally threatened steelhead.

Recommendations: CDFW recommends the County assess the aquatic carrying capacity of watersheds to support cannabis cultivation and propose a limit on density or number of cultivation sites. The focus of the assessment should be to determine the maximum water use availability from watersheds that maintains adequate water supply for fish and wildlife species, considering the cumulative impact of existing and future legal and illegal diversions. Prior to issuing permits for new cultivation sites, the County should prepare the assessment at a watershed scale describing a) existing water use

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and availability, b) potential for sediment and other pollutant discharge, and c) percentage of habitat fragmentation within a given watershed. Hemp should be incorporated into this analysis since it requires essentially the same cultivation techniques and water use. From CDFW's perspective, activities causing the same or similar environmental impacts should be reviewed and analyzed with the same rigor. Identified impacts due to hemp cultivation should be avoided, minimized, and/or mitigated. In addition, the analysis should provide detail on the amount of cannabis and hemp cultivation the County proposes to permit within each watershed (e.g., HUC 12 or smaller watershed area), and what impacts the allowed cultivation would have on each of these elements.

In order to avoid a concentration of cannabis and hemp cultivation sites in a particular watershed, which could result in potential significant effects, CDFW recommends that prior to issuing permits for new cultivation, the County defines a watershed cap based on an analysis of the impacts to each watershed as described above. Without a defined cap on the number of cultivation sites, analysis of environmental impacts should assume that all parcels meeting zoning criteria could be used for cannabis cultivation. For all cultivation sites, disclosure of the amount of water to be used from each water source, and a current, site-specific analysis of water availability should be required, and the County should reserve the discretion to modify permit conditions. Please note that possession of an active appropriative water right does not guarantee that an adequate water supply is available to support fish and wildlife resources.

Additionally, surface water diversions (including subterranean streamflow) are subject to notification under Fish and Game Code 1602. The Ordinance should require projects with surface diversions to comply with 1602 and notify CDFW for all surface diversion activities.

Wells used for cannabis cultivation should be evaluated under the CEQA review process to determine their potential for stream water depletion that may adversely affect fish and aquatic life. Wells should be metered and monitored to determine if there are any adverse impacts. Water conservation and other mitigation should be required in areas where these wells have the potential to impact public trust resources.

For consistency with the SWRCB *Cannabis Cultivation Policy – Principals and Guidelines for Cannabis Cultivation*, the Project should require a forbearance period from surface diversions and wells in subterranean streams. The intent of forbearance and storage is to require for water to be diverted during the wintertime when water is more abundant so that this stored water can be used in the summertime to meet irrigation demands.

Recommendation: CDFW recommends outlining the following Project requirements for cultivators to demonstrate adequate water supply at each site:

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- For surface water and sub-streamflow diversions, sufficient off-stream water storage should be demonstrated prior to receiving a County cultivation permit in order to allow full compliance with the SWRCB forbearance periods. To determine the necessary storage, cultivators should be required to calculate how much water is required for each year of cultivation with consideration to expansion over time. In addition, CDFW encourages use of metal or wood water tanks.
- For well diversions, demonstrating adequate water should include technical analysis prepared by a qualified professional showing diversion from the well is limited to ground water only and that groundwater pumping will not deplete surface water flows.

CDFW recommends the County's cannabis program include management actions that include preventative and avoidance measures.

Preventative measures should include the planning and implementation of projects that reduce water demand in the summer months and therefore, reduce the risk of water diversions competing with Coho salmon and steelhead for surface water. These actions may include outreach, education, and funding of storage and forbearance, rainwater catchment or other water security projects. Preventative measures can be taken at any time of year and should be ongoing activities regardless of drought conditions.

Comment 6: California tiger salamander (*Ambystoma californiense*) Habitat Exclusion from Ministerial Process

Issue: The Cannabis Program Update could allow cannabis cultivation under a ministerial process that can result in significant impacts to California tiger salamander (*Ambystoma californiense*, CTS) and/or their habitat. The present range of the Sonoma Distinct Population Segment (DPS) of CTS is predominantly located on the Santa Rosa Plain but according to CNDDDB, the present range also include areas outside of the cities of Petaluma, Penngrove and Cotati.

Evidence of Impacts: CTS is endemic to central California, with isolated populations in Sonoma and Santa Barbara counties (Bolster 2010, USFWS 2014). CTS relies on seasonal wetlands or freshwater ponds for successful reproduction and adjacent or accessible terrestrial habitat for migration and aestivation, making the quality of both aquatic and terrestrial habitat essential for CTS survival (Bolster 2010). Upland habitats must contain underground refugia, such as mammal burrows, that CTS depend upon for food, shelter, and protection (Laredo et al. 1996). Threats to CTS include habitat loss/conversion and fragmentation, including dispersal habitat between breeding pools and upland refugia. CTS spend the majority of their lifecycle underground (Trenham et al. 2000) and are susceptible to being crushed during ground disturbance. CTS is also

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threatened by competition with and predation from invasive species (USFWS 2017). Introduced species such as bullfrogs and sunfishes have had a negative effect on CTS (Bolster 2010). Larval populations undergo large fluctuations, with most populations containing less than 100 breeding pairs (Pechmann et al. 1991, Bolster 2010). Fluctuating *Ambystoma* populations were found to be susceptible to recruitment failure during stochastic events (Pechmann et al. 1991).

Over the past 25 years, land development has increased dramatically within the Santa Rosa Plain, including low- and high-density land use and agricultural conversion (USFWS 2016). The current core range of Sonoma County CTS encompasses approximately 18,000-20,000 acres of fragmented habitat. The species can migrate up to 1.3 miles between a breeding pond and upland burrows (Orloff 2011). CTS spend approximately 95 percent of their lifetime in underground burrows, emphasizing the importance of protecting potential upland habitat in addition to wetland breeding ponds (Trenham 2001).

Pesticides and fertilizers used in cannabis cultivation could decrease fitness or survival of, or cause abnormalities in, *Ambystoma* species. Construction or modification of perennial ponds has been shown to provide breeding habitat for invasive bullfrogs that prey on and compete with sensitive amphibians (Kiesecker et al. 2001, Bolster et al. 2011, Fuller et al. 2011 Kupferberg and Fury 2015). Grading and filling of habitat can result in crushing CTS, collapsing underground burrows, and trapping CTS within, and reducing or fragmenting breeding or non-breeding habitat. Roads can result in amphibian mortality and fragment habitat, as well as, create barriers to movement.

Recommendations: The Santa Rosa Plain has an enhanced potential for CTS presence and is critical to the long-term survival of the species; therefore, should not be considered eligible for cannabis cultivation under a ministerial process. Please be advised that actions related to cannabis cultivation activities, including, but not limited to, site grading, relocation of individuals out of harm's way, and installation of fencing could result in "take" of CTS (or other listed species). A CESA ITP (pursuant to Fish and Game Code Section 2080 et seq.) is required in advance of such activities in order to lawfully take this species. A CESA ITP requires CEQA documentation, and the proposed Cannabis Program Update should adequately address impacts to CTS or provide for mitigation to reduce the impact to less-than-significant. CDFW recommends excluding any project within the Santa Rosa Plain and within 1.3 miles of an extant positive occurrence of CTS from the ministerial process. New or expanded cannabis cultivation within the Santa Rosa Plain should be thoroughly assessed through a separate Use Permit and individual CEQA analysis. Additionally, sites outside of the Santa Rosa Plain with the potential for CTS occurrence (e.g., rural Southwest Petaluma, and areas east of Penngrove and Cotati) should be delineated and excluded from the ministerial process.

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Comment 7: Light Pollution

Issue: The Project has potential to generate sources of light in rural areas, near wildlands, and near sensitive natural vegetation communities, including permanent lighting from additional buildings or greenhouses, security lighting, and temporary lighting for proposed nighttime construction. In addition to lighting impacts on neighboring areas, artificial lighting and light pollution may cause significant impacts to rare, threatened, endangered, and nocturnal wildlife and migratory birds. Light pollution impacts can disrupt routine behavior of the species life cycle, degrade the quality of the environment utilized by said species and can substantially reduce the number of individuals.

Evidence of Impacts: Sensitive species, wildlife, and their habitats may be adversely affected by increased and artificial night lighting, even temporarily due to night construction activities. Light plays a vital role in ecosystems by functioning as both an energy and an information source (Gaston et al. 2012, 2013). The addition of artificial light into a landscape disrupts this role, altering the natural circadian, lunar, and seasonal cycles under which species have evolved.

Recommendations: CDFW recommends the following set of criteria of types of lighting that may be used on-site:

- The EIR should include a robust analysis of potential impacts to special-status and listed species (e.g., northern spotted owl) from lighting. Exclusion zones should incorporate lighting restrictions to avoid significant impacts to special-status and listed species.
- In addition to facing lights downward, lights should be motion-activated, or turned off or dimmed during critical times of the year (e.g., migration) and during times of night that have the most significant impact on wildlife (i.e., dawn and dusk) (Gaston et al., 2012, 2013).
- Lights with wildlife-friendly spectral composition (i.e., minimize light avoidance/attraction) should be used (Gaston et al. 2012, 2013). LED lights are well suited for operating at variable brightness and being switched off or dimmed during certain times of the year or during times of low demand, as they operate at full efficiency and have no “warm-up” time (Gaston et al., 2012, 2013).
 - Vegetation may also be used to shield sensitive areas against light, and light-absorbent surfaces can be used in place of reflective surfaces (Gaston et al., 2012, 2013).

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- All lights should be disposed of properly, as many contain mercury and other toxins.
- Hoop-houses and other grow facilities that use lighting (e.g., light deprivation) should be required to be completely covered at night from sunset to sunrise.
- Lighting should be limited in rural areas.

Comment 8: Fencing Hazards

Issue: The Project may result in the use of open pipes used as fence posts, property line stakes, signs, etc.

Evidence of Impacts: Raptor's talons can become entrapped within the bolt holes of metal fence stakes resulting in mortality. Further information on this subject may be found at: <https://ca.audubon.org/conservation/protect-birds-danger-open-pipes>.

Recommendations: CDFW recommends that all hollow posts and pipes be capped to prevent wildlife entrapment and mortality because these structures mimic the natural cavities preferred by various bird species and other wildlife for shelter, nesting, and roosting. Metal fence stakes used on the Project site should be plugged with bolts or other plugging materials to avoid this hazard.

Comment 9: Monofilament Plastic Netting Prohibition

Issue: Monofilament plastic netting is commonly used as trellising on cannabis plants. This plastic netting can be harmful to wildlife such as from entanglement and/or becoming trapped.

Evidence of Impacts: Plastic netting used in these products has been found to entangle many different species of wildlife, including reptiles, amphibians, birds, and small mammals. CDFW has documented wildlife mortality related to monofilament including to raptor and mammal species. Additionally, plastic materials persist in the environment for years before breaking down into smaller fragments. When plastic fragments break down, these smaller fragments or microplastics often blow away or wash materials into waterways and habitat areas.

Recommendations: The Cannabis Program Update should prohibit use of monofilament plastic netting and identify comparable materials that may be allowed that are less harmful to fish and wildlife. Allowable alternatives may include bio-degradable material, such as jute and coir (coconut husk).

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FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

If you have any questions, please contact Emily Galli, Environmental Scientist at Emily.Galli@wildlife.ca.gov; or Wesley Stokes, Senior Environmental Scientist (Supervisory), at Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:

Erin Chappell

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Erin Chappell
Regional Manager
Bay Delta Region

cc: **California Department of Fish and Wildlife**

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