



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region
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Redding, CA 96001
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
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January 6, 2025

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**SUBJECT: REVIEW OF USE PERMIT 22-0005 AND ZONE AMENDMENT 23-0004,
STATE CLEARINGHOUSE NUMBER 2024120276, SHASTA COUNTY**

Dear Tara Petti:

The California Department of Fish and Wildlife (CDFW) has reviewed the Initial Study and Mitigated Negative Declaration (IS/MND), dated December 2024, for the above-referenced project (Project). CDFW appreciates this opportunity to comment on the Project, pursuant to the California Environmental Quality Act (CEQA) Guidelines¹.

CDFW's 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 and G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its Trustee Agency 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.

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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CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. Likewise, to the extent implementation of the Project as proposed may result in “take” as defined by state law, of any species protected under the California Endangered Species Act (CESA) (Fish and G. Code, § 2050 et seq.) or state listed rare plants pursuant to the Native Plant Protection Act (NPPA; Fish and G. Code § 1900 et seq.), authorization as provided by the applicable Fish and Game Code may be required.

Lake and Streambed Alteration Agreement

The IS/MND indicates eight or more stream features flow throughout the Project area. Although the IS/MND indicates Project activities will not impact these streams, please note Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of the bed, channel, or bank of any river, stream, or lake; or
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Lake and Streambed Alteration Program staff are available to assist and can be contacted at r1lsaredding@wildlife.ca.gov. To obtain information about the 1602 Notification process, please consult the [Lake and Streambed Alteration Program](#)².

California Endangered Species Act

Several CESA-listed species have the potential to occur within or adjacent to the Project area. Please be advised that a [CESA Incidental Take Permit](#)³ must be obtained if the Project has the potential to result in “take” (hunt, pursue, catch, capture, kill, or attempt thereof) of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA permit is subject to CEQA documentation; the CEQA document must specify impacts,

² <https://wildlife.ca.gov/Conservation/Environmental-Review/LSA>

³ <https://wildlife.ca.gov/Conservation/CESA/Permitting>

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mitigation measures, and a mitigation monitoring and reporting program. If the Project has the potential to result in take of a CESA-listed species, early consultation is encouraged, as significant modification to the Project may be necessary to minimize and fully mitigate impacts as required by Fish and Game Code section 2081(b)(2).

Project Description:

The Project is described in the IS/MND as follows:

"The project is a proposal to change the zoning for an approximately 132.90-acre undeveloped parcel from the National Recreation Area, Shasta Unit (NRA-S) to the NRA-S combined with Building Site Minimum (NRA-SBSM) and to subdivide the subject property into four parcels, 74.89 acres, 20.41 acres, 20.00 acres and 20.20 acres in size...

Development envelopes are identified on each of the proposed parcels and the remaining land is designated non-building/limited-disturbance area due to the heavily forested and steeply sloped terrain. The development envelopes are between .51 and 1.07 acres in size and are located in areas that were previously disturbed by logging activities. Potential significant impacts to riparian habitat and oak woodland habitat are not expected due to the limited nature of proposed improvements and the designation of development envelopes...

The 132.90-acre project site is generally located in the Sacramento Canyon region of Shasta County, approximately 0.5 miles west of the McCloud River Arm of Shasta Lake and 0.5 miles east of O'Brien, CA. The topography consists of ridges running in a southeasterly direction with slopes descending toward Shasta Lake. Slopes range from 0-30% slopes along small portions of the ridgelines to 40-60% on the majority of the subject property. The elevation is approximately 1,400 feet. The property is heavily forested with old sparsely vegetated landing sites. Several vegetative communities are present including Ponderosa Pine Forest and Montane Hardwood which are the dominant vegetative communities. Montane Hardwood-Conifer, Blue Oak Foothill Pine, and Mixed Chaparral are also present."

Environmental Setting

The 132.90-acre Project area is located approximately 0.5 miles west of the McCloud River Arm of Shasta Lake and 0.5 miles east of O'Brien, within the lower McCloud River watershed, as defined by the U.S. Forest Service (USFS). Land surrounding the Project area is within the Shasta Unit of the Shasta National Recreation Area and generally comprised of USFS-owned land. The

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Project area is heavily forested consisting of several vegetative communities including ponderosa pine forest, montane hardwood-conifer, blue oak foothill pine and mixed chaparral. The Project area is currently undeveloped. The McCloud limestone formations and their associated vegetated habitats, occur in the vicinity of the Project area. These habitats are unique in composition and biodiversity, and are home to several endemic species, and several more state special-status species. Documentation from sightings, nest locations and habitat/distribution models have indicated approximately 218 species of wildlife are associated with the McCloud Arm Watershed⁴. CDFW's Northern Region staff recognize this area for its unique and abundant biodiversity.

Comments and Recommendations

In December 2022, CDFW responded to an early consultation solicitation from Shasta County (Lead Agency). CDFW staff are pleased to see that some of our earlier recommendations were incorporated into the IS/MND including avoidance and minimization measures for migratory birds and bats. However, due to the high potential for several sensitive biological resources to occur within and/or adjacent to the Project area, CDFW finds the lack of biological surveys inadequate, and does not believe the Lead Agency substantiated the determination that the Project will cause no impact, less-than-significant impact and less-than-significant effects with mitigation incorporated. CDFW offers the following comments and recommendations to assist the Lead Agency in adequately identifying, avoiding, and minimizing potentially significant, direct, and indirect impacts on biological resources with the implementation of the Project.

Biological Assessment

The IS/MND indicates that a Biological Review (BR) was completed in October 2024. The BR was not included in the documents available for review to the public. Without attaching the BR, or including specific information from the BR into the IS/MND, it is impossible to determine which species and habitats with potential to occur were considered, if any protocol-level biological surveys were performed, and the overall adequacy of the determinations made regarding biological resources. It is also unclear if information from the BR was used in determining site development envelopes that would avoid sensitive species. The lack of necessary information does not allow for a meaningful review of Project-

⁴ Shasta Trinity National Forest, 1998. McCloud Arm Watershed Analysis. Available here: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5108913.pdf

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related effects by CDFW. Therefore, CDFW recommends re-posting the draft IS/MND for public review with information from the BR to more adequately disclose this Projects potential impacts to biological resources, with the addition of the following recommendations.

Rare Plants

While the IS/MND includes Measure IV.a.2, which proposes to survey for rare plants prior to Project initiation, conducting protocol-level rare plant surveys before this Project's approval is critical for informed decision making and facilitates a meaningful review of the project-related effects. The Project area has a high potential for rare plant species to occur, including but not limited to Shasta snow-wreath (*Neviusia cliffonii*, CESA Threatened, State Rank 2, endemic to Shasta County), oval-leaved viburnum (*Viburnum ellipticum*, State Rank 3, CRPR 2B.3), and starry-tentacled bushmallow (*Malacothamnus astrotentaculatus*, State Rank 2, CRPR 1B.3, endemic to Shasta and Tehama Counties). These plants have been observed in proximity to the Project site, in same/similar habitat conditions. Given the high potential of their occurrence, CDFW strongly recommends that the Lead Agency does not approve the Project until protocol-level rare plant surveys are conducted, results are shared with CDFW, and coordination conclusions are incorporated into the final IS/MND with any necessary avoidance, minimization, or mitigation measures. Surveying after Project approval is not recommended because significant impacts to existing rare plant populations may result in the need to avoid areas designated for development and redesign of project features, and may split rare plant populations among different parcels, which could require multiple mitigation strategies depending on ownership and individual site impacts.

All plants constituting California Rare Plant Rank 1B and 2B meet the definition of CESA under Fish and Game Code and are eligible for state listing. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA as they meet the definition of Rare or Endangered under CEQA Guidelines section 15125 (c) and/or section 15380. It does not appear that specific impacts to these species have been analyzed and Measure IV.a.2 as proposed may not satisfy the CEQA standards for deferred mitigation (CEQA Guidelines, § 15126.4), as the Project has yet to adopt specific mitigation strategies and performance standards for impacts on rare plants, nor identifies type of potential action(s) that may achieve such performance standards.

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CDFW strongly recommends the Lead Agency ensure rare plant surveys are performed prior to the release of the final IS/MND and Project approval. As a reminder, botanical surveys should be conducted by a qualified botanist following [CDFW'S March 2018 Protocols for Surveying and Evaluating Impacts to Special Status Native Plants Populations and Sensitive Natural Communities](#)⁵ during the blooming period for rare plants with potential to occur. If Shasta snow-wreath is observed and if impacts to Shasta snow-wreath cannot be feasibly avoided during Project facilitation, the Project proponent should coordinate with CDFW to obtain appropriate CESA authorization for take of Shasta snow wreath, including development and proposal of a strategy to fully mitigate impacts to the species and any associated habitat. As previously noted, issuance of a CESA permit will require CEQA documentation that specifies impacts, mitigation measures, and a mitigation monitoring and reporting program for the species subject to take.

Raptors

While the IS/MND includes Measure IV.d.1 for the protection of nesting birds, the IS/MND does not adequately address the high potential for nesting raptors in and adjacent to the Project area. Such potentially occurring raptors include, but are not limited to, bald eagle (*Haliaeetus leucocephalus*, CESA Endangered), osprey (*Pandion haliaetus*, CDFW Sensitive) and forest-dwelling owls protected under Fish and Game Code sections 3503, 3503.5, 3505, 3513 and California Code of Regulation, Title 14, sections 251.1, 652 and 783-786.6. eBird⁶ observations indicate that bald eagle, osprey and a variety of owl species have been observed directly adjacent to the Project area. Conducting protocol-level nesting surveys for bald eagle, osprey, and owls before this Project's approval is critical for informed decision making and allows for a meaningful review of the project-related effects.

Raptors display a high degree of fidelity to nest sites and nesting territories⁷. Measure IV.a.2 as proposed may not satisfy the CEQA standards for deferred mitigation (CEQA Guidelines, § 15126.4), as the Project has yet to adopt specific mitigation strategies for direct/indirect impacts to nest trees that may occur

⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>

⁶ <https://ebird.org/>

⁷ https://www.fws.gov/sites/default/files/documents/Utah_Field_Office_Raptor_Guidance.pdf

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within the Project area. CDFW strongly recommends the Lead Agency condition nesting raptor surveys to be performed by a qualified biologist prior to the final IS/MND and Project approval.

Additionally, it is recommended to revise Measure IV.d.1 to the following:

“The Project area contains suitable habitat for nesting birds. Nesting migratory birds and raptors, if present, could be directly or indirectly impacted by construction and maintenance activities. Implementation of nest season surveys, outlined below, would ensure that impacts to nesting birds are less than significant.

To avoid impacts to all nesting birds and/or raptors protected under Fish and Game Code sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act, one of the following should be implemented:

- a) Construction and maintenance activities of telecommunication structures and facilities should occur between September 1 and January 31, when birds are not anticipated to be nesting; or
- b) Construction and maintenance activities may occur during the nesting season if a pre-construction nesting bird survey is conducted by a qualified biologist to identify active nests in and adjacent to the Project area, and active nests are avoided.

Surveys should begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey should consider acoustic impacts and line of sight Project disturbances to determine a sufficient survey radius to maximize observations of nesting birds. A nesting bird survey report should be prepared and, at a minimum, the report should include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, presence of predators).

If an active nest is located during pre-construction surveys, avoidance and minimization measures should be implemented. Avoidance and minimization measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified during the survey, as well as ongoing monitoring by biologists.

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Nesting bird surveys should be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction nesting bird survey, the site should be resurveyed. “

Shasta Salamander

While the IS/MND briefly mentions that Shasta salamander (*Hydromantes samweli* [=shastae], CESA Threatened) has potential to occur in the Project area, the IS/MND does not discuss this species in detail. The Shasta salamander is a CESA-listed endemic species only known in the habitat around Shasta Lake, primarily associated with limestone features, but also inhabits non-limestone hardwood-conifer and chaparral habitat. The Shasta salamander is known to breed and lay eggs in limestone caverns and fissures, but individuals have been observed on the forest floor during rainy periods of fall, winter, and spring after dark. Individuals are known to seek cover under surface objects such as logs, rocks, limestone slabs, moss, duff, and limestone talus. During dry periods individuals are thought to retreat to subterranean refugia within limestone fissures or caves⁸.

Without the BR, it's not clear if Shasta salamander has been considered, or adequately surveyed for, as part of this Project's biological assessment. CDFW recommends a thorough on-site habitat assessment for Shasta salamander, performed by a qualified herpetologist. The habitat assessment should be included in an amended BR and/or final IS/MND. If the habitat assessment concludes that potentially suitable habitat occurs in the Project area, including but not limited to rock outcrops and their surrounding slopes, rock talus, rock crevices, rock fissures, loose soil, crevices near roots, rodent burrows, earthen tunnels in soils, moss, or duff, protocol-level Shasta salamander surveys should be performed in accordance with the 1999 *Survey Protocol for the Shasta Salamander (Hydromantes shastae)*⁹. This standardized survey methodology does not appear to be available on the internet. To retrieve the protocol survey methodology, please contact R1CEQARedding@wildlife.ca.gov. For detailed

⁸ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1462>

⁹ Olson D and Lewendal P 1999 Survey Protocol for the Shasta Salamander (*Hydromantes shastae*). Version 3.0. USDA Forest Service, Pacific Northwest Research Station.

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habitat descriptions and references, the [United States Fish and Wildlife 2021 Species Status Assessment Report](#)¹⁰ provides a thorough review of this species various habitat associations.

Please note that surveys must occur from late Fall to Spring (February and March are preferred), under restricted environmental conditions, detailed in the standardized methodology. At least one site visit should occur during the spring survey season. If Shasta salamanders are not found, then a total of three site visits with thorough surveys of the area need to be conducted, and site visits must be at least 10 days apart. "Presence" is designated when at least one Shasta salamander is observed.

If Shasta salamander is detected and impacts to Shasta salamander cannot be feasibly avoided during Project facilitation, the Project proponent should coordinate with CDFW to obtain appropriate CESA authorization for take of Shasta salamander and fully mitigate for impacts to the species and associated habitat.

Please note, *Hydromantes shastae* has been proposed to consist of cryptic genetic structuring that may warrant recognition of additional species named as *Hydromantes samweli* and *Hydromantes wintu*¹¹. Until formally reviewed by the Fish and Game Commission, all populations in the Shasta salamander complex are considered threatened under CESA.

Western Bumble Bee

Without the BR, it's not clear if special-status bumble bees were considered as part of this Project's biological assessment. Additionally, special-status bumble bees are not mentioned or discussed in the IS/MND. On September 30, 2022, the California Fish and Game Commission accepted a petition to list Western bumble bee (*Bombus occidentalis*, WBB) as endangered under CESA, advancing the species to the candidacy stage of the CESA listing process. Candidate species are granted full protection under CESA during this period. Take of any endangered, threatened, or candidate species that results from the Project is prohibited, except as authorized by state law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9).

WBB may inhabit diverse habitats including alpine ecosystems, woodlands, grasslands, shrublands, agricultural lands and urban landscapes. Without an

¹⁰ <https://ecos.fws.gov/ServCat/DownloadFile/204457>

¹¹ Bingham et al. 2018, Bull. Mus. Comp. Zool. 161(10):403-427

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adequate habitat assessment, and implementation of avoidance and minimization measures, potentially significant impacts to WBB may occur with the implementation of this Project.

Since this Project bisects the range of WBB and potentially suitable habitat appears to occur throughout the Project area, the Project has potential to significantly impact WBB. CDFW recommends a WBB habitat assessment performed by a qualified biologist familiar with California's special-status bumble bees and includes the assessment in an amended BR and/or final IS/MND. If the habitat assessment concludes the Project area has potentially suitable WBB, avoidance and minimization measures should be employed to avoid potential impacts in accordance with CDFW's [June 2023 Survey Considerations for California Endangered Species Act \(CESA\) Candidate Bumble Bee Species](#)¹²:

- Due to potentially suitable habitat within the Project site, within one-year prior land alteration and/or vegetation removal, a qualified biologist familiar with the species behavior and life history should conduct surveys to determine the presence/absence of WBB.
- Surveys should be conducted during the peak flying season when WBB is most likely to be detected above ground, between March 1 to October 1. Survey results, including negative findings, should be submitted to CDFW and submitted to the [California Bumble Bee Watch](#)¹³ to be verified by an expert prior to implementing ground-disturbing activities and/or vegetation removal. At minimum, a survey report should provide the following:
 - a) A description and map of the survey area, focusing on areas that could provide suitable habitat for WBB;
 - b) Field survey conditions that should include name(s) of qualified entomologist(s) and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched;
 - c) Map(s) showing the location of potential nests/colonies; and,
 - d) A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover,

¹² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline>

¹³ <https://www.bumblebeewatch.org/>

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and abundance) within impacted habitat (e.g., species list separated by vegetation class; density, cover, and abundance of each species).

- If WBB is detected, the Lead Agency in consultation with a CDFW should develop a plan to fully avoid impacts to WBB. The plan should include effective, specific, enforceable and feasible measures. An avoidance plan should be submitted to CDFW prior to implementing Project-related ground disturbing activities and/or vegetation removal where there may be impacts to WBB.
- If WBB is detected and impacts cannot be feasible avoided during Project facilitation, the Project proponent should coordinate with CDFW to obtain appropriate authorization for take of WBB and fully mitigate for impacts to the species and associated habitat.

Fisher

While the IS/MND briefly mentions fisher (*Pekania pennanti*, Northern ESU, CDFW Species of Special Concern) has potential to occur in the Project area, the IS/MND does not discuss this species in detail. The Project area has potentially suitable habitat for fisher and according to California Natural Diversity Database, an observation was reported 0.3 miles west from the Project area. Numerous studies have documented that fishers in the western United States utilize stands with specific forest characteristics for resting and denning, such as large trees and snags, coarse woody-debris, dense canopy closure and multiple-canopy layers, large diameter hardwoods and steep slopes near water¹⁴.

Without the BR, it's not clear if fisher has been considered as part of this Project's biological assessment, or if there are denning opportunities for fisher within the area of disturbance. CDFW recommends a fisher habitat assessment performed by a qualified biologist and included in an amended BR and/or final IS/MND. If the habitat assessment concludes the Project area has potentially suitable fisher habitat, avoidance and minimization measures should be employed to avoid potential direct/indirect impacts. To avoid and minimize the potential for direct/indirect impacts on fisher, CDFW recommends the following avoidance and minimization measures:

¹⁴ Powell, R. A., Zielinski, W. J. 1994. Fisher. In: Ruggiero L. F., Aubry K. B., Buskirk S. W., Zielinski W. J., tech. editors. The scientific basis for conserving forest carnivores: American marten, fisher, lynx, and wolverine. Fort Collins (CO): USDA Forest Service, Rocky Mtn. Forest and Range Exp. Station. GTR-RM-254. p 38- 73.

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- A qualified biologist shall conduct a search for potential natal/maternal denning structures within a ¼ mile buffer of the area of disturbance.
- If potentially suitable denning structures are detected, ground-disturbing activities shall be performed outside of the natal and maternal denning period for fisher, between March 1 and June 30th.
- If potentially suitable denning structures are detected and ground-disturbing activities cannot feasibly be performed outside of the natal and maternal denning period, a qualified biologist shall conduct surveys for denning fisher activity in accordance with the [United States Forest Service Survey protocol for fisher denning season: methods for informing denning protection measures](#)¹⁵
- If fisher are not detected, ground-disturbing Project activities may proceed. If denning fisher are detected, ground-disturbing Project activities shall occur after denning has been completed, in coordination with CDFW.

Bats

Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment (Fish & G. Code, § 4150; Cal. Code of Regs., § 251.1). Construction activities, including ground disturbance, vegetation removal, and any activities leading to increased noise levels, may have direct and/or indirect impacts on bats and bat roosts. Trees that contain cavities, crevices, or exfoliated bark have high potential to be used by various bat species.

While CDFW staff are pleased to see the draft IS/MND considers potential impacts to bats, Measure IV.a.1 lacks clarifying details. CDFW recommends revising IV.a.1 to include the following:

“Trees that contain cavities, crevices, or exfoliated bark have high potential to be used by various bat species. If land alteration and/or removal of trees with the above-referenced characteristics will occur, a thorough survey should be conducted by a qualified biologist to determine if bat roosting opportunities are present prior to tree removal. Two-step removal of trees containing occupied bat roosts or providing suitable bat habitat, must only be conducted during seasonal periods of bat activity and may not be conducted in summer months (May 1 to August 14). Trees with 12” diameter at breast height (DBH) or greater

¹⁵ https://research.fs.usda.gov/sites/default/files/2023-12/rmrs-usfs_region_5_fisher_denning_lop_protocol_march9_2020.pdf

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with potentially suitable roosting features should be clearly marked by a qualified biologist and may be removed as follows:

1. To avoid impacts to roosting bats, removal of trees should occur only during the following time frames and subject to the following weather conditions, or as otherwise approved/recommended by a qualified biologist:
 - Between March 15 and April 30, and between August 15 and October 1; and
 - Between October 2 and March 14 when evening temperatures are above 45°F, and no more than ½" of rainfall within a 24-hour period prior to tree removal.
2. Trees shall be removed using a two-step process to allow bats the opportunity to abandon the roost prior to removal. The two-sept removal process is as follows:
 - Day 1: Remove small-diameter trees, brush, and non-habitat features of large trees (branches without cavities, crevices, or exfoliating bark) to create noise and vibration disturbance on the tree and to alter the air flow and temperature around the roost feature thus encouraging bats to vacate roost features on their own. The tree shall then be left for 24 hours to allow the bats to move to another roost site. No excavators, grinders, or other heavy equipment should be used for first day trimming of bat habitat trees.
 - Day 2: If bats may be in branches that can be removed from the tree and set aside, cut the branches off intact and set them upright against trees away from the Project area to allow any bats present to passively escape. Then, remove the remainder of the tree."

Native Vegetation in Landscaping

The IS/MND indicates landscaping throughout the Project area. The typical landscaping palette, common throughout Shasta County, includes that of non-native species which are not well suited to the region's drought conditions and generally do not support our local biodiversity. CDFW strongly encourages the Lead Agency to approve a landscape palette with vegetation native to our region from local plant nurseries. Benefits of utilizing native vegetation in landscaping are numerous and include providing vital resources for native wildlife including beneficial pollinators, conserving water, reducing pesticide use, and reducing vegetation maintenance.

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The California Native Plant Society (CNPS) website includes a variety of useful information and tools to help determine which native species occur in a particular area, information on care and maintenance of native species, and contacts for purchasing native plants or seeds. The CNPS tool [Calscape](#)¹⁶ generates a list of native plants that grow in an area based on a specific address and can be used to develop a planting palette for landscaping plans. For more information regarding the importance of using native species in landscaping, please refer to the [CNPS Guidelines for Landscaping to Protect Native Vegetation from Genetic Degradation](#)¹⁷.

Low Impact Development

With consideration to the proposed Project activities and the topography throughout the Project area, CDFW recommends the implementation of [Low Impact Development](#)¹⁸ (LID) strategies to prevent a net-increase in stormwater runoff from new development. LID strategies may include permeable pavement, vegetated stormwater bio-swales and retention basins to treat, retain and infiltrate stormwater runoff on-site. These LID strategies are typically designed to prevent Project generated stormwater runoff from exceeding that of a 100-year storm event, to protect water quality and manage stormwater as close to its source as possible, thus mitigating potential flooding and the outflow of toxic pollutants such as 6PPD-quinone, a chemical contaminant derived from vehicle tires, suspected to negatively impact aquatic organisms. Ideally, post project stormwater run-off volume, rate and duration will match pre-project conditions and hydro modification would not occur as a result of the Project. CDFW supports the use of LID strategies because they minimize impacts to aquatic habitats by filtering out pollutants, decrease peak flows, minimize erosion, and increase ground water recharge.

Lighting

Studies have shown that artificial lighting has adverse effects on wildlife and plant species. The effects may include, but are not limited to, alteration of flowering, photosynthesis, foraging, reproduction, navigation (being attracted to or deterred from), migration patterns (including movement barriers of light) and predator-prey dynamics. To minimize adverse effects of artificial light on wildlife, CDFW recommends that lighting fixtures associated with the Project be

¹⁶ <https://calscape.org/>

¹⁷ <https://www.cnps.org/wp-content/uploads/2018/04/landscaping.pdf>

¹⁸ https://www.waterboards.ca.gov/water_issues/programs/low_impact_development/

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downward facing, fully shielded, and designed and installed to minimize light-pollution and spillover of light onto adjacent wildlife habitat. [Studies](#)¹⁹ have found that it's best to use lower-intensity, warmer-colored lighting that may also be lower on the light spectrum (lower Kelvin values with fewer short-wavelength blue light emissions).

Avoiding Inadvertent Wildlife Entrapment

If Project activities include trenching or excavating, CDFW recommends securely covering any open trench or excavation prior to stopping work each day and/or a wildlife exit ramp should be installed to prevent wildlife entrapment. If pipes are left out onsite, CDFW recommends inspection for wildlife prior to burying, capping, moving, or filling.

Fencing

CDFW understands fences are essential for controlling trespass however, inappropriately designed or placed fencing may create serious hazards and/or barriers for wildlife. Therefore, CDFW strongly encourages perimeter fencing be designed and implemented to alleviate potential hazards to wildlife. This resource may provide useful information about wildlife friendly fencing techniques: [A Landowners Guide to Wildlife Friendly Fences](#)²⁰.

Submitting Data

CEQA requires that information collected and developed for environmental documents is incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Public Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during surveys to the [California Natural Diversity Database](#)²¹.

Promoting Collaboration

CDFW is charged with preserving and protecting the state's diverse ecosystems and wildlife; therefore, CDFW maintains a strong commitment to collaborate with local agencies. CDFW staff are enthusiastic to continue assisting the Lead Agency in implementing comprehensive avoidance and

¹⁹ <https://www.annualreviews.org/content/journals/10.1146/annurev-ecolsys-110316-022745>

²⁰ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=161708>

²¹ <https://wildlife.ca.gov/Data/CNDDDB>

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minimization strategies for the benefit of California's sensitive resources and aligning regulatory frameworks.

Conclusion

CDFW appreciates the opportunity to comment on the IS/MND and to assist the Lead Agency in identifying, avoiding, minimizing and mitigating potentially significant Project impacts to biological resources. If you have any questions, please contact Erika Iacona, Senior Environmental Scientist (Specialist) by email at R1CEQARedding@wildlife.ca.gov.

Sincerely,

DocuSigned by:

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Jason Roberts, Acting for
Tina Bartlett, Regional Manager
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