



Project Name: Last Chance Grade Permanent Restoration
DIST-CO-RTE-PM: 01-DN-101-PM 12.7 to 16.5
EA: 01-0F280
EFIS ID: 0115000099

CALIFORNIA DEPARTMENT OF TRANSPORTATION FINDINGS

FOR

LAST CHANCE GRADE PERMANENT RESTORATION PROJECT THAT WOULD DEVELOP A LONG-TERM SOLUTION TO THE INSTABILITY AND POTENTIAL ROADWAY FAILURE ON U.S. 101 BETWEEN POST MILES 12.7 AND 16.5 IN DEL NORTE COUNTY

The following information is presented to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091) and the Department of Transportation and California Transportation Commission Environmental Regulations (Title 21, California Code of Regulations, Division 2, Chapter 11, Section 1501 et seq.). Reference is made to the Final Environmental Impact Report (EIR) for the project, which is the basic source for the information.

The following effects have been identified in the EIR as resulting from the project. Effects found not to be significant have not been included.

Biological Resources: Sensitive Natural Communities

Adverse Environmental Effects:

Late-successional redwood forest and Sitka spruce forest are considered Sensitive Natural Communities by the California Department of Fish and Wildlife. Alternative F would result in permanent impacts and habitat conversion on 1.09 acres of late-successional redwood forest (including large mature redwoods), resulting in a significant and unavoidable impact on late-successional redwood forest. Alternative X would affect 0.89 acre and Alternative F would affect 1.13 acres of late-successional Sitka spruce forest and include the removal of large mature trees, resulting in a significant and unavoidable impact on late-successional Sitka spruce forest.

Findings:

Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

Statement of Facts:

Mitigation measure Bio-1 (described below) would fund restoration and preservation projects to mitigate for the loss of late-successional redwood and Sitka spruce conifer forest. However, impacts from the removal of late-successional forest habitat would remain significant, as the identified mitigation measures may take multiple centuries to result in replacement of lost habitat. See the Statement of Overriding Considerations prepared for the project for the specific overriding economic, social, and other benefits of the project that outweigh these significant and unavoidable impacts.

- **Bio-1:** Caltrans would undertake one or more mitigation projects to compensate for the loss of late successional (mature to old-growth) redwood, Douglas-fir, and Sitka spruce conifer forest and associated large trees. The mitigation project(s) would attempt to offset impacts based on acreage removed and temporal loss of function.

Typically, mitigation for Caltrans projects is established by applying ratios to compensate for the temporal loss of function of impacted habitat (e.g., 2:1, 3:1, etc.). However, these ratios are for resources where functional equivalency can be achieved within the foreseeable future. Mitigating for late successional forests is more complex, as the unique character and qualities of these forests cannot be replaced in the near-term. These forests, particularly those that support long-lived species such as coast redwood, can take hundreds of years to establish on their own.

Mitigation strategies for late successional forest communities would include forest restoration and preservation or forest restoration only. These mitigation strategies have been refined based on comments received on the DED and would continue to take into consideration input from project stakeholders. Mitigation would be initiated prior to the completion of project construction. Details pertaining to each mitigation strategy are outlined below:

- **Mitigation Strategy One:** Fund forest restoration projects that accelerate the development of late successional characteristics in younger-aged stands and preserve forested lands to further habitat continuity for late successional forests and/or publicly managed lands and special status species.

Funding thinning projects in dense, early successional stands would accelerate tree growth, increase tree vigor, increase biodiversity for botanical and wildlife species, buffer remaining late successional stands from high intensity stand-damaging fires, and increase carbon sequestration. Current available research supports that thinning young stands could accelerate the

formation of late successional characteristics and functions in approximately 100 years for Sitka spruce, 150 years for Douglas-fir, and 200 years for redwood stands, though this is highly variable based on the treated stand's age, location, and position within the landscape.

In addition to funding thinning projects, this mitigation strategy would include:

- An endowment for the long-term management of treated stands, including additional actions to accelerate the development of late successional characteristics such as additional thinning, crown modification to improve structural complexity, etc.
- A research endowment to fund studies to guide forest management, monitor the efficacy of the thinning treatments, and identify appropriate adaptive management strategies.

Specific objectives related to forest thinning treatments for mitigation include, but are not limited to:

- Accelerate the recovery of previously logged young successional conifer stands to mature forest structure and function.
- Create connectivity between the remaining fragments of late successional forest communities.
- Improve stream habitat, reduce erosion, restore hydrology, and enhance landscape resiliency.

Impacts to sensitive natural communities and ESHA are typically mitigated at a 3:1 ratio; however, given the time it may take for treated stands to reach functional equivalency of the stands impacted by the project, the amount of mitigation required may be based on the length of time it would take to restore functional equivalency of late successional forest impacted by the proposed project, i.e., the number of years it would take for the treated stands to reach the functional equivalency of the impacted habitat. Therefore, mitigation would be 100:1 for late successional Sitka spruce forest, 150:1 for late successional Douglas-fir forest, and 200:1 for late successional coast redwood forest.

Based on the anticipated impact quantities and ratios discussed above, Caltrans would fund the restoration of a minimum of 335 acres of forest habitat at Redwoods Rising¹, a landscape-scale restoration project managed by RNSP. This mitigation strategy has been identified through coordination and consultation with RNSP. Although the total area was determined through species-specific ratios as shown below, it is anticipated that forest restoration would be completed based on the total acreage shown in Table 1. Funding

¹ <https://www.nps.gov/redw/redwoodsrisingmain.htm>

such restoration would occur prior to the commencement of construction activities through a Cooperative Agreement or similar agreement with RNSP.

Table 1. Mitigation Strategy 1: Forest Restoration at Redwood Rising

Habitat Type	Impact (Acres)	Mitigation Ratio	Mitigation Total (Acres)
Redwood Late Successional	1.09	200:1	218
Douglas-Fir Late Successional	0.02	150:1	3
Sitka Spruce Late Successional	1.13	100:1	113
Total	2.24	N/A	335¹

¹ The sum of restoration acres (334) is rounded up to 335.

Preservation would be accomplished through the purchase of existing forest habitat, comprised of the aforementioned forest types, in Del Norte and/or Humboldt counties that is threatened by logging or development, with the intent of conveying the preserved habitat to an agency or organization that would manage it in perpetuity. Forest habitat within the coastal zone and located adjacent to late successional forests and/or publicly managed lands would be prioritized for preservation. Preservation of forest habitat adjacent to late successional forests and/or publicly managed lands would provide buffer habitat, reducing edge effects such as encroachment of invasive species, wildfire, and other external disturbances. Preservation would be implemented using the same ratios as forest restoration, presented in Table 1, resulting in preservation of a minimum of 335 acres. This preservation would be coordinated to provide the greatest benefit to existing late successional forests, and/or publicly managed lands, and special status species. Caltrans would develop a Long-term Management Plan identifying specific goals, objectives, and associated tasks based on the specific needs of the preserved forested habitat. Costs for implementation of the Long-term Management Plan would be developed in close coordination with project partners via a Property Analysis Record, to be held within an endowment and managed by an entity qualified to hold and manage endowments consistent with California Government Code Section 65968(e).

Preservation of existing forest habitat for mitigation would also include:

- An endowment for the long-term management/maintenance of preserved habitats.
- A deed restriction or conservation easement that restricts future land use practices that could adversely affect the protected habitat, thereby ensuring protection of the habitat in perpetuity.

As stated above, this mitigation strategy proposes forest restoration in combination with preservation of forested habitats. However, acquiring land with forest habitat suitable for preservation presents several challenges including, but not limited to, availability of land for purchase, willingness of

property owners to sell at fair market value, issues arising during the due diligence process, and identification of an entity qualified and willing to hold the property and/or conservation easement(s) and conduct long-term management. If progress becomes stalled and Mitigation Strategy One is determined to be infeasible, Mitigation Strategy Two would then be pursued.

- **Mitigation Strategy Two:** Fund forest restoration projects that accelerate the development of late successional characteristics in younger-aged stands.

Mitigation Strategy Two would fund additional restoration beyond what is proposed under Mitigation Strategy One to account for the inability to effectively implement preservation.

Based on the anticipated impact quantities and ratios discussed in Table 1, Caltrans would fund the additional restoration of 335 acres of forest habitat in addition to the 335 acres discussed in Mitigation Strategy One for a total of 670 acres of forest restoration. Funding such restoration would occur prior to the commencement of construction activities through a Cooperative Agreement or similar agreement with RNSP.

Similar to Mitigation Strategy One, in addition to funding thinning projects, this mitigation strategy would include:

- An endowment for the long-term management of treated stands, including additional actions to accelerate the development of late successional characteristics such as additional thinning, crown modification to improve structural complexity, etc.
- A research endowment to fund studies to guide forest management, monitor the efficacy of the thinning treatments, and identify appropriate adaptive management strategies.

Biological Resources: Special Status Animal Species

Adverse Environmental Effects:

Marbled murrelet (MAMU) and its critical habitat: MAMU, a federally threatened and state endangered species, and its critical habitat, are present in the project area. Both Alternatives X and F would permanently remove MAMU critical habitat through construction of highway infrastructure and habitat conversion (tree removal to facilitate cut and fill needed for construction). Because of the restrictive habitat requirements of this species and the rarity of this habitat, even with standard measures incorporated, habitat removal would have a significant and unavoidable impact on MAMU and its critical habitat.

Special status bats (pallid bat and Townsend's big-eared bat): Under both Alternatives X and F, tree removal has the potential to significantly affect special status bat species by injuring or killing them when trees are felled.

Findings:

Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

Statement of Facts:

Mitigation measure Bio-1 (described above) would fund restoration and preservation projects to mitigate for the loss of late-successional redwood, Douglas-fir, and Sitka spruce conifer forest and would lessen impacts on MAMU and its critical habitat. However, impacts from the removal of late-successional forest would remain significant, as proposed mitigation measures may take multiple centuries to result in replacement of lost habitat. See the Statement of Overriding Considerations prepared for the project for the specific overriding economic, social, and other benefits of the project that outweigh these significant and unavoidable impacts.

Mitigation measures Bio-6, Bio-7, Bio-8, and Bio-9 would reduce impacts on special status bats by not felling trees when bats cannot leave (maternity and torpor) and getting day-roosting bats to leave occupied trees prior to felling. With implementation of the following measures, impacts on special status bats would be reduced to a less-than-significant level.

- **Bio-6:** Tree removal would be conducted outside of the maternity season (typically March 1 through September 1) and the winter torpor period (December 1 through February 28), to the extent possible. The limited operating periods may be modified at the recommendation of a biologist based on regional bat roosting data, site-specific roost status, and/or annual climate variation.
- **Bio-7:** Prior to tree removal, a qualified bat biologist would examine trees to be removed or trimmed for suitable bat roosting habitat. Trees greater than 24 inches diameter at breast height (DBH) or any size with habitat features (e.g., tree cavities, basal hollows, loose or peeling bark, larger snags) would be further evaluated for the potential to support roosting habitat, and the area within accessible cavities (and on the outside of the tree, as feasible) for bat sign (e.g., guano, culled insect parts, staining), as feasible. The qualified bat biologist would be approved by Caltrans and be knowledgeable on bat life history, species identification, and identification of potential roosting habitat.

Where suitable cavity bat roosting habitat is identified, the qualified bat biologist would further evaluate the potential use of the tree by bats by conducting an evening emergence survey and/or using a directional night-vision camera to view into the cavity to identify presence of bats at cavities accessible from the ground. Emergence surveys would be conducted no more than 2 weeks prior to start of tree removal activities. Surveys would be conducted 30 minutes before sunset to 1 hour after sunset (or until there is no visibility) and during favorable weather

conditions (calm nights with temperatures conducive to bat activity and no precipitation predicted). Acoustic detectors may be used to detect emerging bats and identify species.

If bats are documented and the site is conducive, the roost is safely accessible from the ground, and it is feasibly appropriate (limited access points), an exclusion device may be installed prior to tree removal. Any exclusion device would be installed under the guidance of a qualified bat biologist and when weather is fair. No exclusion would occur during the maternity season.

- **Bio-8:** If the bat biologist determines during the preconstruction tree surveys (Bio-7) that the tree is suitable for bat roosting, the biologist would use feasible site-specific means to modify and disturb the habitat to allow bats to wake and leave the roost prior to tree felling. These disturbances may include (1) modifying habitat conditions such as removing smaller non-habitat trees at least a day prior to removing habitat trees; (2) creating a vibrational disturbance over the course of a few minutes with a chainsaw, knocking the tree with a sledgehammer, using equipment to shake the tree, or removing the tree in pieces (sections or limbs) over the course of a few days; (3) changing the structure of the potential roost by lifting bark to modify temperature, wind, light, and precipitation; and/or (4) using ultrasound deterrents. The tree disturbance would be monitored by the construction monitor (Bio-9).
- **Bio-9:** A qualified construction monitor would be present on site to conduct monitoring during removal of the trees identified during preconstruction surveys (Bio-7) as having the potential to support bat roosting in tree cavities. Following tree removal, the construction monitor would search downed vegetation for dead and injured bats. Injured bats would be transported to the nearest wildlife rehabilitation facility (Humboldt Wildlife Care Center near Arcata). The qualified construction monitor would be approved by Caltrans and be knowledgeable on bat life history, species identification, and roosting habitat.

Greenhouse Gas Emissions

Adverse Environmental Effects:

The project would increase greenhouse gas (GHG) emissions over existing levels. Post-construction operation of the tunnel (i.e., lighting and ventilation) under Alternative F would generate approximately 221 metric tons of carbon dioxide equivalent per year. Alternatives F and X require helicopter-assisted geotechnical investigations and Alternative F requires substantial tunneling and off-site disposal of tunnel spoils, which would likely result in relatively high GHG emissions, a potentially significant impact.

Findings

Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

Statement of Facts:

Mitigation measure Bio-1 (discussed above) would compensate for the loss of late-successional (mature to old-growth) redwood, Douglas-fir, and Sitka spruce conifer forest and associated large trees. Carbon sequestration from the proposed forest restoration would be expected to fully offset total project emissions over 25 years. The project has incorporated this mitigation measure to reduce GHG emissions impacts to a less-than-significant level.

Conclusion

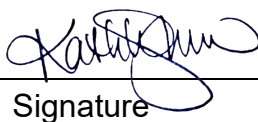
Pursuant to Section 15093 of the State CEQA Guidelines, decision-makers are required to balance the benefits of a project against its unavoidable environmental risks in determining whether to approve a project. If the benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." As the project would have impacts that are significant and unavoidable, a Statement of Overriding Considerations has been prepared.

For those measures described above that serve to avoid or lessen the significant environmental effects as identified in the Final EIR, an Environmental Commitments Record (ECR) has been prepared for the project. The ECR will guide implementation of CEQA project mitigation measures by assigning implementation, monitoring, and reporting responsibilities and specifying timelines.

Caltrans is the custodian of the documents and other materials that constitute the record of proceedings upon which the findings are based; the documents and other materials are contained at the Caltrans District 1 Office at 1656 Union Street, Eureka, CA 95501.

Kathie Vizgaudis on behalf of Matthew Brady

District Director (or designee)



Signature

July 10, 2026

Date