

CHAPTER 3 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) EVALUATION

The proposed project could have an adverse impact on the environment, and must satisfy the requirements of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). This combined Environmental Assessment (EA)/Environmental Impact Report (EIR) has been prepared in accordance with NEPA and CEQA.

Determination of significance under NEPA regulations involves consideration of context (setting) and intensity of the impact. The context to be considered may include society as a whole (human, national), the affected region, the affected interests, or the locality. Short and long term effects are relevant, though NEPA does not require individual significant effects to be specifically identified in an EA. For a site-specific action, such as the proposed tunnel project, significance would depend upon the effects upon the affected region or locale. Under NEPA, the degree to which a resource is impacted is used to determine whether a NEPA Environmental Impact Statement (EIS) or some other lower level of NEPA documentation would be required. For the purposes of the impact discussion in this document, determination of significant or potentially significant impacts is made only in the context of CEQA.

3.1 Determining Significance Under CEQA

The CEQA Guidelines Section 16064 (b) broadly defines a significant effect on the environment as a substantial or potentially substantial adverse change in the physical environment. One of the basic purposes of the CEQA is to inform state, regional, and local governmental decision makers and the public of impacts of proposed activities, and in particular, those impacts that are either significant or potentially significant.

Determining and documenting whether an activity may have a significant effect on the environment plays a critical role in the CEQA process. CEQA requires specific significant impacts to be determined in an EIR. Determination of significance under CEQA guidelines begins by eliminating impacts that are obviously insignificant. Those impacts whose significance is uncertain or potentially significant undergo studies. The studies determine if the impacts result in substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change may be considered in determining whether the physical change is significant. CEQA requires substantial evidence—"facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts"—in determining significance. Serious public controversy over the environmental effects of a project shall, however, be treated as an indicator of significance. Additionally, CEQA distinguishes four mandatory findings of significance:

- Potential to substantially degrade the environment, reduce the habitat of a fish and wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten or eliminate a plant or animal community, reduce the number or range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory;
- Potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals;
- Environmental effects that are individually limited but cumulatively considerable; and

- Environmental effects will cause substantial adverse effects on human beings, either directly or indirectly.

3.1.1 CEQA ENVIRONMENTAL CHECKLIST

The CEQA Environmental Significance Checklist (Appendix A) identifies physical, biological, social, and economic factors that might be affected by the proposed project. This checklist is not a National Environmental Policy Act (NEPA) requirement. The findings for the CEQA checklist were determined in consultation with the technical studies prepared for this project listed in Appendix G. The CEQA impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. In many cases, background studies performed in connection with the project indicate no impacts. A “no impact” reflects this determination.

3.1.2 DISCUSSION OF SIGNIFICANT IMPACTS UNDER CEQA

3.1.2.1 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The proposed project will not have any significant environmental effects. Chapter 2 discusses various environmental settings that may be affected by the Caldecott Improvement Project.

3.1.2.2 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

The proposed project will not have any environmental effects that would remain significant even after mitigation measures are taken.

3.1.3 MITIGATION MEASURES FOR SIGNIFICANT IMPACTS UNDER CEQA

The CEQA Checklist identified only the following items as a “Potentially Significant Impact” or “Less Than Significant With Mitigation Incorporation.”

3.1.3.1 AESTHETICS

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

To lessen visual effects, the following mitigation measures are proposed:

- Vines and/or shrubs would be planted to cover or completely screen views of new sound walls and retaining walls constructed as part of this project.
- Sound walls and retaining walls would be designed with Art Deco features to compliment the existing and new tunnel portal structures;
- Sound walls would be designed with surface texture and stain to enhance the rural character of the corridor to blend with existing facilities;
- Areas where vegetation is removed for project construction shall be revegetated with similar types of tree and shrub species. Areas of particular concern for revegetation include the hillsides surrounding the new tunnel portal and the area between State Route 24 and Caldecott Lane; and

- Existing oak trees in areas affected by project construction shall be replaced with No. 15 (15-gal) size oak trees of same or approved species at a 3:1 ratio.

Implementation of these mitigation measures would reduce the adverse visual effects of the build alternatives.

3.1.3.2 HYDROLOGY AND WATER QUALITY

a) Violate any water quality standards or waste discharge requirements?

To minimize the project's impacts on water quality standards or waste discharge requirements, the following mitigation measures are proposed:

Best Management Practices (BMPs) will be incorporated into this project to reduce the discharge of pollutants during construction as well as permanently to the Maximum Extent Practicable (MEP). These BMPs fall into three categories, Temporary Construction Site BMPs, Design Pollution Prevention BMPs, and Permanent Treatment BMPs.

(a) Construction Site BMP

Construction Site BMPs are implemented during construction activities to reduce pollutants in storm water discharges throughout construction. One critical construction activity, dewatering, will be necessary for this project because of the likelihood of encountering groundwater during tunnel excavation. Early discussion will be initiated regarding the handling and disposal of this water during the design phase. Groundwater will be treated and discharged into the sanitary sewer inlet of EBMUD under permit agreements. Dewatering BMPs and temporary holding devices such as Baker Tanks will be included in the special contract provisions to meet the dewatering requirements. Grading of existing slopes will be required. However, the use of retaining structures, especially in excavation areas, will minimize the amount of grading required. Temporary fences, construction entrance/exit and temporary soil stabilizers are some of the temporary erosion and water pollution control measures that will be utilized in combination to prevent and minimize soil erosion and sediment discharges during construction. Given a projected disturbance of 10.5 hectares (25.9 acres), Storm Water Pollution Prevention Plan (SWPPP) will be developed during construction. This dynamic document addresses the deployment of various erosion and water pollution control measures that are required commensurate to changing construction activities.

(b) Permanent Design Pollution Prevention BMPs

Design Pollution Prevention BMPs are permanent measures to improve storm water quality by reducing erosion, stabilize disturbed soil areas, and maximize vegetated surfaces. Erosion control measures will be provided on all disturbed areas.

As earlier noted, the use of retaining wall structures will minimize the amount of open disturbed soil. Erosion control measures will utilize a combination of source and sediment control measures to prevent and minimize erosion from soil disturbed areas. Source controls will utilize erosion control netting in combination with hydroseeding. The biodegradable netting is effective in providing good initial mechanical protection while seed applied during the hydroseeding operation germinates and establishes itself. Other forms of source control such as tacked straw will also be used when applicable. Sediment controls such as biodegradable fiber rolls are used to retain sediments and to help control runoff from disturbed slope areas.

Outlet protection and velocity dissipation devices placed at the downstream end of culverts and channels are also Design Pollution Prevention BMPs that reduce runoff velocity and control erosion and scour. The need of these devices for this project will be further investigated during the design phase.

(c) Permanent Treatment BMPs

Since this project is considered a major reconstruction project, with an estimated disturbed soil area over 1.2 hectares (3 acres) for all alternatives except the No-Build, it is not exempt from the consideration process for evaluating whether incorporating Treatment BMPs are feasible. Treatment BMPs are permanent devices and facilities treating storm water runoff. Caltrans approved Treatment BMPs are Biofiltration Swales, Infiltration Basins, Detention Basins, Traction Sand Traps, Dry Weather Flow Diversions, Media Filters, Gross Solids Removal Devices (GSRDs), Multi-chamber Treatment Trains, and Wet Basins. Those most feasible in the Bay Area are Biofiltration Swales, Infiltration Basins, Detention Basins, Dry Weather Flow Diversions, Media Filters, Multi-chamber Treatment Trains, and Wet Basins.

For either alternative, it is proposed to include a Dry Weather Flow Diversion device to accommodate tunnel washing and for emergency spills. Dry Weather Flow Diversion Devices direct flow through a pipe or channel to a local municipal sanitary sewer system for conveyance and treatment at a local wastewater treatment plant during dry weather. As previously mentioned, the existing tunnels currently have these devices to route tunnel washings to EBMUD, and similarly, the new bore will propose this device as well.

For the Alameda County side of the project, preliminary investigations show that media filters may be feasible to treat roadway runoff. On the Contra Costa side of the tunnel, biofiltration swales, infiltration basins, and detention basins were evaluated as possible types of Treatment BMPs. During the design phase, the feasibility of these alternatives will be further investigated.

3.1.3.3 NOISE

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Noise generated while constructing the tunnel improvement project could at times reach levels higher than the existing traffic noise. The impact from construction activities would be temporary and can be reasonably minimized by implementing provisions in Section 7-1.01I, "Sound Control Requirements" of the Caltrans Standard Specifications, which may include the following measures:

- *Consider constructing noise barriers as first items of work, where feasible;*
- *Erect temporary noise barriers, if necessary; and*
- *Keep the community informed of upcoming especially noisy construction activities and establish a field office to handle noise complaints.*