

## CHAPTER FIVE

# CUMULATIVE IMPACTS ANALYSIS

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The Council on Environmental Quality (CEQ) identifies the impacts that must be addressed and considered by federal agencies in satisfying the requirements of the *National Environmental Policy Act* (NEPA). This includes permanent, temporary, indirect, and cumulative impacts. The purpose of this chapter is to provide an analysis of the cumulative impacts (also known as a cumulative effects analysis) anticipated as a result of this Doyle Drive Project.

A cumulative effects analysis is intended to describe the sum total of all impacts to a particular resource that have occurred, are occurring, and will likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect effects of the proposed action.

Cumulative impacts can be positive as well as negative depending on the environmental resource (e.g., air quality, wetlands, etc.) being evaluated. It is possible that some environmental resources can be negatively and others positively affected by the same proposed project. Most cumulative effects analyses identify varying levels of beneficial and adverse effects depending on the environmental resources and the specific actions. Because of this potential mixture of effects, it is sometimes difficult to determine which alternative is best.

## 5.1 Guidance

This analysis follows guidance from the CEQ, the Federal Highway Administration (FHWA) and the implementing regulations of the *California Environmental Quality Act* (CEQA). Brief discussions of CEQ, FHWA, and CEQA guidance follow.

### 5.1.1 Council on Environmental Quality

CEQ regulations implementing the procedural provisions of NEPA define cumulative effects as:

*The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.*

The cumulative effects of an action may be undetectable when viewed in the individual context of general impacts, but they can add to other disturbances and eventually lead to a measurable environmental change. Cumulative effects should be evaluated along with the overall impacts analysis of each alternative. The range of alternatives considered should include the No-Build Alternative as a baseline against which cumulative effects are evaluated. The range of actions

to be considered include not only the proposed project but all connected and similar actions that could contribute to cumulative effects.

Related actions should be addressed in the same analysis. CEQ recommends that an agency's analysis accomplish the following:

- Focus on the effects and resources within the context of the proposed action.
- Present a concise list of issues that have relevance to the anticipated effects of the proposed action or eventual decision.
- Reach conclusions based on the best available data at the time of the analysis.
- Rely on information from other agencies and organizations on reasonably foreseeable projects or activities that are beyond the scope of the analyzing agencies purview.
- Relate to the geographic scope of the proposed project.
- Relate to the temporal period (time frame) of the proposed project.

A cumulative effects analysis involves assumptions and uncertainties. Monitoring programs and/or research can be identified to improve the available information and, thus, the analyses in the future. The absence of an ideal database should not prevent the completion of a cumulative effects analysis.

### 5.1.2 Federal Highway Administration

FHWA environmental regulations do not explicitly address cumulative effects. However, FHWA policy is provided in a memorandum and associated position paper<sup>1</sup> dated August 20, 1992, and a memorandum<sup>2</sup> dated January 31, 2003. The January 31, 2003, memorandum states:

*“An appropriately thorough review of the probable direct and indirect impacts of FHWA actions and documentation of other cumulative effects on specific resources is essential to a reasoned and informed project decision and will assist in attaining FHWA’s environmental streamlining and stewardship goals.”*

Per FHWA guidance, cumulative effects analysis is resource-specific and generally performed for the environmental resources directly affected by the action. However, not all of the environmental resources directly affected by a project will require a cumulative effects analysis. The environmental resources subject to cumulative effects analysis should be determined on a case-by-case basis early in the NEPA process, generally as part of early coordination or scoping.

<sup>1</sup> Position Paper on Secondary/Cumulative Impact Assessment in the Highway Development Process.

<sup>2</sup> Interim Guidance: Questions and Answers Regarding Indirect and Cumulative Impact Considerations in the NEPA Process.

### 5.1.3 California Environmental Quality Act

*CEQA Guidelines* provide:

*that the lead agency identify reasonably foreseeable projects in the vicinity of the proposed project, summarize their effects, identify the contribution of the proposed project to cumulative impacts in the project region, and recommend feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects (CEQA Guidelines Section 15130 [b][3]).*

## 5.2 Scope and Methodology of the Cumulative Impacts Analysis

In March 2004, as part of an interdisciplinary team, Caltrans, together with FHWA and EPA staff, prepared a preliminary guidance paper entitled *Guidance for Preparers of Indirect and Cumulative Impact Assessment Methods for Analyzing Effects*. The cumulative impacts analysis for the Doyle Drive Project was conducted in a series of steps based on this preliminary guidance.

The following steps were followed for this analysis:

- Identify the environmental and community resources that warrant a cumulative impacts analysis.
- Define the geographic boundaries for each resource area.
- Define the timeframe (temporal boundary) for analysis for each resource area.
- Identify past actions and present and reasonably foreseeable future projects that would affect that resource.
- Identify the impacts (or benefits) to the resource from the other projects.
- Determine: 1) whether there currently is a cumulative impact to the resource area; and, 2) whether the impacts from the Doyle Drive Project would contribute to that impact.

Following preparation of the cumulative impacts analysis for the Doyle Drive Project, Caltrans' *Guidance for Preparers of Cumulative Impacts Analysis* (July 2005) was released. The analysis presented in this chapter is consistent with the eight steps presented in the July 2005 guidance. Since the analysis is consistent with the new guidance the conclusions presented in this cumulative impacts analysis do not change.

## 5.3 Resources Evaluated

Cumulative effects were evaluated for other projects or activities such as major infrastructure projects, community development improvements, or private developments that are geographically related to the Doyle Drive Project.