

# OUTLINE OF CAL/EPA'S FRAMEWORK FOR CUMULATIVE IMPACTS ANALYSIS

## I. Preface: Introduction to Cumulative Impacts

- i. The introduction provides a background, discusses the need to address cumulative impacts, and gives an overview of the report.

## II. Definitions and Terms

- i. This chapter discusses Cal/EPA's working definition of cumulative impact:

*"Cumulative impacts means exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socio-economic factors, where applicable, and to the extent data are available."*

- ii. Key terms from the working definition such as exposures, public health effects, environmental effects, geographic area, sensitive populations and socio-economic factors will be discussed with examples to ensure that all stakeholders are consistent in their understanding of this approach.

## III. Scientific Background

- i. People are exposed to multiple chemical pollutants from many different sources, however, they tend to distribute unevenly in the environment. This uneven distribution creates concern for differences in exposures and impacts in different places as well as differences among people.
- ii. The literature reviewed in this chapter provides an understanding of potential disparities across different populations with respect to many of the components of the working definition of cumulative impacts: exposures, environmental effects, public health effects, population sensitivity and socioeconomic factors.
- iii. An overview of studies examining cumulative impacts reinforces the concern for low income and minority populations.
- iv. Intrinsic biological or physiologic characteristics such as age, preexisting health conditions, and gender/sex may make some people more sensitive to pollutants than others.
- v. Emerging science also suggests that certain populations may experience worse effects from environmental pollutants due to non-intrinsic, socially-derived factors (such as lack of access to health care), which may lead to increased susceptibility to health effects, particularly in lower socioeconomic status and minority groups.

**IV. Cumulative Impacts in Environmental Decision-Making**

- i. As the working definition of cumulative impacts is broad, it is necessary to discuss the manner and areas in which consideration of cumulative impacts may be used to influence environmental decision-making within Cal/EPA.
- ii. This chapter discusses examples of relevant types of decisions that occur at Cal/EPA.

**V. Decision Making Outline**

- i. The framework integrates the key factors described in the working definition of cumulative impacts (exposures, public health effects, environmental effects, socioeconomic factors and sensitive populations), and seeks to apply a screening methodology that is simple and understandable, relying upon science and data.
- ii. We recommend an overall approach to the analysis of cumulative impacts in communities that is based on the Cal/EPA working definition. This approach will serve as the foundation for the Agency's efforts to address cumulative impacts in a consistent, systematic manner.
- iii. The approach stresses the importance of public participation and focuses on generating the information needed to support decision-making.

**VI. Scientific Methods**

- i. Methods for assessing cumulative impacts provide a systematic way of making information regarding cumulative impacts useful for informing or supporting various types of environmental policy or decision-making. No single methodological approach or established method currently addresses the needs of cumulative impact analysis, as envisioned in Cal/EPA's working definition.
- ii. The chapter discusses OEHHA's proposed methodology for screening impacted communities.

**VII. Proposed Actions and Next Steps**

- i. The Agency will continue to build its capacity to address cumulative impacts by pursuing actions in the areas of information, analytical approaches, guidance, and policies and procedures.