

Mobility. Environment. Community. Economy. Technology



I-710 Corridor Project EIR/EIS

metro.net

I-710 Corridor Project Air Quality and Health Risk Assessment

Julia Lester, PhD
ENVIRON International Corporation

Corridor Advisory Committee
October 15, 2008



Introduction

- The purpose of the proposed I-710 Corridor Project is to:
 - Improve air quality and public health
 - Improve traffic safety
 - Address design deficiencies
 - Alleviate traffic congestion
 - Address projected growth in population, employment, and economic activities related to goods movement
- An Air Quality and Health Risk Assessment (AQ/HRA) measures the Project's ability to improve air quality and public health

What are the Goals of Air Quality and Health Risk Assessment?

- **Evaluate current and projected ambient air concentrations of certain pollutants for the Project**
- **Evaluate the current and projected health risks from air toxics, such as diesel particulate matter (DPM) for the Project**

Types of Air Pollutants in This Analysis

Criteria Pollutants

- Carbon monoxide (CO),
- Oxides of Nitrogen (NO_x) including Nitrogen Dioxide (NO₂)
- Volatile Organic Compounds (VOC)
- Particulate Matter < 10 microns (PM₁₀) and 2.5 microns (PM_{2.5})
 - PM generally results from fuel combustion and road dust
 - Diesel particulate matter is all PM from diesel engines
- Sulfur dioxide (SO₂) and Sulfates (SO₄)

Types of Air Pollutants in This Analysis (cont.)

Toxic Air Contaminants (TACs)

- Diesel PM (DPM) and agency-identified compounds (based on California Air Resources Board and U.S. Environmental Protection Agency guidance)

Greenhouse Gases (GHG)

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Other Kyoto Protocol species, if applicable

What are the Governing State / Federal Regulations For Air Quality / Health Risk Assessments?

- **California Environmental Quality Act (CEQA)**
- **National Environmental Policy Act (NEPA)**
- **Federal and State Transportation Conformity Requirements**

What is Unique about the I-710 Corridor Project's Approach to Air Quality and Public Health?

- **Community input during the MCS identified air quality and public health as prime project objectives.**
- **First highway project in the state of California to propose an expanded Health Risk Assessment**
- **The I-710 Project is both a transportation and a goods movement project**
 - **Transportation projects: historically more focused air quality analyses**
 - **Goods movement projects: recent heightened scrutiny and more extensive analyses**
 - **New regulatory environment**
 - **High-profile examples: TraPac, Middle Harbor**

AQ/HRA Report Part I: CEQA/NEPA

- For the Project operations (e.g., traffic), the AQ/HRA will evaluate changes in:
 - Criteria pollutant and toxics emissions
 - Criteria pollutant concentration levels (air quality)
 - Cancer risks and non-cancer health impacts from toxics
 - PM_{2.5} mortality and morbidity impacts
- Project-related construction air quality impacts
- Greenhouse gases
- Cumulative impacts
 - Qualitative analysis of the effect of the Project in conjunction with impacts from existing air quality conditions (2007 AQMP, MATES III) and known related future local projects

AQ/HRA Report Part II: Conformity/Hotspots

- **Required by the Federal Clean Air Act to ensure transportation projects conform with regional air quality attainment status or plans**
 - **CO**
 - **Quantitative analysis of near-roadway impacts**
 - **PM_{2.5}/PM₁₀:**
 - **Qualitative analysis of near-roadway impacts per latest guidance**
 - **New guidance on quantitative determinations may be issued**

AQ/HRA Development Outreach Process

- **Meet with Agency Air Technical Working Group**
 - Members: USEPA, Federal Highways Administration, SCAQMD, CARB, California Attorney General's office, US Army Corps of Engineers, California Office of Environmental Health and H A, funding partners
 - Purpose: Develop consensus on key technical issues
- **Meet with Environmental Subject Working Group**
 - Members: Corridor-wide representation determined by Project Committee and Local Advisory Committees
 - Purpose: Solicit input from community stakeholders on environmental studies, including the AQ/HRA
- **Develop draft AQ/HRA protocols**

Questions?