



South Coast Air Quality Management District

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Review of Environmental Justice Methodologies and Application Tools

STATEMENT OF WORK:

In the recent review of SCAQMD socioeconomic assessment, the independent reviewer Abt Associates recommended SCAQMD staff to conduct a systematic literature review and expand the analysis of environmental justice (EJ). The goal of this contract is to conduct a comprehensive review of the most updated methodologies and tools for conducting EJ analysis that pertains to air pollution and air regulations.

Under SCAQMD direction, CONTRACTOR shall provide all labor, reports, services, and materials necessary to complete the following tasks:

(1) Review the most updated EJ literature, including but not limited to:

- U.S. EPA. 2014. Chapter 10 of Guidelines for Preparing Economic Analyses.
- U.S. EPA. 2010. Interim Guidance on Considering Environmental Justice during the Development of an Action.
- U.S. EPA. 2013. Draft EJ Technical Guidance.
- Maguire, K. & G. Sheriff. 2011. "Comparing Distributions of Environmental Outcomes for Regulatory Environmental Justice Analysis." *International Journal of Environmental Research and Public Health* 8: 1707-1726.
- Post, E.S., A. Belova & J. Huang. 2011. "Distributional Benefit Analysis of a National Air Quality Rule." *International Journal of Environmental Research and Public Health* 8 (6): 1872-1892.
- Sheriff, G. and K. Maguire. 2013. "Ranking Distributions of Environmental Outcomes Across Population Groups." NCEE Working Paper Series. Working Paper # 13-04.

(2) Identify the most updated list(s) of commonly used components to construct EJ screening tools and discuss the concept. The screening tools to be reviewed shall include but are not limited to the following: EJSCREEN (developed by U.S. EPA), CalEnviroScreen 2.0 (developed by California Office of Environmental Health Hazard Assessment), Environmental Justice Screening Method (or EJSM, developed by the Program for Environmental and Regional Equity at University of Southern California), and Cumulative Environmental Vulnerabilities Assessment (or CEVA, developed by the Center for Regional Change at University of California, Davis).

Compare the identified list(s) of components with how SCAQMD designates an EJ area. SCAQMD defines EJ as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution." Currently, SCAQMD designates as an EJ area for funding purposes if

at least ten percent of the area's population fall below the federal poverty line and the area's PM2.5 concentration or toxic cancer risk are above their respective and pre-defined thresholds.

(3) Identify and summarize the methodologies and tools that are most relevant for air pollution and its control policy and are also applicable for sub-county level analysis (e.g., census tract). Three separate sets of methodologies/tools shall be discussed:

a. Identification of communities and locations that are subject to disproportionately high and adverse human health or environmental effects and risks:

- ✓ A comparison among various EJ screening tools shall be provided. The comparison shall include methodological differences, data sources, and data quality. The screening tools to be reviewed shall include but are not limited to: EJSCREEN, CalEnviroScreen 2.0, EJSM, and CEVA.

b. Assessment of changes in distributions of health and environmental outcomes due to air regulations, to determine whether the regulations increase or reduce pre-existing inequalities.

- ✓ It is strongly preferred but not required that CONTRACTOR provides detailed discussion on the application of Environmental Benefits Mapping and Analysis Program (BenMAP) in such analyses. SCAQMD utilized BenMAP in its 2007 and 2012 Air Quality Management Plans to quantify and monetize air-related health benefits due to emission reductions; however, BenMAP has not been used in SCAQMD's EJ analysis.

c. Ranking of policy alternatives from EJ perspective

(4) Recommend and prioritize alternative list(s) of components to be used to screen EJ areas/communities, which may be different from how SCAQMD currently identifies an EJ area. The aim is to expand and sensitivity-test EJ analysis for SCAQMD's proposed AQMPs or air quality regulations in its socioeconomic assessments.

(5) Consistent with the recommendation produced in Task (4), identify the data and indicators that are most pertinent for each set of methodologies/tools discussed in Task (3). SCAQMD produces its own ambient air quality modeling data at a fine spatial resolution (4km by 4km grid level), which shall serve as the primary data source for air pollutant concentrations if such data are recommended to be used as a proxy of, or to derive, health and environmental outcomes.

(6) Consistent with the recommendations produced in Tasks (4)-(5), recommend the methodologies and/or tools that are most suitable for a sub-county level EJ analysis within SCAQMD's four-county region, which includes Los Angeles, Orange, Riverside, and San Bernardino counties. In addition to the advantages of the recommended methodologies/tools, a detailed discussion of their limitations and the resulting implications shall also be included. For example, a common limitation may be the omission of potential post-rule self-selected migration in and out of EJ areas in response to environmental and housing market changes.

(7) Contingent upon SCAQMD discretion, CONTRACTOR may be requested to apply the recommended methodologies/tools to conduct a sub-county level EJ analysis within the SCAQMD region.

(8) Attend meeting(s) to present findings and recommendations, as requested by SCAQMD.