



Health Impact Assessment Tools and Models

Created by the San Francisco Department of Public Health

<http://www.sfdph.org/phes>



The San Francisco Department of Public Health is currently developing several tools and models aimed at understanding how land use, transportation, and urban design factors influence pedestrian activity, pedestrian injury, air quality, noise, and other health concerns. Most of the tools/models listed below have preliminary products but are still under construction.

Name	Description	SFDPH Staff Contact
Healthy Development Measurement Tool (HDMT)	A health impact assessment tool developed by numerous stakeholders involved in SF's Eastern Neighborhoods to support more accountable, evidence-based, and health-oriented planning and policy-making. In its current form, components of the Tool include: 27 Community Health Objectives, 100+ Measurable Indicators, Established Standards, Baseline Data, Development Targets, and Evidence-based Health Justifications. The latest version is available at: www.theHDMT.org	Lili Farhang (415) 252-3988 lili.farhang@sfdph.org
Pedestrian Flow Model	A practical forecasting model of pedestrian activity for San Francisco that relates environmental characteristics to pedestrian flow in mixed-use neighborhoods. The demand model uses linear regression techniques, existing and original environmental-spatial data and observed street segment pedestrian counts. The model has been piloted on a section of Mission St. and is currently being validated.	Cyndy Comerford (415) 252-3989 cyndy.comerford@sfdph.org
Pedestrian Environmental Quality Index (PEQI)	A quantitative observational instrument to describe and summarize street and intersection environmental factors known to affect people's travel behaviors at the street-level. Factors are grouped into five main categories: traffic, sidewalks, land use, intersections and safety. The model has been piloted in two areas: along Mission Street and along an area linking the Mission, South of Market and Potrero Hill neighborhoods in San Francisco.	Cyndy Comerford (415) 252-3989 cyndy.comerford@sfdph.org
Pedestrian Injury Forecasting Model	A practical forecasting tool to predict changes in pedestrian injury associated with increased traffic volume and other spatial characteristics. The model has been piloted in Oakland and is currently being refined and validated for use in San Francisco.	Megan Wier (415) 252-3972 megan.wier@sfdph.org
Air Quality Modeling	A model to assess and monitor traffic-related air pollution, developed by SFDPH in a partnership with UC Berkeley School of Public Health. The research team is currently collecting data on traffic flows from a variety of sources as well as assessing residents', pedestrians' and bicyclists' exposure to traffic exhaust pollutants. Air quality is measured and modeled using CALINE4 for carbon monoxide, PM10, and nitrogen dioxide. URBEMIS modeling is conducted and mitigation measures are evaluated, with special attention to local sensitive receivers & project-related vehicle miles traveled	Tom Rivard (415) 252-3840 tom.rivard@sfdph.org
Noise Modeling	A series of tools including noise field measurement, evaluation and "Soundplan" modeling to define the current noise level in SF with special emphasis on understanding the effects of traffic volumes on the acoustical environment. SFDPH, in collaboration with the Building and Planning Department, is creating an updated Noise Element and Noise Map for the City's General Plan. This noise map will enable review of a project with respect to potential annoyances and other health impacts, as well as make recommendations for reducing noise exposures, especially to sensitive receivers.	Tom Rivard (415) 252-3840 tom.rivard@sfdph.org