



# SFDPH Program on Health, Equity, and Sustainability

## Urban Health and Place Team

### Health Impact Assessment Tools – June 2009



The Urban Health and Place Team develops, applies and disseminates tools, research and expertise to assess environmental conditions and respond to urban health inequities and environmental policy gaps. Specific tools include:

- Healthy Development Measurement Tool
- Air Quality Measurement and Modeling
- The San Francisco Noise Model
- Pedestrian Environmental Quality Index
- Vehicle-Pedestrian Injury Collision Model
- Bicycle Environmental Quality Index
- Retail Food Availability Survey
- Neighborhood Completeness Indicator
- Pedestrian Flow Model

We use these tools and our general public health expertise to work with community stakeholders and government agencies to inform project development and policy-making and to improve the consideration of health and health inequities in decision-making. Please note that several of the tools/models listed below have preliminary products and are *still being refined*.

Name	Tool Description	SFDPH Staff Contact
<b>Healthy Development Measurement Tool (HDMT)</b>	The Healthy Development Measurement Tool (HDMT) is a comprehensive evaluation metric that supports the inclusion and consideration of health needs in urban land use plans and projects. The HDMT is comprised of three core components: 1) a “community health indicator system” to evaluate community health objectives and baseline neighborhood conditions, 2) a “healthy development checklist” that is used to evaluate land use plans and projects, and 3) a “menu of policy and design strategies” that can be used to make recommendations on how to improve baseline conditions and/or meet checklist targets. The HDMT explicitly connects public health to urban development planning in efforts to achieve a higher quality social and physical environment that advances health. Available at: <a href="http://www.theHDMT.org">www.theHDMT.org</a>	Lili Farhang (415) 252-3988 <a href="mailto:lili.farhang@sfdph.org">lili.farhang@sfdph.org</a>
<b>Air Quality Measurement and Modeling</b>	Motor vehicle air pollution is greater for those living close to busy roadways. Research shows that living close to high levels of traffic is associated with reduced lung function, increased asthma hospitalizations, asthma symptoms, bronchitis symptoms, and medical visits. SFDPH is attempting to assess the problem of traffic-related air pollution in a partnership with UC Berkeley School of Public Health. Using both modeling and monitoring to determine exposure to air pollutants at a local level, SFDPH is using the data to help planners and community groups understand potential exposures and craft solutions. SFDPH is interested in defining the distribution of diesel trucks and busses and their contribution to neighborhood diesel particulate exposures.	Tom Rivard (415) 554-8930 <a href="mailto:tom.rivard@sfdph.org">tom.rivard@sfdph.org</a>
<b>The San Francisco Noise Model</b>	The San Francisco Noise Model is a set of tools including field measurements, evaluations and modeling which define current noise levels in SF communities with special emphasis on understanding the effects of traffic volumes on the acoustical environment. This information is used to assist in the implementation of State Building Code requirements associated with acoustical insulation of new residential construction. In addition, local community groups can use this information to advocate for sound walls, quieter busses, fewer trucks, and less mechanical equipment on commercial rooftops.	Tom Rivard (415) 554-8930 <a href="mailto:tom.rivard@sfdph.org">tom.rivard@sfdph.org</a>

<p><b>Pedestrian Environmental Quality Index (PEQI)</b></p>	<p>The Pedestrian Environmental Quality Index (PEQI) is an observational survey which quantifies street and intersection environmental factors empirically known to affect people’s travel behaviors. PEQI includes five main pedestrian categories which embody important physical environmental factors: traffic, sidewalks, land use, intersections, and safety. SFDPH has applied the PEQI in various parts of SF including sections of the Eastern Neighborhoods, Treasure Island, the Excelsior, and Executive Park. PEQI findings inform neighborhood planning, prioritization of improvements through the land use and transportation planning, and environmental assessments.</p>	<p>Cyndy Comerford Scully (415) 252-3989 <a href="mailto:cyndy.comerford@sfdph.org">cyndy.comerford@sfdph.org</a></p>
<p><b>Vehicle-Pedestrian Injury Collision Model</b></p>	<p>The Vehicle-Pedestrian Injury Collision Model is a practical forecasting tool to predict changes in vehicle-pedestrian injury collisions associated with changes in traffic volume, land use, and additional environmental and demographic factors impacted by development. This multivariate, census tract-level model utilizes publicly available data, and variables for which data is routinely collected, analyzed and reported in local planning processes. SFDPH first piloted a simple bivariate model in Oakland, and then developed and refined a multivariate model for use in San Francisco. This tool can be used in conjunction with safety countermeasures to plan to prevent future pedestrian deaths and injuries. Model methods and findings were published in the peer-reviewed, scientific journal Accident Analysis &amp; Prevention in January 2009.</p>	<p>Megan Wier (415) 252-3972 <a href="mailto:megan.wier@sfdph.org">megan.wier@sfdph.org</a></p>
<p><b>Bicycle Environmental Quality Index (BEQI)</b></p>	<p>The Bicycle Environmental Quality Index (BEQI) is a quantitative observational survey to assess the bicycle environment on roadways and evaluate what streetscape improvements could be made to promote bicycling in San Francisco. The survey has 22 empirically-based indicators, each of which has been shown to promote or discourage bicycle riding and connectivity to other modes of transport. The BEQI is under development has been piloted in San Francisco neighborhoods including Lakeshore and Treasure Island as part of a community transportation plan.</p>	<p>Jennifer McLaughlin (415) 252-3879 <a href="mailto:jennifer.mclaughlin@sfdph.org">jennifer.mclaughlin@sfdph.org</a></p>
<p><b>Retail Food Availability Survey</b></p>	<p>The Retail Food Availability Survey is a survey which assesses the availability of healthy and affordable foods within stores, and therefore within neighborhoods, to determine community food security. This survey aims to examine the availability of certain foods, all of which are components of the US Department of Agriculture’s Thrifty Food Plan Market Basket, and other factors influencing food purchases within stores in low-income neighborhoods in San Francisco, California. The survey has been piloted in 55 stores within the designated boundaries of San Francisco’s South of Market District.</p>	<p>Cyndy Comerford Scully (415) 252-3989 <a href="mailto:cyndy.comerford@sfdph.org">cyndy.comerford@sfdph.org</a></p>
<p><b>Neighborhood Completeness Indicator</b></p>	<p>Created as part of the HDMT, the Neighborhood Completeness Indicator (NCI) is a quantitative spatial assessment tool measuring the proximity of San Francisco residents to daily goods and services in their neighborhoods. Included in the NCI are 11 key public and 12 key retail services, necessary to meet the daily needs of neighborhood residents and to promote increased social interaction and increased walking and biking, thereby reducing daily vehicle trips and miles traveled. The NCI will be piloted this summer at Hope SF project sites to help identify service gaps in each neighborhood.</p>	<p>Jennifer McLaughlin (415) 252-3879 <a href="mailto:jennifer.mclaughlin@sfdph.org">jennifer.mclaughlin@sfdph.org</a></p>
<p><b>Pedestrian Flow Model</b></p>	<p>The Pedestrian Flow Model is a practical forecasting tool which relates pedestrian activity at a street-level to modifiable environmental characteristics within developing and established mixed-use neighborhoods in San Francisco. The model is currently under development and will be used to estimate pedestrian counts on streets segments based on a set of built environment variables. SFDPH will apply the model to planning scenarios and infrastructure proposals emerging out of ongoing planning efforts in order to identify and prioritize enhancements to the pedestrian environment.</p>	<p>Cyndy Comerford Scully (415) 252-3989 <a href="mailto:cyndy.comerford@sfdph.org">cyndy.comerford@sfdph.org</a></p>
<p>For more information, please visit: <a href="http://www.sfpbes.org">www.sfpbes.org</a></p>		