

T. Public Health

100. Definitions

Public Health involves the activities that society undertakes to create and maintain conditions in which people can be healthy.

A CEQR assessment of public health should examine potential impacts on public health Citywide, or on the health of a community or certain group of individuals (e.g. users of a park, or residents adjacent to a new manufacturing facility). While a detailed Public Health analysis may not be necessary for many proposed actions, a thorough consideration of potential public health issues should be documented.

The field of public health is constantly evolving as new research becomes available. For many environmental health issues, research is still needed to understand better the possible links between environmental exposures and health effects. Many public health concerns are closely related to air quality, hazardous materials, construction and natural resources (e.g., water quality impacts). These are discussed in other chapters of this Manual, which should be reviewed in conjunction with any public health assessment.

Understanding the following terms and words may be helpful when considering potential public health impacts:

Risk Assessment/Risk Modeling: A process to determine the increased risk from exposure to environmental pollutants together with an estimate of the severity of impact. Risk assessments use specific chemical information plus risk factors.

Epidemiology: the study of the distribution and determinants of diseases and injuries in human populations

Literature Review: an examination of peer-reviewed, published, scientific literature on a subject. Literature reviews may be assisted by using abstracting services such as Medline, Toxline, PubMed, Environmental Knowledgebase, National Technical Information Service

and the Chemical Abstracts Database.

When considering potential public health impacts it can be helpful to refer to state and federal standards and guidelines. Examples of some standards/guidelines include:

USEPA - National Ambient Air Quality Standards (NAAQS) promulgated under the Clean Air Act

USEPA - Drinking Water Standards and Health Advisories promulgated under the Safe Drinking Water Act

Agency for Toxic Substances and Disease Registry (ATSDR) - Minimal Risk Levels (MRL)

USEPA - Reference Concentration Levels in Air

NYSDEC Air Annual Guidance Criteria/ Short-term Guidance Criteria - (AGC/SGC)

Information may also be readily obtained from the websites of the following agencies: USEPA, ATSDR and NYSDEC.

200. Determining Whether a Public Health Assessment is Appropriate

In determining whether a public health assessment is appropriate, special consideration should be given to urban public health concerns. Such public health concerns for which a public health assessment may be warranted include, but are not limited to:

- Increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts (see Air Quality chapter);
- Increased exposure to heavy metals (e.g., lead) and other contaminants in soil/dust resulting in significant adverse impacts (see Hazardous Materials and Air Quality chapter);
- The presence of contamination from historic spills or releases of substances that might have affected or might affect ground water to be used as a source of drinking

water;

- Solid waste management practices that could attract vermin and result in an increase in pest populations (e.g., rats, mice, cockroaches, and mosquitoes);
- Potentially significant adverse impacts to sensitive receptors from noise and odors (see Noise and Air Quality chapters);
- Vapor infiltration from contaminants within a building or underlying soil (e.g., contamination originating from gasoline stations or dry cleaners) that may result in significant adverse hazardous materials or air quality impacts (see Hazardous Materials and Air Quality chapters);
- Actions for which the potential impact(s) result in an exceedance of accepted federal, state, or local standards, or;
- Other actions, which might not exceed the preceding thresholds, but might nonetheless result in significant public health concerns, including projects such as the NYC Adult Mosquito Control Programs, the Williamsburg Bridge Lead Removal Project, and the NYC Comprehensive Solid Waste Management Plan. For some of these actions, there might be published, peer-reviewed, scientific literature suggesting an association between an exposure potentially caused by the action and potential health impacts. In such cases, should the lead agency wish for assistance in assessing these issues, it is encouraged to consult with OEC and the Department of Health.

300. Assessment Methods

Public health assessments of environmental issues should evaluate the likelihood of exposure, as well as analyze the potential impacts of those exposures on human health. Analytic methods for evaluating some exposures are described in other sections of the manual such as the Air Quality, Hazardous Materials, and Noise chapters. Methods to assess public health can involve environmental risk assessment/risk modeling, literature reviews, and/or epidemiologic analysis.

Literature reviews may be assisted by using abstracting services such as Medline, Toxline, PubMed, Environmental Knowledgebase, National Technical Information Service, and the Chemical Abstracts Database.

400. Determining Impact Significance

In most cases, actions that comply with applicable standards and guidelines protecting public health would not typically result in significant adverse impacts on public health. Since standards and guidelines may not have been established for many substances or activities and since new data on health effects from environmental exposures continue to emerge, it can be difficult to determine whether or not potential adverse public health impacts can be considered to be *significant adverse impacts*.

Some points to consider when determining significance include the likelihood of occurrence, characteristics of the population potentially affected (e.g. age; disease burden; number of people at-risk or sensitive; pregnancy status, etc.); the time frame of potential exposures (e.g., time of day, seasonal vs. year-round); latency (time between exposure and potential health effects); seriousness of the potential health effect; duration (e.g., acute vs. chronic health effects); number of people potentially affected; and the reversibility of potential impacts.

500. Developing Mitigation

If the potential for a significant adverse impact on public health is identified, mitigation measures, whenever possible, should be developed and evaluated in order to minimize exposures. These may incorporate the same approaches outlined in the Air Quality, Hazardous Materials, Noise, and Construction Impacts chapters. Guidance may also be found in standards and guidelines such as those referred to in Section 100, above.

600. Developing Alternatives

In general, if exposure is minimized public health impacts will be unlikely. Thus, public health alternatives are not proposed. Rather, alternative approaches to the project itself should be considered in order to reduce or minimize exposure to levels that are not expected to impact

public health.

In general, the alternatives that would apply would relate to alternatives discussed in other relevant chapters (e.g., Air Quality, Noise, Hazardous Materials, etc.).

700. Regulations and Standards

Air Quality: See Air Quality, Chapter Q

Soil, Groundwater and Sediment Quality:
See Hazardous Materials, Chapter J

Noise: See Noise, Chapter R

In addition to the regulations and guidelines listed in the above chapters, other laws and regulations that pertain specifically to public health and may be relevant for assessment purposes. These may include, but not be limited to the following:

- New York State Public Health Law Section 570 et seq. and 10 New York Codes Rules and Regulations, Part 58 (regulating clinical laboratories) and 42 Code of Federal Regulations Part 72 (covering the handling of pathogenic organisms).
- New York City Health Code, Title IV, Environmental Sanitation. In this Title of the Health Code, the most relevant Articles are 173 (governing hazardous substances) and 175 (governing radiation equipment and radioactive materials).

