

# Chapter 18: PUBLIC HEALTH

## 18.1 Introduction

The *CEQR Technical Manual* describes public health as the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; prevention of disease, injury, disorder, disability and premature death; and reducing inequalities in health status. The purpose of a public health assessment is to determine whether adverse impacts on public health may occur as a result of the proposed action, and if so, to identify measures to mitigate such effects.

The *CEQR Technical Manual* states that a public health analysis is not necessary for projects where no significant unmitigated adverse impact is found in other analysis areas, such as air quality, water quality, hazardous materials, or noise. As explained in the respective chapters of this EIS, the proposed action would not result in significant unmitigated adverse impacts in any of these technical areas. Therefore, the purpose of this chapter is to provide an overview of relevant findings to support the conclusion that the proposed action would not result in adverse impacts to public health.

## 18.2 Principal Conclusions

As described in Chapter 10, “Hazardous Materials,” the results of the Phase I Environmental Site Assessment (“ESA”) and the Phase II ESA support the conclusion that no additional testing or remedial action is recommended for the project site, and that no significant adverse impacts related to hazardous materials would be expected to occur as a result of the proposed action. As described in Chapter 17, “Noise,” none of the studied locations would experience perceptible increases to exterior noise levels related to increased traffic volumes. In order to avoid the potential for significant adverse noise impacts, the proposed action would be required to provide sufficient window attenuation to maintain the CEQR interior noise level requirement of 45 dBA or lower. Further, as described in Chapter 15, “Air Quality,” the cumulative effect of emissions from project-induced traffic and parking facilities associated with the proposed action would not result in any significant adverse air quality impacts. Additionally, pollutant emissions related to the use of No. 2 fuel oil for heating, ventilation, and air conditioning (“HVAC”) systems would not result in any violations of applicable National Ambient Air Quality Standards (“NAAQS”) or exceed New York City Department of Environmental Protection/New York State

Department of Environmental Conservation (“NYCDEP/NYSDEC”) *de minimis* impact criteria. The air toxics analysis concludes that no industrial air toxics facilities are located near the project site with the potential to result in adverse health impacts. As discussed in Chapter 9, “Natural Resources,” there would be no significant adverse impacts to water resources, including groundwater or nearby surface water bodies. As described in Chapter 11, “Water and Sewer Infrastructure,” and Chapter 12, “Solid Waste and Sanitation Services,” the proposed action would result in no significant adverse impacts to the city water supply and sanitary sewer system. Therefore, the proposed action would not result in any significant adverse impact to public health.

### **18.3 Hazardous Materials**

As described in Chapter 10, “Hazardous Materials,” the Phase I ESA conducted for the project site identified potential sources of contamination on the project site and in the surrounding area. Specifically, the Phase I ESA identified the potential for buried material/historic fill material of unknown origin and the potential for methane gas due to the presence of historic marshland beneath the fill material on the site. A Phase II ESA was subsequently conducted to confirm the identification of the buried/historic fill and to characterize subsurface soils and groundwater with respect to hazardous contaminants. Based on the results of the Phase II ESA, no additional testing or remedial action would be warranted, and no significant adverse impacts related to hazardous materials would be expected to occur with the proposed action. Any new building structures would be required to have an engineered vapor barrier installed under the foundation slabs in order to prevent any accumulation of methane gas under building structures and to eliminate potential vapor migration into the building structure. Project documents, such as the Restrictive Declaration, would also require the preparation of a Remedial Action Plan (“RAP”), detailing the installation of the building vapor barriers, and a Construction Health and Safety Plan (“CHASP”) to prevent human exposure (worker and public) to any unidentified or potential on-site contamination, to be reviewed and approved by ESD. The CHASP would include a stipulation that requires any exported urban fill soils and landfill materials to be handled and disposed of in accordance with NYSDEC guidelines and recommendations. With the implementation of these measures, the proposed action would not result in any significant adverse impacts related to hazardous materials.

### **18.4 Sanitation and Water Resources**

As discussed in Chapter 9, “Natural Resources,” there would be no significant adverse impacts to water resources, including groundwater (e.g., the Brooklyn-Queens Sole Source Aquifer) or to nearby surface water bodies, including Old Mill Creek and its tributaries, and associated wetlands. As described in

Chapter 11, “Water and Sewer Infrastructure,” and Chapter 12, “Solid Waste and Sanitation Services,” the proposed action would ensure the appropriate management of solid waste and sanitary waste water generated by the proposed action, and storm water would be appropriately managed on-site and as part of the separate sewerage system (e.g., separate waste water and storm water sewers) serving the project site and surrounding area. The proposed action would be implemented with appropriate water and sewer infrastructure, pursuant to the Water and Sewer Plan prepared as part of the proposed action and subject to the approval of NYCDEP. Therefore, the proposed action would result in no significant adverse impacts to the city water supply and sanitary sewer system.

## 18.5 Air Quality

United States Environmental Protection Agency (“USEPA”) has identified several criteria pollutants as being of concern nationwide: carbon monoxide (“CO”), nitrogen dioxide (“NO<sub>2</sub>”), ozone (“O<sub>3</sub>”), particulate matter (“PM”), sulfur dioxide (“SO<sub>2</sub>”), and lead. As a result, USEPA has established NAAQS for all of these criteria pollutants and has categorized these standards as “primary” and “secondary.” Primary standards are designed to establish limits to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. In addition to criteria pollutants, emissions of air toxics are also of concern and are discussed below.

As described in Chapter 15, “Air Quality,” increases in mobile source emissions of CO, PM<sub>2.5</sub> and PM<sub>10</sub> related to project-induced traffic changes would not result in any exceedances of the NAAQS or the NYCDEP/NYSDEC *de minimis* impact criteria at existing or future project-related sensitive receptors. In addition, the cumulative effect of emissions from project-induced traffic and parking facilities associated with the proposed action would not result in any significant adverse air quality impacts.

Proposed action pollutant emissions of NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> related to the use of No. 2 fuel oil for HVAC systems would not result in any violations of applicable NAAQS or exceed the NYCDEP/NYSDEC *de minimis* impact criteria.

Malodorous emissions from the 26<sup>th</sup> Ward service area have the potential to impact the proposed action. The primary malodorous pollutant of concern from these facilities would be hydrogen sulfide (“H<sub>2</sub>S”). While odors in the environment are rarely cause for serious health concerns, they can result in additional anxiety and annoyance in humans. As described in Chapter 15, “Air Quality,” it is not anticipated that malodorous emissions from the 26<sup>th</sup> Ward service area would result in significant adverse impacts to the proposed action.

As also described in Chapter 15, “Air Quality,” air toxics can be grouped into two categories: carcinogenic air pollutants and non-carcinogenic air pollutants. USEPA and NYSDEC have issued guidelines that establish acceptable ambient levels for air toxics based on human exposure criteria. NYSDEC has established short-term guideline concentrations (“SGC”) and annual guideline concentrations (“AGC”) for exposure limits, below which there should be no adverse effects on public health. When cumulative impacts of multiple air toxics from multiple sources could pose a potential health risk, a cumulative impact analysis for industrial sources is performed. These cumulative impacts are based on the USEPA Hazard Index Approach for non-carcinogenic compounds and the USEPA Unit Risk Factors for carcinogenic compounds. In order to determine if any significant adverse health impacts would result from air toxics, the following procedures were used:

- To ensure that the toxics analysis included existing sources with the most potential to affect the proposed action, an analysis zone within approximately 400 feet of the proposed action is selected;
- A survey of land use mapping within the analysis zone, as well as a visual inspection, has been conducted.

As described in Chapter 15, “Air Quality,” the air toxic analysis conducted in accordance with these procedures did not result in the identification of any industrial air toxics facilities in the analysis zone. As a result, no further analysis of air toxics is required; the proposed new residential and commercial land uses would not be affected, as no surrounding air toxics generators are present.

## 18.6 Noise

As described in Chapter 17, “Noise,” the maximum difference in the With Action noise level compared to the No Action noise level associated with project-generated traffic volumes would be only 1.4 dBA. As a result, none of the studied locations would experience perceptible increases to exterior noise levels related to increases in traffic volumes. In addition, loud stationary noise sources were not identified within the project study area, and all project-related mechanical systems would adhere to the requirements contained within the revised 2005 NYC Noise Code.

As part of the proposed action, locations requiring sound attenuation to avoid the potential for significant adverse noise impacts to interior locations are identified along the north, south, east and west facades of the proposed development parcels. The affected development parcels would be required to provide sufficient window attenuation to maintain the CEQR interior noise level requirement of 45 dBA or lower. These proposed window-wall attenuation requirements would be included as part of the project Restrictive Declaration and would preclude the potential for the proposed action to result in significant adverse noise impacts.