# 17.0 Public Health

## A. Introduction

This chapter assesses the Proposed Action's effect on public health. As defined by the 2021 *City Environmental Quality Review* (*CEQR) Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability, and premature death; and reducing inequalities in health status. The goal of CEQR with respect to public health is to determine whether adverse impacts on human health may occur as a result of a proposed action(s) and, if so, to identify measures to mitigate such effect.

The *CEQR Technical Manual* states that a public health assessment is not necessary for most projects. Where no significant adverse unmitigated impacts are found in other CEQR analysis areas—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area. This assessment represents a distinct layer of inquiry; its criteria are informed by public health considerations and are, therefore, different from the criteria that triggered the need to conduct a public health assessment.

## B. Principal Conclusions

The Proposed Actions would not result in significant adverse public health impacts. As described in the preceding chapters of this FEIS, the Proposed Actions would not result in unmitigated significant adverse impacts related to water quality, or for any of the projected and potential development sites in the areas of hazardous materials and operational noise. However, ~~a~~ as discussed in Chapters 9, "Hazardous Materials", 14, "Air Quality", and 16," Noise", the potential for significant adverse impacts for the 1,093,808 gsf area modeled for residential conversions cannot be precluded. Furthermore, the potential for a significant adverse air quality impact has been identified for four projected and potential development sites as discussed in Chapter 14, "Air Quality". Additionally, as discussed in Chapter 19, "Construction," the Proposed Actions could also result in significant adverse impacts related to construction noise and air quality. Therefore, a preliminary assessment of public health was conducted, and is provided below. As detailed therein, the Proposed Actions could result in significant adverse unmitigated impacts related to hazardous materials, air quality and noise ~~due to conversion of commercial area to residential units~~, and on the surrounding air quality and ambient noise, as a result of construction activities within the Rezoning Area facilitated by the Proposed Actions on projected and potential development sites. However, the potential for these impacts to occur is expected to be limited and would not significantly affect public health. Therefore, no significant adverse public health impacts are expected as a result of the Proposed Action.

# C. Methodology

As noted above, the *CEQR Technical Manual* states that where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area. As stated in Chapters 9, "Hazardous Materials", 14, "Air Quality", and 16, "Noise", in areas where conversions to residential uses would occur in the Affected Area, the potential for significant adverse impacts for hazardous materials, air quality, and noise cannot be precluded. Additionally, significant adverse air quality impacts have been identified at four projected and potential development sites. Where significant adverse construction-period noise impacts are identified, it is DCP's practice to examine the potential for these construction-period noise impacts to affect public health. As stated in Chapter 19, "Construction," the potential for the Proposed Actions to result in significant adverse impacts on ambient noise and air quality as a result of construction on the projected/potential development sites could not be ruled out. Therefore, a preliminary assessment is provided below for the technical areas related to public health.

# D. Preliminary Screening

As recommended in the *CEQR Technical Manual*, if a public health assessment is determined to be necessary, the assessment process involves evaluating whether and how exposure to environmental contaminants may occur and the extent of that exposure; characterizing the relationship between exposures and health risks; and applying that relationship to the population exposed.

### *Hazardous Materials*

Potential health exposures from hazardous materials in soil and dust include metals, hazardous compounds, or dust conditions that the public can be exposed to through ingestion, inhalation, or dermal contact. Health effects of exposure can lead to poisonings, gastroenteric illnesses, chronic illnesses, asthma, or respiratory complaints. As discussed in Chapter 9, "Hazardous Materials", by implementing the (E) designation, the potential presence of contaminated materials would not result in any impact across all 68 potential and projected development sites. However, significant adverse impacts from hazardous materials cannot be precluded for the 1,093,808 gsf of non-residential area modeled for residential conversion. For this area, the extent of hazardous materials are unknown because of the non-site specific nature of DCP's conversion model and because it is not possible to determine exactly where and to what extent additional in-ground disturbance may occur for each residential conversion. Without an assessment of specific development sites, the absence of hazardous materials cannot be definitively demonstrated. As such, the possibility of impacts related to hazardous materials cannot be eliminated. However, in-ground disturbance is likely to be limited for residential conversions, as many buildings will only require interior renovations to convert non-residential floor area to a newly-permitted residential use. To mitigate potential residential exposure to soil vapor intrusion, newly developed residential buildings would need soil vapor barriers installed on the ground and sub-ground levels. Since

residential conversion development resulting from the Proposed Action would be as-of-right, there would be no mechanism for the City to conduct or require a program to test for hazardous materials contamination, or to mandate the remediation of such materials. Therefore, any such impact would remain unmitigated except in cases where a parcel may have already been (E) Designated because of prior actions. Additionally, DCP is exploring additional zoning regulations and non-zoning strategies to address public health concerns related to specific aspects of the proposal. In terms of public health, it is not expected that potential hazardous materials impacts would be sufficiently large or widespread to raise the potential for significant adverse public health impacts. The Proposed Actions would allow for more development to occur as-of-right, consistent with the majority of construction within the city, which occurs on an as-of-right basis. Therefore, further analysis is not warranted.

### *Air Quality*

Potential health exposures from inhalation of air pollutants such as fine particles, CO, $NO_2$ and ozone can lead to the exacerbation of asthma symptoms and can contribute to poor cardiovascular and respiratory health outcomes. Health effects may also occur from exposure to other pollutants from combustion and process emissions such as VOCs. The potential for health impacts associated with air quality conditions can be evaluated from the results of the analysis in Chapter 14, “Air Quality”.

The air quality analysis for the Proposed Actions considered the potential for both mobile and stationary source impacts. The mobile source analyses determined that Proposed Action-generated traffic resulting in concentrations of CO and $PM_{2.5}$ at the analyzed intersections would not result in any violations of National Ambient Air Quality Standards (NAAQS). Further, the 8-hour CO incremental concentrations and the 24-hour and annual incremental $PM_{2.5}$ concentrations were predicted to be below the City’s de minimis criteria. An E-Designation would be placed on several sites to ensure that ~~an~~ HVAC stationary source impacts do not occur. The stationary light industrial source analyses determined that one non-criteria carcinogenic pollutant from a NYCDEP permitted small industrial facility exceeds the annual threshold criteria and fails the cancer risk assessment at a proposed development site. In addition, one NYSDEC permitted large facility’s (large or major sources) 1-hour~~annual incremental~~ $NO_2$ concentrations exceed the NAAQS standard at a nearby projected development site. As such, the Proposed Actions are anticipated to result in significant, adverse impacts related to air quality at a few development sites. An E-designation would be placed on these two sites to ensure ~~industrial and~~ large/major source impacts of 1-hour $NO_2$ exceedance are mitigated. ~~minimized~~Similarly, an E-designation would be placed on projected development site 13 to ensure cancer risk resulted by the light industrial source is mitigated while sites 11, 13, 14 and C would experience ambient Cadmium concentrations higher than NYSDEC DAR-1 annual guideline concentration (AGC).

Additionally, significant adverse air quality impacts cannot be precluded for the 1,093,808 gsf of non-residential area modeled for residential conversion. For this area, the extent of air quality impacts are unknown because of the non-site specific nature of DCP’s conversion model and because it is not possible to determine exactly where and to what extent development may occur for each residential conversion. For conversion sites near the New York Condo at 620 Eighth

Avenue, there is a potential for air quality impacts of 1-hour $NO_2$ exceedance. If Ben-Anum Co Inc. at 246 W 38th Street continues the operation conditions as assumed in the analysis, air quality impacts could occur to nearby conversion sites.

However, ~~I~~in terms of public health, it is not expected that potential air quality impacts would be sufficiently large or widespread to raise the potential for significant adverse public health impacts. Therefore, further analysis is not warranted.

### *Noise*

Prolonged exposure to high noise levels has the potential to decrease quality of life by disrupting sleep or interfering with conversations. Chronic noise exposure may raise blood pressure and has also been suggested to contribute to myocardial infarctions. Prolonged exposure to levels above 85 dBA will eventually harm hearing. Noise assessment results from Chapter 16, "Noise" inform whether there would potentially be exceedances of allowable noise levels that may result in public health impacts.

As detailed in Chapter 16, "Noise", mobile sources that would be generated by individual developments under the Proposed Actions were assessed to evaluate the potential for mobile source noise impact on existing noise receptors. The assessment concluded that on all 68 projected and potential development sites, noise levels would range between the "marginally acceptable" and "marginally unacceptable" exterior CEQR noise exposure categories, resulting in a noise attenuation requirement range of 28 to 33 dBA to ensure noise levels within the projected and potential development sites would comply with applicable CEQR interior noise level target requirements. As a result, the Proposed Actions includes (E) designations for most of the projected and potential development sites. The window/wall attenuation levels required under the (E) designation (E-830) and specified in Zoning Resolution (ZR) would avoid the potential for significant adverse noise impacts due to the Proposed Actions; see Appendix ~~X~~G, for the proposed (E) designation.

It is assumed that 1,093,808 gsf of existing nonresidential floor area would convert to residential use over the next decade, but this RWCDS residential conversion model is not site-specific. Due to the non-site-~~–~~specific nature of the 1,093,808 gsf area modeled for residential conversion, a conversion's proximity to mobile sources such as heavily trafficked roadways, rail lines or other rail infrastructure, with the path of aircraft, or near other stationary sources of noise, such as large boiler or generator systems, is not known. However, as ambient noise assessment evidenced that residential development in the Rezoning Area would need to provide up to 33 dBA of window/wall attenuation requirement to meet the acceptable interior noise level, residential conversions in the proposed Special Midtown South Mixed-Use (MSMX) Districts would achieve the acceptable interior noise goal as any new dwelling units in the proposed Mixed-Use Districts would require a minimum of 35 dBA of attenuation per ZR 123-32. On the other hand, while the majority of residential conversion is expected to be within the proposed Special Mixed-Use District, project generated residential conversion is also assumed at portions of the MSMX Affected Area in C6-4M Districts that would be outside of the Special Mixed-Use District. Therefore, as there is no mechanism to ensure adequate noise attenuation measures at project generated residential conversions to occur outside of the proposed Special Mixed-Use District,

the potential for elevated interior noise levels (in the absence of sufficient building attenuation measures) cannot be ruled out. However, considering that the CEQR interior noise guideline is aimed at reducing noise nuisance and improving quality of life for City residents, interior noise levels higher than the CEQR target does not necessarily indicate public health concerns. It is expected that developers would consider existing noise levels in building design and corresponding window-wall attenuation to maintain the marketability and attractiveness of their developments. In terms of public health, it is not expected that potential noise impacts would be sufficiently large or widespread to raise the potential for significant adverse public health impacts. Therefore, further analysis is not warranted.

The Proposed Actions would allow for manufacturing and residential uses in the same building. To protect occupants of mixed-use residential and manufacturing buildings and surrounding properties from vibrations and noise, any manufacturing uses operating on the ground floor of these buildings would need to adhere to the NYC Noise Code and the performance standards for M1 districts outlined in ZR 42-40. Manufacturing uses operating on the same story or above residential uses would need to adhere to the environmental requirements of ZR 32-423, as referenced in ZR 123-31(c)(2) to ensure there would be no significant adverse noise impacts.

To conclude, the Proposed Action would not result in noise-related significant public health impact.

### *Construction Air Quality*

As detailed in Chapter 19, "Construction", construction on many of the projected/potential development sites could result in a significant adverse impact on the surrounding air quality. However, measures required to reduce pollutant emissions during construction would include all applicable laws, regulations, and the City's building codes. These include dust suppression measures, idling restriction, and the use of ultra-low sulfur diesel (ULSD) fuel. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and on-road sources determined that particulate matter $PM_{10}$, annual-average nitrogen dioxide ($NO_2$), and carbon monoxide (CO) concentrations would be below their corresponding de minimis thresholds or National Air Quality Ambient Standards (NAAQS), respectively. However, due to site proximity and overlap in projected construction schedules, maximum combined emissions from Sites 46 and 49 and Sites 51 and 52 were examined. $PM_{2.5}$ was shown to be below the annual and 24-hour NAAQS but would exceed the annual de minimis threshold for all individual and combined Sites.

The exceedance of the de minimis threshold would be considered a significant adverse air quality impact. Since construction activities are temporary and the total annual $PM_{2.5}$ concentrations resulted by the construction activities would be lower than NAAQS, the temporary exceedance of the de minimis criterion does not indicate adverse public health impacts.

~~Between the Draft and Final EIS, additional review and evaluation will be performed to determine whether the identified impacts related to Annual PM2.5 increments will be avoided. This may include using more refined assumptions in terms of construction equipment usage, and the use of newer construction equipment with lower particulate emissions, as applicable.~~

Given the potential for construction air quality impacts would be temporary, it is not anticipated that the Proposed Actions would have the potential for public health impacts from air quality emissions during construction.

### *Construction Noise*

As detailed in Chapter 19, "Construction," the *CEQR Technical Manual* specifies that the construction noise analysis consider the potential for construction of a project to create high noise levels (the "intensity"), whether construction noise would occur for an extended period of time (the "duration"), and the locations where construction has the potential to produce noise ("receptors") in evaluating potential construction noise effects. If construction noise would occur continuously for 24 months or more, a detailed construction noise analysis is warranted and there is a potential for significant adverse noise impacts. Construction noise occurring for shorter durations would not typically result in significant adverse noise impact unless there is a higher intensity of noise.

As described in Chapter 19, "Construction," noise level increases exceeding the construction noise impact criteria would occur at several locations throughout the Rezoning Area and the Proposed Actions would result in significant adverse construction noise impacts. Four representative projected development sites (Projected Development Sites 35, 46, 49, and 52) were analyzed for construction noise for each phase of construction: Demolition/Excavation/Foundation; Building Superstructure/Exterior; and Interior Fit-Out. No significant adverse construction noise impacts are expected from construction of development sites whose construction duration would be considered short-term (less than 24 months). Based on the construction stage predicted to occur at each development site according to the conceptual construction schedule during each of the selected analysis periods, each receptor expected to experience an exceedance of the construction noise impact threshold was determined. However, construction noise impact thresholds are based on quality-of-life considerations. These differ from public health considerations, which would likely employ distinct criteria that are appropriate in the public health context. For example, chronic noise exposure may raise blood pressure and has been suggested to contribute to myocardial infarctions and to interfere with language development in children, prolonged exposure to levels above 85 dBA will eventually harm hearing, or episodic and unpredictable exposure to short-term impacts of noise at high decibel levels may also affect health.

Although the thresholds for significant adverse construction noise impacts are predicted to be exceeded at certain locations during construction, these exceedances would not constitute a significant adverse public health impact. As discussed above, the thresholds for construction noise are based on quality-of-life considerations and not on public health considerations. An impact found pursuant to a quality-of-life framework does not imply that an impact will exist when the analysis area is evaluated in terms of public health. Additionally, the buildings at those receptors with significant adverse construction noise impacts would provide at least 25 dBA window/wall attenuation for locations with insulated glass windows and alternate means of ventilation. As such, interior noise levels would be much lower than exterior noise levels. It is expected that all construction activities would follow the requirements of the NYC Noise Control Code for construction noise control measures would be in place at each site. Specific noise control

measures would be utilized in noise mitigation plans required under the NYC Noise Control Code. Further, the analysis in this EIS is based on RWCDS conceptual site plans and construction schedules, with the possibility that the actual construction may be of less magnitude in which case construction noise would be less than the analysis predicts. Therefore, given the potential for noise effects related to construction sources would be temporary, localized, and would not likely be short-term high decibel levels, it is not anticipated that the Proposed Action would have the potential for public health impacts from noise emissions during construction.