ENVIRONMENTAL PROTECTION

OFFICE OF THE COMMISSIONER

Environmental Justice Rules

Proposed New Rules: N.J.A.C. 7:1C

Authorized By: Shawn M. LaTourette, Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1D-1 et seq., 13:1D-157 et seq., 26:2C-1 et seq., 13:1E-1 et seq., 13:1E-26

et seq., 13:1E-99.11 et seq., 58:1A-1 et seq., 58:4A-4 et seq., 58:10A-1 et seq., 58:10A-21 et seq.,

12:5-1 et seq., 13:1D-29 et seq., 13:9A-1 et seq., 13:9B-1 et seq., 13:19-1 et seq., 13:20-1 et seq.,

58:16A-50 et seq., 13:1F-1 et seq., 13:1E-48.1 et seq., and 13:1E-99.21a et seq.

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

DEP Docket Number: 04-22-04.

Proposal Number: PRN 2022-082.

Public hearings concerning this notice of proposal will be held on the following dates and times.

- Monday, July 11, 2022, from 3:00 P.M. through 5:00 P.M. and 6:00 P.M. through 7:00
 P.M. at the Department of Environmental Protection's (Department) Public Hearing
 Room, 401 E. State Street, Trenton.
- Wednesday, July 13, 2022, at 6:30 P.M. at the Ray and Jon Kroc Corps Community Multi Purpose Room; 1865 Harrison Ave., Camden, NJ 08105.
- Wednesday, July 27, 2022, at 6:00 P.M. at the New Jersey Institute of Technology (NJIT), Campus Center Atrium, First Floor 150 Bleeker Street, Newark, NJ 07102.

Parking is Available at the NJIT Summit Street Garage, 154 Summit Street: https://www.njit.edu/about/maps-directions.

4. Thursday, July 28, 2022, at 6:00 P.M. through the Department's Microsoft Teams software (as noted below).

The public hearing will be conducted virtually through the Department video conferencing software, Microsoft Teams. A link to the virtual public hearing with telephone call-in option will be provided on the Department's website at <u>https://www.nj.gov/dep/rules/notices.html</u>.

Submit comments by September 4, 2022, electronically at <u>www.nj.gov/dep/rules/comments</u>. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

The Department encourages electronic submittal of comments. In the alternative, comments may be submitted on paper to:

Melissa P. Abatemarco, Esq. Attn.: DEP Docket No. 04-22-04 Office of Legal Affairs Department of Environmental Protection 401 East State Street, 7th Floor Mail Code 401-04L PO Box 402 Trenton, New Jersey 08625-0402

If you are interested in providing oral testimony or submitting written comments at the virtual public hearing, please email the Department at <u>ejrulehearings@dep.nj.gov</u>, no later than 5:00 P.M. on July 27, 2022, with your contact information (name, organization, telephone number, and email address). You must provide a valid email address, so the Department can send you an email confirming receipt of your interest to testify orally at the hearing and provide you with a separate option for a telephone call-in line if you do not have access to a computer or mobile device that can connect to Microsoft Teams. This hearing will be recorded. It is requested (but not required) that anyone providing oral testimony at the public hearing provide a copy of any prepared remarks to the Department through email.

The notice of proposal may be viewed or downloaded from the Department's website at http://www.nj.gov/dep/rules.

The agency proposal follows:

Summary

As the Department of Environmental Protection (Department) has provided a 90-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Department is proposing new rules to implement the provisions of New Jersey's Environmental Justice Law, codified at N.J.S.A. 13:1D-157 et seq. (Act), and establish the requirements for applicants seeking permits for certain pollution-generating facilities located, or proposed to be located, in overburdened communities, including the analysis of relevant environmental and public health stressors, as each are defined in the Act, as well as requirements intended to ensure applicants' meaningful engagement with members of host overburdened

communities, and community members' participation in the Department's decision-making process.

Background

All residents of the State of New Jersey, regardless of income, race, ethnicity, color, or national origin, have a right to live, work, learn, and recreate in a clean and healthy environment. Environmental justice requires fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, in the development, implementation, and enforcement of environmental laws, rules, and policies. This goal can only be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making processes in the places they live, learn, and work, and recreate.

Still, New Jersey's low-income communities and communities of color historically have been subjected to a disproportionately high number of environmental and public health stressors including mobile sources of pollution, as well as numerous industrial, commercial, and governmental stationary sources of pollution. Further compounding this inequity, New Jersey's overburdened communities often lack important environmental benefits, such as quality green and open spaces, sufficient tree canopy, or adequate stormwater management. Through the establishment of environmental justice policies and programs since 1998, the State of New Jersey has worked with uneven results to better acknowledge and address these disparities.

In September 2020, thanks to community leaders and advocates who have dedicated their lives and work to the cause of environmental justice, legislative champions, long-time environmental professionals at the Department, and business leaders invested in their host

communities, New Jersey enacted the Act, the first of its kind, and the nation's most empowering, environmental justice law. The Department must now implement the Act, in part, through the rules proposed in this rulemaking.

The Act is premised, in part, on the recognition that existing environmental standards are often formulated based on the effect that pollution has upon general populations spread over wide geographic areas, which may fail to fully consider localized impacts. Accordingly, the Legislature declared that all New Jersey residents, regardless of income, race, ethnicity, color, or national origin, have a right to live, work, and recreate in a clean and healthy environment. N.J.S.A. 13:1D-157. The Legislature further found that, historically, New Jersey's low-income communities and communities of color have been subject to a disproportionately high number of environmental and public health stressors, including pollution from numerous industrial, commercial, and governmental facilities located in those communities, and that the legacy of siting sources of pollution in overburdened communities continues to pose a threat to the health, well-being, and economic success of the State's most vulnerable residents. *Ibid*.

The Legislature also found that the State's overburdened communities must have a meaningful opportunity to participate in certain Departmental decisions pertaining to enumerated pollution-generating facilities, the siting or expansion of which may disproportionately increase environmental and public health stressors affecting the community. *Ibid*. Finally, the Legislature declared that it is in the public interest for the State, where appropriate, to limit the future siting or expansion of such facilities in overburdened communities. *Ibid*.

The Act requires the Department to assess relevant environmental and public health stressors affecting an overburdened community and to deny or condition permits where facilities

cannot avoid the occurrence of disproportionate environmental or public health stressors in the overburdened community. N.J.S.A. 13:1D-160. Critically, the Act empowers the Department to consider environmental and public health stressors presented by the entirety of a facility and its operations, including elements not previously subject to certain of the Department's media-based regulatory schemes, such as mobile sources of emissions. To that end, the Act enhances existing Departmental authorities, many of which focus on reducing adverse impacts to certain environmental media, but may have historically not always been able to fully address facility-wide environmental impacts, the concentration of facilities in given geographic areas, or the cumulative effects of facility-siting decisions.

The Department's authority, pursuant to the Act, applies in circumstances where three criteria are met: (1) the proposed or existing facility is one of the eight types of facilities enumerated in the Act; (2) the applicant seeks a Department permit or approval enumerated in the Act; and (3) the facility is located or proposed to be located, in whole or in part, in an overburdened community as defined by the Act.

The eight specific types of facilities covered by the Act are: (1) major sources of air pollution; (2) incinerators and resource recovery facilities; (3) large sewage treatment plants that process more than 50 million gallons per day; (4) transfer stations and solid waste facilities; (5) recycling facilities that receive at least 100 tons of recyclable material per day; (6) scrap metal facilities; (7) landfills; and (8) medical waste incinerators, except those attendant to hospitals and universities. N.J.S.A. 13:1D-158.

As discussed in more detail below, the Act applies to Departmental permits or approvals enumerated at N.J.S.A. 13:1D-158, which arise under the Department's authorities related to solid

waste and recycling, land resource protection, water supply and pollution control, air pollution control, and pesticide regulation.

The Act, at N.J.S.A. 13:1D-158, defines an overburdened community as "any census block group, as determined in accordance with the most recent United States Census, in which: (1) at least 35 percent of the households qualify as low-income households; (2) at least 40 percent of the residents identify as minority or as members of a State recognized tribal community; or (3) at least 40 percent of the households have limited English proficiency." N.J.S.A. 13:1D-158.

Where the Act applies, the Department may not deem a permit application complete for review, unless the applicant completes the environmental justice impact statement (EJIS) process to assess the environmental and public health stressors in the overburdened community and the facility's potential contributions thereto, including conducting a public hearing in the affected overburdened community and responding to public comment on the application. N.J.S.A. 13:1D-160(a).

Finally, the Act further provides that, after review of the EJIS, response to public comment and any other relevant information, and upon a finding that approval of a permit or permit renewal, as proposed, would, together with other environmental or public health stressors affecting the overburdened community, cause or contribute to adverse cumulative environmental or public health stressors in the community that are higher than those borne by other communities in the State, county, or other geographic unit of analysis as determined by the Department, the Department: (1) shall deny a permit for a new facility, or approve a new facility permit with conditions upon the new facility's demonstration that it meets a compelling public interest; or (2) may apply conditions to a permit for the expansion of an existing facility or the renewal of an

existing facility's major source permit. N.J.S.A. 13:1D-160(c) or (d). This rulemaking would establish the regulatory criteria necessary to implement these statutory requirements.

Where this rulemaking applies, and as explained more fully below, an applicant seeking an individual permit for a new or expanded facility, or the renewal of an existing major source permit, for a facility located in an overburdened community will be required to analyze the comparative environmental and public health stressors affecting the overburdened community and seek, in the first instance, to avoid a disproportionate impact. In assessing a facility's ability to avoid a disproportionate impact in an overburdened community, an applicant would conduct modeling of the facility's operations to determine how those operations would impact levels of stressors identified as affected, utilizing the data and metrics set forth in the chapter Appendix.

Where a proposed new facility cannot avoid a disproportionate impact, the Act would require the Department to deny a permit, unless the proposed new facility would serve a compelling public interest in the overburdened community.

Where an expanded facility or an existing major source cannot avoid a disproportionate impact, the applicant would analyze measures that, if undertaken by the applicant, could avoid, and/or minimize, environmental and public health stressors and, where applicable, provide a net environmental benefit in the overburdened community.

Where an applicant satisfies the standards of the proposed rulemaking, the Department would issue a decision with conditions intended to ensure that a disproportionate impact is avoided or that appropriate avoidance, minimization, or net benefit measures are implemented.

Public Engagement

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In formulating this rulemaking, the Department conducted 10 public engagement sessions: one on October 22, 2020, two on January 20, 2021, two on March 11, 2021, two on April 7, 2021, two on May 20, 2021, and one on June 24, 2021, to seek input for the development of this rulemaking. Attendees included representatives from environmental and professional organizations, industry groups, residents of both non-overburdened communities and overburdened communities, and local government officials. Each meeting discussed specific topic(s) as follows:

- October 22, 2020 Initial Engagement Session
 - Background on environmental justice and key aspects of the Act.
 - Input and feedback on key aspects of the Act in anticipation of rulemaking.
- January 20, 2021 Geographic Points of Comparisons and Facility and Permit Definitions
 - Overburdened community and appropriate geographic point of comparison definitions.
 - Potential publicly available data and mapping tools.
 - Facility and permit definitions.
- March 11, 2021 Environmental and Public Health Stressors
 - Potential environmental and public health stressors.
- April 7, 2021 Renewal Conditions, Expansion Conditions, and Compelling Public Interest
 - Permit conditions.
 - Compelling public interest.
- May 20, 2021 Environmental Justice Impact Statement

- EJIS contents and process.
- June 24, 2021 Review Meeting
 - Overview of considerations for proposed rulemaking.

Pursuant to the Act, N.J.S.A. 13:1D-159, on January 16, 2021, the Department posted, to its website, a list of overburdened communities and created an interactive GIS-based mapping tool showing their locations throughout the State (see https://www.nj.gov/dep/ej/communities.html). The Department conducted a webinar on overburdened communities on February 9, 2021, for mayors, local government officials, and contractors to provide an overview of the U.S. census data utilized to develop the overburdened community list and mapping tool. Additional public information meeting materials are available on the Department's Office of Environmental Justice's website at https://www.nj.gov/dep/ej/policy.html.

The Department has considered the comments and feedback received during the aforementioned public engagements, and the information shared and received has informed this rulemaking.

General Provisions

Relationship to Other Regulatory Programs (N.J.A.C. 7:1C-1.4)

The following existing Department regulatory programs evaluate requests for, and issue, permits or approvals subject to the Act's requirements at N.J.S.A. 13:1D-158:

Air Quality, Energy & Sustainability

• N.J.S.A. 26:2C-1 (Air Pollution Control Act)

Sustainable Waste Management

- N.J.S.A. 13:1E-1 and 13:1E-26 (Solid Waste Management Act)
- N.J.S.A. 13:1E-99.11 (New Jersey Statewide Mandatory Source Separation and Recycling Act)
- N.J.S.A. 13:1E-48.1 and 13:1E-99.21a (Comprehensive Regulated Medical Waste

Management Act)

Water Resources Management

- N.J.S.A. 58:1A-1 and 58:4A-5 (Water Supply Management Act)
- N.J.S.A. 58:10A-1 and 58:10A-21 (Water Pollution Control Act)
- N.J.S.A. 13:1F-1 (Pesticide Control Act of 1971)

Watershed and Land Management

- N.J.S.A. 12:5-1 (Waterfront Development)
- N.J.S.A. 13:1D-29 (Construction Permits)
- N.J.S.A. 13:9A-1 (The Wetlands Act of 1970)
- N.J.S.A. 13:9B-1 (Freshwater Wetlands Protection Act)
- N.J.S.A. 13:19-1 (Coastal Area Facility Review Act)
- N.J.S.A. 13:20-1 (Highlands Water Protection and Planning Act)
- N.J.S.A. 58:16A-50 (Flood Hazard Control Act)

Definitions (N.J.A.C. 7:1C-1.5)

The Act defines several terms, and those definitions are proposed to be incorporated without change into the rule's definitions. These terms are "limited English proficiency," "low-income household," "major source," "overburdened community," and "permit." N.J.S.A. 13:1D-

158. The "Environmental Justice Impact Statement" is addressed more fully in its relevant subchapter summary discussion below.

Other required definitions are proposed as described below.

Analysis of environmental and public health stressors

The Act requires an analysis of the environmental and public health stressors affecting an overburdened community. To clarify the points of analysis and provide consistency of terminology, the Department proposes to define several key concepts as follows.

Geographic Point of Comparison

The Act gives the Department discretion to determine the appropriate geographic unit of analysis upon which to base the required comparative analysis of environmental and public health stressors. N.J.S.A. 13:1D-160. After analyzing several different approaches, including considering State, county, and region alone as the appropriate geographic unit, the Department determined that a single point of comparison or "one-size-fits-all" approach would not provide equitable protection to overburdened communities, as is intended by the Act. For instance, using only a county point of comparison would threaten to perpetuate the historic siting inequities the Legislature sought to remedy by providing less consistent protection in the State's comparatively more industrialized counties. Conversely, focusing on a strict Statewide comparison would provide less protection to overburdened communities in comparatively less industrialized counties, particularly in the State's southern regions. Similarly, analysis of more regionalized approaches lacked uniformity and a coherent basis for boundary determination.

Accordingly, the Department proposes to use a hybrid approach that compares the environmental and public health stressor values of an overburdened community to the State or county's 50th percentile and selects the lower value as the appropriate geographic point of comparison. In the course of this comparison, the Department would exclude stressor values from other overburdened communities to comport with the Act's recognition of historic siting inequities and the Legislature's intent that "no community should bear a disproportionate share of the adverse environmental and public health consequences that accompany the State's economic growth." N.J.S.A. 13:1D-157. The Department also proposes additional definitions to aid in the assessment of stressor levels in an overburdened community in relation to the geographic point of comparison. This includes defining "adverse environmental and public health stressor" as a stressor in the overburdened community that is higher than an overburdened community's geographic point of comparison or would be made higher than an overburdened community's geographic point of comparison as a result of the facility's contribution.

"Combined stressor total" is proposed to mean the total number of adverse environmental and public health stressors in an overburdened community.

Further, "adverse cumulative stressors" means that the combined stressor total of an overburdened community is higher than or would be made higher than the overburdened community's geographic point of comparison.

Finally, the Department is proposing to define "disproportionate impact" as situations where a facility cannot avoid either: (1) creating adverse cumulative stressors in an overburdened community as a result of the facility's contribution; or (2) contributing to an adverse environmental

and public health stressor in an overburdened community that is already subject to adverse cumulative stressors.

Compelling Public Interest

The Department is proposing a definition of "compelling public interest" at N.J.A.C. 7:1C-1.5 that, consistent with the legislative intent, would be a narrow exception to the Act's requirement that the Department deny the issuance of a permit to a new facility that cannot avoid a disproportionate impact. To satisfy the conditions of the narrow compelling public interest exception, the primary purpose of the facility must be to serve an essential environmental, health, or safety need of the host overburdened community for which there is no reasonable alternative to siting within the overburdened community. Consistent with the legislative intent to reduce the environmental and public health stressors within overburdened communities due to historic inequities in facility siting notwithstanding the economic benefits associated with such facilities, the Department has determined to expressly exclude reliance on economic factors to justify applicability of the compelling public interest exception. Economic factors include, but are not limited to, employment opportunities, increased municipal tax revenue, or increased demand for services. However, the Department would consider whether a proposed facility, such as a public works project, would directly reduce adverse environmental or public health stressors in the host overburdened community, thereby serving an essential environmental, health, or safety need of the host overburdened community.

Finally, to ensure meaningful input and participation by members of an overburdened community, the Department would consider as relevant, the position(s) of members of the

overburdened community in determining whether a facility satisfies the compelling public interest standard.

This standard would enable consideration of projects that address host community needs, including appropriately scaled food waste facilities, public water infrastructure, renewable energy facilities, and projects designed to reduce the effects of combined sewer overflows.

Facilities

The Department proposes to: (1) establish new definitions for certain facilities enumerated in the Act; (2) modify existing definitions of certain facilities; and (3) incorporate by reference definitions from the Department's other existing regulatory authorities.

"New facility," "expansion," and "renewal" are proposed to be defined to apply to all facility and media types covered by the Act. The proposed definition for "new facility" covers the development of new covered facilities, as well as changes in use of existing facilities. The proposed definition for "expansion" applies to modifications or changes in an existing facility's operations that have the potential to result in an increase in the existing facility's contribution to environmental and public health stressors. The proposed definition for "renewal" is intended to apply to facilities that are continuing in their existing capacities and would include minor modifications made to major source permits that do not increase emissions.

Certain existing Department definitions are proposed to be modified to meet the Legislative intent of the Act: "sludge processing facility," "sludge incinerator," "sewage treatment plant," "scrap metal facility," "recycling or reclamation facility," and "existing facility."

As there is no existing definition for "sludge processing facility" within the Department's preexisting rules, the Department proposes a specific definition informed by existing definitions for "residual use or disposal practice" and "environmental assessment" from the New Jersey Pollution Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A-1.2 and 20.6, respectively. Because the existing "residual use or disposal practice" definition covers activities conducted under a general permit that is broader in scope than activities performed at a "sludge processing facility," the Department is modifying the definition to include only those activities that require an individual permit under the NJPDES regulations.

The proposed definition for "sewage treatment plant" is modified from the existing definition of "affected sewerage entity" from the Department's NJPDES rules with the addition of "group of commissioners" and "commission" to ensure that the definition covers all sewage treatment facilities intended under the Act.

The proposed definition for "scrap metal facility" draws from the existing definition at N.J.A.C. 7:26-1.4 for "scrap metal shredding facility." Since the Act was not limited to scrap metal shredding, the proposed definition is broader in scope than that of "scrap metal shredding facility" and is proposed to include activities in addition to scrap metal shredding.

"Recycling or reclamation facility" is proposed to be modified from the existing definition at N.J.A.C. 7:26-1.4 because the Act's "facility" definition narrows the scope of the applicable facilities to those "intending to receive at least 100 tons of recyclable material per day," whereas the existing definition contains no such limitation. Even though recycling permits are called "general approvals" in the recycling rules, N.J.A.C. 7:26A, these permits are akin to individual permits and are, thus, subject to the Act because they contain site-specific requirements.

"Existing facility" is modified from N.J.A.C. 7:26-1.4 to remove references to solid waste and to broaden its scope to all facilities identified in the Act.

Similarly, because there is no existing Department regulatory definition for the term, "sludge incinerator" it is proposed to be defined, instead, using the existing definition of "sludge" in the NJPDES rules at N.J.A.C. 7:14A-1.2 and the concepts of combustion and incineration referenced in the Act.

The Department proposes to modify the statutory definition for "facility" in two ways. First, the statutory definition for "facility" references the "capacity" of a sewage treatment plant. The proposed definition changes "capacity" to "permitted flow" to align with the NJPDES rules at N.J.A.C. 7:14A, which do not regulate a facility's capacity, but rather categorize and regulate a facility's discharge through "permitted flow." The rule text also explains that the term "permitted flow" is used as defined at N.J.A.C. 7:14A-1.2. The statutory definition of "medical waste incinerator" is proposed to be modified for clarity and consistency with the Department's permitting program.

Where appropriate, definitions are proposed to be incorporated by reference from the Department's underlying existing programmatic regulations without change to ensure consistency across permitting schemes. The definitions incorporated by reference from other rules without change are: "resource recovery facility," "incinerator," "hazardous waste," "hazardous waste landfill," "medical waste," "reclaim or reclamation," "recyclable materials," "residual," "residual-only facility," "sanitary landfill," "scrap metal," "sewage sludge," "sludge," "solid waste facility" and "transfer station." The existing regulatory cross-references are included in the proposed definitions.

Finally, as indicated above, and discussed in more detail below, the proposed new chapter implements the provisions of New Jersey's Environmental Justice Law, codified at N.J.S.A. 13:1D-157 et seq., involving Department review of permit applications to ensure that members of overburdened communities have meaningful opportunities for input into environmental permitting decisions made by the Department that may impact those communities and that those potential impacts are adequately considered. To provide context for terms used throughout the chapter, definitions are proposed for the terms "Act," "applicant," "Department," and "person." These definitions provide a citation to the Act for those interested in reviewing the legislative directive, make clear that it is the Department that implements the rules, and make clear that references in the rules to "applicants" and "persons" include not only individuals, but various other entities. Additionally, the proposed definition for "feasible" makes clear that feasibility will include both the concept of technical feasibility and the concept of economic feasibility. The proposed definition for "material change" reflects that a change to a facility or EJIS' basic purpose, an expansion of the facility, an increase in the potential contributions to environmental or public health stressors or a change in measures addressing them constitute a material change requiring further Departmental analysis. A "net environmental benefit" is proposed to be determined by the Department as either a reduction of baseline environmental and public health stressors in an overburdened community, or another action that improves environmental and public health conditions in an overburdened community. The Department's proposed definition for "site" makes clear that a site includes any parcel or contiguous parcel of property on which a facility is located, or proposed to be located, and that parcels separated by a right-of-way shall be considered contiguous.

Environmental and Public Health Stressors (N.J.A.C. 7:1C-1.4 and Chapter Appendix)

The Department proposes to define "environmental and public health stressors," or "stressors," by incorporating the statutory definition at N.J.S.A. 13:1D-158. This definition includes the following categories of stressors: (1) concentrated areas of air pollution; (2) mobile sources of air pollution; (3) contaminated sites; (4) transfer stations or other solid waste facilities, recycling facilities, and scrap yards; (5) point-sources of water pollution including, but not limited to, water pollution from facilities or combined sewer overflows; and (6) conditions that may cause potential public health impacts including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems, in the overburdened community.

To further inform the statutorily enumerated categories, the Department proposes to include a specific list of stressors, their respective unit of analysis and, where applicable, data sources, which shall be used to determine the stressors existing in an overburdened community. The proposed list of stressors selected by the Department is informed by the environmental and public health stressors determined by the Legislature to be of primary concern in overburdened communities, including those related to the pollution-generating facilities subject to the Act and this chapter. The stressors are proposed to be included at the chapter Appendix.

In developing the list of stressors, the Department considered a broad range of potential stressors and data sources, including those identified in the Department's Environmental Justice Guidance "Furthering the Promise" (Sept. 2020), USEPA's EJSCREEN, and California's CalEnviroScreen (see https://www.nj.gov/dep/ej/docs/furthering-the-promise.pdf; https://www.nj.gov/dep/ej/docs/furthering-the-promise.pdf; https://www.nj.gov/dep/ej/docs/furthering-the-promise.pdf; https://www.nj.gov/dep/ej/docs/furthering-the-promise.pdf; https://www.nj.gov/dep/ej/docs/furthering-the-promise.pdf; https://www.nj.gov/dep/ej/docs/furthering-the-promise.pdf; https://www.epa.gov/ejscreen; <a href="https://www

In determining the stressors to be utilized in the analyses required by the Act, the Department considered their alignment with the Act's statutory categories, data availability and quality, the ability to extrapolate data to the appropriate geographic scale (for example, census block group, county, State), and the marginal value of each stressor to the stressor analysis. Regarding marginal value, the Department's goal is to utilize the minimum number of stressors necessary to accurately assess the presence of environmental and public health stressors in overburdened communities, thereby excluding stressors that, while potentially relevant, would not provide sufficient value to the analysis to warrant inclusion.

While the Department has organized its list of selected stressors in accordance with the statutory categories, it notes that certain of the selected stressors might inform multiple stressor categories. For example, mobile sources might also relate to concentrated areas of air pollution, both of which may be relevant to potential public health stressors such as asthma. In each instance, the Department has determined that the selected stressors are relevant to the statutorily defined categories and can be used to understand the relative impacts to overburdened communities.

As acknowledged by the Act, a community's proximity to environmental stressors is correlated with increased adverse public health risks. Overburdened communities historically subject to disproportionate environmental stressors, including the cumulative impacts of industrial facility siting decisions, generally experience a higher degree of public health stressors, as compared to communities that are not overburdened. By categorizing industrial facilities themselves as a statutorily defined stressor, the Act further recognizes that an overabundance of enumerated facilities in overburdened communities should be avoided. Accordingly, as discussed

below, the Department proposes to consider the density of each type of facility in an overburdened community as a relevant stressor.

The Department's proposed list of 26 stressors follows below. For each stressor, the Department proposes, at the chapter Appendix, to indicate the statutory category it informs, whether it is a baseline or affected stressor, the appropriate unit of measurement, and, where appropriate, the specific data source to be used to conduct the comparative stressor analysis required pursuant to the proposed rule. Where a stressor is listed as "affected," an applicant would be required to analyze, through appropriate modeling, the existing or proposed facility's impact thereto when determining whether the facility can avoid a disproportionate impact. For general reference, the tables below additionally indicate whether the stressor is utilized in EJSCREEN or CalEnviroScreen.

Concentrated Areas of Air Pollution

Ground-Level Ozone

The Department proposes to list ground-level ozone as a stressor relevant to concentrated areas of air pollution. In the upper atmosphere, stratospheric ozone provides protection against the sun's ultraviolet rays. In contrast to ozone in the upper atmosphere, tropospheric ozone at ground level is harmful to public health. Ground-level ozone forms when volatile organic compounds (VOCs) and nitrogen oxides (NO_x) react in the presence of sunlight. Of the six criteria air pollutants designated by the U.S. Environmental Protection Agency (USEPA), ozone and particulate matter pose the most widespread and significant health threats. Ground-level ozone can irritate the entire respiratory tract and people with pre-existing respiratory ailments are especially

prone to the effects of ozone. For example, asthmatics affected by ozone may have more frequent or severe attacks during periods when ozone levels are high. Children are particularly at risk for ozone-related problems since they breathe more air per pound of body weight than adults, and ozone can affect the development of their immature respiratory systems. Additionally, children tend to be active outdoors during the summer when ozone levels are at their highest. Even when ozone is present at low levels, inhaling it can trigger a variety of health problems including chest pains, coughing, nausea, throat irritation, and congestion. Ozone can aggravate medical conditions, such as bronchitis, heart disease, emphysema, and asthma, and can reduce lung capacity (see https://www.state.nj.us/dep/airmon/pdf/2019-nj-aq-report.pdf).

The Department proposes to consider the ozone stressor on a three-year average of Air Quality Index (AQI) days greater than 100 for ozone, as 100 is considered the threshold for safe levels. The AQI is a system for communicating daily air quality to the public and warning them when air pollutant levels in their area are unhealthy, where higher AQI daily values indicate a greater level of health concern (see <u>https://www.airnow.gov/aqi/aqi-basics/</u>). The source of the data for this analysis is collected at New Jersey's air quality monitors and submitted to the USEPA for posting on its AirNow website (see <u>https://aqs.epa.gov/aqsweb/airdata/download_files.html</u>).

Fine Particulate Matter (PM_{2.5})

The Department proposes to list $PM_{2.5}$ concentrated areas of air pollution. Particulate matter is the general term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. These particles can be manmade or natural, and directly emitted, or formed, in the atmosphere from the chemical reactions of other pollutants. Particles that are 2.5 micrometers in

diameter and smaller, referred to as fine particulate matter or $PM_{2.5}$, pose the greatest public health risk. $PM_{2.5}$ can penetrate deep into the lungs and may even enter the bloodstream. $PM_{2.5}$ has known adverse effects on the heart and lungs, exacerbating existing respiratory diseases and cardiovascular effects. Health studies show a significant association between exposure to particle pollution and health risks, including premature death. The smaller the size of the particles, the greater the potential for causing health issues. A strong body of scientific evidence shows that long- and short-term exposure to $PM_{2.5}$ below the current Federal standards can lead to heart attacks, asthma attacks, and premature death. (https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1001EX6.txt).

As with ground-level ozone, individuals with pre-existing respiratory ailments are especially prone to the effects of PM_{2.5}. Roughly one out of every three people in the United States are at a higher risk of experiencing PM_{2.5}-related health effects, from active children, that spend a lot of time playing outdoors as their bodies develop, to the elderly population. These additional impacts are particularly concerning in overburdened communities that are already subject to a higher-than-average share of at-risk individuals; for example, individuals living in poverty are 1.35 times more likely to live in areas with high PM_{2.5} emissions than the overall population and black individuals are 1.54 times more likely to live in areas with high PM_{2.5} than the overall population (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5844406/).

Similar to ground-level ozone, the Department proposes to consider the $PM_{2.5}$ stressor on a 3-year average of AQI days greater than 100 for fine particulate matter, as 100 is considered the threshold for safe levels. The source of this data for analysis is collected at New Jersey's air quality

monitors and submitted to the USEPA for posting on its AirNow website (see https://ags.epa.gov/agsweb/airdata/download files.html).

Air Toxics Cancer Risk Including Diesel Particulate Matter

The Department proposes to list the cancer risk from air toxics, including diesel particulate matter, as calculated by USEPA's AirToxScreen as a stressor relevant to concentrated areas of air pollution. AirToxScreen, formerly known as the National Air Toxics Assessment, or "NATA," reflects the USEPA's ongoing review of air toxics in the United States and provides a snapshot of outdoor air quality based on inhalation of air toxics, estimating cancer risk for all covered air toxics and noncancer health effects for certain covered pollutants at the census tract level (see https://www.epa.gov/AirToxScreen).

Diesel is a type of fuel derived from crude oil and biomass that is used in most freight and delivery trucks, as well as buses, trains, construction and farm vehicles, boats, and some cars and trucks. When burned, diesel fuel produces emissions can be harmful to human health. Immediate health effects from diesel exhaust exposure include irritation to the eyes, nose, throat, and lungs, headaches, lightheadedness, coughs, and nausea, worsen allergies to dust and pollen, and increase the intensity and frequency of asthma attacks. Children, the elderly, and individuals with asthma, emphysema, and chronic heart and lung disease are particularly sensitive to this type of pollution (see https://oehha.ca.gov/air/health-effects-diesel-exhaust). The USEPA has also determined that engine likely diesel exhaust is carcinogenic to humans (see https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance nmbr=642).

The Department proposes to consider the cancer risk including diesel stressor in risk per million. This data is available for analysis at <u>https://www.epa.gov/AirToxScreen/2017-airtoxscreen</u>.

Air Toxics Cancer Risk Excluding Diesel Particulate Matter

The Department also proposes to list the cancer risk from air toxics excluding diesel particulate matter as calculated by the USEPA's AirToxScreen as a stressor relevant to concentrated areas of air pollution. Air toxics are generally associated with industrial sources and include benzene, found in gasoline; tetrachloroethylene, emitted from dry cleaning facilities; and methylene chloride, used as a solvent and paint stripper. AirToxScreen includes air toxics in its core stressors that the USEPA has classified as "carcinogenic to humans," "likely to be carcinogenic to humans," or "suggestive evidence of carcinogenic potential." Much of the published literature supports the hypothesis that proximity to environmental hazards translates to higher risks, including increased adverse health risks. Concern about proximity to industrial facilities and other pollutant sources stems from the fact that industrial areas generally carry a higher environmental burden than do purely residential neighborhoods in terms of pollution and risks. (see https://archive.epa.gov/ncer/ej/web/pdf/brender.pdf). Given that carcinogenic air toxics are associated with industrial sources, it is unsurprising that these elevated exposures would align with overburdened communities, which are affected by greater air toxics (see https://archive.epa.gov/ncer/ej/web/pdf/brender.pdf).

The Department proposes to consider the cancer risk excluding diesel stressor in risk per million from 138 of the non-diesel PM_{2.5} air toxics. The source of this data for analysis is posted on the USEPA's website at <u>https://www.epa.gov/AirToxScreen/2017-airtoxscreen.</u>

Air Toxics Non-Cancer Risk

The Department proposes to include "air toxics non-cancer risk" in its list of stressors at N.J.A.C. 7:1C Appendix. The noncancer health impacts from exposure to 138 of the 180 air toxics is relevant to concentrated areas of air pollution. These health effects include impacts on the lungs and other parts of the respiratory system; on the immune, nervous, and reproductive systems; and to organs, such as the heart, liver, and kidneys. These effects can range from headaches and nausea to respiratory arrest and death, with the severity depending on the amount and length of exposure and the nature of the chemical itself (see https://www.epa.gov/AirToxScreen/2017-airtoxscreen). Unlike other pollutants that the USEPA regulates, air toxics have no universal, predefined risk levels that clearly represent acceptable or unacceptable thresholds. Instead, the USEPA sets regulatory-specific targets to protect the most people possible to an individual lifetime risk level no higher than about one in one million. These determinations called for considering other health and risk factors, including risk assessment uncertainty, in making an overall judgment on risk acceptability.

To estimate noncancer air toxic health impacts, the USEPA calculates a Hazard Index (HI) that sums the Hazard Quotients (HQs) to account for potential noncancer health effects to certain human organs and organ systems due to long-term exposure to air toxics. Each air toxic HQ is a ratio of the potential exposure to that substance and the level at which no adverse effects are

expected. An HQ or HI of one or lower means a specific air toxic, or air toxics combined, are unlikely to cause adverse noncancer health effects over a lifetime of exposure. However, an HQ or HI greater than one does not necessarily mean adverse effects are likely. Instead, the USEPA evaluates this on a case-by-case basis, considering the confidence level of the underlying health data, the uncertainties, the slope of the dose-response curve (if known), the magnitude of the exceedances, and the numbers or types of people exposed at various levels above the reference concentration.

The Department proposes to consider the air toxics non-cancer stressor in risk per million from 138 of the air toxics. This data is available for analysis on the USEPA's website at https://www.epa.gov/AirToxScreen/2017-airtoxscreen.

Mobile Sources of Air Pollution

Traffic – Cars, Light- and Medium-Duty Trucks

The Department proposes to include "traffic – car, light- and medium-duty trucks" in its list of stressors at N.J.A.C. 7:1C Appendix. The proximity of car and light-and medium-duty truck traffic is an indicator of increased vehicular air pollution exposure levels and is relevant to mobile sources of air pollution in overburdened communities. Traffic congestion, defined as periods when traffic volume exceeds roadway capacity, creates "stop and go" traffic and idling in place (see https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4243514/). Idling for more than 10 seconds uses more fuel, thereby producing more emissions, than stopping and restarting the engine, which is simply not practical in gridlock traffic (see https://afdc.energy.gov/files/u/publication/idling_personal_vehicles.pdf). In many instances,

congestion is recurring, as high traffic volumes regularly overload roadways during weekday peak "rush hour" periods. Residential proximity to traffic is associated with various health impacts, particularly the onset of, or exacerbation of asthma, as well as mortality rates. Traffic proximity is also associated with noise, which is a risk factor for various health problems.

The Department proposes to determine the magnitude of the "Traffic – cars and light- and medium-duty trucks" stressor through the Average Annual Daily Traffic (AADT) data from the Federal Highway Administration's (FHWA) Highway Performance Monitoring System. For car, light- and medium-duty truck traffic, the Department would analyze the following data: FHWA's total data minus the combination of single unit truck data for New Jersey and combined truck data for New Jersey (see https://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/page05.cfm#toc249159705; https://www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltpp/13091/002.cfm; https://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/page05.cfm#toc249159708.)

Traffic – Heavy-Duty Trucks

The Department proposes to include "traffic – heavy duty trucks" in its list of stressors at N.J.A.C. 7:1C Appendix. The proximity of heavy-duty truck traffic to residences and other institutions is an indicator of increased truck-related air pollution exposure levels and is relevant to mobile sources of air pollution. Though vital to movement of goods in and around the State, the ports of entry for these goods, such as seaports, airports, railyards, and warehouse and distribution facilities, are often collocated with low-income communities and communities of color (see https://www.epa.gov/community-port-collaboration/ports-primer-51-goods-movement-and-

transportation-planning). Residential proximity to traffic is associated with various health impacts, particularly the on-set of, or exacerbation of asthma, as well as mortality rates. Proximity to traffic has also been associated with subclinical atherosclerosis, which is a key pathology underlying cardiovascular disease (CVD), prevalence of CVD and coronary heart disease (CHD), incidence of myocardial infarction, and CVD mortality. These health impacts likely stem from increased exposure to vehicle-related emissions, such as ultrafine and other components of PM_{2.5}, lead and other metals, and mobile source air toxics such as benzene, nitrogen oxides (NO_x), volatile organic compounds (VOCs), and carbon monoxide. Vehicles also emit ozone and PM_{2.5} precursors in addition to being New Jersey's largest source of carbon dioxide emissions. Ambient exposure to nitrogen oxides, sulfur dioxide, and fine particulate matters significantly increases the risk of lung cancer (see https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4448375/). Traffic proximity is also associated with noise, which is a risk factor for various health problems. Heavy-duty trucks contribute to PM_{2.5} and its precursors due to the vehicle-type's use of diesel fuel.

Similar to the proposed "Traffic/Major Roadway," stressor, the Department proposes to determine the density of the "truck traffic" stressor through the Average Annual Daily Traffic (AADT) data from the FHWA Highway Performance Monitoring System. The Department proposes to consider the traffic/major roadways stressor on increased truck-related air pollution exposure levels. The Department would analyze the single unit truck data and combined truck data at https://www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltpp/13091/002.cfm and https://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/page05.cfm#toc249159708.

Railways

The Department proposes to include "railways" in its list of stressors at N.J.A.C. 7:1C Appendix. The proximity of railways to residences and other institutions is an indicator of increased air pollution exposure levels and is relevant to mobile sources of air pollution. There are two types of rail systems operating in New Jersey: passenger (both light rail and commuter rail) and freight. New Jersey Transit Corporation, or NJ Transit, is the State-owned public transportation system that services New Jersey, along with portions of New York State and Pennsylvania, and provides 270 million passenger trips each year covering 5,325 square miles (see https://www.njtransit.com/our-agency/about-us).

Freight locomotives, including those that transport goods to and from the Port Authority of New York and New Jersey, the third largest container port in the United States, and passenger operations, like NJ Transit and Amtrak, operate on a frequent basis and contribute to noise, congestion, industrial blight, and air pollution (see https://envhealthcenters.usc.edu/wp-content/uploads/2016/11/Tracting-Harm.pdf). A 2014 study of freight rail impacts on environmental justice communities in California found that 167,000 residents in proximity of their three highest priority rail yards had an estimated diesel cancer of greater than 100 in one million, which is characterized as a significant risk. Overall, there was a statistically higher percentage of non-white residents, particularly Latinos, in the California Air Resources Board (CARB)-identified diesel cancer risk areas near rail yards than the comparative county population. The same study found that with respect to income, the estimated percentage of low-income households in the 100 in a million-risk isopleth was higher than the comparative county population for most of their rail yards (see https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3945577/; see also Allen, P et al., Newark Community Impacts of Mobile Source Emissions: A Community-Based

 Participatory
 Research
 Analysis,
 (2020),
 available
 at:

 https://www.mjbradley.com/sites/default/files/MJBA_Report_NewarkCommunityElectrification
 Nov2020.pdf).

The Department proposes to consider proximity to railways as a stressor for increased railrelated air pollution exposure levels. The source of this data for analysis is posted on NJDOT's ArcGIS website (data downloaded from https://services.arcgis.com/HggmsDF7UJsNN1FK/arcgis/rest/services/Railroads_Network/Featu reServer/1/).

Contaminated Sites

Known Contaminated Sites

Starting in the early 1800s, New Jersey grew and prospered as a manufacturing center in the United States. New Jersey cities including Paterson, Trenton, Camden, Elizabeth, Jersey City, Newark, Vineland, and Passaic developed industries, including textiles, trains, clay products, iron, and steel (see https://nj.gov/nj/about/history/short_history.html). Those industries contributed to significant contamination with waste products and chemical pollutants. Many of these sites were later abandoned following cessation of industrial activity and without a responsible party to remediate for future use. Presently, those same cities and their citizens, many of which are low-income and/or communities of color, bear the brunt of that legacy pollution, as well as newer contaminated sites, such as former dry cleaners and gas stations.

Soil contamination can impact human health through various exposure routes. Common routes of human exposure involve direct contact with soil pollutants through dermal-incidental soil

ingestion and inhalation of soil and dust particles, as well as inhalation of substances volatilized to the atmosphere. Soil contaminants can also be transported to potable water aquifers, which can result in the ingestion of contaminated ground water. Children in urban environments are particularly susceptible to soil contamination. They may absorb more contaminants, such as lead, and metabolize them differently and their developing nervous systems are more susceptible to chemicals. From conception through adolescence, children have critical developmental windows when the nervous system is more susceptible to damage. Children from low-income and minority families are more likely to be at risk of exposure because they (1) spend more time playing on contaminated soil than children from higher-income families; (2) spend more time in houses that have lead paint or high dust levels; (3) may be exposed to higher levels of contaminants in utero and in breast milk because their mothers are also disproportionately exposed; and (4) have inadequate diets that may increase the absorption of toxic chemicals from their digestive system (see <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222496/</u>).

In New Jersey, about 41 percent of potable water comes from ground water, either through public- or domestic-supply wells. Ground water is supplied by rain that infiltrates the ground (see https://www.nj.gov/dep/njgs/enviroed/infocirc/withdrawals2009.pdf). Though soil typically filter pollutants from water seeping into the ground, if a given pollutant is resistant to such filtering, or if the pollutant is not exposed to the soil for a sufficient period of time, such as by entering a bedrock fracture or by entering the ground water through sub-surface disposal, it can spread underground and potentially cause health issues and other problems if the ground water is used for human consumption (see https://www.co.hunterdon.nj.us/mun/Holland/GroundWater.pdf).

A 2021 report by the National Environmental Justice Advisory Council (NEJAC) looked more closely at how Federal Superfund cleanups were addressed in environmental justice communities. The report found that Superfund sites disproportionately impact minorities, people living under the poverty level, and communities who are linguistically isolated, and recommended an analysis of the demographics in the communities surrounding Superfund sites to gain a better perspective on the impacted communities (see https://www.epa.gov/sites/default/files/2021-05/documents/superfund_remediation_and_redevelopment_for_environmental_justice_communities_may_2021.pdf).

The Department proposes to include "contaminated sites" in its list of stressors at N.J.A.C. 7:1C Appendix. The Department's Known Contaminated Sites (KCS) list identifies all properties in the State with confirmed soil or ground water contamination levels greater than applicable standards (see https://www.state.nj.us/dep/srp/kcsnj). This dataset broadly includes contaminated sites at various stages of remediation, such as those where remediation has not yet started, is currently underway or completed with implementation of an institutional control or engineering control. For this stressor, however, only contaminated sites where remediation is pending or in progress are included. Fully remediated sites with institutional or engineering controls in place under a Remedial Action Permit (RAP) issued by the Department are included under other stressors in this category. The "Known Contaminated Sites" stressor is also weighted to identify the mostly critically contaminated locations from a public health and environmental perspective. Sites in the "Immediate Environmental Concern" GIS layer with a receptor status of in-progress, and those sites on the National Priorities List were given the highest stressor score (three). Licensed Site Remediation Professional program cases with 10 or fewer contaminated Areas of Concern,

and Pending sites, were given the lowest weighted stressor score (one). All other sites were given a weighted stressor score of two. Unregulated heating oil underground storage tank sites were assigned a weighted stressor score of zero because they are considered low risk since they discharge smaller quantities that do not typically impact ground water or travel off site from the discharge location. Also, any discharges from an unregulated heating oil underground storage tank that cannot be remediated by a simple excavation are elevated to a higher rank, and not listed as an unregulated heating oil underground storage tank site.

Sites with a restricted or limited restricted Remedial Action Outcome are included in the "Soil Contamination Deed Restriction" stressor evaluation and are, therefore, also assigned a weighted stressor score of zero. Finally, all sites where remediation has been completed were assigned a weighted stressor score of zero.

The Department proposes to analyze this stressor by using the weighted number of KCS per square mile, as derived from the Department's "Known Contaminated Sites List" GIS file data, as an indicator of proximity to residents and other institutions, such as schools and hospitals, within the overburdened community (see https://njogis-jersey/explore?location=40.119505%2C-74.746500%2C8.80).

Soil Contamination Deed Restrictions

The Department proposes to include "soil contamination deed restrictions" in its list of stressors at N.J.A.C. 7:1C Appendix. Sites with complex contamination issues can have several sources of contamination and can impact both the soil and ground water, as well as additional

media. For sites where remediation is complete, such that there is no longer a threat to public health, but the soil and/or ground water still do not meet the requisite standards, restrictions are placed on use of the site. Where soil contamination remains above the Department's Soil Remediation Standards at N.J.A.C. 7:26D-4, the Department requires the addition of a deed notice to the property's title. Specifically, the deed notice requires a property owner's consent, specifies the location of the contamination, as well as its concentrations, and outlines how the remaining contamination must be controlled, maintained, and/or monitored for protection of human health and the environment. The deed notice is intended to inform prospective holders of an interest in the property of the remaining contamination and related use restrictions. While soil contamination deed restrictions are protective, sites subject to such restrictions cannot be used for any purpose and, when found in abundance, reflect siting inequities that the Act seeks to address. Further, soil contamination.

The Department proposes to use the percent of acreage subject to soil contamination deed restrictions within an overburdened community as the indicator for this stressor.

Ground Water Classification Exception Areas/Currently Known Extent Restrictions

The Department proposes to include "ground water classification exception areas/currently known extent restrictions" in its list of stressors at N.J.A.C. 7:1C Appendix. Ground water classification exception areas are relevant to contaminated sites. At sites where remediation is complete such that it no longer poses a threat to public health, but the soil and/or ground water still do not meet the requisite standards, restrictions are placed on use of the site. The Department establishes "Ground Water Classification Exception Areas" (CEAs) to provide notice that its

Ground Water Quality Standards (GWQS, see N.J.A.C. 7:9C) have been exceeded. The establishment of a CEA also ensures that the use of the ground water in an area is restricted until the ground water meets the GWQS. The CEA is based on existing ground water quality data and modeling to determine the extent and duration the contamination will remain above the GWQS.

The Department also establishes "Currently Known Extents" (CKEs) based on potable well sampling results conducted during the initial stages of an "Immediate Environmental Concern" (IEC) investigation (see https://www.nj.gov/dep/srp/guidance/IEC/index.html). A CKE is "the aerial extent of ground water in which concentrations of one or more contaminants exceed any applicable ground water remediation standard." N.J.A.C. 7:26E-1.8. CKEs can be replaced by a CEA when the source(s) of the ground water IEC is identified, and sufficient data exists to establish a CEA for the site. Remedial actions involving a CEA require institutional and, if necessary, engineering controls when contamination remains above applicable ground water standards. An example of an engineering control is a system to treat ground water contamination. Similar to Soil Contamination Deed Restrictions, while the establishment of a CEA and/or CKE is protective, the measures also restrict the overall utility of a given site. In accordance with the findings of the Act, the Department has determined that the presence of multiple restricted sites in a given overburdened community is an impediment to the growth, stability, and long-term well-being of that community. Similar to soil contamination deed restrictions, this stressor is also an indicator of historical and ongoing contamination.

The Department proposes to use the percent of acreage subject to CEA and/or CKA restrictions within an overburdened community as the indicator for this stressor.

Transfer Stations or Other Solid Waste Facilities, Recycling Facilities, and Scrap Metal Facilities

In 2018, New Jersey municipalities and counties generated 23 million total tons of solid waste (including municipal waste, construction debris, and other types of non-municipal waste), with 13.3 million of that waste recycled and 9.7 million tons disposed of in landfills or waste incinerators. While waste management is essential to New Jersey's public and environmental health, solid waste facilities emit air and water pollution, generate truck and rail traffic-related emissions, and create noise, odor, dust, and sometimes light pollution. Solid waste landfills can release methane and carbon dioxide into the air for decades, even after they are permanently closed. Traditional solid waste facilities include landfills, waste incinerators, recycling centers, and transfer stations. Improperly managed scrap metal facilities can contaminate soils, groundwater, and surface waters with hazardous materials and release refrigerants containing fluorocarbons into the air. It is for these reasons that the Department proposes to include stressors that measure the presence of solid waste and scrap metal facilities in overburdened communities.

Solid Waste Facilities

The Department proposes to include "solid waste facilities" in its list of stressors at N.J.A.C. 7:1C Appendix. "Solid waste facilities" are part of the Act's "environmental or public health stressors" definition. N.J.S.A. 13:1D-158. The Act's definition of "facility" also includes resource recovery facilities and incinerators, transfer stations or other solid waste facilities, recycling facilities intended to receive at least 100 tons of recyclable materials per day, landfills, including, but not limited to, those accepting ash, construction or demolition debris, or solid waste, and medical waste incinerators, except those associated with a hospital or university to process

self-generated regulated medical waste. Resource recovery facilities and other waste incinerators in the State are captured under the regulated air pollution facilities stressor and are not considered for this stressor. Sanitary landfills, recycling facilities, and transfer stations are considered for this stressor.

To analyze this stressor, the Department proposes to use the density of solid waste facilities per square as an indicator of proximity to residents and other institutions, such as schools, within an overburdened community.

Scrap Metal Facilities

The Department proposes to include "scrap metal facilities" in its list of stressors at N.J.A.C. 7:1C Appendix. "Scrap metal facilities" are part of the Act's "environmental or public health stressors" definition, similar to "solid waste facilities." N.J.S.A. 13:1D-158. The Act includes scrap metal facilities in its definition of "facility." However, unlike traditional solid waste facilities that are regulated primarily through one program area of the Department, scrap metal facilities are regulated by various Department programs depending on their size and location. The Department identified these facilities through various data sets and processes and determined scrap metal facilities to be facilities primarily engaged in the distribution or retail of used motor vehicle parts, and those primarily engaged in assembling, breaking up, sorting, or distribution of scrap and waste metal.

Metal emissions are generated during outdoor operations at most scrap metal facilities, which include gas torch cutting and mechanical cutting methods that help to downsize scrap metal

for eventual consumption by end users. Metal torch cutting typically is of most concern because it has the potential to generate inhalable particles containing toxic heavy metals.

The Houston Health Department conducted metal recycling facility fence line air monitoring from 2010 to 2012, in response to numerous citizen complaints. It found that at some locations, particularly those with torch cutting, known carcinogenic metals, such as nickel compounds, were detected in the ambient air. Other metals, such as manganese and cobalt, associated with non-carcinogenic adverse health effects were also detected. A follow up study using a community-based participatory research method characterized metal emissions in four environmental justice communities. Those results indicated that metal concentrations were the highest at the fence line and decreased by 57 to 70 percent within 100 meters and reached similar levels to background at 600 meters. After adjusting the measured data for meteorological parameters and operating hours, estimated inhalation cancer risks ranged from 0.12 cases to 24 cases in one million people and hazard index values ranged from 0.04 to 11 (see https://www.researchgate.net/publication/340840194_Evalution_of_metal_aerosols_in_four_co_mmunities_adjacent_to_metal_recyclers_in_Houston_Texas_USA).

Based on the nature of industrial activity and operations at scrap metal processing and recycling sites, there is potential for surface and/or ground water contamination from stormwater runoff. Pollutants commonly found in stormwater runoff from a scrap metal facility include suspended solids, aluminum, copper, iron, lead, zinc, petroleum hydrocarbons, and polychlorinated biphenyls (PCBs) (see <u>https://www.nj.gov/dep/dwq/pdf/sm-sm2-fact-sheet-5-16-13.pdf</u>). Pollutants are discharged to surface water if stormwater is exposed to industrial activity on the site and is then discharged to surface water. Likewise, pollutants are discharged to ground

water if industrial activity exposed to stormwater and pollutants are mobilized downward as stormwater infiltrates into ground. The volume and quality of stormwater discharges will depend on a variety of factors, including the outdoor activities at the facility, such as material storage, loading/unloading, vehicle maintenance, extent of impervious surfaces, type of ground cover, and duration and intensity of precipitation. Stormwater quality can also vary depending on the effectiveness and implementation of Best Management Practices (BMPs), as well as the performance of any pollution prevention and/or treatment methods.

To analyze this stressor, the Department proposes to use the density of scrap metal facilities per square mile in the block group as an indicator of proximity to residents and other institutions, such as schools.

Point-Sources of Water Pollution

Surface Water

The Department proposes to include "surface water" in its list of stressors at N.J.A.C. 7:1C Appendix. Surface water quality is the key to a healthy ecosystem and safe public recreation. Water quality parameters, such as concentrations of pathogenic bacteria, such as Enterococcus, *E. coli*, and dissolved oxygen are used to understand how swimmable and fishable surface waters are when assessed against Federal recreational water quality recommendations and guidance. Excess nitrogen, phosphorus, and sediment pollution have resulted in algae blooms, beach closures, fish consumption advisories, and dead zones.

New Jersey's long history of industrial activity has left a legacy of surface water contaminants, such as polychlorinated biphenyls (PCBs), heavy metals, such as mercury,

pesticides, and polyaromatic hydrocarbons (PAHs). Some of these contaminants are particularly troubling because they persist in the environment for great lengths of time and can bioaccumulate in the tissues of fish, aquatic plants, and wildlife, existing in greater quantities higher up the food chain (see https://www.hudsonriver.org/wp-

<u>content/uploads/2021/07/WaterQualityReport2021.pdf</u>). While the discharge of metals and toxins into the State's waterbodies is drastically reduced, legacy issues still impact some areas of the State where metals remain in the sediment. During storms and high flow, these sediments can become re-suspended in the water column, elevating metal levels. However, in the Raritan region, metal levels remain low even during high flow events indicating clean sediment and/or metals that are buried too far below the sediment for re-suspension.

Communities of color, low-income communities, tribes, and other indigenous people depend on healthy aquatic ecosystems and the fish and aquatic plants and wildlife that these ecosystems support to a greater extent and in different ways than does the general population.

These resources are consumed and used to meet nutritional and economic needs, and for many there are no real alternatives to eating and using fish and aquatic plants and wildlife; it is entirely impractical to "switch" to "substitutes" when the fish and other resources on which they rely have become contaminated. For some groups, these resources are also consumed or used for cultural, traditional, or religious purposes. For members of these groups, the conventional understandings of the "health benefits" or "economic benefits" of catching, harvesting, preparing, and eating fish and aquatic plants and wildlife do not adequately capture the significant value these practices have in their lives and the life of their culture. The harms caused by aquatic habitat degradation and fishery depletion also have a generational toll, impeding the transfer of ecological

knowledge, customs, and traditions surrounding harvest, preparation, and consumption of aquatic resources (see <u>https://www.epa.gov/sites/default/files/2015-02/documents/fish-consump-report 1102.pdf</u>).

To analyze this stressor, the Department proposes to use the water quality results from its 2016 Integrated Water Quality Assessment Report at the "Assessment Unit" (AU) level. The AU is determined by the United States Geological Service Hydrologic Unit Code 14, or "HUC-14" (where 14 indicates the number of digits in the code), for delineating and identifying drainage systems and watershed boundaries. For each AU, all station parameter results, such as chemicals or pollutants tested, were aggregated to determine if the General Aquatic Life Use designated use was in attainment. If an AU includes more than one station, the results for each parameter were aggregated with the "worst case" station assessment representing the AU. If some stations were in attainment for a parameter but others had insufficient data, then the parameter was considered in attainment.

Combined Sewer Overflows

The Department proposes to include "combined sewer overflows" (CSO) in its list of stressors at N.J.A.C. 7:1C Appendix. CSOs can contain untreated, or partially treated, human and industrial waste, toxic materials, and other debris, and often contain high levels of total suspended solids, pathogens, nutrients, oxygen-demanding organic compounds, oil, and grease (see https://www.epa.gov/npdes/combined-sewer-overflows-csos). These contaminants and pollutants impair water quality and the recreational use of urban waterways, resulting in beach closures, contamination of local drinking water sources, and impacts on aquatic ecosystems (see

<u>https://www.nj.gov/dep/dwq/cso-basics.htm</u>). The Department currently has issued individual CSO permits covering 209 outfalls in 21 jurisdictions (see https://www.nj.gov/dep/dwq/cso-sewer-maps.htm). Because CSOs are common in older, urban areas, their overlap with overburdened communities is significant.

In New Jersey, CSO-permitted areas include Newark, Elizabeth, Patterson, Camden, and Trenton. An estimated 23 billion gallons of a mixture of raw sewage and stormwater are dumped annually into New Jersey's waterways because of CSOs. Over time, as the urban population density in these areas has increased, with more demand placed on infrastructure, CSO events have also increased (see https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6396826/). While the goal of CSO permits is to reduce or eliminate the CSOs by implementing nine minimum controls and developing a "Long Term Control Plan," plan estimates will cost billions of dollars over many years to implement (see https://www.nj.gov/dep/dwq/cso-nine.htm; https://www.nj.gov/dep/dwq/cso-nine.htm;

The Department proposes to use the presence of any CSO outfall in an overburdened community as the indicator for this stressor.

May Cause Potential Public Health Impacts

The Department proposes stressors under this category that are indicators of indirect environmental and public health impacts, often referred to as "quality-of-life" impacts. These include the physical and mental stress of living in proximity to a multitude of commercial and industrial sites, poor water quality, the effects of aging housing stock on health, the impact of limited access to natural features and high quality recreational and open space resources, such as

parks and wildlife areas, and social determinants of health. Social determinants of health, such as education and employment levels, act as "threat multipliers" in our overburdened communities, further straining their resources and making environmental and public health threats more difficult to prevent or manage.

Drinking Water

The Department proposes to include "drinking water" in its list of stressors at N.J.A.C. 7:1C Appendix. Drinking water can become contaminated at the water source, as well as in the distribution system after treatment. Contamination can come from naturally occurring chemicals and minerals, land uses, such as fertilizers, pesticides, and road salt; manufacturing processes, and more; as well as contaminants leaching into the treated water as it passes through the distribution system. Contaminated drinking water can lead to gastrointestinal illness, reproductive problems, and neurological disorders. Specific contaminants that can contribute to various health concerns include:

- 1,2,3-Tricloropropane, a persistent manmade substance found in soil fumigants, industrial processes, and paint removers, is a potent carcinogen and mutagen.
- Arsenic, primarily from naturally occurring minerals in bedrock aquifers of Northern and Central New Jersey, can increase the risk of lung, bladder, or skin cancer.
- Ethylene Dibromide and 1,2-Dibromo-3-chloropropane, used as pesticides, are also potent carcinogens and mutagens.
- Escherichia coli (*E. coli*), infectious microorganisms found in human and animal feces, can cause nausea, vomiting, and diarrhea.

- Radionuclides, such as radium, uranium, and radon, come from the decay of natural rock.
 Radium can increase the risk of bone or sinus cancer; uranium can affect kidney function; and radon can contribute to lung cancer.
- Mercury, either naturally occurring or from septic tanks, landfills, industrial facilities, or hazardous waste sites, may result in nervous system or kidney damage.
- Nitrates from the breakdown of human and animal wastes and chemical fertilizers, decrease the blood's ability to carry oxygen to organs throughout the body, particularly in infants.
- Volatile organic compounds from septic tanks, gas stations, landfills, and dry cleaning, industrial and hazardous waste facilities affect the liver, kidney, nervous system, or heart; and increase the risk of cancer.

Existing studies have found associations between poor drinking water quality and key environmental justice indicators, such as poverty, race, and ethnicity. Public water systems that serve communities with lower median incomes, lower rates of home ownership, and higher proportions of Hispanic or non-white residents are associated with higher levels of nitrate and arsenic. Health-based violations of drinking water standards are more common in poor communities with higher proportions of Hispanic or African American residents, while the effects of race and ethnicity were not apparent in more affluent communities (see https://link.springer.com/article/10.1186/s12940-018-0442-6).

The Department proposes to analyze this stressor based on the sum of maximum contaminant level violations, treatment technique violations, and action level exceedances, as derived from public drinking water reports (see

https://www.state.nj.us/dep/watersupply/dwc_systems.html), and exceedances of the primary drinking water standards for: arsenic, mercury, radionuclides, *E. coli*, and VOCs as derived from New Jersey Private Well Testing Act data (see https://njdep.maps.arcgis.com/apps/MapSeries/index.html?appid=826ec9fae77543caa582a787d5 f088e7).

Potential Lead Exposure

The Department proposes to include "potential lead exposure" in its list of stressors at N.J.A.C. 7:1C Appendix. Lead is a heavy metal widely used in industrial processes and consumer products. When absorbed into the human body, lead can have damaging effects on the brain and nervous system, kidneys, and blood cells. Lead exposure is particularly hazardous for pre-school children because it can disrupt brain development, causing lowered intelligence, hyperactivity, attention deficits, developmental problems, and decreased hearing. There is no safe level of lead in the blood; even trace amounts can damage brain cells. International pooled analysis of children six to 24 months of age observed a loss of 1.88 intelligence quotient (IQ) points for each doubling of blood lead levels beginning at two micrograms per deciliter (µg/dL), and recent meta-analysis demonstrated that even slight increases in blood lead levels below three µg/dL are associated with a greater risk of presenting with symptoms of attention-deficit/hyperactivity disorder (ADHD) among children five to 12 years of age.

The U.S. Centers for Disease Control and Prevention estimates that children with blood lead levels at or above the blood lead reference value of 3.5 micrograms per deciliter represent the top approximately 2.5 percent of U.S. children aged one to five tested for lead in their blood (when

compared to children who are exposed to more lead than most children (see https://www.cdc.gov/nceh/lead/docs/lead-levels-in-children-fact-sheet-508.pdf)). Infants and preschool-aged children are at a higher exposure risk primarily due to their increased body surface area, increased heart and respiratory rates, the ingestion and inhalation of contaminated dust or soil from greater hand-to-mouth activity, pica, crawling, and their low stature to the ground. A 2020 study found that the black race is the second strongest predictor for increased blood lead during early childhood after the risk from living in pre-1950 housing. Statistically, the black racial disparity continues to significantly persist within each of the other examined risk factor, such as poverty, education, and presence of smokers in the home, even after correcting for those other risk factors and variables. The most pronounced disparities were observed for black children two to three years of age, those living in poverty, or older housing built from 1950 to 1977, and those with a primary guardian who had not received a high school diploma or GED. (see https://www.mdpi.com/1660-4601/17/5/1552).

The Department proposes to base its analysis of this stressor on the age of housing, specifically the percentage of homes built in 1950 and earlier, in a given overburdened community, as derived from New Jersey ACS summary data (<u>https://www2.census.gov/programs-surveys/acs/summary_file/2019/data/5_year_by_state/</u>). This metric will be as a surrogate for the likelihood of lead paint exposure.

Lack of Recreational Open Space

The Department proposes to include "lack of recreational open space" in its list of stressors at N.J.A.C. 7:1C Appendix. Open space and parkland is proven to benefit public health. Trees

filter the air and provide shade on hot days; wetlands and marshes clean water and protect communities from floods and storm surges; parks provide safe havens where children can play and connect, and trails allow people to exercise outdoors. However, access to nature is unequal for lower-income communities and communities of color compared to affluent white communities. A recent report from the Center for American Progress and the Hispanic Access Foundation found that communities of color experience "nature deprivation" at three times the rate of white Americans (see https://www.americanprogress.org/article/the-nature-gap/). According to the report, 74 percent of communities of color live in nature-deprived areas, with black communities experiencing the highest levels of deprivation. Similarly, the 2019 study by the University of British Columbia examined 10 U.S. cities, including New York, Chicago, and Houston, and found that latino and black communities have less access to urban nature than white communities (see https://ensia.com/articles/urban-nature-environmental-justice-maginalized-underrepresentedcommunities/). Urban residents with lower access to urban vegetation are also those who are most likely to experience poor public health outcomes that could be mitigated by adequate exposure to urban open space.

A growing body of evidence shows that access to green space in urban areas brings considerable benefits to the health and well-being of city residents. These benefits may include improved cognitive development and functioning, reduced severity of attention deficit/hyperactivity disorder (ADHD), reduced obesity, and positive impacts on mental health (see<u>https://ncceh.ca/documents/evidence-review/green-space-and-mental-health-pathways-</u> impacts-and-gaps). An article published in the December 2008 issue of the American Journal of Preventive Medicine reported that children living in inner city neighborhoods with higher

"greenness" experienced lower weight gains compared to those in areas with less green space (see https://els-jbs-prod-

cdn.jbs.elsevierhealth.com/pb/assets/raw/Health%20Advance/journals/amepre/AJPM PR Dec

<u>08_Green_Neighborhoods.pdf</u>). This is critical, as childhood obesity can lead to Type 2 diabetes, asthma, hypertension, sleep apnea and emotional distress. Obese children are likely to become obese adults, experiencing more cardiovascular disease, high blood pressure and stroke and incurring higher healthcare costs. Finally, the impact of urban vegetation exposure on the health and well-being of marginalized communities may become even more critical as climate change worsens, raising temperatures and increasing flooding.

The Department proposes to analyze this stressor based on the population per acre of open space encumbered by the Department's Green Acres program and as reported in the Recreational Open Space Inventory (ROSI) database) within one quarter mile (approximately equivalent to a 10-minute walk) of an overburdened community (see https://www.nj.gov/dep/greenacres/openspace.html).

Lack of Tree Canopy

The Department proposes to include "lack of tree canopy" in its list of stressors at N.J.A.C. 7:1C Appendix. Urban Tree Canopy (UTC) cover is widely regarded as an environmental good or amenity. UTC cover as an environmental amenity includes direct perceived benefits, or ecosystem services, to people and neighborhoods where UTC cover is found, including regulation of regional climate and water cycles. In addition to UTC, "greenness," as an indicator of vegetation cover, has been associated with reductions in childhood obesity rates, decreasing cognitive fatigue, improved

worker attitudes on the job, and reduced stress, as well as feelings of anger, depression, or anxiety. UTC cover is also associated with improved aesthetics, noise reduction, and stronger social cohesion and community empowerment. Therefore, a lack of UTC cover denies those benefits to the community (see

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122051&xid=17259,1570002 3,15700186,15700191,15700256,15700259,15700262,15700265,15700271,15700283).

A 2015 study found that high-income neighborhoods in selected cities are more likely than low-income neighborhoods to have high tree canopy cover. An earlier 2011 study shows that white areas in Miami-Dade County had greater tree density, greater tree and shrub cover, more tree diversity, and the greatest amount of energy savings due to trees. However, Hispanic areas had greater individual tree leaf area index (LAI), more trees in excellent condition, more impervious surfaces, and more air pollution removal than the other two areas groups. African American areas had the lowest tree density and LAI, lowest tree and shrub cover and diversity, and received the least amount of ecosystem services in terms of air pollution removal and energy savings. However, African Americans had the greatest amount of potential planting space for trees and the greatest percentage of street trees. The results of this study show that even when some urban forest structure indicators are not strikingly different among areas, the ecosystem services provided by trees can be limited and inequitable, suggesting the uneven distribution of UTC cover might be influenced by differing levels of control over the physical environment due to housing tenure (see

https://www.researchgate.net/publication/228268481_Environmental_Justice_Implications_of_U rban Tree Cover in Miami-Dade County Florida).

The Department proposes to analyze this stressor based on the spatially weighted average of tree canopy in an overburdened community, as derived from the U.S. Forest Service Tree Canopy data (see https://data.fs.usda.gov/geodata/rastergateway/treecanopycover/#table1).

Impervious Surface

The Department proposes to include "impervious surface" in its list of stressors at N.J.A.C. 7:1C Appendix. Impervious surfaces create several environmental and public health threats, including exacerbating heat impacts, worsening flooding, transporting surface pollutants into water sources, deteriorating water quality, and intensifying droughts by preventing ground water recharge from occurring. Each of these threats impact overburdened communities more acutely. For example, various studies have looked at the characteristics of populations in certain urban settings that are more vulnerable to heat-related mortality. Fine-scale, remotely sensed data shows that impervious surfaces are important predictors of intra-urban variation in temperature, and the degree of impervious surfaces generally increases with population density. Several authors have also found that the extent of impervious surface is greater in neighborhoods with low socioeconomic status and a high proportion of minority residents, although these studies have been limited U.S. single city (see to а or state https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3701995/). A 2006 study of neighborhood microclimates in Phoenix that looked at population, community, and biophysical characteristics to simulate an outdoor human thermal comfort index (HTCI) (an indicator of heat stress) as a function of local climate variables found that lower socioeconomic and ethnic minority groups were more likely to live in warmer neighborhoods with greater exposure to heat stress. Further, the study

found that the vulnerability of these warmer neighborhoods was exacerbated by a resident's lack of adequate social and material resources to cope with extreme heat (see https://www.sciencedirect.com/science/article/abs/pii/S027795360600373X?via%3Dihub).

Impervious cover also impacts water quality. Studies on the connection between water quality and the percentage of land cover in a watershed have correlated high stream concentrations of inorganic nitrogen and phosphorus, two of the three main ingredients in artificial fertilizer spread, with both urban and agricultural land use. A 2003 study from the University of Connecticut indicated that the percent of impervious land in a watershed is significantly related to all water characteristics. For comparison, estimates of the percentage of impervious surface in urban areas range from 50 percent of moderately dense suburban dwellings to over 94 percent in Mid-Manhattan West (see https://news.climate.columbia.edu/2010/07/13/no-more-pavement-the-problem-of-impervious-surfaces/). Flooding exacerbates water contamination, particularly in areas where CSOs are overwhelmed resulting in human contact with raw sewage.

The Department proposes to analyze this stressor based on the percentage of impervious surface in an overburdened community.

Flooding (Land Use Cover)

The Department proposes to include "flooding (land use cover)" in its list of stressors at N.J.A.C. 7:1C Appendix. The health impact of flooding varies with an affected individual's preexisting health status, which is often worse in underprivileged neighborhoods. These impacts range from the immediate risk of injury and death to diverse symptoms associated with the proximity of flood water and living in damp accommodations, such as exacerbation of asthma,

skin rashes, gastroenteritis (Ohl, C.A. and Tapsell, S., Flooding and human health: The dangers posed are not always obvious, BMJ 2000), to longer term psychological problems including panic attacks, agoraphobia, depression, tiredness, stress, and anxiety. Specifically, garbage, sewage, and other contaminants may be present in flood waters, raising the risk of waterborne diseases. Flood water can also seep into buildings, affect sewer pipes, and contribute to indoor mold growth.

The Department proposes to analyze this stressor based on the percentage of urban land areas prone to flooding in an overburdened community as derived from "New Jersey Land Use 2015 (Urban type) Source Data," "Total Climate Adjusted Flood Elevation," and "FEMA 0.2% (500 Year) Flood Hazard Source Data" (see <u>https://njogis-</u> newjersey.opendata.arcgis.com/documents/njdep::land-use-land-cover-of-new-jersey-2015download/about; <u>https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::tidal-climate-</u> adjusted-flood-elevation-for-new-jersey/about; <u>https://msc.fema.gov/portal/advanceSearch</u>).

Density/Proximity Stressors

The Department proposes to list three additional stressors related to facility density and proximity at N.J.A.C. 7:1C Appendix to assess the potential impact that the density of permitted air, NJPDES, and emergency planning facilities may have on an overburdened community. While the impacts from these particular facilities, such as air emissions, water pollution, potential toxic releases, are captured by other listed stressors, the mere presence of multiple pollution sources within a block group is itself a stressor. Relevant to these three specific stressors, as well as the Department's use of density metrics to identify the presence of facilities in overburdened

communities, the Act recognizes that the existence of a concentration of industrial facilities in a given geographic area represents a stressor.

A community's proximity to environmental stressors is correlated with increased adverse public health risks, and overburdened communities historically subject to disproportionate environmental stressors, including the cumulative impacts of industrial facility siting decisions, generally experience a higher degree of public health stressors, as compared to communities that are not overburdened.

Even when acting in compliance with applicable requirements, these facilities can impact a community in several ways, including, but not limited to, increased mobile source emissions, dust, odor, and noise that adversely affect the environment and public health. A 2011 literature review identified several studies that found that living near hazardous waste sites, industrial sites, cropland with pesticide applications, highly trafficked roads, nuclear plants, and gas stations or repair shops is related to an increased risk of adverse health outcomes (see Brender et al., Residential Proximity to Environmental Hazards and Adverse Health Outcomes, American Jour. Of Public Health 101, S37-S52, (2011)). Specifically, many studies found significant relationships between residential proximity to environmental stressors and adverse public health impacts. These include: adverse pregnancy outcomes including increased risks for central nervous system defects, congenital heart defects, oral clefts, renal dysplasia, limb malformations, chromosomal anomalies, preterm births, low birth weight, small-for-gestational-age births, fetal and infant deaths, childhood cancers including leukemia, brain cancer, germ-cell tumors, non-Hodgkin's and Burkitt lymphoma, asthma hospitalizations and chronic respiratory symptoms, stroke mortality, PCB toxicity, end-stage renal disease, and diabetes.

Increased dust, odors, and noise can also have negative health consequences for overburdened communities. In 2021, the New Jersey Clean Air Council examined the health impacts from fugitive dust and found that fine particulates can reach greater distances from the source and pose significant health problems as they can be "inhaled into the respiratory tract, affecting the nasal passages, sinuses, and more deeply into the lungs" (see https://www.nj.gov/dep/cleanair/pdfs/cac2021report.pdf).

Exposure to odors resulting from human activity is generally recognized to be a nuisance and persistent malodor exposure is considered an environmental stressor, capable of generating negative impacts for health and well-being due to stress-related symptoms and illnesses, even if the odorous air is not toxic. A 2019 study extended previous work that identified a relationship between proximity to odor-emitting sites and higher levels of odor annoyance in the Waterfront South neighborhood of Camden, especially in comparison to residents of North Camden. Specifically, the study determined that the presence, intensity, and spatial pattern of three primary odor types (waste treatment, industrial activity, and diesel/auto emissions) observed in Waterfront South, suggested odor pollution continues to function as an environmental stressor (see https://www.mdpi.com/2413-8851/3/3/93/htm#B3-urbansci-03-00093).

The measurement, regulation, and human health impacts from noise pollution are well known. Dubbed the "new secondhand smoke" due to similarities in relating their health impacts, noise levels deemed acceptable by the USEPA (70 decibels or below over a 24-hour period) and the National Institute for Occupational Safety and Health (NIOSH) (85 decibels or below over a 24-hour period) are well above recommendations made by the European Union (40 decibels at night and 50 decibels during the day). According to a 2017 study led by the School of Public

Health at the University of California at Berkeley, people in poorer and racially segregated neighborhoods live with higher levels of noise than other people. Neighborhoods with median annual household incomes below \$25,000 were nearly two decibels louder than neighborhoods with incomes above \$100,000, and communities where at least three in four residents are black had median night-time noise levels of 46.3 decibels — four decibels louder than communities with no black residents.

The Department proposes to analyze the three proximity stressors outlined below based on the number of applicable sites per square mile in an overburdened community, as derived from the applicable data source GIS file.

Permitted Air Sites

The "permitted air sites" proximity stressor includes approximately 230 sites that are major sources of air emissions, such as power plants and large-scale chemical and manufacturing facilities, and just over 3,500 minor sources of air emissions that are classified under one of 56 Standard Industrial Classification codes identified as causing the most frequent community complaints or enforcement actions, including concrete and granite operations, flavors and fragrances, adhesives and paints, gas stations, and chemical preparations.

NJPDES Sites

The "NJPDES sites" proximity stressor includes all 135 major drinking water and residual category V sludge processing facilities, as defined in the NJPDES rules at N.J.A.C. 7:14A-1.2, in the State with NJPDES permits.

Emergency Planning Sites

Emergency planning sites are those facilities within the State required to have emergency response plans in place due to the types and amounts of chemicals on-site at any given time. The Department's "emergency planning sites" proximity stressor includes over 560 sites regulated under the Toxic Catastrophe Prevention Act (TCPA) program rules (N.J.A.C. 7:31); the Discharge of Petroleum and other Hazardous Substance (DPHS) program rules (N.J.A.C. 7:1E); or the Worker and Community Right to Know (CRTK) rules (N.J.A.C. 7:1G) that are Federally required to develop emergency response plans (ERPs), excluding "battery only" sites, or locations with industrial batteries used for equipment. These types of batteries, if damaged, could cause occupational concerns for workers on-site, but are unlikely to present any concerns for the community-at-large since they are enclosed within the facility. As such, "battery only" sites were excluded.

Social Determinants of Health

The Department proposes two stressors under this category: "unemployment" and "education." The U.S. Department of Health and Human Services defines those conditions in the environments where people live and work that adversely affect health, functioning, and qualityof-life outcomes and risks as social determinants of health. Three of the primary social determinants of health, low-income households, minority status, and limited English proficiency, comprise the Act's definition of "overburdened community." However, "unemployment" and "education" are often referenced as key "upstream" factors directly tied to low-income/poverty,

which, in turn, impacts health and creates disparities by shaping the distribution of money, power, and resources. These factors are used to measure social vulnerability and the capacity to anticipate, confront, repair, and recovery from externalities such as natural and human-caused disasters, and disease outbreaks (see <u>https://www.neha.org/sites/default/files/jeh/JEH6.18-Column-Direct-From-ATSDR.pdf</u>).

Unemployment

The Department proposes to include "unemployment" in its list of stressors at N.J.A.C. 7:1C Appendix. In addition to providing income, employment can offer other benefits, such as health insurance, paid sick leave, and parental leave, all of which affect the health of employed individuals. Health insurance provides access to affordable medical care and financial protection from unexpected health care costs, while paid sick leave allows employees to seek medical care for themselves dependent family members without losing wages or (see https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-

health/interventions-resources/employment).

Unemployment can also result in negative health consequences. Those who are unemployed can suffer from depression, anxiety, low self-esteem, demoralization, and physical pain. Unemployed individuals also have more stress-related illnesses, such as high blood pressure, stroke, heart attack, heart disease, and arthritis. In addition, experiences, such as perceived job insecurity, downsizing, or workplace closure, and underemployment also have implications for physical and mental health (see <u>https://www.healthypeople.gov/2020/topicsobjectives/topic/social-determinants-health/interventions-resources/employment#36</u>).

The Department proposes to indicate this stressor based on the percentage of unemployed persons in an overburdened community as obtained from New Jersey's American Community Survey (ACS) summary data (see <u>https://www2.census.gov/programs-</u>surveys/acs/summary file/2019/data/5 year by state/).

Education

The Department proposes to include "education" in its list of stressors at N.J.A.C. 7:1C Appendix. Education is not only linked to differences in employment type, but also working conditions, income amount, and benefits. Individuals with less education have fewer employment choices, driving them into positions with low levels of control, job insecurity, low wages, and limited or no additional benefits. Individuals with less education are also more likely to have jobs that physically demanding include are or exposure to toxins (see https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-

health/interventions-resources/employment#36).

Students fail to complete high school for a variety of reasons, including the impacts of poverty and teen pregnancy and parenthood. Students who do not graduate high school are more likely to self-report overall poor health. They are also more likely to suffer from at least one chronic health condition, such as asthma, diabetes, heart disease, high blood pressure, stroke, hepatitis, or stomach ulcers. Ultimately, finishing more years of high school, and especially earning a high risk of school diploma, decreases the premature death (see https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinantshealth/interventions-resources/high-school-graduation#7).

The Department proposes to indicate this stressor based on the percentage of persons without a high school diploma in an overburdened community as obtained from New Jersey's American Community Survey (ACS) summary data (see https://www2.census.gov/programs-surveys/acs/summary_file/2019/data/5_year_by_state/).

New Jersey Environmental Justice Rule Requirements and Procedure

Relationship with Other Regulatory Programs (N.J.A.C. 7:1C-1.4)

Consistent with the intent of the Act, the proposed chapter would impose additional procedural and substantive requirements to existing Department permitting schemes, but does not relieve an applicant from compliance with any other applicable standards. Additionally, while the chapter is intended to harmonize requirements, in the event of a conflict with a non-Federally mandated provision in a Department regulation, the additional requirements of this chapter will control.

Severability (N.J.A.C. 7:1C-1.6)

Proposed N.J.A.C. 7:1C-1.6 is a severability provision, provided that if a section of the subchapter is found to be invalid or unenforceable, the remaining sections of the subchapter would be unaffected by this decision.

Applicability (N.J.A.C. 7:1C-2.1)

Pursuant to proposed N.J.A.C. 7:1C-2, the requirements would apply where the Department receives an application for an individual permit for a new or expanded facility, or the

renewal of an existing major source permit, located, or proposed to be located, in whole or in part, in an overburdened community.

Where applicable, the Department would not consider the permit application complete for review under the applicable permitting scheme before the applicant completes the environmental justice impact statement (EJIS) process and receives a decision from the Department in accordance with N.J.A.C. 7:1C-9. The Act expressly provides that an application shall not be deemed complete for review unless the applicant satisfies the requirements of preparing an EJIS and completing the associated public process. To implement this requirement and ensure the proposed rule efficiently and effectively meets the legislative intent that the assessment of environmental and public health occur in advance of the Department's existing permitting processes, the Department proposes to require completion of the proposed requirements under the proposed new rules and issuance of the Department's decision as the appropriate condition for advancement in permit review.

Applications previously deemed complete for review prior to the effective date of this chapter would not be subject to the requirements set forth in this rulemaking, but are nonetheless subject to the requirements of Administrative Order 2021-25, issued by Commissioner Shawn M. LaTourette (Sept. 20, 2021).

Identification of Overburdened Communities

Pursuant to proposed N.J.A.C. 7:1C-2.1(d), the Department would indicate and identify, consistent with the requirements of the Act, the list of overburdened communities in the State that meet the statutory criteria based on the most recent complete U.S. census data (<u>https://www.nj.gov/dep/ej/communities.html</u>) published by the Department on January 16, 2021.

As required by the Act at N.J.S.A. 13:1D-159, the Department would also update this list at least every two years thereafter utilizing the most recently published complete U.S. census data.

Adjacency

The Department recognizes that certain census block groups may now or, as a result of census reconfiguration, have zero population. To the extent these zero population census blocks are immediately adjacent to statutorily defined overburdened communities, the operations of new or existing facilities in the zero population block groups have similar potential for impacts to environmental and public health stressors as those located directly in the overburdened community that would not otherwise be considered. Accordingly, the Department proposes to require an analysis of impacts of those facilities on the immediately adjacent overburdened community be required. Therefore, pursuant to proposed N.J.A.C. 7:1C-2.1(e), where an overburdened community or communities are located immediately adjacent to any block group that has zero population, and a facility otherwise subject to the proposed rules is located or proposed to be located within that zero-population block group, the Department would consider the zeropopulation block group to be an overburdened community. In such case, the applicant would evaluate the facility's contribution to the environmental and public health stressors in the immediately adjacent overburdened community or communities. If there is more than one overburdened community immediately adjacent to a zero population-block group, the applicant would use the highest combined stressor total of any immediately adjacent overburdened community.

Analysis of Contribution to Environmental and Public Health Stressors

The Department recognizes that an individualized analysis of facility contribution to each of the environmental and public health stressors identified at the chapter Appendix is not always feasible or warranted. Therefore, pursuant to proposed N.J.A.C. 7:1C-2.1(f), where an applicant is required pursuant to this chapter to analyze the facility's potential to create additional adverse environmental or public health stressors in an overburdened community, the applicant would be required to address only those stressors identified as "affected" at the chapter Appendix. In assessing a facility's ability to avoid a disproportionate impact that would occur by creating adverse cumulative stressors in an overburdened community, an applicant would conduct modeling of the facility's operations to determine how those operations would impact levels of stressors identified as affected, by utilizing the data and metrics set forth at the chapter Appendix.

Applicability Determination

To provide clarity as to the applicability of this chapter to a given application, pursuant to proposed N.J.A.C. 7:1C-2.1(g), the Department will provide, upon request, a written applicability determination if an applicant provides the Department with the address of the existing or proposed facility and other basic information necessary to determine whether the existing or proposed facility is the type subject to this chapter.

Procedural Overview (N.J.A.C. 7:1C-2.2)

Proposed N.J.A.C. 7:1C-2.2 sets forth a procedural overview or roadmap of the process applicants would follow to satisfy the requirements of this chapter.

Step 1 – Initial Screen: Upon receipt of a permit application subject to the requirements of this chapter, the Department would provide the applicant with the initial screening information for the overburdened community, including identification of the environmental and public health stressors, the appropriate geographic point of comparison, any adverse environmental or public health stressors and whether the overburdened community is subject to adverse cumulative stressors. Alternatively, the applicant who wishes to submit the EJIS with its permit application could obtain the information directly from the Department's Environmental Justice Mapping, Assessment and Protection Tool (EJMAP)

(https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=34e507ead25b4aa5a5 051dbb85e55055).

Step 2 – **Preparation of EJIS:** Once the applicant obtains the required screening information, it would proceed with the applicable requirements of the EJIS process set forth at N.J.A.C. 7:1C-3, dependent upon whether the overburdened community is already or will be made subject to adverse cumulative stressors as a result of the facility's contribution.

Where the overburdened community is not subject to adverse cumulative stressors or the applicant can demonstrate, through appropriate modeling of the facility's contribution to affected stressors as identified and calculated at the chapter Appendix, that the facility can avoid a disproportionate impact that would occur by creating adverse

cumulative stressors in the community as a result of the facility's contribution, the applicant would only be required to provide the information required pursuant to N.J.A.C. 7:1C-3.2, including identifying the measures it would implement to avoid a disproportionate impact.

Where the overburdened community is already subject to adverse cumulative stressors or the applicant cannot demonstrate that a disproportionate impact would be avoided, the applicant would be required to include both the information required pursuant to N.J.A.C. 7:1C-3.2 and the supplemental information required pursuant to N.J.A.C. 7:1C-3.3, including proposing appropriate control measures to avoid or minimize contributions to environmental and public health stressors, provide a net environmental benefit, or, where appropriate, demonstrate how the project serves a compelling public interest in the overburdened community in accordance with the requirements of the applicable subchapters – new facilities (N.J.A.C. 7:1C-6 and 7), expanded existing facilities (N.J.A.C. 7:1C-8).

Step 3 – **Authorization to Proceed:** The applicant would submit the EJIS and supplemental information, as applicable, to the Department for review to ensure the EJIS comports with the requirements at N.J.A.C. 7:1C-3, including providing appropriate public notice. Upon the Department's administrative approval of the EJIS, the applicant would be authorized to proceed with the meaningful public participation process pursuant to N.J.A.C. 7:1C-4.

Step 4 – **Meaningful Public Participation:** The applicant would proceed with the meaningful public participation process pursuant to N.J.A.C. 7:1C-4, including holding a public hearing in the overburdened community and responding to public comment. Upon completion of public process, the applicant would provide the EJIS and any supplemental information, testimony, written comments, the applicant's response to comments, and any other relevant information to the Department for review and decision.

Step 5 – Department Review: The Department would consider the EJIS and any supplemental information, testimony, written comments, the applicant's response to comments, and any other information deemed relevant by the Department, and issue a decision in accordance with N.J.A.C. 7:1C-9.

Step 6 – Department Decision: Where the facility can avoid a disproportionate impact, the Department would authorize the applicant to proceed and would impose conditions necessary to ensure a disproportionate impact is avoided.

Where the facility cannot avoid a disproportionate impact, the Department would deny an application for a new facility, unless it demonstrates it will serve a compelling public interest in the overburdened community. For new facilities that serve a compelling public interest in the overburdened community, expanded facilities, and major source renewals, the Department would authorize the applicant to proceed with Department permitting subject to appropriate conditions to address facility impacts to environmental and public health stressors.

Initial Screening Information (N.J.A.C. 7:1C-2.3)

To ensure a consistent basis for the analysis, the Department proposes to create a process for an applicant to obtain initial screening information for the overburdened community in which the facility is, or is proposed to be, located.

Pursuant to proposed N.J.A.C. 7:1C-2.3, the Department would provide the applicant with a listing of the existing environmental and public health stressors in the overburdened community in the manner set forth at the chapter Appendix and identify the appropriate geographic point of comparison for and any adverse environmental or public health stressors present in the overburdened community. From that information, the Department would then indicate the combined stressor total for the overburdened community and whether it is subject to existing adverse cumulative stressors at the time of the application. Alternatively, an applicant would be able to obtain the information directly from EJMAP same (https://nidep.maps.arcgis.com/apps/webappviewer/index.html?id=34e507ead25b4aa5a5051dbb 85e55055.

Geographic Point of Comparison and Adverse Stressors

Pursuant to proposed N.J.A.C. 7:1C-2.3(b), the Department will determine the geographic point of comparison by calculating: (1) a value for each environmental and public health stressor in the overburdened community utilizing the unit of analysis and data source identified at the chapter Appendix; (2) a value for each environmental and public health stressor for each block group in the State that is not identified as an overburdened community utilizing the unit of analysis

and data source identified at the chapter Appendix; and (3) the 50th percentile of each environmental and public health stressors using the block groups that are not identified as overburdened communities both Statewide and for the county in which the facility is located. The lower value for each environmental and public health stressor – State or county – calculated under the third item is that stressor's geographic point of comparison. Environmental and public stressors would be considered "adverse" where the value of the stressor in the overburdened community is higher than its geographic point of comparison.

Combined Stressor Total and Adverse Cumulative Stressors

As set forth at proposed N.J.A.C. 7:1C-2.3(d), the combined stressor total for the overburdened community would be determined by summing the number of adverse environmental and public health stressors in the overburdened community.

Pursuant to proposed N.J.A.C. 7:1C-2.3(e), whether an overburdened community is subject to adverse cumulative stressors would be determined by comparing the combined stressor total for the overburdened community with the 50th percentile of combined stressor totals for block groups that are not identified as overburdened communities in the geographic point of comparison, which, as described above, is the lower of the values for the State and the county in which the facility is located. The overburdened community is subject to adverse cumulative stressors where its combined stressor total is higher than the appropriate geographic point of comparison.

Upon receipt of the initial screening information, an applicant would be able to prepare and submit an environmental justice impact statement in accordance with N.J.A.C. 7:1C-3.

Environmental Justice Impact Statement (EJIS)

EJIS Applicability (N.J.A.C. 7:1C-3.1)

Consistent with the Act, the proposed section would require the completion of an EJIS for any permit application for a facility located or proposed to be located in an overburdened community to ensure an understanding in the community of the existing environmental and public health stressors in the community, how the proposed or existing facility will impact those stressors, and any measures the applicant proposes to address those impacts and inform the Department's decision.

The Department would require only the information set forth at proposed N.J.A.C. 7:1C-3.2, when an overburdened community is not subject to adverse cumulative stressors and an applicant demonstrates, through appropriate modeling of the facility's contribution to affected stressors as identified and calculated at the chapter Appendix, that the facility will avoid a disproportionate impact that would occur by creating adverse cumulative stressors as a result of the facility's contribution.

The Department recognizes, however, that a broader scope of analysis is required where overburdened communities are subject to adverse cumulative stressors or where a facility cannot avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution. Accordingly, as set forth at proposed N.J.A.C. 7:1C-3.1(c) and (d), the Department would require that the EJIS include additional supplemental information at proposed N.J.A.C. 7:1C-3.3. The Department proposes to reserve the right to request any additional information from the applicant that the Department deems necessary to complete its analyses pursuant to this rulemaking or in furtherance of the

protection of public health and the environment. All information must be submitted in accordance with Subchapter 3. An applicant must appropriately reference the supporting documentation that addresses each requirement. When there will be no impact from a facility for a particular requirement, the Department proposes to allow an applicant to utilize a notation of nonapplicability.

EJIS Requirements (N.J.A.C. 7:1C-3.2)

Pursuant to proposed N.J.A.C. 7:1C-3.2, an applicant would provide the core information necessary to assess the existing environmental and public health stressors in an overburdened community, how the proposed or existing facility will impact those stressors, and any measures the applicant would propose to address those impacts.

This would include: (1) an executive summary; (2) appropriate information related to the proposed or existing facility's physical location, including mapping; (3) a detailed operational description and purpose; (4) a listing of all other Federal, State, and local permits possessed or required for the facility; (5) evidence of satisfaction of any local environmental justice or cumulative impact analysis with which the applicant is required to comply; (6) the initial screening information required pursuant to proposed N.J.A.C. 7:1C-2.3; (7) assessment of facility impacts to environmental and public health stressors; (8) a public participation plan that satisfies the proposed requirements pursuant to N.J.A.C. 7:1C-4; (9) a demonstration, including any necessary operational conditions and control measures, that the facility would avoid a disproportionate impact; and (10) where applicable, how the proposed new facility would serve a compelling public interest in the overburdened community.

Supplemental Information (N.J.A.C. 7:1C-3.3)

The Department proposes to require supplemental information where: (1) the facility is located, or proposed to be located, in whole or in part, in an overburdened community that is already at the time of the permit application subject to adverse cumulative stressors; or (2) the applicant cannot demonstrate that it will avoid a disproportionate impact because it will create adverse cumulative stressors in the overburdened community. The information proposed to be required is critical to ensuring the Department is able to fully evaluate the environmental and public health stressors in overburdened communities that are likely to be disproportionately impacted.

The supplemental information would include: (1) detailed mapping including identification of all regulated areas, endangered or threatened species, water classifications, and recreational attributes; (2) assessment of site contamination; (3) localized air quality data; (4) ground water data; (5) assessment of climate and flooding impacts; (6) traffic studies; (7) description of sewage treatment and collection systems; (8) description of stormwater treatment and collection systems; (9) water supply information; (10) assessment of energy demands, including renewable options; (11) an alternative analysis for proposed new or expanded facilities; (12) odor, dust, and noise mitigation or management plans; (13) all control measures proposed; and (14) a detailed compliance history for the facility, including any existing Department permits, including copies of any enforcement actions issued to the facility, for the five years preceding the date of the permit application.

Lastly, the Department is proposing to allow an applicant to submit both its EJIS and supplemental information independent of the Department's determination that the supplemental information would be required.

Review of EJIS and Authorization to Proceed (N.J.A.C. 7:1C-3.4)

To ensure that the information contained in the EJIS and presented to the members of the overburdened community comports with the requirements of the proposed rules, the Department proposes to review the EJIS for administrative completeness before an applicant begins the process of meaningful public participation pursuant to N.J.A.C. 7:1C-4. The Department's review at this point would be intended to ensure that the EJIS contains all information required by the proposed rules, but would not include a detailed, substantive analysis of the information at this early step.

After review, the Department would either request revisions or authorize the applicant to proceed with the public engagement process. Once an applicant receives authorization from the Department, it will publish the EJIS and any supplemental information on its website, in the bulletin published pursuant to N.J.S.A. 13:1D-34 and provide an electronic copy to any party that has expressed interest in the project or overburdened community. The applicant must ensure that it has the appropriate proof of having provided notice.

Public Participation

Public Notice and Hearing (N.J.A.C. 7:1C-4.1 and 4.2)

Pursuant to proposed N.J.A.C. 7:1C-4.1, after receiving the Department's authorization to proceed, the applicant would provide notice of the public hearing and opportunity for public comment at least 60 days prior to the hearing.

The proposed public notice and hearing provisions are essential to accomplish the Act's purpose of ensuring meaningful public participation by members of the overburdened community. The Department is, therefore, proposing to incorporate these statutory notice provisions (EJIS to the municipal clerk, newspaper notice, and notice to the governing body) with expanded requirements that it believes will ensure adequate notice and maximum public participation. These additional requirements include: (1) notice to property owners within 200 feet of the facility; (2) placement of a sign at the site; and (3) notice through additional methods tailored to best reach individuals in the host community that could include interfacing with community groups, additional signage or flyers or direct outreach. The Department, municipality or municipalities, and local environmental and environmental justice groups would be directly invited to participate in the public hearing.

The notice required at proposed N.J.A.C. 7:1C-4.1(b) would include information about the applicant, a brief description of the facility, brief summary of the EJIS and how a copy may be obtained, an invitation to provide public comment for no less than 30 days after the hearing and 60 days total, and any other information deemed necessary by the Department for that particular notice.

Pursuant to proposed N.J.A.C. 7:1C-4.2, the applicant would be required to hold the public hearing in the overburdened community, unless it demonstrates that no suitable meeting space is available in which case, upon Department approval, the hearing would be held in a location nearby

the overburdened community in a manner intended to ensure maximum participation. All hearings would be required to begin after 6:00 P.M. on a weekday. In addition to the in-person hearing, applicants must hold a virtual component of the hearing that is recorded and available for the public to view at least until the close of the public comment period.

At the public hearing, the applicant must provide a clear, accurate, and complete presentation of the EJIS and any supplemental information, leaving sufficient time to accommodate public comment.

Post-Hearing and Comment Process (N.J.A.C. 7:1C-4.3)

At the close of public comment, the applicant would be required to provide the Department with a written transcript of the hearing, a copy and summary of all public comments received, and written responses on how it will address all comments. To the extent those responses require modifications to the EJIS, the applicant would amend and republish the EJIS.

Where an applicant materially changes (as defined below) the EJIS or its related permit application after completion of the aforementioned public process, the Department will require an applicant to conduct additional public processes pursuant to N.J.A.C. 7:1C-4.

General Requirements (N.J.A.C. 7:1C-4.4)

Proposed N.J.A.C. 7:1C-4.4(a) states that the notice and hearing requirements of the subchapter do not supersede any other regulatory process requirements.

Additionally, at proposed N.J.A.C. 7:1C-4.4(b), the Department would require an applicant to conduct the public process required pursuant to the subchapter concurrent with the District Solid

Waste Management Plan public process pursuant to N.J.S.A. 13:1E-23 to ensure related issues are identified and addressed as early in the solid waste facility siting process as possible and that the applicant does not receive county approval that cannot be effectuated pursuant to this chapter.

Permit Applications for New Facilities

Applicability (N.J.A.C. 7:1C-5.1)

Proposed N.J.A.C. 7:1C-5.1 sets forth the standards for the analysis to be included in the EJIS for a proposed new facility either: (1) in an overburdened community already subject to adverse cumulative stressors; or (2) that cannot avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

Avoidance of Disproportionate Impact (N.J.A.C. 7:1C-5.2)

Pursuant to proposed N.J.A.C. 7:1C-4.4(a), an applicant for a new facility that is proposed to be located, in whole or in part, in an overburdened community that is already subject to adverse cumulative stressors would first be required to analyze and propose control measures necessary to avoid causing a disproportionate impact by contributing to adverse environmental and public health stressors in the overburdened community. Where a disproportionate impact can be avoided, the Department may grant the subject application, subject to conditions necessary to ensure the disproportionate impact is avoided, pursuant to proposed N.J.A.C. 7:1C-9.2(c).

In assessing a facility's ability to avoid a disproportionate impact that would occur by creating adverse cumulative stressors in an overburdened community, an applicant would conduct

modeling of the facility's operations to determine how those operations would impact levels of stressors identified as affected, utilizing the data and metrics set forth at the chapter Appendix.

Pursuant to proposed N.J.A.C. 7:1C-9.2(b), if the applicant cannot avoid a disproportionate impact, the Department would be required to deny the subject application, unless the applicant demonstrates, the facility will serve a compelling public interest in the overburdened community pursuant to N.J.A.C. 7:1C-5.3.

Compelling Public Interest (N.J.A.C. 7:1C-5.3)

Pursuant to the Act, the Department must deny a permit for a new facility if it will result in a disproportionate impact, except where the Department determines "that a new facility will serve a compelling public interest in the community where it is to be located." N.J.S.A. 13:1D-160(c). In such a case, the Department "may grant a permit that imposes conditions on the construction and operation of the facility to protect public health." *Ibid*.

Pursuant to proposed N.J.A.C. 7:1C-5.3(b), the burden is on the applicant to demonstrate that the facility will serve a compelling public interest in the host overburdened community.

Pursuant to proposed N.J.A.C. 7:1C-5.3(c), the Department would consider proposed facilities, including certain public works projects, that directly reduce adverse environmental and public health stressors in the overburdened community as serving an essential environmental, health or safety need of the individuals in an overburdened community.

Finally, pursuant to proposed N.J.A.C. 7:1C-5.3(d), to ensure meaningful input and participation by members of an overburdened community, the Department would consider, as

relevant, the position(s) of members of the overburdened community in determining whether a facility satisfies the compelling public interest standard.

Control Measures (N.J.A.C. 7:1C-5.4)

Pursuant to proposed N.J.A.C. 7:1C-5.4(a), an applicant seeking to demonstrate a compelling public interest for proposed new major sources would be required to propose control measures in accordance with N.J.A.C. 7:1C-7.1.

Proposed N.J.A.C. 7:1C-5.4(b) would address any aspects of the proposed new major source facility's operations not subject to N.J.A.C. 7:1C-7.1(a), as well as all other types of new facilities. Pursuant to the proposed rule, an applicant would be required to, in order, analyze and propose all feasible measures to: (1) avoid contributions to all environmental and public health stressors; (2) minimize any contributions that cannot be avoided onsite and then offsite; (3) reduce other offsite adverse environmental and public health stressors in the overburdened community considering those in order from highest to lowest percentile in relation to the geographic point of comparison; and (4) provide a new environmental benefit in the overburdened community. When determining whether a disproportionate impact will occur, the applicant would only be required to consider impacts to adverse environmental and public health stressors, but when proposing control measures where a disproportionate impact is present, the applicant must consider impacts to all environmental and public health stressors, whether adverse or not.

Permit Applications for Facility Expansions

Proposed N.J.A.C 7:1C-6.1 sets forth the standards for the analysis to be included in the EJIS for a proposed expanded facility either: (1) in an overburdened community already subject to adverse cumulative stressors; or (2) that cannot avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

These proposed standards largely mirror those provided for new facilities requiring an initial analysis to determine whether a disproportionate impact can be avoided (N.J.A.C. 7:1C-6.2), and where it cannot, the analysis of control measures in the same manner as a new facility (N.J.A.C. 7:1C-6.3). The only significant difference is the omission of references to compelling public interest, which is only relevant to the analysis of new facilities pursuant to the Act. N.J.S.A. 13:1D-160(c).

Localized Impact Control Technology for Major Sources

Standards (N.J.A.C. 7:1C-7.1)

Consistent with the Act's recognition that while the Department's standards for the control of air pollution are protective based on the effect pollution has upon general populations spread over a wide geographic area, but may fail to fully consider localized impacts and in an effort to provide objective standards for analysis of control technology for stationary sources of air pollution, the Department has developed a proposed standard specific to proposed new or expanded major facilities located in an overburdened community that is subject to adverse cumulative stressors or that cannot avoid a disproportionate impact by creating stressors in the overburdened community.

The new standard - Localized Impact Control Technology (LICT) - is adapted from the Department's "State of the Art" standard (SOTA), authorized pursuant to the Air Pollution Control Act of New Jersey (APCA), N.J.S.A. 26:2C-9.2c; N.J.A.C. 7:27-8.12(f), which mandates that new or modified sources which emit air pollutants incorporate "advances in the art of air pollution control." N.J.S.A. 26:2C-9.2c.

LICT, like SOTA, is intended to minimize the degradation of air quality from new sources, improve air quality when existing sources are replaced or reconstructed and promote enhanced pollution prevention, thereby reducing stressors in overburdened communities. The Department proposes to use SOTA as the basis of the proposed LICT standard. However, LICT would focus on technical feasibility rather than economic feasibility or cost-effectiveness in determining appropriate control technologies. This reflects the Department's goal to reduce emissions from new and expanding facilities as much as possible to reduce environmental and public health stressors in overburdened communities. The Department would assess sources on a facility-wide level to accomplish the Act's goal of properly addressing potential contributions to environmental and public health stressors for new and expanded facilities in overburdened communities.

Pursuant to the proposed N.J.A.C. 7:1C-7.1(c), proposed new or expanded major source facilities that meet the emissions thresholds at subsection (a) are required to conduct a top-down consideration to determine the most effective technically feasible control technology that can be implemented and not eliminated due to environmental or energy impacts. The top-down approach shifts the burden of proof to the applicant to justify why the proposed source is unable to apply the best technology available. The applicant shall list the potential control measures in descending

order of air pollution control effectiveness, and propose the highest ranking technology not eliminated through the top-down approach as the control measure.

Requirements Specific to Renewal Applications for Major Source Facilities

Applicability (N.J.A.C. 7:1C-8.1), Avoidance of Disproportionate Impact (N.J.A.C. 7:1C-8.2) and General Requirements (N.J.A.C. 7:1C-8.3)

The Department proposes to require an applicant for the renewal of a major facility permit to propose feasible control measures in its EJIS in two situations: (1) when the facility is located in an overburdened community subject to adverse cumulative stressors; or (2) where the facility cannot demonstrate that it will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in an overburdened community as a result of the facility's contribution.

As with new and expanded facilities, an applicant would first analyze whether it can implement measures to avoid a disproportionate impact at proposed N.J.A.C. 7:1C-8.2(a). Where a disproportionate impact can be avoided, the Department would be authorized to grant the subject application, subject to conditions necessary to ensure the disproportionate impact is avoided, pursuant to proposed N.J.A.C. 7:1C-9.2(a).

Where a disproportionate impact cannot be avoided, the applicant would be required to analyze and propose control measures in accordance with the remainder of the subchapter.

Pursuant to proposed N.J.A.C. 7:1C-8.3, this process begins with a facility-wide risk assessment (unless one has previously been approved by the Department and does not require updates) and a technical feasibility analysis to reduce emissions.

Facility-wide Risk Assessment (N.J.A.C. 7:1C-8.4)

The Department proposes to require an applicant for a renewal of a major facility permit to conduct a risk assessment for its existing source operations that emit hazardous air pollutants (HAPs) and toxic substances at a facility-wide level. The facility-wide risk assessment would consist of a refined air quality modeling analysis that includes all source operations that emit air toxics listed in the permit. This analysis uses stack- and source-specific data, as well as representative meteorological data. For each unique air toxic, a model simulation estimates the cumulative impact from multiple stacks or operations within the facility. Applicants performing a facility-wide risk assessment must submit an atmospheric dispersion modeling protocol in accordance with procedures outlined in Technical Manual 1002 "Guidance on Preparing an Air Quality Modeling Protocol." This be downloaded manual can at http://www.state.nj.us/dep/aqpp/techman.html. Specifically, the applicant would identify the facility's cumulative rate of HAPs and toxic substances that exceed the Department's existing HAP reporting thresholds at N.J.A.C. 7:27-17.9(a). The HAP reporting thresholds are values established by the Department, above which the HAP emissions must be identified on air permits. If the risk assessment indicates that the risk is negligible, no further analysis is necessary. If the risk assessment indicates that the risk from the emissions is non-negligible, then the applicant would need to submit a plan to the Department to modify the source operation to lower the risk to the point where the output shows a negligible risk or consider other risk reduction measures. If the facility's plan does not lower the risk to a negligible level, then the applicant would propose

permit conditions, including, but not limited to, higher stack height or increased efficiency of the air pollution control devices, to reduce the risk in the overburdened community.

Technical Feasibility Analysis (N.J.A.C. 7:1C-8.5)

The Department also proposes to require a technical feasibility analysis for certain equipment or control apparatus as part of an applicant's EJIS to ensure technical feasibility review for facilities operating with older equipment that may be able to be upgraded to emit fewer pollutants. Specifically, when the equipment was installed at least 20 years prior to the expiration date of its current operating permit, when the equipment was not subject to review pursuant to this subchapter within 15 years prior to the expiration date of its current operating permit of the expiration date of its current operating permit of the expiration date of its current operating permit and when the equipment's emissions of fine particulate matter, nitrogen oxide, or volatile organic compounds represent more than 20 percent of the facility's emissions for that pollutant. Fine particulate matter is proposed because it is a criteria pollutant under State and Federal law, and nitrogen oxide and volatile organic compounds are precursors to ozone, which is also a criteria pollutant.

The technical feasibility analysis must be a top-down analysis, where the first step is to list in descending order of air pollution control effectiveness starting with the most stringent control available for the emission source. If this level of control is technically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process of elimination continues until the measure under consideration cannot be eliminated by any substantial or unique technical difficulties cost objections.

Control Measures (N.J.A.C. 7:1C-8.6)

For any aspects of the existing major source facility's operations not addressed pursuant to N.J.A.C. 7:1C-8.6(a), the applicant would be required to analyze additional feasible measures to: (1) avoid facility contributions to environmental and public health stressors; and (2) where a contribution cannot be feasibly avoided, implement all feasible onsite measures to minimize facility contributions to environmental and public health stressors. While when determining whether a disproportionate impact will occur, the applicant would only be required to consider impacts to adverse environmental and public health stressors, when proposing control measures where a disproportionate impact is present, the applicant must consider impacts to all environmental and public health stressors, whether adverse or not.

Department Review and Decision

Department Review (N.J.A.C. 7:1C-9.1)

After the public participation process is complete, the Department proposes to review the EJIS, any supplemental information, testimony, written comments, the applicant's response to comments and any other information the Department deems necessary, appropriate, and relevant to rendering a decision pursuant to this chapter.

To make its decision pursuant to this chapter, the Department would determine whether the facility would avoid a disproportionate impact, evaluate the applicant's analysis of proposed conditions under the relevant subchapter and impose appropriate conditions to be incorporated into related permit decisions.

In the event the Department requires additional expert analysis of any information submitted by the applicant, the Department is proposing a procedure by which it may engage an expert at the applicant's expense to review any information submitted by the applicant.

Department Decision (N.J.A.C. 7:1C-9.2)

If the Department determines that the facility will avoid a disproportionate impact, the Department would authorize the applicant to proceed and impose permit conditions necessary to ensure that a disproportionate impact is avoided. These conditions could include appropriate pollution control measures, equipment upgrades or modification, or operational conditions that would address the facility's contributions to environmental and public health stressors in the overburdened community.

If the Department finds that a new facility cannot avoid a disproportionate impact, the Department would be required to deny the permit application absent a finding of compelling public interest. If the Department finds that the facility would serve a compelling public interest pursuant to N.J.A.C. 7:1C-5.3, the Department would impose permit conditions necessary to avoid or minimize contributions to adverse environmental and public health stressors, reduce adverse environmental and public health stressors, and/or provide a net environmental benefit in the overburdened community.

For facility expansions and renewals of major source facility permits, the Department would authorize the applicant to proceed to the underlying permitting process with appropriate conditions necessary to avoid or minimize contributions to adverse environmental and public

health stressors, reduce adverse environmental and public health stressors, or provide a net environmental benefit in the overburdened community, as applicable.

The Department would, however, not be permitted to issue a decision that would compromise the reasonable requirements of public health, safety, and welfare or the environment in the overburdened community.

Form and Timing of Decision (N.J.A.C. 7:1C-9.3)

Pursuant to proposed N.J.A.C. 7:1C-9.3(a), the Department would issue a written decision summarizing its analysis and any conditions to be imposed in any subsequently issued permits, and this decision shall be incorporated into any related permitting decisions. The Department intends its written decision to be considered the final agency decision pursuant to this chapter and appealable. As required by the Act, the Department would not issue a decision until at least 45 days after the public hearing held pursuant to N.J.A.C. 7:1C-4.

To avoid unnecessary duplication of process, pursuant to proposed N.J.A.C. 7:1C-9.3(b), the Department would list any additional Department permits that would be subject to the conditions of the decision, provided the same would be submitted to the Department within five years and that no material change occurs.

In accordance with the Act, the Department shall not consider complete for review, any permit application for a facility subject to the requirements of this chapter prior to the issuance of a decision pursuant to this subchapter.

Violations (N.J.A.C. 7:1C-9.4)

Meeting the intent of this chapter to avoid and reduce impacts to environmental and public health stressors requires consistent and strict compliance with any conditions imposed hereunder. Accordingly, pursuant to proposed N.J.A.C. 7:1C-9.4(a) and (b), the Department is providing notice to applicants that failure to comply with the conditions imposed pursuant to this chapter shall subject the facility to enhanced enforcement with non-minor violations constituting grounds for revocation or suspension of any Department-issued permits in accordance with the revocation and suspension procedures of the underlying permitting authorities.

Procedure to Request an Adjudicatory Hearing; Decision on the Request; Effect of the Request (N.J.A.C. 7:1C-9.5)

A provision to appeal decisions by the Department is proposed. A person, pursuant to this chapter, may contest the decision and request a contested case hearing pursuant to N.J.A.C. 7:1C-9.5.

Fees (N.J.A.C. 7:1C-10)

Because the provisions of this chapter create an entirely novel permit review program, the Department is proposing a tiered approach to fee assessment.

Pursuant to proposed N.J.A.C. 7:1C-10.3(c), the Department is setting an initial fee for the first fiscal year at \$3,900 for review of the EJIS. This fee is based on an estimated review time necessary for an appropriately skilled employee at median hourly compensation. The Department estimates EJIS Review will require 52 hours of labor from employees classified as Environmental

Specialist 1 with a median hourly compensation (including fringe and indirect expenses; rounded down to the nearest five-dollar increment) of \$75.00.

Pursuant to proposed N.J.A.C. 7:1C-10.3(a) and (b), for each subsequent fiscal year, the Department would calculate the appropriate fee based on cost incurred during the prior fiscal year strictly for review pursuant to this chapter.

Submission of the fee shall be required to complete the EJIS process and obtain the Department's decision.

Social Impact

The Department anticipates that the proposed new rules will have a positive social impact in not just overburdened communities, but throughout the State of New Jersey, by providing a critical tool in the State's efforts to improve environmental and public health conditions in overburdened communities, address historic inequities in the siting of pollution generating facilities that have placed the burden of economic progress disproportionately on low-income and minority communities and guarantee opportunities for meaningful participation by members of overburdened communities in the Department's permitting processes.

In passing the Act, the Legislature found that the low-income communities and communities of color in New Jersey have historically been exposed to a disproportionately high number of environmental and public health stressors. The residents in these communities are more likely to suffer health impacts. With the passage of the Act, the Legislature declared that all residents of New Jersey, regardless of income, race, ethnicity, color, or national origin, have a right to live, work, and recreate in a clean and health environment. N.J.S.A. 13:1D-157. The proposed

new rules are intended to ensure that no community will be disproportionately impacted by polluting facilities, by limiting the future placement and expansion of such facilities in these communities, and guaranteeing an opportunity for meaningful participation during the decision-making process. The Act does not require the relocation of pollution from one community to another, but rather improves conditions for all by reducing impacts where they are worst.

More specifically, the EJIS process would empower overburdened communities to raise issues affecting their communities and have those issues responded to, and addressed by, applicants by guaranteeing a public hearing and public comment period of no less than 60 days to ensure adequate opportunity to assess the information in the EJIS. Moreover, during the public hearing, the applicant would be required to present the EJIS to the members of the overburdened community, by providing detailed operational information, the environmental and public health stressors affecting the community, how the facility might impact those stressors and what it would propose to do to avoid or minimize those impacts. This would provide applicants, overburdened communities, the public, and the Department a better understanding of issues at play in a permitting decision, allow for better informed decision-making and, through the denial or conditioning of permits, avoid, minimize, and reduce environmental and public health stressors as a result of the EJIS process and thereby decreasing the negative health impacts associated with each stressor.

Economic Impact Statement

The Department anticipates that the proposed rulemaking will have a positive economic impact. The Department believes that reducing environmental and public health stressors in

overburdened communities will reduce health care costs throughout the State. Additionally, reducing stressors in the identified communities is expected to make them more attractive, both to potential new residents and the type of investment that spurs economic revitalization.

The Department anticipates that any additional capital, operating, and/or regulatory expenses incurred by facilities located or proposed to be located in overburdened communities to comply with the proposed new rules will be offset by increased economic health of the host overburdened community.

Benefits

As discussed in the Social and Environmental Impact statements, while the benefits of the proposed rules are difficult to fully quantify, the proposed changes are expected to improve the quality of life for those residents currently impacted by the stressors identified in the notice of proposal Summary section. Due to the interconnected nature of the State's watersheds and airsheds, the benefits of reducing stressors in OBCs are felt throughout the New Jersey. How benefits will be distributed throughout the State is unclear, but it is expected that they generally will be concentrated in overburdened communities. For the purposes of this discussion, the Department considered the potential economic benefits of the proposed rule changes in two broad categories: improvements in human health and increased amenity values. The Department acknowledges that in doing so, the overall positive impact of the rule is likely understated, as additional non-quantifiable benefits, such as improved information access, greater civil society representation, and reductions in inequity were not considered.

Improvements in Human Health

As discussed in the notice of proposal Summary, many of the identified stressors have negative impacts on human health. By reducing exposure to these stressors, the proposed changes are likely to provide long-lasting economic benefits in the form of avoided premature deaths, avoided costs associated with treating acute and chronic conditions, and increased productivity. While the Department is unable to predict specific reductions in the various identified stressors, it is believed that over time, the proposed changes will reduce the associated negative health outcomes in overburdened communities and elsewhere. For example, the proposed rule will likely reduce exposure to pollution from diesel engines or major air sources, and, therefore, also reduce exposure to pollutants, such as ground-level ozone and PM_{2.5}. Reducing exposure to these pollutants will likely lead to reduced incidences of cardiovascular diseases, respiratory disease, and mortality throughout New Jersey.

In order to provide an example of the economic value of improved health outcomes, the Department used EPA's CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (or COBRA). After the user determines a possible scenario, the COBRA model estimates any potential increases or decreases in the annual incidences of the following health endpoints: mortality; nonfatal heart attacks; infant mortality; cardiovascular and respiratory hospital admits; acute bronchitis; upper respiratory symptoms; lower respiratory symptoms; emergency room visits, asthma; asthma exacerbation; minor restricted activity days; and work loss. The model also applies standardized monetary values to the changes in predicted health outcomes, and provides a dollar-value range. As an example, using a three percent discount rate and limiting the analysis to the impacts on New Jerseyans, the Department used COBRA to model the positive health impacts

of a one percent reduction in NO_x —a precursor to ground-level ozone—and $PM_{2.5}$. According to the COBRA model, the avoided health costs from this source alone is estimated to be between \$2.7 million and \$6.3 million dollars. A one percent reduction was selected in this example to provide a low-end estimate of the potential economic benefits of the proposed rule changes.

Although it is only used here as an example of the potential economic benefits of reducing emissions from one stressor, it is important to note that the values provide by COBRA likely understate the overall economic benefits. For example, PM_{2.5}, polycyclic aromatic hydrocarbons (PAHs), nitrogen dioxide, and black carbon have been associated with deficits in intelligence, memory, and behavior. PAHs, which are a component of black carbon and PM_{2.5}, have been associated with developmental delay; reduced IQ; symptoms of anxiety; depression; and inattention; attention deficit hyperactivity disorder (ADHD); and reduced size of brain regions important for processing information and impulse control. (See American Journal of Public Health, Healthy Air, Healthy Brains: Advancing Air Pollution Policy to Protect Children's Health, March 2019, D.C. 13, by Payne-Sturges al, et https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2018.304902) As COBRA is focused on a narrow range of health outcomes, benefits, such as those described above are not included in the model's estimates.

Improved Amenities

The concentration of identified stressors and regulated facility types in overburdened communities is associated with multiple negative economic outcomes beyond immediate health impacts. Poor air quality and surface water quality limit residents' opportunities for outdoor

activities. Outdoor activities provide positive health benefits that reduce health care costs, often at lower costs than substitutes, like gym memberships. Outdoor recreation also supports State and local economies. According to analysis compiled in the Bureau of Economic Analysis 2020 Outdoor Recreation Satellite Account for New Jersey report, outdoor recreation provided \$8.7 billion dollars in value added to the New Jersey economy. (U.S. Department of Commerce, Bureau of Economic Analysis, 2020 New Jersey Outdoor Recreation Satellite Account, https://apps.bea.gov/data/special-topics/orsa/summary-sheets/ORSA%20-

<u>%20New%20Jersey.pdf</u>) To the extent that low environmental quality reduces the demand for outdoor recreation in New Jersey's OBCs, the activities of regulated entities also prevent those communities from benefiting from participation in this important subsector of New Jersey's economy.

The negative relationship between environmental quality and property values has been long understood in environmental economics literature (see Lambert, T. and Boerner, C., Envtl. Inequity: Economic Causes, Economic Solutions, Yale J. on Reg., 14, 195 (1997) and Palmquist, R.B., Measuring Environmental Effects on Property Values Without Hedonic Regressions, Journal of Urban Econ., 11(3), 333-347 (1982) for early discussions). While researchers have debated the causal nature of this relationship, it is generally agreed that decreases in environmental quality bring about lower property values in areas surrounding facilities producing pollution. Conversely, it has been repeatedly found that reducing emissions and/or cleaning up polluted areas increases property values in the previously impacted communities. Improvements in environmental quality are also associated with rising incomes in previously impacted communities (see Banzhaf et al., Environmental Justice: The Economics of Race, Place, and Pollution, Journal of Econ.

Perspectives, 33(1), 185-208, (2012)). While rising property values have raised some concerns of "environmental gentrification," Banzhaf et al. (2012) argues that this can be mitigated through increased community participation. (The Political Economy of Envtl. Justice, ed. H. Spencer Banzhaf, Moving Beyond Cleanup: Identifying the Crucibles of Envtl. Gentrification, Stanford Univ. Press, 296 (2012)).

Moreover, by improving conditions in overburdened communities the proposed new rules may incentivize and create opportunities for development of affordable housing, retail, and commercial enterprises in lieu of construction or expansion of additional facilities.

Costs

The Department acknowledges that some entities will incur costs to comply with the proposed new rules. Expected costs will include the preparation of the EJIS and imposition of necessary control measures to avoid, minimize, and reduce impacts to environmental and public health stressors. However, the Department cannot fully estimate those costs as they will depend on numerous factors specific to the proposed or existing facility's operations. It is unclear to what extent facilities may or may not forego expansion or build outside of overburdened communities. The costs of meeting the requirements of the proposed changes must be balanced against the costs or relocation or re-siting. These decisions will depend on several factors, likely including, but not limited to, the age of the facility, outside market forces, and operating costs, as well as the need to meet new regulatory requirements. Ultimately, the Department does not anticipate that facilities will not be constructed at all, only that they will be constructed either outside of overburdened communities of inequity suggest that construction of facilities outside of overburdened communities will not

increase environmental stressors to the extent that building in overburdened communities would, so that even if facilities are relocated it is expected that New Jersey will, on balance, benefit.

Compliance costs will depend on the size of the facility and other technical factors. In some cases, the costs of meeting new requirements are expected to be relatively minor when compared to the overall expenses a regulated entity will pay while building or expanding a facility. In other cases, compliance costs may represent a larger portion of a facility's budget. However, in many instances, the Department will consider feasibility, which includes consideration of economic factors, in determining appropriate avoidance, minimization, and impact reduction measures. This may also have an added economic benefit of encouraging the market for innovation, low-cost solutions without increasing environmental impacts.

Finally, the Department anticipates that the proposed new rules will have some financial impact on the Department, given that staff hours will be needed for administration and compliance with the proposed environmental justice rules.

Accordingly, the Department anticipates that the proposed new rules will result in stronger, healthier communities, build better businesses, demonstrate that environmental protection and economic development are not mutually exclusive and advance the State's efforts to achieve a triple bottom line of social, environmental, and economic success.

Environmental Impact Statement

The proposed new rules are projected to have a positive impact on the environment and, specifically, on environmental and public health conditions in overburdened communities, including potential improvements in air and water quality. The Department anticipates that the

process set forth in the proposed new rules, which requires identification, analysis, and measures to avoid, minimize, and reduce impacts to environmental and public health stressors will provide direct and long-term environmental benefits to overburdened communities.

As discussed more fully above, many of the statutory categories of environmental and public health stressors and the stressors selected to inform each category have significant environmental and health impacts. Accordingly, targeted and direct reductions in stressors and the avoidance of disproportionate impacts, particularly in overburdened communities that are already subject to adverse cumulative stressors, will have positive environmental impacts. The Department anticipates as the effects from the proposed new rules begin to accrue, reductions in each stressor will occur. As noted above, historic patterns of inequity suggest that construction of facilities outside of overburdened communities will not increase environmental stressors to the extent that building in overburdened communities would, so that even if facilities are relocated it is expected that New Jersey will, on balance, benefit.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), require State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal Standards Statement. The proposed new rules are not subject to any Federal standards or requirements. Accordingly, a Federal standards analysis is not required pursuant to Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq.

Jobs Impact

The Department anticipates that the proposed rulemaking will have little to no impact on job retention in the State and in overburdened communities. In reviewing the best available science on the subject, the Department determined that the causal link between environmental injustice and employment is unclear. However, as reducing environmental and public health stressors is likely to improve economic activity in overburdened communities, the Department expects that the proposed changes will improve employment outcomes in those communities. In that case, it is also likely that there will be additional indirect and induced job growth elsewhere in the State. It is possible that at some regulated facilities may offset compliance costs by hiring fewer workers or limiting expansion. However, the Department expects that in the long run, continuing improvements in technology will drive down mitigation costs at these facilities. In turn, this will allow for a reduction in negative environmental impacts at regulated facilities without substantial job losses.

Agricultural Industry Impact

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated this rulemaking and determined that it will not have an impact on the agricultural industry. Accordingly, no further analysis is required.

Regulatory Flexibility Analysis

In accordance with the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, recordkeeping, and other compliance requirements

that the proposed rulemaking would impose on small businesses. As defined by the Regulatory Flexibility Act, a "small business" is one that is independently owned and operated and employs fewer than 100 full-time employees. The Department does not expect that the majority of the eight facility types listed in the Environmental Justice statute would fit within the Regulatory Flexibility Act's definition of a "small business." However, the Department has determined that it is possible that a number of the facility and property owners that will be affected by the proposed new rules are "small businesses" as defined by the Regulatory Flexibility Act. It is not possible for the Department to accurately estimate the number of small businesses situated within overburdened communities. The proposed rulemaking may impose compliance, recordkeeping, and reporting requirements on small businesses with facilities covered by the Environmental Justice statute seeking permits triggering the proposed regulation. These requirements and their associated costs are discussed in the Summary and Economic Impact statements above.

Because the improvement of environmental and public health conditions in overburdened communities is important to all persons, and the proposed new rules are necessary to protect against adverse impacts to overburdened communities, no lesser requirements for small businesses are provided. Small business owners and employees will enjoy the environmental, health, and other benefits of the new rules, and the Department believes these environmental and health benefits justify the compliance cost to the regulated community, including to small businesses.

Housing Affordability Impact Analysis

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has evaluated the proposed new rules to determine their impact, if any, on the affordability of housing and the average costs of housing in the State.

The proposed rulemaking, in conjunction with the Environmental Justice Law at N.J.S.A. 13:1D-157, will inform the public of identified overburdened communities and potential defined facilities within those communities. The Department anticipates that this information will bring greater awareness to the general public of the potential health and environmental risks that exist within an overburdened community, while also giving the public a voice in addressing concerns of those risks. The proposed rulemaking neither imposes requirements, nor confers direct benefits, upon homeowners, builders, or other providers of housing, making it unlikely that the proposed rulemaking will have an impact on the affordability of housing units or result in a change in the average costs of housing in the State.

Smart Growth Development Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated this rulemaking and determined that it will not have an impact on housing production within Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan. Accordingly, no further analysis is required.

Racial and Ethnic Community Criminal Justice and Public Safety Impact

The Department has evaluated this rulemaking and determined that it will not have an impact on pretrial detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

Full text of the proposed new rules follows:

CHAPTER 1C

ENVIRONMENTAL JUSTICE

SUBCHAPTER 1. GENERAL PROVISIONS

7:1C-1.1 Scope

This chapter shall constitute the rules of the Department to address the review and analysis of contributions to environmental and public health stressors by facilities in overburdened communities pursuant to N.J.S.A. 13:1D-157 et seq.

7:1C-1.2 Construction

This chapter shall be liberally construed to effectuate the statutory function, intent, and purposes of N.J.S.A. 13:1D-157.

7:1C-1.3 Purpose

(a) This chapter is promulgated for the following purposes:

1. Ensure meaningful public participation in the Department's analysis of environmental and public health stressors in overburdened communities and a facility's contributions thereto;

2. Limit the placement of new facilities that would create a disproportionate impact by causing or contributing to adverse cumulative stressors in an overburdened community; and

3. Reduce environmental and public health stressors in overburdened communities in the permitting of new, expanded, and existing major source facilities by requiring incorporation of measures to avoid, minimize, and/or reduce facility contributions thereto.

7:1C-1.4 Relationship to other regulatory programs

(a) Compliance with any subchapter of this chapter shall not relieve any person of the obligation to comply with all other applicable Federal, State, or local laws, rules, regulations, codes, or ordinances.

(b) In the event of a conflict between this chapter and another Department rule, this chapter shall supersede, except that this chapter shall not supersede any provision required to comply with Federal law.

7:1C-1.5 Definitions

"Act" means N.J.S.A. 13:1D-157 et seq., and any amendments thereto.

"Adverse cumulative stressors" means that the combined stressor total of the overburdened community is higher than the overburdened community's geographic point of comparison or would be made higher than an overburdened community's geographic point of comparison as a result of the facility's contribution.

"Adverse environmental and public health stressor" means a stressor in the overburdened community that is higher than an overburdened community's geographic point of comparison or

would be made higher than an overburdened community's geographic point of comparison as a result of the facility's contribution.

"Applicant" means a person who submits to the Department an application for a permit, expansion, or renewal.

"Change in use" means a change in the type of operation of an existing facility that increases the facility's contribution to any environmental and public health stressor in an overburdened community, such as a change to waste processed or stored.

"Combined stressor total" means the sum of adverse environmental and public health stressors in an overburdened community. If the combined stressor total in the overburdened community is greater than the value of the geographic point of comparison, the overburdened community is subject to adverse cumulative stressors.

"Compelling public interest" means a demonstration by a proposed new facility that primarily serves an essential environmental, health, or safety need of the individuals in an overburdened community, is necessary to serve the essential environmental, health, or safety need, and that there are no other means reasonably available to meet the essential environmental, health, or safety need. For purposes of this chapter, the economic benefits of the proposed new facility shall not be considered in determining whether it serves a compelling public interest in an overburdened community.

"Department" means the New Jersey Department of Environmental Protection.

"Disproportionate impact" means the facility cannot avoid either: (1) creating adverse cumulative stressors in an overburdened community as a result of the facility's contribution; or (2) contributing to an adverse environmental and public health stressor in an overburdened community

that is already subject to adverse cumulative stressors. For purposes of this chapter, a facility located either in whole or in part in an overburdened community can have a disproportionate impact on that community. When determining whether a disproportionate impact will occur, an applicant would only be required to consider impacts to adverse environmental and public health stressors.

"Environmental and public health stressor" or "stressor" means sources of environmental pollution, including, but not limited to, concentrated areas of air pollution, mobile sources of air pollution, contaminated sites, transfer stations or other solid waste facilities, recycling facilities, scrap yards, and point-sources of water pollution including, but not limited to, water pollution from facilities or combined sewer overflows; or conditions that may cause potential public health impacts, including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community, as the same are more specifically listed at the chapter Appendix.

"Environmental justice impact statement" or "EJIS" means a systematic, interdisciplinary and integrated assessment of environmental and public health conditions in an overburdened community that identifies and analyzes: (1) existing environmental and public health stressors; (2) any adverse environmental and public health stressors; (3) the presence or absence of adverse cumulative stressors; (4) potential environmental and public health stressors associated with a facility; (5) whether the facility can avoid causing a disproportionate impact; (6) the measures the facility will propose to implement to avoid or address any disproportionate impact; and (7) where applicable, how the new facility serves a compelling public interest in the overburdened community.

"Existing facility" means a facility, or any portion thereof, which, as of (the effective date of this chapter), possesses a valid approved registration or permit from the Department for its operation or construction and is in operation.

"Expansion" means a modification or expansion of existing operations or footprint of development that has the potential to result in an increase of an existing facility's contribution to any environmental and public health stressor in an overburdened community, but shall not include any such activity that decreases or does not otherwise result in an increase in stressor contributions.

"Facility" means any (1) major source of air pollution; (2) resource recovery facility or incinerator; (3) sludge processing facility, combustor, or incinerator; (4) sewage treatment plant with a "permitted flow," as defined at N.J.A.C. 7:14A-1.2, of more than 50 million gallons per day; (5) transfer station or other solid waste facility, or recycling facility intending to receive at least 100 tons of recyclable material per day; (6) scrap metal facility; (7) landfill, including, but not limited to, a landfill that accepts ash, construction or demolition debris, or solid waste; or (8) medical waste incinerator, except a medical waste incinerator that accepts regulated medical waste for disposal, including a medical waste incinerator, that is attendant to a hospital or university and intended to process self-generated regulated medical waste, as defined in this chapter.

"Feasible" means measures addressing contributions to environmental or public health stressors that are reasonably capable of being accomplished by taking into account economic and technological factors.

"Geographic point of comparison" means the comparison area and value used to determine whether an overburdened community is subject to one or more adverse environmental and public health stressors and is determined by selecting the lower value of the State or county's 50th

percentile, calculated excluding the values of other overburdened communities. For the purposes of this definition, "county" shall refer to the county in which the overburdened community is located.

"Hazardous waste" has the same meaning as the term defined at N.J.A.C. 7:26G-5.1.

"Hazardous waste landfill" has the same meaning as the term defined at N.J.A.C. 7:27-

8.1.

"Incinerator" has the same meaning as the terms defined at N.J.A.C. 7:26-1.4 and 7:27-

11.1.

"Landfill" means a sanitary or hazardous waste landfill.

"Limited English proficiency" means that a household does not have an adult that speaks English "very well" according to the United States Census Bureau.

"Low-income household" means a household that is at, or below, twice the poverty threshold as that threshold is determined annually by the United States Census Bureau.

"Major source" or "major facility" shall have the same meaning as the term defined at N.J.A.C. 7:27-22.1.

"Material change" means a modification of the facility or EJIS that, in the determination of the Department, requires further analysis or public comment to accurately assess the facility's contribution to environmental and public health stressors in the overburdened community, such as, but not limited to: 1. A change to the basic purpose; 2. An expansion of the facility; 3. An increase in the potential contributions to environmental or public health stressors; or 4. A change in measures proposed to address the facility's contributions to environmental and public health stressors.

"Medical waste" has the same meaning as the term "medical/infectious waste" defined at N.J.A.C. 7:27-27.1.

"Net environmental benefit" means a reduction of baseline environmental and public health stressors in an overburdened community or other action that improves environmental or public health conditions in an overburdened community, as determined by the Department.

"New facility" means: 1) any facility that has not commenced operation as of (the effective date of this chapter); or 2) a change in use of an existing facility. For the purposes of this chapter, an existing facility that has operated without a valid approved registration or permit required by the Department prior to (the effective date of this chapter) shall be considered a new facility.

"Overburdened community" means any census block group as determined by the Department in accordance with the most recent United States Census, in which: (1) at least 35 percent of the households qualify as low-income households; (2) at least 40 percent of the residents identify as minority or as members of a State-recognized tribal community; or (3) at least 40 percent of the households have limited English proficiency. For the purposes of this chapter, State-designated tribal lands shall be considered overburdened communities. Information regarding overburdened communities can be found on the Department's internet website at https://www.nj.gov/dep/ej/communities.html.

"Permit" means any individual permit, registration, or license issued by the Department to a facility establishing the regulatory and management requirements for a regulated activity pursuant to the following State laws, as amended and supplemented: the Waterfront and Harbor Facilities Act, N.J.S.A. 12:5-1 et seq.; P.L. 1975, c. 232 (N.J.S.A. 13:1D-29 et seq.); the Solid Waste Management Act, P.L.1970, c. 39 (N.J.S.A. 13:1E-1 et seq.); section 17 of P.L. 1975, c.

326 (N.J.S.A. 13:1E-26); the Comprehensive Regulated Medical Waste Management Act, P.L. 1989, c. 34 (N.J.S.A. 13:1E-48.1 et seq.); P.L. 1989, c. 151 (N.J.S.A. 13:1E-99.21a et seq.); the New Jersey Statewide Mandatory Source Separation and Recycling Act, P.L. 1987, c. 102 (N.J.S.A. 13:1E-99.11 et seq.); the Pesticide Control Act of 1971, P.L. 1971, c. 176 (N.J.S.A. 13:1F-1 et seq.); The Wetlands Act of 1970, P.L. 1970, c. 272 (N.J.S.A. 13:9A-1 et seq.); the Freshwater Wetlands Protection Act, P.L. 1987, c. 156 (N.J.S.A. 13:9B-1 et seq.); the Coastal Area Facility Review Act, P.L. 1973, c. 185 (N.J.S.A. 13:19-1 et seq.); the Highlands Water Protection and Planning Act, P.L. 2004, c. 120 (N.J.S.A. 13:20-1 et seq.); the Air Pollution Control Act (1954), P.L. 1954, c. 212 (N.J.S.A. 26:2C-1 et seq.); the Water Supply Management Act, P.L. 1981, c. 262 (N.J.S.A. 58:1A-1 et seq.); P.L. 1947, c. 377 (N.J.S.A. 58:4A-5 et seq.); the Water Pollution Control Act, P.L. 1977, c. 74 (N.J.S.A. 58:10A-1 et seq.); P.L. 1986, c. 102 (N.J.S.A. 58:10A-21 et seq.); or the Flood Hazard Area Control Act, P.L. 1962, c. 19 (N.J.S.A. 58:16A-50 et seq.); except that "permit" shall not include any authorization or approval necessary to perform a remediation, as defined pursuant to section 23 of P.L. 1993, c. 139 (N.J.S.A. 58:10B-1), or any authorization or approval required for a minor modification of a facility's major source permit for activities or improvements that do not increase actual or potential emissions.

"Person" means an individual, corporation, corporate officer or official partnership, association, the Federal government, the State, municipality, commission or political subdivision of the State, or any interstate body.

"Reclaim" or "reclamation" has the same meaning as the term defined at N.J.A.C. 7:26-1.4.

"Recyclable materials" has the same meaning as the term defined at N.J.A.C. 7:26-1.4.

"Recycling or reclamation facility" means any place, equipment, or plant designed and/or operated for the purpose of recycling or reclamation, as defined above, to collect, store, process, or to redistribute separated waste, so as to return the material to market intending to receive at least 100 tons of recyclable material per day.

"Renewal" means the continuation of existing permitted operations at a major facility without change. For the purposes of this chapter, modifications or changes of operations that decrease or do not otherwise increase a facility's contributions to stressors shall be permitted as a renewal.

"Residual" has the same meaning as the term defined at N.J.A.C. 7:14A-1.2.

"Residual-only facility" has the same meaning as the term defined at N.J.A.C. 7:14A-1.2.

"Resource recovery facility" has the same meaning as the term defined at N.J.A.C. 7:26-

1.4.

"Sanitary landfill" has the same meaning as the term defined at N.J.A.C. 7:26-1.4.

"Scrap metal" has the same meaning as the term defined at N.J.A.C. 7:26-1.4.

"Scrap metal facility" means any facility that receives, stores, processes, shreds, or recycles scrap metal, and includes what is commonly known as a scrap or junk yard.

"Sewage sludge" has the same meaning as the term defined at N.J.A.C. 7:14A-1.2.

"Sewage treatment plant" means any facility owned or operated by any public or private sewerage authority, municipal utilities authority, joint meeting, State agency, county, municipality or other governmental agency, subdivision or instrumentality, group of commissioners, commission, or other entity, into which a treatment works, as defined at N.J.A.C. 7:14A-1.2, will

discharge; or which has jurisdiction to treat or convey sewage or other wastewater in the service area in which the proposed treatment works are to be located.

"Site" means any parcel or contiguous parcels of property on which a facility is located or proposed to be located. Parcels separated by a right-of-way shall be considered contiguous.

"Sludge" has the same meaning as the term defined at N.J.A.C. 7:14A-1.2 and includes sewage sludge.

"Sludge incinerator" means any facility that incinerates or combusts sludge in an enclosed device.

"Sludge processing facility" means, for the purposes of this chapter, a facility that receives, stores, or processes sludge, the location of a sludge transfer station or the location of any other treatment works treating domestic sewage (TWTDS) or residual-only facility required to obtain a permit pursuant to N.J.A.C. 7:14A-20. However, a sludge processing facility shall not include the land to which residual is applied or will be applied.

"Solid waste" has the same meaning as the term defined at N.J.A.C. 7:26-1.6.

"Solid waste facility" has the same meaning as the term defined at N.J.A.C. 7:26-1.4.

"Transfer station" has the same meaning as the term defined at N.J.A.C. 7:26-1.4.

7:1C-1.6 Severability

A finding by a court of competent jurisdiction that any section, subsection, provision, clause, or portion of this chapter is invalid or unconstitutional shall not affect the remainder of the chapter. If any section, subsection, provision, clause, or portion of this chapter is adjudged

unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall not be affected thereby.

SUBCHAPTER 2. APPLICABILITY AND PROCEDURES

7:1C-2.1 Applicability

(a) The requirements of this chapter apply when an applicant submits a permit application to the Department for a new or expanded facility, or the renewal of an existing major source permit, for a facility located or proposed to be located, in whole or in part, in an overburdened community, or to Solid Waste Management Plan actions as provided at N.J.A.C. 7:1C-4.4(b).

(b) The Department shall not consider complete for review any application for a permit for a new facility or for the expansion of an existing facility, or any application for the renewal of an existing facility's major source permit, if the facility is located, or proposed to be located, in whole or in part, in an overburdened community, before the permit applicant first obtains a decision in accordance with N.J.A.C. 7:1C-9.

(c) Any application complete for review prior to (the effective date of this chapter), shall not be subject to the requirements set forth in this chapter.

(d) As of January 16, 2021, the Department has published on its website a list of overburdened communities utilizing data from the most recently published U.S. census. This information can be found at <u>https://www.nj.gov/dep/ej/communities.html</u>. At least every two years thereafter, the Department shall update the list utilizing the most recently published U.S. census data.

(e) Where an overburdened community is located immediately adjacent to a block group that has zero population, and that zero-population block group is the existing or proposed location of a

facility, the zero-population block group shall be deemed an overburdened community and shall utilize the highest combined stressor total of any immediately adjacent overburdened community for the purposes of this chapter. For the purposes of this section, immediately adjacent may include those communities separated by a street, road, or right-of-way.

(f) Where an applicant is required to analyze the potential for a facility's contribution to create additional adverse environmental and public health stressors in an overburdened community, the applicant shall be required to address only those stressors identified as affected at the chapter Appendix.

(g) An applicant may request a determination of the applicability of this chapter to an application or potential application by providing the Department, in writing, the address of the existing or proposed facility and information necessary for the Department to determine whether the existing or proposed facility is subject to this chapter.

7:1C-2.2 Procedural overview

(a) Upon request, the Department shall provide to the applicant the initial screening information for the overburdened community required pursuant to N.J.A.C. 7:1C-2.3 identifying the environmental and public health stressors, the geographic point of comparison, any adverse environmental and public health stressors, and whether the overburdened community is subject to adverse cumulative stressors. Alternatively, the applicant that wishes to submit its EJIS with a permit application may obtain the required information itself pursuant to N.J.A.C. 7:1C-2.3(g).

(b) After obtaining the information set forth at (a) above, the applicant shall complete the EJIS, in accordance with N.J.A.C. 7:1C-3.

1. Where the overburdened community is not subject to adverse cumulative stressors and the applicant demonstrates, through an analysis of the facility's contributions to the existing environmental and public health stressors in the overburdened community identified as affected at the chapter Appendix, that the facility will avoid causing a disproportionate impact that would occur by creating adverse cumulative stressors as a result of the facility's contribution, only the information pursuant to N.J.A.C. 7:1C-3.2 will be required.

2. Where the facility cannot avoid a disproportionate impact that would occur by creating adverse cumulative stressors as a result of the facility's contribution, the applicant shall include information required pursuant to both N.J.A.C. 7:1C-3.2 and 3.3, including analyzing and proposing feasible measures to, as applicable, avoid or minimize contributions to environmental and public health stressors, provide a net environmental benefit and, where appropriate, demonstrate how the facility serves a compelling public interest in the overburdened community.

3. Where the overburdened community is subject to adverse cumulative stressors, the applicant shall include information required pursuant to both N.J.A.C. 7:1C-3.2 and 3.3.

4. An applicant that is required to provide the information pursuant to N.J.A.C. 7:1C-3.3 shall comply with the requirements pursuant to the following sections to determine whether the facility can, as applicable, first avoid a disproportionate impact or, where a disproportionate impact will occur, address its contributions to environmental and public health stressors in the overburdened community:

i. Applications for permits for proposed new facilities shall satisfy the requirements at N.J.A.C. 7:1C-6 and, as applicable, N.J.A.C. 7:1C-7.

ii. Applications for permits to expand existing facilities shall satisfy the requirements at N.J.A.C. 7:1C-6 and, as applicable, N.J.A.C. 7:1C-7.

iii. Applications for renewals of existing major source permits shall satisfy the requirements at N.J.A.C. 7:1C-8.

(c) The applicant shall provide the EJIS to the Department for administrative review and, upon the Department's authorization to proceed as required pursuant to N.J.A.C. 7:1C-3.4, complete the process for meaningful public participation pursuant to N.J.A.C. 7:1C-4.

(d) Following the completion of the public participation process at N.J.A.C. 7:1C-4, the Department shall consider the EJIS, and any supplemental information, testimony, written comments, the applicant's response to comments, and any other information deemed relevant by the Department to determine whether the facility can avoid a disproportionate impact, determine whether to deny or approve the application, and evaluate whether and how to impose conditions concerning the construction and operation of the facility to address its contributions to environmental and public health stressors affecting the overburdened community and issue a decision, in accordance with N.J.A.C. 7:1C-9.

7:1C-2.3 Initial screening information

(a) Upon request, the Department shall provide to the applicant the initial screening information provided in this section and a statement of applicability.

(b) Environmental and Public Health Stressors/Geographic Point of Comparison: The Department shall provide a listing of the existing environmental and public health stressors in the overburdened community as set forth at the chapter Appendix and indicate the appropriate geographic point of

comparison for each stressor by selecting the lower of the 50th percentile of the State or county's equivalent stressor, excluding other overburdened communities from the comparison.

(c) Adverse Environmental and Public Health Stressors: The Department shall indicate which environmental and public health stressors are considered adverse by comparing the value of each stressor in the overburdened community with the appropriate geographic point of comparison.

(d) Combined Stressor Total: The Department shall sum the number of adverse environmental and public health stressors in the overburdened community to determine the combined stressor total. The Department shall also indicate the appropriate geographic point of comparison for the combined stressor total by selecting the lower of the 50th percentile of the State or county's combined stressor totals excluding the combined stressor totals of other overburdened communities from the comparison.

(e) Cumulative stressors: The Department shall determine whether the overburdened community is subject to stressors by comparing the combined stressor total to the appropriate geographic point of comparison. If the facility is located, or proposed to be located, in whole or in part, in more than one overburdened community, the Department will apply the higher combined stressor total of the overburdened communities for the purposes of this analysis.

(f) The Department shall provide the screening information at (b) through (e) above to the applicant, in writing, for incorporation into the EJIS.

(g) An applicant that wishes to submit its EJIS concurrent with a permit application may obtain the screening information at (a) through (f) above from the Department's Environmental Justice Mapping, Assessment and Protection Tool

(https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=34e507ead25b4aa5a5051dbb 85e55055).

SUBCHAPTER 3. ENVIRONMENTAL JUSTICE IMPACT STATEMENT

7:1C-3.1 Applicability

(a) All permit applicants shall prepare and submit to the Department an environmental justice impact statement (EJIS) in accordance with the requirements of this section.

(b) Where the overburdened community is not subject to adverse cumulative stressors and the applicant demonstrates, through an analysis of the facility's contributions to the current environmental and public health stressors in the overburdened community, that the facility will avoid a disproportionate impact that would occur by creating adverse cumulative stressors as a result of the facility's contribution, only the information at N.J.A.C. 7:1C-3.2 will be required.

(c) Where the facility cannot avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution, the applicant shall include information required at both N.J.A.C. 7:1C-3.2 and 3.3.

(d) Where the overburdened community is subject to adverse cumulative stressors, the applicant shall include information required at both N.J.A.C. 7:1C-3.2 and 3.3.

(e) The Department may require inclusion of any additional information or point of analysis it deems necessary for the protection of public health and the environment.

(f) An EJIS, and any supplemental information submitted in accordance with N.J.A.C. 7:1C-3.3, must be prepared and submitted pursuant to this chapter, as applicable. Where the information addressing a requirement is supplied in the engineering designs or reports, reference to such

designs or reports may be noted in the EJIS and supplemental information, provided the appropriate section and page number of the design or report is summarized, cross referenced, and indexed. If any category or requirement above presents no impact relative to the facility, a notation of non-applicability shall be entered in the EJIS and supplemental information.

7:1C-3.2 Environmental justice impact statement requirements

(a) In its EJIS, an applicant for a facility located, or proposed to be located, in whole or in part, in an overburdened community shall include:

1. An executive summary of the information contained in the EJIS, including any supplemental information as required at N.J.A.C. 7:1C-3.3.

2. A detailed written description of the municipal and neighborhood setting of the facility, including the location of community and residential dwellings, hospitals, nursing homes, playgrounds, parks, schools, and comprehensive demographic, economic zoning, and physical descriptions. The site location shall also be identified by a site plan of the facility or equivalent map if no site plan exists.

3. A description of the facility's current and proposed operations, which shall include, but not be limited to, the following:

i. An explanation of the purpose of the permit application, including how the project serves the needs of the individuals in the overburdened community;

ii. Identification of all processes to be used, including pollution or environmental control measures and monitoring instrumentation, hours of operation, onsite equipment, traffic

routes, number of employees, and all other information relevant to the potential for the facility to contribute to environmental and public health stressors in the overburdened community; and

iii. For new or expanded facilities, a schedule for the construction and operation including anticipated completion dates for major phases of construction, any pollution or environmental control measures and monitoring instrumentation, hours of operation, onsite equipment, traffic routes, number of employees, and all other information relevant to the potential for the construction to contribute to environmental and public health stressors in the overburdened community.

4. A list of all the Federal, State, and local permits that are required, or will be required, for construction or operation of the facility including, but not limited to, those defined at N.J.A.C. 7:1C-1.5.

5. Evidence of satisfaction of any local environmental justice or cumulative impact analysis with which the applicant is required to comply.

6. The initial screening information obtained pursuant to N.J.A.C. 7:1C-2.3.

7. An assessment of the impacts, both positive and negative, of the facility on each environmental and public health stressor in the overburdened community identified as affected at the chapter Appendix under conditions of maximum usage or output, and a correlation of such impacts with various stages of the site preparation, facility construction and operation, including the amounts, concentrations, and pathways of any contaminants or pollution that will be associated with the facility.

8. A public participation plan that, at a minimum, satisfies the requirements at N.J.A.C. 7:1C-3.4(d) and 7:1C-4, including all proposed forms and methods of notice to the members of the overburdened community and the proposed hearing location.

9. A demonstration, including any necessary operational conditions and control measures, that the facility will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution. If the applicant cannot make such a demonstration, then it is presumed that a disproportionate impact is present and the applicant shall include the information required at N.J.A.C. 7:1C-3.3.

10. As applicable, how a proposed new facility will serve a compelling public interest in the overburdened community, in accordance with N.J.A.C. 7:1C-5.3.

7:1C-3.3 Supplemental information

(a) An applicant shall supplement its EJIS with the information described below if the Department determines a facility is located, or proposed to be located, in whole or in part, in an overburdened community that is subject to adverse cumulative stressors or the facility cannot demonstrate that it will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

1. Site mapping showing:

i. Topographic conditions, contour data, drainage patterns, wetlands or their associated buffers, coastal zones, or other areas regulated by the Department;

ii. Areas of known plant or animal species on the Federal and State endangered, threatened, or rare plant or animal species list;

iii. All existing water classifications, designated uses, and limitations of the surface water bodies that are immediately adjacent to the site, exist on the site, or drain directly onto or off the site, upstream tributaries of bodies of water which flow onto the site, and downstream tributaries of bodies of water which flow from the site, in accordance with N.J.A.C. 7:9B; and

iv. Any existing onsite public scenic attributes or outdoor recreation and conservation opportunities in the overburdened community, such as any Federal, State, county, or municipal parks, forests, wildlife management areas and natural areas, any areas acquired for recreation and conservation purposes with Green Acres funding, program, or a non-profit conservation organization, any lands preserved as open space by a non-profit conservation organization or other public access features; and

2. Information pertaining to the existence or absence of contamination on site, which may include the existence of known, or suspected, contaminants, historical uses of the site, and any remediation activities that have occurred on the site;

3. A description of the ambient air quality data for existing concentrations of the National Ambient Air Quality Standard pollutants as identified at 42 U.S.C. §§ 7401 et seq., and a discussion of how the facility will comply with the requirements at N.J.A.C. 7:27;

4. A description of the subsurface hydrology that presents ground water quantity and quality data for the aquifers located beneath the site, including, but not limited to, depth to ground water during seasonal high and low flow, flow direction, existing uses, and future supply capabilities. In addition, a description of the soils that identifies major soil types and their characteristics, including, but not limited to, drainage, erosion potential, and sedimentation potential;

5. A description of the localized climate and flooding impacts through the presentation of site-specific data for average annual and monthly precipitation, flooding, and temperature. Meteorological data may be obtained from the nearest National Oceanographic and Atmospheric Administration sanctioned station.

i. At a minimum, the description shall use data and tools from the Department's Climate Change website (<u>https://www.nj.gov/dep/climatechange</u>), which must be referenced in the prepared document, and address:

(1) Whether the facility is located within a flood hazard area, as delineated by the Flood Hazard Area Control Act Rules, N.J.A.C. 7:13;

(2) The expected impacts of flooding on the facility from the 100-year storm event and/or potential inundation due to sea level rise;

(3) Proposed resilience measures; and

(4) A list of measures to mitigate risks from flooding and inundation;

6. A traffic study that describes the transportation routes that will service the facility, site access capability, and existing traffic flow patterns expressed in terms of daily peak hour volumes, off peak hour volumes, levels of service, and average daily round trips, and the facility's current and proposed contributions thereto for all vehicles associated with the facility's operations;

7. A description of the sewage facilities that identifies the type of treatment system available, existing treatment capacity, collection system capacity, average and peak flow data, and current committed capacity for the treatment and collection system;

8. A description of the stormwater management system that identifies the type of collection and treatment system available, and current collection and treatment capacity and utilization, including the presence or absence of combined sewer overflows;

9. A description of the water supply that identifies the water supply system, water sources, level and type of existing pre-treatment, capacity of the distribution system, current commitment of capacity, availability of additional supply, and peak and average demands;

10. A description of the energy supply system on-site or immediately available to the site by identifying existing power lines or pipelines, current commitment of capacity, the capability of supplying energy to the proposed facility and/or activity, and conveying, if applicable, any energy products generated by the proposed facility and/activity from the site. This analysis shall include an evaluation of the feasibility of the utilization of onsite or offsite renewable energy resources to meet, fully or partially, the energy demand of the facility;

11. For new or expanded facilities, a sufficiently detailed comparison of reasonable design alternatives that would permit independent and comparative evaluation, including siting changes or process alternatives that could reduce some or all of the proposed facility's contributions to environmental and public health stressors in the overburdened community, including:

i. Identification of any significant differences in contributions to environmental and public health stressors that would reasonably result from the alternatives considered;

ii. A discussion of the alternative of no action or no project, including the major foreseeable consequences of such a choice;

iii. A comparison, in matrix or other appropriate format, of both the chosen alternative and the set of alternatives considered; and

iv. A justification of selection of the preferred alternative;

12. An odor, dust, and/or noise mitigation or management plan, if:

i. The facility has the potential to cause odor, dust, and/or noise off-site; or

ii. The facility has had a confirmed odor, dust, and/or noise complaint submitted through DEP's Hotline or the local health agency for the five years preceding the date of the permit application;

13. A detailed compliance history for the facility, including any existing Department permits and copies of any enforcement actions issued to the facility for the five years preceding the date of the permit application; and

14. An analysis and proposal of control measures to address the facility's contribution to environmental and public health stressors in accordance with N.J.A.C. 7:1C-5 (new facilities), 6 (facility expansions), or 8 (renewal of existing major source permits).

(b) The requirements of this section are in addition to, and do not supersede, the EJIS requirements in accordance with N.J.A.C. 7:1C-3.2.

(c) An applicant may elect to submit an EJIS and any supplemental information, in accordance with this subchapter, independent of whether the facility is located, or proposed to be located, in whole or in part, in an overburdened community that is subject to adverse cumulative stressors or the facility cannot demonstrate that it will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

7:1C-3.4 Review of Environmental Justice Impact Statement and authorization to proceed (a) Prior to providing public notice pursuant to N.J.A.C. 7:1C-4.1, an applicant shall transmit the EJIS, and any supplemental information, to the Department for administrative review and authorization to proceed pursuant to N.J.A.C. 7:1C-4. The Department's review shall be limited to determining the presence of the information required to complete the EJIS and that the proposed public notice complies with the requirements of this chapter.

(b) Within 10 days of receipt of the EJIS, and any supplemental information, the Department shall either request revisions or the inclusion of additional information in the EJIS or provide the applicant with authorization to proceed with the public participation process pursuant to N.J.A.C. 7:1C-4.

(c) Upon providing authorization to proceed, the Department shall publish the EJIS and any supplemental information on its website and in the bulletin published pursuant to N.J.S.A. 13:1D-34 and shall provide an electronic copy to any party that has registered its interest in the project or representation of the overburdened community with the Department.

(d) The applicant shall provide, to the Department:

A proof of publication of the notice of public hearing required pursuant to N.J.A.C. 7:1C 4.1(b)1i;

2. A dated copy of the posting required pursuant to N.J.A.C. 7:1C-4.1(b)1ii, as applicable;

3. Copies of and proof of mailing of the notices required pursuant to N.J.A.C. 7:1C-4.1(b)1iii and iv; and

4. A proof of the posting and maintenance of a sign as required pursuant to N.J.A.C. 7:1C-4.1(b)1iv.

SUBCHAPTER 4. PROCESS FOR MEANINGFUL PUBLIC PARTICIPATION

7:1C-4.1 Public notice

(a) After receiving authorization from the Department pursuant to N.J.A.C. 7:1C-3.4 to proceed to public process, the applicant shall provide notice of the public hearing and of the opportunity for the public to submit written comments, in accordance with the following, and shall maintain a record that documents that these notice requirements were met:

1. At least 60 days prior to the hearing, the applicant shall:

i. Provide a copy of the EJIS to the clerk of the municipality or municipalities in which the overburdened community is located;

ii. Publish notice of the hearing in at least two newspapers circulating within the overburdened community, including, at a minimum, one local non-English language newspaper in a language representative of the residents of the overburdened community, if applicable;

iii. Provide written notice of the hearing to the Department, the governing body, and the clerk of the municipality in which the overburdened community is located;

iv. Provide written notice of the hearing through certified mail (return receipt requested) to all persons who own and/or reside on land located within 200 feet of the facility and to any easement holders for that land who are listed in the tax records for the municipality or municipalities in which the land is located;

v. Post and maintain, in a legible condition, until the public comment period is concluded, a sign on the site of the existing or proposed facility. Any such sign must advise the public of the permit application, the public hearing on the application, and the opportunity for

public comment on the proposal. Such sign must be located in a prominent location(s) viewable by the public and contain sufficient detail in a language or language representative of the residents of the overburdened community as to inform of the application, and the method by which the public may obtain information about such proposed application;

vi. Provide notice through other methods identified by the applicant to ensure direct and adequate notice to individuals in the overburdened community including, but not limited to, providing information directly to active community groups or organizations, automated phone, voice, or electronic notice, flyers, and/or utilization of other publications utilized within the overburdened community; and

vii. Invite the Department, municipality or municipalities, and local environmental and environmental justice bodies to participate in the public hearing.

(b) The notices required pursuant to (a)1 above shall include the following information:

1. The name of the applicant and the date, time, and location of the hearing;

2. A general description of the proposed new or expanded facility or existing major source facility, as applicable, being considered;

3. A map indicating the location of the facility, including the street address, as applicable, municipality, county, tax map block and lot, and size of the property that would be the subject of the application being considered;

4. A brief summary of the EJIS and supplemental information, as applicable, and information on how an interested person may review a copy of the complete EJIS and supplemental information, as applicable;

5. A statement inviting participation in the public hearing and notifying the public that, for a time period of no less than 30 days after the hearing and 60 days total, written comments may be submitted to the applicant. The statement shall provide an address for submittal of written comments to the applicant and shall require that copies of any written comments also be sent to:

New Jersey Department of Environmental Protection

Office of Permitting and Project Navigation

401 East State Street

PO Box 420

Trenton, New Jersey 08625; and

6. Any other information deemed appropriate by the Department, for that specific notice.

7:1C-4.2 Public hearing and comment

(a) An applicant shall schedule the public hearing, as follows:

1. The hearing must be held in the overburdened community, unless the applicant demonstrates that there is no suitable hearing space in the overburdened community. Where such demonstration is made, the hearing may, subject to the Department's approval, be held in the municipality in which the facility is, or will be, located within as close proximity as possible to the overburdened community and in a manner that facilitates participation of individuals in the overburdened community. If the facility is located in more than one overburdened community, the applicant shall, subject to the Department's approval, propose a central location within close proximity to all affected overburdened communities; and

2. All hearings must be conducted on a week day no earlier than 6:00 P.M. Eastern Standard Time/Eastern Daylight Time. An applicant shall include a virtual component to the in-person public hearing to increase public participation. The virtual component shall be recorded and available online for the public to view after the hearing until at least the close of the public comment period.

(b) At the public hearing, an applicant shall provide a clear, accurate, and complete presentation of the information contained in the EJIS and any supplemental information required by this chapter and accept written and oral comment from any interested party regarding the application. The applicant shall allot sufficient time to ensure that all interested individuals have a reasonable and adequate opportunity to provide oral comment at the hearing.

(c) The public comment period may begin upon completion of the notice requirements, in accordance with N.J.A.C. 7:1C-4.1. In addition, the comment period shall remain open a minimum of 30 days after the completion of the required public hearing, in accordance with this section and be no less than 60 days total.

7:1C-4.3 Post-hearing and comment process

(a) After the close of public comment, the applicant shall provide to the Department:

1. A written transcript of the public hearing; and

2. A summary of the public comments and the applicant's responses made at the public hearing, and a copy of the comments provided in writing after the public hearing, and the applicant's response to the public comments. The applicant shall indicate in its response how it will address the comments and, as necessary, amend and republish the EJIS.

(b) If the applicant makes a material change to the information set forth in the EJIS, its permit application, or an application pursuant to N.J.S.A. 13:1E-23, after it has submitted its EJIS pursuant to N.J.A.C. 7:1C-3, or after it has completed the public notice or public hearing requirements pursuant to this subchapter, the Department will require the applicant to amend its EJIS to reflect the material change and conduct additional public notice and public hearing, pursuant to this subchapter.

7:1C-4.4 General requirements

The notice and hearing requirements of this subchapter are in addition to the notice and hearing requirements of any other rule, except that an applicant shall conduct the notice and public hearing required pursuant to N.J.A.C. 7:1C-4.2, concurrent with the Solid Waste Management Plan notice and hearing required pursuant to N.J.S.A. 13:1E-23.

SUBCHAPTER 5. REQUIREMENTS SPECIFIC TO PERMIT APPLICATIONS FOR NEW FACILITIES

7:1C-5.1 Applicability

(a) This subchapter sets forth the requirements for an applicant that submits a permit application for a new facility that is proposed to be located, in whole or in part, in an overburdened community that is subject to adverse cumulative stressors or a new facility that cannot demonstrate that it will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

(b) In preparing an EJIS for a new facility pursuant to N.J.A.C. 7:1C-3, an applicant shall conduct the analysis and provide the information required pursuant to this subchapter.

7:1C-5.2 Avoidance of disproportionate impact

(a) An applicant that submits a permit application for a new facility that is proposed to be located, in whole or in part, in an overburdened community that is subject to adverse cumulative stressors shall analyze and propose all control measures necessary to avoid facility contributions to all adverse environmental and public health stressors in the overburdened community. Where the control measures proposed by the applicant will prevent a disproportionate impact by avoiding facility contributions to all adverse environmental and public health stressors in the overburdened community, the Department may grant the subject application pursuant to N.J.A.C. 7:1C-9.2(a).

(b) Where the control measures proposed by the applicant cannot avoid a disproportionate impact, the Department shall deny the subject application pursuant to N.J.A.C. 7:1C-9.2(b)1, unless the applicant demonstrates that the proposed facility will serve a compelling public interest in the overburdened community, in accordance with N.J.A.C. 7:1C-5.3.

(c) An applicant seeking to demonstrate that the proposed facility will serve a compelling public interest shall conduct the analysis and provide the information required at N.J.A.C. 7:1C-5.3 and 5.4.

7:1C-5.3 Compelling public interest

(a) Where a proposed new facility cannot avoid a disproportionate impact, the Department shall deny the subject application pursuant to N.J.A.C. 7:1C-9.2(b)1, unless the applicant

demonstrates that the proposed facility will serve a compelling public interest in the overburdened community.

(b) An applicant that seeks approval for a proposed new facility that will serve a compelling public interest in the overburdened community where it is to be located must demonstrate that:

1. The proposed new facility will primarily serve an essential environmental, health, or safety needs of the individuals in an overburdened community;

2. The proposed new facility is necessary to serve the essential environmental, health, or safety needs of the individuals in an overburdened community; and

3. There are no feasible alternatives that can be sited outside the overburdened community to serve the essential environmental, health, or safety needs of the individuals in an overburdened community.

(c) Facilities that directly reduce adverse environmental and public health stressors in the overburdened community may be considered as serving an essential environmental, health, or safety need of the individuals in an overburdened community.

(d) The Department may consider, as relevant, public input as to whether a compelling public interest is demonstrated if there is a significant degree of public interest in favor of or against an application from individuals residing in the overburdened community. In addition to any other public comment provided pursuant to this chapter, the Department may seek input from the public whenever it determines such comments may clarify whether the compelling public interest standard is met.

7:1C-5.4 Control measures

(a) An applicant for a proposed new major source facility that seeks to demonstrate a compelling public interest, shall propose control measures, in accordance with N.J.A.C. 7:1C-7.1.(b) For any aspects of a new facility's operations not addressed at (a) above, the applicant shall propose control measures in the following order:

1. All feasible measures to avoid facility contributions to environmental and public health stressors;

2. For any contribution that cannot feasibly be avoided, all feasible onsite measures to minimize facility contributions to environmental and public health stressors;

3. All feasible offsite measures within the overburdened community to reduce environmental and public health stressors to which the facility will contribute;

4. All feasible offsite measures within the overburdened community to reduce adverse environmental and public health stressors to which the facility will not contribute, with preference for the reduction of stressors from highest to lowest percentile in relation to the geographic point of comparison; and

5. All feasible offsite measures within the overburdened community to provide a net environmental benefit in the overburdened community.

SUBCHAPTER 6. REQUIREMENTS SPECIFIC TO PERMIT APPLICATIONS FOR FACILITY EXPANSIONS

7:1C-6.1 Applicability

(a) This subchapter sets forth the requirements for an applicant that submits a permit application for an expanded facility located, in whole or in part, in an overburdened community that is subject

to adverse cumulative stressors or a facility expansion that cannot demonstrate that it will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

(b) In preparing an EJIS for an expanded facility pursuant to N.J.A.C. 7:1C-3, an applicant shall conduct the analysis and provide the information required pursuant to this subchapter.

7:1C-6.2 Avoidance of disproportionate impact

(a) An applicant that submits a permit application for an expanded facility that is proposed to be located, in whole or in part, in an overburdened community that is subject to adverse cumulative stressors shall analyze and propose all control measures necessary to avoid facility contributions to all adverse environmental and public health stressors in the overburdened community. Where the control measures proposed by the applicant will prevent a disproportionate impact by avoiding facility contributions to all adverse environmental and public health stressors in the overburdened community, the Department may grant the subject application pursuant to N.J.A.C. 7:1C-9.2(a).
(b) Where the control measures proposed by the applicant cannot avoid a disproportionate impact,

the Department shall impose conditions in accordance with N.J.A.C. 7:1C-9.2(b)2.

(c) An applicant seeking approval for an expanded facility where a disproportionate impact is present shall conduct the analysis and provide the information required pursuant to N.J.A.C. 7:1C-6.3.

7:1C-6.3 Control measures

(a) An applicant for an expanded major source facility shall propose control measures in accordance with N.J.A.C. 7:1C-7.1.

(b) For any aspects of any other expanded facility's operations not addressed at (a) above, the applicant shall propose control measures in the following order:

1. All feasible measures to avoid facility contributions to environmental and public health stressors;

2. For any contribution that cannot feasibly be avoided, all feasible onsite measures to minimize facility contributions to environmental and public health stressors;

3. All feasible offsite measures within the overburdened community to reduce environmental and public health stressors to which the facility will contribute;

4. All feasible offsite measures within the overburdened community to reduce adverse environmental and public health stressors to which the facility will not contribute, with preference for the reduction of stressors from highest to lowest percentile in relation to the geographic point of comparison; and

5. All feasible offsite measures within the overburdened community to provide a net environmental benefit in the overburdened community.

SUBCHAPTER 7. LOCALIZED IMPACT CONTROL TECHNOLOGY FOR NEW OR EXPANDED MAJOR SOURCE FACILITIES

7:1C-7.1 Localized impact control technology for new or expanded major source facilities(a) For a new major source facility that serves a compelling public interest pursuant to N.J.A.C.7:1C-4.1, or an expansion of an existing major source facility, if an application proposes

construction, installation, reconstruction, or modification of equipment and control apparatus that is a significant source operation, as defined at N.J.A.C. 7:27-8.1, meeting the following criteria, the applicant shall document Localized Impact Control Technology (LICT) for the source:

1. The facility has a potential to emit any HAP at a rate equal to or greater than the SOTA Threshold at N.J.A.C. 7:27-17.9.

2. The facility has a potential to emit carbon monoxide, nitrogen oxide, inhalable particles with diameters that are generally 10 micrometers and smaller, fine inhalable particles with diameters that are generally 2.5 micrometers and smaller, sulfur dioxide, trisodium phosphate, total volatile organic compounds, or any other air contaminant or category of air contaminant not covered at (a)1 above at a rate individually equal to or greater than the five tons per year.

(b) Documentation of LICT is required only for an air contaminant for which the facility's potential to emit that air contaminant at the amount listed at (a) above.

(c) An applicant shall document compliance with the LICT standard determined through a topdown approach. To perform a top-down LICT demonstration, the applicant shall:

1. Identify and evaluate a list of air pollution control technologies or measures that may be applied to the source to reduce each contaminant identified at N.J.A.C. 7:27-7.1(b). This list shall not be limited to measures that have been applied to other existing sources in this same source category and shall include measures applied to sources in similar source categories, as well as innovative control technologies, modification of the process or process equipment, other pollution prevention measures, and combinations of the above measures.

2. Arrange the measures on the list in descending order of air pollution control effectiveness. The first-listed or "top" measure shall constitute LICT for the source unless the applicant provides one of the following:

i. A demonstration that the top measure should be eliminated from consideration because it is technically infeasible, based on physical, chemical, or engineering principles, and/or technical difficulties that would prevent the successful application of the measure;

ii. A demonstration that the top measure should be eliminated from consideration based on its environmental impacts. The justification shall show that the adverse environmental effects of the top measure, such as effects on water or land, or HAP emissions, when compared with its air contaminant emission reduction benefits, would make use of the top measure unreasonable; or

iii. A demonstration that the top measure should be eliminated from consideration based on its energy impacts. The justification shall show that the top measure uses fuels that are not reliably available; or that the energy consumed by the top measure is greater than the proposed measure(s), and that the extra energy used, when compared with the air contaminant emission reduction benefits resulting from the top measure, would make use of the top measure unreasonable.

3. If the top measure is eliminated from consideration under any of the provisions at (c)2i, ii, or iii above, the applicant shall evaluate each successive measure on the list, using the procedures described at (c)2 above, until a measure is reached that is not eliminated. Upon the Department's approval of the LICT demonstration, this measure shall constitute the LICT for the source.

(d) The requirements of this subchapter shall not apply to sources permitted in a general permit issued pursuant to N.J.A.C. 7:27-8.8 or in a general operating permit issued pursuant to N.J.A.C. 7:27-22.14.

(e) The requirements of this subchapter shall not relieve the applicant from the responsibility to comply with any other State, local, or Federal regulations.

SUBCHAPTER 8. REQUIREMENTS SPECIFIC TO RENEWAL APPLICATIONS FOR MAJOR SOURCE FACILITIES

7:1C-8.1 Applicability

(a) This subchapter sets forth the requirements for an applicant for a permit for a major facility, as defined at N.J.A.C. 7:27-22.1, that submits an application for a renewal of its operating permit required pursuant to N.J.A.C. 7:27-22 and is located in an overburdened community that is subject to adverse cumulative stressors or cannot demonstrate that it will avoid a disproportionate impact that would occur by creating adverse cumulative stressors in the overburdened community as a result of the facility's contribution.

(b) In preparing an EJIS for the renewal of an existing major source permit pursuant to N.J.A.C.7:1C-3, an applicant shall conduct the analysis and provide the information required pursuant to this subchapter.

7:1C-8.2 Avoidance of disproportionate impact

(a) In addition to the analysis and measures required at N.J.A.C. 7:1C-8.3, 8.4, and 8.5, an applicant that submits a permit application for the renewal of an existing major source permit that is to be

located, in whole or in part, in an overburdened community that is subject to adverse cumulative stressors shall analyze and propose all control measures necessary to avoid facility contributions to all adverse environmental and public health stressors in the overburdened community. Where the control measures proposed by the applicant will prevent a disproportionate impact by avoiding facility contributions to all adverse environmental and public health stressors in the overburdened community, the Department may grant the subject application pursuant to N.J.A.C. 7:1C-9.2(a).

(b) Where the control measures proposed by the applicant cannot avoid a disproportionate impact, the Department shall impose conditions in accordance with N.J.A.C. 7:1C-9.2(b)2.

(c) An applicant seeking the renewal of a major source facility permit, where a disproportionate impact is present, shall conduct the analysis and provide the information required pursuant to N.J.A.C. 7:1C-8.3, 8.4, 8.5, and 8.6.

7:1C-8.3 General requirements

(a) An applicant for a major facility permit renewal subject to this subchapter shall include the following in its environmental justice impact statement, as applicable:

1. A facility-wide risk assessment, pursuant to N.J.A.C. 7:1C-8.4, unless:

i. The applicant or designated responsible corporate official certifies that:

(1) The applicant submitted a facility-wide risk assessment, as part of its application for its current effective operating permit;

(2) The Department approved the facility-wide risk assessment; and

(3) No new information or change in use or operation at the facility occurred since the Department approved the facility-wide risk assessment; and

ii. The Department determines that there have been no changes to the requirements for a facility-wide risk assessment pursuant to N.J.A.C. 7:1C-8.4, requiring an update to the facility-wide risk assessment; and

2. A technical feasibility analysis to reduce emissions to the maximum extent technically feasible, pursuant to N.J.A.C. 7:1C-8.5, if the facility meets the criteria set forth at N.J.A.C. 7:1C-8.5.

7:1C-8.4 Facility-wide risk assessment

(a) An applicant of a major facility permit renewal subject to this subchapter shall submit a facilitywide risk assessment that evaluates existing source operations and includes each source operation's emission rates of hazardous air pollutants (HAP) and toxic substances that exceed the reporting thresholds at N.J.A.C. 7:27-17.9(a).

(b) The applicant shall conduct the facility-wide risk assessment in accordance with a protocol approved in advance by the Department. The Department will not approve a protocol unless it takes all relevant site-specific and general factors into account. These factors include, but are not limited to, a land use analysis, proper consideration of topography, a good engineering practice stack height analysis, use of the most recent version of the USEPA-approved models, identification of the most appropriate meteorological data, and consideration of all relevant averaging times. The protocol shall document how the applicant proposes to conduct the facility-wide risk assessment, and how the results will be presented to the Department. Technical guidance on the preparation of a protocol can be found in the Air Quality Permitting Program's Technical Manual 1002 (Guidance on Preparing an Air Quality Modeling Protocol) and Technical Manual 1003 (Guidance on

Preparing a Risk Assessment for Air Contaminant Emissions) available on the Department's website at http://www.nj.gov/dep/agpp/techman.html.

(c) If the outcome of the facility-wide risk assessment is above a negligible level pursuant to Technical Manual 1003, then the applicant shall submit a plan to lower the risk to a negligible level as part of its EJIS in accordance with N.J.A.C. 7:1C-2. The plan may include measures, such as applying better air pollution controls to lower emissions, modifying stack parameters to increase dispersion, and/or implementing applicable risk minimization strategies to reduce risk in the overburdened community.

(d) If the facility's proposed plan does not lower risk to a negligible level, the Department will include conditions in its decision that are necessary to reduce risk in the overburdened community.

7:1C-8.5 Technical feasibility analysis

(a) An applicant for a major facility permit renewal subject to this subchapter shall submit a technical feasibility analysis if the facility's current effective operating permit includes any equipment or control apparatus that meets the following:

1. The equipment or control apparatus was installed at least 20 years prior to the expiration date of its current effective operating permit;

2. The equipment or control apparatus was not subject to review under this subchapter in the 15 years prior to the expiration date of its current effective operating permit; and

3. The total emissions of any of the pollutants listed below from all equipment or control apparatus that meet the criteria at (a)1 and 2 above, comprise at least 20 percent of the facility's overall potential to emit that pollutant. All emissions shall be calculated based on potential to emit:

i. Fine particulate matter;

ii. Nitrogen oxide; and

iii. Volatile organic compounds.

(b) The applicant shall list each equipment and source operation that meets the criteria at (a) above, according to the potential to emit of each equipment and source operation, in descending order, for each applicable pollutant.

(c) The applicant shall submit as part of its EJIS pursuant to N.J.A.C. 7:1C-3, a technical feasibility analysis that addresses each equipment and source operation required to be listed at (b) above, beginning at the top of the list provided at (c)1 and 2 below. The technical feasibility analysis shall include the following, and utilize the "top-down" approach, as provided below:

1. A list of air pollution control technologies or pollution prevention options that may be applied to each equipment or control apparatus to reduce the pollutants identified at (a)3 above, which shall:

i. Include control applied to similar types of sources, innovative control technologies, modification of the process or process equipment, other pollution prevention measures, and combination of these measures; and

ii. List each measure in descending order of air pollution control effectiveness.

2. A proposal to reduce emissions of each pollutant that meets (a)3 above by applying the first listed or "top" measure in its list for each equipment and control apparatus, unless the applicant demonstrates that:

i. The top measure is technically infeasible, based on physical, chemical, or engineering principles, and/or technical difficulties that would prevent the successful application of the measure;

ii. The top measure would be unreasonable when comparing its air contaminant emission reduction benefits with its adverse environmental effects, such as effects on water or land, or HAP emissions;

iii. The total and incremental costs of the top measure are greater than the total and incremental costs of the proposed measure(s), which costs shall be calculated using the techniques in the latest edition of the USEPA's Air Pollution Control Cost Manual and that the extra costs, compared with the air contaminant emission reduction benefits resulting from the top measure, would make use of the top measure unreasonable; or

iv. The top measure uses fuels that are not reliably available, or that the energy consumed by the top measure is greater than the proposed measure(s), and the extra energy used, when compared with the air contaminant emission reduction benefits resulting from the top measure, would make use of the top measure unreasonable.

3. If the top measure is eliminated from consideration, the applicant shall evaluate each successive measure on the list, using the procedure described at (c)2 above, until the applicant reaches its proposed measure.

7:1C-8.6 Control measures

(a) An applicant seeking renewal of an existing facility's major source permit shall propose control measures in accordance with N.J.A.C. 7:1C-8.3, 8.4, and 8.5.

(b) For any aspects of the existing major source facility's operations not addressed at (a) above, the applicant shall propose control measures in the following order:

1. All feasible measures to avoid facility contributions to environmental and public health stressors; and

2. For any contribution that cannot feasibly be avoided, all feasible onsite measures to minimize facility contributions to environmental and public health stressors.

SUBCHAPTER 9. DEPARTMENT REVIEW AND DECISION

7:1C-9.1 Department review

(a) Following the completion of the public participation process at N.J.A.C. 7:1C-4, the Department shall consider the EJIS and any supplemental information, testimony, written comments, the applicant's response to comments, and any other information deemed relevant by the Department to evaluate its decision pursuant to this chapter.

(b) In issuing its decision pursuant to N.J.A.C. 7:1C-9.2, the Department shall:

1. Determine whether the facility will avoid a disproportionate impact to an overburdened community;

2. Evaluate and determine the feasibility of conditions on the construction or operation of the facility in accordance with the requirements at N.J.A.C. 7:1C-5, 6, and 8 and such evaluation shall not be limited to those conditions proposed by the applicant; and

3. Impose conditions selected by the Department after being evaluated pursuant to (b)2 above, on the construction of operation of the facility.

(c) If it is necessary for the Department to engage one or more experts to evaluate any information submitted by the applicant, the Department shall notify the applicant, include an estimate of the cost to the Department to engage the expert(s), and direct the applicant to submit payment in full within 90 days of the Department's notice in order to obtain further review of its application. An application for which the Department finds it necessary to engage an expert for alternatives analysis review shall not be considered complete before the Department has received and reviewed the recommendations of the expert.

7:1C-9.2 Department decision

(a) If the Department determines that the facility will avoid a disproportionate impact, the Department shall authorize the applicant to proceed with the imposition of conditions set by the Department, as necessary to ensure a disproportionate impact is avoided.

(b) If the Department determines that the facility cannot avoid a disproportionate impact, it shall:

- 1. For new facilities:
 - i. Deny the application; or

ii. Find that the facility will serve a compelling public interest pursuant to N.J.A.C. 7:1C-5.3 in the overburdened community and authorize the applicant to proceed with the imposition of conditions set by the Department as necessary to avoid or minimize contributions to adverse environmental and public health stressors, reduce adverse environmental and public health stressors, and/or provide a net environmental benefit in the overburdened community;

2. For expanding facilities: authorize the applicant to proceed with the Department permitting the imposition of appropriate conditions set by the Department as necessary to avoid or

minimize contributions to adverse environmental and public health stressors, reduce adverse environmental and public health stressors, or provide a net environmental benefit in the overburdened community;

3. For major source renewals: authorize the applicant to proceed with the Department permitting the imposition of appropriate conditions set by the Department as necessary to avoid or minimize contributions to adverse environmental and public health stressors in the overburdened community; and

4. The Department shall not issue a decision that would compromise the reasonable requirements of public health, safety, and welfare to the environment in the overburdened community.

7:1C-9.3 Form and timing of decision

(a) The Department shall issue its decision, in writing, with a summary of facts, the Department's analysis, and identification of any conditions set by the Department that will be incorporated into any subsequently issued Departmental permits for the facility. The Department's decision shall constitute a final agency decision and shall be incorporated into any related permitting decisions.
(b) The Department may determine that its decision pursuant to this subchapter satisfies the requirements of this chapter for subsequent Department permits for the facility required to be listed pursuant to N.J.A.C. 7:1C-3.2(a)4 and identified in the Department-authorized EJIS, provided the permit applications are submitted to the Department within five years of the date of the decision and there is no material change to the facility. Any such permits shall be listed in the decision.

(c) In accordance with N.J.S.A. 13:1D-160.b, and notwithstanding the provisions at N.J.S.A. 13:1D-29 et seq., or any other law, rule, or regulation adopted pursuant thereto, to the contrary, the Department shall not issue a decision pursuant to this chapter until at least 45 days after the public hearing held pursuant to N.J.A.C. 7:1C-4.

(d) The Department shall not consider complete for review, any permit application for a facility subject to the requirements of this chapter prior to the issuance of a decision.

7:1C-9.4 Violation of permit conditions

(a) Any violation of the conditions imposed pursuant to this chapter shall, as applicable, be considered non-minor violations or aggravating circumstances, or the equivalent, under any other Department rules applicable to the facility.

(b) Any violation of the conditions imposed pursuant to this chapter shall constitute grounds for suspension or revocation, in accordance with N.J.S.A. 13:1B-3, N.J.A.C. 13:1D, or the underlying permitting authorities of any Department-issued permits.

7:1C-9.5 Procedure to request an adjudicatory hearing; decision on the request; effect of request(a) This section sets forth the process by which a person may request an adjudicatory hearing to contest a Department decision pursuant to this chapter.

(b) To contest a Department decision pursuant to this chapter, a person shall submit an adjudicatory hearing request within 30 calendar days of issuance. If a person submits the adjudicatory hearing request after this time, the Department shall deny the request.

(c) A person requesting an adjudicatory hearing shall provide the following information on an adjudicatory hearing request form, available from the Department:

1. The name, address, daytime telephone number, fax number, and email address of the person requesting the hearing, and of the person's authorized representative;

2. A copy of the Department decision on which a hearing is being requested;

3. The date that the Department decision on which a hearing is being requested was received by the person requesting the hearing;

4. A specific admission, denial, or explanation of each fact appearing in the Department decision, or a statement that the person is without knowledge thereof;

5. A concise statement of the facts or principles of law asserted to constitute any factual or legal defense; and

6. Where the person submitting the hearing request is not the person to whom the decision that is being contested was issued, evidence that a copy of the hearing request has been mailed or delivered to the person to whom the decision was issued.

(d) A person requesting an adjudicatory hearing shall:

1. Submit the original hearing request to:

New Jersey Department of Environmental Protection

Office of Administrative Hearings and Dispute Resolution

Attention: Adjudicatory Hearing Requests

Mail Code 401-07A

PO Box 402

401 East State Street, 7th Floor

Trenton, NJ 08625-0402; and

2. Submit a copy of the hearing request to the Director of the Office of Permit and Project Navigation.

(e) Nothing in this subchapter shall be construed to provide a right to an adjudicatory hearing in contravention of the Administrative Procedure Act, at N.J.S.A. 52:14B-3.1, 3.2, and 3.3.

(f) The Department shall notify the requester that the request for hearing is granted or denied. If the hearing request is denied, the denial shall provide the reason(s) for the denial. If the hearing request is granted, the Department shall refer the matter to the Office of Administrative Law for a contested case hearing, in accordance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1.

(g) A final decision issued by the Commissioner after the hearing in the Office of Administrative Law shall be considered a final agency action for purposes of the Administrative Procedure Act and shall be subject to judicial review in the Appellate Division of the Superior Court, as provided in the Rules of Court.

(h) When an applicant requests an adjudicatory hearing to contest a Department decision pursuant to this chapter, the decision and any associated permits shall be automatically stayed in its entirety and all permitted activities shall stop as of the date the hearing request is submitted, and shall not be started again until the matter is resolved.

SUBCHAPTER 10. FEES

7:1C-10.1 Applicability

(a) An applicant who submits an application for an individual permit for a new or expanded facility, or the renewal of an existing major source permit, located, or proposed to be located, in whole or in part, in an overburdened community shall remit a fee to the Department in accordance with this subchapter.

7:1C-10.2 Payment of fees

(a) Fees for activities related to environmental justice review shall be paid in U.S. dollars by certified check, government purchase order or check, or money order, payable to "Treasurer, State of New Jersey," and mailed or hand-delivered to the following address, unless the Department authorizes some other means of payment:

New Jersey Department of Environmental Protection

Office of Permitting and Project Navigation

PO Box 420

401 East State Street

Trenton, NJ 08625-0420

(b) The Department may refrain from commencing work on activities related to environmental justice review until the Department receives full payment of such fee. If the Department has commenced work on the service, the Department may suspend such work until it receives full payment of such fee.

(c) The Department shall not issue a decision pursuant to N.J.A.C. 7:1C-9, unless the fee required pursuant to this subchapter is paid in full.

(d) Any fee pursuant to this subchapter that is subject to N.J.A.C. 7:1L shall be payable in installments, in accordance with N.J.A.C. 7:1L.

7:1C-10.3 Fee calculation

(a) By December 1 of the first full year after (the effective date of this rulemaking), the Department shall calculate base EJIS submission fees for the upcoming fiscal year (July 1 through June 30), as follows:

1. The Department shall determine its EJIS review budget by determining the dollar amount needed to accomplish all tasks associated with administering the EJIS Review, including costs to provide technical assistance to permit applicants and overburdened communities as needed to comply with this chapter. The Department shall not include in its EJIS Review budget any costs associated with any other program areas within the Department's Environmental Justice Program that is funded by a source outside of the EJIS Review budget. The result shall be the total amount of revenue that is to be collected through EJIS submission fees.

2. The Department shall calculate the EJIS submission fee by dividing the EJIS review revenue calculated pursuant to (a) above by the number of EJIS submissions received by the Department in the prior calendar year.

(b) For each fiscal year after (the effective date of this chapter), the Department shall prepare an EJIS Program Fee Calculation Report based on the prior calendar year data, including the information contained in the annual budget submission to the Department of the Treasury, and the numbers of EJIS applications, and the EJIS submission fee that shall be due and payable for that calendar year. Beginning March 2024, and each March thereafter, the Department shall

publish in the New Jersey Register, a notice that includes a summary of the report and its EJIS Review budget. The Department shall also post this report on its website.

(c) Through (the first year after the effective date of this chapter), the initial fee shall be \$3,900

per EJIS reviewed.

APPENDIX

Concentrated Areas of Air Pollution			
Stressor	Designation	Measure	Source
Ground-Level Ozone	Affected	3-year average days	Most recent USEPA ¹
		above standard	Ambient Air Quality
			Daily Summary data
Fine Particulate Matter	Affected	3-year average days	Most recent USEPA
$(PM_{2.5}^2)$		above standard	Ambient Air Quality
			Daily Summary data
Air Toxics Cancer Risk	Affected	Estimated cancer	Most recent
Including Diesel		risk per million	AirToxScreen NJ state
Particulate Matter			summary file
Air Toxics Cancer Risk	Affected	Estimated cancer	Most recent
Excluding Diesel		risk per million	AirToxScreen NJ state
Particulate Matter			summary file
Air Toxics Non-Cancer	Affected	Combined Hazard	Most recent
Risk		Quotient	AirToxScreen NJ state
			summary file

¹United Stated Environmental Protection Agency

²Particulate matter composed of particles smaller than 2.5 microns

Mobile Sources of Air Pollution			
Stressor	Designation	Measure	Source
Traffic – Cars, Light- and Medium-Duty	Affected	AADT ³ -mile per square mile	Most recent FHWA ⁴ HPMS ⁵ data
Trucks			
Traffic – Heavy-Duty	Affected	AADT-mile per	Most recent FHWA
Trucks		square mile	HPMS data
Railways	Affected	Rail miles per	Most recent NJDOT ⁶
		square mile	Railroads Network data

³Annual Average Daily Traffic

⁴U.S. Department of Transportation, Federal Highway Administration

⁵Highway Performance Monitoring System

⁶New Jersey Department of Transportation

Contaminated Sites			
Stressor	Designation	Measure	Source
Known Contaminated Sites	Affected	Weighted sites per square mile	Most recent NJDEP Known Contaminated Site List data
Soil Contamination Deed Restrictions	Affected	Percent area	Most recent NJDEP Deed Notice Extent in New Jersey data
Ground Water Classification Exception Areas/Currently Known Extent Restrictions	Affected	Percent area	Most recent NJDEP CEA ⁷ and CKE ⁸ data

⁷Classification Exception Areas-Well Restriction Areas for New Jersey ⁸Currently Known Extent of Groundwater Contamination for New Jersey

Transfer Stations or Other Solid Waste Facilities, Recycling Facilities, and Scrap Metal Facilities					
Stressor	Stressor Designation Measure Source				
Solid Waste Facilities	Affected	Sites per square mile	Most recent NJDEP Solid & Hazardous Waste Facilities in New Jersey data		
Scrap Metal Facilities	Affected	Sites per square mile	Most recent NJDEP Scrap Metal Facilities data		

Point-Sources of Water Pollution				
Stressor	Desi gnat ion	Measure	Source	
Surface Water	Affected	Percent uses impaired	Most recent NJDEP Integrated List of Waters for New Jersey	
Combined Sewer Overflows	Affected	Count	Most recent NJDEP Combined Sewer Overflow (CSO) for NJ	

May Cause Potential Public Health Impacts			
Stressor	Designation	Measure	Source
Drinking Water	Baseline	Count of	Most recent NJDEP
		community	Private Well Testing Act
		drinking water	Summary Results
		violations or	
		exceedances, or	
		percent of PWTA ⁸	
		exceedances	
Potential Lead	Baseline	Percent houses	Most recent U.S. Census
Exposure		older than 1950	five-year ACS ⁹ data
Lack of Recreational	Affected	Population per	Most recent NJDEP State,
Open Space		acre of open	Local and Nonprofit
		space within 0.25	Open Space of New
		mile	Jersey data
Lack of Tree Canopy	Affected	Percent lack of	Most recent USFS ¹⁰
		tree canopy	Analytical Tree Canopy
			Cover data
Impervious Surface	Affected	Percent	Most recent NJDEP
		impervious	County Impervious
		surface	Surface of New Jersey
			data
Flooding (Land Use	Affected	Percent urban	Most recent NJDEP
Cover)		land use area flooded	Urban Flooding data

⁹Private Well Testing Act

¹⁰United States Forest Service

Density/Proximity Stressors			
Stressor	Designation	Measure	Source
Emergency Planning	Affected	Sites per square mile	Most recent NJDEP
Sites			Facility Density Data
Permitted Air Sites	Affected	Sites per square mile	Most recent NJDEP
			Facility Density Data
NJPDES ¹¹ Sites	Affected	Sites per square mile	Most recent NJDEP
			Facility Density Data

¹¹New Jersey Pollutant Discharge Elimination System

Social Determinants of Health			
Stressor	Designation	Measure	Source
Unemployment	Baseline	Percent unemployed	Most recent U.S. Census Bureau five- year ACS ¹² data
Education	Baseline	Percent without high school diploma	Most recent U.S. Census Bureau five- year ACS data

¹²American Community Survey