Environmental Resource Inventory

Borough of Sayreville
Middlesex County, New Jersey
2026

Adopted by the Environmental Commission on September 1, 2026

Prepared by
Acuity Consulting Services, LLC

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CONSULTING SERVICES

Peter Van den Kooy, AICP, PP
License No. 5918

Dan Levin, AICP, PP
License No. 6472

Acknowledgements

Sayreville Environmental Commission
Ernie Read – Chairman
Anton New – Vice Chairman
Nicole Waranowicz – Secretary
Christina Sitaca – Planning Board Liaison
Shirley Read
Nicolette McElroy
Minesh Shah
Cassandra Dougherty – Alternate
Thomas Cleary – Alternate

Bharti Shah – 2025 Commission Member

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Bharat Trivedi
Valentine Tarr
Nainesh Desai
Rajesh Kadakia
Donna Roberts
Nicole Waranowicz – Secretary

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Barry Muller – Vice Chairman
Dan Volosin
James Williams
Noren Shah
Judy Lahrman
Beth Magnani – Board Secretary

Project Team
Acuity Consulting Services, LLC
Peter Van den Kooy, AICP, PP – Vice President
Daniel Levin, AICP, PP – Director of Technical Services
Kevin Hunter – Project Manager & Technical Specialist Planner

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Introduction & Background

An Environmental Resource Inventory (ERI) is intended to be a factual, objective document that identifies, describes, and maps the natural resources within a municipality. The purpose of an ERI is to document the existence, extent, and characteristics of natural and environmental resources so that they may be appropriately considered during municipal planning, development review, and decision-making processes. While limited interpretation is necessary to evaluate certain characteristics, an ERI does not provide conclusions that reflect policy positions, value judgments, or advocacy.

Two statutes provide Environmental Commissions with the authority to complete an ERI. The first, Environmental Commission Enabling Legislation (N.J.S.A. 40:56A-2) states that "an environmental commission... shall have power to conduct research into the use and possible use of the open land areas of the municipality.... It shall keep an index of all open areas, publicly or privately owned, including open marshlands, swamps and other wetlands, in order to obtain information on the proper use of such areas..."[1] In addition, the Municipal Land Use Law (N.J.S.A. 40:55D-27b) states that: "Whenever the environmental commission has prepared and submitted to the planning board and the board of adjustment an index of the natural resources of the municipality, the planning board or the board of adjustment shall make available to the environmental commission an informational copy of every application for development submitted to either board."[2]

This ERI has been prepared for the Borough of Sayreville to provide comprehensive documentation of environmental conditions within the municipal boundaries. The ERI serves as a snapshot of the Borough's natural resources and environmental constraints, using the best available data at the time of preparation. Its purpose is to inform municipal planning, development, and land-use decision-making by providing a consistent and accessible reference.

Sayreville's environmental setting is shaped by its location along the Raritan Bay and its relationship to the Raritan River, South River, Cheesequake Creek, and their associated wetlands and floodplains. Changing land-use patterns, legacy industrial activity, and increasing awareness of flooding risk, groundwater protection, and climate-related impacts underscore the need for a comprehensive environmental inventory.

This ERI inventories a broad range of environmental resources, including geology, soils, groundwater, surface waters, floodplains, wetlands, wildlife, vegetation, open space, and known contaminated sites. Narrative descriptions are supported by Geographic

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[1] New Jersey Statutes Annotated. (2025). *N.J.S.A. 40:56A-2*. https://law.justia.com/codes/new-jersey/title-40/section-40-56a-2/
[2] New Jersey Statutes Annotated. (2025). *N.J.S.A. 40:55D-27(b)*. https://law.justia.com/codes/new-jersey/title-40/section-40-55d-2

Information Systems (GIS) mapping based on publicly available datasets and planning-level analysis. The maps and text are not a substitute for site-specific surveys or regulatory determinations but are intended as a screening and planning tool, highlighting areas where valuable or sensitive environmental resources are likely present and where further investigation may be warranted.

Location

The Borough of Sayreville is situated within the western section of Middlesex County along the boundary with Raritan Bay in the central region of the State. The borough is approximately 25 miles southwest of Midtown Manhattan "as the crow flies", and approximately 30 miles northeast of the New Jersey State House in Trenton.

Sayreville encompasses approximately 18.66 square miles, consisting of 15.83 square miles of land and 2.38 square miles of water.[3] The Borough is bounded by the Raritan Bay and the City of South Amboy to the east, the Borough of South River and the Township of East Brunswick to the west, the Township of Old Bridge to the south, and the Townships of Edison, Woodbridge, and the City of Perth Amboy to the north.

Major north–south transportation corridors connecting Sayreville include the Garden State Parkway, US Route 9, NJ Route 35, and NJ Transit's North Jersey Coast Line. Major east-west routes include Main Street (County Route 670), Washington Road (County Route 535), Bordentown Avenue (County Route 615), and Conrail's Amboy Secondary and Sayreville Running Track.

Sayreville's northern boundary follows the Raritan River, its western boundary follows the South River, and portions of its eastern and southern boundaries coincide with Raritan Bay and Cheesequake Creek, respectively.

Topography & Slopes

Topography is the shape and physical features of the land surface. It may be natural, reflecting underlying geology and long-term erosion and deposition processes, or the result of human activity such as grading or filling. Topography influences surface drainage patterns, soil development, vegetation communities, wildlife habitat, and the visual character of the landscape. It also affects the location and design of development by guiding where buildings, roads, and infrastructure can be constructed most efficiently and safely. Understanding these topographic patterns supports informed land use planning and

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[3] U.S. Census Bureau. (2024). *Annual geographic information table (Table GEOINFO).* https://data.census.gov/table/GEOINFO2024.GEOINFO?q=GEOINFO

helps align development with existing natural features. Slope is a particularly important topographic factor affecting development suitability and environmental sensitivity. Steep slopes can present construction challenges, higher stabilization costs, and increased risks of erosion, sedimentation, and rapid stormwater runoff.

Methodology

The topography of Sayreville was analyzed using Middlesex County 2-foot contour data derived from the New Jersey digital elevation model (DEM).[4] (See Figure 1.) A standard threshold of 15 percent slope was used to distinguish steep from non-steep areas. Steep slopes were delineated using the statewide 2021 New Jersey Digital Elevation Model (DEM), which provides 10-foot contour intervals. (See Figure 2.)[5]

Sayreville

Topography

Sayreville has two ridgelines, the first along the divide between the South River and Lower Raritan River watersheds and the other along the divide between the Lower Raritan River and Cheesequake Creek watersheds.

The low point of the Borough of Sayreville is at an approximate elevation of 0 feet North American Vertical Datum of 1988 (NAVD 88), and is located along the South River, Raritan River, Raritan Bay, and Cheesequake Creek. The elevation generally rises from these water courses and their associated streams toward the Borough's high points.

The high point of the Borough is at an approximate elevation of 178 feet NAVD 88 near the intersection of US Route 9 and Ernston Rd, adjacent to the municipality's southern border. This is part of the ridge between the Lower Raritan River and Cheesequake Creek watersheds.

Other high points include:

- The divide between the South River and Lower Raritan River watershed at an approximate elevation of 165 feet NAVD 88. It is located near the DuPont Parlin facility and to the south of Sayreville Middle School.
- At the base of the FirstEnergy (JCPL) electrical transmission line tower adjacent to the water tower east of Raritan Street at an approximate elevation of 150 feet NAVD 88.

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[4] Middlesex County, New Jersey. (2017). *Middlesex County, NJ 2-foot contours* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/middlesexcounty::middlesex-county-nj-2foot-contours

[5] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated August 2023). *New Jersey 10ft Digital Elevation Model* [Date set]. https://www.arcgis.com/home/item.html?id=c29ab646471d440f83843b704e811207

- A continuation of the division between the South River and Lower Raritan River watershed adjacent to the Sayreville water tower and Saint Stanislaus Cemetery, and in the area bounded by Tannehill Lane, University Place, and Deerfield Road at an approximate elevation of 140 feet and 143 feet NAVD 88, respectively.

Sayreville's topography is generally low-lying and gently sloping, with broad flat areas along the rivers, coast, and tidal wetlands. It rises gradually toward higher ground at the divides between watersheds, where older, more resistant sediments form uplands that have eroded more slowly than the surrounding lowlands. Overall, Sayreville's topography shows a clear pattern of flat coastal lowlands transitioning into gently elevated terrain shaped mainly by deposition, erosion, and long-term water activity.

Steep Slopes

In general, Sayreville is relatively level, with a gentle topographic slope that rises away from watercourses. Most slopes within the Borough are less than 15 percent (defined as a rise of 15 vertical feet over 100 horizontal feet).

Most slopes of 15 percent or greater are the result of man-made conditions, including:

- Areas adjacent to the Garden State Parkway,
- Along Conrail's South Amboy Secondary Corridor and the Sayreville Running Track, and
- Locations where grading was undertaken to create level sites for development.

These areas do not typically pose significant constraints, as they are fully developed and have been stabilized.

Significant naturally occurring steep slopes of 15 percent or greater are uncommon and are generally limited to:

- Along Crossway Creek and in areas near Raritan Bay south of South Amboy
- Areas near Parlin, including sections along Washington Road and between the High School and Middle School
- The vicinity of Towne Lake and Majors Pond

Geology

Geology is a fundamental environmental factor that influences water resources, soil conditions, and land suitability. The type, structure, and permeability of underlying geologic materials determine how groundwater is stored, transmitted, and recharged. Permeable sands and gravels facilitate infiltration and aquifer recharge, reducing surface runoff and supporting water supplies, but they can also allow contaminants to migrate rapidly if not

properly protected. Less permeable or clay-rich materials restrict infiltration, which can limit groundwater recharge, affect stormwater management, and constrain subsurface wastewater disposal.

Geologic conditions also affect land stability and development potential. Materials vary in their ability to support structures, respond to saturation, and accommodate natural processes such as settlement and freeze-thaw cycles. Certain geologic formations may pose additional constraints due to erosion, dissolution, or subsurface instability.

Methodology

The geologic information about Sayreville was obtained from NJDEP's New Jersey Geological & Water Survey using data from the digital geodata series, including the Bedrock Geology of New Jersey and the Surficial Geology of New Jersey.[6,7] Also utilized were the static Bedrock Geologic Map of New Jersey (2014) and Surficial Geologic Map of New Jersey (2016).[8,9] In addition, the publication by the New Jersey Geological Survey entitled *Geology of Middlesex County in Brief* (1980) was also consulted.[10] A map of Sayreville's Bedrock and surficial geology is included as Figure 3.

Sayreville

Sayreville is located within New Jersey's Coastal Plain Physiographic Province. The province occupies approximately the southern 3/5ths of the state, its border with the Piedmont province roughly bisecting Mercer and Middlesex counties. The Coastal Plain Physiographic Province was shaped by repeated marine, river, and coastal processes over tens of millions of years. Unlike areas underlain by hard crystalline rock, Sayreville's geology consists almost entirely of unconsolidated sediments, such as sand, silt, clay, and gravel. This strongly influences groundwater behavior, soil properties, land stability, flooding risk, and ecological development.

The Borough is roughly split diagonally into two different bedrock classifications. In the northern area, the Raritan Formation (USDA symbol Kr) is found. It is made up mostly of sand, with thin layers of clay and silt mixed in. Both rock layers serve as aquifers as part of the Potomac-Raritan-Magothy aquifer system. In the southern area, the Magothy Formation

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[6] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated February 2023). *Bedrock geology of New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::bedrock-geology-of-new-jersey/

[7] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated May 2007). *Surficial geology of New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::surficial-geology-of-new-jersey/

[8] Dalton, R. F., Monteverde, D. H., Sugarman, P. J., & Volker, R. A. (2014). *Bedrock geologic map of New Jersey*. New Jersey Geological and Water Survey, New Jersey Department of Environmental Protection. https://dep.nj.gov/wp-content/uploads/njgws/technical-pubs-info/maps/geologic/bedrock250.pdf

[9] New Jersey Geological and Water Survey. (2016). *Surficial geologic map of New Jersey*. New Jersey Department of Environmental Protection. https://dep.nj.gov/wp-content/uploads/njgws/enviroed-freedwn/freedwn/psnjsurf.pdf

[10] Dombroski, D. R., Jr. (1980) *Geology of Middlesex County in brief.* New Jersey Geological Survey. https://dep.nj.gov/wp-content/uploads/njgws/enviroed/county-series/middlesex_county.pdf

(Kmg) is present. In the Magothy Formation, the material is mostly white quartz sand that ranges from very fine to coarse grains, and in some places includes small gravel. Near the top of the formation, thin layers of dark gray clay or a clay-silt mixture are mixed between the sand layers.

Above the bedrock lie younger surficial deposits. One of the most prominent is the (Tp) Pensauken Formation, a Pliocene-aged deposit of sand, gravel, and clay that forms erosional remnants of an ancient river plain. In some places, it is as thick as 70 to 140 feet. Many Pensauken deposits have since been completely stripped by quarrying, exposing the underlying Raritan Formation. Other widespread surficial deposits include Weathered Coastal Plain Formations (Qwcp), which represent partially eroded bedrock mixed with sediment moved by water and gravity. At the base of slopes, Lower Colluvium (Qcl) forms thin aprons of sand and silt derived from upslope erosion. Typically, less than 10 feet thick, they are graded to lower stream terraces or the modern floodplain.

Sayreville's proximity to the Raritan River system is reflected in the abundance of stream-related deposits. Lower Stream Terrace Deposits (Qtl) and Upper Stream Terrace Deposits (Qtu) represent ancient floodplains that now sit 5 to 20 feet above modern floodplains. Closer to present waterways, Alluvium (Qal), made up of sand, gravel, silt, and organic-rich sediments, continues to accumulate within channels and floodplains. One of the most geologically and environmentally significant superficial deposits in Sayreville is the (Qmm) Holocene Salt-Marsh and Estuarine Deposits. These organic-rich silts, sands, clays, and peats formed as the sea level rose after the last Ice Age, flooding river valleys and creating tidal marshes and estuaries.

Sayreville's geology plays a significant role in groundwater conditions, soil stability, and flood risk. The Borough overlies the Potomac–Raritan–Magothy aquifer system, a major regional source of groundwater. Sandy units within the Magothy Formation and portions of the Raritan Formation allow groundwater to move and be stored efficiently. While this supports groundwater recharge, it also increases the potential for surface contaminants to migrate downward. Subsurface conditions across Sayreville reflect the presence of loose or weakly consolidated Coastal Plain sediments. In upland areas underlain by the Pensauken Formation, soil conditions can vary substantially over short distances. Historic sand and gravel mining has modified local subsurface conditions by removing stable materials and exposing weaker soils.

Flooding risk in Sayreville is associated with the distribution of alluvium (Qal), stream-terrace deposits (Qtl), and salt-marsh and estuarine deposits (Qmm) along the Raritan River, tidal creeks, and Raritan Bay. These low-lying deposits consist primarily of

fine-grained, organic-rich soils that drain slowly and are situated near sea level, making them especially vulnerable to flooding.

Soils

Soils strongly influence land stability, drainage, and ecological function. The physical and chemical soil characteristics, including mineral composition, particle size, organic content, and depth to groundwater, affect natural processes such as erosion, flooding, infiltration, and freeze–thaw cycles. These same characteristics also constrain or support human activities, including agriculture, infrastructure installation, and site development. Soils develop from marine, fluvial, wind-blown, or disturbed deposits, and their properties vary accordingly. Coarse-grained sandy soils are typically well drained and less susceptible to frost heaving, while finer-grained silts and clays tend to drain more slowly and are more prone to shrink–swell behavior. Organic-rich soils retain moisture and support valuable ecological functions, but often lack the load-bearing strength for development. The mixture and distribution of soil particles influence erodibility, runoff, and groundwater recharge. Recognizing these inherent soil and geologic characteristics helps identify environmental constraints and opportunities, supporting informed land-use decisions.

Methodology

The soils of Sayreville are detailed in the Soil Survey Geographic Database (SSURGO), which contains information about soil as collected by the National Cooperative Soil Survey as prepared by the US Department of Agriculture's (USDA) Natural Resources Conservation Service. The soil descriptions are derived from the USDA's Official Soil Series Descriptions database.[11] The mapping of Sayreville soils was obtained from the SSURGO Web Soil Survey database.[12] A map of Sayreville's soils is included in Figure 4.

Sayreville

The soils found throughout the Borough developed from a mix of water-deposited coastal plain materials such as sand, loam, and organic matter, as well as areas that have been heavily disturbed by construction, filling, and mining. As a result, soil conditions vary and include sandy soils that drain quickly, wetter soils in low-lying and tidal areas, and highly disturbed soils in developed or excavated locations. These differences affect how water moves through the ground, how stable the land is, and how suitable various areas are for agriculture, development, or open space uses. The following descriptions of Sayreville's soil

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[11] U.S. Department of Agriculture, Natural Resources Conservation Service. (n.d.). *Official soil series descriptions (OSDs)*. https://www.nrcs.usda.gov/resources/data-and-reports/official-soil-series-descriptions-osds

[12] U.S. Department of Agriculture, Natural Resources Conservation Service. (n.d.). *Web soil survey* [Database]. https://websoilsurvey.sc.egov.usda.gov/app/

types include approximate percentages of the Borough's land area that they cover. These figures are provided for general comparison only and should not be used for detailed site-specific analysis or regulatory decisions.

Table 1: Soil Types

Symbol	Map Unit Name	Hydric	Farmland	Acres	% of Total
AtsA	Atsion sand, 0 to 2 percent slopes, Northern Coastal Plain	Yes	unique importance	338.2	3.3%
DocB	Downer loamy sand, 0 to 5 percent slopes, Northern Coastal Plain	No	statewide importance	454.8	4.4%
DocC	Downer loamy sand, 5 to 10 percent slopes, Northern Coastal Plain	No	statewide importance	34.9	0.3%
DoeB	Downer sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	No	prime farmland	5.6	0.1%
DouC	Downer-Urban land complex, 5 to 10 percent slopes	No		2,315.3	22.7%
EkaAr	Elkton loam, 0 to 2 percent slopes, rarely flooded	Yes	statewide importance, if drained	5.8	0.1%
EveB	Evesboro sand, 0 to 5 percent slopes	No		171.7	1.7%
EveC	Evesboro sand, 5 to 10 percent slopes	No		14.4	0.1%
EveD	Evesboro sand, 10 to 15 percent slopes	No		249.7	2.4%
GamB	Galloway loamy sand, 0 to 5 percent slopes	No	statewide importance	320.2	3.1%
GamkB	Galloway loamy sand, clayey substratum, 0 to 5 percent slopes	No	statewide importance	63.5	0.6%
GaokB	Galloway, clayey substratum-Urban land complex, 0 to 5 percent slopes	No		234.3	2.3%
HbmaB	Hammonton loamy sand, 0 to 5 percent slopes, Northern Coastal Plain	No	statewide importance	7.7	0.1%
HbmkB	Hammonton loamy sand, clayey substratum, 0 to 5 percent slopes	No	statewide importance	65.5	0.6%
HumAt	Humaquepts, 0 to 3 percent slopes, frequently flooded	Yes		51	0.5%
KemB	Keyport sandy loam, 2 to 5 percent slopes	No	prime farmland	129.8	1.3%
KeuC	Keyport-Urban land complex, 0 to 10 percent slopes	No		331.3	3.2%
LakB	Lakehurst sand, 0 to 5 percent slopes	No		14.4	0.1%
LasC	Lakewood sand, 5 to 10 percent slopes	No		78.1	0.8%
MbrB	Matapeake silt loam, 2 to 5 percent slopes	No	prime farmland	28	0.3%
PdwAv	Pawcatuck-Transquaking complex, 0 to 2 percent slopes, very frequently flooded	Yes	unique importance	1,117.9	10.9%
PHG	Pits, sand, and gravel	No		1,001.6	9.8%
PHM	Pits, clay	No		595.7	5.8%
PssA	Psamments, 0 to 3 percent slopes	No		825.1	8.1%
PstA	Psamments, sulfidic substratum, 0 to 3 percent slopes	No		711.5	7.0%
PsuB	Psamments, waste substratum, 0 to 8 percent slopes	No		17.2	0.2%
SadB	Sassafras gravelly sandy loam, 2 to 5 percent slopes	No	prime farmland	63.9	0.6%
SadC	Sassafras gravelly sandy loam, 5 to 10 percent slopes	No	statewide importance	5.3	0.1%
SadD	Sassafras gravelly sandy loam, 10 to 15 percent slopes	No		6	0.1%
SapB	Sassafras-Urban land complex, 0 to 5 percent slopes	No		13.5	0.1%
UdcB	Udorthents, clayey substratum, 0 to 8 percent slopes	No		134.2	1.3%
UR	Urban land	No		815.8	8.0%

Downer

Downer soils make up 27.5% of the land area in the Borough of Sayreville. The Downer-Urban Land Complex (DouC) is the most common soil type in the Borough, covering approximately 23% percent of the land area (2,315 acres), and occurs primarily on gently sloping land with slopes ranging from 5 to 10 percent. It consists of approximately 60 percent Downer soils and 30 percent urban land, with the remainder made up of minor soil components. Other present Downer soils include Downer-Loamy Sand (DocB and DocC) covering approximately 5% of the land area (490 acres), and a small area of Downer-Sandy Loam (DoeB) covering less than 0.05% of the land area (less than 6 acres).

Downer soils formed in loamy Coastal Plain deposits and are very deep, well-drained, and highly permeable. They are generally strongly acidic, have low shrink–swell potential, and produce low to moderate runoff depending on slope. Dominant native vegetation in Downer soils can include white oak, red oak, scarlet oak, black oak, Virginia pine, pitch pine, hickory, sassafras, dogwood, greenbriar, and American Holly. The understory is dominantly low-bush blueberry and mountain laurel.

These soils are generally well-suited for development and can support agricultural uses such as field crops, vegetables, flowers, and some tree fruit with appropriate soil amendments. Downer loamy sands are classified as farmland of statewide importance, while sandy loam phases are considered prime farmland. However, the Downer–Urban Land Complex itself is not considered prime farmland due to slope and urban disturbance.

Pits

Pit soils cover approximately 16% percent of the land area, making it the second most common soil type in Sayreville. Sand and Gravel Pits (PHG) make up approximately 10% of the land area (1002 Acres). Clay Pits (PHM) make up approximately 6% of the land area (596 acres). The soils consist of pits formed by human excavation. In sand and gravel pits, sandy parent materials are disturbed by mining activity. These soils are highly disturbed and lack natural soil profiles. Sand and gravel pits are excessively drained and droughty, while clay pits are somewhat poorly drained with very high runoff potential and shallow groundwater. All pit soils are classified as non-prime farmland and generally present severe limitations through unstable substrates, altered drainage, and site-specific engineering concerns. Importantly, some of these soils have been developed in recent years. Such development may not be reflected in the most recent SSURGO data.

Psamments

Psamments occur widely throughout the Borough and collectively account for approximately 15% of the land area, primarily on nearly level to gently sloping terrain. The dominant unit is Psamments, 0 to 3 percent slopes (PssA), which covers approximately 8

percent of the Borough (825 acres). Additional Psamments include Psamments, sulfidic substratum, 0 to 3 percent slopes (PstA) covering approximately 7 percent (712 acres) and a small area of Psamments, waste substratum, 0 to 8 percent slopes (PsuB) covering approximately 0.2 percent of the land area (17 acres).

These soils occur on the coastal plain and formed in sandy deposits, commonly associated with filled depressions, former marshlands, and other human-altered settings. These soils are generally very deep, excessively sandy, and extremely permeable, with low water-holding capacity and very low runoff potential. Flooding and ponding do not occur in these soils; however, the depth of the seasonal high-water table ranges somewhat significantly. Shrink–swell potential is low, and erosion risk is generally slight due to gentle slopes, but it may increase where vegetation is removed.

Psamments are not prime farmland due to doughtiness and low fertility. Development potential varies and typically requires site-specific evaluation due to sandy textures, disturbed materials, and the presence of sensitive subsurface layers.

Pawcatuck-Transquaking

The Pawcatuck-Transquaking (PdwAv) is the fourth most common soil type in the Borough of Sayreville, covering approximately 11% percent of the land area (1118 acres). The soil occurs in low-lying coastal and estuarine areas and is associated with nearly level terrain, with slopes ranging from 0 to 2 percent. It is dominated by Pawcatuck soils, which comprise approximately 60 percent of the complex, and Transquaking soils, which account for about 25 percent. The remaining area consists of minor soil components.

These soils are very poorly drained, frequently flooded, and permanently saturated, with water tables at or near the surface. Runoff potential is negligible due to the flat topography and continuous saturation. These soils can become extremely acidic if drained. Salinity ranges from slightly to strongly saline, and the shrink–swell potential is low. Dominant vegetation typically includes salt marsh cordgrass, saltmeadow cordgrass, saltgrass, olney threesquare, sea lavender, seaside goldenrod, and other salt-tolerant marsh species.

Because of their high organic content, permanent saturation, frequent flooding, and chemical limitations, Pawcatuck and Transquaking soils are generally poorly suited for development, agriculture, or infrastructure. Their primary value is ecological, as tidal salt marshes provide important habitat for fish, shellfish, waterfowl, and other wildlife, as well as water quality improvement, carbon storage, and coastal storm protection.

Urban Land

Urban Land (UR) accounts for approximately 8 percent of the land area (816 acres) within Sayreville and represents areas that have been intensively developed for residential,

commercial, industrial, transportation, and institutional uses. Urban Land is dominated by impervious surfaces, including pavement, buildings, roadways, and other constructed features. Urban Land consists of approximately 95 percent urban land, with the remaining area composed of minor soil components.

Natural soil conditions are highly altered. Hydrologic behavior is largely controlled by infrastructure rather than soil properties, resulting in high runoff and limited infiltration. Urban Land is not prime farmland and has severe limitations for agriculture or conservation.

Galloway

Galloway soils occur across low-lying areas of Sayreville on the coastal plain and collectively account for approximately 6 percent of the land area. The dominant unit is Galloway loamy sand, 0 to 5 percent slopes (GamB), which covers approximately 3 percent of the Borough (320 acres). Additional Galloway soils include Galloway, clayey substratum–Urban land complex (GaokB) covering approximately 2 percent (234 acres), and Galloway loamy sand, clayey substratum (GamkB) accounting for approximately 0.6 percent of the land area (64 acres). These soils are somewhat poorly drained, very deep, and dominated by sandy textures, with shallow seasonal groundwater. They occur on nearly level flats, dunes, and low-lying landforms with slopes generally less than 5 percent. Natural vegetation in wooded areas is dominated by mixed oaks, sweetgum, and red maple. Galloway soils are strongly acidic, have low fertility, and have low runoff potential. Galloway loamy sand is classified as farmland of statewide importance and can support agriculture, such as with drainage and soil management. Crops include corn, soybeans, hay, and truck crops. Development is moderately constrained by shallow groundwater and low bearing strength during wet periods. Those mapped as Galloway–Urban land complex (GaokB) require site-specific geotechnical and environmental evaluations due to disturbance, impervious cover, and mixed soil conditions.

Keyport

Keyport soils collectively account for approximately 5 percent of the land area in Sayreville. The dominant unit is Keyport–Urban land complex, 0 to 10 percent slopes (KeuC), which covers approximately 3 percent of the Borough (331 acres). Keyport sandy loam, 2 to 5 percent slopes (KemB), comprises an additional 1 percent (130 acres) of the land area. These soils are moderately well drained and characterized by sandy loam surface over dense clay subsoils, resulting in slow permeability and high runoff potential. Where wooded, natural vegetation can include red, white, and black oaks, beech, hickory, red maple, sweetgum, and yellow poplar. Keyport sandy loam is classified as prime farmland and has supported agriculture where erosion and wetness are managed. This includes general crops, hay, and pasture.

Evesboro

Evesboro soils are widely distributed across upland areas of the Borough of Sayreville on the coastal plain and collectively account for approximately 14.3 percent of the land area. The dominant unit is Evesboro sand, 0 to 5 percent slopes (EveB), which covers approximately 11.68 percent of the Borough. Steeper Evesboro soils include Evesboro sand, 10 to 15 percent slopes (EveD), accounting for approximately 2.44 percent, and a small area of Evesboro sand, 5 to 10 percent slopes (EveC), comprising approximately 0.14 percent of the land area. These soils occur primarily on low hills, ridges between valleys, dunes, and gently sloping uplands. These soils are very deep, excessively drained, and dominated by sand throughout, resulting in very low water-holding capacity and drought-prone conditions. Most areas are in woodland, fruit and vegetable crops, or urban land. Native vegetation commonly consists of black oak, pitch pine, scrub oak, and blackjack oak. Evesboro soils are strongly acidic and not prime farmland due to low fertility and severe moisture limitations. While wetness constraints are minimal, excessive drainage, erosion on steeper slopes, and low bearing capacity call for careful site-specific evaluation.

Atsion

Atsion soils occur primarily in low-lying areas of the coastal plain within the Borough of Sayreville and account for approximately 3.31 percent of the land area. These soils are mapped as Atsion sand, 0 to 2 percent slopes (AtsA), and are associated with nearly level terrain, including flats, shallow depressions, drainageways, and flat wind-eroded areas.

Atsion soils are very deep, poorly drained soils with a seasonally high water table near the surface. Although sandy and permeable, Atsion soils are limited by frequent saturation and wetland regulatory constraints. They are classified as farmland of unique importance due to their suitability for crops such as blueberries and cranberries. Wooded areas are mostly pitch pine mixed with black gum and red maple. Undergrowth consists of highbush blueberries, sweet pepperbush, sheep laurel, and greenbriar. Development is generally constrained by shallow groundwater and environmental protections.

Udorthents

Udorthents occur in scattered upland areas of the Borough of Sayreville and account for approximately 1.31 percent of the land area. These soils are mapped as Udorthents, clayey substratum, 0 to 8 percent slopes (UdcB), and are associated with low hills and gently sloping upland terrain that has been extensively modified by human activity, including grading, filling, and excavation for transportation corridors and development. These soils are highly variable, somewhat poorly drained, and typically have shallow seasonal groundwater. Udorthents are classified as not prime farmland and present significant

limitations for development due to uncertain subsurface conditions, high runoff potential, and restricted drainage.

Other Soils

Several additional soil units occur within the Borough of Sayreville to limited extents. Collectively, these soils represent small, scattered inclusions that do not dominate the landscape but can impose localized agricultural, environmental, or development constraints. Sandy and excessively drained upland soils include Lakewood sand (LasC) and Lakehurst sand (LakB), which together account for approximately 0.90 percent of the land area. These soils are very deep, rapidly permeable, acidic, and drought-prone, with low natural fertility and limited water-holding capacity. Their presence may indicate wetland or floodplain conditions and can trigger regulatory constraints related to wetlands, flood hazard areas, and stormwater management.

Loamy and gravelly upland agricultural soils include Hammonton loamy sand (HbmaB), Hammonton loamy sand with clayey substratum (HbmkB), Matapeake silt loam (MbrB), and Sassafras gravelly sandy loam (SadB, SadC, and SadD). These soils together account for approximately 1.7 percent of the land area and range from gently sloping to moderately sloping uplands. They are generally moderately well to well drained and have moderate to high agricultural potential, though steeper Sassafras phases have increased erosion risk. Where present, urban land components (SapB) reduce agricultural suitability and introduce additional runoff and disturbance considerations. Poorly drained and hydric soils occur in very small areas and include Humaquepts (HumAt) and Elkton loam (EkaAr), collectively representing approximately 0.56 percent of the land area. These soils are associated with low-lying flood-prone positions and shallow groundwater and are subject to wetness limitations and environmental regulations.

Groundwater

Groundwater is a critical natural resource that directly influences a community's drinking water security, land-use planning, and public health. The depth to groundwater, its rate and direction of flow, and the physical characteristics of the aquifer all influence the feasibility and reliability of groundwater withdrawal. These factors determine how deep wells must be drilled, how much water can be sustainably pumped, and the long-term dependability of the supply. Overdrawing groundwater supplies can lead to long-term declines in water levels, reduced stream baseflow, land subsidence, and degradation of water quality. Because groundwater moves slowly and can take decades to replenish, maintaining adequate recharge and avoiding over-pumping are essential to sustaining both the quantity and resilience of local water supplies.

The quality of groundwater is closely tied to both natural conditions and human activities. Water quality can be compromised by naturally occurring conditions such as mineral dissolution that elevates iron, manganese, or hardness, as well as by human activities. For these reasons, groundwater protection programs, such as delineation of wellhead protection areas around public supply wells, identification of recharge areas, and tracking of known contamination and remediation zones, are important to safeguarding drinking water sources.

Methodology

The information regarding Sayreville's groundwater was acquired from several sources. For aquifer data, this includes NJDEP Bedrock Aquifers in New Jersey and Surficial Aquifers in New Jersey geodata. [13,14] The New Jersey Geological Survey Aquifers of New Jersey static map was also consulted.[15] Also examined were the EPA's Map of sole source aquifer locations and various USGS materials.[16] For groundwater protection and contamination, sources included NJDEP well head protection areas for public community water supply wells and classification exception area geodata.[17,18] A map of Sayreville's groundwater recharge areas and well head protection areas is included in Figure 5. Groundwater contamination areas are included in Figure 10 with contaminated sites.

Sayreville

The Borough overlies the Potomac–Raritan–Magothy bedrock aquifer system (prma), which is a major regional source of groundwater and one of several coastal plain aquifers in New Jersey. At one time, it was the most heavily pumped aquifer in New Jersey. From the late 19th century through the early 1990s, steadily rising withdrawals caused groundwater levels to drop.[19] Groundwater levels have continued to decline in some areas due to pumping, but recovered elsewhere as withdrawals were reduced through regulation. The Sayreville Water Department sources its water from the wells that are part of the Old Bridge

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[13] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2023). *Bedrock aquifers in New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::bedrock-aquifers-in-new-jersey

[14] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2023). *Surficial aquifers in New Jersey* [Data set]. NJGIN Open Data. https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::surficial-aquifers-in-new-jersey

[15] Herman G. C., Canaca, R. J., Stanford, S. D., Pristas, R. S., Sugarman, P. J., French, M. A., Hoffman, J. L., Serfes, M. S., & Mennel, W. J. (1998). *Aquifers of New Jersey*. New Jersey Geological Survey, New Jersey Department of Environmental Protection. https://dep.nj.gov/wp-content/uploads/njgws/maps/ofmap/ofm24.pdf

[16] U.S. Environmental Protection Agency. (2025). *Map of sole source aquifer locations*. https://www.epa.gov/dwssa/map-sole-source-aquifer-locations

[17] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated November 2025). *Wellhead protection areas for public community water supply wells in New Jersey* [Data set]. NJGIS Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::well-head-protection-areas-for-public-community-water-supply-wells-in-new-jersey/

[18] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated April 2026). *Classification exception areas-well restriction areas for New Jersey.* [Data set]. NJDEP Open Data. https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::classification-exception-areas-well-restriction-areas-for-new-jersey/

[19] New Jersey Water Science Center, U.S. Geological Survey. (2025). *Water levels in ten major confined aquifers in New Jersey.* https://www.usgs.gov/centers/new-jersey-water-science-center/science/water-levels-ten-major-confined-aquifers-new-jersey

Sands and Farrington Aquifers, constituent aquifers within the Potomac Raritan-Magothy aquifer system.[20]

The NJDEP's New Jersey Geological Survey ranks the Potomac–Raritan–Magothy aquifer system's ability to yield groundwater to high-capacity wells as "A", meaning it has a median yield of over 500 gallons per minute (gpm) ('A' is the highest median yield gpm ranking, see Table 2). The New Jersey Geological Survey describes the aquifer as:

- Interbedded sand, gravel, silt, and clay are separated into lower, middle, and upper aquifers, which include the Raritan confining unit composed of interbedded sand, silt, and clay;
- Primary intergranulated porosity and permeability;
- Water is fresh, moderately hard, with near-neutral pH;
- Salinity increases toward the coastline near Delaware and Raritan Bays;
- Elevated iron and manganese are common;
- Calcium and magnesium levels decrease, and sodium and potassium levels generally increase to the southeast; and
- Calcium-bicarbonate waters dominate.

The Potomac-Raritan-Magothy aquifer system is part of the US Environmental Protection Agency's New Jersey Coastal Plain Aquifer System Sole Source Aquifer designated under the Safe Drinking Water Act of 1974. This means the aquifer provides at least 50% of the drinking water in its service area, and that there is no reasonable alternative drinking water source should the aquifer be contaminated. Any federally funded project in an area that could affect groundwater in a sole-source aquifer must be reviewed by the US EPA.[21] According to the New Jersey Geological Survey, there are no surficial aquifers within the Borough of Sayreville.

Raritan and Magothy bedrock formations described earlier in this report form an aquifer system that is mostly interlayered beds of quartz sand, silt, and clay.[22] Coastal plain aquifers, like the Potomac-Raritan-Magothy system, are recharged by precipitation soaking into the ground, by water slowly moving downward through underground layers, and by

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[20] Sayreville Water Department. (2025). *2024 Consumer Confidence Report.* https://www.sayreville.com/documents/Water/Sayreville%20Water%20CCR%202024.pdf

[21] U.S. Environmental Protection Agency. (2025). *Overview of the drinking water sole source aquifer program.* https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program

[22] Gill, H. E., & Farlekas, G. M. (1976). *Geohydrologic maps of the Potomac–Raritan–Magothy aquifer system in the New Jersey Coastal Plain* (Hydrologic Atlas 557). U.S. Geological Survey. https://pubs.usgs.gov/publication/ha557

seeping in from rivers and other surface waters.[23] Aquifer recharge areas are those locations where precipitation can infiltrate and replenish an aquifer's groundwater supply.

NJDEP uses land-use/land-cover, soil, and climatic data to estimate the groundwater recharge in inches per year, with 16 to 23 inches per year being the highest at Rank A. The most common rank for Sayreville is 'B' at 11 to 15 inches a year, followed by Rank C with 8 to 10 inches a year. Rank A recharge areas in Sayreville are primarily located in two locations: In the north, along a corridor on either side of the Main Street Extension, and in the south, in and around the Julian Capik Nature Preserve, Sayreville Water and Sewer Utilities site, and the Sayreville Recreational Complex.

Table 2: Groundwater Recharge Rates

Rank	Description	Acres	% of Total
A	16 to 23 in/yr	597.66	5.6%
B	11 to 15 in/yr	3349.90	31.6%
C	8 to 10 in/yr	868.54	8.2%
D	1 to 7 in/yr	1003.21	9.5%
E	0 in/yr	1916.56	18.1%
L	hydric soil-no recharge calculated	125.89	1.2%
W	wetlands, open water-no recharge calculated	2734.83	25.8%
		10596.60 Acres	-

As part of the New Jersey Source Water Area Protection Program (SWAP), New Jersey Wellhead Protection Areas (WHPAs) are mapped around public water supply wells that delineate the horizontal extent of groundwater captured by the well over two (Tier 1), five (Tier 2), and twelve-year periods (Tier). These areas protect drinking water sources by monitoring potential contamination and limiting hazardous land uses. The WHPAs in Sayreville are generally clustered in the southwest and southeast portions of the Borough.

NJDEP's Division of Water Monitoring, Standards, and Pesticide Control has designated a portion of the Farrington constituent aquifer in Sayreville as Class III-B groundwater with uses other than potable water, which includes saltwater intrusion. [24]

As discussed later in this report, NJDEP indicates there are 49 Known Contaminated Sites within the Borough of Sayreville. Some of these sites are associated with Classification Exception Areas (CEAs) noted in the table below, where the groundwater exceeds specific containment levels for New Jersey Ground Water Quality Standards.

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[23] New Jersey Water Science Center, U.S. Geological Survey. (n.d.). *Major aquifers in New Jersey*. (Retrieved April 23, 2026). https://www.usgs.gov/centers/new-jersey-water-science-center/major-aquifers-new-jersey

[24] New Jersey Administrative Code. (As Amended February 2025.). *N.J.A.C. 7:9C, Ground water quality standards*. https://dep.nj.gov/wp-content/uploads/rules/rules/njac7_9c.pdf

Table 3: Groundwater Classification Exception Areas

CEA Name	Address	Program	Established Date	Description
National Amusements (Former) - Historic Fill	8020 Route 9	VIC	2026-02-11	The historic fill CEA comprises the entirety of Block 265 Lot 1; Block 273 Lot 1; and Block 274.01 Lot 1, north of the interchange of Routes 9 and 35
Sayreville Economic Redevelopment	Chevalier Ave	LSRP	2021-10-28	CEA encompasses part of Parcel C (Main Plant) of the site. CEA bordered to the north and west by the Raritan River and east by Driscoll Bridge. Boundaries are based on sampling data.
Atlantic Resources Corp	120 Horseshoe Rd	DEP	2025-02-10	The CEA encompasses 210,200 square feet and is bordered to the east by the Raritan River railroad, to the west by wetlands, and to the south by a wooded area extending to a depth of 30 feet bgs.
Sayreville Generating Station - Historic Fill	River Rd & Main St	VIC	2017-08-21	Groundwater is contaminated by the presence of historic fill found at the site. The footprint of the subject property will define the extent of the CEA.
Tiger Paw Station - Historic Fill	912 Route 9 S & Kenneth Ave	LSRP	2019-05-02	The CEA is approx. 4400 sq. feet on the property west of Route 9, south and east of Kennedy Avenue, and flowing offsite to the south approx. 80 feet. Delineated by wells
Pfizer-Jernee Mill Road Site	Quigley Ln	RAP	2004-10-15	Metals
Sunoco Station #0007-6612	943 Route 9 & Bordentown Ave	RAP	1996-06-19	The CEA is contained on-site. The horizontal extent is 20,203.2040 square feet. Groundwater flow direction is variable.
Speedway Station #3437	974 Route 9 S	LSRP	2018-11-20	CEA encompasses entire site and extends offsite to the west beneath adjacent properties to the north, west, and south. Bordered to east by Route 9. Boundaries based on field data and modeling.
Cheesequake Service Plaza - Area 2	Garden State Parkway MM 124 - Cheesequake Plaza	LSRP	2018-12-14	CEA encompasses eastern portion of site and extends to the east beneath service station and offsite beneath Garden State Parkway. Boundaries based on sampling data and fate and transport modeling.
Neptune RTS Sayreville Station - Historic Fill	309 Main St	VIC	2017-11-30	Entire Lot 2 of Block 175.01
Forest View Industrial Park	Jernee Mill Rd	RAP	2000-09-11	Secondary constituents
Amoco Station #5148	Route 9 & Route 35	LSRP	2001-02-26	CEA for BTEX, MTBE, TBA, Naphthalene, TICs & Lead, see attached map. CEA approximately 360 feet long from east to west and approximately 120 feet wide from south to north. Indeterminant due to active
Sayreville Landfill	Jernee Mill Rd	DEP	2007-06-14	Shallow and Perched Groundwater contamination emanating from the site to the South River and Pond Creek.

Getty Station #00670 (Former)	957 Route 9 N	LSRP	2020-04-08	CEA encompasses ~170,500 sqft. which includes the entire subject site, and extends offsite to the south and east to the neighboring parcels.
BP Station #931	Route 9 & Route 35 Southbound	LSRP	2015-05-06	CEA extends 122 feet radially around MW-14 includes the site Block 293.02, Lot 1, and properties along Oak Street (Block 293.02, Lots 2,3.01,3.02, 4, 5, Blocks 294, Lots 38 and 44.01 also Route 9/35
Sayreville First Aid Squad	Veterans Dr	RAP	2000-09-22	The CEA remains onsite and encompasses MW-FA1R, former fuel oil tank excavation area, and immediately downgradient. The area of the CEA is 1726 sqft. Groundwater flows northwesterly.
Exxon Station #34232 (Former)	6040 Route 35 & 9 N	RAP	2018-08-15	The CEA is an overall shaped area of 0.17 acres in size. It is depicted in Exabit B below. The groundwater flow at the site is to the east.
Gerdau Ameristeel	North Crossman Rd	LSRP	2018-10-03	CEA extends vertically 107 feet, and horizontally to western and southwestern property boundaries. Contamination is not expected to go off-site. Delineation based on data.
Sunoco Station #0007-6570	Route 9 & Route 35	RAP	2013-12-16	The CEA is for VOC groundwater contamination at the site. The horizontal extent of the CEA is approximately 0.24 acres. Groundwater flow is to the northeast.
Sunoco Station #0007-7594 (Former)	1788 Route 35 N	LSRP	2015-10-16	Extends off site onto Haussling Place to the southeast, and State Highway 35 to the southwest.
Quigley Co	Bordentown Ave	RAP	2000-04-07	The CEA encompasses the entire site. Groundwater flow direction is to the east northeast. The horizontal extent of the CEA is 20.3 acres.
Sayreville Economic Redevelopment - Historic Fill	Chevalier Ave	VIC	2021-10-27	CEA encompasses the entire site, approximately 440 acres. Bounded to the north and east by the Raritan River and to the south by industrial properties.
E I Dupont	Cheesequake Rd	DEP	1997-01-22	The CEA is indicated on the enclosed site map.
Albemarle Corp	880 Main St	LSRP	2005-02-01	Central portion of block 251, lot 1 in Sayreville Boro, and immediately downgradient of said portion.
Mobil Station #15-JNG	933 Route 9 & Bordentown-Amboy Tpke	RAP	1999-05-25	The CEA is for VOC groundwater contamination at the site. The horizontal extent of the CEA is approximately 0.12 acres. Groundwater flow is to the southeast.
Cheesequake Service Plaza - Area 1	Garden State Parkway MM 124 - Cheesequake Plaza	LSRP	2018-12-14	CEA encompasses large portion of parking area and extends offsite to the east beneath all lanes of the Garden State Parkway. Boundaries based on sampling data and fate and transport modeling.
Horseshoe Road Superfund Site	Horseshoe Rd	DEP	2022-07-15	The CEA encompasses 19.08 acres extending to a depth of 30 feet bgs.
Getty Station #56893	Bordentown Ave & Ernston Rd	LSRP	2010-09-16	The CEA is defined on the enclosed CEA Map. The CEA extends across Ernston Road to the north and across Bordentown Road to the northwest onto the adjacent properties.

Surface Waters

Surface waters function as natural systems for stormwater conveyance and storage, mitigate flooding during storm events, and support groundwater recharge. Surface waters also provide critical habitat for aquatic organisms and support birds, mammals, and other wildlife for feeding, nesting, and migration. Beyond these ecological roles, they offer recreational opportunities such as fishing and boating, and contribute to the scenic and cultural character of landscapes.

Still or slow-moving water bodies such as lakes and ponds tend to be especially sensitive to pollution, sedimentation, and nutrient loading because they have limited natural flushing capacity. When sediments or contaminants accumulate, water quality can degrade rapidly. Flowing waters, including rivers and streams, are more dynamic, yet they can also serve as pathways that transport pollutants, sediments, and excess nutrients from upland areas downstream. Because surface waters are interconnected within larger watershed systems, impacts occurring far from a waterbody's edge can ultimately affect downstream environments, including estuaries and coastal waters.

Methodology

The methodology used for the inventory of Sayreville's surface waters included several NJDEP geodata sets. Watershed data was sourced from the Waterfront Management Areas in New Jersey data set, as well as the 11 Digit Hydrologic Unit Code and 14 Digit Hydrologic Unit Code Delineations for New Jersey data sets.[25,26,27] River, stream, and tributary data were sourced from the Surface Water Quality Classification of New Jersey data set as well as the 2020 Waterbody and Stream Network data sets.[28,29,30] Sayreville's surface water resources are shown in Figure 2.

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[25] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2023). *Watershed Management Areas in New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::watershed-management-areas-in-new-jersey/about

[26] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated November 2021). *11 digit hydrologic unit code delineations for New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::11-digit-hydrologic-unit-code-delineations-for-new-jersey/

[27] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2023). *14 digit hydrologic unit code delineations for New Jersey* [Data set]. NJGIN Open Data. https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::14-digit-hydrologic-unit-code-delineations-for-new-jersey/

[28] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2023). *Surface Water Quality Classification of New Jersey* [Data set]. NJGIN Open Data. https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::surface-water-quality-classification-of-new-jersey/

[29] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated November 2025). *Waterbody 2020 in New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::waterbody-2020-in-new-jersey/

[30] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated March 2026). *Stream Network 2020 in New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::stream-network-2020-in-new-jersey/

Sayreville

Watersheds

Watersheds in New Jersey are organized into a hierarchical system. The system begins with the largest units, known as Water Regions, and narrows down to the smallest units, called Sub-Watersheds (HUC 14). The state's five Water Regions are divided into twenty Watershed Management Areas (WMAs). Each WMA is further subdivided into HUC 11 drainage basins, which are then broken down into HUC 14 sub-watersheds. This system is derived from the USGS Hydrologic Unit Codes.

Sayreville is bisected by the Raritan water region to the north and Atlantic Coastal water regions to the south, with the boundary roughly following US Route 9. This also serves as the border between the Lower Raritan, South River, Lawrence Watershed Management Area to the north, and the Monmouth Watershed Area to the south. This is also the boundary of the Raritan River Lower (Below Lawrence) Watershed to the north, River Raritan/Sandy Hook Bay Tributaries Watershed to the South (HUC 14).

Table 4: Watersheds

WMA	HUC 11	HUC 14	Acres	% of Total
Raritan / Lower Raritan, South River, Lawrence	Raritan River Lower (Below Lawrence)	Raritan R Lwr (below Lawrence Bk)	9304.12	47.8%
		South River (below Duhernal Lake)	6351.24	32.6%
		Tennent Brook (below 74d 19m 05s)	537.35	2.8%
		Deep Run (below Rt 9)	38.77	0.2%
Monmouth	River Raritan/Sandy Hook Bay Tributaries	Cheesequake Creek / Whale Creek	3231.45	16.6%

Rivers, Streams, and Tributaries

All arterial waters within Sayreville eventually drain into Raritan Bay, either by way of the Raritan River or Raritan Bay tributaries such as Cheesequake Creek. The Raritan River is formed by the confluence of the North Branch and South Branch in Somerset County. The South Branch originates at Budd Lake in Mount Olive Township, with the North Branch originating at Raritan Pond in Mendham Borough. From the confluence point, the river flows generally eastward across central New Jersey for approximately 70 miles. 16 miles from the confluence, it slows in tidewater at New Brunswick. The estuary then extends 14 miles before emptying into the Raritan Bay. In Sayreville, the river flows from west to east, forming the Borough's northern border. According to the Sierra Club of New Jersey, more than 200 contaminated sites are adjacent to or drain into the lower Raritan River, including

abandoned industrial sites, Superfund sites, old landfills, dredge dumping areas, and old army arsenals.[31]

- Burt Creek is the only significant named tributary of the Raritan in Sayreville that does not first enter the South River. The creek flows northward from Kennedy Park.

The South River is formed by the confluence of Manalapan Brook and Matchaponix Brook. It begins at Duhernal Lake in Spotswood and flows northward toward the Raritan River. In Sayreville, the river flows from south to north, forming the Borough's western border. According to the US Army Corps of Engineers, "the area is prone to imminent and severe flooding from hurricanes and other storms." Significant flood events and the greatest ecological degradation are occurring within the Boroughs of South River and Sayreville. Many property owners along the river were bought out after significant damage from Hurricane Sandy.[32] The Washington Canal, constructed between 1824 and 1825, cuts a roughly mile-long channel that allowed vessels to bypass several curves in the South River.[33] Significant tributaries of the South River in Sayreville, moving from south to north, include:

- Deep Run, which flows northwest and originates outside of the Borough.
- Tennent Brook, which flows northwest but originates outside of the Borough.
- Duck Creek is entirely within the Borough and flows west from near the Recharge Lagoons in the Julian L. Capik Nature Preserve.
- Selovers Brook is entirely within the Borough and flows southwest from south of the Arsenal Trade Center.
- Pond Creek is entirely within the Borough and southwest with its tributaries extending to Bailey Park.

Cheesequake Creek is part of the Monmouth WMA and flows directly into Raritan Bay. It originates in Old Bridge Township and forms a sizable portion of Cheesequake State Park. A separate channel connects the creek to Lockwood Marina.

- Crossway Creek is the only major tributary of Cheesequake Creek within the Borough. It flows southeast, originating near the Jon Bon Jovi Service Plaza on the Garden State Parkway.

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[31] Sierra Club New Jersey Chapter. (n.d.). *The Raritan River*. https://www.sierraclub.org/new-jersey/raritan-valley/issue-1-raritan-river
[32] U.S. Army Corps of Engineers, New York District. (2021). Fact Sheet - South River–Raritan Basin, NJ. https://www.nan.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/487579/fact-sheet-south-river-raritan-basin-nj/
[33] Model, E. (2010, October 4). *New Jersey's long legacy of canals*. New Jersey Newsroom. https://www.newjerseynewsroom.com/style/new-jerseys-long-legacy-of-canals

Surface waters in New Jersey are classified according to both the type of waterbody and its intended use. In New Jersey, surface waters fall into two broad categories: freshwater and saline waters.

- Freshwaters are divided into two main classes. FW1 waters are freshwater bodies that receive no human-made wastewater discharges. They are protected for their exceptional ecological value. FW2 waters include all other freshwaters in the state, outside of the Pinelands. FW2 waters are further categorized based on whether they can support trout.
- Saline waters are classified as either saline estuarine (SE) or saline coastal (SC) waters. Estuarine waters are further divided into SE1, SE2, and SE3, depending on how well they support recreation, shellfish harvesting, and warm-water fish species.

Some waterways near the coast have dual classifications, reflecting the transition from freshwater to saltwater as the water flows toward an estuary or the ocean. There are no FW1 class surface waters listed in Sayreville. Surface waters in Sayreville are classified as FW2-NT or FW2-NT/SE.

- **FW2-NT** classification means fresh water subject to manmade discharge (FW2) that is non-trout supporting (NT). Designated uses for FW2 waters include:
  - Maintenance, migration, and propagation of the natural and established [34]biota;
  - Primary contact recreation;
  - Industrial and agricultural water supply;
  - Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and
  - Any other reasonable uses.
- **FW2-NT/SE1** is a dual classification where there is an interface between salt water and fresh water. In addition to the FW2-NT classification described above, the waters are also saline estuarine (SE1), with the following designated uses:
  - Shellfish harvesting in accordance with N.J.A.C. 7:12;
  - Maintenance, migration, and propagation of the natural and established biota;
  - Primary contact recreation and any other reasonable uses.[35]

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[34] New Jersey Department of Environmental Protection. (n.d.). *Surface water quality standards (SWQS).* https://dep.nj.gov/wms/bears/surface-water-quality-standards-swqs/

[35] New Jersey Administrative Code. (As Amended December 2023). *N.J.A.C. 7:9B,* Surface water quality standard. https://dep.nj.gov/wp-content/uploads/rules/rules/njac7_9b.pdf

Table 5: Rivers, Streams, and Tributaries

Class	Surface Water	Total Length (Miles)
FW2-NT/SE1	Raritan River Unnamed Tributaries	12.74
	South River Unnamed Tributaries	10.02
	Raritan River	8.60
	South River	6.66
	Uncoded Tributary	6.07
	Un-coded Tributary	2.69
	Burt Creek Unnamed Tributaries	2.64
	Cheesequake Creek	2.31
	Pond Creek	2.21
	Selovers Brook	2.13
	Burt Creek	2.01
	Cheesequake Creek Unnamed Tributaries	1.34
	Crossway Creek	1.12
	Duck Creek	1.04
	Washington Canal	0.92
	Melvins Creek	0.51
	Crossway Creek Unnamed Tributaries	0.37
	Flat Creek Unnamed Tributaries	0.17
	Raritan Bay	0.08
FW2-NT	Tennent Brook	1.02
	South River Unnamed Tributaries	0.57
	Tennent Brook Unnamed Tributaries	0.46
	Deep Run	0.29
	Uncoded Tributary	0.11
	South River	0.03

Lakes, Ponds, and Reservoirs

NJDEP Waterbody data delineated for New Jersey derived from 2020 color imagery as part of the Land Use/Land Cover 2020 update, includes 126 natural and artificial lakes. (This excludes canals/ditches, estuaries, streams/rivers, and tidal mud flats). These bodies of water make up approximately 274.43 acres. 12 water bodies are classified as natural lakes and cover 4.6 acres, while 114 are classified as artificial lakes and cover 269.83 acres.

Recharge Lagoon A of the Sayreville Water Department is the largest of these lakes, ponds, and reservoirs at 54 acres. The next largest is Towne Lake at 31.35 acres, followed by Majors Pond at 23.24 acres. The lake at John F. Kennedy Memorial Park, at 18.4 acres, and Recharge Lagoon B at the Sayreville Water Department, at 14.22 acres, are the remaining lakes, ponds, and reservoirs over 10 acres in size.

Floodplains

Floodplains are naturally occurring, low-lying areas adjacent to rivers, streams, and tidal waterways that are formed by long-term geologic and hydrologic processes, including erosion, sediment deposition, and channel migration. During periods of heavy rainfall or snowmelt, floodplains provide space for water to spread beyond the normal channel, temporarily storing floodwaters. When floodplains are altered through filling or development, their ability to store and convey floodwater is reduced, which can result in increased flooding, erosion, and sediment transport both nearby and elsewhere in the watershed.

In addition to flood control, floodplains provide important environmental benefits. Vegetation adapted to flooding helps stabilize soils, slow floodwaters, and filter sediments and pollutants from stormwater runoff, contributing to improved surface water quality. Floodplains also support riparian and aquatic habitats and play a key role in maintaining overall watershed health. As climate change contributes to more frequent and intense precipitation events, as well as increased coastal flooding from sea level rise and storm surge, the protection of floodplains is increasingly important for reducing flood risks and enhancing long-term environmental resilience.

Methodology

Floodplain mapping is provided by the Federal Emergency Management Agency (FEMA) using Flood Insurance Rate Maps (FIRMs). The data are available through the FEMA electronic database and were used in preparing this ERI.[36] Sayreville's floodplains are shown in Figure 6.

Sayreville

Flood plains within Sayreville can be found associated with the following water bodies and waterways and their associated tributaries. Most flood zones within the Special Flood Hazard Area (SFHA), also known as the 100-year flood plain, are designated Zone AE. Zone AE has had a detailed analysis performed and is considered to have a high flood risk. Other SFHAs are designated Zone VE. These zones are also based on detailed ones, and have a high flood risk, but are located on the coast and have an additional hazard associated with storm waves.[37] In Sayreville, Zone VE is concentrated along the shore of Raritan Bay.

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[36] Federal Emergency Management Agency. (n.d.). *GIS Web Services for the FEMA National Flood Hazard Layer* [data set]. Retrieved April 6, 2026, from https://hazards.fema.gov/femaportal/wps/portal/NFHLWMS

[37] Federal Emergency Management Agency. (n.d.). *Glossary*. Retrieved April 13, 2026. https://www.fema.gov/about/glossary

Raritan River

The SFHA spans the length of the river. It is noteworthy in the following locations from east to west:

- The Marsh Point area to the west of the Victory Bridge and Main Street South Amboy. While mostly undeveloped, in some locations it extends across the roadway into areas occupied by primarily industrial uses.
- The area adjacent to Burt Creek and the land extending west to the Sayreville Generating Station. There is limited development in this area. However, the generating station itself is located within the Special Flood Hazard area, as there are several homes roughly between Marsh Avenue and Quaid Avenue, and portions of Ken Buccanan Park.

Along the river, some limited additional development is within the 0.2% Annual Chance Flood Hazard (500-year flood plain). The areas most affected include the wedge between the Garden State Parkway and the Victory Bridge and portions of the planned Riverton Redevelopment Area (which may be modified in the future to reduce flood risk).

South River & Washington Canal

The SFHA spans the river and the associated canal through the Borough. The area has suffered significant flooding from storm events and saw significant property buyouts after Hurricane Sandy.[38] It is noteworthy in the following locations from north to south:

- The wetlands between and along the river and the canal.
- The Sayreville Pump Station.
- Residentially developed areas along Weber Ave and MacArthur Avenue, including portions of War Memorial Park.
- Residentially, commercial, and industrially developed areas between roughly the River and Jernee Mill Road, generally north of the Vistra Corp. Sayreville Energy Center access drive.
- Portions of the Winding Woods apartment complex, including portions along Tennent Brook, with most of the remainder of the complex within the 0.2% Annual Chance Flood Hazard area.
- Industrial and storage use areas and residential areas along the river and Deep Run, including Old Bridge Park, along and adjacent to Williams Street and Bordentown Avenue.

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[38] U.S. Army Corps of Engineers, New York District. (2021). *Fact Sheet - South River–Raritan Basin, NJ.* https://www.nan.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/487579/fact-sheet-south-river-raritan-basin-nj/

Cheesequake Creek

The SFHA spans the river and its tributaries, Melvins Creek and Crossway Creek, within the Borough. This includes the wetlands adjacent to Cheesequake State Park, the Garden State Parkway, and several boatyards and marinas. While residential development generally lies outside the SFHA in this area, the sole vehicular access point to such development, Gondeck Road, is within the SFHA. A small, narrow portion of this SFHA also extends to the west of the Jon Bon Jovi Service Area of the Garden State Parkway.

Raritan Bay

The SFHA extends along the coast and inland to include the wetlands south of Raritan Bay Waterfront Park, portions of the NJ Transit North Jersey Coast Line right-of-way, and portions of the City of South Amboy public works yard located within Sayreville. Residential development is not located in this area. While not in the SFHA portions of the waterfront park, they are within the 0.2% Annual Chance Flood Hazard area.

Wetlands

Wetlands are transitional ecosystems where land and water interact. The presence of water at or near the surface for at least part of the year supports soils and vegetation adapted to saturated environments. Because wetlands occupy low-lying areas within the landscape, they are closely tied to surrounding land uses and watershed processes. Even small changes in drainage patterns, grading, or water inputs can alter wetland function.

Wetlands perform several important ecological functions. They slow the movement of water across the landscape, allowing sediments to settle and providing conditions for processes that filter, store, and biogeochemically process contaminants. Wetlands also sustain plant and wildlife communities. Many species rely exclusively on wetlands for breeding or migration, while others depend on wetlands as links between upland and aquatic habitats.

Methodology

Two separate wetland resources were reviewed to inventory wetlands in Sayreville. The Wetlands 2020 in New Jersey dataset from the NJDEP Bureau of GIS utilizes the 2020 Land Use/Land Cover data to map wetlands.[39] The second, the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), delineates areas of wetlands using

[39] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated November 2025.). *Wetlands 2020 in New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::wetlands-2020-in-new-jersey/

aerial imagery to categorize wetlands.[40] The NWI also categorizes deepwater habitats. For clarity, open water was excluded from the map of wetlands included (see Figure 7), but is included in the table below. No physical surveys were conducted to compile this information; it should not be used in place of site-specific surveys.

Sayreville

Sayreville has a considerable number of mapped wetlands, resulting from its location on both Raritan Bay and several rivers and streams. Wetlands are generally hydrologically connected within Sayreville and generally in riverine locations and adjacent to coastal areas. Wetlands, as mapped by the state, make up over 1,930 acres within the Borough.

Tidal wetlands and flats are coastal habitats shaped by the regular rise and fall of tides, which flood and drain the land, bringing in sediment and food that support rich, productive ecosystems. Saline marshes can be dominated by salt-tolerant grasses like cordgrass, which provide critical habitat for birds and marine animals. Tidal flats are muddy or sandy areas exposed at low tide and submerged at high tide, and they are especially important feeding grounds for migratory shorebirds and marine invertebrates.[41]

Non-tidal wetlands are found inland along floodplains, lakes, rivers, and streams where water remains at or near the surface for much of the year. They include swamps, marshes, bogs, and fens, and support high biodiversity and provide important habitat for plants and animals adapted to wet conditions. They can be forested swamps dominated by trees or open marshes dominated by grasses and sedges.[42]

The largest category of wetlands mapped by the state are Phragmites Dominate Coastal Wetlands at approximately 30% of all Wetlands (582 acres). Phragmites Dominate Interior Wetlands make up an additional 8.8% of all wetlands (170 acres). Phragmites-dominated coastal wetlands are salt or brackish marshes where the plant Phragmites australis (common reed) has become the main or overwhelming vegetation, replacing native marsh plants. While some phragmites are native to the United States, the European species is an aggressive invasive plant that spreads rapidly and forms dense stands. They can crowd out native species, degrading wetlands, reducing habitat quality, interfering with recreation, and causing harm to wildlife and important regional fisheries. In Sayreville, Phragmites Dominate Wetlands tend to be found adjacent to the Raritan River on either side of Burt

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[40] U.S. Fish and Wildlife Service. (n.d.). *National Wetlands Inventory web mapping services* [Data Set]. Retrieved April 12, 2026. https://www.fws.gov/program/national-wetlands-inventory/web-mapping-services

[41] New Jersey Department of Environmental Protection. (n.d.). *State Wildlife Action Plan: Tidal wetlands and flats*. Retrieved April 14, 2026. https://dep.nj.gov/swap/habitats/tidal-wetlands-and-flats/

[42] New Jersey Department of Environmental Protection. (n.d.). *State Wildlife Action Plan: Non-tidal wetlands*. Retrieved April 14, 2026. https://dep.nj.gov/swap/habitats/non-tidal-wetlands/

Creek in the area between the South River and Washington Canal, along the South River, Tennent Brook, and Crossway Creek.

In addition to Phragmites Dominate Coastal Wetlands, tidal wetlands and flats in Sayreville include Saline Marsh (Low Marsh), at approximately 18% if all wetlands (343 acres), Saline Marsh (High Marsh), at approximately 2.6% of all wetlands (50 acres), and Freshwater Tidal Marshes at approximately 0.2% of all wetlands (4 acres). In Sayreville, tidal wetlands tend to be located adjacent to the Cheesequake Creek, Crossway Creek, along Raritan Bay, and the western portions of the Raritan River near the mouth of the South River. Significant non-tidal, typically freshwater wetlands in Sayreville include Deciduous Wooded Wetlands at approximately 24% of all wetlands (455 acres), Herbaceous Wetlands at approximately 5% of all wetlands (95 acres), and Deciduous Scrub/Shrub Wetlands at approximately 3% of all wetlands (51 acres). In Sayreville, non-tidal wetlands tend to be located adjacent to streams like Burt Creek, Pond Creek, Selovers Brook, and Duck Creek, and the upper portions of Crossway Creek.

Table 6: State-Mapped Wetlands

Wetland Land Use Category	Acres	% of Total
Coniferous Wooded Wetlands	1.20	0.1%
Deciduous Scrub/Shrub Wetlands	51.31	2.7%
Deciduous Wooded Wetlands	455.42	23.6%
Disturbed Wetlands (Modified)	38.41	2.0%
Freshwater Tidal Marshes	3.58	0.2%
Herbaceous Wetlands	95.16	4.9%
Managed Wetland In Built-Up Maintained Rec Area	21.23	1.1%
Managed Wetland In Maintained Lawn Greenspace	17.21	0.9%
Mixed Scrub/Shrub Wetlands (Coniferous Dom.)	1.77	0.1%
Mixed Scrub/Shrub Wetlands (Deciduous Dom.)	15.75	0.8%
Mixed Wooded Wetlands (Coniferous Dom.)	12.99	0.7%
Mixed Wooded Wetlands (Deciduous Dom.)	14.01	0.7%
Phragmites Dominate Coastal Wetlands	582.07	30.2%
Phragmites Dominate Interior Wetlands	169.93	8.8%
Saline Marsh (High Marsh)	49.93	2.6%
Saline Marsh (Low Marsh)	342.62	17.8%
Vegetated Dune Communities	4.96	0.3%
Wetland Rights-Of-Way	52.64	2.7%
TOTAL	**1930.19**	-

Wetlands mapped by the NWI follow a similar pattern to the State-mapped wetlands. Areas of wetlands immediately adjacent to Raritan Bay, Raritan River, South River, Washington Canal, Tennent Brook, and Cheesequake Creek, along with portions of Crossway Creek and Burt Creek, are typically categorized as Estuarine and Marine wetlands. These wetlands can

be described as estuarine, intertidal systems dominated by emergent, persistent vegetation that are irregularly flooded by tides, with frequent but secondary scrub-shrub, broad-leaved deciduous components.

Freshwater Forest/Shrub wetlands are generally mapped along Pond Creek, Selovers Brook, and Duck Creek, as well as near Estuarine wetlands along Burt Creek. The wetlands are best described as palustrine, forested systems dominated by broad-leaved deciduous vegetation that are continuously saturated or seasonally flooded with occurrences of needle-leaved evergreen and scrub-shrub components.

Freshwater Emergent Wetlands are interspersed throughout Sayreville, generally adjacent to other wetlands. These wetlands are best described as palustrine, freshwater emergent wetlands dominated by persistent vegetation that are primarily seasonally flooded or seasonally flooded–tidal. The table below includes all entries in the NWI for Sayreville, including Marine Deep Water, Freshwater Pond, Lake, and Riverine typologies.

Two significant differences exist between the NWI and NJDEP datasets. The NWI maps the Riverton redevelopment area to the west of the Garden State Parkway, along the Raritan River as a freshwater emergent wetland. It is likely the NWI assessment predates the redevelopment of this area. NJDEP maps a significantly larger portion of the areas adjacent to Pond Creek, Selovers Brook, and Duck Creek as wetlands than the NWI.

Table 7: National Wetland Inventory

Wetland Type	Classification Code	Acres	% of Total
Estuarine and Marine Deepwater	E1UBL – Estuarine, Subtidal, Unconsolidated Bottom, Subtidal	936.20	31.97%
	E1UBLx – Estuarine, Subtidal, Unconsolidated Bottom, Subtidal, Excavated	44.68	1.53%
	E1UBL6 – Estuarine, Subtidal, Unconsolidated Bottom, Subtidal, Oligohaline, Coastal Halinity	0.34	0.01%
	E1UBLx6 – Estuarine, Subtidal, Unconsolidated Bottom, Subtidal, Excavated, Oligohaline, Coastal Halinity	0.21	0.01%
Estuarine and Marine Wetland	E2EM1Pd – Estuarine, Intertidal, Emergent, Persistent, Irregularly Flooded, Partially Drained/Ditched	787.16	26.88%
	E2EM1P – Estuarine, Intertidal, Emergent, Persistent, Irregularly Flooded	201.73	6.89%
	E2EM1Ps – Estuarine, Intertidal, Emergent, Persistent, Irregularly Flooded, Spoil	51.90	1.77%
	E2SS/EM1Pd – Estuarine, Intertidal, Scrub-Shrub, Emergent, Persistent, Irregularly Flooded, Partially Drained/Ditched	28.20	0.96%
	E2SS1/EM1P – Estuarine, Intertidal, Scrub-Shrub, Broad-Leaved Deciduous, Emergent, Persistent, Irregularly Flooded	18.15	0.62%
	E2SS1P – Estuarine, Intertidal, Scrub-Shrub, Broad-Leaved Deciduous, Irregularly Flooded	12.08	0.41%
	E2EM1/SS1P – Estuarine, Intertidal, Emergent, Persistent, Scrub-Shrub, Broad-Leaved Deciduous, Irregularly Flooded	4.89	0.17%
	E2US2P – Estuarine, Intertidal, Unconsolidated Shore, Sand, Irregularly Flooded	4.44	0.15%
Freshwater Emergent Wetland	PEM1Rh – Palustrine, Emergent, Persistent, Seasonally Flooded-Tidal, Diked/Impounded	35.46	1.21%
	PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded	23.76	0.81%

	PEM1Rd – Palustrine, Emergent, Persistent, Seasonally Flooded-Tidal, Partially Drained/Ditched	23.40	0.80%
	PEM1/SS1D – Palustrine, Emergent, Persistent, Scrub-Shrub, Broad-Leaved Deciduous, Continuously Saturated	17.91	0.61%
	PEM1R – Palustrine, Emergent, Persistent, Seasonally Flooded-Tidal	14.04	0.48%
	PEM1/SS1R – Palustrine, Emergent, Persistent, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded-Tidal	11.09	0.38%
	PEM1E – Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated	8.33	0.28%
	PEM1/SS1Eh – Palustrine, Emergent, Persistent, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated, Diked/Impounded	7.03	0.24%
	PEM1A – Palustrine, Emergent, Persistent, Temporary Flooded	6.50	0.22%
	PEM1/SS1C – Palustrine, Emergent, Persistent, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded	5.41	0.18%
	PEM1F – Palustrine, Emergent, Persistent, Semipermanently Flooded	5.05	0.17%
	PEM1D – Palustrine, Emergent, Persistent, Continuously Saturated	3.03	0.10%
	PEM1Eh – Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Diked/Impounded	2.34	0.08%
	PEM1Ex – Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated	2.11	0.07%
Freshwater Forested/Shrub Wetland	PFO1D – Palustrine, Forested, Broad-Leaved Deciduous, Continuously Saturated	81.51	2.78%
	PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	47.76	1.63%
	PFO1/4E – Palustrine, Forested, Broad-Leaved Deciduous, Forested, Needle-Leaved Evergreen, Seasonally Flooded/Saturated	39.24	1.34%
	PFO1E – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated	34.98	1.19%
	PFO1R – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded-Tidal	29.69	1.01%
	PFO4/1D – Palustrine, Forested, Needle-Leaved Evergreen, Forested, Broad-Leaved Deciduous, Continuously Saturated	22.31	0.76%
	PSS1R – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded-Tidal	19.13	0.65%
	PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded	17.16	0.59%
	PSS1/EM1D – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Emergent, Persistent, Continuously Saturated	17.07	0.58%
	PSS1D – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Continuously Saturated	11.75	0.40%
	PFO1/SS1D – Palustrine, Forested, Broad-Leaved Deciduous, Scrub-Shrub, Broad-Leaved Deciduous, Continuously Saturated	6.77	0.23%
	PFO4D – Palustrine, Forested, Needle-Leaved Evergreen, Continuously Saturated	4.61	0.16%
	PFO1A – Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded	4.41	0.15%
	PFO1/SS1C – Palustrine, Forested, Broad-Leaved Deciduous, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded	3.90	0.13%
	PSS1/FO1E – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated	3.74	0.13%
	PFO1/SS1R – Palustrine, Forested, Broad-Leaved Deciduous, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded-Tidal	3.49	0.12%
	PFO1Eh – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated, Diked/Impounded	1.93	0.07%
	PSS1/FO1D – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Forested, Broad-Leaved Deciduous, Continuously Saturated	1.26	0.04%
	PSS1/EM1R – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Emergent, Persistent, Seasonally Flooded-Tidal	0.85	0.03%
Freshwater Pond	PUBHx – Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated	116.01	3.96%
	PUSCx – Palustrine, Unconsolidated Shore, Seasonally Flooded, Excavated	8.33	0.28%
	PUBHh – Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded	6.87	0.23%

	PUSCh – Palustrine, Unconsolidated Shore, Seasonally Flooded, Diked/Impounded	4.51	0.15%
	PUBVx – Palustrine, Unconsolidated Bottom, Permanently Flooded-Tidal, Excavated	3.09	0.11%
	PUBVh – Palustrine, Unconsolidated Bottom, Permanently Flooded-Tidal, Diked/Impounded	1.99	0.07%
	PUBH – Palustrine, Unconsolidated Bottom, Permanently Flooded	1.88	0.06%
	PUSAx – Palustrine, Unconsolidated Shore, Temporary Flooded, Excavated	1.49	0.05%
	PUBFh – Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Diked/Impounded	0.63	0.02%
	PUBFx – Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Excavated	0.33	0.01%
Lake	L2UBHx – Lacustrine, Littoral, Unconsolidated Bottom, Permanently Flooded, Excavated	82.24	2.81%
	L2UBHh – Lacustrine, Littoral, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded	29.79	1.02%
	L1UBHx – Lacustrine, Limnetic, Unconsolidated Bottom, Permanently Flooded, Excavated	22.73	0.78%
Riverine	R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	18.60	0.64%
	R2UBH – Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded	4.28	0.15%
	R1UBV – Riverine, Tidal, Unconsolidated Bottom, Permanently Flooded-Tidal	3.68	0.13%
	R2UBHx – Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated	3.53	0.12%
	R3UBH – Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded	3.20	0.11%
	R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded	3.13	0.11%
	R4SBCx – Riverine, Intermittent, Streambed, Seasonally Flooded, Excavated	2.83	0.10%
	R1UBVx – Riverine, Tidal, Unconsolidated Bottom, Permanently Flooded-Tidal, Excavated	1.13	0.04%
	R4SBA – Riverine, Intermittent, Streambed, Temporary Flooded	0.54	0.02%
	R4SBAx – Riverine, Intermittent, Streambed, Temporary Flooded, Excavated	0.51	0.02%

Wildlife

The condition, abundance, and variety of wildlife species within a community are important indicators of the overall health and biodiversity of the environment. Well-functioning habitats also benefit people by promoting clean air and water, providing peaceful settings, and offering recreation opportunities. Some wildlife species are designated as rare, threatened, or endangered at the global, federal, or state level. These classifications typically reflect the limited availability of suitable and sustainable habitat. The presence of such species within a community suggests that remnants of this increasingly scarce habitat still exist and is therefore considered a positive ecological indicator. Threatened and endangered species, along with their habitats, are protected from harm or disturbance by state and federal regulations.

Methodology

The methodology for determining the presence of wildlife within Sayreville included the NJDEP's Division of Fish and Wildlife's Landscape Project Version 3.4, which provides

wildlife habitat mapping data for community land-use planning and species conservation.[43] In addition to state-documented records of rare, threatened, and endangered species, species occurrence data were compiled from crowdsourced wildlife observations available through iNaturalist. iNaturalist is a joint initiative of the California Academy of Sciences and the National Geographic Society. [44] A map of Sayreville's Habitat Landscape is shown in Figure 8.

Sayreville

Endangered, Threatened, and Special Concern Species

The Landscape Project uses five wildlife habitat rankings based on documented wildlife occurrences from the biotics database and the NJDEP and land use and land cover geospatial dataset derived from aerial imaging and interpretation. Habitat patches with a rank of 2 through 5 will contain or overlap a known Species Occurrence Area (SOA) where an endangered, threatened, or special concern species is documented.

Rank 5 is assigned to species-specific habitat patches containing one or more occurrences of wildlife listed as endangered and threatened pursuant to the Federal Endangered Species Act of 1973. No Rank 5 habitat patches are documented in Sayreville.

Rank 4 is assigned to species-specific habitat patches with one or more occurrences of state-endangered species. Approximately 1,064 acres of Rank 4 habitat patches are documented in Sayreville. These habitat patches are located in the marshes adjacent to Raritan Bay Waterfront Park, adjacent to the South River and Washington Canal in the northwest of the borough, and along the Raritan River east of Burt Creek, north of CMC Steel, and west of the Middlesex County Utility Authority Central Treatment Facility.

Rank 3 is assigned to species-specific patches containing one or more occurrences of state-threatened species. Approximately 3,130 acres of Rank 3 habitat patches are documented in Sayreville. These habitat patches are primarily adjacent to waterways and waterbodies, including but not limited to the Raritan River, South River, Brunt Creek, Pond Creek, Selovers Brook, Duck Creek, Tennent Brook, Deep Run, Cheesequake Creek, and Crossway Creek. It also covers Majors Pond, Towne Lake, and portions of John F. Kennedy Park and a sizable portion of the area around Deerfield Road.

Rank 2 is assigned to species-specific habitat patches containing one or more occurrences of species considered to be of special concern. Approximately 1,327 acres of Rank 2 habitat patches are documented in Sayreville. These habitat patches are primarily adjacent to, and

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[43] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2025). *Piedmont Habitat, Landscape Project v3.4* [Date set]. https://njdep.maps.arcgis.com/home/item.html?id=2f278c0efb364ebe8ef77cb7d14a662a

[44] iNaturalist. (n.d.). *Filtered iNaturalist observations* [Data set]. https://www.inaturalist.org/observations

fanning out from, the Garden State Parkway, along the southernmost portions of Cheesequake Creek, the Riverton Redevelopment site, and between neighboring Rank 3 habitats.

Rank 1 is assigned to species-specific habitat patches that meet habitat-specific suitability requirements, such as minimum size or core area criteria for endangered, threatened, or special concern wildlife species, but that do not intersect with any confirmed occurrences of such species. Approximately 1,441 acres of Rank 1 habitat patches are documented in Sayreville. Those most significantly sized of these habitat patches are within, and adjacent to, the Julian L. Capik Nature Preserve extending north across Cheesequake Road into the open space behind the High School and Middle School.

Documented Endangered, Threatened, and Special Concern Species, according to the Landscape Project, are included in Table X.

Table 8: State Threatened, Endangered, and Species of Special Concern

Scientific Name	Common Name	State Status	Type
Haliaeetus leucocephalus	Bald Eagle	Special Concern	Bird
Nycticorax nycticorax	Black-Crowned Night-Heron	Threatened	Bird
Toxostoma rufum	Brown Thrasher	Special Concern	Bird
Bubulcus ibis	Cattle Egret	Special Concern	Bird
Plegadis falcinellus	Glossy Ibis	Special Concern	Bird
Ardea herodias	Great Blue Heron	Special Concern	Bird
Ixobrychus exilis	Least Bittern	Special Concern	Bird
Egretta caerulea	Little Blue Heron	Special Concern	Bird
Malaclemys terrapin terrapin	Northern Diamond-Backed Terrapin	Special Concern	Reptile
Circus hudsonius	Northern Harrier	Endangered	Bird
Lasiurus cinereus	Northern Hoary Bat	Special Concern	Mammal
Falco peregrinus	Peregrine Falcon	Threatened	Bird
Ammospiza caudacuta	Saltmarsh Sparrow	Threatened	Bird
Passerculus sandwichensis	Savannah Sparrow	Threatened	Bird
Egretta thula	Snowy Egret	Special Concern	Bird
Hylocichla mustelina	Wood Thrush	Special Concern	Bird
Nyctanassa violacea	Yellow-crowned Night-Heron	Threatened	Bird

Other Wildlife

An inventory of birds, mammals, amphibians, reptiles, and other wildlife observed in the vicinity of Sayreville was developed using verified, research-grade iNaturalist records collected between January 1, 2025, and January 1, 2026. Although crowdsourced datasets may reflect uneven observation effort (such as higher concentrations of records in more frequently visited areas), these data provide valuable insight into the species present and

most observed in Sayreville. The table below includes wildlife with more than five observations. The full listing is included as an appendix to this report.

Table 9: 2025 Wildlife Species Observations

Scientific Name	Common Name	Count
Ray-Finned Fish (Actinopterygii)		
Morone saxatilis	Striped Bass	7
Amphibians (Amphibia)		
Lithobates catesbeianus	American Bullfrog	6
Plethodon cinereus	Eastern Red-Backed Salamander	34
Anaxyrus fowleri	Fowler's Toad	102
Lithobates clamitans	Green Frog	14
Birds (Aves)		
Anas rubripes	American Black Duck	6
Larus smithsonianus	American Herring Gull	6
Setophaga ruticilla	American Redstart	10
Turdus migratorius	American Robin	5
Haliaeetus leucocephalus	Bald Eagle	6
Mniotilta varia	Black-And-White Warbler	6
Cyanocitta cristata	Blue Jay	12
Chroicocephalus philadelphia	Bonaparte's Gull	5
Branta bernicla	Brant	12
Certhia americana	Brown Creeper	5
Bucephala albeola	Bufflehead	9
Branta canadensis	Canada Goose	16
Nannopterum auritum	Double-Crested Cormorant	10
Sayornis phoebe	Eastern Phoebe	7
Sturnus vulgaris	European Starling	8
Corvus ossifragus	Fish Crow	5
Dumetella carolinensis	Gray Catbird	8
Ardea herodias	Great Blue Heron	10
Ardea alba	Great Egret	9
Tringa melanoleuca	Greater Yellowlegs	5
Lophodytes cucullatus	Hooded Merganser	8
Podiceps auritus	Horned Grebe	7
Passer domesticus	House Sparrow	8
Leucophaeus atricilla	Laughing Gull	6
Hydrocoloeus minutus	Little Gull	5
Anas platyrhynchos	Mallard	12
Zenaida macroura	Mourning Dove	9
Cygnus olor	Mute Swan	8
Cardinalis cardinalis	Northern Cardinal	6
Colaptes auratus	Northern Flicker	5
Pandion haliaetus	Osprey	12
Branta bernicla hrota	Pale-Bellied Brant	5
Melanerpes carolinus	Red-Bellied Woodpecker	10
Agelaius phoeniceus	Red-Winged Blackbird	5
Larus delawarensis	Ring-Billed Gull	9

Melospiza melodia	Song Sparrow	10
Zonotrichia albicollis	White-Throated Sparrow	5
Meleagris gallopavo	Wild Turkey	16
Insects (Insecta)		
Harmonia axyridis	Asian Lady Beetle	10
Bombus griseocollis	Brown-Belted Bumble Bee	6
Bombus impatiens	Common Eastern Bumble Bee	11
Malacosoma americana	Eastern Tent Caterpillar Moth	9
Mantis religiosa	European Mantis	5
Danaus plexippus	Monarch	6
Libellula needhami	Needham's Skimmer	5
Lycorma delicatula	Spotted Lanternfly	16
Mammals (Mammalia)		
Tamias striatus	Eastern Chipmunk	6
Sylvilagus floridanus	Eastern Cottontail	6
Sciurus carolinensis	Eastern Gray Squirrel	6
Marmota monax	Groundhog	5
Odocoileus virginianus	White-Tailed Deer	9
Mollusks (Mollusca)		
Ensis leei	Atlantic Jackknife	5
Geukensia demissa	Atlantic Ribbed Mussel	7
Ilyanassa obsoleta	Eastern Mudsnail	7
Crassostrea virginica	Eastern Oyster	9
Mya arenaria	Soft-Shelled Clam	8
Reptiles (Reptilia)		
Terrapene carolina carolina	Eastern Box Turtle	6
Chrysemys picta picta	Eastern Painted Turtle	6
Coluber constrictor constrictor	Northern Black Racer	7
Trachemys scripta	Pond Slider	11
Trachemys scripta elegans	Red-Eared Slider	11

Vegetation

Vegetation is an important indicator of overall environmental health, shaping ecological processes and supporting both human and wildlife communities. Healthy vegetation supports key ecosystem functions such as soil stabilization, groundwater recharge, stormwater absorption, and climate moderation. Vegetation also contributes to human well-being by enhancing scenic quality, providing shade, reducing noise, and supporting opportunities for passive recreation. Vegetation communities are especially valuable when they include native species and occur in large, relatively undisturbed and connected areas. These areas are more capable of supporting complex ecological processes and providing habitat for a range of species. As the core of terrestrial ecosystems, the loss or fragmentation of plant communities can have cascading effects on wildlife, soils, water resources, and overall environmental stability.

Methodology

The methodology for determining the presence of vegetation within Sayreville includes data from the Office of Natural Lands Management Natural Heritage Program, including the Natural Heritage Priority Sites and the Natural Heritage Grid Map.[45,46,47] The program tracks over 800 plant species, 365 of which are considered endangered in the state. In addition to state-documented records of rare, threatened, and endangered species, species occurrence data were compiled from crowdsourced vegetation observations available through iNaturalist.[48] A map of Sayreville's Natural Heritage is shown in Figure 8.

Sayreville

Natural Priority Sites

The Natural Heritage Priority Sites listing developed from the biotics database identifies key areas to protect biological diversity, focusing on rare plants and ecological communities. The Endangered and Nongame Species Program also assists in demarcating sites that include significant habitats for rare animals. These sites are considered top priorities for conserving New Jersey's biological diversity, as damage or loss could permanently eliminate unique natural resources. While there are no sites within Sayreville, the South River Marshes south of Bordentown Avenue, just over the extreme southwest border of Sayreville between Old Bridge Township and East Brunswick Township, are identified as a Natural Priority Site.

Natural Heritage Grid

The program's Natural Heritage Grid Map includes all locations where threatened or endangered species have been documented. The grid map divides areas into cells ranging from 358 to 372 acres. If a rare plant species or rare ecological community is documented anywhere within a cell, the entire cell is coded as containing that occurrence. This map is intended for broad-scale analysis to identify the general location of potentially sensitive areas rather than precise site boundaries. To protect vulnerable habitats and species valued by collectors, the names of some rare species are intentionally withheld.

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[45] New Jersey Department of Environmental Protection. (n.d.). *Rare plants and the Biotics database*. https://dep.nj.gov/parksandforests/conservation/natural-lands/rare-plants-and-the-biotics-database/

[46] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated July 2023). *Natural heritage priority sites in New Jersey* [Data set]. NJGIN Open Data. https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::natural-heritage-priority-sites-in-new-jersey

[47] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated December 2023). *Natural Heritage Grid Map for New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::natural-heritage-grid-map-for-new-jersey/

[48] iNaturalist. (n.d.). *Filtered iNaturalist observations* [Data set]. https://www.inaturalist.org/observations

Per the Natural Heritage Program, each grid cell has one of three possible values:

- **S**: The location of an occurrence of a rare plant species or ecological community is precisely known and falls somewhere within the grid cell.
- **M**: The location of the rare plant species or ecological community occurrence is not precisely known; there may be up to 1.5 miles of uncertainty in the mapped location.
- Some grid tiles include both precisely known (S) and less precise (M) occurrences for rare plant species or ecological communities that are found within the same cell.

The State ranks each species based on the system developed by the Nature Conservancy according to its global, national, and state rarity. The following ranks are found within Sayreville:

- **S1:** Critically imperiled in New Jersey due to extreme rarity, typically defined as five or fewer known occurrences or very limited remaining individuals or acreage. These elements are often restricted to highly specialized habitats or extremely small geographic areas within the state. This category also includes species that were once more common but have experienced significant declines due to habitat loss or other biological limitations. Even with extensive surveys, the discovery of additional substantial populations is considered unlikely.
- **S1.1** – S1 Ranking, but elements are only ever documented from a single location.
- **S2:** Imperiled in New Jersey due to rarity, with approximately 6 to 20 known occurrences. Many of these elements were historically more widespread but have declined significantly, primarily because of habitat destruction. While additional occurrences may still exist, they are uncommon and would require thorough and targeted surveys to identify.

The following vegetation is included in the Heritage Grid Map within grids that intersect or are contained within Sayreville.

Table 10: Rare Plant Species and Ecological Communities

Botanical Name	Common Name	State Status	Rank	Habitat	Precision
Zigadenus leimanthoides	Death-camus	Endangered	S1	Palustrine	M
Sabatia dodecandra var. dodecandra	Large Marsh-pink		S2	Estuarine	M
Juncus greenei	Greene's Rush		S2	Terrestrial	M
Data Sensitive Species or Ecological Community	Data Sensitive Species or Ecological Community	Endangered	S1.1	Palustrine	S
Data Sensitive Species or Ecological Community	Data Sensitive Species or Ecological Community	Endangered	S1	Estuarine; Palustrine	M

Other Vegetation

An inventory of plants observed in the vicinity of Sayreville was developed using verified, research-grade iNaturalist records collected between January 1, 2025, and January 1, 2026. Although crowdsourced datasets may reflect uneven observation effort (such as higher concentrations of records in more frequently visited areas), these data provide valuable insight into the species present and most observed in Sayreville. The table below includes plants with more than five observations. The full listing, which also includes fungi, is included as an appendix to this report.

Table 11: Plant Species Observations

Scientific Name	Common Name	Count
Ilex opaca	American Holly	10
Diospyros virginiana	American Persimmon	11
Liquidambar styraciflua	American Sweetgum	7
Robinia pseudoacacia	Black Locust	8
Nyssa sylvatica	Black Tupelo	7
Trichostema dichotomum	Blue Curls	5
Asclepias tuberosa	Butterfly Milkweed	17
Linaria canadensis	Canada Toadflax	8
Quercus montana	Chestnut Oak	10
Osmundastrum cinnamomeum	Cinnamon Fern	7
Asclepias syriaca	Common Milkweed	5
Artemisia vulgaris	Common Mugwort	9
Phragmites australis	Common Reed	11
Ornithogalum umbellatum	Common Star-Of-Bethlehem	7
Juniperus virginiana	Eastern Redcedar	13
Symplocarpus foetidus	Eastern Skunk Cabbage	13
Pinus strobus	Eastern White Pine	5
Asplenium platyneuron	Ebony Spleenwort	5
Amorpha fruticosa	False Indigo Bush	7
Verbascum thapsus	Great Mullein	7
Baccharis halimifolia	Groundsel Tree	16
Reynoutria japonica	Japanese Knotweed	7
Opuntia humifusa	Low Pricklypear	8
Kalmia latifolia	Mountain Laurel	16
Morella pensylvanica	Northern Bayberry	5
Solidago sempervirens	Northern Seaside Goldenrod	5
Cypripedium acaule	Pink Lady's Slipper	17
Pinus rigida	Pitch Pine	14
Securigera varia	Purple Crownvetch	8
Acer rubrum	Red Maple	5
Plantago lanceolata	Ribwort Plantain	5
Sassafras albidum	Sassafras	21
Kalmia angustifolia	Sheep Laurel	6
Rhus copallinum	Shining Sumac	7
Asclepias incarnata	Swamp Milkweed	5

Clethra alnifolia	Sweet Pepperbush	29
Quercus alba	White Oak	14
Rubus phoenicolasius	Wineberry	5

Open Space

Open space is land used for outdoor recreation, conservation, or resource protection. This includes parks, preserves, conservation areas, recreational complexes, and other lands that remain mostly undeveloped or are developed only for low-intensity outdoor uses. Open space supports community health by providing places for physical activity, outdoor recreation, and informal gathering. Research shows that access to open space can improve public health outcomes, enhance neighborhood livability, and offer residents a connection to natural systems within the built environment.[49] Open space also helps protect sensitive natural resources such as wetlands, floodplains, waterways, and wildlife habitats. They can also reduce harmful impacts associated with runoff, flooding, and habitat fragmentation.

Methodology

Local units in New Jersey are required to prepare a Recreation and Open Space Inventory (ROSI) as a condition of applying for and receiving NJDEP Green Acres funding. This section uses the database of State, Local, and Nonprofit Open Space maintained by the NJDEP.[50] The dataset documents protected open space and recreational lands, including areas that are both encumbered and unencumbered under the Green Acres Program. Encumbered lands have either received funding through the Green Acres State or Local Assistance Program or are identified in an approved ROSI. In contrast, unencumbered open space properties are not subject to Green Acres regulations and therefore receive a lower level of long-term protection. Sayreville's Open Space is shown in Figure 9.

Sayreville

Sayreville has approximately 863 acres of parks and open space. Most parks and open spaces, with the notable exception of Raritan Bay Waterfront Park, are located to the west of the Garden State Parkway and South of Main Street. Of the parks and open space within Sayreville, approximately 58 percent (499 acres) are primarily park, 12 percent (105 acres) are primarily preserve, seven percent (61 acres) is primarily conservation area, and 23 percent (198 acres) are other open space uses.

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[49] Lee, A. C. K., Jordan, H. C., & Horsley, J. (2015). *Value of urban green spaces in promoting healthy living and wellbeing: Prospects for planning*. Risk Management and Healthcare Policy, 8, 131–137. https://pmc.ncbi.nlm.nih.gov/articles/PMC4556255/

[50] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated March 2026). *State, local, and nonprofit open space of New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::state-local-and-nonprofit-open-space-of-new-jersey/

Raritan Bay Waterfront Park (138 acres) makes up the largest single park or open space at approximately 16 percent, with Cheesequake State Park at approximately 13 percent (110 acres), the Julian Capik Nature Preserve and the adjacent park at 12 percent (105 acres), and the Sayreville Recreation Complex at 12 percent (104 acres). Oak Street Playground is the smallest park or open space at approximately 0.02 percent (0.2 acres).

The vast majority of parks and open space are encumbered under the Green Acres program, the exceptions being approximately 41 acres of borough owned open space (Block 28 Lot 1) adjacent to Julian Capik Nature Preserve and 10.36 acres of open space owned by the South River Borough (Block 170 Lot 1 and Block 170.1 Lot 1) located across the main channel of the South River but with the municipal borders of Sayreville.

In terms of ownership, the Borough owns approximately 76 percent (659 acres) of parks and open space within the municipality, with the state owning approximately 16.5 percent (142 acres, some portions in conjunction with Middlesex County), and the County alone owning approximately 6 percent (5 acres) within the Borough.

Sayreville has two zoning districts dedicated solely to open space and park uses. OS-C (Open Space – Conservation) and OS-R (Open Space – Recreation).[51] However, these districts do not appear to be mapped anywhere in the Borough.[52] However, the PRIME (Public, Recreational, Institutional Municipal and Educational) zoning district does cover most parks and open spaces within Sayreville, including Bailey Park, Bordentown Avenue Park, Burkes Park, portions of Cheesequake State Park, Clark Park, Fielek Park, Jackson Avenue Park, Julian Capik Nature Preserve, portions of Kennedy Park, Oak Street Park/Melrose Park, Popowski Avenue Park, Raritan Bay Waterfront Park, portions of River Road Park, Sayreville Recreational Complex, Triggs Park, Walter D Faith Park, Woodland Avenue Park, and War Memorial Park. The Borough plans to update the Open Space and Recreation Plan Element of the Master Plan in 2026. This will contain more detailed information about each park and open space parcel listed on the ROSI as well as certain other parcels.

Table 12: Open Space

Name	Owner	Type	Acres	Block	Lot(s)
Bailey Park	Sayreville Borough	Park	21.24	83.01	1
Bayview Park	Sayreville Borough	Park	1.80	495	1, 219, 220
Boehmhurst Park	Sayreville Borough	Park	1.40	217	3.04

[51] Sayreville Borough. (n.d.). *Code of ordinances, Chapter XXVII: Land development, Article III: Approval and review of development applications (§§ 26-76–26-80)*. Municode Library. Retrieved April 7, 2026, from https://library.municode.com/nj/sayreville_borough/codes/code_of_ordinances?nodeId=CHXXVILADE_ARTIIIAPREDEPR_26-76--26-80RE

[52] Sayreville Borough. (n.d.). *Zoning and parcel map* [Interactive web map]. ArcGIS Online. Retrieved April 7, 2026, from https://www.arcgis.com/apps/mapviewer/index.html?webmap=5d859629b3584a11bca72af8aed47d9

				218	50-58, 61
Bordentown Avenue Park	Sayreville Borough	Park	3.37	444	1, 2
Burkes Park	Sayreville Borough	Park	10.29	42	1.03, 2.01
Cheesequake State Park	New Jersey Department of Environmental Protection	Park	110.20	13	1.02
				451	1.04
				54	1
				54.01	1.01
Clark Park	Sayreville Borough	Park	5.95	447.16	2
Evelyn Terrace Park	Sayreville Borough	Park	0.53	432	1
Fielek Park	Sayreville Borough	Park	20.88	202.01	2
				203	4.24
				210.08	14
Hoffman Avenue Park	Sayreville Borough	Park	0.57	454	2.01, 2.02
Jackson Avenue Park	Sayreville Borough	Park	3.26	361	137-154
				362	57-74, 74.01, 75, 75.01, 76-92
Jernee Mill Park	Sayreville Borough	Park	1.09	61	5, 6
Julian Capik Nature Preserve	Sayreville Borough	Preserve	86.99	24	1
Julian Capik Park	Sayreville Borough	Preserve	18.02	17	2
Kennedy Park	Sayreville Borough	Park	83.02	252	1
				254.01	3
				368	3
				368.10	1
Middlesex County Open Space	New Jersey Department of Environmental Protection / Middlesex County	Conservation Area	50.87	259	1
				260	1, 3
				261	1
				262	1
				263	1
				266	1
				267	1
				268	1
				269	1
				270	1
				271	1
				272	1
				280	1.01
Millers Corner Park	Sayreville Borough	Park	0.22	71	3, 3.01
Morgan Park /Raritan Bay Waterfront Park	Sayreville Borough	Open Space	27.47	505	6
Oak Street Park / Melrose Park	Sayreville Borough	Park	3.11	286	163-180
				287	5-22, 67-84

Oak Street Playground	Sayreville Borough	Park	0.20	307	1, 2, 3
Popowski Avenue Park	Sayreville Borough	Park	19.79	169	13, 13.01
Raritan Bay Waterfront Park	Sayreville Borough	Open Space	138.30	506	1
				506.01	1, 1.01
				524.01	1, 2
River Road Park	Sayreville Borough	Park	13.11	169.21	1, 2
Sayreville Borough Open Space	New Jersey Department of Environmental Protection	Open Space	32.26	1	130.01, 130.02, 3, 3.01, 8, 8.02, 39-49, 68, 85
				168.01	115, 115.01
				168.02	4-14, 17-27
				168.05	3
				169.02	2, 7.01, 7.02, 8, 9
				169.03	2-9, 11-14, 15.01, 17.01, 19, 20, 21.01
				169.04	1-5,11, 12, 15-17, 18, 21, 22
				169.05	1, 3-12
				169.06	1, 9-16
				169.07	2.01,7-9, 22-26
				169.09	46- 52
				169.10	56- 63
				169.11	70- 74
				169.30	1-3, 6, 7, 49, 50
				169.31	4-7, 10-15
				169.41	1.21, 10-13, 2.23, 4-9
				2	60-67, 68.01, 68.03, 68.04, 70, 71, 79-84
				216.01	16
				216.02	12, 13
				218	33, 34, 35
				3	100-112, 118.03, 118.05, 86, 87, 90- 95
				4	118-124
				5	35, 36.01, 36.02, 37
				6	21, 22.01, 22.02, 23, 25-30
				7	14-18, 136- 139, 141.01, 143.01
				8	1- 4
Sayreville Borough Open Space	Sayreville Borough	Park	40.98	28	1
Sayreville Recreational Complex	Sayreville Borough	Park	104.26	14	1.04

South River Borough Open Space	South River Borough	Conservation Area	10.36	170 170.01	1 1
Triggs Park	Sayreville Borough	Park	5.66	369	1, 1.02
Walter D Faith Park	Sayreville Borough	Park	3.33	28.01	1.02
War Memorial Park	Sayreville Borough	Park	34.06	168.01	95.01
Woodland Avenue Park	Sayreville Borough	Park	9.56	478	1700-1731
				479	1801-1809
				480	1810-1818
				481	1819-1837
				482	1780-1800
				483	1754-1779
				484	1838-1857
				485	1858-1877
				486	1732-1753, 33
TOTAL ACRES	-	-	**863.08**	-	-

Contaminated Sites

Contaminated sites present significant concerns for public health, environmental quality, and future land use. Contamination can harm humans, wildlife, and vegetation, degrade ecosystems, and impair natural resources like both groundwater and surface waters. Contaminants can migrate beyond their original point of release, increasing the likelihood of exposure and spreading impacts. The presence and severity of contamination can limit how properties may safely be reused, particularly for residential or recreational purposes, which are subject to the most stringent remediation standards.

Sites affected by contamination from historic or ongoing human activities are commonly referred to as "brownfields." These sites may range from small properties with localized impacts to complex locations involving multiple contamination sources. While some contaminated sites rise to the level of federal Superfund designation due to the severity of their conditions, many others are addressed through state regulatory programs that oversee investigation, cleanup, and long-term management.

Methodology

The inventory of Known Contaminated Sites and the accompanying map showing their locations on the Brownfields (Contaminated Sites) graphic were sourced from the NJDEP's

Known Contaminated Site List (KCSL) electronic database and the NJDEP DataMiner.[53,54] Superfund sites were obtained from the EPA's Superfund National Priorities List.[55] Sayreville's contaminated sites are shown in Figure 10.

Sayreville

The KCSL identifies sites statewide where soil or groundwater contamination has been confirmed at or above applicable regulatory standards, or where contamination is suspected. The list includes properties where remediation is currently underway, required but not yet initiated, or has been completed, in some cases with contamination managed through institutional controls. Remedial activities at these sites vary widely, ranging from simple excavation and removal to complex, multifaceted cleanups involving several contamination sources affecting soil, groundwater, and other media.

There are 49 known contaminated sites listed within Sayreville and are included in the table below. The status date is the date on which the remedial status was designated. The remediation levels and number of sites at each remediation level are as follows:

- **A** - Emergency action/stabilization (0 Sites)
- **B** - Single-phase remedial action; single contamination affecting only soils. (6 Sites)
- **C1** - No formal design; source known or identified; potential groundwater contamination. (3 Sites)
- **C2** - Formal design; known source or release with groundwater contamination. (17 Sites)
- **C3** - Multi-phased remedial action - unknown or uncontrolled discharge to soil or groundwater. (4 Sites)
- **D** - Multi-phased remedial action; multiple sources/releases to multi-media, including ground water. (8 Sites)
- 11 Sites are active post-remedial cases

Table 13: State Known Contaminated Sites

Program Interest Name	Address	Status	Status Date	Remediation Level
Morgan Ordnance Depot	Ernston Rd (Rte 35 & Cheesquake Rd)	Active	10/28/2000	B

[53] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated September 2025). *Known contaminated site list for New Jersey* [Data set]. NJGIN Open Data. https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::known-contaminated-site-list-for-new-jersey/

[54] New Jersey Department of Environmental Protection. (n.d.). *NJDEP DataMiner* [Database]. Retrieved April 7, 2026, from https://njems.nj.gov/DataMiner

[55] U.S. Environmental Protection Agency. (n.d.). *Search Superfund sites where you live*, Retrieved April 7, 2026, from https://www.epa.gov/superfund/search-superfund-sites-where-you-live

Gabriele's Discount Tire & Auto	2079 Rt 35	Active	4/16/2015	B
234 Ernston Rd Oil Spill	234 Ernston Rd	Active	11/10/2020	B
Fulton's Landing Industrial Development	850 Main Street	Active	2/22/2021	B
Sayreville Boro Municipal Buildings	167 Main St	Active	8/20/2021	B
Sayreville Power Llc	99 River Road	Active	11/26/2025	B
Horseshoe Road Superfund Site	Horseshoe Rd	Active	10/30/2000	C1
Richies Getty	237 Main St	Active	6/24/2011	C1
Disch Confined Disposal Facility	Main St	Active	11/12/2015	C1
E I Dupont Denemours & Co	250 Cheesequake Rd	Active	3/28/2000	C2
6099 Gas Corp	299 Rtes 9 & 35 Southbound	Active	3/16/2011	C2
Former Amoco Service Station #5148	Rt 9 & 35 N	Active	3/21/2011	C2
Jon Bon Jovi Service Plaza #80005860	Gs Pwy Mm 124 - Cheesequake Plz	Active	3/28/2011	C2
Speedway 3437 / 7-Eleven 44748	974 Rt 9 S/B	Active	10/11/2011	C2
Tiger Paw Exxon	912 Rt 9 S & Kenneth Ave	Active	11/3/2011	C2
Bus Body Works	7061 Rt 35	Active	5/7/2012	C2
Getty 00670	957 Rt 9 North	Active	5/8/2012	C2
Roundabout Ii Property	Jernee Mill	Active	5/8/2012	C2
Former National Amusements	8020 Route 9	Active	1/26/2021	C2
John B Moore Corporation	Rt 9 & Gsp	Active	3/16/2021	C2
Vacant Lot @ Route 9 & Gsp	Rt 9 & Gsp	Active	3/30/2021	C2
Raceway Parlin	198 Ernston Rd	Active	6/23/2021	C2
Middlesex County Fire Academy	1001 Fire Academy Dr	Active	7/21/2022	C2
499 Ernston Road	499 Ernston Road	Active	12/20/2022	C2
Middlesex County Utility Authority	2571 Main St Ext	Active	12/15/2023	C2
Piccadilly Circus St @ Sheffield Mews Condos	Piccadilly Circus St	Active	10/23/2025	C2
Sayreville Water Dept Wellfield Contamination	Bordentown Ave	Active	5/11/2005	C3
Tiger Operating Inc T/A Power Fuel	1788 Rt 35 N	Active	4/12/2012	C3
Scott Avenue Ground Water Contamination	Scott Ave	Active	6/21/2016	C3
Atlantic Resources Corporation	120 Horseshoe Rd	Active	7/9/2025	C3
Green Tree Chemical Tech Inc	50 Hercules Veterans Way	Active	4/15/1999	D
Ah Spector Sayreville Project	6275 Main St	Active	3/18/2011	D
Ethyl Corp	880 Main St	Active	12/19/2011	D

Insul-Coustic Division Celotex Corp Former	300 Jernees Mill Rd	Active	4/2/2012	D
Sayreville Generating Station	River Rd & Main St	Active	5/8/2012	D
Cmc Steel	North Crossman Rd	Active	5/16/2012	D
Sayreville Economic Redevelopment Agency	Chevalier Ave	Active	5/16/2012	D
Sayreville Seaport Associates	Off Main St	Active	11/14/2016	D
Aes Red Oak Power Plant	832 Red Oak Ln	Active - Post Rem	9/5/2012	Post remedial case
Pse&G Company	5000 Bordentown Amboy Tpke	Active - Post Rem	6/10/2013	Post remedial case
Pfizer Incorporated	Jernee Mill Rd	Active - Post Rem	6/12/2013	Post remedial case
Morgan Fire House	Rte 35 & Old Spye Rd	Active - Post Rem	8/27/2014	Post remedial case
Quigley Co Sub Of Pfizer Inc	Bordentown Ave	Active - Post Rem	1/27/2017	Post remedial case
Sayre Fisher Brick Company	309 Main St	Active - Post Rem	11/21/2017	Post remedial case
South Amboy Sunoco	943 Rt 9 & Bordentown Ave	Active - Post Rem	7/3/2019	Post remedial case
Sunoco 80000368	6055 Rt 35 & 9 S	Active - Post Rem	11/1/2022	Post remedial case
Kaydon Acquisition Xi Inc	1 Crossman Rd S	Active - Post Rem	12/27/2023	Post remedial case
Mobil Oil Corp	933 Rt 9 & Bordentown-Amboy Tpke	Active - Post Rem	1/14/2024	Post remedial case
K & D Patel Realty Llc	6040 Rt 35 & 9 N	Active - Post Rem	3/17/2025	Post remedial case

As noted in the table above, Sayreville includes two sites on the EPA's Superfund National Priorities List. These are the Atlantic Resources Corporation site (120 Horseshoe Road) and the adjacent Horseshoe Road site. One former superfund site, the Sayreville Landfill, is no longer listed as it was remediated and deleted from the list in 2011.

In addition, four New Jersey known contaminated sites also appear in the EPA's Superfund database bordering Sayreville in neighboring municipalities, these include:

- CPS/Madison Industries (Old Bridge Township)
- Evor Phillips Leasing (Old Bridge Township)
- Global Sanitary Landfill (Old Bridge Township)
- Raritan Bay Slag (Old Bridge Township)

Air Quality

Air pollutants can impair public health, reduce visibility, and damage vegetation and natural resources. Because air pollution is not confined by municipal boundaries, emissions from regional and even distant sources can affect local conditions. Long-term exposure to degraded air quality can disproportionately affect vulnerable populations. To address these risks, air pollution is regulated and tracked through a system that identifies and manages both widespread "criteria pollutants" and toxic hazardous air pollutants. While national standards exist to limit concentrations of common pollutants, air toxics present additional challenges due to their potential to cause cancer and other serious health effects even at low concentrations.

Methodology

The data consulted from this section comes from both the NJDEP and the USEPA. This includes the National Ambient Air Quality Standards (NAAQS) Attainment Area Status data and 2020 Air Toxics Assessment from the NJDEP Bureau of Air Quality Evaluation and Planning.[5657] Also consulted was the NJDEP Air Quality Permitted Facilities of New Jersey geodata set.[58] EPA data sources included the National Emissions Inventory (NEI) and the Facility Level Information on Greenhouse Gases Tool (FLIGHT) for 2023 Greenhouse Gas Emissions from Large Facilities, and the AirToxScreen Mapping Tool [59.60] NEI emissions facilities and NJDEP air quality permitted facilities are shown in Figure 11.

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The USEPA has identified six pollutants that are regulated under the National Ambient Air Quality Standards (NAAQS), commonly referred to as criteria pollutants. These include ozone, sulfur dioxide, carbon monoxide, nitrogen dioxide, particulate matter, and lead. These pollutants have been managed nationwide through a standardized process, with their atmospheric levels monitored and recorded. While the standards themselves are set by the USEPA, monitoring activities are conducted by state, local, and tribal agencies to assess whether air quality meets the established limits. According to the NJDEP Bureau of Air

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[56] New Jersey Department of Environmental Protection. (n.d.) *National ambient air quality standards (NAAQS) and attainment area status*. https://dep.nj.gov/airplanning/naaqs-and-attainment-area-status/

[57] New Jersey Department of Environmental Protection. (n.d.). *2020 air toxics risk results for New Jersey*. https://dep.nj.gov/airplanning/airtoxics/2020-risk-results-for-nj/

[58] New Jersey Department of Environmental Protection, Bureau of GIS. (Updated September 2025). *NJDEP air quality permitted facilities of New Jersey* [Data set]. NJGIN Open Data. https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::njdep-air-quality-permitted-facilities-of-new-jersey/

[59] EPA Office of Air Quality Planning and Standards. (Updated May 2025). *National Emissions Inventory (NEI) 2020 for Facility Point Sources, US EPA, OAR, OAQPS* [GIS layer]. Retrieved April 28, 2026, from https://www.arcgis.com/home/item.html?id=72ed295d9f3d41f19db72c6bc0308a7e

[60] U.S. Environmental Protection Agency. (n.d.). 2020 AirToxScreen Mapping Tool [Web application]. Retrieved April 28, 2026, from https://experience.arcgis.com/experience/a0deb771dbcd40d0a46fbe83adc51747/

Quality Evaluation and Planning, the state has reached attainment of all standards except for Ozone.

Air toxics are classified as air pollutants other than the criteria pollutants (excluding lead, which is considered both a criteria pollutant and an air toxic) that are released into the atmosphere in amounts capable of causing harmful health effects. These pollutants can pose serious health risks, ranging from respiratory irritation to birth defects and cancer. Although NAAQS standards are not established for these substances, the USEPA began regulating nearly 200 such pollutants. These regulated air toxics are referred to as Hazardous Air Pollutants (HAPs).[61]

According to the 2020 Air Toxics Assessment for New Jersey, Middlesex County had eight air toxics and had a modeled air concentration greater than the established health benchmark. These pollutants are acetaldehyde, benzene, carbon tetrachloride, diesel particulate matter, ethylene oxide, formaldehyde, naphthalene, and polycyclic organic matter/ polycyclic aromatic hydrocarbons. According to the EPA, the cancer risk from air toxics in Sayreville census blocks ranges from 30 to 40 per million.

Table 14: Risk by Air Toxic

Toxic	Percent of Total Cancer Risk
Formaldehyde	58.16%
Ethylene Oxide	6.99%
Carbon Tetrachloride	9.98%
Benzene	6.18%
Acetaldehyde	5.59%
Other	13.11%

The National Emissions Inventory (NEI) is a comprehensive estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emission sources. The NEI is released every three years based primarily upon data provided by State, Local, and Tribal air agencies for sources in their jurisdictions and supplemented by data developed by the US EPA.

NEI point sources include emissions estimates for larger sources that are located at a fixed, stationary location. Point sources in the NEI include large industrial facilities and electric power plants, airports, and smaller industrial, non-industrial, and commercial facilities. The emissions potential of each facility determines whether that facility should be reported as a point source, according to emissions thresholds set in the Air Emissions Reporting Rule

[61] New Jersey Department of Environmental Protection. (n.d.). *Air toxics*. https://dep.nj.gov/airplanning/airtoxics/

(AERR). Major Criteria Air Pollutant (CAP) point source emissions are those greater than or equal to 100 tons per year (except lead, which is 0.5 tons per year). The table below shows the NEI point sources in Sayreville.

Table 15: 2020 NEI Point Sources

Name (Major CAP in Bold)	Address	Description
Dupont Specialty Products Usa, Llc	250 Cheesequake Rd	
Ashland Specialty Ingredients	50 South Minisink Ave	
Cmc New Jersey	**North Crossman Rd**	**Steel Mill**
Efs Parlin Holdings, Llc	790 Washington Rd	Electricity Generation via Combustion
Industrial Summit Technology Corp	250 Cheesequake Rd	
Jersey Cooperage Company, Inc	20 River Rd	
Mcua Landfill Gas Utilization Project	Middlesex County Utilities Authority	Electricity Generation via Combustion
Middlesex County Utilities Authority	2571 Main St	Wastewater Treatment Facility
Red Oak Power Llc	**Red Oak Power Llc**	**Electricity Generation via Combustion**
Sayreville Generating Station	Sayreville Power Llc	Electricity Generation via Combustion
Sayreville Power Lp	**Sayreville Power Lp**	**Electricity Generation via Combustion**
The Chemours Company Fc Llc	250 Cheesequake Rd	

The EPA reports 4,653,155 metric tons of carbon dioxide equivalent (mt CO2e) were emitted from large facilities in Middlesex County. With approximately 93% coming from power plants. Large facilities reporting in Sayreville include Red Oak Power LLC at 1,228,376 mt CO2e, Sayreville Power LP at 439,364 mt CO2, CMC Steel New Jersey at 75,627 mt CO2e, and EFS Parlin Holdings, LLC at 4,639 mt CO2.

The NJDEP Bureau of Stationary Sources manages permitting for stationary sources of air pollution in the state and provides a database of all facilities with air quality permits. These are categorized as major or minor by NJDEP. The table below lists all air quality permit holders in Sayreville.

Table 16: Air Quality Permitted Facilities

Name	Address	Description
Major Facility		
Cmc Steel New Jersey	1 N Crossman Rd	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills
Middlesex Cnty Utilities Auth	2571 Main St	Electric and Other Services Combined
Middlesex Cnty Utilities Authority	2571 Main St	Sewerage Systems
Red Oak Power Llc	832 Red Oak Ln	Electric Services
Sayreville Generating Station	7702 River Rd	Electric Services
Sayreville Power Generation Lp	601 Jernee Mill Rd	Fossil Fuel Electric Power Generation
Minor Facility		
19 Petroleum	1949 Rt 35	Gasoline Stations

6099 Gas Corp	6099 & Rt 35	Other Gasoline Stations
A One Truck Stop Llc	15 Victory Plz	
Altice Usa	400 Kennedy Dr	Wired Telecommunications Carriers
Alzo Inc Sayreville Process Facility	650 Jernee Mill Rd	Chemicals and Allied Products, NEC
American Pile Driving Equipment Inc	401 Hartle St	Other Support Activities for Road Transportation
American Tower 88099 - Sayreville	491 Ernston Rd	Wired Telecommunications Carriers
Ashland Specialty Ingredients	50 S Minisink Ave - Ste 1	All Other Miscellaneous Chemical Product and Preparation Manufacturing
Boehnhurst Sewage Pump Station	Boehnhurst Ave	Sewerage Systems
Boro Of Sayreville Road Dept Garage	Veterans Dr & Main St	Gasoline Service Stations
Brown's Boat Yard	7 Zaunerowicz Rd	Other Gasoline Stations
Center For Lifelong Learning	333 Cheesequake Rd	Other Schools and Instruction
Chemo Dynamics Inc	3 S Crossman Rd	
Chemours Parlin Finishes	250 Cheesequake Rd	Paint and Coating Manufacturing
Crossway Creek Sewage Pumping Station	Gondek Dr	Sewerage Systems
Delta Serv Sta	350 Main St	Tire Dealers
Dupont Parlin Site	250 Cheesequake Rd	Photographic and Photocopying Equipment Manufacturing
Former Nl Industries Inc Sanitary Landfill	1000 Chevalier Ave	Waste Treatment and Disposal
Frsteam By Tristate	750 Hartle St	Drycleaning and Laundry Services (except Coin-Operated)
Garden State Green Energy Inc	4430 Bordentown Ave	UNKNOWN
Getty Service Station #00670	957 Rt 9	Other Gasoline Stations
Guest Supply Co	409 Kennedy Dr	UNKNOWN
Industrial Summit Technology Corp	500 Cheesequake Rd	Basic Chemical Manufacturing
J&P Gas Go Llc	3340 Washington Rd	Other Gasoline Stations
Jersey Cooperage Co Inc	20 River Rd	Industrial Supplies
Jesse Selover School	150 Lincoln St	Elementary and Secondary Schools
Lakeview Apartments	1 Kulas Ln	New Multifamily Housing Construction (except Operative Builders)
Level 3 Communications	809 Ernston Rd	All Other Telecommunications
Main Cleaners	69 Main St	Drycleaning and Laundry Services
Melrose Sewage Pump Station	Scott Ave	Sewerage Systems
Middlesex Cnty Fire Academy	1001 Fire Academy Dr	Fire Protection
Middlesex County-Area 3 Garage	750 Jernee Mill Rd	Gasoline Service Stations
Morgan Marina	8000 Gondek Drive	Marinas
NJ Highway Auth Cheesequake Service Area	Garden State Pkwy Mm 124.0	
NJ Highway Auth Raritan Toll Plz South	Garden State Pkwy Mm 125.4	Regulation and Administration of Transportation Programs
NJ Natural Gas Sayreville Station	River Rd & Main St	Natural Gas Distribution
One Hour Cleaners	3197 Washington Rd	Drycleaning Plants, Except Rug Cleaning
Our Lady Of Victories	42 Main St	Religious Organizations
Parlin Shell	2800 Washington Rd	Other Gasoline Stations
Power Fuel	1788 Rt 35	Other Gasoline Stations

PSE&G Sayreville Gas Subheadquarters	5000 Bordentown Tpke	Electric and Other Services Combined
Pse&G Sayreville M&R	Jernees Mill Rd	Fossil Fuel Electric Power Generation
Pse&G Sayreville M&R	Washington Rd	Electric and Other Services Combined
Quickchek Corp	3101 Bordentown Ave	Gasoline Stations with Convenience Stores
Raritan Street Booster Station	Raritan St	Sewerage Systems
Sabert Corp	879-899 Main St	All Other Rubber Product Manufacturing
Sabert Corp	2288 Main St Ext	Unlaminated Plastics Profile Shape Manufacturing
Samsel Upper Elementary School	298 Ernston Rd	
Sayreville Auto Body	276 Washington St.	Automotive Body, Paint, and Interior Repair and Maintenance
Sayreville Boro Bordentown Avenue Wtp	3750 Bordentown Ave	Water and Sewer Line and Related Structures Construction
Sayreville Boro Crossman Pump Station	N Crossman Rd	Sewerage Systems
Sayreville Boro Emergency Squad	776 Washington Rd	Other General Government Support
Sayreville Boro Municipal Bldg	167 Main St	Executive, Legislative, and Other General Government Support
Sayreville Boro Public Safety Complex	1000 Main St	Other General Government Support
Sayreville Boro River Road Pump Station	River Rd	Sewerage Systems
Sayreville Boro River Road Pump Station	River Rd	Sewerage Systems
Sayreville Boro Senior Citizens Ctr	423 Main St	Civic and Social Organizations
Sayreville Boro Weber Avenue Pump Station	Weber Ave	Water Supply and Irrigation Systems
Sayreville Borough Bd Of Ed-Arleth School	3198 Washington Rd	Elementary and Secondary Schools
Sayreville Borough Bd Of Ed-Eisenhower School	601 Ernston Road	Elementary and Secondary Schools
Sayreville Borough Bd Of Ed-Wilson School	65 Dane Street	Elementary and Secondary Schools
Sayreville Borough-Eugene Pumping Station	Frank Ave	Sewerage Systems
Sayreville Borough-Morgan Sewage Pump Station	Rt 35	Sewerage Systems
Sayreville Exxon Service Station	6040 Rt 35 & Rt 9	Gasoline Stations
Sayreville Fuel Inc	273 Washington Rd	Gasoline Stations
Sayreville High School	820 Washington Rd	Elementary and Secondary Schools
Sayreville Housing For Seniors Inc	650 Washington Rd	
Sayreville Landfill Iii Site Commission	Jernee Mill Road	Refuse Systems
Sayreville Middle School	800 Washington Rd	Elementary and Secondary Schools
Sayreville Pump Station	Canal St	Water Supply and Irrigation Systems
Shri Krishna Gasoline Llc	Main St & Macarthur Ave	Other Gasoline Stations
Skytop Gardens Apartments	Ernston Rd	Operators of Apartment Buildings

South Amboy City Hall	140 N Broadway	Other General Government Support
South Amboy Filling Corp	6090 Rt 9 & 35 N	Other Gasoline Stations
South Amboy Sunoco	943 Rt 9n & Bordentown Av	Other Gasoline Stations
Speedway #03437	974 Rt 9	Other Gasoline Stations
Sunoco Retail Llc	Garden State Pkwy Mm 124	Gasoline Stations
Sunoco Retail Service Station	6055 Rt 9	Other Gasoline Stations
Tiger Paw Service Station	912 Rt 9	Gasoline Stations with Convenience Stores
Tms International Llc	1 N Crossman Rd	Materials Recovery Facilities
Transco Compressor Station 207	55 Manzo Blvd	Oil and Gas Pipeline and Related Structures Construction
Turbo Building	2600 Main St Ext	Miscellaneous Apparel and Accessory Stores
Verizon South Amboy Co (28400)	934 Rt 9	Wireless Telecommunications Carriers (except Satellite)
Wawa Food Market #8404	969 Rt 9	Gasoline Stations with Convenience Stores

Climate Change

Climate change is a defining environmental challenge for New Jersey, with broad implications for public health, natural systems, and infrastructure. Rising temperatures, more frequent and severe heat waves, increasing sea levels, and intensifying storms are already affecting the environment. These changes threaten human safety, strain water resources, accelerate ecosystem loss, and increase the frequency and severity of flooding. Temperature increases disproportionately affect areas with significant development and high social vulnerability. Sea-level rise and coastal storms will impact low-lying areas and associated infrastructure, groundwater supply, and wetlands. While the wide range and complexity of climate impacts are beyond the scope of this inventory, it is important that this report briefly examines projected changes in heat, inundation, and storm impacts to better anticipate future conditions and identify areas of heightened risk.

Methodology

While the scope of climate change impacts will be wide-ranging, this analysis focuses on key implications for the State of New Jersey as described in the 2025 New Jersey Scientific Report on Climate Change. With the expected increase in temperatures, more detailed analysis was focused on the urban heat islands and heat vulnerability, using the NJDEP Urban Heat Islands and Land Surface Temperatures in New Jersey dataset and Rutgers New Jersey Climate Change Resource Center's Heat Vulnerability Index and the Heat Island and

Overburdened Communities Analysis datasets.[62,63,64] These are shown in Figure 12. Similarly, with the expected increase in sea levels and major storms, particular hazards analyzed include the National Oceanic and Atmospheric Administration (NOAA) Sea Level Rise Inundation model and the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model, which were consulted.[65,66] These are shown in Figure 13.

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Temperature Increases

According to the 2025 New Jersey Scientific Report on Climate Change, despite 20% decline in greenhouse gas emissions in New Jersey between 2006 and 2022. The state continues to warm faster than both the broader Northeast region and the global average. Average annual temperatures are projected to rise by roughly 3.7 to 6.2°F by the end of the century, contributing to more frequent, longer, and more intense heat waves. That will impact human and ecological communities. Figure 12 shows potential impacted areas in Sayreville. This includes the existing urban heat islands, locations of moderately high to high impervious surface coverage (which can exacerbate the urban heat island effect), and census tracts in Sayreville where people are most vulnerable to the impacts of higher temperatures.

Sea-Level Rise

Sea-level rise represents one of the most significant climate impacts facing New Jersey and Sayreville. Sea levels in the state are rising at more than twice the global average. By 2050, there is a 50 percent chance that sea-level rise will reach or exceed 1.3 feet, with higher-end projections accounting for rapid ice-sheet loss approaching nearly 2 feet by mid-century and more than 4 feet by 2100. Low-lying upland forests and developed areas are increasingly vulnerable to inundation, saltwater intrusion, and permanent land loss. Figure 13 reflects this potential inundation in Sayreville at both 2ft and 5ft of sea-level rise.

As sea levels rise, coastal wetlands and marshes will face saltwater inundation and erosion. An estimated 61 percent of monitored tidal wetlands in New Jersey are not gaining elevation fast enough to offset current sea-level rise. These changes reduce critical wildlife habitat,

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[62] NJDEP Bureau of GIS. (Updated May 2025.). *Urban Heat Islands and Land Surface Temperatures in New Jersey* [GIS layer]. Retrieved April 28, 2026, from https://www.arcgis.com/home/item.html?id=27d0f981fc8340fc904e5fb91804d85a

[63] Rutgers University. (Updated August 2025.). *NJ Heat Vulnerability Index* [GIS layer]. Retrieved April 28, 2026, from NJ Heat Vulnerability Index

[64] Rutgers University. (Updated February 2026.). *Heat Island and Overburdened Communities Analysis* [GIS layer]. Retrieved April 28, 2026, from https://www.arcgis.com/home/item.html?id=a1f0bdf81c4742e6beac89ccdbb39a80

[65] NOAA Office for Coastal Management. (Updated August 2024.) *NOAA Sea-Level Rise Inundation* [GIS Layers]. Retrieved April 28, 2026, from https://coast.noaa.gov/digitalcoast/data/slr.html

[66] NOAA National Weather Service. (Updated May 2025.) *SLOSH Hurricane Storm Surge* [GIS layer]. Retrieved April 28, 2026, from https://www.arcgis.com/home/item.html?id=a2888059e0564520856e845dd913996d

weaken natural flood buffers, and diminish water-quality functions such as nutrient and contaminant filtration.

Saltwater intrusion associated with rising sea levels also threatens aquifers, freshwater intakes, and recharge areas, particularly in areas like Sayreville, where groundwater withdrawals are significant, further stressing regional water resources.

Increasing Rainfall & Storms

Inland and coastal flooding risks are intensified by changes in precipitation patterns. Annual precipitation in New Jersey is expected to increase by approximately 6 to 7 percent by 2100, with heavier and more frequent intense rainfall events, increasing flooding risks. Larger storms are also projected to deliver significantly greater rainfall volumes, increasing runoff, flooding, and erosion. Figure 13 also shows the potential storm surge for Category 1 through 4 hurricanes in Sayreville.