REMINGTON & VERNICK ENGINEERS

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Watershed Inventory Report

Phase 1 of the Watershed Improvement Plan –
INITIAL DRAFT= Pre January 1, 2026 filing deadline

NEPTUNE TOWNSHIP
MONMOUTH COUNTY

Date Approved: *Pending (Dec 2025)*

Permit Number: NJG0150631

Stormwater Program Coordinator: Terence Vogt, PE

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DISCLAIMER - STORMWATER MAPPING IS BEING COMPLETED FOR NEPTUNE TOWNSHIIP PRIOR TO THE JANUARY 1 2026 FILING DEADLINE. MAPPING WILL BE FILED WITH NJDEP AND MADE AVAILABLE THROUGH NEPTUNE TOWNSHIPS STORMWATER WEBLINK (BELOW).

HTTPS://NEPTUNETOWNSHIP.ORG/STORMWATER-MANAGEMENT

THE FINAL PHASE 1 WIP REPORT WILL BE REVISED TO INCLUDE DATA FROM THIS MAPPING WORK AFTER IT IS COMPLETED (BY OR BEFORE SPRING, 2026)

Acronyms & Definitions

1. Acronyms
   - i. "BMP" – Best Management Practice
   - ii. "DO" – Dissolved Oxygen
   - iii. "EPA" – U.S. Environmental Protection Agency
   - iv. "GIS" – Geographic Information System
   - v. "HUC 14" – Hydrologic Unit Code 14
   - vi. "MS4" – Municipal Separate Storm Sewer System
   - vii. "MTD" – Manufactured Treatment Device
   - viii. "NJPDES" – New Jersey Pollutant Discharge Elimination System
   - ix. "NJ-WET" – New Jersey Watershed Evaluation Tool
   - x. "TDS" – Total Dissolved Solids
   - xi. "TMDL" – Total Maximum Daily Load
   - xii. "TSS" – Total Suspended Solids
   - xiii. "WIP" – Watershed Improvement Plan
2. Definitions
   - i. "HUC 14" or "hydrologic unit code 14" means an area within which water drains to a particular receiving surface water body, also known as a subwatershed, which is identified by a 14-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey. (N.J.A.C. 7:9B)
   - ii. "Municipal separate storm sewer" (or MS4 conveyance) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) as defined in more detail at N.J.A.C. 7:14A-1.2.
   - iii. "Outfall" means any point source which discharges directly to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.
   - iv. "Storm drain inlet" means the point of entry into the storm sewer system.
   - v. "Stormwater" means water resulting from precipitation (including rain and snow) that runs off the land's surface, is transmitted to the subsurface, is captured by separate storm sewers or other sewerage or drainage facilities or is conveyed by snow removal equipment.
   - vi. "Stormwater facility" means stormwater infrastructure including, but not limited to, catch basins, infiltration basins, detention basins, green infrastructure (GI), filter strips, riparian buffers, infiltration trenches, sand filters, constructed wetlands, wet basins, bioretention systems, low flow bypasses, Manufactured Treatment Devices (MTDs), and stormwater conveyances.
   - vii. "Stormwater management basin" means a stormwater management basin as defined in N.J.A.C. 7:8.
   - viii. "Stormwater management measure" means a stormwater management measure as defined in N.J.A.C. 7:8.
   - ix. "Stormwater runoff" means water flow on the surface of the ground or in storm sewers,

resulting from precipitation.

x. "Total maximum daily load" or "TMDL" means a total maximum daily load formally established pursuant to Section 7 of the Water Quality Planning Act (N.J.S.A. 58:11A-7) and Section 303(d) of the Clean Water Act, 33 U.S.C. §§12512 et seq. A TMDL is the sum of individual wasteload allocations for point sources, load allocations for nonpoint sources of pollution, other sources such as tributaries or adjacent segments, and allocations to a reserve or margin of safety for an individual pollutant.

xi. "Waters of the State" means the Monmouth and its estuaries, all springs, streams and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction" (see N.J.A.C. 7:9B-1.4)

Acknowledgements

Neptune Township's Phase 1 Watershed Inventory Plan (WIP) report was prepared by Remington & Vernick, Engineers. Funding for preparation of the plan was provided by Neptune Township.

This WIP Inventory Report was prepared using NJDEP-GIS stormwater infrastructure mapping data obtained by RVE; which was funded in-part by a $25,000 NJDEP stormwater mapping grant provided to Neptune Township.

Regional Collaboration

Neptune Township has not collaborated regionally in the preparation of this Phase 1 Inventory Report. At Neptune's discretion it may choose to collaborate for preparation of Phase 2 and Phase 3 reports due January 1, 2027 and December 31, 2027, respectively.

Introduction

The purpose of this watershed inventory report is to provide a comprehensive understanding of key, defining features within the watersheds throughout Neptune Township. This involves gathering, organizing, and presenting information about existing conditions and infrastructure within each watershed. It aims to serve as a tool for informed decision-making, planning, and implementation of sustainable watershed management strategies aimed to protect and enhance the health of the watershed, its associated ecosystems, and the surrounding communities.

Located in Monmouth County in central New Jersey, Neptune Township covers over 8.8 square miles and is located west of Asbury Park and Belmar Borough, adjoining Neptune City (north), east the Garden State Parkway and north of Interstate 195. Its municipal address is 25 Neptune Boulevard, Neptune, NJ 07753.

According to ***2020 Census data***, Neptune, NJ had a population of approximately 28,061, The township's population was 46% White, 30% Black, 3% Asian, and 3% Hispanic. Other demographic data includes a median age of 43.1 years and a median household income of approximately $50,154 (based on 2010-2014 data). Additional demographic information is listed below:

- **Age:**
  - Median age: 43.1 years
  - Percentage under 18: 18.4%
  - Percentage 65 and older: 15.3%
- **Households:**
  - Average household size: 2.24
  - Percentage of households with married couples: 38.8%
  - Percentage of non-family households: 42.8%
- **Income (2006-2010 data):**
  - Median household income: $50,154
  - Median family income: $72,313
  - Per capita income: $31,172
  - Percentage of families below the poverty line: 3.0%

From the 2012 Neptune Township, Comprehensive NJ Master Plan Re-examination (by CME Associates)

The Township of Neptune has been approaching build-out of its vacant developable parcels. The Township of Neptune is comprised of a variety of land uses, including residential, retail, office, public and institutional uses and a nominal amount of light industrial uses.

Residential uses comprise the single largest land use category in Neptune Township. As indicated above, out of all of the parcels in the Township, nearly 87% are currently being utilized as a residential single-family, two-family, or three-family home. In addition, approximately 1% of the parcels in the Township are being utilized as apartments. Residential land uses comprise over 42% of the developable acres of the Township. The second and third largest land uses in terms of acreage are public and commercial land uses, which each comprise approximately 16% of the total developable acreage of the Township. Vacant land comprises roughly 12% of the remaining developable land of the Township. However, it should be noted that although 12% of the developable land area or 513 acres remains vacant.

A significant portion of this undeveloped area is located within the High Pointe – Route 18 Redevelopment area, comprised of approximately 166 acres, while the balance of the vacant parcels are relatively small in nature and many may not be developable due to size, location, environmental constraints, easements, and deed restrictions among other things. In addition, many of the vacant parcels are existing open spaces for condominium developments, buffer and transitional areas.

the Township has essentially approached buildout and the actual vacant and developable land that remains is considerably less than what is depicted above. As such, there are few opportunities in the Township for the new development of nonresidential or residential uses on currently vacant properties.

Slightly over 87% of the total parcels in Neptune Township, which are listed on the property tax files are classified as residential. Single-family housing is the predominant type of dwelling unit. While there are a number of two and three-family dwelling units, there are also several other

multifamily residential dwellings, including apartment buildings of various types and configurations.

Commercial uses account for 414 parcels or 3.73% of the total parcels in Neptune Township. Commercial uses are found throughout the Township, but the most prevalent areas are along the Route 33, Route 35 and Route 66 corridors.

There are three industrially zoned districts in the Township. Industrial uses have diminished significantly in the Township. There is an existing LI zone Old Corlies Avenue, as well as one along 5th and Ridge Avenues, along the Township border with the Borough of Bradley Beach.

The largest and most significant institutional use in the Township is the Jersey Shore University Medical Center. Jersey

Neptune Township contains portions of six (6) HUC-14 watersheds, listed below:

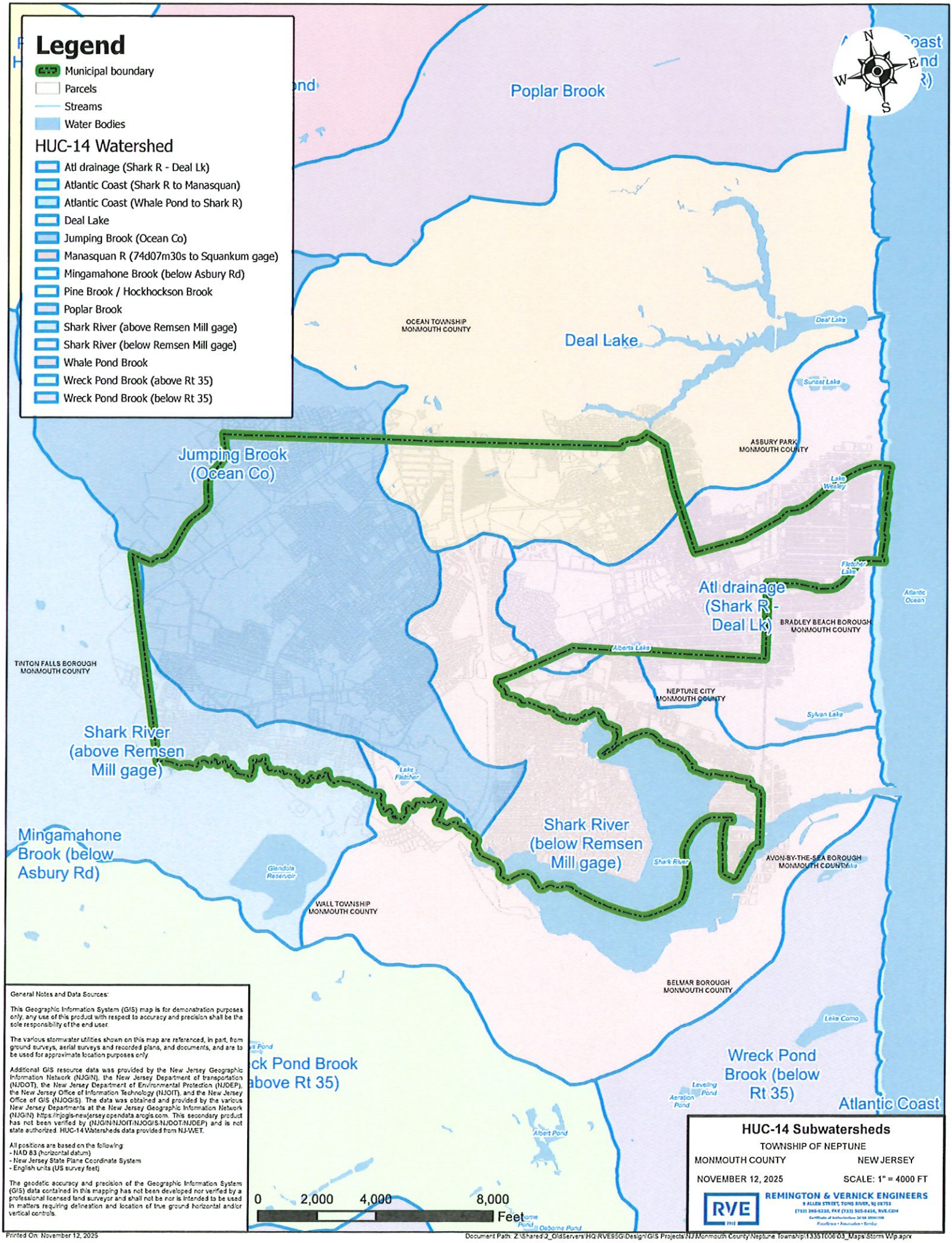
Watershed Management Area 12 (Monmouth)

- Shark River (below Remsen Mill gage)- HUC 02030104090060, Dissolved Oxygen, PCBs in Fish Tissue Impaired
- Shark River (above Remsen Mill gage) – HUC-14 02030104090040, PCB in Fish Tissue Impaired
- Jumping Brook (Ocean Co) – HUC-14 02030104090050, no impairments
- Deal Lake – HUC-14 02030104090090, E Coli Impaired
- Atlantic Coast (Whale Pond to Shark R) - HUC-14 02030104930010, Dissolved Oxygen Impairment.
- Atl drainage (Shark R - Deal Lk) – HUC-14 02030104090090, E Coli Impairment

Neptune Township contains several significant surface water bodies, including portions of the Atlantic Ocean, the Shark River estuary, and the three interconnected coastal lakes: Deal Lake, Fletcher Lake, and Wesley Lake.

Major Surface Water Bodies

- Atlantic Ocean: Neptune Township's eastern border (specifically the Ocean Grove section) is the Atlantic Ocean.
- Shark River/Shark River Bay: This estuary forms the majority of the Township's southern border and drains into the Atlantic Ocean.
- Deal Lake, Fletcher Lake, and Wesley Lake: These are small, dammed coastal lakes that form parts of the northern and eastern borders with neighboring municipalities like Asbury Park and Bradley Beach.



General Notes and Data Sources:

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All positions are based on the following:
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- New Jersey State Plane Coordinate System
- English units (US survey feet)

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HUC-14 Subwatersheds

TOWNSHIP OF NEPTUNE

MONMOUTH COUNTY NEW JERSEY

NOVEMBER 12, 2025 SCALE: 1" = 4000 FT

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Streams and Tributaries

The Township's inland areas drain into the Shark River watershed via several brooks and streams, including:

- Jumping Brook
- Musquash Brook
- Wells Brook
- Hankins Brook
- Hollow Brook (a tributary of Deal Lake)
- Robins Swamp Brook
- Sarah Green Brook

Neptune Township is primarily located in the Shark River Watershed, which is part of Watershed Management Area 12 (WMA 12). Some northern and eastern areas of the township drain into Deal Lake and Wesley Lake, which also contribute to the coastal drainage system in WMA 12.

- Shark River Watershed: The majority of Neptune Township's drainage flows into the Shark River. The Shark River drains into the Atlantic Ocean through Shark River Inlet.

- Deal Lake and Wesley Lake: A portion of the northern part of the township drains into Deal Lake, and the eastern part drains into Wesley Lake, which then flows into the Atlantic Ocean.

- Watershed Management Area 12 (WMA 12): Both the Shark River and the Deal Lake/Wesley Lake systems are part of this larger coastal watershed area, which covers numerous municipalities in Monmouth, Middlesex, and Ocean counties.

Neptune Township has significant flooding problems due to its proximity to the Atlantic Ocean, Shark River, coastal lakes, and numerous streams. These issues are worsened by coastal storms, heavy rainfall, and high tides, leading to both widespread disruptions and localized, severe damage in areas like Shark River Hills. Major past floods include Hurricane Sandy in 2012, which caused flooding to a high of 14.1 feet.

Causes and types of flooding

- **Coastal and storm-driven flooding:** Strong winds, rough seas, and storm surges cause significant flooding, as seen during Hurricane Sandy and other events.
- **Rainfall and high tides:** Regular heavy rain events and high tides can cause flooding in addition to major storms, affecting areas near the numerous water bodies within the township.
- **Vulnerable areas:** Specific neighborhoods like Shark River Hills are particularly vulnerable, but flooding impacts the entire township by closing roads, disrupting utilities, and affecting all residents to some degree.
- **Increasing risk:** Climate change is contributing to higher seas and stronger storms, which is projected to increase flooding risk in the future.

Public Participation (Neptune Township Phase 1 WIP Inventory Report)

- **List of stakeholders**

  The Phase 1 Watershed Inventory Report (WIP) was prepared for Neptune Township by Remington & Vernick, Engineers (RVE).

  Stakeholders for this plan include Neptune Township, Neptune Township Committee, Neptune Township Planning Board, Neptune Township Zoning Board and the Neptune Township Department of Public Works (DPW).

- **List of Previously Held Meetings (Neptune December 2025 Committee meeting)**

  Neptune Township shall solicit input from stakeholders, including residents, business owners, owners of private stormwater facilities (as per b.xiii below), and other municipalities and/or dischargers to the subwatershed(s) to be involved in the Plan development process

  Neptune Township shall conduct semi-annual public information sessions (in-person or virtual) beginning on or before January 1 2026, throughout the development of the Plan. These sessions could be included on the agenda for Township Committee (or equivalent) meetings.

- **Summary of Feedback**
  - *Summarize any feedback received from informational or stakeholder sessions. Include notes and meeting minutes from any public meetings for the WIP*

- **Future Scheduled Meetings**

  A second (and final) semi-annual public information session shall be held by or before June, 2026. The final draft of the Phase 1 Watershed Inventory Report will be available on Neptune Township's Stormwater Webpage at the link below:

  https://www.Neptunenj.gov/department/stormwater

  The second meeting date and time will be advertised on Neptune's municipal website:

  https://www.Neptunenj.gov/

Stormwater Outfall(s)

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Receiving Surface Water Bodies & Water Quality Classifications

Stream bodies in the majority of the Township are classified as ***Freshwater Non-Trout, Saline Estuary (FW2-NT/SE1).*** This acronym stands for:

- **FW2**: Freshwater 2 (a general classification for freshwaters not designated as FW1 or Pinelands waters).

- **NT**: Non-Trout (waters that are not capable of sustaining a natural or stocked trout population).

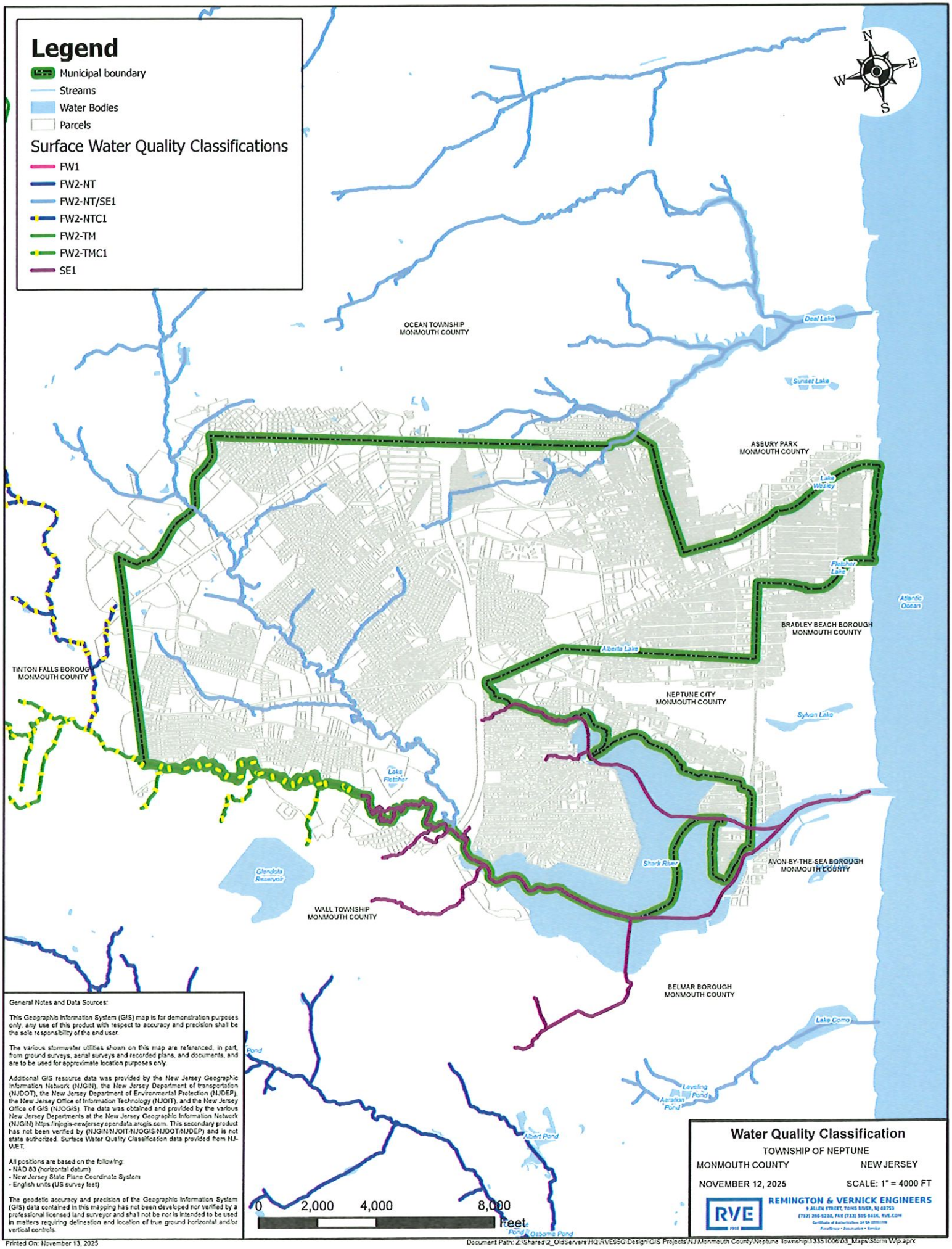
- **SE1:** This sub-classification applies to the saline (saltwater) portion of the water body and designates it as "saline estuarine 1." This is the highest quality classification for saline waters, indicating it supports uses like swimming and shellfish harvesting

Stream bodies along the southern boundary of the Township, feeding into the Shark River are classified as ***Freshwater Trout Maintenance, Category 1 (FW2-TMC1).*** This acronym stands for:

- **FW2**: General freshwater classification for waters not designated as FW1 or Pinelands Waters.

- **TM**: Trout Maintenance. The water is designated for the support of trout throughout the year.

- **C1**: Category One. This is a high-level antidegradation designation that protects the water's quality from any measurable changes. This classification often includes waters with high ecological significance.



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Water Quality Classification

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MONMOUTH COUNTY NEW JERSEY

NOVEMBER 12, 2025 SCALE: 1" = 4000 FT

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Stormwater Interconnection(s)

Interconnections between MS4s should have been acquired as part of the MS4 Infrastructure Map requirements, this section will go beyond those requirements to include any entities that interconnect with the permittee' MS4 system, including private systems. This section should detail the following information for all interconnections into and from the permittee's MS4:

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Drainage Area(s) for Stormwater Outfalls and Stormwater Interconnections

This section should detail the following information for outfalls owned/operated by the permittee and interconnection(s) from the permittee's MS4 into another entity's system:

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Storm Drain Inlets

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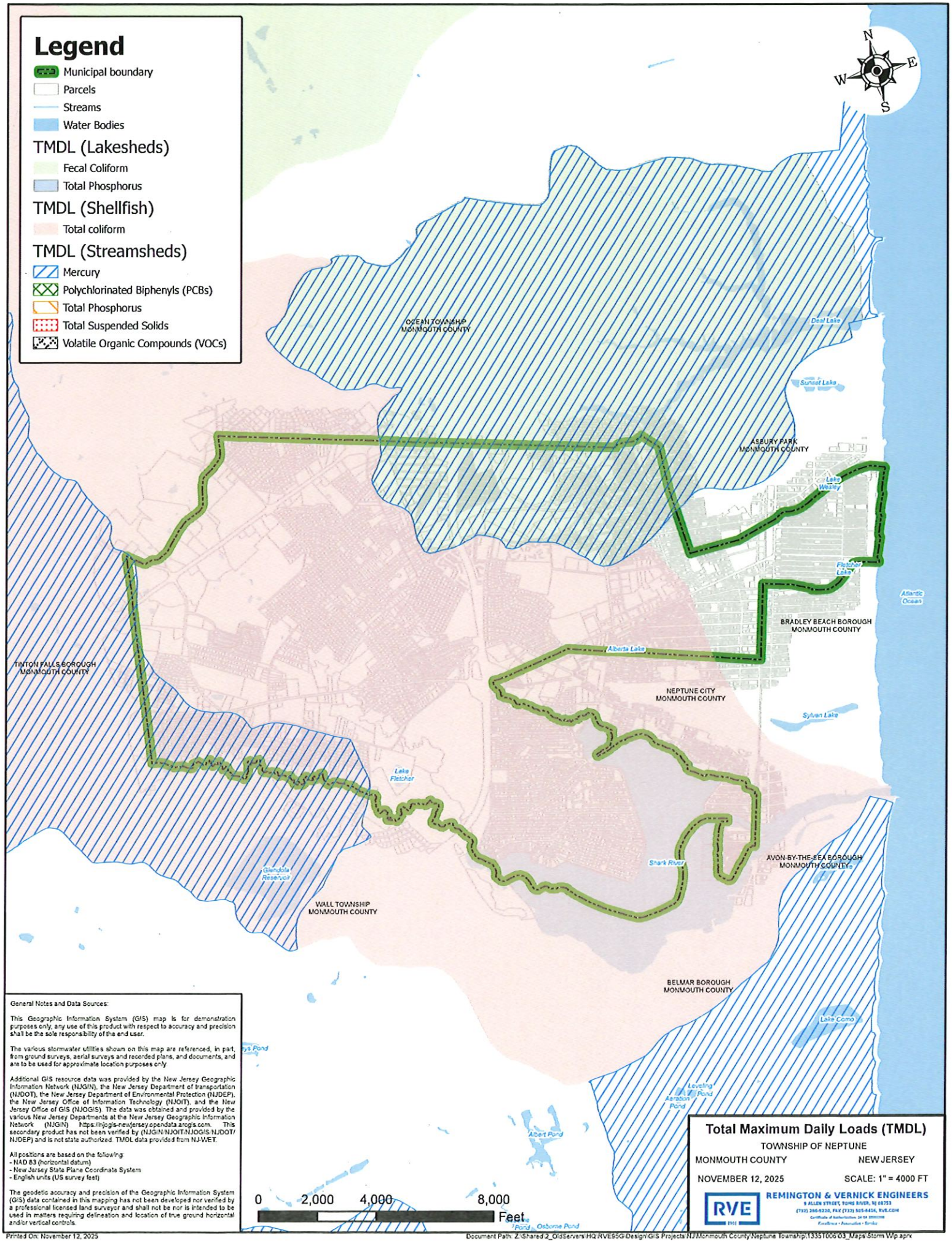
TMDLs and Water Quality Impairments

In accordance with Section 305(b) and 303(d) of the Federal Clean Water Act, New Jersey is required to assess the overall water quality of the state's waters and identify those waterbodies with a water quality impairment for which total maximum daily loads (TMDLs) may be necessary. NJDEP fulfills its assessment obligation under the Clean Water Act through the Integrated Water Quality Monitoring and Assessment Report (i.e., Integrated Report), which includes the Integrated List of Waterbodies, issued biennially. A TMDL represents the assimilative or carrying capacity of a waterbody, taking into consideration point and nonpoint sources of pollutants of concern, the natural background, and surface water withdrawals. A TMDL can be thought of as a "budget" for the total amount of a pollutant that can enter a waterbody while still maintaining surface water quality standards. TMDLs have been developed for various pollutants in various waterbodies throughout the state. Tier A MS4 discharges are considered point sources under the Clean Water Act;

Surface water quality problems in Neptune Township, New Jersey, are primarily linked to **stormwater runoff**, which carries pollutants like bacteria, fertilizers, and oil from urban and suburban areas into local waterways. Other issues include potential contamination from aging septic systems, flooding due to coastal location and heavy rainfall, and overall susceptibility to pathogens.

Issues affecting Neptune Township Stormwater Water Quality

- **Stormwater Runoff:** Runoff from streets, lawns, and other impervious surfaces is a major source of pollution. It can contain bacteria, chemicals (like fertilizers and pesticides), and debris that enter the storm drains and eventually flow into rivers and the ocean without treatment.
- **Pathogens:** Rain events can significantly increase bacteria levels in streams and wetlands, particularly from sources like pet waste, wildlife, and leaking septic systems.
- **Septic Systems:** While public sewer systems are in place, some areas still rely on septic systems. A malfunctioning system can leak and contaminate groundwater, which can then impact nearby surface water.
- **Flooding:** Due to its coastal location, the township experiences frequent flooding during storms and tidal surges. This can exacerbate water quality issues by washing pollutants from land into waterways and can sometimes lead to the failure of drainage infrastructure.
- **Vulnerability to pathogens:** The New Jersey Department of Environmental Protection (NJDEP) has rated all surface water intakes in the area as highly susceptible to pathogens, although this reflects the potential for contamination, not necessarily the presence of it. Public water systems are required to monitor and treat water to ensure it remains safe.



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Total Maximum Daily Loads (TMDL)

TOWNSHIP OF NEPTUNE

MONMOUTH COUNTY NEW JERSEY

NOVEMBER 12, 2025 SCALE: 1" = 4000 FT

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Table(s) #: TMDLs and Impairments for Subwatersheds within or bordering (Neptune Township)

HUC 14	Subwatershed Name	TMDL(s)	Impairment(s)
02030104090050	*Jumping Brook*	*Stream sheds Fecal Coliform (2004)*	*None*
02030104090060	*Shark River*	*Stream sheds Fecal Coliform (2004), Total Phosphorous (2005), Mercury (2011)*	*Dissolved Oxygen, PCBs in Fish Tissue Impaired*
02030104090040	*Shark River (above Remsen Mill gage)*	*Stream sheds Mercury (2011)*	*PCB in Fish Tissue*
02030104090090	*Deal Lake*	*Stream sheds Mercury (2010)*	*E Coli*
02030104090090	*Deal Lake*	*Lakebeds Fecal Coliforms (2007) Total Phosphorous (2003)*	*E. Coli*
02030104090060	*Shark River*	*Shellfish Total Coliforms (2006)*	*Dissolved Oxygen, PCBs in Fish Tissue Impaired*

Dissolved oxygen (DO) refers to the concentration of oxygen gas incorporated into the water. Oxygen enters the water by direct absorption from the atmosphere and is enhanced by turbulence. Running water, such as that of a swift moving stream, normally contains more dissolved oxygen than the still water of a pond or lake. Water also absorbs oxygen released by aquatic plants during photosynthesis. Sufficient DO is essential to growth and reproduction of aerobic aquatic life (e.g., see Murphy 2006, Giller and Malmqvist 1998, Allan 1995; https://www.epa.gov/caddis-vol2/dissolved-oxygen). Low levels of oxygen (hypoxia) or no oxygen levels (anoxia) can occur when excess organic materials are decomposed by microorganisms. During this decomposition process, the DO in the water is consumed. In some water bodies, DO levels fluctuate periodically, seasonally, and even as part of the natural daily ecology of the aquatic resource. As DO levels drop, some sensitive animals may move away, decline in health, or even die.

DO is considered an important measure of water quality as it is a direct indicator of an aquatic resource's ability to support aquatic life. While each organism has its own DO tolerance range, generally, DO levels below 3 milligrams per liter (mg/L) are of concern and waters with levels below 1 mg/L are considered hypoxic and are usually devoid of life. Stormwater runoff containing nutrients such as nitrate, phosphorus, and organic TSS matter and animal and pet waste cause the levels of dissolved oxygen to decrease in the receiving waters. An increase in these materials transported via stormwater runoff will have a greater impact on receiving waters.

Pathogens, including fecal coliform, and total coliform, enter the receiving waters when stormwater comes into contact with sources of these pathogens, such as pet waste, animal waste from geese and other wildlife, some farming activities, illicit discharges, failing sewage conveyance systems and septic systems, combined sewage overflows, and sanitary sewer overflows (SSOs).

While sewage treatment plants contribute a steady input of treated sewage to their receiving waters, stormwater runoff is the primary contributor to pathogen loads in the surface waters of the state. Many of these pathogens affect the designated uses of the receiving waters and are harmful to human or animal health when ingested causing intestinal disease. Pathogens can attack the immune system and cause infections that may result in abdominal issues, respiratory problems, fever, headache, skin rashes, etc. (Water Quality Topics: Pathogens | US EPA).

When receiving surface waters include shellfish harvesting as a designated use, pathogens also pose additional concerns. Proximity to potential sources such as marinas, development served by septic systems and concentrated stormwater outfall locations warrant precautionary closures of shellfish waters on a seasonal or full-time basis. The National Shellfish Sanitation Program has established criteria for pathogens that are used to determine support of the shell fishing use.

Phosphorus is a key nutrient for plant growth and is often the limiting nutrient in a freshwater setting. Total phosphorous is the sum of particulate and dissolved phosphorous which includes the total amount of phosphorous in both organic and inorganic forms. High concentrations of phosphorus in receiving waters may result from stormwater runoff due to poor agricultural practices, urban areas, leaking septic systems, illicit discharges or SSOs. Additional stormwater runoff sources of phosphorous include the breakdown of plant and leaf litter (including grass clippings), soil particles, pet and animal waste, fertilizer from lawns, and atmospheric deposition of phosphorus particles. Contribution from runoff from lawns and roads accounts for the greatest loading in many receiving waters.

An excess of phosphorus into a water body can have a detrimental effect on designated uses related to both public health and aquatic health. For instance, too much phosphorus in a surface water can cause increased growth of algae and large aquatic plants (a process called eutrophication) causing significant swings in pH and dissolved oxygen, which can in turn result in the violation of surface water quality criteria for these parameters and adversely affect the aquatic community. Additionally, high levels of phosphorus can also lead to HABs, that produce toxins which can be harmful to human and animal health. The presence of excessive plant biomass can also interfere with other designated uses, such as swimming or boating. When algae are present in large amounts, drinking water purveyors must also increase the use of disinfectants and oxidants to treat the algae, which can lead to an increase in disinfection byproducts such as trihalomethanes, listed as likely carcinogens by EPA.

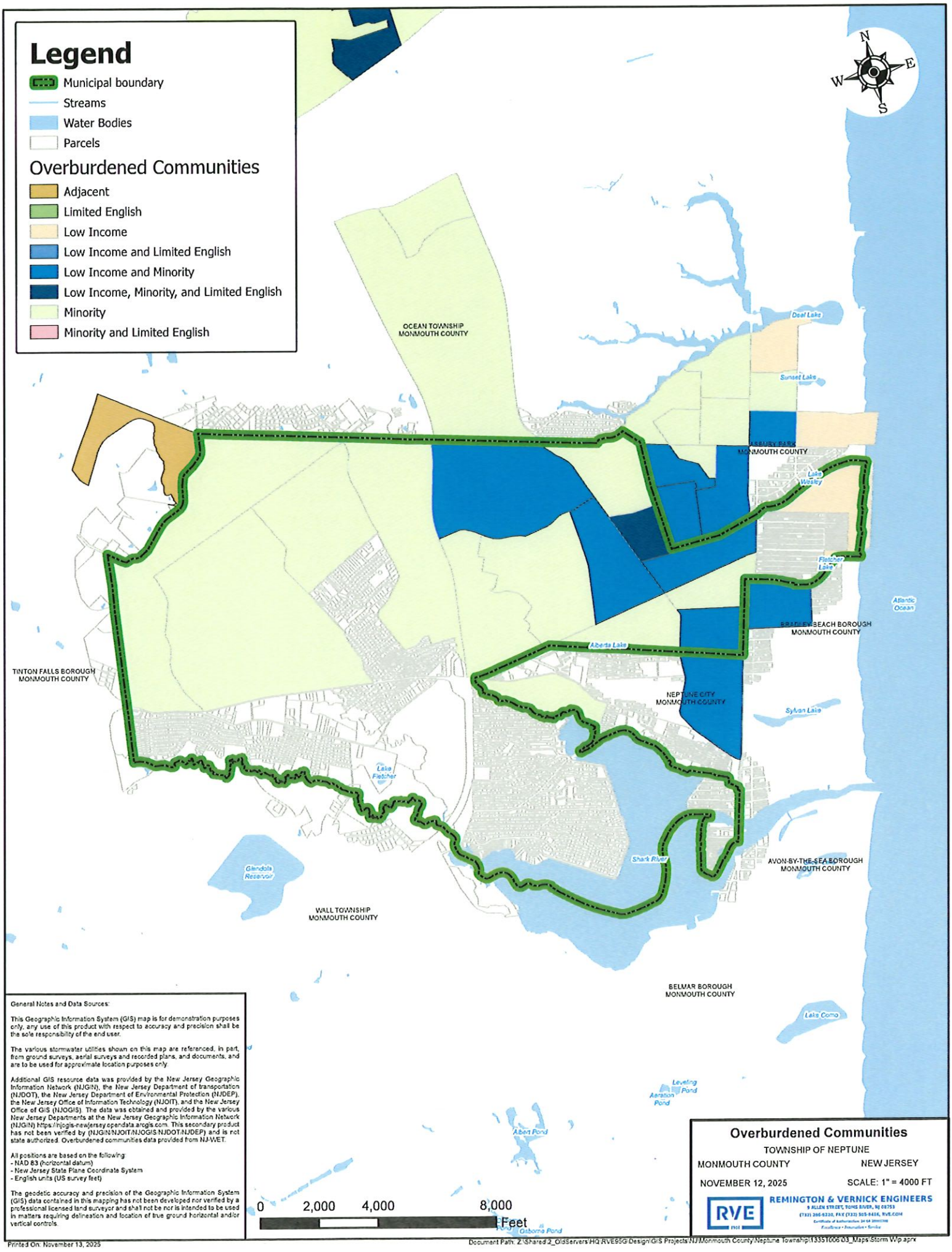
Overburdened Communities

Overburdened communities with limited financial resources have less capacity to invest in adequate stormwater management systems, increasing the vulnerability of the community to flooding. Flooding in overburdened communities can also lead to public health issues since these communities are already more susceptible to health disparities. This dataset was extracted from NJDEP's GIS Open Data source in November, 2025.

See Neptune Overburden Communities Map (attached)

Overburdened communities' data by subwatershed is summarized below:

HUC-14	Watershed	Watershed Pop. Poverty	% of Low Income
02030104090050	Jumping Brook (Ocean Co)	1954	6.75%
02030104090060	Shark River (below Remsen Mill gage)	1025	26.6%
02030104090030	Deal Lake	2272	18.9%
02030104090090	Atl drainage (Shark R - Deal Lk)	1126	39.1%
02030104930010	Atlantic Coast (Whale Pond to Shark R)	846	40.4%
02030104090020	Poplar Brook	1447	23.9%



General Notes and Data Sources:

This Geographic Information System (GIS) map is for demonstration purposes only, any use of this product with respect to accuracy and precision shall be the sole responsibility of the end user.

The various stormwater utilities shown on this map are referenced, in part, from ground surveys, aerial surveys and recorded plans, and documents, and are to be used for approximate location purposes only.

Additional GIS resource data was provided by the New Jersey Geographic Information Network (NJGIN), the New Jersey Department of Transportation (NJDOT), the New Jersey Department of Environmental Protection (NJDEP), the New Jersey Office of Information Technology (NJOIT), and the New Jersey Office of GIS (NJOGIS). The data was obtained and provided by the various New Jersey Departments at the New Jersey Geographic Information Network (NJGIN) https://njogis-newjersey.opendata.arcgis.com. This secondary product has not been verified by (NJGIN/NJOIT/NJOGIS/NJDOT/NJDEP) and is not state authorized. Overburdened communities data provided from NJ-WET.

All positions are based on the following:
- NAD 83 (horizontal datum)
- New Jersey State Plane Coordinate System
- English units (US survey feet)

The geodetic accuracy and precision of the Geographic Information System (GIS) data contained in this mapping has not been developed nor verified by a professional licensed land surveyor and shall not be nor is intended to be used in matters requiring delineation and location of true ground horizontal and/or vertical controls.

Overburdened Communities

TOWNSHIP OF NEPTUNE

MONMOUTH COUNTY NEW JERSEY

NOVEMBER 12, 2025 SCALE: 1" = 4000 FT

REMINGTON & VERNICK ENGINEERS
9 ALLEN STREET, TOMS RIVER, NJ 08753
(732) 240-8220, FAX (732) 505-8416, RVE.COM

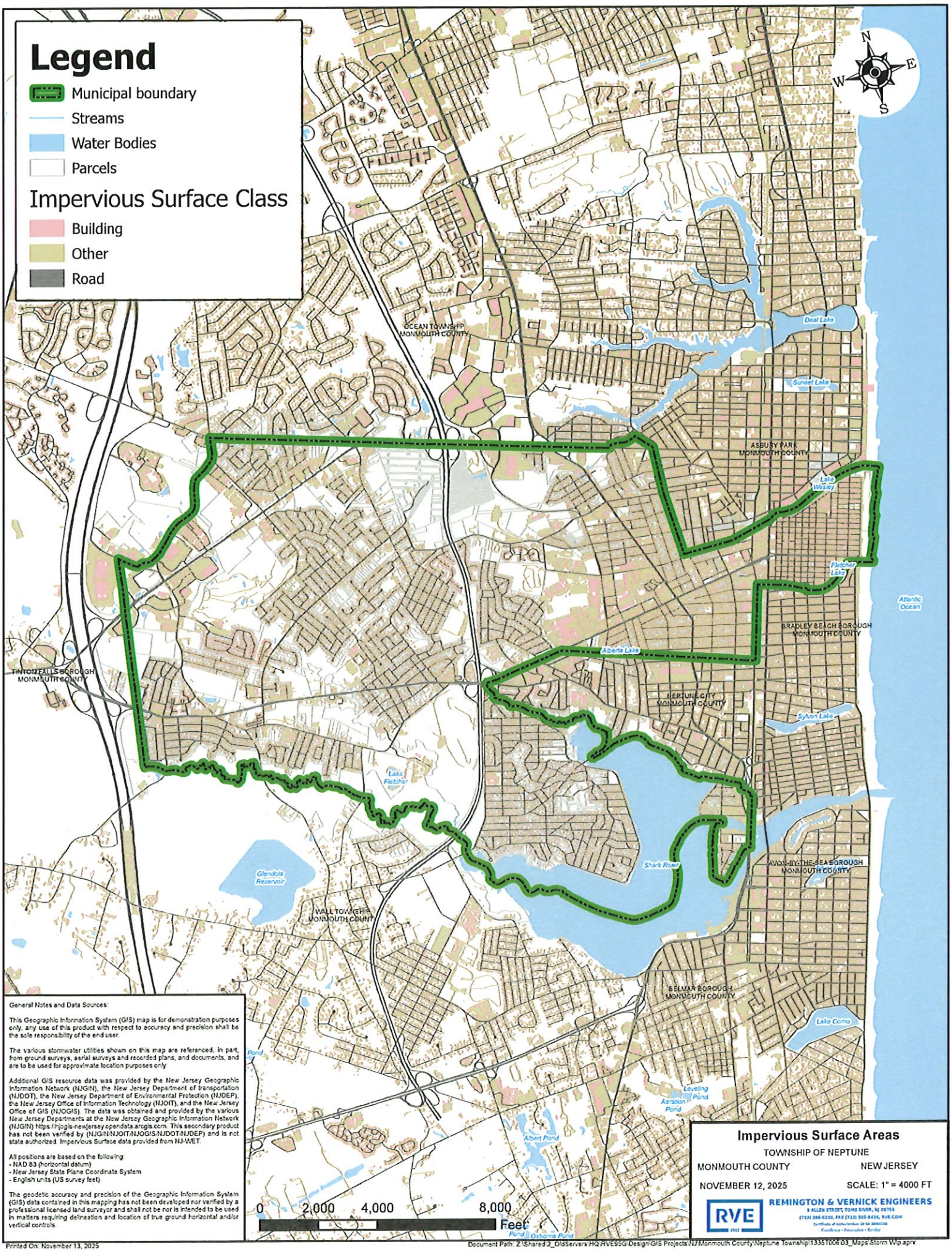
Printed On: November 13, 2025

Document Path: Z:\Shared\2_OldServers\HQ\RVE95G\Design\GIS Projects\NJ\Monmouth County\Neptune Township\13351006\03_Maps\Storm Wtr.aprx

Impervious Area (*see "Impervious Cover" Map enclosed*)

NJDEP's Open Data impervious surface GIS data layer depicts surfaces throughout Neptune Township that have been covered with materials that are highly resistant to infiltration by water, rendering them impervious. These impervious cover values were used to estimate the impervious coverage for Neptune Township. NJWET data was used in November, 2025 to obtain data for Neptune Township.

Impervious cover can have considerable impacts on ecosystem and stream health. Due to an increase in stormwater runoff caused by impervious cover, the potential for pollutants to be carried to streams and rivers increases, which in turn can impact stream quality. ***Additionally***, stormwater runoff discharging into streams increases the volume of water traveling within those streams. Increases in stream volume can lead to changes in stream conditions as it reaches equilibrium, such as increases in erosion, sediment load, and other stream attributes.



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Impervious Surface Areas

TOWNSHIP OF NEPTUNE

MONMOUTH COUNTY NEW JERSEY

NOVEMBER 12, 2025 SCALE: 1" = 4000 FT

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Non-Municipally Owned or Operated Stormwater Facilities

STORMWATER MAPPING IS BEING COMPLETED FOR NEPTUNE TOWNSHIIP PRIOR TO THE JANUARY 1 2026 FILING DEADLINE. MAPPING WILL BE FILED WITH NJDEP AND MADE AVAILABLE THROUGH NEPTUNE TOWNSHIPS STORMWATER WEBLINK (BELOW).

HTTPS://NEPTUNETOWNSHIP.ORG/STORMWATER-MANAGEMENT

THE FINAL PHASE 1 WIP REPORT WILL BE REVISED TO INCLUDE DATA FROM THIS WORK ONCE IT IS COMPLETED

Conclusion

This Watershed Inventory Report shall serve as a record of the known stormwater infrastructure, water quality data, and additional relevant information within Neptune Township. All the datasets contained in this report have been compiled into a GIS digital map that can be utilized to look at the data in far more detail than the static maps included will provide. This report will be followed by a Watershed Assessment Report, which will provide an assessment of potential water quality improvement projects that can be done to address water quality issues that have been identified in this report.

References

Data Sources

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Township of Neptune Comprehensive Master Plan, September, 2011, prepared by CME Associates.

Township of Neptune 2023 Master Plan Re-examination Report prepared by Leon S Avakian Inc. Consulting Engineers.

NJDEP ***Pollutants of Concern*** document, not dated.

Report entitled "Hamilton Township (Mercer County) Watershed Inventory Report", developed by the Rutgers Cooperative Extension Water Resources Program, dated January 31, 2024