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# Watershed Inventory Report

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

**Township of Saddle Brook**

**Bergen County**

**Permit Number: NJ0151521**

**Stormwater Program Coordinator: Robert Klein, Ardurra**

## Date Approved: Pending

**RVE Project No. Job #0257T132**

# Table of Contents

*Acknowledgements* ..... 3
*Introduction* ..... 3
*List of Figures* ..... 5
*List of Tables* ..... 5
*Electronic Data to be Uploaded to NJDEP Online* ..... 5
*Acronyms & Definitions* ..... 5
*Public Participation* ..... 8
*Stormwater Outfall(s)* ..... 9
*Stormwater Outfalls Owned/Operated by Permittee* ..... 9
*Receiving Surface Waters* ..... 9
*Water Quality Classifications* ..... 9
*Stormwater Interconnection(s)* ..... 13
*Interconnections from the permittee's MS4 into another entity* ..... 13
*Interconnection(s) into the permittee's MS4 from another entity (for Tier A permittees only)* ..... 13
*Drainage Area(s) for Stormwater Outfalls and Stormwater Interconnections* ..... 16
*MS4 Outfall Drainage Areas* ..... 17
*MS4 Interconnection Drainage Areas* ..... 18
*TMDLs and Water Quality Impairments* ..... 22
*Overburdened Communities (for Tier A permittees only)* ..... 24
*Impervious Area* ..... 26
*Non-Municipally Owned or Operated Stormwater Facilities (for Tier A permittees only)* ..... 28
*Conclusion* ..... 35
*Appendix A* ..... 37
*References* ..... 40

## Acknowledgements

The Township of Saddle Brook (Bergen County) Watershed Inventory Report has been prepared by Remington & Vernick Engineers.

Funding for this project was provided by the Township of Saddle Brook.

## Introduction

The Township of Saddle Brook (also referred to in this report as "the Township") is in Bergen County New Jersey. The Township is bordered, Elmwood Park, Fair Lawn, Garfield, Lodi, Paramus and Rochelle Park. Saddle Brook Township covers approximately 2.69 square miles. It's population according to the 2020 US Census is 14294 people.

**Table 1: Land Use Types within the Township of Saddle Brook**

| Land Use | Acreage | Percentage |
|---|---|---|
| BARREN LAND | 1.64 | 0.09% |
| FOREST | 76.56 | 4.35% |
| URBAN | 1639.88 | 93.28% |
| WATER | 22.36 | 1.27% |
| WETLANDS | 17.53 | 1.00% |
| | | 100.00% |

Saddle Brook, NJ, sits within the Lower Passaic River Watershed (WMA-4), primarily draining into the Saddle River, a tributary that flows to the Passaic, then Newark Bay, and eventually the Atlantic. Its watershed faces challenges from urban/suburban runoff, leading to nutrient pollution, bacteria, and sediment issues, with the Saddle River experiencing minor impacts on aquatic life, though the township focuses on stormwater management for flood control and water quality improvement.

**Key Watershed Details:**

- **Watershed System**: Lower Passaic River Watershed (WMA 4).
- **Main Waterbody**: The Saddle River, along with Coalberg Brook and Pehle Brook.
- **Flow Path**: Saddle River -> Passaic River -> Newark Bay -> Atlantic Ocean.
- **Counties Involved**: Passaic, Essex, Hudson, Morris, & Bergen (Saddle Brook is in Bergen County).
- **Land Use**: Heavily developed urban/suburban area.

**Water Quality & Management:**

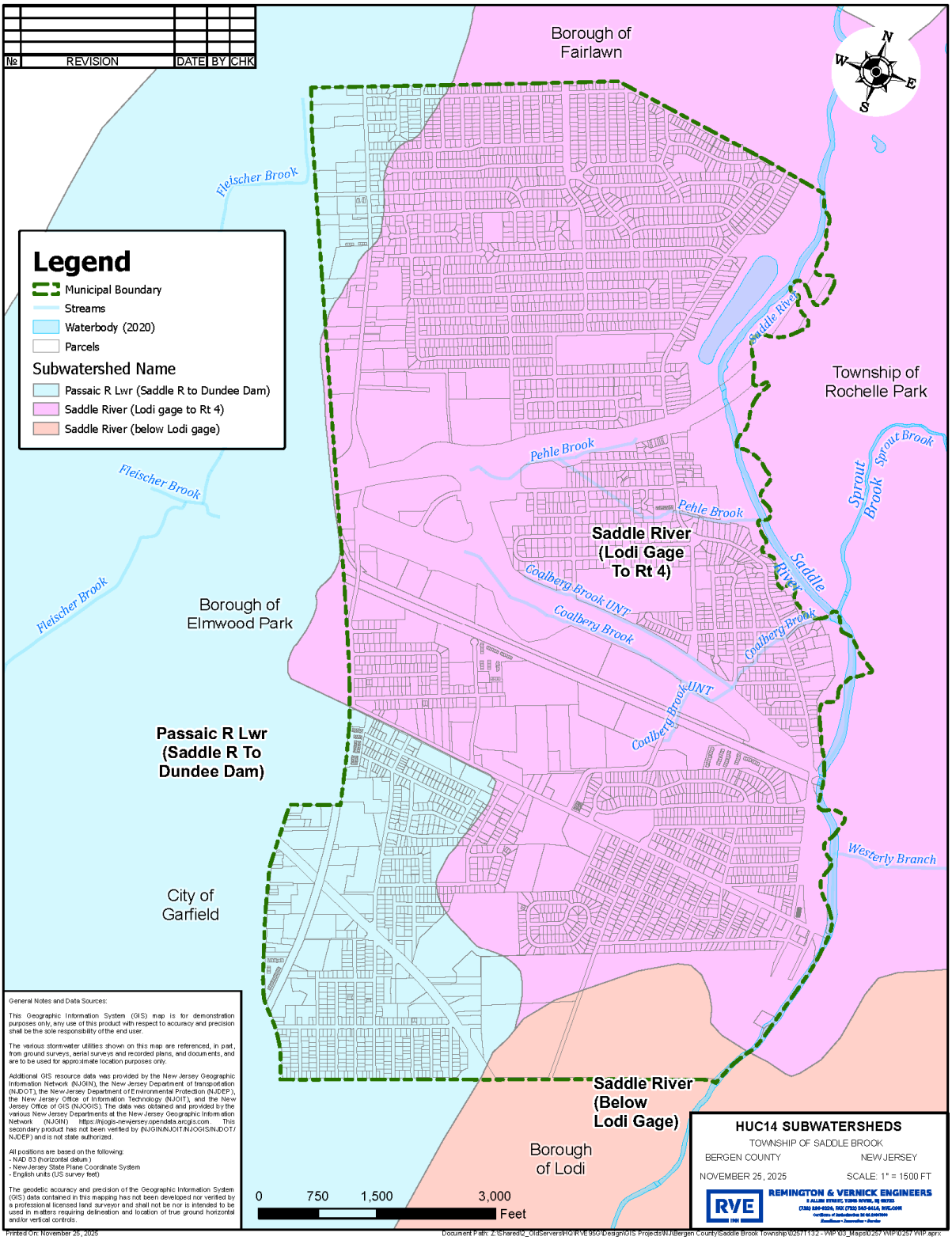
- **Concerns**: Nutrient loading, bacteria (fecal coliform), high sediment, and urban runoff.

- **Impacts**: Water quality is often poor, with flooding a significant issue in Saddle Brook due to the river and brooks.
- **Solutions**: Saddle Brook Township implements stringent stormwater management plans to meet state goals and improve quality of life.
- **Water Supply**: Veolia provides water sourcing from reservoirs (Oradell, Wanaque) and surface waters, including the Saddle River.

There are areas within the Township that may be prone to flooding. The FEMA National Flood Layer Viewer was used to identify roads that fall in the 500 and 100 year floodplains. Those roads are in Appendix A.

The Goal of the Watershed Improvement Plan (WIP) is to provide a comprehensive procedure for how the Township of Saddle Brook will comply with the new MS4 regulations put in place by the NJDEP. The WIP is required to identify opportunities to improve water quality, reduce contribution of pollutants to water bodies with impairments and TMDLs, and to address stormwater flooding to protect human health, safety, and the environment. Phase 1 is to complete stormwater inventory by mapping required features, data, and to complete a Watershed Inventory Report. Phase 2 will evaluate the information found in Phase 1 to determine what potential improvement projects may be implemented to address water quality and quantity concerns. In Phase 3, permittees will identify which of the potential improvement projects they are choosing to implement and identify schedules.

**Figure 1: HUC14 Sub watersheds within the Township of Saddle Brook**



## List of Figures

*Figure 1: HUC14 Sub watersheds within the Township of Saddle Brook* ..... *5*
*Figure 2: Township of Saddle Brook Stormwater Outfalls* ..... *11*
*Figure 3: Interconnections into and from the Permittee's MS4* ..... *15*
*Figure 4: Outfall Drainage Area(s)* ..... *17*
*Figure 5: Interconnection Drainage Area(s)* ..... *18*
*Figure 6: TMDLs by Parameter for Township of Saddle Brook* ..... *23*
*Figure 7: Overburdened Communities within the Township of Saddle Brook* ..... *25*
*Figure 8: Impervious Cover Area in the Township of Saddle Brook* ..... *27*
*Figure 9: Non-municipally Owned/Operated Stormwater Infrastructure in the Township of Saddle Brook* ..... *35*

## List of Tables

*Table 1: Land Use Types within the Township of Saddle Brook* ..... *3*
*Table 2: Receiving Surface Water Bodies & Water Quality Classifications* ..... *9*
*Table 3: Stormwater Interconnections from and Into the Township of Saddle Brook* ..... *13*
*Table 4: Drainage Areas for Outfalls and Outward Interconnections* ..... *19*
*Table 5: TMDLs and Impairments for Sub watersheds within or bordering the Township of Saddle Brook* ..... *22*
*Table 6: Impervious Coverage by HUC14 Sub watersheds within the Township of Saddle Brook* ..... *26*
*Table 7: Non-municipally Owned/Operated Stormwater Infrastructure in the Township of Saddle Brook* ..... *28*

## Electronic Data to be Uploaded to NJDEP Online

- Drainage Areas for Outfalls
    - Topographical Map
    - Shape File
- Stormwater Interconnections
    - Shape File
- Drainage Area for Each Interconnections
    - Topographical Map
    - Shape File
- Non-Municipally Owned Stormwater Infrastructure
    - Shape File

## Acronyms & Definitions

1. *Acronyms*
    - *i. "BMP" – Best Management Practice*
    - *ii. "DO" – Dissolved Oxygen*
    - *iii. "EPA" – U.S. Environmental Protection Agency iv.*
    - *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*

xiv. *"DEM" – Digital Elevation Model*

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 sub watershed, 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. 7:8.3*

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 waste load 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 Bergen 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).*

## Public Participation

The Township plans on having several meetings with the Stakeholders. Stakeholders are listed below. Engaging with stakeholders opens a channel of communication and collaboration.

- List of stakeholders
    - Robert D. White – Township of Saddle Brook Mayor
    - Council Members
    - Jimmy Homsi – Township Administrator
    - Bob Hicswa – Department of Public Works
    - New Jersey Department of Transportation
    - Bergen County
    - Remington & Vernick Engineers

- Future Scheduled Meetings

    Public Meetings for the Watershed Improvement Plan will be scheduled during the Public Council Meetings. Public Committee Meetings are on the 2nd and 4th Thursday of every month.

    - A Meeting will be scheduled in September 2026 where the WIP will be introduced and open for public comment.
    - Second meeting will be scheduled for November of 2026.
    - Meeting minutes and notes and a summary of feedback from stakeholders will be written up at each meeting and reported in WIP phase 2.

    - The Watershed Improvement Plan Phase 1 will be put on the dedicated stormwater webpage at:

        Stormwater Management - Saddlebrook DPW

## Stormwater Outfall(s)

The information utilized in this section was gathered using the Municipal Stormwater Infrastructure data field collected by Remington and Vernick Engineers as part of the Outfall and MS4 Infrastructure Mapping Projects from 2020 and 2025. This data was processed using QGIS, SAGA, PCRaster, and GDAL softwares. Water Quality Classification Data was gathered from the NJDEP Open Data Portal. The data was accessed in December 2025. The findings are summarized below and in Table 2 and Figure 2.

## Stormwater Outfalls Owned/Operated by Permittee

- There are 25 outfalls owned and operated by the Township of Saddle Brook.

## Receiving Surface Waters

See Table 2

## Water Quality Classifications

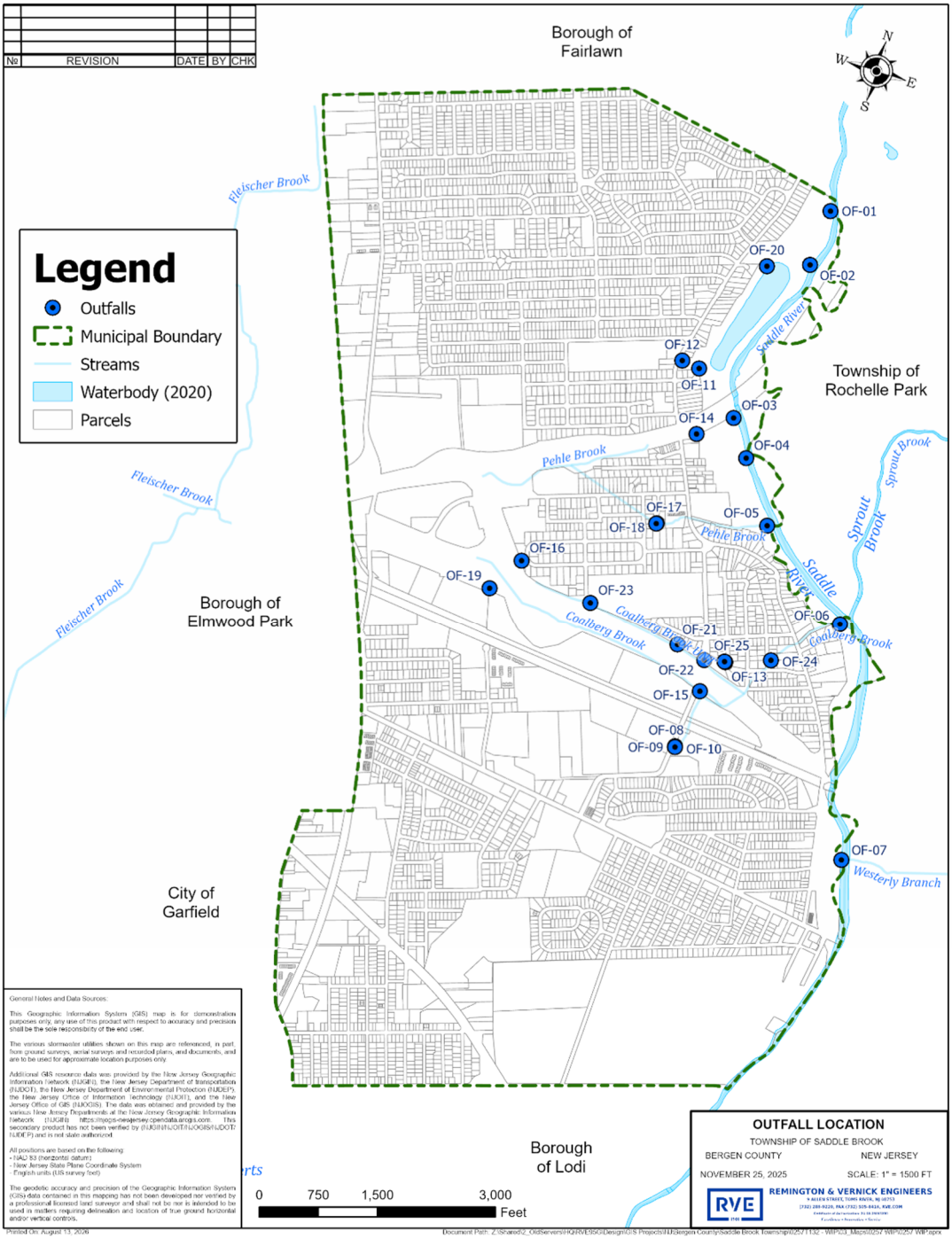
All of Saddle Brook land ultimately drains to the Saddle River, then to the Passaic River, next the Newark Bay and ultimately the Atlantic Ocean. 8 of the Outfall zones drain to the Saddle River. The Saddle River is classified as FW2-NT/SE1.

**Table 2: Receiving Surface Water Bodies & Water Quality Classifications**

| Local Outfall ID | Receiving Surface Water Body | Water Quality Classification |
|---|---|---|
| OF-Zone 1 | Saddle River | FW2-NT |
| OF-Zone 2 | Saddle River | FW2-NT |
| OF-Zone 3 | Saddle River | FW2-NT |
| OF-Zone 4 | Saddle River | FW2-NT |
| OF-Zone 5 | Saddle River | FW2-NT |
| OF-Zone 6 | Saddle River | FW2-NT |
| OF-Zone 7 | Saddle River | FW2-NT |
| OF-Zone 8 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 9 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 10 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 11 | Saddle River | FW2-NT |
| OF-Zone 12 | Saddle River | FW2-NT |
| OF-Zone 13 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 14 | Saddle River | FW2-NT |
| OF-Zone 15 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 16 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 17 | Pehle Brook | FW2-NT |
| OF-Zone 18 | Pehle Brook | FW2-NT |
| OF-Zone 19 | Coalberg Brook tributary | FW2-NT |

| | | |
|---|---|---|
| OF-Zone 20 | Saddle River | FW2-NT |
| OF-Zone 21 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 22 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 23 | Coalberg Brook tributary | FW2-NT |
| OF-Zone 24 | Coalberg Brook | FW2-NT |
| OF-Zone 25 | Coalberg Brook tributary | FW2-NT |

**Figure 2: Township of Saddle Brook Stormwater Outfalls**



## Stormwater Interconnection(s)

The information utilized in this section was gathered using Municipal Stormwater Infrastructure data field collected by Remington & Vernick Engineers as part of the Outfall and MS4 Infrastructure Mapping Projects from 2020 and 2025. County stormwater infrastructure was provided by Bergen County. Sate stormwater infrastructure was digitized from plans provided by the Township. This data was processed using QGIS, SAGA, PCRaster, and GDAL softwares. The data was accessed in December 2025. The findings are summarized below and in 3 and Figure 3.

### Interconnections from the permittee's MS4 into another entity

- There are 38 interconnections from the Township of Saddle Brook's MS4 infrastructure into other entities MS4 systems. This system is owned and operated by Bergen County or NJDOT.
- Each of these interconnections are directed piped connection.

### Interconnection(s) into the permittee's MS4 from another entity (for Tier A permittees only)

- There are 16 interconnections owned and operated by other entities that convey stormwater flow to infrastructure owned and operated by the Township of Saddle Brook
    - Bergen Couty 6
    - NJDOT 1
    - Private 8
    - Other Municipalities 1 Fair Lawn

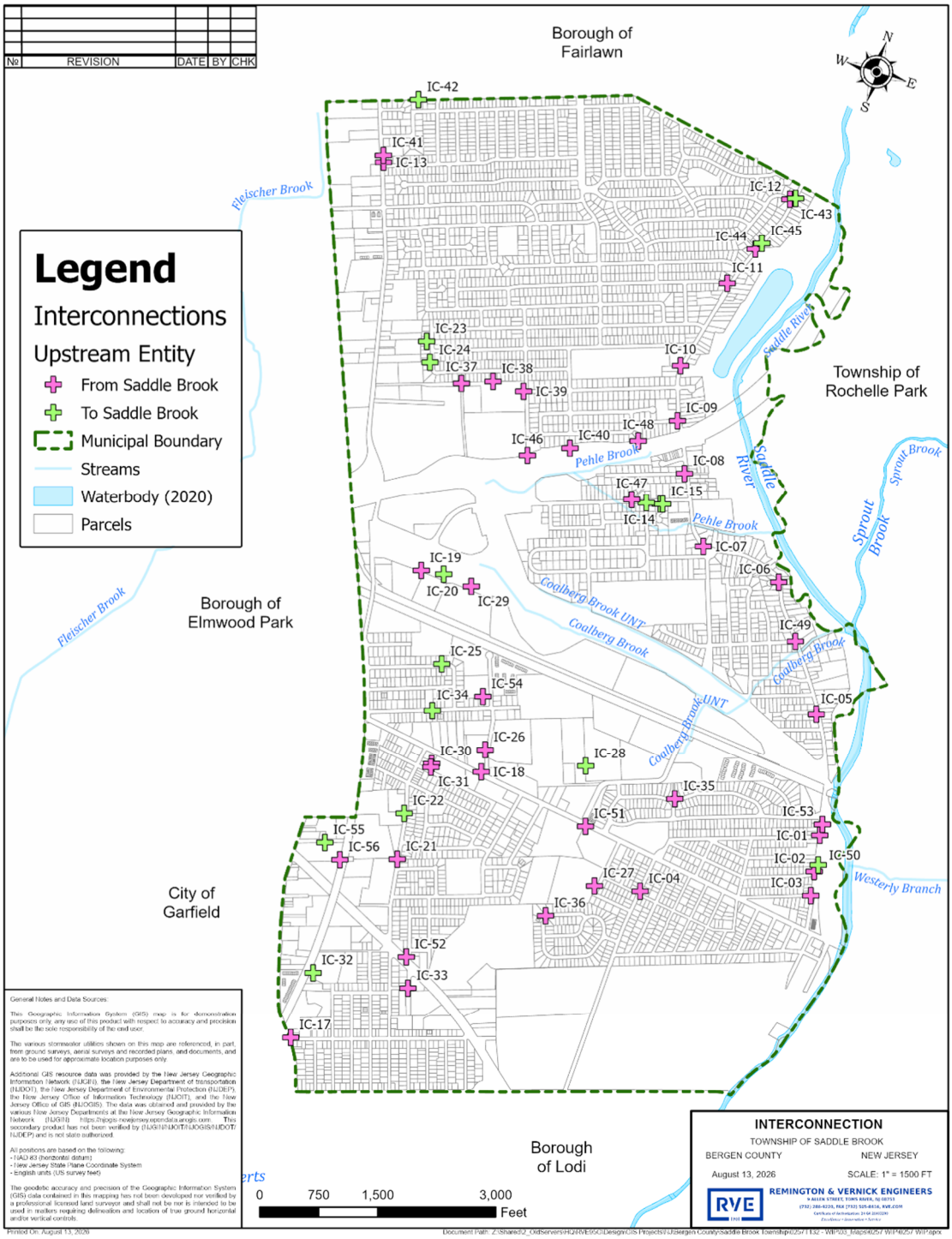
- All interconnections are directed piped connection.

**Table 3: Stormwater Interconnections from and Into the Township of Saddle Brook**

| Local Interconnection ID | Type | Upstream Entity | Downstream Entity |
|---|---|---|---|
| IC-01 | Pipe | Saddle Brook Township | Bergen County |
| IC-02 | Pipe | Saddle Brook Township | Bergen County |
| IC-03 | Pipe | Saddle Brook Township | Bergen County |
| IC-04 | Pipe | Saddle Brook Township | Bergen County |
| IC-05 | Pipe | Saddle Brook Township | Bergen County |
| IC-06 | Pipe | Saddle Brook Township | Bergen County |
| IC-07 | Pipe | Saddle Brook Township | Bergen County |
| IC-08 | Pipe | Saddle Brook Township | Bergen County |
| IC-09 | Pipe | Saddle Brook Township | Bergen County |
| IC-10 | Pipe | Saddle Brook Township | Bergen County |
| IC-11 | Pipe | Saddle Brook Township | Bergen County |
| IC-12 | Pipe | Saddle Brook Township | Bergen County |
| IC-13 | Pipe | Saddle Brook Township | Bergen County |
| IC-14 | Pipe | Bergen County | Saddle Brook Township |
| IC-15 | Pipe | Bergen County | Saddle Brook Township |
| IC-16 | Pipe | Bergen County | Saddle Brook Township |
| IC-17 | Pipe | Saddle Brook Township | Bergen County |
| IC-18 | Pipe | Saddle Brook Township | Bergen County |
| IC-19 | Pipe | Saddle Brook Township | Private |
| IC-20 | Pipe | NJDOT | Saddle Brook Township |
| IC-21 | Pipe | Saddle Brook Township | Private |
| IC-22 | Pipe | Private | Saddle Brook Township |
| IC-23 | Pipe | Private | Saddle Brook Township |
| IC-24 | Pipe | Private | Saddle Brook Township |
| IC-25 | Pipe | Private | Saddlebrook Township |
| IC-26 | Pipe | Saddle Brook Township | Private |
| IC-27 | Pipe | Saddle Brook Township | Private |
| IC-28 | Pipe | Private | Saddle Brook Township |
| IC-29 | Pipe | Saddle Brook Township | State |
| IC-30 | Pipe | Saddle Brook Township | Bergen County |
| IC-31 | Pipe | Saddle Brook Township | Bergen County |
| IC-32 | Pipe | Private | Saddle Brook Township |
| IC-33 | Pipe | Saddle Brook Township | State |
| IC-34 | Pipe | Private | Saddle Brook Township |
| IC-35 | Pipe | Saddle Brook Township | Private |
| IC-36 | Pipe | Saddle Brook Township | Private |
| IC-37 | Pipe | Saddle Brook Township | Private |

| | | | |
|---|---|---|---|
| IC-38 | Pipe | Saddle Brook Township | Private |
| IC-39 | Pipe | Saddle Brook Township | Private |
| IC-40 | Pipe | Saddle Brook Township | NJDOT |
| IC-41 | Pipe | Saddle Brook Township | Bergen County |
| IC-42 | Pipe | Fair Lawn | Saddle Brook Township |
| IC-43 | Pipe | Bergen County | Saddle Brook Township |
| IC-44 | | Saddle Brook Township | Bergen County |
| IC-45 | Pipe | Bergen County | Saddle Brook Township |
| IC-46 | Pipe | Saddle Brook Township | State |
| IC-47 | Pipe | Saddle Brook Township | Bergen County |
| IC-48 | Pipe | Saddle Brook Township | State |
| IC-49 | Pipe | Saddle Brook Township | Bergen County |
| IC-50 | Pipe | Bergen County | Saddle Brook Township |
| IC-51 | Pipe | Saddle Brook Township | Bergen County |
| IC-52 | Pipe | Saddle Brook Township | State |
| IC-53 | Pipe | Saddle Brook Township | Bergen County |
| IC-54 | | Saddle Brook Township | Private |
| IC-55 | Pipe | Private | Saddlebrook Township |
| IC-56 | Pipe | Saddlebrook Township | Private |

**Figure 3: Interconnections into and from the Permittee's MS4**



## Drainage Area(s) for Stormwater Outfalls and Stormwater Interconnections

The information utilized in this section was gathered using data from the 2019 New Jersey LiDAR flyover and Municipal Stormwater Infrastructure data field collected by Remington & Vernick Engineers as part of the Outfall and MS4 Infrastructure Mapping Projects from 2020 and 2025. County stormwater infrastructure was provided by Bergen County. Sate stormwater infrastructure was digitized from plans provided by the Township. This data was processed using QGIS, SAGA, PCRaster, and GDAL softwares. The data was accessed in December 2025. The findings are summarized below and in Table 3 and Figure 4 and Figure 5. Drainage area calculation methods are also described below.

### Storm Drain Inlets

- The Township of Saddle Brook owns and operates 538 storm drain inlets and catch basins.

### MS4 Outfall Drainage Areas

- Utilizing QGIS, SAGA, PCRaster, and GDAL, the DEM from the LiDAR flyover was clipped to the Township's Boundary with a 500-foot buffer.
- The clipped DEM was pre-processed to make it hydraulically correct with a max fill depth of 1 foot.
- Flow directions were determined from the pre-processed DEM.
- Outfall drainage areas were determined by calculating and vectorizing the upslope areas of each outfalls' upstream stormwater network.

### *Drainage area of interconnection(s) from the permittee to another entity*

- Utilizing QGIS, SAGA, PCRaster, and GDAL, the DEM from the LiDAR flyover was clipped to the Township's Boundary with a 500-foot buffer.
- The clipped DEM was pre-processed to make it hydraulically correct with a max fill depth of 1 foot.
- Flow directions were determined from the pre-processed DEM.
- The interconnection pipe network was categorized by receiving interconnections
- The Interconnection drainage areas were determined by calculating and vectorizing the upslope areas of each interconnect's upstream stormwater network.

**Figure 4: Outfall Drainage Area(s)**

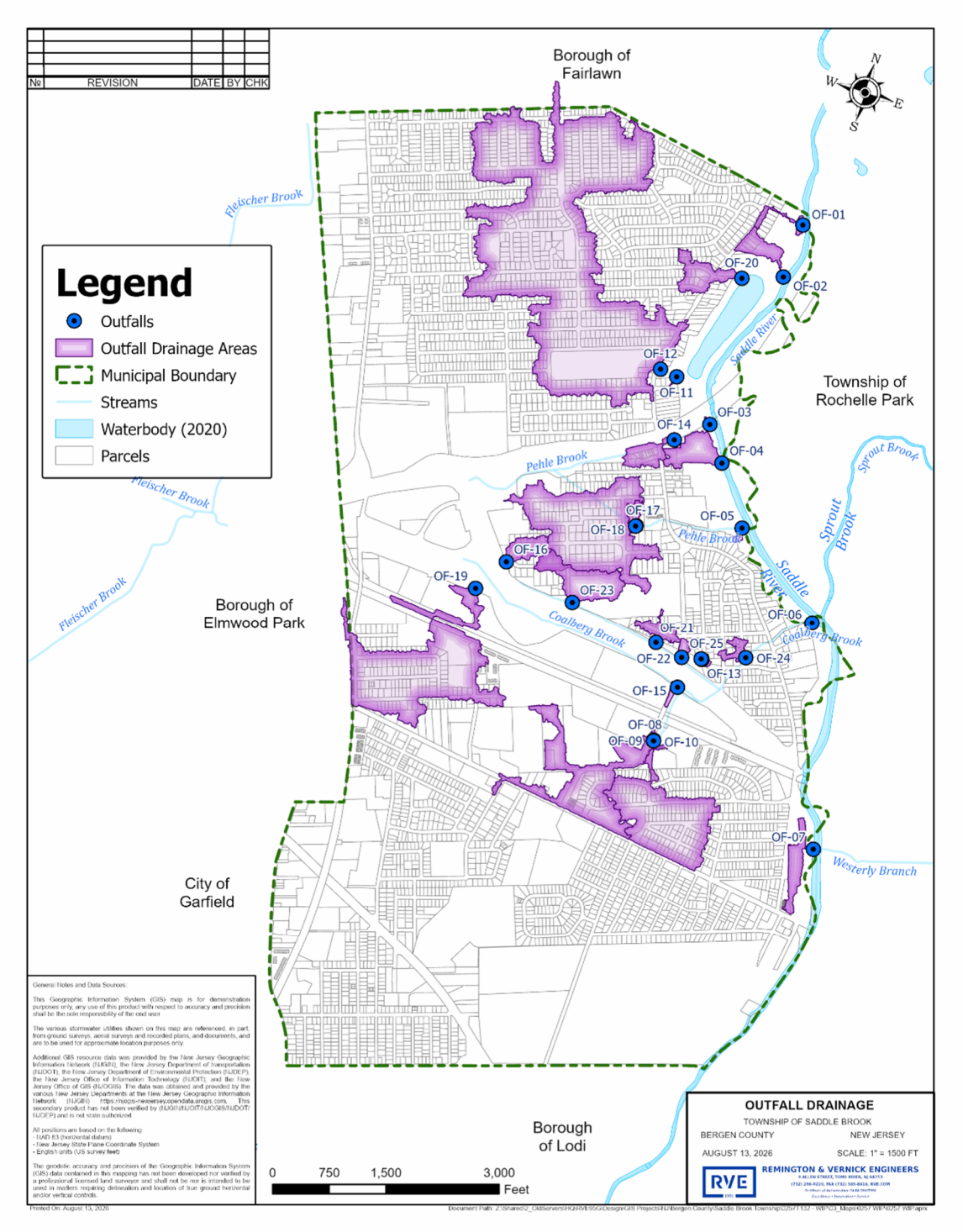


**Figure 5: Interconnection Drainage Area(s)**

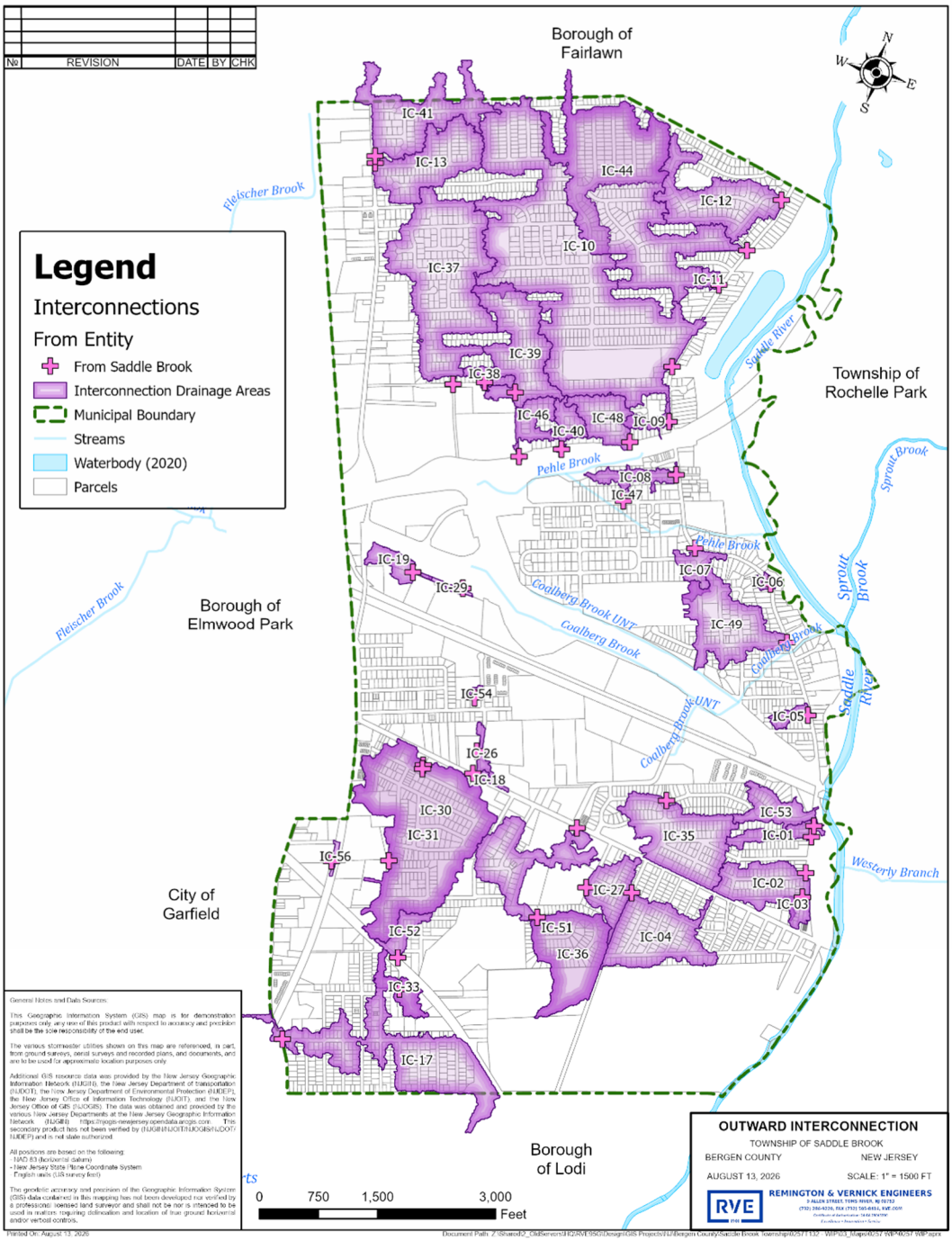


**Table 4: Drainage Areas for Outfalls and Outward Interconnections**

| Drainage Area ID | Drainage Area (acres) | Interconnection | Primary Contributing Drainage Area Type |
|---|---|---|---|
| IC-01 | 3.775 | Interconnection to Bergen County | Residential |
| IC-02 | 14.168 | Interconnection to Bergen County | Residential |
| IC-03 | 0.617 | Interconnection to Bergen County | Residential |
| IC-04 | 20.322 | Interconnection to Bergen County | Residential |
| IC-05 | 1.898 | Interconnection to Bergen County | Residential |
| IC-06 | 0.862 | Interconnection to Bergen County | Residential |
| IC-07 | 4.759 | Interconnection to Bergen County | Residential |
| IC-08 | 4.364 | Interconnection to Bergen County | Residential |
| IC-09 | 2.154 | Interconnection to Bergen County | Residential |
| IC-10 | 141.287 | Interconnection to Bergen County | Residential |
| IC-11 | 1.416 | Interconnection to Bergen County | Residential |
| IC-12 | 20.580 | Interconnection to Bergen County | Residential |
| IC-13 | 18.801 | Interconnection to Bergen County | Residential |
| IC-17 | 39.885 | Interconnection to Bergen County | Residential |
| IC-18 | 0.791 | Interconnection to Bergen County | Commercial |
| IC-19 | 4.044 | Interconnection to Private | Commercial |
| IC-26 | 1.766 | Interconnection to Private | Commercial |
| IC-27 | 8.327 | Interconnection to Private | Residential |
| IC-29 | 0.748 | Interconnection to State | Commercial |
| IC-30 | 57.569 | Interconnection to Bergen County | Residential |
| IC-31 | 57.569 | Interconnection to Bergen County | Residential |
| IC-33 | 4.681 | Interconnection to State | Commercial |
| IC-35 | 23.680 | Interconnection to Private | Residential |
| IC-36 | 20.884 | Interconnection to Private | Residential |
| IC-37 | 46.809 | Interconnection to Private | Residential |
| IC-38 | 2.326 | Interconnection to Private | Residential |
| IC-39 | 21.892 | Interconnection to Private | Residential |
| IC-40 | 3.882 | Interconnection to State | Residential |
| IC-41 | 21.419 | Interconnection to Bergen County | Residential |
| IC-44 | 66.777 | Interconnection to Bergen County | Residential |
| IC-46 | 5.169 | Interconnection to State | Residential |
| IC-47 | 0.261 | Interconnection to Bergen County | Residential |
| IC-48 | 9.280 | Interconnection to State | Residential |
| IC-49 | 19.702 | Interconnection to Bergen County | Residential |
| IC-51 | 38.470 | Interconnection to Bergen County | Residential |

| | | | |
|---|---|---|---|
| IC-52 | 3.870 | Interconnection to State | Residential |
| IC-53 | 7.143 | Interconnection to Bergen County | Residential |
| IC-54 | 0.507 | Interconecction to Private | Residential |
| IC-56 | 0.535 | Interconecction to Private | Commercial |

## TMDLs and Water Quality Impairments

In accordance with Section 305(b) and 303(d) of the Federal Clean Water Act, the State of 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 (TMDL) may be necessary. NJDEP fulfills its assessment obligation under the Clean Water Act through the Integrated Water Quality Monitoring and Assessment Report (Integrated Report), which includes the Integrated List of Waterbodies, issued biennially. The Integrated Report can be found at:

https://dep.nj.gov/wms/bears/integrated-wq-assessment-report-2022

The New Jersey Integrated Water Quality Assessment Report (Integrated Report) is a compilation of information about the quality of New Jersey's surface waters. The New Jersey Department of Environmental Protection (DEP) prepares the Integrated Report as a biennial assessment of statewide water quality that identifies and prioritizes waters for protection, restoration, and additional monitoring or research. The Integrated Report thus serves as an effective tool for enhancing, maintaining, and restoring water quality in all surface waters of the State to support their use for aquatic life, recreation, water supply, fish consumption, and shellfish harvest for consumption.

Under this obligation, NJDEP has established an Ambient Biomonitoring Network (AMNET) to document the health of the state's waterways. The AMNET Program is a sampling program that supports the water quality inventory report and list of impaired waters. The AMNET site is found at:

https://www.nj.gov/dep/wms/bfbm/amnet.html

There are over 760 AMNET sites throughout the state of New Jersey. These sites area sampled for benthic macroinvertebrate by the NJDEP on a five-year cycle. Streams are classified as nonimpaired, moderately impaired, or severely impaired based on the AMNET data. The data is used to generate a New Jersey Impairment Score (NJIS), which is based on a number of biometrics related to benthic macroinvertebrate community dynamics. Based on the Integrated Report, the Department identifies waterbodies for which a Total Maximum Daily Load (TMDL) may be necessary.

A Total Maximum Daily Load (TMDL) is the amount of a pollutant that can be accepted by a waterbody without causing an. exceedance of water quality standards or interfering with the ability to use a waterbody for one or more of its designated uses. The allowable load is allocated to the various sources of the pollutant, such as stormwater and wastewater discharges, which require an NJPDES permit to discharge, and nonpoint source, which includes stormwater runoff from agricultural areas and residential areas, along with a margin of safety. Provisions may also be made for future sources in the form of reserve

capacity. An implementation plan is developed to identify how the various sources will be reduced to the designated allocations. Implementation strategies may include improved stormwater treatment plants, adoption of ordinances, reforestation of stream corridors, retrofitting stormwater, systems, and other BMPs.

**Total Maximum Daily Load (TMDL) Information Municipality and County**
Saddle Brook Township
Bergen County

**Total Maximum Daily Load(TMDL) Information for Selected Municipality:**

**Applicable Stream TMDL(s)**

- Total Maximum Daily Loads for Fecal Coliform to Address 32 Streams in the Northeast Water Region

Fecal Coliform - 2003 : W Br Saddle, Saddle R at Ridgewood, Lodi & Fairlawn, Ramsey Bk at Allendale, Hohokus Bk at Paramus : View the TMDL Document

**Applicable Lake TMDL(s)**

None

**Applicable Shellfish TMDL(s)**

None

### Pathogens (Enterococcus, E. Coli, Fecal Coliform, Total Coliform)

Pathogens, including enterococcus, E. Coli, 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 plans contribute a steady input of treated sewage to their receiving waters, stormwater runoff is the primary contributor to pathogen loads in surface waters of the state (*Pollutants of Concern document).*

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 (*Pollutants of Concern document).*

### Dissolved Oxygen

Dissolved oxygen (DO) refers to the concentration of oxygen gas incorporated into the water. 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. As DO levels drop, some sensitive animals may move away, decline in health, or even die. Due to this, DO is considered an important measure of water quality as it is a direct indicator of a water body's ability to support aquatic life. While each organism has its own DO tolerance range, generally, DO levels below 3 mg/L are of concern and waters with levels below 1 mg/L are considered hypoxic and usually cannot support life.

Saddle Brook drinking water is sourced entirely from outside the municipality. One provider is SUEZ which sources water from reservoirs in New Jersey and New York. A 2021 report on water quality published by SUEZ can be found at https:// www.mysuezwater.com/water-in-my-area/water quality-reports/07601.

The NJDEP's Bureau of Environmental Analysis, Restoration and Standards has an interactive Geographic Information System (GIS) mapping tool, NJ-GeoWeb, that allows users to view and analyze various environmental data, including water quality. You can view water quality data for specific monitoring stations within the state's watersheds.

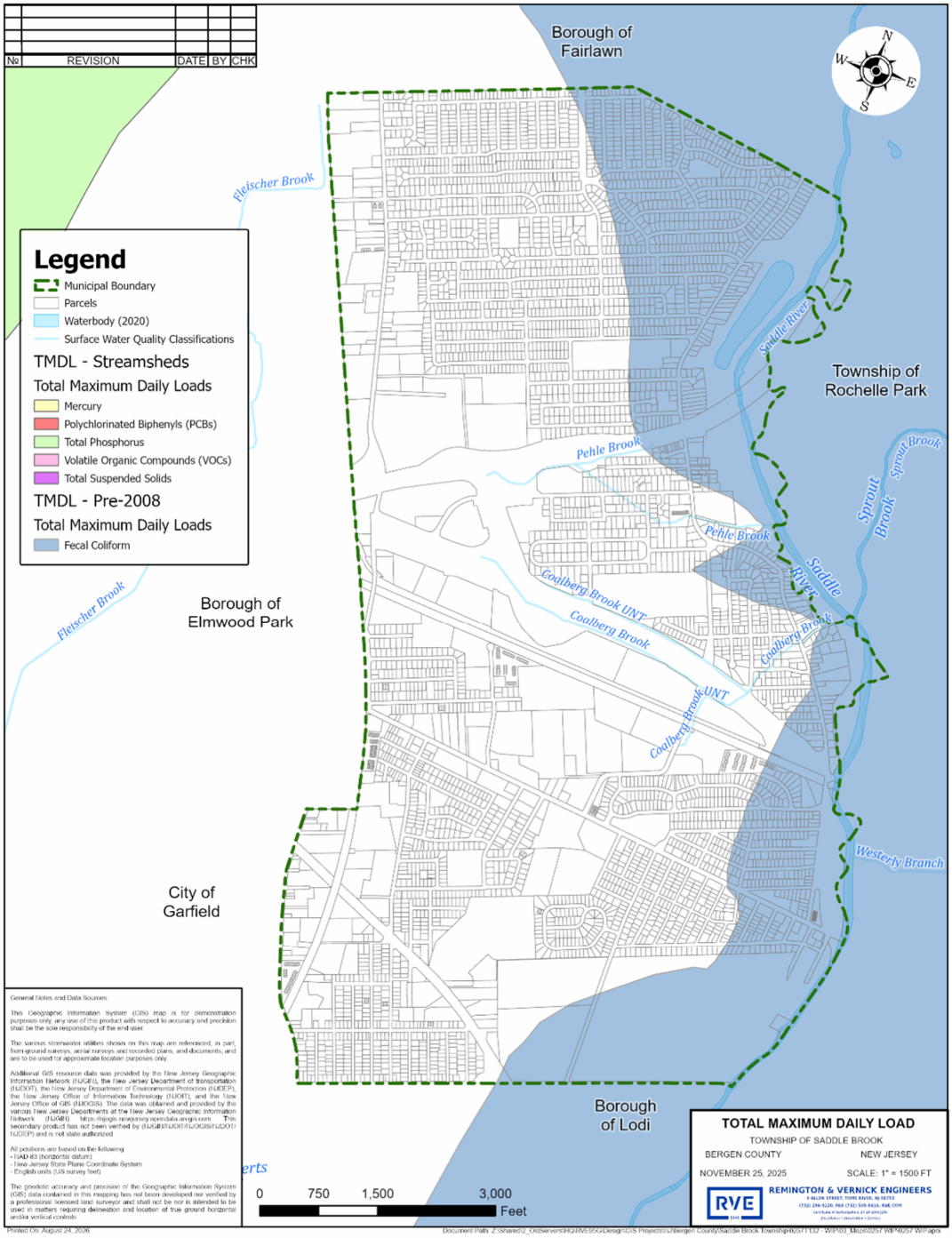
- **NJ-GeoWeb:** dep.nj.gov/wms/bears/water-quality-assessment/gis-and-resources/

- **NJDEP Open Data**: gisdata-njdep.opendata.arcgis.com/

**Table 5: TMDLs and Impairments for Sub watersheds within or bordering the Township of Saddle Brook**

| HUC14 | Sub watershed Name | TMDL | Impairments |
|---|---|---|---|
| 2030103140060 | Saddle River Lodi Gage to Rt 4 | Fecal Coliform | chloride |
| | | | total phosphorus |
| | | | total dissolved solids |
| 2030103120090 | Passaic R Lwr (Saddle R to Dundee Dam) | | benzoapyrene PAHS |
| | | | e coli |
| | | | pcbs in fish tissue |
| | | | ph |
| | | | Total phosphorus |
| 2030103140070 | Saddle River (below Lodi gage) | Fecal Coliform | chloride |
| | | | total phosphorus |
| | | | total dissolved solids |

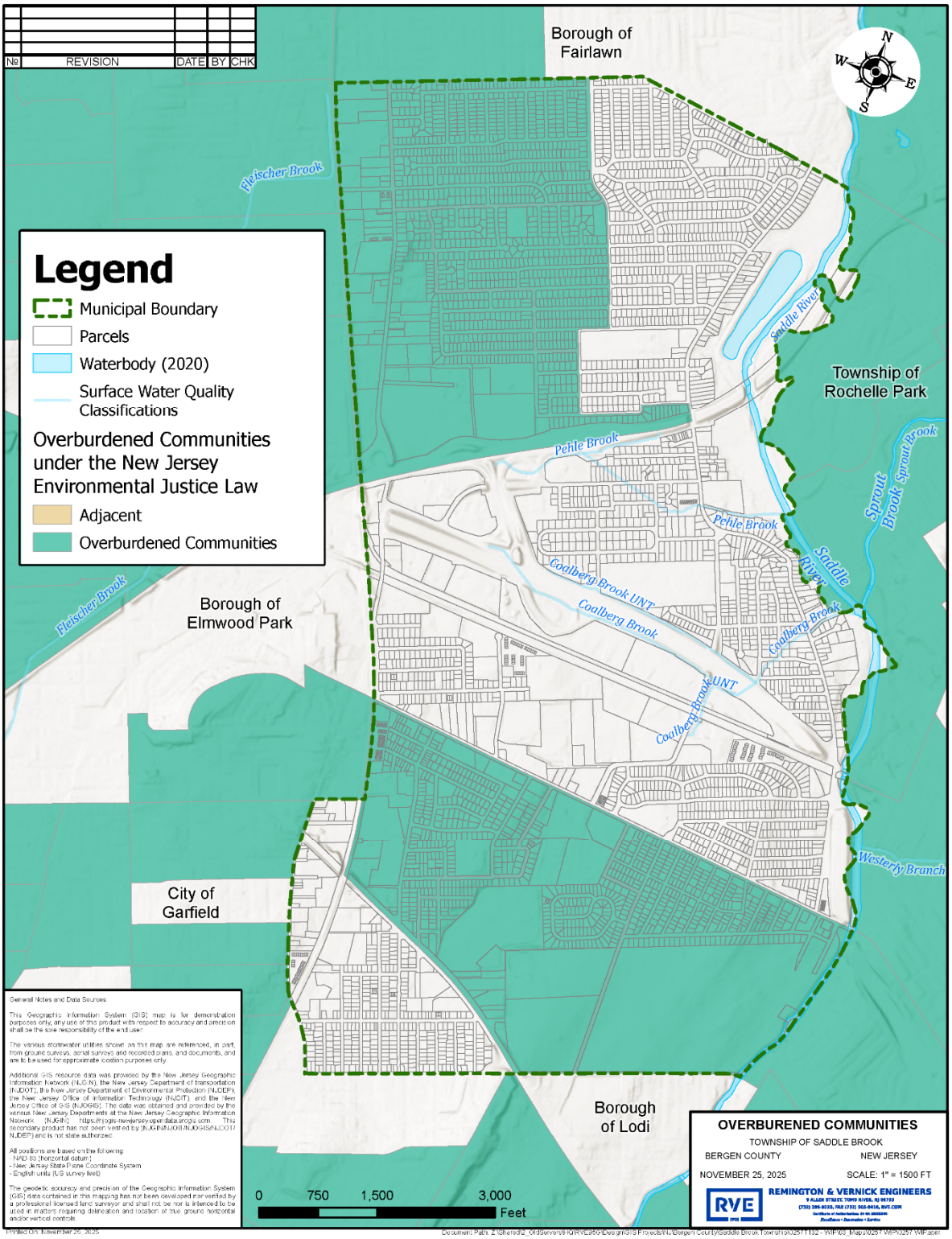
**Figure 6: TMDLs by Parameter for Saddle Brook Township**



## Overburdened Communities (*for Tier A permittees only)*

Township of Saddle Brook is listed as an overburdened community in Bergen County, New Jersey, according to a map from the New Jersey Department of Environmental Protection. Overburdened communities are defined by specific criteria related to low-income households, minority populations, or limited English proficiency, though the specific data for Saddle Brook's individual census block groups is not provided in the search results. The state's Environmental Justice Law requires the NJDEP to evaluate the impact of certain facilities on these communities.

**Figure 7: Overburdened Communities within the Township of Saddle Brook**



## Impervious Area

Information regarding impervious cover was gathered using NJ-WET and NJDEP Open Data. The impervious areas within the Township are shown in Figure 8 and summarized in Table 6.

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.

Using Scheuler's Model of Impervious Cover (Schueler,2009), which predicts stream quality based on the corresponding impervious cover within a watershed, the following conclusions can be drawn about the streams in the HUC14 sub watersheds of Saddle Brook Township:

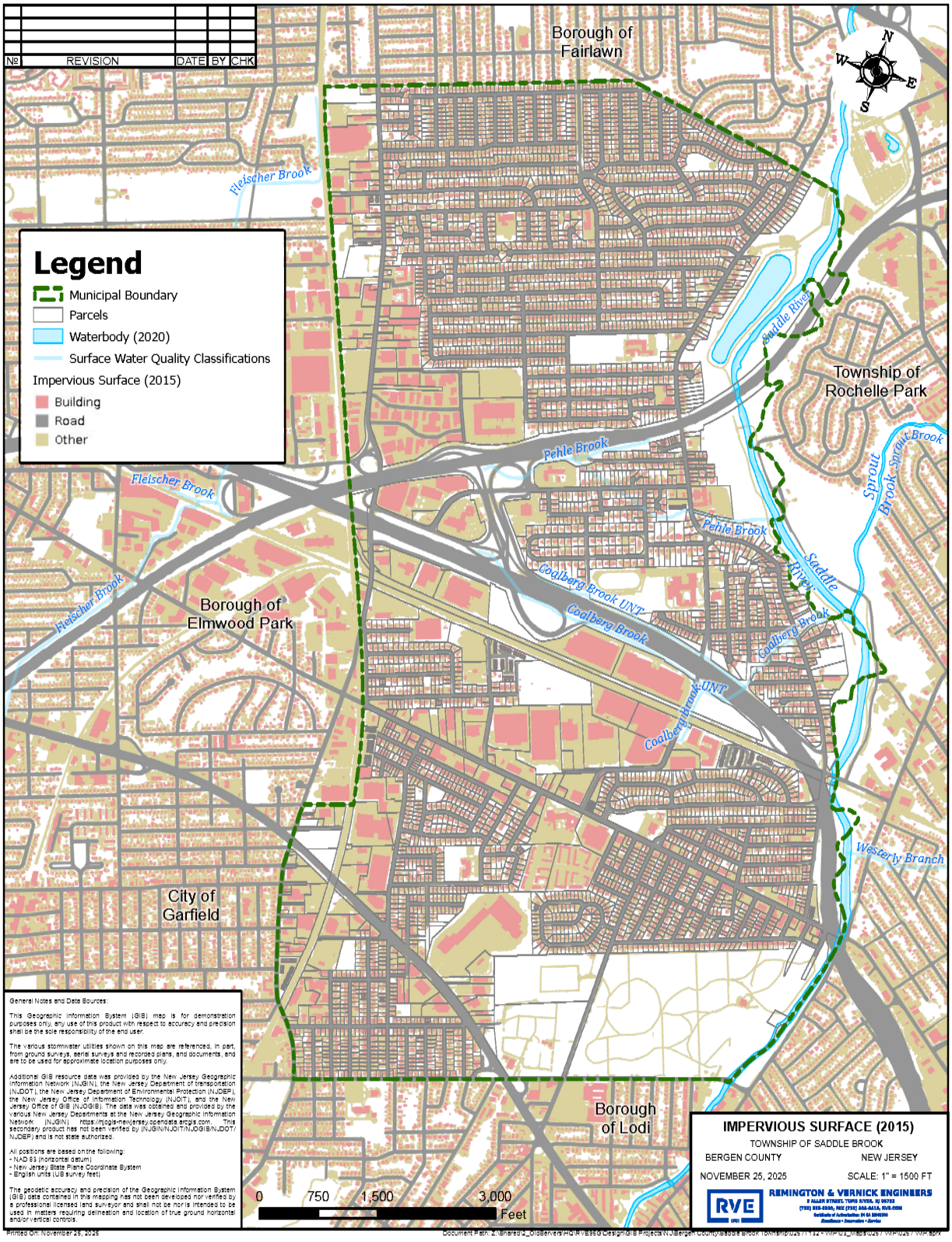
- Saddle River (below Lodi gage) is an "impacted" stream quality watershed because there is over 10% of impervious cover in the watershed area within Saddle Brook Township
- Saddle River (Lodi gage to Rt 4) and Passaic R Lwr (Saddle R to Dundee Dam) are considered "non-supporting" stream quality watersheds since they each have well over 25% of impervious cover in the watershed area within Saddle Brook Township.

All sub watersheds within the Township have been identified as having impaired waters due to numerous pollutants. Impairments such as pH, e. Coli, fecal coliforms, total phosphorus, and total dissolved solids can be addressed by treating or filtering stormwater runoff from impervious surfaces before entering waterways in Saddle Brook Township.

**Table 6: Impervious Coverage by HUC14 Sub watersheds within the Township of Saddle Brook**

| HUC14 | Sub watershed Name | HUC14 Acres | Impervious Cover Type | Impervious Acres | HUC14 % Impervious |
|---|---|---|---|---|---|
| 02030103120090 | Passaic R Lwr (Saddle R to Dundee Dam) | 306.43 | **Overall** | **210.86** | 68.81% |
| | | | Building | 65.32 | 21.31% |
| | | | Other | 100.96 | 32.95% |
| | | | Road | 44.59 | 14.55% |
| 02030103140060 | Saddle River (Lodi gage to Rt 4) | 1375.45 | **Overall** | **810.83** | 58.95% |
| | | | Building | 225.06 | 16.36% |
| | | | Other | 343.13 | 24.95% |
| | | | Road | 242.63 | 17.64% |
| 02030103140070 | Saddle River (below Lodi gage) | 76.09 | **Overall** | **8.29** | 10.89% |
| | | | Building | 0.43 | 0.56% |
| | | | Other | 5.37 | 7.06% |
| | | | Road | 2.49 | 3.27% |

**Figure 8: Impervious Area within the Township of Saddle Brook**



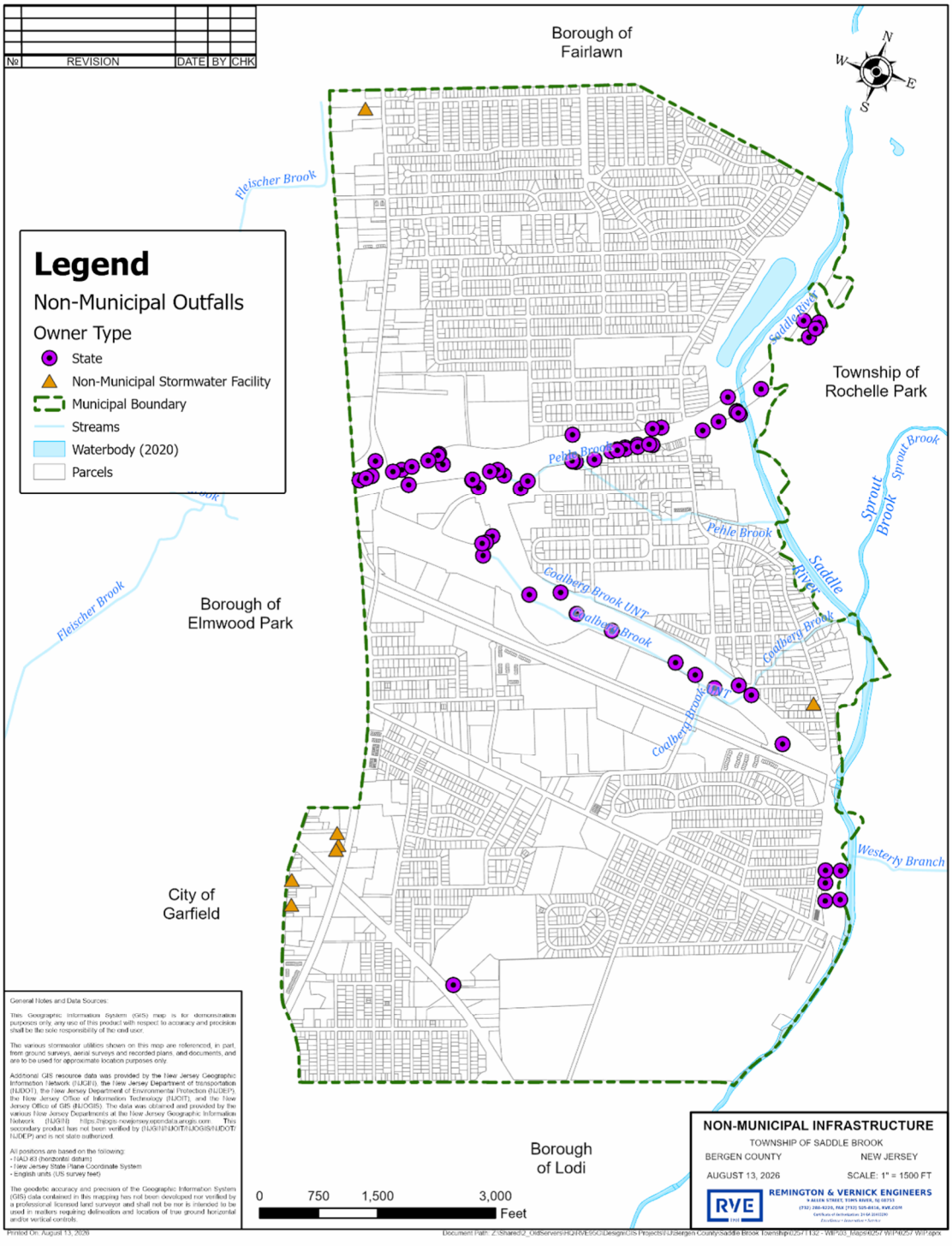
## Non-Municipally Owned or Operated Stormwater Facilities (*for Tier A permittees only*)

There are 7 stormwater facilities (basins) within the Township of Saddle Brook that are not municipally owned. Their locations are shown in Figure 9 below as well as summarized in Table 7.

**Table 7: Non-municipally Owned/Operated Stormwater Infrastructure in the Township of Saddle Brook**

| **Basins** | | | | |
|---|---|---|---|---|
| **Project Name** | **HUC14** | **Block** | **Lot** | **Basin Type** |
| Bell Atlantic Work Center | 2030103120090 | 403 | 4,5, 6 & 18 | Detention |
| Building Addition | 2030103120090 | 403 | 7, 8, 12, 16, & | Detention |
| Eckel Subdivision | 2030103140060 | 905 & 906 | 14, 15 & 23 | Detention |
| LACKLAND SELF STORAGE | 2030103120090 | 1701 | 1,3 | Infiltration |
| Basin | 2030103120090 | 401 | 1 | Underground Detention Basin |
| Basin | 2030103120090 | 402 | 1 | Underground Detention Basin |
| Basin | 2030103120090 | 402 | 1 | Manufactured Treatment Device |

**Figure 9: Non-municipally Owned/Operated Stormwater Infrastructure in the Township of Saddle Brook**



## Conclusion

This Watershed Inventory Report, Phase 1 of the Watershed Improvement Plan, identifies stormwater infrastructure, as required in the MS4 permits. It also summarizes water quality data, including stream classifications, TMDLs, and water quality impairments. The data that accompanies this inventory report has been compiled as an electronic map and submitted to the NJDEP through NJDEP Online via the Document Submittal Service. The information from this inventory report will be used to make informed decisions during the creation of the Watershed Assessment Report, Phase 2 of the Watershed Improvement Plan. The work done in Phase 2 will identify areas of potential concern and where potential water quality improvement projects may be implemented to address any water quality and quantity issues identified in this inventory report.

## Appendix A
## FEMA National Flood Layer Street List

| MUN | SADDLE BROOK TWP | |
|---|---|---|
| | | |
| **YR** | **STREET** | **Affected Length (ft)** |
| **100 Year Flood Zone** | Ackerman Avenue | 111.30 |
| | Adriana Street | 82.79 |
| | Albany Street | 1395.11 |
| | Bell Avenue | 434.80 |
| | Blanch Street | 268.28 |
| | Cambridge Avenue | 131.15 |
| | Catherine Avenue | 197.69 |
| | Chelsea Court | 204.99 |
| | Congress Street | 1136.63 |
| | Daniel Court | 208.08 |
| | Dyer Place | 232.64 |
| | East Lanza Court | 316.90 |
| | Finnigan Avenue | 61.16 |
| | Franklin Avenue | 57.79 |
| | Garden State Parkway | 312.96 |
| | Garden Street | 221.60 |
| | Harrison Avenue | 13.98 |
| | Interstate 80 | 597.76 |
| | Interstate 80 Express | 322.37 |
| | Jamros Terrace | 692.23 |
| | John Street | 40.07 |
| | Kenwood Court | 401.89 |
| | Leswing Avenue | 791.45 |
| | Liberty Street | 1014.24 |
| | Lincoln Avenue | 600.55 |
| | Market Avenue | 572.24 |
| | Mayhill Street | 2818.85 |
| | Mayhill Street Extension | 227.11 |
| | Mckenzie Street | 22.43 |
| | Nicolas Court | 288.48 |
| | North Lanza Court | 97.13 |
| | North Leswing Avenue | 638.19 |

| | | |
|---|---|---|
| | Orchard Lane | 138.55 |
| | Outwater Lane | 75.97 |
| | Path Road | 1143.88 |
| | Pehle Avenue | 1134.05 |
| | Poplar Street | 418.55 |
| | Railroad Avenue | 146.06 |
| | Riverview Avenue | 1210.78 |
| | Rochelle Parkway | 1771.07 |
| | Saddle River Court | 233.74 |
| | Saddle River Road | 5290.01 |
| | Santa Lucia Court | 133.84 |
| | South Lanza Court | 220.58 |
| | South Leswing Avenue | 797.68 |
| | Washington Street | 994.55 |
| | Welcome Road | 16.51 |
| **500 Year Flood Zone** | 1st Street | 157.12 |
| | 2nd Street | 190.23 |
| | 5th Street | 388.43 |
| | Ackerman Avenue | 60.84 |
| | Adriana Street | 545.16 |
| | Bell Avenue | 1689.70 |
| | Blanch Street | 86.54 |
| | Cambridge Avenue | 547.04 |
| | Capitol Street | 134.09 |
| | Catherine Avenue | 107.13 |
| | Chelsea Court | 226.69 |
| | Colonial Avenue | 27.22 |
| | Dale Road | 118.41 |
| | Fairview Avenue | 62.22 |
| | Finnigan Avenue | 214.96 |
| | Franklin Avenue | 30.12 |
| | Garden State Parkway | 2263.46 |
| | Garden Street | 46.57 |
| | Glen Road | 176.94 |
| | Grace Avenue | 18.27 |
| | Harrison Avenue | 215.08 |
| | Harrop Avenue | 16.45 |
| | Hillside Avenue | 340.93 |
| | Interstate 80 | 921.23 |
| | Interstate 80 Express | 395.99 |
| | Jamros Terrace | 458.21 |

| | | |
|---|---|---|
| | Jefferson Avenue | 411.51 |
| | John Street | 215.65 |
| | Kern Place | 607.44 |
| | Kuhn Court | 308.17 |
| | Kuhn Drive | 860.20 |
| | Legregni Street | 356.14 |
| | Lincoln Avenue | 41.59 |
| | Macarthur Drive | 397.77 |
| | Market Avenue | 416.14 |
| | Mayhill Street | 687.94 |
| | Mckenzie Street | 17.05 |
| | Midland Avenue | 200.29 |
| | Nightingale Road | 518.58 |
| | North 5th Street | 744.11 |
| | North Lanza Court | 58.44 |
| | North Leswing Avenue | 109.81 |
| | Pehle Avenue | 357.81 |
| | Platt Avenue | 100.21 |
| | Poplar Street | 70.59 |
| | President Street | 439.72 |
| | Railroad Avenue | 36.32 |
| | Riverview Avenue | 274.94 |
| | Rugby Road | 161.44 |
| | Saddle River Court | 83.04 |
| | Saddle River Road | 1520.70 |
| | South Lanza Court | 49.11 |
| | South Leswing Avenue | 259.02 |
| | South Street | 340.32 |
| | Susan Lane | 250.78 |
| | Sylvan Street | 339.07 |
| | US Highway 46 | 73.28 |
| | Van Luyn Terrace | 186.66 |
| | Victor Street | 715.36 |
| | Welcome Road | 437.63 |

## References


*2020 Census of Population and Housing. Retrieved in December 2025 from U.S. Department of Commerce, U.S. Census Bureau website: https://data.census.gov/.*

*New Jersey 2022 Integrated Water Quality Report, including the 303(d) Impaired Waters List. Retrieved in December 2025 from New Jersey Department of Environmental Protection, Bureau of Bureau of Environmental Analysis, Restoration and Standards website: https://dep.nj.gov/wms/bears/integrated-wq-assessment-report-2022/.*

*New Jersey Watershed Evaluation Tool (NJ-WET). Retrieved in December 2025 from Division of Watershed and Land Management, Bureau of NJPDES Stormwater Permitting & Water Quality Management website: https://dep.nj.gov/njpdes-stormwater/municipal-stormwater-regulation-program/watershed- improvement plan-guidance/.*

*NJDEP Open Data. Retrieved in December 2025 from Division of Information Technology, NJDEP Bureau of GIS website: https://gisdata-njdep.opendata.arcgis.com/.*

*Schueler, Thomas R., et al. "Is Impervious Cover Still Important? Review of Recent Research." Journal of Hydrologic Engineering, vol.14, no. 4, Apr. 2009, pp. 309–315, https://doi.org/10.1061/(asce)1084-0699(2009)14:4(309).*

*Total Maximum Daily Load (TMDL) Look-Up Tool. Retrieved in December 2025 from New Jersey Department of Environmental Protection, Bureau of NJPDES Stormwater Permitting and Water Quality Management website: https://dep.nj.gov/njpdes-stormwater/municipal-stormwater-regulation-program/tmdl/.*

*"National Flood Hazard Layer". Version 1.1.1.0, Federal Emergency Management Agency, **https://msc.fema.gov** published March 3, 2020.*

*Wikimedia Foundation. (2026, January 4).Saddle Brook Township, Bergen County, New Jersey. Wikipedia. https://en.wikipedia.org/wiki/Saddle_Brook_Township,_Bergen_County,_New_Jersey*