December 31, 2025

Gabryella Pulsinelli
Environmental Specialist
Department of Environmental Protection
Bureau of NJPDES Stormwater Permitting
P. O. Box 420
Trenton, NJ 08625

Dear Ms. Pulsinelli,

Greenman-Pedersen, Inc. would like to notify the New Jersey Department of Environmental Protection (NJDEP) that a final submission has been made for the 'Tier A MS4 Permit, MS4 Storm Infrastructure Mapping and Watershed Improvement Plan' for Springfield Township in Union County, New Jersey. (Permit ID# NJG0153885, PI: 214886) This submission was completed through the DEPOnline portal as a Stormwater Document Submittal and includes data for the following:

- MS4 outfalls (receiving surface water name, type of outfall);
- MS4 interconnections (type into/from, entity);
- Storm drain inlets (type, catch basin present, label present, retrofitted);
- MS4 manholes;
- MS4 conveyance (type, direction of flow);
- MS4 storm pump stations;
- Property boundaries of maintenance yard(s) and other ancillary operations (type).
- Groundwater Discharge Points
- Outfall Drainage Areas
- Interconnection Drainage Areas

This data, along with the Watershed Inventory Report, has also been shared via OneDrive from GPI to the NJDEP. We would also like to note that our "MS4 interconnections (type into/from, entity)" point data could not be exported today due to layer ownership complications. This will be resolved, and interconnection point data will be submitted by the week of January 5th. We thank you for your understanding.

Should you have any questions, please do not hesitate to contact me. My email is acangiano@gpinet.com

Very truly yours,

Andrew Cangiano, PE, CME
Vice President / Director of Engineering

Enclosures
cc: Tim Ebersberger, NJDEP
Hannah Maugeri, NJDEP
Robert Boettcher, Springfield Township
Michael Disko, Springfield Township
Maggie Keffer, Springfield Township
Andrew Cangiano, GPI
Steven Lange, GPI
Sean Neimeyer, GPI
Patricia DiGiorgio, GPI

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Watershed Inventory Report

Phase 1 of the Watershed Improvement Plan
For Tier A and Public Complex Permittees

SPRINGFIELD TOWNSHIP
UNION COUNTY

Date Report Finalized: 12/31/2025

Permit Number: NJG0153885

Stormwater Program Coordinator: Gabryella Pulsinelli

Table of Contents

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 (regulatory citations are included at the end of each definition for those that are copied from that regulation)
   - 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. (see 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 ocean 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).

Data Requirements & Resources

The following table identifies the required features analyzed in the Phase 1 – Watershed Inventory Report, with some features having need to be submitted electronically to the Department in addition to the MS4 Infrastructure Map, due on January 1, 2026. The table also details the best sources to view, retrieve, and analyze the required data.

Required Data	Data Source
All stormwater outfalls owned/operated by the permittee	MS4 Infrastructure Map
Drainage area for each permittee owned/operated outfall	Topography ArcGIS Solutions/ArcHydro
Receiving waterbodies of those outfalls	NJ-WET NJDEP Open Data
Water quality classification of all receiving waterbody segments	NJ-WET NJDEP Open Data
All stormwater interconnections from the permittee's MS4 system into another entities' storm or sanitary sewer system	MS4 to MS4 interconnections required in MS4 Infrastructure Map, private interconnection(s) needed
The drainage area for each interconnection into another entities' storm or sanitary sewer system	Topography ArcGIS Solutions/ArcHydro
All stormwater interconnections into the permittee's system from another entities' storm sewer system	MS4 to MS4 interconnections required in MS4 Infrastructure Map, private interconnection(s) needed
All storm drain inlets owned/operated by the permittee	MS4 Infrastructure Map
Area associated with each TMDL for waters that lie within or bordering the permittee's property(s)/jurisdiction	NJ-WET NJDEP Open Data
Area associated with each water quality impairment for waters that lie within or bordering the permittee's property(s)/jurisdiction	NJ-WET NJDEP Open Data
Overburdened communities	NJ-WET NJDEP Open Data EJMAP
Impervious areas	NJ-WET NJDEP Open Data

Electronic data is required to be submitted to the Department via the Stormwater Document Submittal Service using NJDEP Online. Non-electronic data will be analyzed and summarized, as detailed in the following sections, from the data acquired for the permittee's MS4 Infrastructure Map or from the Department's publicly available data.

New Jersey Watershed Evaluation Tool (NJ-WET)

NJ-WET was developed by the Bureau of NJPDES Stormwater Permitting to assist permittees in the development and implementation of their WIPs. Users can download the following data and create unique PDF maps of the following:

- Receiving surface waterbodies
- Water quality classification of all receiving surface waterbody segments
- TMDLs associated with HUC 14s/subwatersheds
- Water quality impairments associated with HUC 14s/subwatersheds
- Overburdened communities
- Impervious areas

Link to NJ-WET: https://experience.arcgis.com/experience/f40f65d807bb4372bd92b48bb98f1972

NJDEP Open Data

NJDEP Open Data is a site hosted by the Bureau of GIS which hosts a multitude of publicly available data for download and manipulation. Some examples of datasets available for download that may assist in the development and implementation of the WIP are:

- Receiving surface waterbody names
- Water quality classification of all receiving surface waterbody segments
- Sub-watersheds associated with TMDLs
- Overburdened communities
- Impervious areas
- Land use cover
- Elevation
- Hydrography

Link to NJDEP Open Data: https://gisdata-njdep.opendata.arcgis.com/

MS4 WIP Guidance Webpage

The Bureau of NJPDES Stormwater Permitting hosts guidance on its webpage that includes the following:

- Pollutants of Concern Summaries – Provides detailed descriptions of each water quality parameter of concern from MS4s and the related effects on the environment
- WIP Matrix – Provides examples of projects that would address different pollutant parameters
- Project Descriptions – Provides a narrative description of each project from the accompanying WIP Matrix

Link to MS4 WIP guidance: https://dep.nj.gov/njpdes-stormwater/municipal-stormwater-regulation-program/watershed-improvement-plan-guidance/

TMDL Lookup Tool

The TMDL Lookup Tool allows users to search by county and municipality to obtain links to the specific TMDL reports generated for each subwatershed within the selected municipal boundary.

Link to TMDL Lookup Tool: https://dep.nj.gov/njpdes-stormwater/municipal-stormwater-regulation-program/tmdl/

New Jersey's Integrated Water Quality Assessment Reports – 303(d) List

The 303(d) list is required under Section 303(d) of the federal Clean Water Act, which mandates that states submit to USEPA, on a biennial basis, a list of waters that do not support their designated uses because they are not meeting surface water quality standards. All such waters must be identified on the 303(d) List of Water Quality Limited Waters ("303(d) List"). States must prioritize 303(d)-listed waters for Total Maximum Daily Load (TMDL) development and identify those high priority waters for which they anticipate establishing TMDLs in the next two years. The 303(d) List must be submitted to USEPA by April 1 of every even-numbered year. Since 2002, New Jersey has developed and submitted its 303(d) List and Two-Year TMDL Schedule as part of the Integrated Report.

Link to the Department's information: https://dep.nj.gov/wms/bears/water-quality-assessment/

New Jersey Environmental Justice Mapping, Assessment, and Protection Tool (EJMAP)

This tool was designed to support the NJDEP's efforts to implement the State's Environmental Justice (EJ) Law through its regulatory and permitting processes. More information on overburdened communities and data related to this may be found here.

Link to NJDEP's EJ Map: https://experience.arcgis.com/experience/548632a2351b41b8a0443cfc3a9f4ef6

H&H Database

The New Jersey Hydrologic Modeling Database, or "H&H Database," is the culmination of several decades of data collection effort by NJ Soil Conservation Districts the NJ Department of Agriculture (NJDA), and the Department of Environmental Protection (NJDEP). The data contained in the database was originally submitted to NJ soil conservation districts as part of the permit review process and are part of the public record. While every effort has been made to review the data for accuracy and correctness, the final responsibility for accuracy rests with the original designer(s). Site plans and design data are subject to all applicable copy write and intellectual property rights laws. The data available in this database can provide a starting point for permittees to identify potential private stormwater management measures within the permittee's jurisdiction.

Link to H&H Database: https://hydro.rutgers.edu/about/

List of Figures

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Acknowledgements

The Township of Springfield's Watershed Inventory Report has been prepared by Greenman Pedersen, Inc. (GPI) using funds provided by Springfield Township

Regional Collaboration

The Township of Springfield has not collaborated with any regional entities for preparation of this report. Springfield Township may decide to participate in regional collaborations while preparing Phases 2 and 3 of this report, due January 1, 2027, and December 31, 2027, respectively.

Introduction

Location

The Township of Springfield is located in Union County at 100 Mountain Avenue, Springfield, NJ 07081. The Township covers 5.17 square miles.

Population

In 2020 United States Census Population was 17,178.

Demographics

Age:
- Persons under 18: 21.5%
- Persons over 65: 16.5%

Housing (2019-2023 Data):
- Households: 6,615
- Average persons per household: 2.56
- Median gross rent: $2,135

Income (2019-2023 Data):
- Median household Income: $146,059
- Per Capita Income: $65,501
- Percent of persons in poverty: 5.5%

Population Characteristics (2019-2023 Data):
- Percent of foreign-born persons: 26.1%
- Veterans: 438

Land Use Types

Land use type(s) consist of deciduous wooded wetlands, deciduous forest (>50% crown closure), other urban or built-up land, streams and canals, orchards/vineyards/nurseries/horticultural areas, artificial lakes, barren land, and commercial/services. This data was taken from the most recent Land Use data hosted by NJDEP via NJDEP Open Data.

Sub-watersheds within or bordering the Township of Springfield

There are 6 Sub-watersheds within or bordering Springfield Township and are as follows:

- Rahway River WB - HUC14 02030104050010 - Fecal Coliform, Total Phosphorus, Total Dissolved Solids (TDS)
- Rahway River EB - HUC14 02030104050020 - Fecal Coliform
- Baltusrol trib (above Springfield Sta) - HUC14 02030104050030 - Fecal Coliform
- Green Bk (above/incl Blue Brook) - HUC14 02030105120010 - Fecal Coliform, Total Suspended Solids, PH, Temperature, Total Dissolved Solids (TDS).
- Nomahegan Brook - HUC14 02030104050050 - Fecal Coliform, Total Phosphorus
- Rahway R (Kenilworth Blvd to EB / WB) - HUC14 02030104050040 - Fecal Coliform, Total Phosphorus, Total Dissolved Solids (TDS).

Areas Prone to Flooding

Flooding in the Township of Springfield can occur in several areas, especially those near water bodies or low-lying zones. Some general areas that tend to be more prone to flooding start with the Rahway River. This river runs through Union County and can cause flooding, especially during periods of heavy rain or snowmelt. During these events, neighborhoods nearby the Rahway River Park and the Washington Avenue Park experience the worst of it. Areas near Millburn Avenue and Route 22 can experience flooding due to overwhelmed drainage systems.

Goal for the Watershed Improvement Plan

The goal for Phase I of the Watershed Inventory Report is to support compliance with the New Jersey Pollutant Discharge Elimination System (NJPDES) Tier A Municipal Separate Stormwater Sewer System (MS4) permit by documenting and organizing stormwater infrastructure within the Township of Springfield. This report provides a comprehensive inventory of all municipally owned and operated stormwater conveyance systems and stormwater management measures, including storm inlets, pipes, outfalls, swales, culverts, basins and more.

This Watershed Inventory Report is intended to identify the location, type and drainage characteristics of stormwater infrastructure within the township and to define how stormwater runoff is conveyed to receiving waters. By organizing stormwater assets by Sub-watershed, the report enhances understanding of local drainage patterns and the Township's contribution to surface water bodies regulated under the NJPDES program.

The information contained herein will assist the Township of Springfield in prioritizing stormwater management efforts, planning future maintenance and capital improvements, and protecting the quality of local waterways in accordance with state and federal regulations.

Public Participation

List of stakeholders

This Phase I of the Watershed Inventory Report was prepared by Greenman Pedersen, Inc. (GPI) for the Township of Springfield, in Union County, New Jersey.

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

List of Previously Held Meetings

The Township of Springfield shall conduct stakeholder input, public information sessions and public announcements identified in MS4 Permit Subsections H1.b. c. & f.

The Township of Springfield shall conduct semi-annual public information sessions beginning on or before January 1, 2026, while developing the plan. These sessions can be conducted during meetings equivalent to Township Committee meetings.

Summary of Feedback

No semi-annual public information sessions have been conducted as of December 31, 2025. Feedback and notes from sessions, along with notes and meeting minutes from public meetings, will be included in this Watershed Inventory Report when conducted.

Future Scheduled Meetings

The first semi-annual public information session shall be held before June 2026. The final draft of the Phase 1 Watershed Inventory Report will be available on the Township of Springfield's Stormwater Information Webpage:

Stormwater Information | Township of Springfield

The second meeting date and time will be advertised on the Township of Springfield's Township Committee website:

Township Committee | Township of Springfield

Stormwater Outfall(s)

Stormwater Outfalls Owned/Operated by Permittee

There are 49 municipally owned or operated stormwater outfalls in the Township of Springfield. Stormwater Outfall data was collected in-person via mobile device between April and August of 2025 and through the 'New Jersey Watershed Evaluation Tool' (NJ-WET) on Tuesday, 12/9/2025. Existing ArcGIS Online Outfall Location Data assisted in collection.

Table 1: The Number of Outfalls that Discharge to each Sub-watershed

Sub-watershed	# of Outfalls
Rahway River WB	0
Rahway River EB	0
Baltusrol trib (above Springfield Sta)	16
Green Bk (above/incl Blue Brook)	4
Nomahegan Brook	3
Rahway R (Kenilworth Blvd to EB / WB)	26

Receiving Surface Waters

The receiving surface waters within the permittee's jurisdiction include:

- Blue Brook UNT
- Nomahegan Brook
- Rahway River UNT
- Rahway River
- Van Winkle Brook

Table 2: The Number of Outfalls that Discharge to each Receiving Surface Water

Receiving Surface Water	# of Outfalls
Blue Brook UNT	4
Nomahegan Brook	1
Rahway River UNT	16
Rahway River	14
Van Winkle Brook	4

This data was collected through the 'New Jersey Watershed Evaluation Tool' (NJ-WET) on Tuesday, 12/9/2025.

Water Quality Classifications

40 Outfalls discharge into water classified as 'FW2-NT'.

- **FW2:** Freshwater 2 is a general classification for freshwaters not designated as FW1 or Pineland Waters.
- **NT:** Non-Trout are waters uncapable of sustaining a natural or stocked trout population.

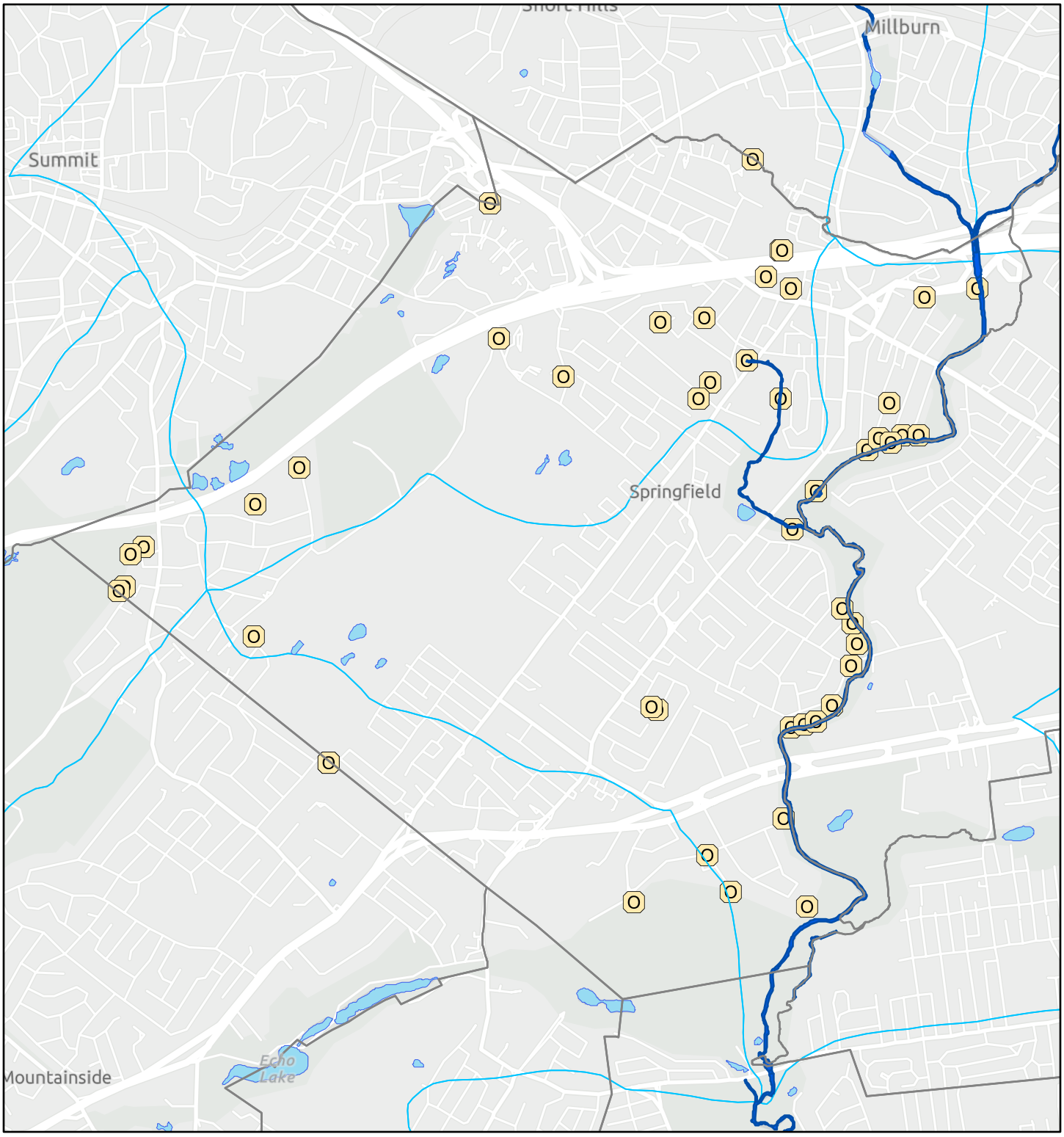
9 Outfalls do not discharge water into a surface water body. Instead, they are also considered a groundwater discharge point. A groundwater discharge point is a piped point discharge location with no direct receiving surface water body. Instead, receiving entities can consist of basins, swales, woodlands and more. This data was collected through the 'New Jersey Watershed Evaluation Tool' (NJ-WET) on Tuesday, 12/9/2025.

Table *3*: Receiving Surface Water Bodies, Groundwater Discharge Points & Water Quality Classifications

Local Outfall ID	Receiving Surface Water Body	Water Quality Classification	Sub-Watershed # (HUC-14)	Sub-Watershed Name (HUC-14)
2	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
3	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
4	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
7	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
8	GDP	GDP	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
9	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
10	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
11	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
12	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
13	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
17	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
19	Blue Brook UNT	FW2-NT	02030105120010	Green Bk (above/incl Blue Brook)
20	Blue Brook UNT	FW2-NT	02030105120010	Green Bk (above/incl Blue Brook)
21	Blue Brook UNT	FW2-NT	02030105120010	Green Bk (above/incl Blue Brook)
23	GDP	GDP	02030104050030	Baltusrol trib (above Springfield Sta)
26	Nomahegan Brook UNT	FW2-NT	02030104050050	Nomahegan Brook
27	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
36	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
38	Van Winkle Brook	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
40	Van Winkle Brook	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
41	Van Winkle Brook	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
42	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
43	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
46	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
47	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
48	GDP	GDP	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
51	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
55	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
57	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
62	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
67	Blue Brook UNT	FW2-NT	02030105120010	Green Bk (above/incl Blue Brook)
68	GDP	GDP	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
73	GDP	GDP	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
77	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
78	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
79	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
80	Rahway River UNT	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
81	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
82	GDP	GDP	02030104050030	Baltusrol trib (above Springfield Sta)
83	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
85	GDP	GDP	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
86	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
87	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
88	GDP	GDP	02030104050030	Baltusrol trib (above Springfield Sta)
89	Van Winkle Brook	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
91	GDP	GDP	02030104050050	Nomahegan Brook
106	Rahway River	FW2-NT	02030104050040	Rahway R (Kenilworth Blvd to EB / WB)
129	Rahway River UNT	FW2-NT	02030104050030	Baltusrol trib (above Springfield Sta)
134	GDP	GDP	02030104050050	Nomahegan Brook

Local Outfall ID's listed above do not represent the quantity of outfalls.

FIGURE 1
PERMITTEE OWNED OR OPERATED STORMWATER OUTFALLS



12/29/2025

1:40,000

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

NJ Municipal Boundaries

Waterbody 2020 in New Jersey

Lake/Pond

Reservoir

Stream/River

Water Withdrawals Categorized by Return Class and Aggregated by HUC 14 Boundaries for New Jersey - Water Withdrawals Categorized by Return Class and Aggregated by Outfall

Union County

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Stormwater Interconnection(s)

Interconnections between MS4s have been acquired as part of the MS4 Infrastructure Map requirements, but this section of the WIP adds any entities that interconnect with the permittee's MS4 system. For Springfield Township, this includes private system interconnections and any points where the flow leaves Springfield and enters another permittee's drainage system. There are 132 interconnections within the Township of Springfield's MS4 System. These interconnections occur with entities such as the NJDOT, Union County, and private property owners.

Interconnections from the permittee's MS4 into another entity's storm or sanitary sewer system

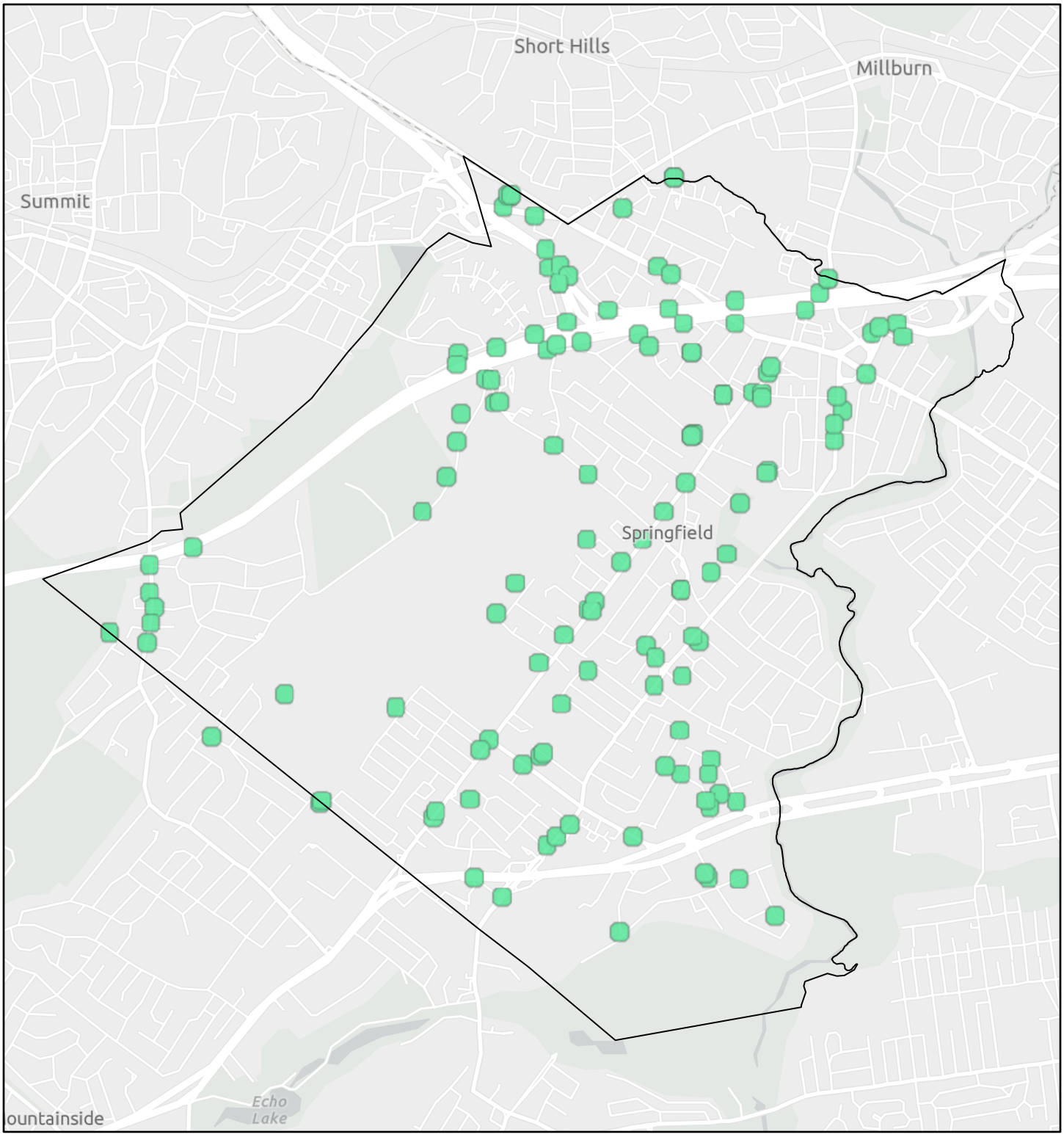
Stormwater interconnection data was investigated and collected in-person via mobile device between April and August of 2025. Existing ArcGIS Online Outfall Location Data, along with plans/data from GPI and the Township of Springfield Planning Board assisted in collection. 104 of these interconnections directed are from the Township of Springfield's MS4 system into another entity's stormwater system. All these interconnections are piped.

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

Stormwater interconnection data was investigated and collected in-person via mobile device between April and August of 2025. Existing ArcGIS Online Outfall Location Data, along with plans/data from GPI and the Township of Springfield Planning Board assisted in collection. 28 of these interconnections are directed into another entity's stormwater system from the Township of Springfield's MS4 system. All these interconnections are piped.

FIGURE 2

INTERCONNECTIONS INTO AND FROM SPRINGFIELD TOWNSHIP'S MS4



12/30/2025

Springfield Township Jurisdiction

Interconnection

1:40,000

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Drainage Area(s) for Stormwater Outfalls and Stormwater Interconnections

Storm Drain Inlets

994 storm drain inlets were investigated and collected in-person via mobile device between April and August of 2025. ArcGIS Inlet Location Data, along with plans/data from GPI and the Township of Springfield Planning Board assisted in collection.

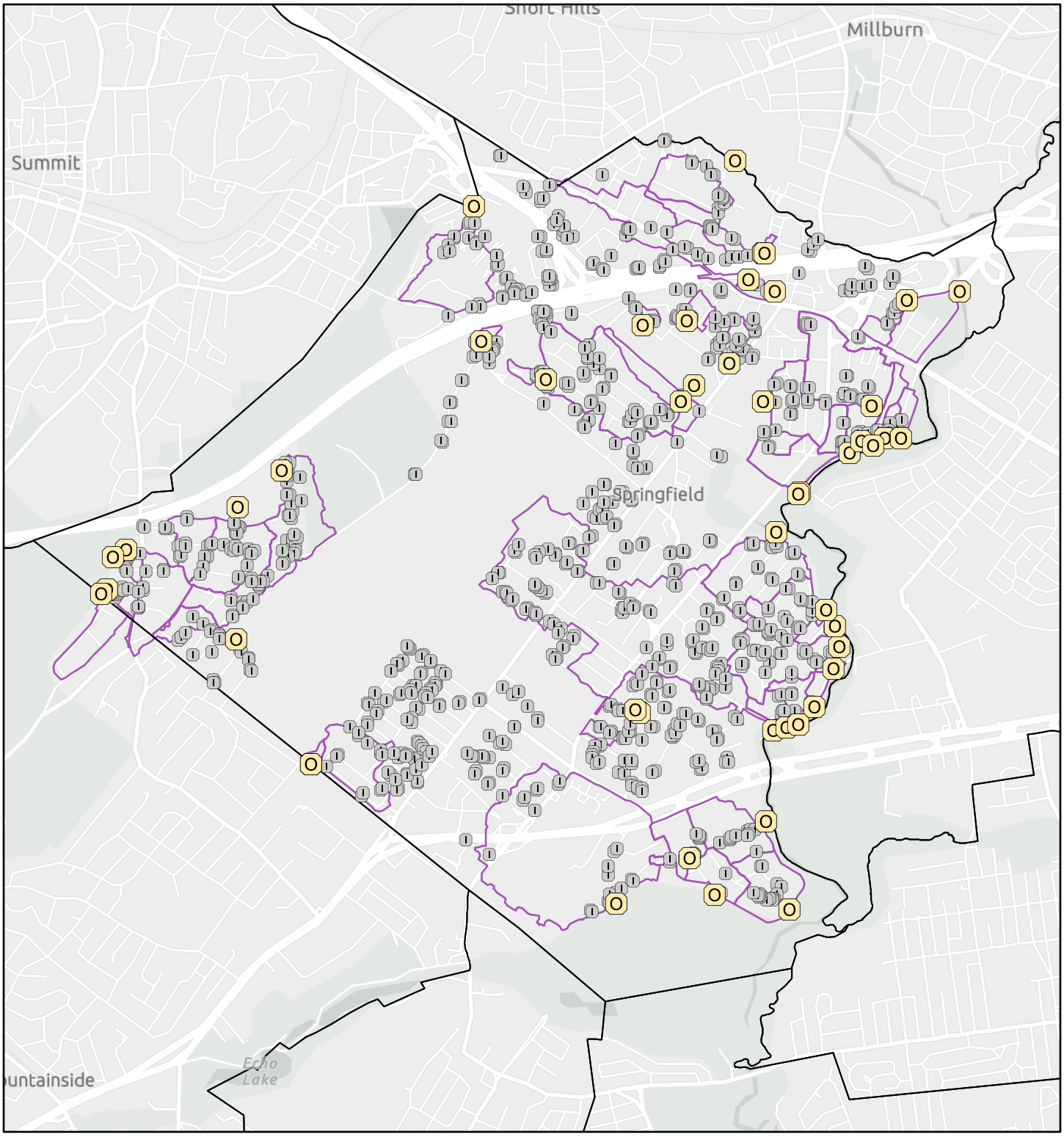
MS4 Outfall Drainage Areas

StreamStats was used as a starting point, with drainage areas imported into CAD as .SHP files. NOAA Data Access Viewer was used to gather LIDAR data, also used in CAD. Proper drainage areas were then traced over LIDAR in CAD around all 49 MS4 outfalls. This data gathered in December of 2025.

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

StreamStats was used as a starting point, with drainage areas imported into CAD as .SHP files. NOAA Data Access Viewer was used to gather LIDAR data, also used in CAD. Proper drainage areas were then traced over LIDAR in CAD around all 104 interconnections from the Township of Springfield into another entity. This data was gathered in December of 2025.

FIGURE 3
DRAINAGE AREAS FOR MUNICIPAL STORMWATER OUTFALLS



12/29/2025

1:40,000

0 0.25 0.5 1 mi
0 0.4 0.8 1.6 km

Municipal Outfall

Municipal Inlet

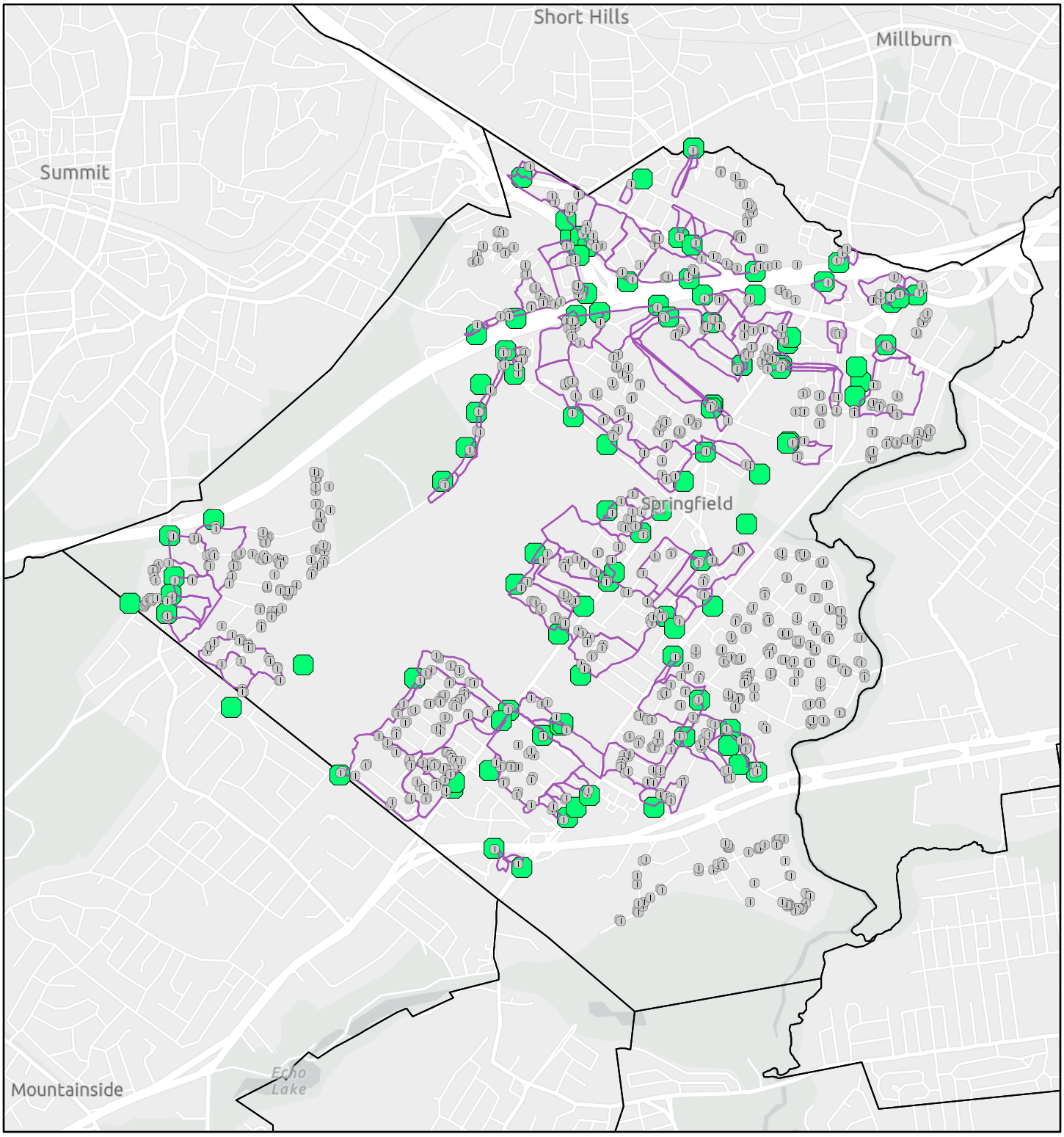
Springfield Township Jurisdiction

Springfield MS4 Task 2 Outfall Drainage Areas

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

FIGURE 4

DRAINAGE AREAS FOR INTERCONNECTION FROM SPRINGFIELD TOWNSHIP'S MS4



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0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Municipal Inlet

Springfield MS4 Task 2 Interconnection Drainage Areas

Interconnection

Springfield Township Jurisdiction

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

TMDLs and Water Quality Impairments

The data in this section was collected through the 'New Jersey Watershed Evaluation Tool' (NJ-WET) on 12/8/2025.

There are 6 Sub-watersheds within or bordering Springfield Township. TMDLs and Impairments are present in some as follows:

- Rahway River WB - HUC14 02030104050010 - Fecal Coliform, Total Phosphorus, Total Dissolved Solids (TDS)
- Rahway River EB - HUC14 02030104050020 - Fecal Coliform
- Baltusrol trib (above Springfield Sta) - HUC14 02030104050030 - Fecal Coliform
- Green Bk (above/incl Blue Brook) - HUC14 02030105120010 - Fecal Coliform, Total Suspended Solids, PH, Temperature, Total Dissolved Solids (TDS).
- Nomahegan Brook - HUC14 02030104050050 - Fecal Coliform, Total Phosphorus
- Rahway R (Kenilworth Blvd to EB / WB) - HUC14 02030104050040 - Fecal Coliform, Total Phosphorus, Total Dissolved Solids (TDS).

TMDL - Fecal Coliform is commonly contributed by pathogens such as pet and wild animal waste, failing sewage conveyance systems, and sanitary sewer overflows. When ingested, these pathogens can be harmful for humans. Results can include infections, respiratory problems, skin rashes and more. Some ordinances aimed to reduce these effects include the Pet Waste Ordinance, Yard Waste Ordinance, Roadside Erosion Control and more.

TMDL - Total Suspended Solids (TSS) are particulates, picked up from the land surface and discharged into receiving surface waterbodies. Land surface types can include parking lots, developments, construction sites, and areas with general human activities. Particulates can also come from vehicles, buildings, plant and leaf litter, and even road paint. These suspended solids contain microorganisms such as protozoa, bacteria, and viruses, all reducing quality of aquatic life, along with drinking water. This type of drinking water is more difficult to purify. Some ordinances aimed to reduce these effects include the Street Sweeping Program, Yard Waste Ordinance, Roadside Erosion Control and more.

TMDL - Total Phosphorus is the combination of particulate and dissolved phosphorus, making up both organic and non-organic forms. Excessive phosphorus can be caused by stormwater runoff from urban areas, illicit discharges, sanitary sewer overflows and more. An excess amount of phosphorus can lead to unbalanced algae and aquatic plant growth, further misbalancing PH and dissolved oxygen levels. If unattended for too long, drinking water quality can decrease. This creates the need for additional byproducts for purifying dinking water, which can be carcinogenic. Some ordinances aimed to reduce these effects include the Street Sweeping Program, Yard Waste Ordinance, Roadside Erosion Control and more.

Impairments - Total Phosphorus is the combination of particulate and dissolved phosphorus, making up both organic and non-organic forms. Excessive phosphorus can be caused by stormwater runoff from urban areas, illicit discharges, sanitary sewer overflows and more. An excess amount of phosphorus can lead to unbalanced algae and aquatic plant growth, further misbalancing PH and dissolved oxygen levels. If unattended for too long, drinking water quality can decrease. This creates the need for additional byproducts for purifying drinking water, which can be carcinogenic. Some ordinances aimed to reduce these effects include the Street Sweeping Program, Yard Waste Ordinance, Roadside Erosion Control and more.

Impairments - Total Dissolved Solids (TDS) contain ion particles such as calcium, chlorides nitrate, iron, sulfur and more. These particles can pass through voids no bigger than 0.002cm. These various levels of particles affect the cell density of aquatic organisms because their cells either absorb or reject the water around them, lowering the chance of survival. Humans unfamiliar with drinking this water can also encounter adverse health effects. TDS is typically caused by runoff from road surfaces containing salt or brine solutions, fertilizers, and vehicle fluids. Some ordinances aimed to reduce these effects include the Inspection and Maintenance of Stormwater Facilities, Yard Waste Ordinance, Roadside Erosion Control and more.

Impairments - PH represents the amount of hydrogen ions in a solution, determining the alkalinity or acidity of said solution. When pH levels exceed their normal threshold, negative impacts begin to occur for aquatic life, biodiversity, and a species' ability to sustain life. This can occur when stormwater collects sulfur, battery acids, lime, cement, fertilizers and more. Some ordinances aimed to reduce these effects include the Improper Disposal of Waste Ordinance, Yard Waste Ordinance, Improper Disposal of Waste Ordinance and more.

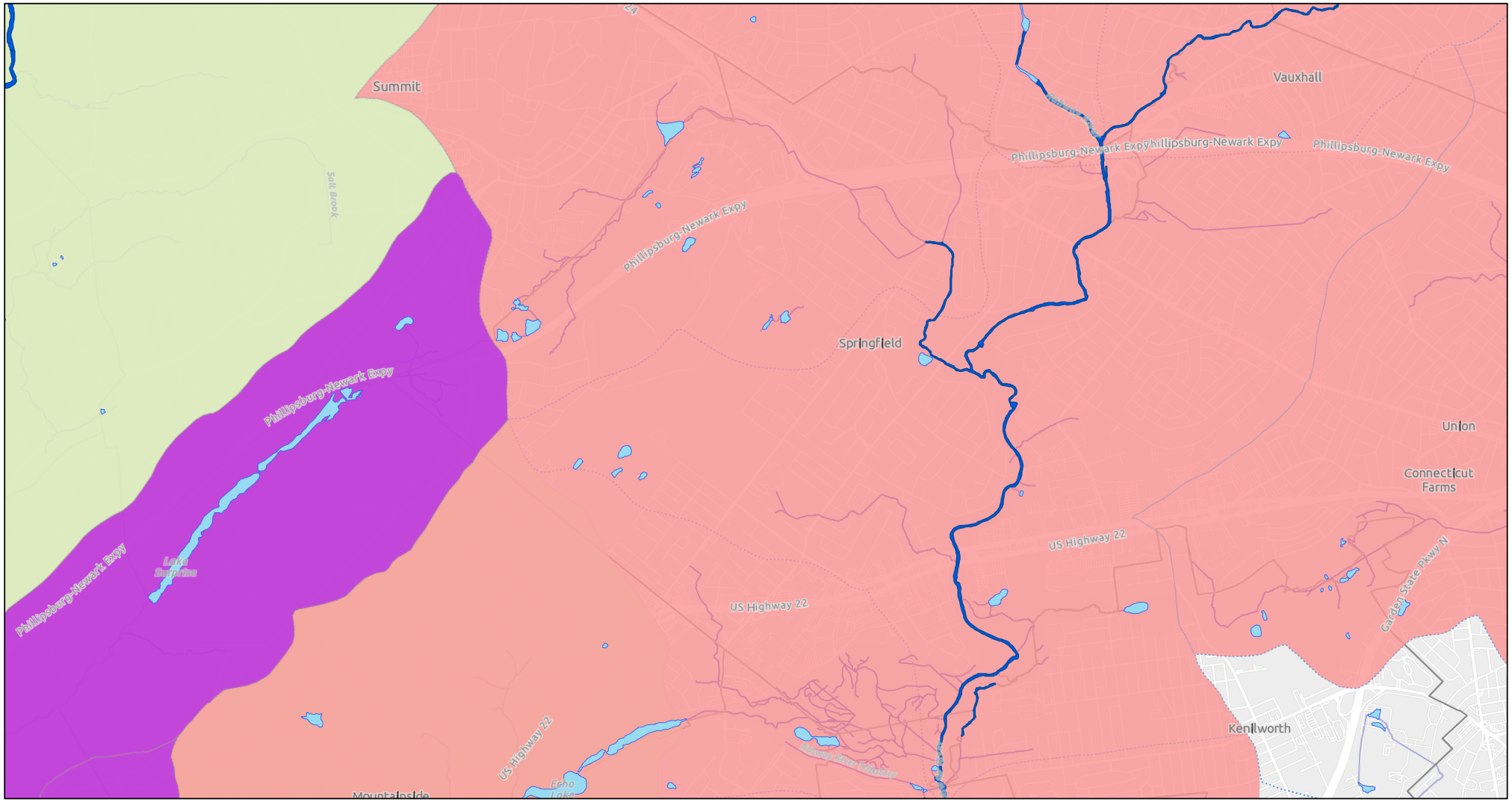
Impairments – Temperature has a drastic effect on dissolved oxygen (DO) levels within waterbodies. Colder and deeper waters store higher DO while warmer, shallow waters store less. Elevated water temperature can be caused by no tree canopy, runoff from hot surfaces such as roadways or parking lots, and heated stormwater basin overflow. Some ordinances aimed to reduce these effects include the Stream Scouring Program, Roadside Vegetative Waste Management, Roadside Erosion Control and more.

Table 4: TMDLs and Impairments for HUC 14s within or Bordering the township of Springfield

HUC 14	Subwatershed Name	TMDL(s)	Impairment(s)
02030104050010	Rahway River WB	Streamsheds Pre-2008 Fecal Coliform	Total Phosphorus Total Dissolved Solids (TDS)
02030104050020	Rahway River EB	Streamsheds Pre-2008 Fecal Coliform	None
02030104050030	Baltusrol trib (above Springfield Sta)	Streamsheds Pre-2008 Fecal Coliform	None
02030105120010	Green Bk (above/incl Blue Brook)	Streamsheds Pre-2008 Fecal Coliform Streamsheds Total Suspended Solids	PH Temperature Total Dissolved Solids (TDS)
02030104050050	Nomahegan Brook	Streamsheds Pre-2008 Fecal Coliform Lakesheds Total Phosphorus	Total Phosphorus
02030104050040	Rahway R (Kenilworth Blvd to EB/WB)	Streamsheds Pre-2008 Fecal Coliform	Total Phosphorus Total Dissolved Solids (TDS)

FIGURE 5

TMDL'S BY PARAMETER RELATED TO STORMWATER FOR SPRINGFIELD TOWNSHIP



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Waterbody 2015 (NHD)
- Lake/Pond
- Reservoir
- Stream/River

TMDL (Streamsheds)
- Total Phosphorus
- Total Suspended Solids

TMDL (Streamsheds) Pre-2008
- Fecal Coliform

TMDL (Lakesheds)
- Total Phosphorus
- Municipality
- Watersheds (DEPHUC14)

Surface Water Quality Classifications
- FW2-NT
- FW2-NT/SE3

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

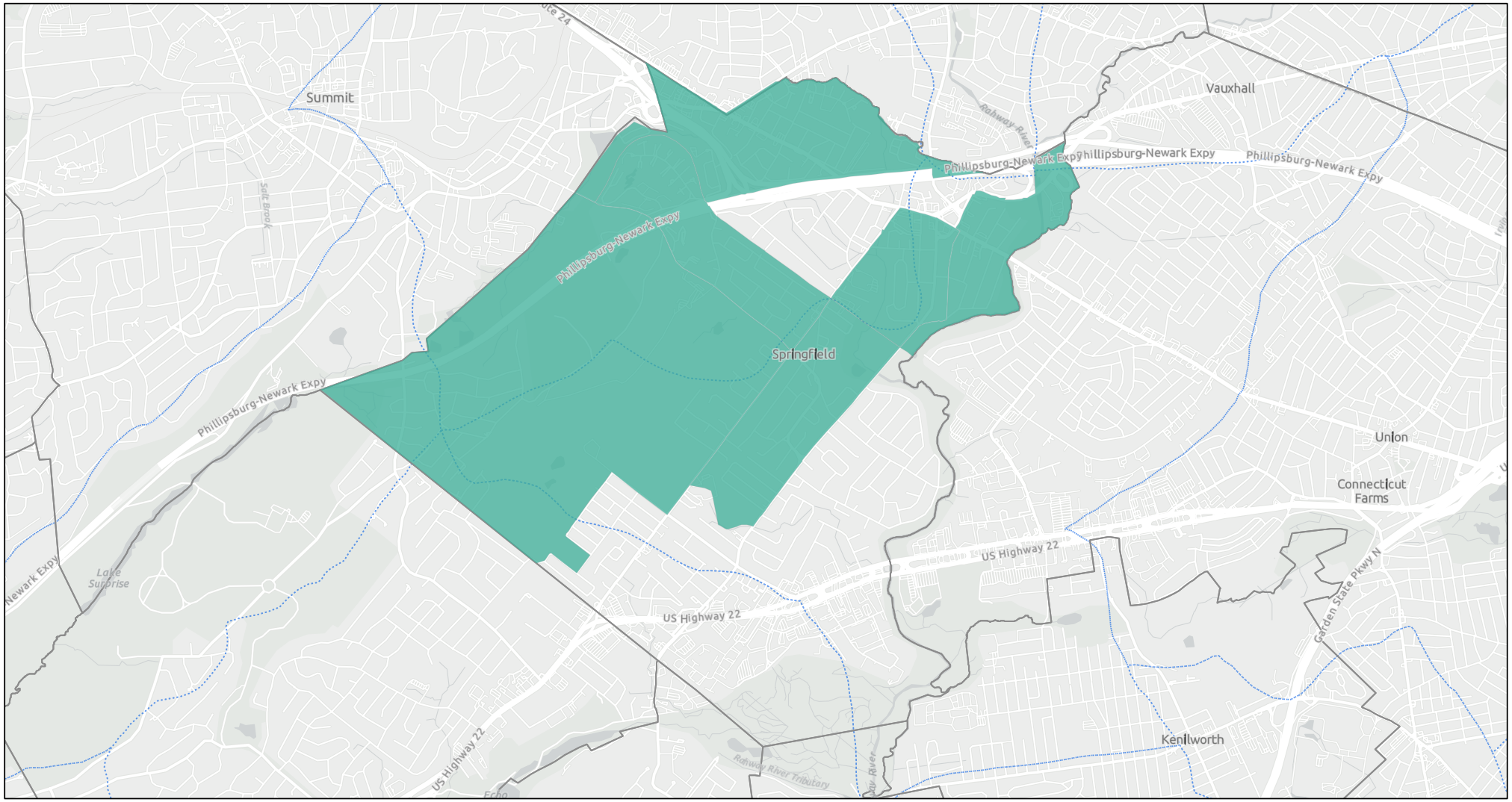
Overburdened Communities (for Tier A permittees only)

The data in this section was collected through the 'New Jersey Watershed Evaluation Tool' (NJ-WET) on 12/9/2025.

Sub-watersheds within the Township of Springfield's jurisdiction that overburdened communities (Minority criteria) are present in:
HUC14 02030104050010 - Rahway River WB
HUC14 02030104050020 - Rahway River EB
HUC14 02030104050030 - Baltusrol trib (above Springfield Sta)
HUC14 02030105120010 - Green Bk (above/incl Blue Brook)
HUC14 02030104050050 - Nomahegan Brook
HUC14 02030104050040 - Rahway R (Kenilworth Blvd to EB / WB*)*

The importance of clean surface water in overburdened communities consists of lowering healthcare costs, healthier livestock/crop growth, and preventing spread of diseases through water.

FIGURE 6
OVERBURDENED COMMUNITIES WITHIN SPRINGFIELD TOWNSHIP



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Overburdened Communities under the New Jersey Environmental Justice Law

- Overburdened Communities
- Municipality
- Watersheds (DEPHUC14)

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community