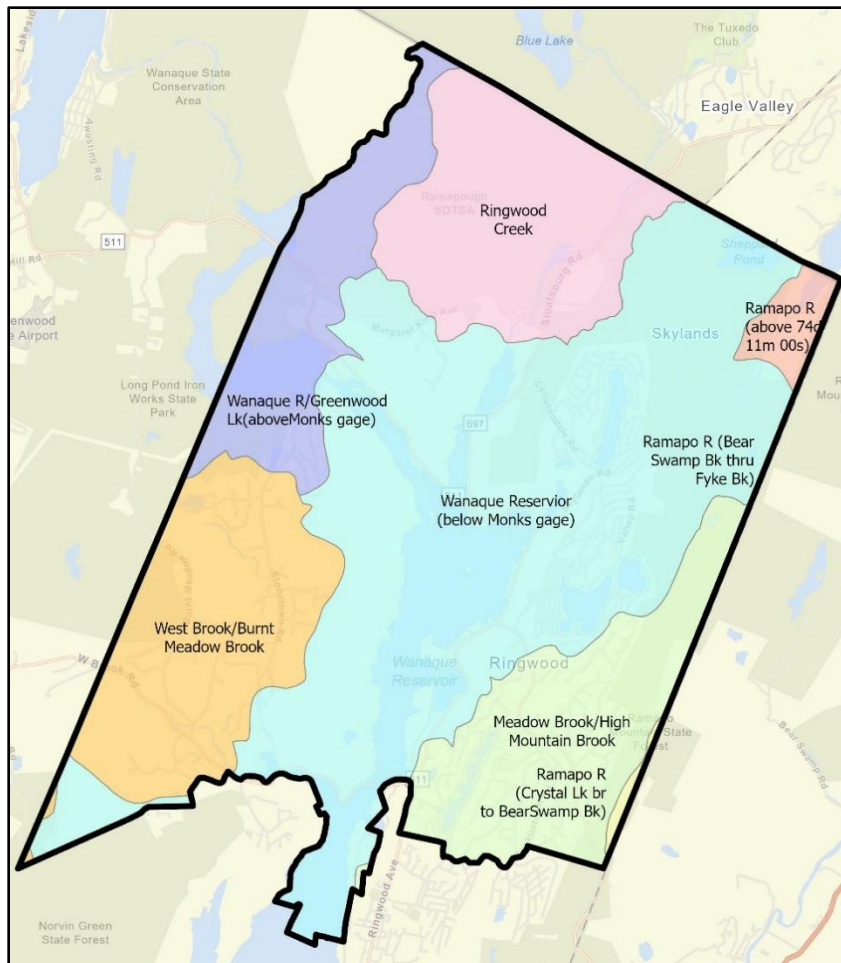


WATERSHED INVENTORY REPORT

PHASE 1 OF THE WATERSHED IMPROVEMENT PLAN

BOROUGH OF RINGWOOD

PASSAIC COUNTY, NEW JERSEY



Approved:

Permit Number: NJG 0152749

Stormwater Program Coordinator: Scott Heck

Prepared by:

H2M Associates, Inc.
119 Cherry Hill Road, Suite 110
Parsippany, New Jersey 07054

H2M Project No.: BRGW2502



architects + engineers

December 2025

WATERSHED INVENTORY REPORT

Phase 1 of the Watershed Improvement Plan
Borough of Ringwood, Passaic County, New Jersey

December 2025

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Acknowledgements

The Borough of Ringwood's Watershed Inventory Report has been prepared by H2M Associates, Inc.

Funding for this project was provided by the Borough of Ringwood.

Introduction

Location

- The Borough of Ringwood is located in northern Passaic County, New Jersey with a land area of 25.6 square miles.
- To the West the Borough is bordered by West Milford Township. The southern border is bounded by Bloomingdale Borough and Wanaque Borough and the eastern border by Mahwah Township of Bergen County. The north of the Borough shares a boundary with New York State. The center of the Borough contains the Wanaque Reservoir which extends into Wanaque Borough.
- The Municipal Building is located at 60 Margaret King Avenue, Ringwood, NJ 07456

Population and Demographics – United States Census (2020)

- Total population of 11,735
- Total households of 4,154 with an average size of 2.77 persons
- The employment rate in the Borough is 65.6% of which 84.1% use a motor vehicle or public transportation to commute to work, 0.8% walk or use a bicycle, and the remaining 15.1% work from home.

Land Use Summary – Borough of Ringwood (2020)

- Land use within the Borough of Ringwood is predominantly forested, with Forest areas accounting for approximately 11,792 acres, or 64.7% of the total land area. Urban land uses - including residential, commercial, Industrial, and recreational areas - make up the second largest category, covering 3,168 acres or 17.4%. Water bodies, including lakes, reservoirs, and streams, comprise 2,249 acres (12.3%), while Wetlands occupy 918 acres (5.0%). Barren land, such as disturbed or extractive areas, represents a minor portion of the landscape at 67 acres (0.4%). Agricultural land use is the least prevalent, totaling just 38 acres (0.2%).

Subwatersheds within or bordering the Borough of Ringwood (NJ-WET 2025)

- The Borough of Ringwood encompasses portions of nine HUC 14 subwatersheds, each contributing to the area's hydrologic and environmental profile. These subwatersheds collectively define the Borough's watershed boundaries and are essential for evaluating water quality conditions and TMDL impacts. Below are the subwatersheds listed in order of size.
 1. **HUC 02030103070050** – Wanaque Reservoir (below Monk's gage), 13.90 square miles (sq mi)
 2. **HUC 02030103070040** – West Brook/Burnt Meadow Brook (4.01 sq mi)
 3. **HUC 02030103070080** – Ringwood Creek (3.75 sq mi)
 4. **HUC 02030103070060** – Meadow Brook/High Mountain Brook (3.71 sq mi)
 5. **HUC 02030103070030** – Wanaque River/Greenwood Lake (above Monk's gage) 2.47 sq mi
 6. **HUC 02030103100010** – Ramapo River (above 74 11'00") 0.50 sq mi
 7. **HUC 02030103100050** – Ramapo River (Crystal Lake branch to Bear Swamp Brook) (0.13 sq mi),
 8. **HUC 02030103100040** – Ramapo River (Bear Swamp Brook through Fyke Brook) (0.003 sq mi)
 9. **HUC 02030103070070** – Wanaque River/Posts Brook (below reservoir) (0.002 sq mi)

Area(s) Prone to Flooding

- Due to the Borough's location at higher elevations which are predominantly forested, areas prone to flooding have not been identified. Subsequent phases of the Watershed Improvement Plan will seek public and stakeholders input to identify areas not immediately evident to the municipality.

Goals for the Watershed Improvement Plan

- The Borough continues to develop its geographic information system (GIS) and mapping to visualize data regarding existing stormwater infrastructure, land cover, watershed delineation, and water quality classification. The data collected was used to prepare the Watershed Inventory Report. The goal of the Watershed Inventory Report is to gather, organize and present the information in a way to assist the municipality in making decisions, planning and implementing sustainable strategies for watershed management. The ultimate goal of the Watershed Improvement Plan is to improve the quality of the watershed and community by reducing pollutant loads in impaired waterbodies and those with TMDL's, address flooding in vulnerable and overburdened communities, and promote collaboration and green infrastructure solutions that align with NJDEP's Integrated Water Quality Assessment.

Stormwater Outfall(s)

Stormwater Outfalls Owned and Operated by the Borough of Ringwood

The Borough of Ringwood, located in Passaic County, New Jersey, owns and operates 269 stormwater outfalls that discharge into various waterways. Over the past decade, the Borough has developed and maintained a comprehensive geospatial dataset of outfall locations using GPS technology. This dataset originated from initial mapping efforts and has been continuously updated to reflect changes in the stormwater system.

Figure 1 illustrates the locations of these outfalls, as documented under the Borough’s Municipal Separate Storm Sewer System (MS4) permit issued by the New Jersey Department of Environmental Protection (NJDEP). The Borough of Ringwood inspects each Outfall annually. Appendix A includes a listing of all the outfalls.

Subwatershed Analysis

Subwatershed delineation was performed using data obtained from the NJDEP Open Data portal in July 2025. Specifically, the dataset titled “Water Returns Categorized by Return Class and Aggregated by HUC 14 Boundaries” was used to determine the location of each stormwater outfall within the HUC 14 boundary layer.

Table 1 provides a subwatershed summary of the 269 outfalls owned and operated by the Borough of Ringwood.

Table 1: Outfall Subwatershed Summary

Subwatershed	Count of Outfalls	Percent
Meadow Brook/High Mountain Brook	74	28%
Ringwood Creek	10	4%
Wanaque R/Greenwood Lk (above Monk’s gage)	5	2%
Wanaque Reservoir (below Monk’s gage)	115	43%
West Brook/Burnt Meadow Brook	65	24%
Grand Total	269	100%

Figure 2 provides a visual representation of the outfall subwatershed delineations.

Receiving Surface Waters

The data used to identify receiving surface waters was sourced from the NJDEP Open Data portal in July 2025. The Surface Water Quality Classification of NJ layer was used to assign each stormwater outfall to its corresponding receiving waterbody based on spatial proximity. Within the Borough of Ringwood, the 269 stormwater outfalls discharge into 22 distinct receiving surface water bodies. Their distribution is summarized in Table 2 below.

Figure 3 provides a visual representation of the receiving surface waters associated with each outfall.

Table 2: Receiving Surface Water Body Summary

Receiving Surface Water Body	Count of Outfalls	Percent
Blue Mine Brook	2	1%
Burnet Meadow Brook	8	3%
Burnt Meadow Brook UNT	29	11%
Cupsaw Brook	11	4%
Cupsaw Brook UNT	32	12%
Cupsaw Lake	8	3%
Erskine Brook	15	6%
Erskine Lake	19	7%
High Mountain Brook	22	8%
High Mountain Brook UNT	5	2%
Lake Rickonda	2	1%
Meadow Brook	7	3%
Meadow Brook UNT	27	10%
Ringwood Creek	3	1%
Ringwood Creek UNT	7	3%
Skyline Lake	15	6%
Upper Erskine Lake	8	3%
Wanaque Reservoir	10	4%
Wanaque Reservoir UNT	6	2%
Wanaque River UNT	3	1%
West Brook	12	4%
West Brook UNT	18	7%
Grand Total	269	100%

Water Quality Classifications

Water quality classifications were determined using the Surface Water Quality Classification of NJ dataset from the NJDEP Open Data portal (July 2025). Each stormwater outfall was assigned a classification based on its spatial proximity to the designated water quality layer.

The 269 stormwater outfalls in the Borough of Ringwood fall within four distinct water quality classifications summarized in Table 3 below. Figure 4 provides a visual representation of the classifications.

Table 3: Water Quality Classification Summary

Water Quality Classification	Count of Outfalls	Percent
FW2-NTC1	132	49%
FW2-TM	1	0%
FW2-TMC1	41	15%
FW2-TPC1	95	35%
Grand Total	269	100%

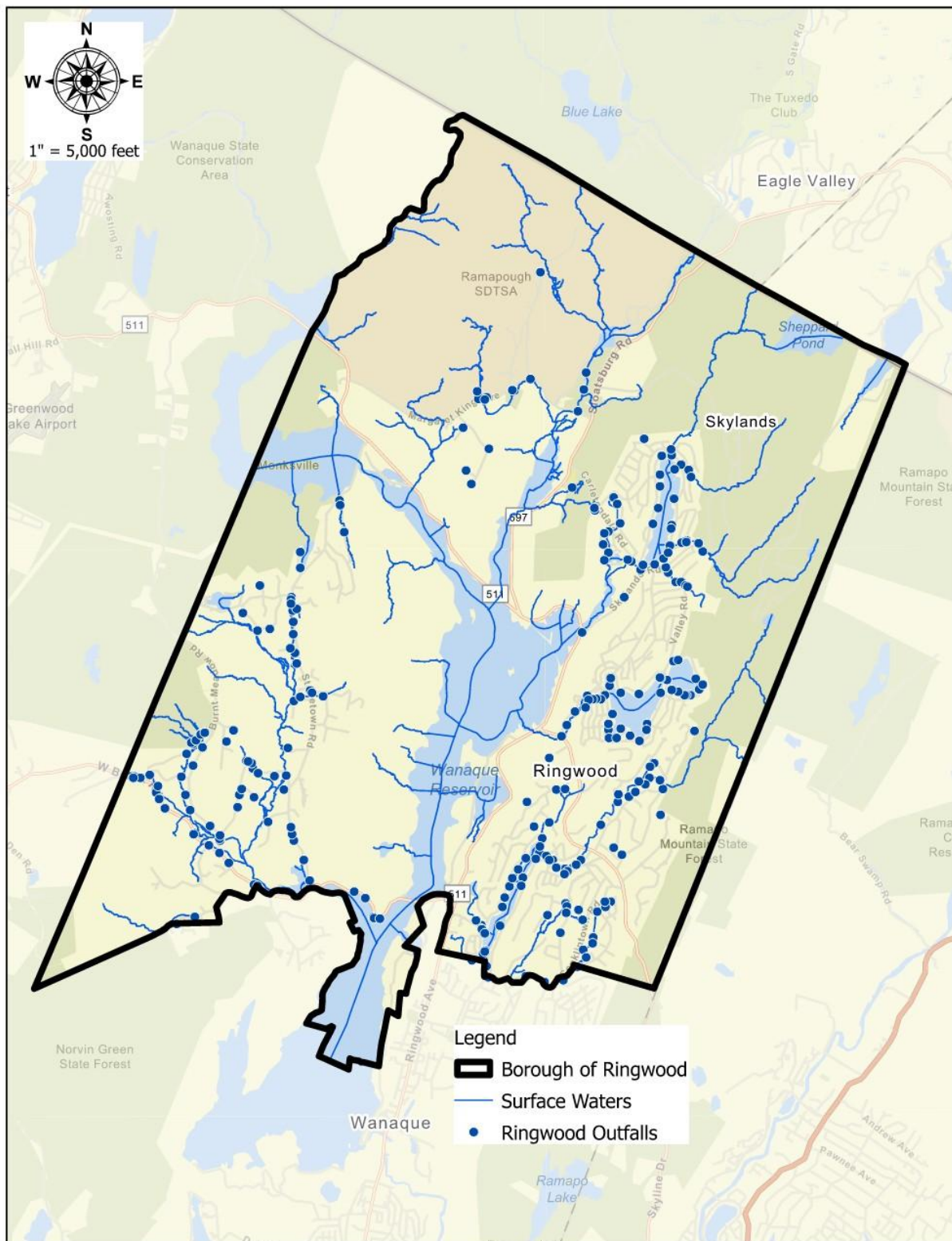


Figure 1: Borough of Ringwood Owned and Operated Stormwater Outfalls

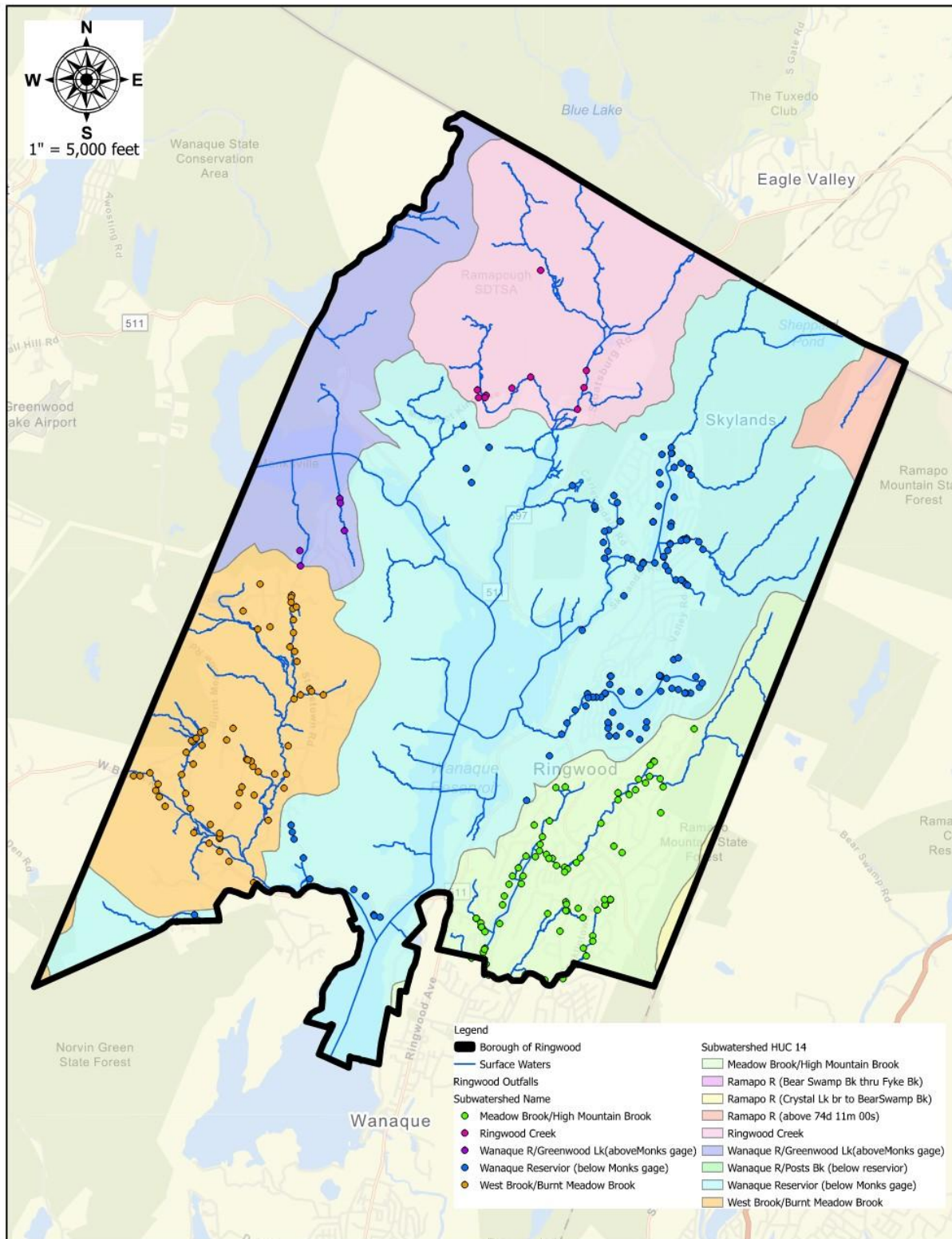


Figure 2: Borough of Ringwood Outfall Watershed Delineations

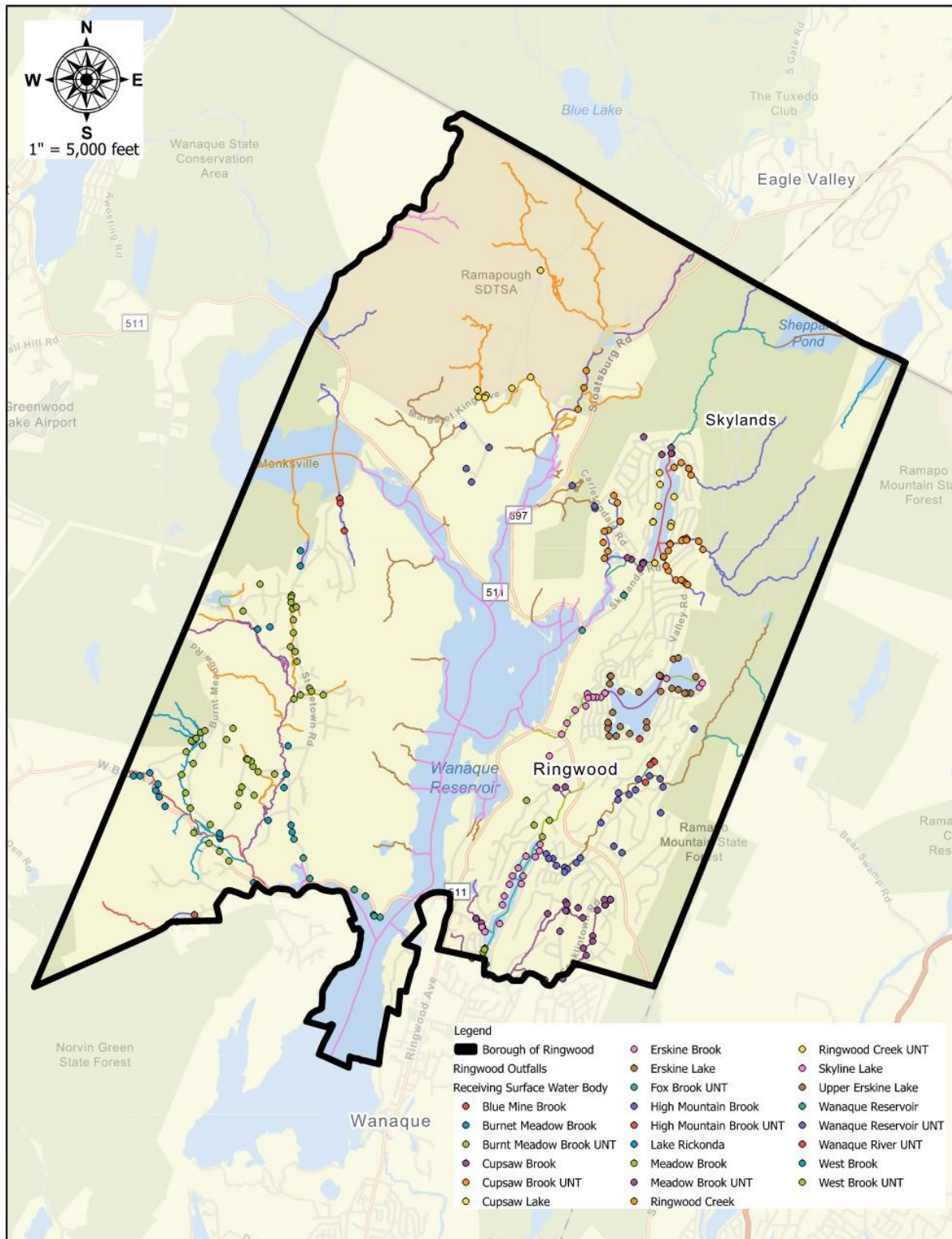


Figure 3: Borough of Ringwood Outfall Receiving Surface Waters

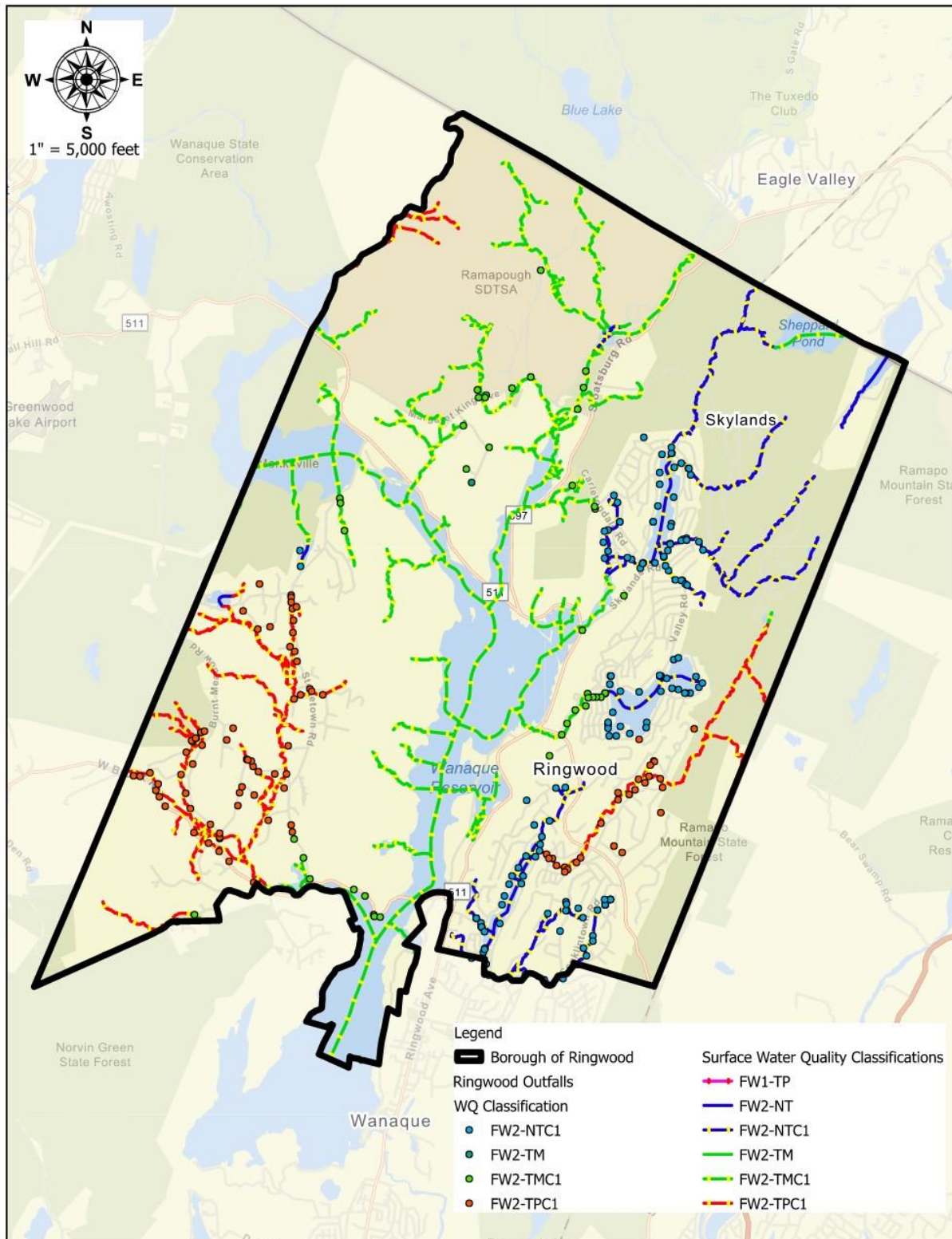


Figure 4: Borough of Ringwood Water Quality Classification of Surface Waters

Stormwater Interconnection(s)

The Borough of Ringwood maintains four stormwater interconnections: three with Passaic County's MS4 system and one with the Borough of Wanaque's MS4 system.

- Passaic County Interconnections:
 - Two of these interconnections consist of pipes where Ringwood's stormwater system serves as the upstream entity, discharging into Passaic County's conveyance system downstream.
 - The third interconnection is located at a conveyance pipe where Passaic County's MS4 system is upstream and connects to Ringwood's conveyance system downstream of the interconnection point.
- Borough of Wanaque Interconnection:
 - This interconnection consists of a pipe through which Ringwood's stormwater infrastructure discharges into Wanaque's system, ultimately draining to an outfall owned by the Borough of Wanaque.

The locations of these interconnections have been delineated as a point feature representing the precise connection between each system. Figure 5 illustrates these interconnections.

Drainage Area(s) for Stormwater Outfalls and Interconnections

Storm Drain Inlets

The Borough of Ringwood, located in Passaic County, New Jersey, owns and operates over 2,000 drain inlets. Over the past decade, the Borough has developed and maintained a detailed geospatial inventory of inlet locations using GPS technology. This dataset originated from initial mapping efforts and has been continuously refined to reflect updates and modifications to the stormwater infrastructure. As of the most recent update, the Borough owns and operates a total of 2,359 stormwater inlets. Figure 7 contains a map of the drain inlet locations throughout the Borough.

All inlets are required to be inspected annually per the MS4 permit from NJDEP. The Borough not only performs a visual inspection of the inlet as required by the permit but also performs a condition assessment of the inlet structure. Condition assessment of the inlet is required by the permit once every five years. Logs of the inspection and maintenance records are kept by the Borough.

MS4 Outfall Drainage Areas

Ringwood Outfall Drainage Areas Summary

The delineation of drainage areas within the Ringwood watershed was conducted to identify contributing zones to stormwater outfalls points. This analysis supports efforts to detect potential sources of illicit discharges and to better understand the behavior of the stormwater infrastructure network. Figure 8 depicts the drainage area for each outfall.

Methodology Overview

The delineation process integrated both natural topography and engineered stormwater infrastructure using advanced geospatial tools in ArcGIS Pro. A high-resolution Digital Elevation Model (DEM)—specifically the 2-foot Northwest NJ2018 DEM from the New Jersey Geographic Information Network—served as the foundation for surface flow modeling.

To accurately reflect the influence of the stormwater pipe network on surface hydrology, the pipe polyline data was rasterized and embedded into the DEM. This “burn-in” technique artificially lowered elevations along pipe paths, ensuring that modeled flow would follow constructed drainage routes rather than defaulting to natural terrain features.

Following this enhancement, the DEM was hydrologically conditioned by filling depressions to maintain continuous flow paths. Flow direction and flow accumulation rasters were then generated to simulate water movement across the landscape. Outfall points were aligned with high-flow accumulation cells to improve the accuracy of watershed delineation.

Each point was used as a pour point in the watershed tool to define its contributing drainage area. The resulting raster outputs were converted into polygonal representations of distinct drainage zones. These polygons were then visually inspected and cross-referenced with elevation data and the stormwater pipe layout to confirm that modeled flow paths aligned with real-world infrastructure.

To determine the primary contribution drainage area land use type, the Land Use 2020 layer was downloaded from the NJDEP Open Data website in September of 2025. This layer was clipped to the drainage area boundaries. Each land use polygon was assigned a drainage area ID based on a spatial join from the Outfall drainage area polygon layer that was created in the steps above. Based on that we were able to determine the land use type that had the largest area in each of the drainage areas. This information is represented in Stormwater Outfall Drainage area GIS layer that is submitted along with this report.

MS4 Interconnection Drainage Areas

Ringwood Interconnection Drainage Areas Summary

The delineation of drainage areas within the Ringwood watershed was performed to identify zones contributing to stormwater interconnection points. This analysis supports efforts to detect potential sources of illicit discharges and enhances understanding of the stormwater infrastructure network’s behavior. The methodology used to determine these drainage areas followed the same approach applied to the outfall drainage areas described above. Figure 6 illustrates the delineated drainage areas for each interconnection.

The electronic data accompanying this report includes the Stormwater Outfall and Interconnect Drainage areas GIS file.

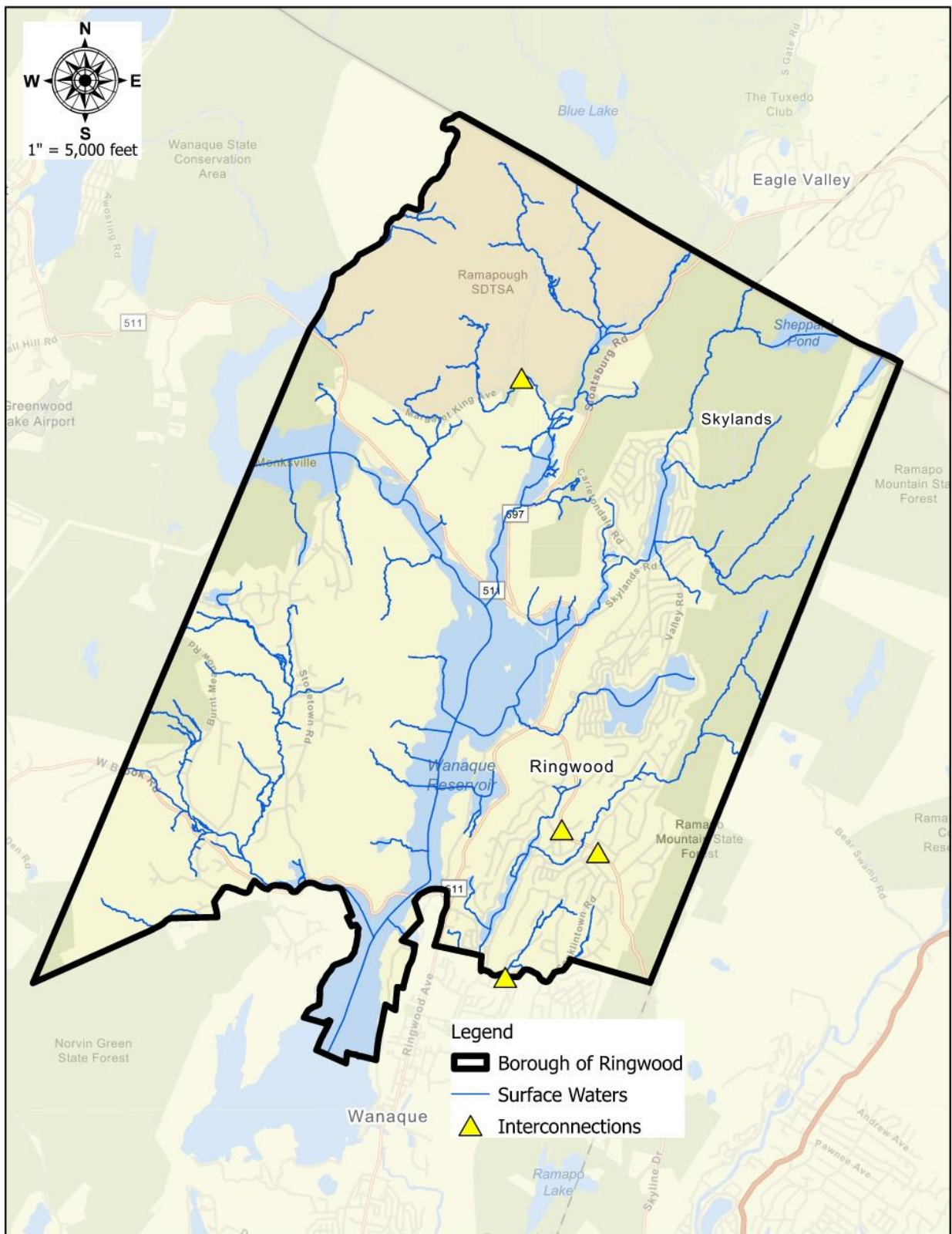


Figure 5: Borough of Ringwood Interconnections

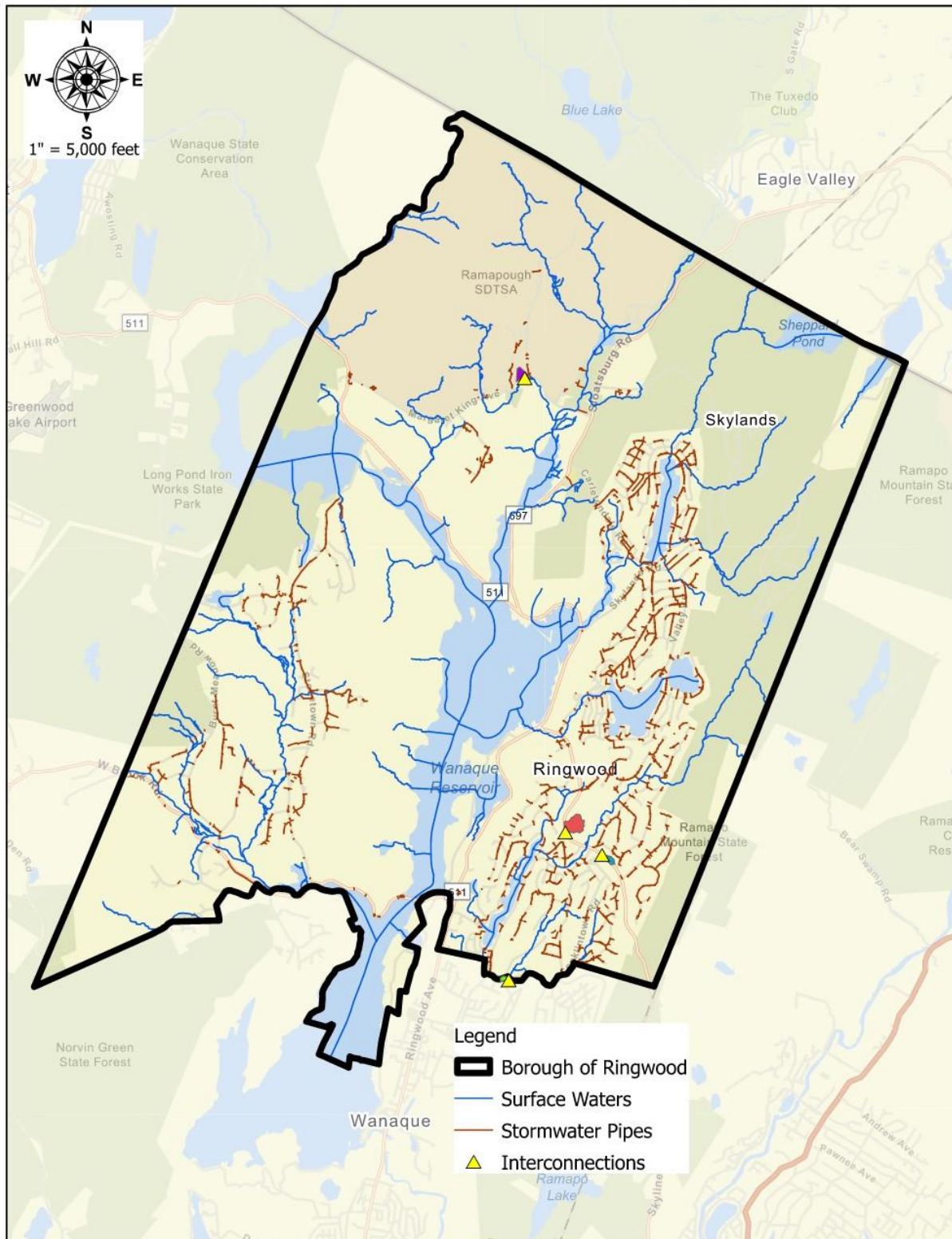


Figure 6: Borough of Ringwood Interconnection Drainage Areas

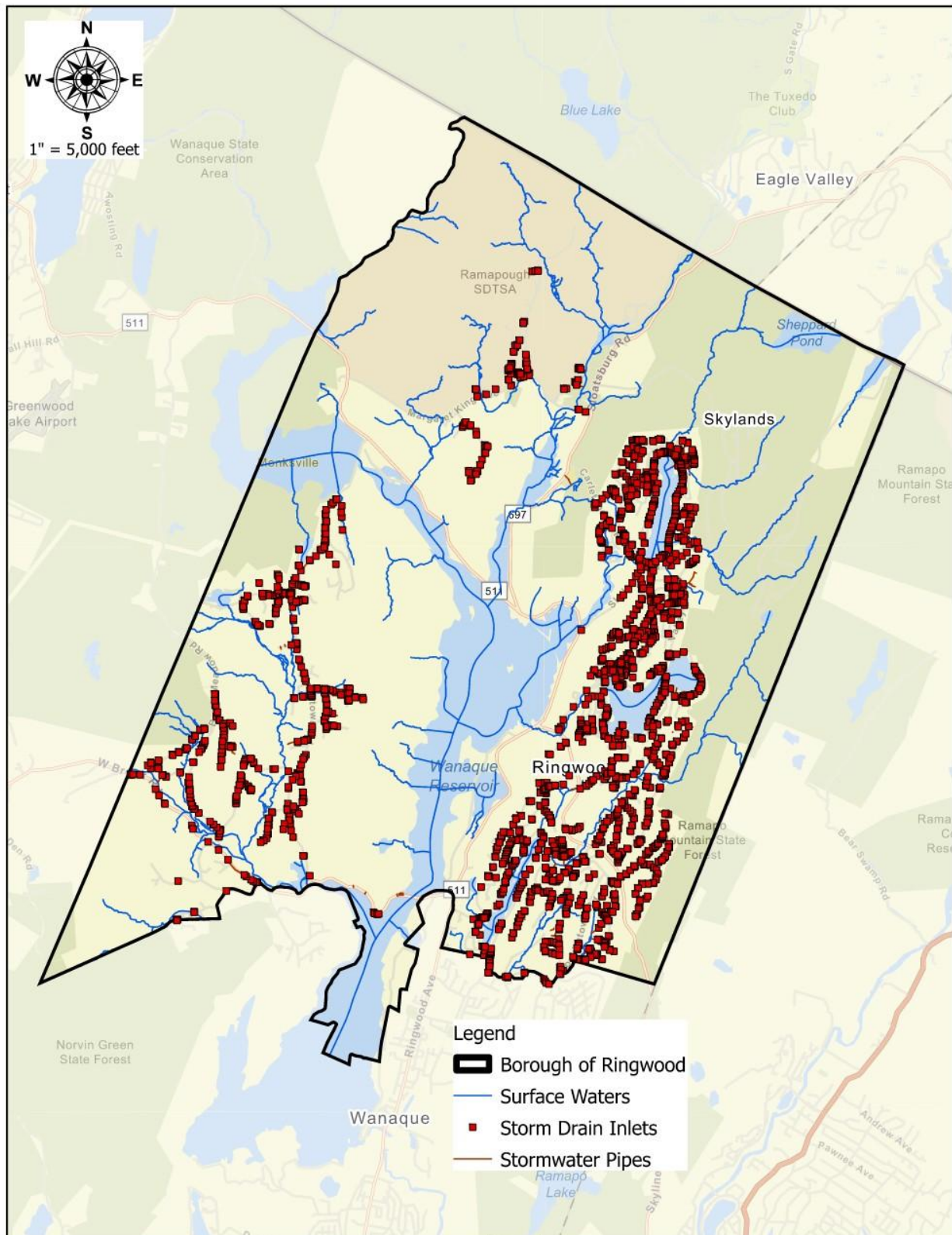


Figure 7: Borough of Ringwood Storm Drain Inlets

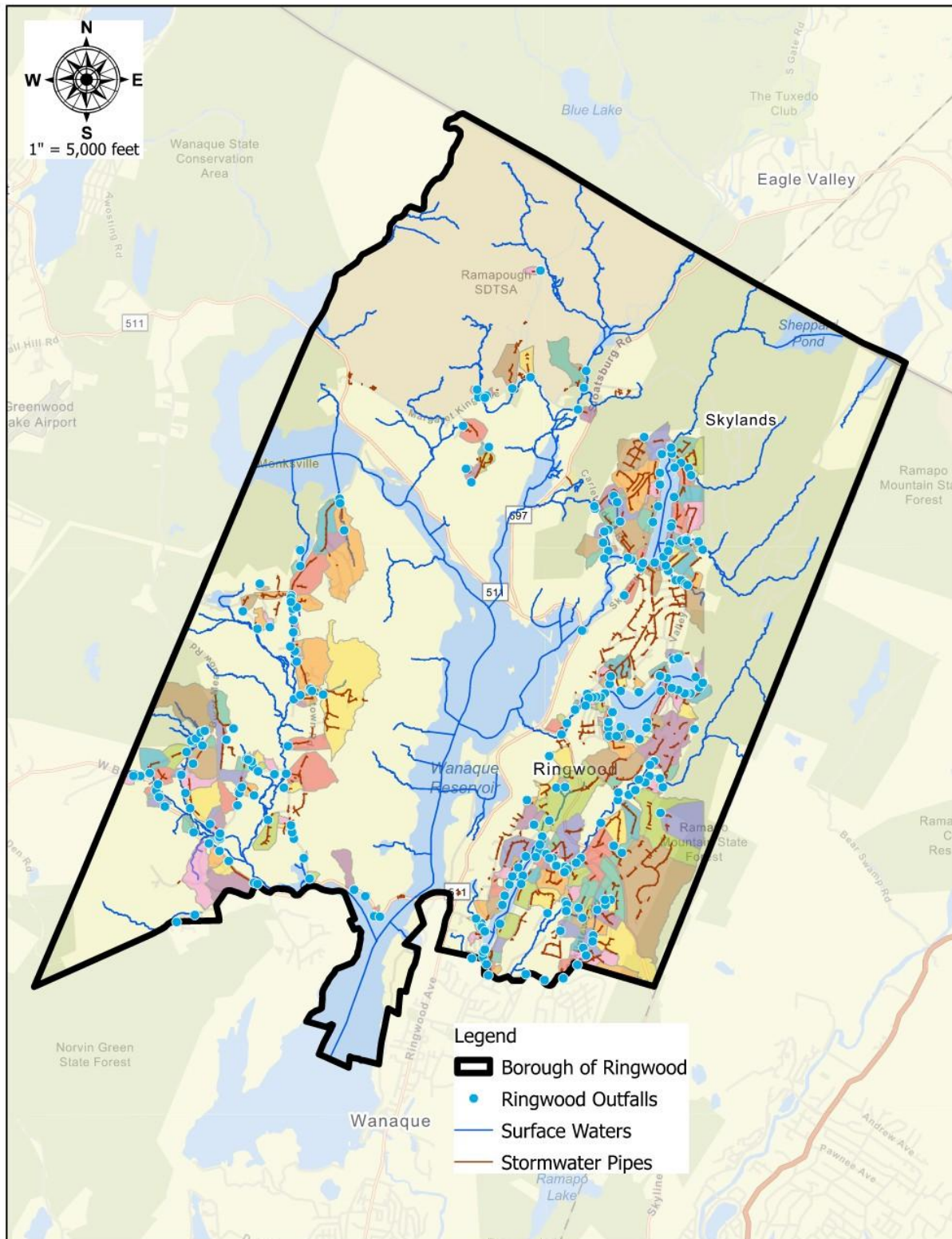


Figure 8: Borough of Ringwood Outfall Drainage Areas

Total Maximum Daily Loads (TMDLs) and Water Quality Impairments

TMDLs

To support the TMDL analysis, the TMDL Stream Sheds, TMDL Stream Sheds Pre-2008, TMDL Lake Sheds, and TMDL Shellfish layers were downloaded from the NJDEP Open Data Portal I in September 2025. These datasets were spatially joined to identify which HUC 14 watersheds intersect or share boundaries with the Borough of Ringwood. Within the Borough, three TMDLs were identified: Fecal Coliform, Mercury, and Total Phosphorus. There are no TMDL Shellfish areas within the Borough of Ringwood. The areas of overlap between these TMDLs and the Borough of Ringwood are illustrated in Figure 9 and detailed in Table 4.

Fecal Coliform TMDL

Fecal coliform bacteria are indicators of contamination from human and animal waste. In freshwater systems, their presence suggests potential exposure to pathogenic organisms such as *E. coli*, viruses, and protozoa. These pathogens pose health risks to humans engaging in recreational activities like swimming or fishing (1).

Elevated fecal coliform levels can lead to:

- Recreational water use restrictions due to unsafe conditions.
- Degradation of water quality, including increased turbidity and unpleasant odors.
- Oxygen depletion, which stresses aquatic life and disrupts microbial balance.

Sources include urban stormwater runoff, failing septic systems, agricultural activities, and wildlife. Rain events often exacerbate contamination levels by increasing runoff (1).

Mercury TMDL

Mercury contamination in freshwater ecosystems primarily occurs through atmospheric deposition from coal-fired power plants and incinerators. Once in aquatic environments, mercury is converted to methylmercury, a highly toxic form that bioaccumulates in fish and other aquatic organisms (2).

Key concerns include:

- Bioaccumulation in fish, leading to fish consumption advisories due to health risks, especially for pregnant women and children.
- Neurological and developmental effects on wildlife and humans.
- Long-term persistence in sediments, which can be re-mobilized under certain conditions.

Mercury TMDLs often require coordination across air, water, and waste programs due to the diverse sources and transport mechanisms (2).

Total Phosphorus TMDL

Phosphorus is a nutrient essential for aquatic life, but excessive levels in freshwater systems lead to eutrophication—a process that promotes harmful algal blooms and depletes oxygen levels (3).

Environmental impacts include:

- Algal blooms, which reduce water clarity and can produce toxins harmful to fish, wildlife, and humans.
- Hypoxia (low oxygen levels), resulting in fish kills and loss of biodiversity.
- Altered aquatic community structure, including shifts in diatom populations and other sensitive species.

Sources of phosphorus include agricultural runoff, wastewater discharges, and urban stormwater. Human disturbances such as erosion and overuse of fertilizers significantly contribute to phosphorus loading (3).

Water Quality Impairments

To support the water quality impairment analysis, the 2020 Water Quality Impairments Related to Stormwater dataset was obtained from the New Jersey Department of Environmental Protection (NJDEP) Open Data Portal in September 2025. The dataset was filtered to include only impairments occurring within HUC 14 watersheds in the Borough of Ringwood. Within the Borough of Ringwood, four water quality impairments were identified: pH, Temperature, Dissolved Oxygen, and Escherichia coli (E. coli). These impairments are illustrated in Figure 10, and Table 4 provides a summary of each impairment present within the HUC 14 watershed boundaries.

pH Water Quality Impairments

Impact on Freshwater Ecosystems: pH levels in freshwater bodies influence the solubility and biological availability of nutrients and metals. Deviations from the optimal pH range (typically 6.5–8.5) can:

- Stress aquatic organisms, especially sensitive species like trout, by disrupting metabolic and reproductive functions (4).
- Increase toxicity of metals such as aluminum and lead, which become more soluble in acidic conditions.
- Alter microbial activity, affecting decomposition and nutrient cycling.

pH impairments are often linked to nutrient over-enrichment, acid rain, and urban runoff. Restoration efforts typically focus on controlling nutrient inputs and improving buffer zones (4).

Temperature Water Quality Impairments

Impact on Freshwater Ecosystems: Elevated water temperatures reduce dissolved oxygen levels and affect species composition.

Elevated temperatures can cause:

- Coldwater species like Brook Trout are losing habitat due to warming stream temperatures (5).
- Thermal stress increases mortality and reduces reproductive success in fish, amphibians, and macroinvertebrates.
- Urbanization and climate change exacerbate temperature impairments through increased impervious surfaces and altered hydrology.

Temperature impairments are often linked to urbanization, loss of riparian vegetation, and climate change.

Dissolved Oxygen Water Quality Impairments

Impact on Freshwater Ecosystems: Dissolved Oxygen is essential for respiration in aquatic organisms. Low Dissolved Oxygen levels (hypoxia) can:

- Cause fish kills, especially in sensitive species like trout and bass.
- Disrupt benthic communities, leading to reduced biodiversity and altered food webs.
- Promote anaerobic conditions, which can release harmful substances like hydrogen sulfide.

Dissolved Oxygen impairments are common in urbanized areas due to stormwater runoff, nutrient loading, and thermal pollution. Impervious surfaces reduce oxygen exchange and increase water temperatures, compounding the issue (4).

Escherichia Coli (E. coli) Water Quality Impairments

Impact on Freshwater Ecosystem: E. coli is a fecal indicator bacterium that signals the presence of pathogens. Affects and sources of E. coli include:

- Primary recreation uses (e.g., swimming, kayaking) are often restricted due to elevated E. coli levels (4).
- Stormwater runoff is a major contributor, especially after rainfall events.
- Wildlife, failing septic systems, and agricultural runoff are common sources.

E. coli is one of the most frequent causes of impairment statewide, and its presence can lead to public health advisories and long-term monitoring requirements (6).

Table 4: TMDLs and Impairments for Subwatersheds Within or Bordering the Borough of Ringwood

HUC 14	Subwatershed Name	TMDL(s)	Impairments
02030103070030	Wanaque R/Greenwood Lk (above Monk's gage)	<u>Stream Sheds</u> Mercury, Total Phosphorus	None
02030103070040	West Brook/Burnt Meadow Brook	<u>Stream Sheds</u> Mercury, Total Phosphorus	Temperature Dissolved Oxygen
02030103070050	Wanaque Reservoir (below Monk's gage)	<u>Stream Sheds</u> Mercury, Total Phosphorus <u>Stream Sheds (Pre-2008)</u> Fecal Coliform <u>Lake Shed</u> Fecal Coliform, Total Phosphorus	None
02030103070060	Meadow Brook/High Mountain Brook	<u>Stream Sheds</u> Mercury, Total Phosphorus <u>Stream Sheds (Pre-2008)</u> Fecal Coliform <u>Lake Shed</u> Fecal Coliform, Total Phosphorus	Escherichia Coli (E. Coli) Temperature
02030103070070	Wanaque R/Posts Bk (below reservoir)	<u>Stream Sheds</u> Total Phosphorus	Temperature
02030103070080	Ringwood Creek	<u>Stream Sheds</u> Mercury, Total Phosphorus	None
02030103100010	Ramapo R (above 74d 11m 00s)	<u>Stream Sheds</u> Mercury, Total Phosphorus <u>Stream Sheds (Pre-2008)</u> Fecal Coliform <u>Lake Shed</u> Total Phosphorus	Dissolved Oxygen
02030103100040	Ramapo R (Bear Swamp Bk thru Fyke Bk)	<u>Stream Sheds</u> Mercury, Total Phosphorus <u>Stream Sheds (Pre-2008)</u> Fecal Coliform <u>Lake Shed</u> Total Phosphorus	pH Temperature
02030103100050	Ramapo R (Crystal Lk br to Bear Swamp Bk)	<u>Stream Sheds</u> Total Phosphorus <u>Stream Sheds (Pre-2008)</u> Fecal Coliform <u>Lake Shed</u> Fecal Coliform, Total Phosphorus	pH Temperature

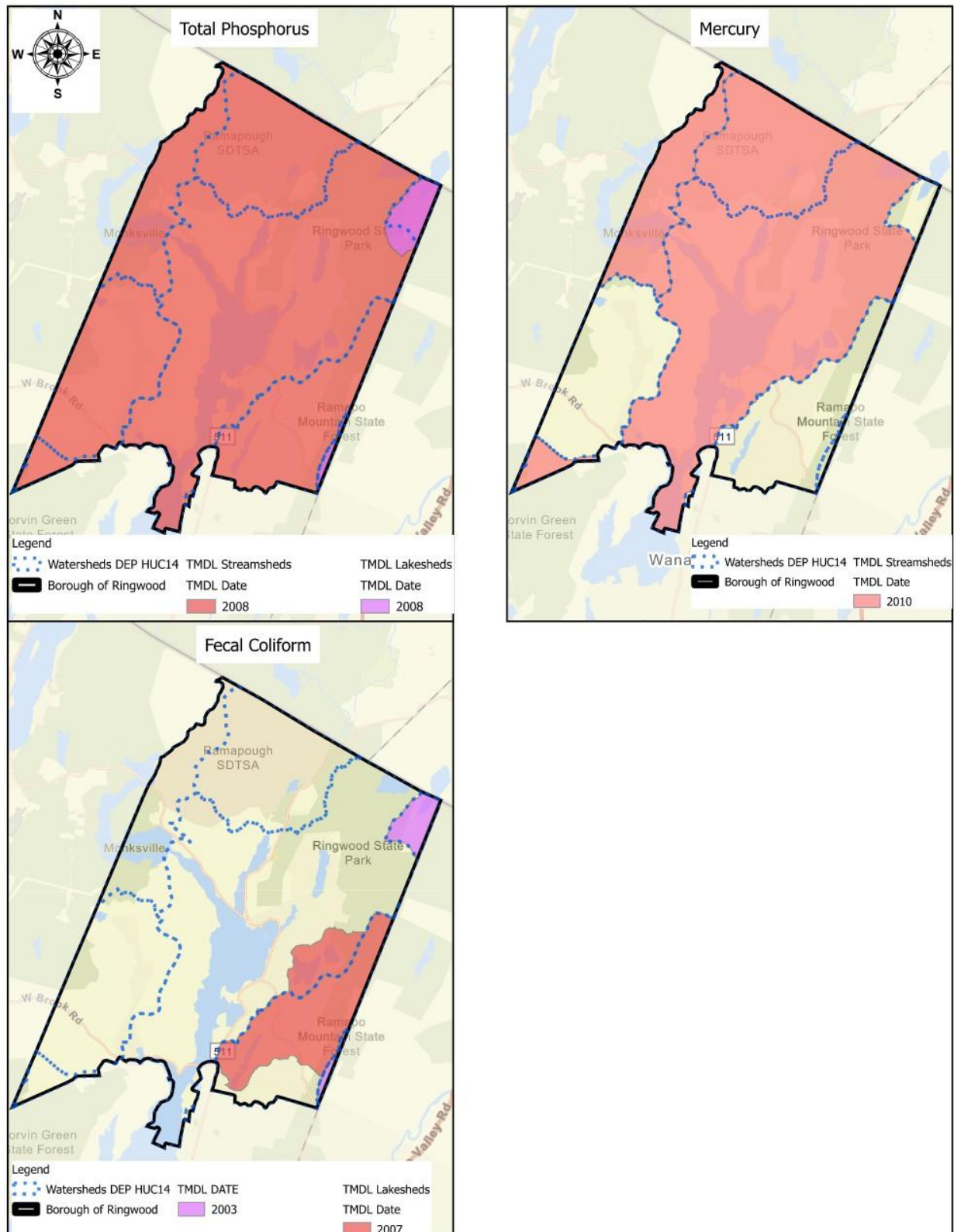


Figure 9: Borough of Ringwood HUC14's with TMDL's

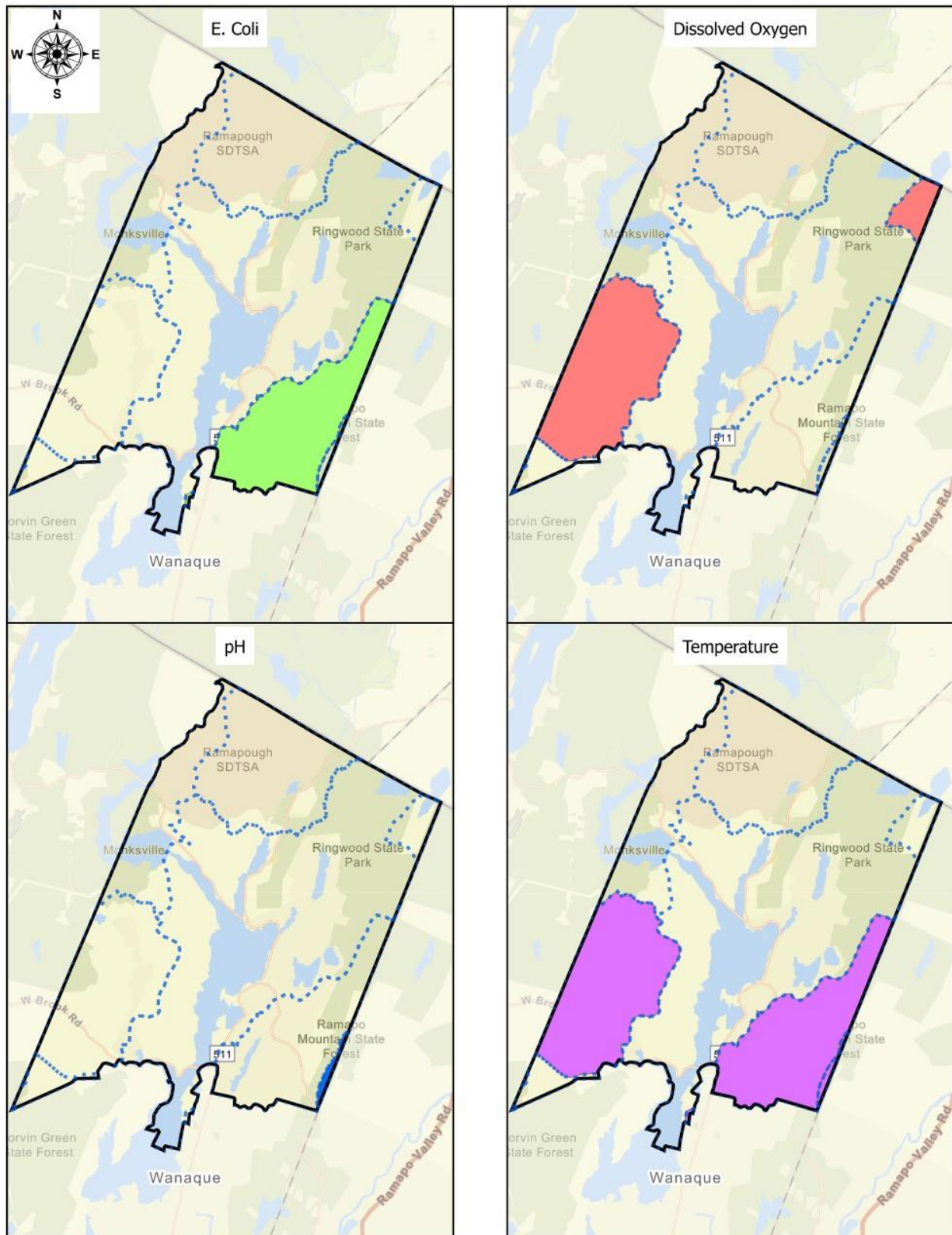


Figure 10: Borough of Ringwood HUC14's with Water Quality Impairments

Overburdened Communities

Communities that are overburdened and financially constrained often lack the resources needed to implement effective stormwater management infrastructure. As a result, they face heightened risks of flooding. In addition to property damage, flooding in these areas can exacerbate existing public health challenges, as these communities are already more vulnerable to health disparities.

Clean surface water is especially critical in these communities, as it directly impacts public health, environmental quality, and overall resilience. Contaminated runoff from impervious surfaces can degrade water quality, leading to increased exposure to pollutants and waterborne illnesses. Ensuring access to clean surface water helps mitigate these risks and supports healthier living conditions in areas that are already disproportionately affected by environmental stressors.

To support this analysis, the Overburdened Communities under the New Jersey Environmental Justice Law and Watershed DEP HUC 14 layers were downloaded from NJDEP's Open Data portal in September 2025. These datasets were spatially joined to identify which HUC 14 watersheds intersect with overburdened communities. The areas within the Borough of Ringwood that overlap with these communities are illustrated in Figure 11 and detailed in Table 5.

Table 5: Overburdened Communities within the Borough of Ringwood

HUC 14	Subwatershed Name	Overburdened Communities
02030103070030	Wanaque R/Greenwood Lk (above Monk's gage)	Minority
02030103070040	West Brook/Burnt Meadow Brook	None
02030103070050	Wanaque Reservoir (below Monk's gage)	Minority
02030103070060	Meadow Brook/High Mountain Brook	None
02030103070070	Wanaque R/Posts Bk (below reservoir)	None
02030103070080	Ringwood Creek	Minority
02030103100010	Ramapo R (above 74d 11m 00s)	None
02030103100040	Ramapo R (Bear Swamp Bk thru Fyke Bk)	None
02030103100050	Ramapo R (Crystal Lk br to Bear Swamp Bk)	None

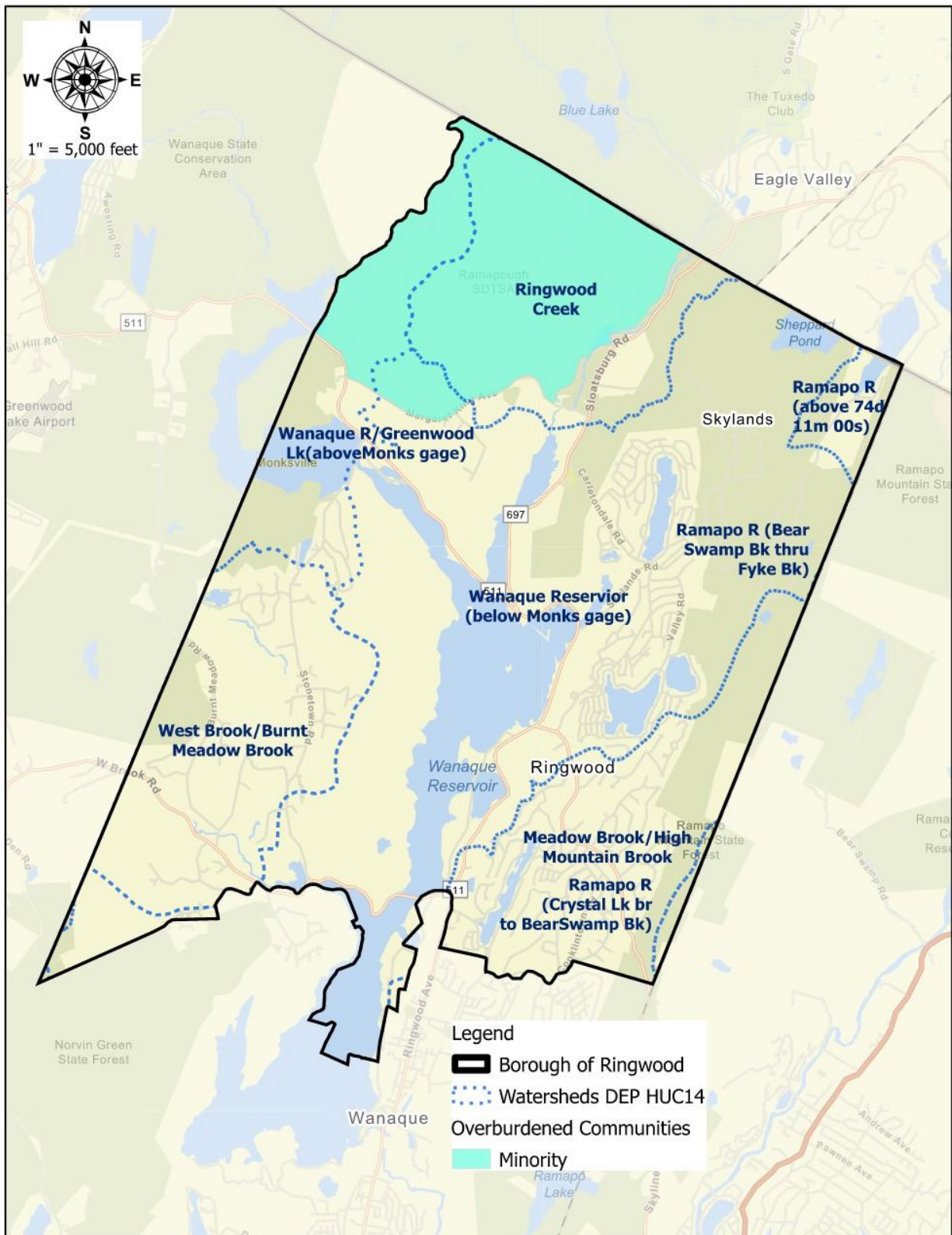


Figure 11: Borough of Ringwood Overburdened Communities

Impervious Area

The New Jersey Department of Environmental Protection (NJDEP) Open Data layer titled Impervious Surface 2015 provides a comprehensive depiction of impervious surfaces across the state. This dataset categorizes impervious features into three classes: buildings, roads, and other impervious surfaces such as driveways and parking lots. To focus the analysis on the Borough of Ringwood, the dataset was clipped to the Borough boundary, allowing for a localized assessment of impervious surface distribution. Refer to Figure 12 detailing the impervious surface locations through the Borough of Ringwood.

For this analysis, both the Impervious Surface 2015 layer and the Watershed DEP HUC 14 layer were downloaded from NJDEP's Open Data portal in September 2025. To calculate the percentage of impervious surface within the Borough of Ringwood, advanced geospatial analysis was conducted using ArcGIS Pro.

The process began with a union operation between the two layers to ensure that any impervious surfaces spanning multiple watershed boundaries were appropriately segmented. This step guaranteed that each impervious surface polygon was confined to a single HUC 14 watershed boundary. Following the union, a spatial join was performed to assign the corresponding HUC 14 watershed identifier to each impervious surface feature. The resulting dataset was then used to calculate the percentage of impervious surface within each HUC 14 watershed in the Borough of Ringwood, providing valuable insight into land cover and watershed characteristics. Refer to Table 6 to see the percentage of impervious cover in each watershed.

Impervious surfaces such as roads, rooftops, and parking lots significantly alter natural hydrology by preventing infiltration and increasing the volume and velocity of stormwater runoff. This runoff rapidly transports pollutants like nutrients, heavy metals, and sediments into nearby waterways, degrading water quality and stream habitat (7). These changes disrupt stream morphology, increase erosion, and elevate water temperatures, which can be lethal to sensitive aquatic species (8). Additionally, reduced groundwater recharge due to impervious cover lowers baseflow levels, further impairing stream health and ecosystem resilience (9).

Table 6: Impervious Surfaces within the Borough of Ringwood

HUC 14	Subwatershed Name	Square Miles	Percent Impervious Cover
02030103070030	Wanaque R/Greenwood Lk (above Monk's gage)	2.5	3.50%
02030103070040	West Brook/Burnt Meadow Brook	4	7.10%
02030103070050	Wanaque Reservoir (below Monk's gage)	13.9	5.20%
02030103070060	Meadow Brook/High Mountain Brook	3.7	14.20%
02030103070070	Wanaque R/Posts Bk (below reservoir)	0.002	No impervious Surface
02030103070080	Ringwood Creek	3.8	3.40%
02030103100010	Ramapo R (above 74d 11m 00s)	0.5	0.10%
02030103100040	Ramapo R (Bear Swamp Bk thru Fyke Bk)	0.003	No impervious Surface
02030103100050	Ramapo R (Crystal Lk br to Bear Swamp Bk)	0.1	0.00%
Total		28.5	

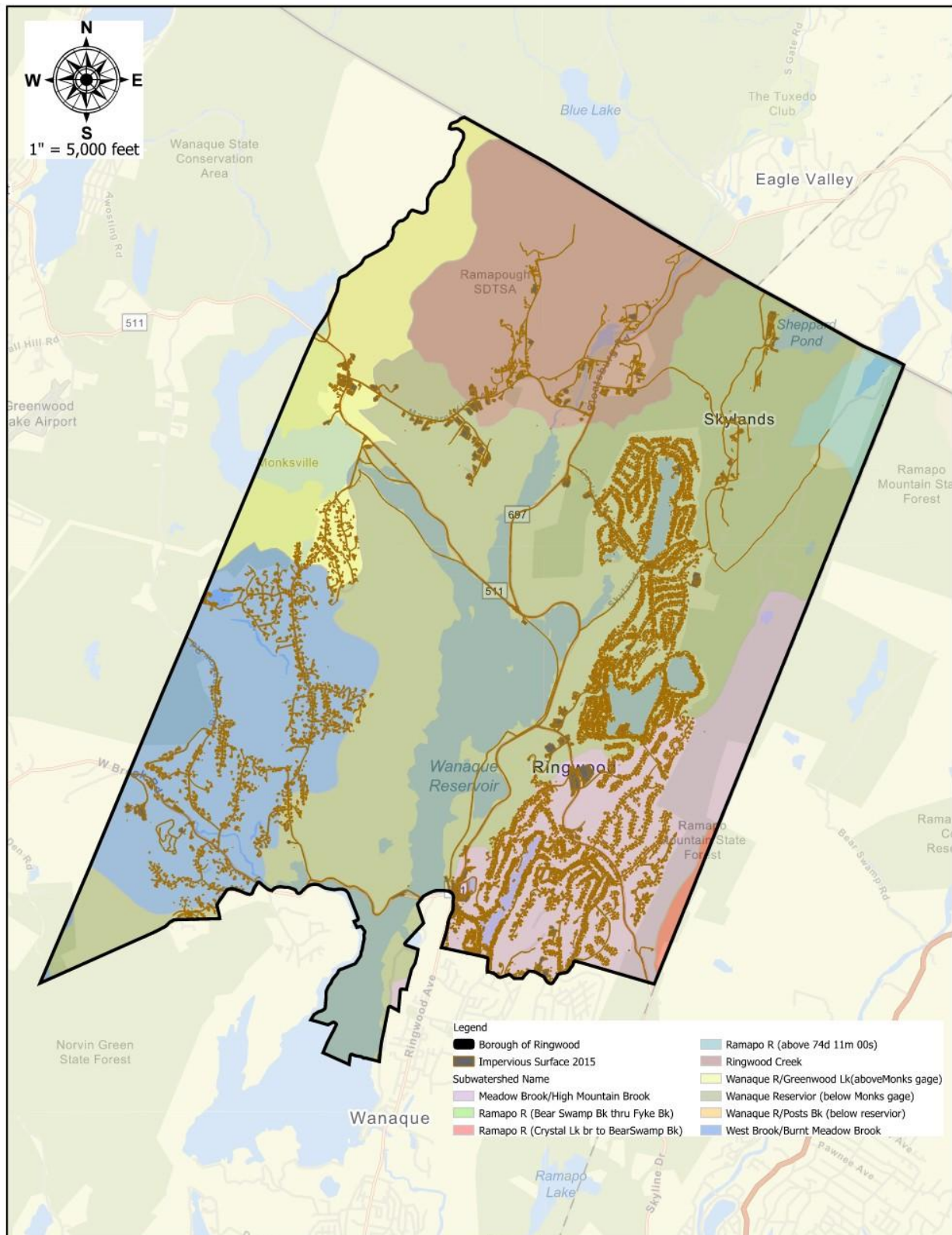


Figure 12: Borough of Ringwood Impervious Surface

Non-Municipally Owned or Operated Stormwater Facilities

The inventory of non-municipally owned or operated stormwater management facilities was developed using data from the New Jersey Hydrologic Modeling Database, accessed via Hydro.rutgers.edu and downloaded in September 2025. The data set was refined to include only facilities located within the Borough of Ringwood. These locations were reviewed in coordination with Borough officials to distinguish between municipally owned or operated and privately owned stormwater facilities.

In addition, Borough planning documents containing information on private stormwater structures were reviewed, and relevant facilities were incorporated into the database. Once the ownership status of each facility was confirmed, the locations were spatially joined with the HUC 14 subwatershed layer to quantify the number of non-municipally owned facilities within each subwatershed. Figure 13 depicts the locations of the facilities identified within their respective subwatersheds.

A total of 37 stormwater management structures were identified across four HUC 14 subwatersheds. The breakdown by structure type and subwatershed is provided in Table 7 below:

Table 7: Privately Owned Stormwater Infrastructure Summary

HUC 14 Subwatershed	Quantity of Each Structure Type						
	Dry Well	Extended Detention Basin	Infiltration Basin	Manufact- ured Treatment Device	Outfall	Wet Pond	Grand Total
02030103070030	17		1	1			19
02030103070050	5	2	1		1	2	11
02030103070060	3		1		1		5
02030103070080		1	1				2
Grand Total	25	3	4	1	2	2	37

The electronic data accompanying this report includes non-municipally owned and operated Outfalls and Stormwater Facilities. A summary of these facilities is provided above. This data provides a comprehensive inventory of privately owned stormwater infrastructure within the Borough of Ringwood and supports spatial analysis by subwatershed. Refer to Table 8 for details for each non-municipally owned stormwater facility.

Table 8: Privately Owned Stormwater Infrastructure Details

Local ID	Type	Owner Details	Block	Lot	HUC14
SWF-48	Dry Well	1140 Greenwood Lake Llc	311	2	02030103070030
SWF-49	Dry Well	1140 Greenwood Lake Llc	311	2	02030103070030
SWF-50	Dry Well	1140 Greenwood Lake Llc	311	2	02030103070030
SWF-51	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-52	Dry Well	Bajwa Manjit Singh & Kaur Ravinder	400	4	02030103070030
SWF-53	Dry Well	Bajwa Manjit Singh & Kaur Ravinder	400	4	02030103070030
SWF-55	Dry Well	1140 Greenwood Lake Llc	311	2	02030103070030
SWF-56	Dry Well	1140 Greenwood Lake Llc	311	2	02030103070030
SWF-57	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-58	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-59	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-60	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-61	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-62	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-69	Dry Well	A.J.T.T. Realty Llc	400	5.01	02030103070030
SWF-70	Dry Well	Lascari Anthony	311	3	02030103070030
SWF-71	Dry Well	Ponderosa Group I Llc	310	1.01	02030103070030
SWF-73	Infiltration Basin	A.J.T.T. Realty Llc	400	5.01	02030103070030
SWF-74	Manufactured Treatment Device	Bajwa Manjit Singh & Kaur Ravinder	400	4	02030103070030
SWF-41	Wet Pond	Wallach Michael Sr & Connie Mae	508	2.30	02030103070050
SWF-42	Wet Pond	Wallach Michael Sr & Connie Mae	508	2.30	02030103070050
SWF-43	Infiltration Basin	Blizzard Industries Llc	508	2.12	02030103070050
SWF-44	Extended Detention Basin	John Joseph Realty Llc	508	508	02030103070050
SWF-64	Dry Well	28 Executive Parkway Assoc	508	2.25	02030103070050
SWF-65	Dry Well	28 Executive Parkway Assoc	508	2.25	02030103070050
SWF-66	Dry Well	28 Executive Parkway Assoc	508	2.25	02030103070050
SWF-67	Dry Well	28 Executive Parkway Assoc	508	2.25	02030103070050
SWF-68	Dry Well	29 Executive Pkwy Llc	508	2.22	02030103070050
SWF-72	Extended Detention Basin	Serler Llc	508	2.21	02030103070050
SWF-45	Infiltration Basin	Martinez Eric & Nancy	877	16.09	02030103070060
SWF-46	Dry Well	10 Greenwood Lake Tpk Llc	739	49	02030103070060
SWF-47	Dry Well	10 Greenwood Lake Tpk Llc	739	49	02030103070060
SWF-63	Dry Well	Lanza Vincent	877	16.01	02030103070060
OF-235	Outfall	Skyline Lake Property Owners Assoc	732	27	02030103070060
SWF-39	Extended Detention Basin	Spectrum Ringwood Apts Inc	902	1.03	02030103070080
SWF-40	Infiltration Basin	Spectrum For Living Group Homes Inc	902	1.02	02030103070080
OF-283	Outfall	Eleanor G. Hewitt Elementary School	900	1	02030103070050

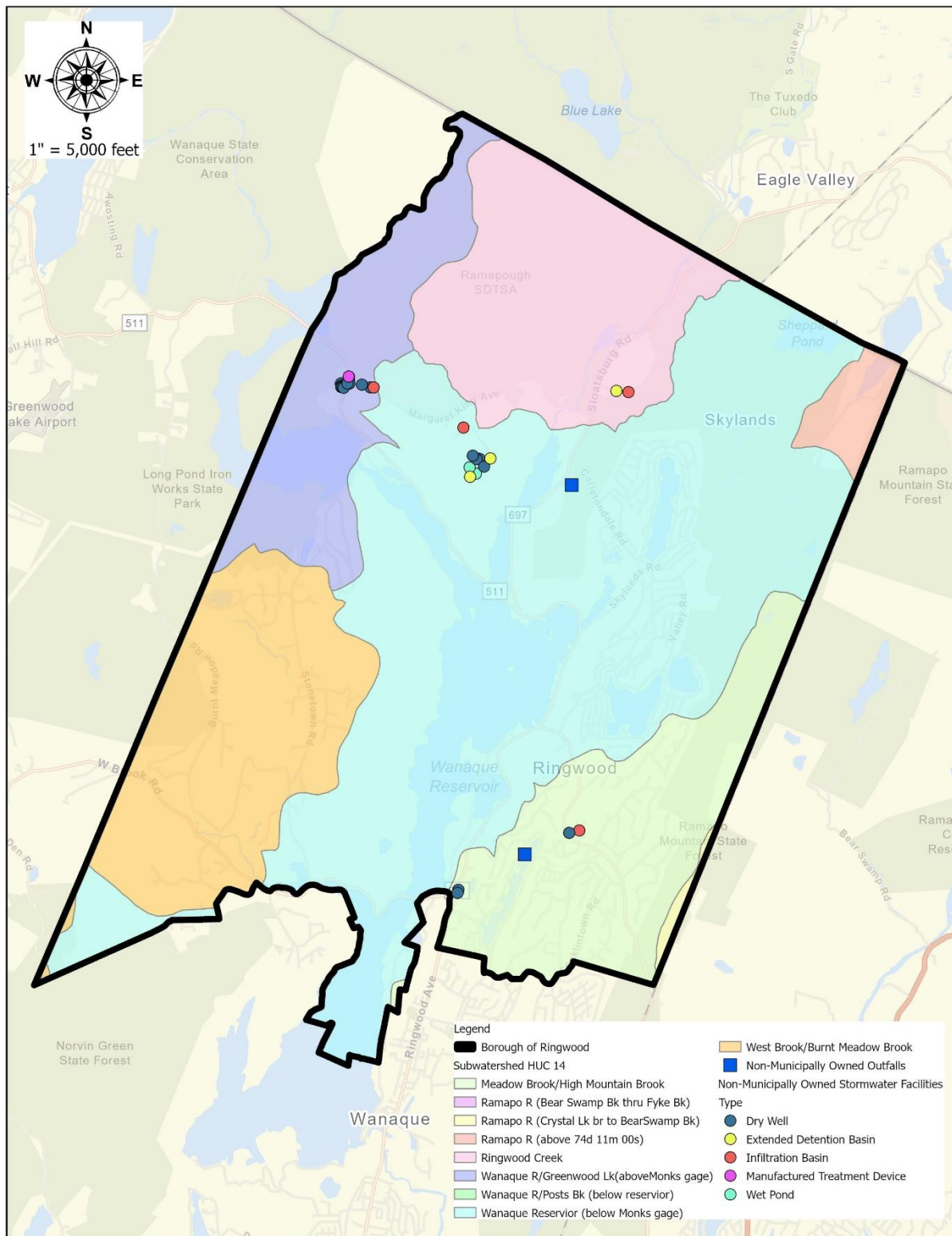


Figure 13: Borough of Ringwood Privately Owned Stormwater Infrastructure

Conclusion

The 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 the highlighted water quality and quantity issues identified in this inventory report.

As identified above within the Watershed Inventory Report, the Borough of Ringwood faces several TMDLs and water quality impairments within its watersheds such as mercury, total phosphorus, and fecal coliform. These environmental impacts are correlated with stormwater runoff from impervious and agricultural areas that discharge directly to streams and other water bodies. Phase 2 of the Watershed Improvement Plan will use the information contained in this report to make recommendations on Best Management Practices which have potential to reduce the identified contaminants and improve the overall quality of the municipality's watersheds. Stakeholders will be engaged including business/property owners, school districts, DEP (State Parks), and the North Jersey District Water Supply Commission to solicit input and regional support of activities to improve the quality of watersheds in and surrounding the Borough of Ringwood.

References

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- H&H Database, Retrieved September 16, 2025 from New Jersey Hydrologic Modeling Database website <https://hydro.rutgers.edu/>*
- New Jersey 2022 Integrated Water Quality Report, including the 303(d) Impaired Waters List. Retrieved on September 8, 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 on July 12 and September 9, 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 on July 12 and September 9-20, 2025 from Division of Information Technology, NJDEP Bureau of GIS website: <https://gisdata-njdep.opendata.arcgis.com/>.*
- Total Maximum Daily Load (TMDL) Look-Up Tool. Retrieved on September 9, 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/>.*

Sources

- (1) Fecal Coliform: [Determination of Fecal Coliform Loading and its Impact on River Water Quality for TMDL Development](#) [academia.edu]
- (2) Mercury: [Impaired Waters and Mercury | US EPA](#) [epa.gov]
- (3) Total Phosphorus: [Connecticut Advance Restoration Plan for Total Phosphorus in Non-Tidal Surface Waters](#) [epa.gov]
- (4) pH, DO, Temperature, E. coli: [NJDEP Integrated Water Quality Assessment Report 2022](#) [dep.nj.gov]
- (5) Temperature: [NJDEP Fish & Wildlife Climate Change Impacts](#) [dep.nj.gov]
- (6) E. coli: [US EPA E. coli Parameter Factsheet](#) [epa.gov]
- (7) [Penn State Extension – Impervious Surfaces and Stormwater Impacts](#) [extension.psu.edu]
- (8) [EPA – Urbanization and Stormwater Runoff](#) [epa.gov]
- (9) [Center for Watershed Protection – Impacts of Impervious Cover on Aquatic Systems](#) [epa.gov]

APPENDIX A

TOTAL OUTFALL LIST

[illegible]

Facility ID	WQ Classification	Subwatershed Name	Receiving Surface Water Body	Subwatershed HUC 14
OF-60	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-61	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-62	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-63	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-64	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-65	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-66	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-67	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-68	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-69	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-70	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-71	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-72	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-73	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-74	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir UNT	02030103070050
OF-75	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir UNT	02030103070050
OF-76	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-77	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-78	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-79	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-80	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-81	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-82	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-83	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-84	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-85	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-86	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-87	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-88	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-89	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-90	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-91	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-92	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-93	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-94	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-95	FW2-TPC1	Wanaque Reservoir (below Monks gage)	Burnet Meadow Brook	02030103070050
OF-96	FW2-TPC1	Wanaque Reservoir (below Monks gage)	Burnet Meadow Brook	02030103070050
OF-97	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-98	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-99	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-100	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-101	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-102	FW2-TMC1	Wanaque R/Greenwood Lk(aboveMonks gage)	Wanaque River UNT	02030103070030
OF-103	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnet Meadow Brook	02030103070040
OF-104	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-105	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-106	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-107	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnet Meadow Brook	02030103070040
OF-108	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-109	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-110	FW2-NTC1	Wanaque R/Greenwood Lk(aboveMonks gage)	Lake Rickonda	02030103070030
OF-111	FW2-NTC1	Wanaque R/Greenwood Lk(aboveMonks gage)	Lake Rickonda	02030103070030
OF-112	FW2-TMC1	Wanaque R/Greenwood Lk(aboveMonks gage)	Wanaque River UNT	02030103070030
OF-113	FW2-TMC1	Wanaque R/Greenwood Lk(aboveMonks gage)	Wanaque River UNT	02030103070030
OF-114	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Blue Mine Brook	02030103070050
OF-115	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-116	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-117	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040

Facility ID	WQ Classification	Subwatershed Name	Receiving Surface Water Body	Subwatershed HUC 14
OF-118	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-119	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-120	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-121	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-122	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-123	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-124	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-125	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-126	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-127	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-128	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-129	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-130	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-131	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-132	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-133	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-134	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-135	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-136	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-137	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-138	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-139	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-140	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-141	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir UNT	02030103070050
OF-142	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir UNT	02030103070050
OF-143	FW2-TM	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir UNT	02030103070050
OF-144	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-145	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-146	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-147	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-148	FW2-TMC1	Ringwood Creek	Ringwood Creek	02030103070080
OF-149	FW2-TMC1	Ringwood Creek	Ringwood Creek	02030103070080
OF-150	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-151	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook	02030103070060
OF-152	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-153	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-154	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-155	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-156	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-157	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-158	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-159	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-160	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-161	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-162	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook	02030103070060
OF-163	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook	02030103070060
OF-164	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-165	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-166	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook	02030103070060
OF-167	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook	02030103070060
OF-168	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Meadow Brook	02030103070050
OF-169	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-170	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-171	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-172	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-173	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-174	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-175	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060

Facility ID	WQ Classification	Subwatershed Name	Receiving Surface Water Body	Subwatershed HUC 14
OF-176	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-177	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-178	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-179	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-180	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-181	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-182	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-183	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-184	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-185	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-186	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-187	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-188	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-189	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-190	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-191	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-192	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-193	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-194	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-195	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-196	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-197	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-198	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-199	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-200	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-201	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook	02030103070060
OF-202	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-203	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-204	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-205	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050
OF-206	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050
OF-207	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050
OF-208	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-209	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050
OF-210	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-211	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir	02030103070050
OF-215	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-216	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Erskine Brook	02030103070050
OF-218	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-219	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-221	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-222	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-223	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-224	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-226	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook UNT	02030103070060
OF-227	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-228	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook	02030103070040
OF-229	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-230	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Lake	02030103070050
OF-231	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-232	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-233	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050
OF-234	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050
OF-236	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook	02030103070040
OF-237	FW2-TMC1	Ringwood Creek	Ringwood Creek	02030103070080
OF-238	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-239	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-240	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Lake	02030103070050

Facility ID	WQ Classification	Subwatershed Name	Receiving Surface Water Body	Subwatershed HUC 14
OF-241	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-242	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-243	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Upper Erskine Lake	02030103070050
OF-244	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook UNT	02030103070050
OF-245	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-248	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-250	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-252	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-255	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-256	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-257	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnet Meadow Brook	02030103070040
OF-258	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-259	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-260	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-261	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-262	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-263	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-264	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook UNT	02030103070040
OF-265	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Erskine Brook	02030103070050
OF-266	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Erskine Brook	02030103070050
OF-267	FW2-TPC1	Meadow Brook/High Mountain Brook	High Mountain Brook	02030103070060
OF-268	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-272	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-273	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-274	FW2-TPC1	Wanaque Reservoir (below Monks gage)	Blue Mine Brook	02030103070050
OF-275	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnt Meadow Brook UNT	02030103070040
OF-278	FW2-TPC1	West Brook/Burnt Meadow Brook	Burnet Meadow Brook	02030103070040
OF-279	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-280	FW2-TMC1	Ringwood Creek	Ringwood Creek UNT	02030103070080
OF-282	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Wanaque Reservoir UNT	02030103070050
OF-284	FW2-TMC1	Wanaque Reservoir (below Monks gage)	Erskine Brook	02030103070050
OF-285	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060
OF-286	FW2-NTC1	Meadow Brook/High Mountain Brook	Skyline Lake	02030103070060
OF-287	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-288	FW2-NTC1	Wanaque Reservoir (below Monks gage)	Cupsaw Brook	02030103070050
OF-289	FW2-TPC1	West Brook/Burnt Meadow Brook	West Brook	02030103070040
OF-290	FW2-NTC1	Meadow Brook/High Mountain Brook	Meadow Brook UNT	02030103070060