

**Byram Township
Chapter of the Sussex County
Wastewater Management Plan**

Amending the Following Areawide Water Quality Management Plan:

Sussex County

**Prepared by the State of New Jersey Highlands Water Protection and Planning
Council in support of Byram Township's approved Petition for Plan
Conformance and the Water Quality Management Planning Rules, N.J.A.C. 7:15.**

Submitted by the Board of County Commissioners of the County of Sussex

Approved by the New Jersey Department of Environmental Protection:

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CONTENTS

LIST OF TABLES	ii
LIST OF MAPS	ii
INTRODUCTION.....	1
WASTEWATER MANAGEMENT PLANNING AREA	2
SUMMARY OF SIGNIFICANT ACTIONS PROPOSED IN THIS WMP	2
SEWER SERVICE IN THE HIGHLANDS REGION.....	2
NON-SEWER SERVICE AREAS (WASTEWATER PLANNING FLOWS OF 2,000 GALLONS PER DAY (GPD) OR LESS)	4
WASTEWATER TREATMENT FACILITIES	5
MUNICIPAL BUILD-OUT RESULTS	14
AVAILABLE WASTEWATER UTILITY CAPACITY AND MUNICIPAL BUILD-OUT RESULTS	15
NITRATE DILUTION ANALYSIS.....	15
STRATEGIES TO ADDRESS CAPACITY DEFICIENCIES.....	17
SEPTIC MAINTENANCE PROGRAM	17
MAPPING REQUIREMENTS PURSUANT TO N.J.A.C. 7:15-4.3(C).....	17
LIST OF APPENDICES.....	19

List of Tables

Table	Title	Page
1.	Wastewater Districts and Franchise Areas	6
2.	Musconetcong Sewerage Authority Treatment Facility	7
3.	Panther Lake Camping Resort Existing Sanitary Septic System General Permit (T-1) Treatment Facility	8
4.	Camp Allamuchy Existing Sanitary Septic System General Permit (T-1) Treatment Facility	9
5.	Rose Property – Parsons Road Section Existing Sanitary Septic System General Permit (T-1) Treatment Facility	10
6.	Rose Property – Dennis Hill Section Existing Sanitary Septic System General Permit (T-1) Treatment Facility	11
7.	Rose Property – Division Lane Section Existing Sanitary Septic System General Permit (T-1) Treatment Facility	12
8.	239 Route 206 LLC Existing Sanitary Septic System General Permit (T-1) Treatment Facility	13
9.	Jefferson Lake Day Camp Existing Sanitary Septic System General Permit (T-1) Treatment Facility	14
10.	Former Adam Todd Restaurant Existing Sanitary Septic System General Permit (T-1) Treatment Facility	15
11.	Sewer Service Area Wastewater Treatment Capacity Analysis	16
12.	Non-Sewer Service Area Nitrate Dilution Build-Out by Land Use Capability Zone in the Planning Area	16
13.	Non-Sewer Service Area Nitrate Dilution Build-Out in the Preservation Area	17
14.	Non-Sewer Service Area Nitrate Dilution Build-Out Analysis	17
15.	Municipal Build-Out Results Summary	17

List of Maps

Maps	Title
1.	Wastewater Management Plan Area
2.	Selected Environmentally Sensitive Features
3a.	Highlands Land Use Capability Zones
3b.	Wastewater Service Areas
4.	Composite Zoning

Introduction

The New Jersey Department of Environmental Protection (DEP) is responsible for ensuring that all areas of New Jersey are addressed by Wastewater Management Plans (WMPs) that comply with the provisions of the Water Quality Management Planning (WQMP) Rules at N.J.A.C. 7:15. Within the Highlands Region, this process will be achieved through a coordinated process with the affected county, municipality and the Highlands Water Protection and Planning Council (Highlands Council) as provided in N.J.A.C. 7:15-2.9 and N.J.A.C. 7:38-1.1. One of the conditions for each municipality that fully conforms to the Regional Master Plan (RMP) (“Plan Conformance” for the entire municipality) is the development of a municipal WMP or municipal chapter for a County WMP, as appropriate, in conformance with the RMP, and where applicable the DEP Highlands Preservation rules N.J.A.C. 7:38-3.4 (a and b) and N.J.A.C. 7:15. Please note that the WMP document only takes into consideration consistency with the septic guidelines of the RMP and does not apply to any RMP consistency determinations required for other Highlands resources; these resources include, but are not limited to: Highlands Open Water Buffers, Forests Resource Areas, Prime Groundwater Recharge Areas, Carbonate Rock, Vernal Pools, Highlands Critical Habitat, and Steep Slopes. The purpose of the WMP is to ensure that sewer service areas and non-sewer service areas (septic system service area) for wastewater planning flows of 2,000 gallons per day (gpd) or less (individual subsurface sewage disposal systems – ISSDS) are consistent with the Land Use Capability Zone (LUCZ) Map designations and policies of the Highlands RMP. The WMP is therefore a direct result of the Plan Conformance process, intended to be adopted as the municipal chapter of the relevant County WMP where a County WMP is developed, or as a stand-alone document where a County WMP is not developed. Municipalities that do not pursue Plan Conformance for the Planning Area will address their wastewater planning responsibilities in cooperation with their counties or directly with DEP, which in turn will coordinate review with the Highlands Council.

Byram Township is a municipality that fully conforms to the Highlands Water Protection and Planning Act (Highlands Act) and the Highlands RMP. On September 23, 2010, the Highlands Council adopted Resolution #2010-6 (attached as **Appendix A**) which approved Byram Township’s Petition for Plan Conformance, subject to conditions as set forth in the Final Consistency Review and Recommendation Report for Byram Township (**Appendix B**). Plan Conformance applies to the entirety of Byram Township – both Planning and Preservation Areas. Byram Township passed their Planning Area Petition Ordinance (**Appendix C**) on June 21, 2011. On June 20, 2017, the municipality adopted land use ordinance amendments consistent with the Highlands Council’s approval of the Petition for Plan Conformance (**Appendix D**). A condition of the approved Petition for Plan Conformance, as detailed in the Final Consistency Review and Recommendation Report, is the requirement that Byram Township adopt a WMP working with the Highlands Council under Plan Conformance. As such, this Byram Township Chapter of the Sussex County WMP has been developed under Plan Conformance for the entire Township. The Highlands Council worked cooperatively with Byram Township throughout the Plan Conformance process to conduct an extensive analysis of the complete land area of the municipality, using a geodatabase that documents the status of development for each parcel, and wastewater utility service, build-out potential, etc. Mapping depicting these analyses, as identified in this document, is provided.

Wastewater Management Planning Area

The WMP Area is defined as Byram Township Chapter of the Sussex County WMP pursuant to the WQMP rules. The WMP has been submitted to the DEP for approval so that it may be incorporated into the Sussex County WQMP via the plan amendment procedure at N.J.A.C. 7:15-3.5.

Summary of Significant Actions Proposed in this WMP

The WMP area was reviewed in accordance with the WQMP rules and the Highlands RMP for areas eligible for sewer service and non-sewer service areas. The applicable areas were then assessed to determine if there was adequate wastewater treatment capacity available for the identified type of wastewater service. As a result of this evaluation, 592 acres are being added to the areas eligible for sewer service area. Fifty-nine acres (59) are designated as future sewer service area. The total wastewater generation of 78,807 gallons per day (gpd) is proposed to go to the Musconetcong Sewerage Authority (MSA) Wastewater Treatment Facility. The assigned sewer service area is expanded to include two existing sanitary septic system general permit (T-1) treatment facilities, the Former Adam Todd Restaurant (NJG0292982) and Jefferson Lake Day Camp (NJG0219851). Added to this build-out analysis are areas in the Preservation Area that are in the pre-Highlands Act sewer service area prior to August 10, 2004, and are identified as eligible for an exemption in accordance with applicable exemptions designated under the Highlands Act and N.J.A.C 7:38-2.3a (exemptions 1, 2, and/or 4). These have been evaluated as part of the build-out process to identify any additional flows to adjacent (pipes in the ground) Assigned Sewer Service Area. Byram Township has zero (0) parcels that qualify for either exemption 1, 2 and/or 4.

Byram Township is allocated 0.1 million gallons per day (MGD) from MSA. However, the proposed build-out plus the existing flow equals 0.110807 MGD, which exceeds the allocated gallonage by 0.010807 MGD. MSA has adequate existing capacity to serve the areas identified as eligible for sewer service but would need to provide an increased allocation to Byram Township to treat the potential full build-out wastewater generation.

Areas identified as non-sewer service areas, which are served by ISSDS, have been evaluated in accordance with the standards established at N.J.A.C. 7:38-3.4(b) or as identified in the RMP Land Use Capability Zones (LUCZs), as applicable, based on the type of Highlands Area, to determine the potential number of equivalent dwelling units which could occur within the Highlands Region. The build-out analysis identified the potential for zero (0) septic systems in the Planning Area for all RMP LUCZs and HUC 14 subwatersheds and the potential for six (6) additional septic systems in the Preservation Area. In addition to this build-out analysis, the number of equivalent dwelling units which could occur in areas identified as non-sewer service areas was evaluated in accordance with applicable exemptions designated in the Preservation Area under the Highlands Act and N.J.A.C 7:38-2.3a (exemptions 1 and 2). Also, underdeveloped parcels in the Planning Area would not be evaluated against the septic standards set by the RMP if the development proposes fewer than three residential units. There are an estimated 231 parcels that qualify for either exemption 1 or 2 in the Preservation Area and two (2) potential dwelling units that could be developed on underdeveloped parcels in Byram Township. These underdeveloped and exempt parcels do not meet the Highlands standards established at N.J.A.C. 7:38-3.4(b) or as identified in the RMP LUCZs because the development of these additional units identified would trigger an exceedance of nitrate dilution capacities. The septic build-out for exempt and underdeveloped parcels is based on some assumptions and does not take into account environmental constraints that may affect the buildability of a parcel. Therefore, the total

number of equivalent dwelling units is approximate. A future analysis to determine whether these parcels are buildable may be undertaken thus possibly reducing the number of septic systems that contribute to a potential exceedance in nitrate dilution. The following strategies have been proposed to address these deficiencies: land preservation, future analysis of potential buildability of all the exempt and underdeveloped parcels, and future analysis to identify potential public health and safety concerns. The Highlands Council will work with the Township through the Plan Conformance Grant Program to fund such analyses.

Sewer Service in the Highlands Region

1. Assigned Sewer Service Area – These areas may be designated as one of the following:

- a. The Existing Areas Served (EAS) includes all areas currently served by New Jersey Pollutant Discharge Elimination System (NJPDES) permitted wastewater treatment facilities, including domestic and industrial, as well as discharges to surface or ground water, including T-1 sites (NJPDES permit for existing sanitary septic system general wastewater discharges to ground water);
- b. In the Highlands Planning Area, the Future Sewer Service Area (FSSA) includes any other lands for Highlands conforming municipalities as defined at N.J.A.C. 7:15-1.5, in accordance with N.J.A.C. 7:15-4.4(c)2, sewer service may only be provided to those areas established within the RMP as Existing Community Zone (excluding the Environmentally-Constrained Subzone), Lake Community Sub-Zone, or designated as Highlands Redevelopment Areas or Highlands Centers; or any lands previously approved by the DEP as sewer service areas for which a currently valid municipal development approval and valid DEP Treatment Works Approval (TWA), if required, has been issued and is currently in effect, where such information was documented by the municipality or the DEP and provided to the Highlands Council;
- c. In the Highlands Preservation Area, assigned sewer service area is limited to those areas that, in accordance with N.J.S.A. 58:11A-7.1, were connected to a wastewater treatment facility as of August 10, 2004. Any new discharge to surface or ground water that would require an individual or general NJPDES permit and any extension of a wastewater collection system that requires a DEP TWA is prohibited in the Preservation Area unless the development is in an area eligible for sewer service pursuant to N.J.A.C. 7:38-2.3, 2.4, 2.6, and 3.4. The following areas are eligible to be identified as sewer service area:
 1. Areas determined to be and remaining exempt from the Highlands Act and pursuant to N.J.A.C. 7:38-2.3a;
 2. Areas where a Highlands Preservation Area Approval (HPAA) with waiver has been granted by the DEP;
 3. Areas that lie within a Highlands Council Designated Redevelopment Area; or
 4. Areas that are not a Major Highlands Development as defined at N.J.A.C. 7:38-1.4.
- d. Sewered Exemptions- An evaluation of any possible Highlands Act exemptions was included in the build-out analysis for assigned sewer service areas. Exemptions 1 and 2 pertain to vacant lots in existence on the date of enactment of the Highlands Act

(August 10, 2004), that would allow construction of one single family home. Exemption 4 applies to the reconstruction of any building or structure for any reason within 125% of the footprint of the lawfully existing impervious surface but is limited to one-quarter acre of new impervious. Lots that fall under one of the three exemptions above and are located in a pre-Highlands Act sewer service area are eligible to connect to existing Domestic Treatment Works (DTWs). The exemption build-out analysis is based on some assumptions, which are discussed in **Appendix E**, and therefore the number of exempt lots is approximate.

2. Unassigned Sewer Service Area

Unassigned Sewer Service Area is defined as areas eligible for sewer service for which a specific DTW or industrial treatment works has not been identified. Areas that meet the criteria identified in Section 1b above would also be eligible to be identified as an unassigned sewer service area.

Environmentally Sensitive Areas

Under the WQMP rules, large, contiguous, environmentally sensitive areas defined as 25 acres or larger consisting of habitat for endangered and threatened species as identified on the Landscape Project Maps of Habitat for Endangered, Threatened or Other Priority Species (Version 3.3), Natural Heritage Priority Sites, Category One Waters and their corresponding 300-foot riparian zones, and wetlands, alone or in combination, should be excluded from areas eligible for sewer service. However, the WQMP rule provides, at N.J.A.C. 7:15-4.4(g) and (i)-(m), several exceptions which allow environmentally sensitive areas to be included in areas eligible for sewer service.

RMP Consistency Determinations: Any proposed modification to this WMP will not be approved without a review of Highlands RMP consistency by the Highlands Council and coordination between the Highlands Council and the DEP in accordance with N.J.A.C. 7:38-1.1(k) and 7:15-2.9.

Additional properties may be proposed for inclusion in the assigned sewer service area through DEP approval of amendment(s) to this WMP, where determined to be exempt from the Highlands Act or consistent with the RMP (through a Highlands Council Consistency Determination). Amendments may also be approved to address public health and safety issues. Further, in both the Preservation Area and the Planning Area, connection of additional properties or expansion of flows from existing connections is subject to municipal approval regarding availability of utility capacity, including both remaining available utility capacity (e.g., wastewater flows) and infrastructure capacity (e.g., pump stations, mains). Compliance with the connection requirement will be governed through compliance with N.J.A.C. 7:9A-1.6(e), which provides guidance on sewer connections.

Non-Sewer Service Areas (Wastewater Planning Flows of 2,000 gallons per day (gpd) or less)

Remaining areas of the municipality not otherwise identified as eligible to receive sewer service from a NJPDES regulated domestic or industrial treatment works and other small treatment works that treat 2,000 gpd or less of wastewater with discharge to groundwater are included within the non-sewer service area. This category applies to all lands for which the density of new septic system development will be consistent with applicable septic density/nitrate dilution allowances. Portions of the Existing Community Zone, Lake Community Sub-Zone, designated Highlands Redevelopment Areas or Highlands Centers that are not sewered and are not intended to receive sewer service may be

designated in the same manner. These areas will be subject to a septic maintenance program that will ensure these facilities are functioning properly.

In the Highlands Preservation Area, the applicable septic system density and nitrate dilution capacity allowance must be consistent with the requirements as set forth in the Highlands Act Rules, N.J.A.C. 7:38-3.4, or the development activity must be exempt from the Highlands Act or receive a Highlands Preservation Area Approval (HPAA) with or without waiver, as applicable, from DEP. The Highlands Council evaluated exemptions 1 and 2 in the Preservation Area in accordance with the Highlands Act and N.J.A.C 7:38-2.3a in this build-out analysis.

In the Highlands Planning Area, for Highlands conforming municipalities, the nitrate dilution capacity analysis shall be performed in accordance with the procedures set forth pursuant to the Highlands RMP; however, development is not evaluated against the septic standards set by the RMP if the development consists of fewer than three residential dwelling units.

The septic build-out for exempt parcels in the Preservation Area and underdeveloped parcels in the Planning Area is based on some assumptions, as discussed in **Appendix E**, and therefore the total number of equivalent dwelling units is approximate.

Projects in non-sewer service areas with cumulative wastewater flows of more than 2,000 gpd shall not be eligible for NJPDES discharge permits or TWAs unless a WQMP revision or amendment to this WMP is proposed and adopted to change the service area designation from a non-sewer service area to a sewer service area (assigned) for one of the following reasons:

- Projects approved under septic system density provisions consistent with the RMP, as required by the Highlands land use ordinance amendments adopted by the municipality pursuant to Highlands Council approval of its Petition for Plan Conformance. (NOTE: Approval pursuant to these provisions is deemed in conformance with the septic system density requirements of N.J.A.C. 7:15);
- The Highlands Council has determined that the discharge is consistent with the RMP;
- The development activity is exempt from the Highlands Act; or
- Within the Preservation Area, the development activity receives a HPAA with or without waiver from DEP.

Wastewater Treatment Facilities

This section addresses wastewater treatment facilities currently or anticipated to be utilized within the municipality, regardless of whether the treatment works itself is located within or outside of the municipality. Facility tables are provided for each existing and proposed wastewater treatment facility.

Overview of Wastewater Services and Wastewater Responsibilities

Existing Public Wastewater Treatment Works and Service Area

Table 1 lists the major domestic wastewater treatment facilities and the municipality or municipalities they serve, and the existence of any Federal 201 grant limitations (treatment facility or collection system) which prohibit the extension of sewer service to environmentally sensitive areas.

Table 1. Wastewater Districts and Franchise Areas		
Wastewater Utility	Municipalities Served	Federal 201 Grant Limitation
Musconetcong Sewerage Authority	Hopatcong Borough, Byram Township, Mount Arlington Borough, Mount Olive Borough, Netcong Borough, Roxbury Borough, and Stanhope Borough	Wetlands and 100-year flood plain.

Wastewater Facility Tables

Below are wastewater facility tables for all sanitary and/or process wastewater discharge to surface water facilities and those sanitary and/or process wastewater discharges to ground water facilities discharging greater than 2,000 gpd (e.g., requiring NJPDES permits). They include domestic wastewater treatment facilities which may serve one or multiple municipalities, onsite domestic treatment facilities, onsite existing sanitary septic system general permit (T-1) treatment facilities, and/or industrial treatment facilities which treat only industrial process wastewater, and/or facilities serving industrial land uses that have independent wastewater treatment facilities that treat and discharge manufacturing process waste and/or sanitary sewage that may be discharged to ground water or to surface water.

Table 2. Musconetcong Sewerage Authority Treatment Facility		
1. Existing or proposed facility:	Existing	
2. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJ0027821	
3. Discharge to ground water (DGW) or surface water (DSW):	DSW	
4. Receiving water or aquifer name:	Musconetcong River	
5. Classification of receiving water or aquifer:	FW2-TM(C2)	
6. Owner of facility:	James Schilling	
7. Operator of facility:	James Schilling	
8. Co-Permittee of facility (<i>where applicable</i>):		
9. Location of facility:		
a. Municipality & County	Budd Lake Township, Morris County	
b. Street address	110 Continental Drive	
c. Block and Lot	Block 201 Lot 3	
10. Location of discharge:	State Plane Coordinates X:430347, Y:757066	
11. Present permitted flow:	5.79 MGD	
12. Summary of population served/to be served:	Current (Year 2020) Population	Build-Out Population
Byram Township	81	441
13. Summary of wastewater flow	Max 12-Month Rolling Average Over 5 Years (MGD)	Build-Out (MGD)
Byram Township	0.032	0.110807

Note: The other municipalities not listed in this table that are served by the MSA will be added as their WMPs are adopted.

Table 3. Panther Lake Camping Resort Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0085723
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Frank Kymer, Panther Lake Camping Resort
6. Operator of facility:	George Yapple
7. Location of facility:	
a. Municipality & County	Byram Township, Sussex County
b. Street address	6 Panther Lake Road
c. Block and Lot	Block 360 Lot 31
8. Location of discharge:	State Plane Coordinates X: 427415, Y: 775865
9. Summary of current population served identifying all wastewater generating uses:	_____
Campground:	The facility is a seasonal campground on 126 acres with 435 campsites (with RV hookups). Multiple campsites discharge into existing septic systems. The facility also has sanitary waste from two RV waste disposal stations, 11 bathhouses, a centralized laundry facility and an office/residence building discharging into septic systems. There is a total of 150 septic systems in use on this site.
Other: Refer to N.J.A.C. 7:9A-7.4	0.0497 MGD

Table 4. Camp Allamuchy Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0136905
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Patriots Path Council - Boy Scouts of America
6. Operator of facility:	Keith Dlugosz
7. Location of facility:	
a. Municipality & County	Stanhope Borough, Sussex County
b. Street address	750 Waterloo Road
c. Block and Lot	Block 384 Lot 1
8. Location of discharge:	State Plane Coordinates X: 417025, Y: 760039
9. Summary of current population served identifying all wastewater generating uses:	_____
Campground:	The facility consists of a subsurface disposal system comprised of three septic tanks and a disposal field serving an existing Dining Hall and Cook's residence.
Other: Refer to N.J.A.C. 7:9A-7.4	0.002 MGD

Table 5. Rose Property – Parsons Road Section Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0141461
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Robert Dennis
6. Operator of facility:	James Kruse
7. Location of facility:	
a. Municipality & County	Byram Township, Sussex County
b. Street address	11 Parsons Road
c. Block and Lot	Block 332 Lot 3.25
8. Location of discharge:	State Plane Coordinates X: 424882, Y: 771978
9. Summary of current population served identifying all wastewater generating uses:	_____
Commercial:	The facility consists of seven houses each with its own septic system. The aggregate design flow of sanitary wastewater from all seven houses is approximately 2,750 gpd.
Other: Refer to N.J.A.C. 7:9A-7.4	0.0025 MGD

Table 6. Rose Property – Dennis Hill Section Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0143057
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Robert Dennis
6. Operator of facility:	Allen Campbell
7. Location of facility:	
a. Municipality & County	Andover Borough, Sussex County
b. Street address	Cabin Spring Trail
c. Block and Lots	Block 332 Lots 3.06 and 3.13-3.16
8. Location of discharge:	State Plane Coordinates X: 424256, Y:772204
9. Summary of current population served identifying all wastewater generating uses:	_____
Campground:	The facility consists of five three-bedroom houses with an aggregate design flow of 2,500 gpd. Each house has its own septic system and water supply although the land is owned by one entity.
Other: Refer to N.J.A.C. 7:9A-7.4	0.0025 MGD

Table 7. Rose Property – Division Lane Section Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0146919
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Robert Dennis
6. Operator of facility:	Allen Campbell
7. Location of facility:	
a. Municipality & County	Andover Borough, Sussex County
b. Street address	Division Lane
c. Block and Lot	Block 330 Lot 1
8. Location of discharge:	State Plane Coordinates X: 423827, Y: 771575
9. Summary of current population served identifying all wastewater generating uses:	_____
Campground:	10 homes (2 and 3 bedrooms) on a common lot. Site design flow is 3,950 gpd.
Other: Refer to N.J.A.C. 7:9A-7.4	0.002 MGD

Table 8. 239 Route 206 LLC Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0174726
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Stonewood Property LLC
6. Operator of facility:	Dimitri Matthews
7. Location of facility:	
a. Municipality & County	Andover Borough, Sussex County
b. Street address	239 Route 206
c. Block and Lot	Block 212 Lot 5
8. Location of discharge:	State Plane Coordinates X: 427400, Y: 771136
9. Summary of current population served identifying all wastewater generating uses:	_____
Restaurant:	Site was formally Timber's Restaurant which was a 200-seat restaurant served by a septic system. There is an existing dwelling on the property that is also served by the septic system.
Other: Refer to N.J.A.C. 7:9A-7.4	

Table 9. Jefferson Lake Day Camp Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0219851
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	Dan Kadan, Kagan Realty LLC
6. Operator of facility:	Justin Efros, Jefferson Lake Camp & Travel Corporation
7. Location of facility:	
a. Municipality & County	Byram Township, Sussex County
b. Street address	38 Jefferson Lake Road
c. Blocks and Lots	Blocks 366 & 370 Lots 3.01 & 7.01
8. Location of discharge:	State Plane Coordinates X: 427192, Y: 763276
9. Summary of current population served identifying all wastewater generating uses:	_____
Campground:	Day camp comprised of an existing building that houses 450 campers, an existing arts and crafts building, and a proposed 4,669 square foot office building.
Other: Refer to N.J.A.C. 7:9A-7.4	

Table 10. Former Adam Todd Restaurant Existing Sanitary Septic System General Permit (T-1) Treatment Facility	
1. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit Number:	NJG0292982
2. Discharge to ground water (DGW):	DGW
3. Name of receiving aquifer:	
4. Classification of receiving aquifer:	
5. Owner of facility:	John Ursin, 263 Route 206 Real Estate LLC
6. Operator of facility:	Owen Dykstra
7. Location of facility:	
a. Municipality & County	Byram Township, Sussex County
b. Street address	263 Route 206
c. Block(s) and Lot(s)	Block 215 Lot 2
8. Location of discharge:	State Plane Coordinates X: 426879, Y: 772431
9. Summary of current population served identifying all wastewater generating uses:	_____
Restaurant: Identify number of seats	Adam Todd Restaurant is an existing restaurant comprised of a 10,000 square foot building currently served by two septic tanks of unknown size and two seepage pits of unknown size. The building contains 532 seats. The calculated flow for the number of seats is 18,620 gpd, but the proposed change in use decreases the flow volume to 9,600 gpd.
Other: Refer to N.J.A.C. 7:9A-7.4	0.002 MGD

Municipal Build-Out Results

The Highlands Technical Method for WMP Build-Out Analysis (attached as **Appendix E**) for Byram Township is based upon local zoning, Highlands LUCZs in the Planning Area, Highlands Act Rules (N.J.A.C. 7:38-3.4), prior approvals, and exemptions. Open space, preserved land, and DEP environmentally constrained land are not included as developable land in the build-out analysis for the assigned sewer service areas. The Highlands Council estimated the number of new development units for potential developable lands for the entire municipality, as summarized in **Table 15** below. The results of the municipal build-out analysis are designed to be utilized at a municipal scale and are not appropriate for determining if a particular parcel or development project is consistent with the RMP (for example, certain results regarding residential or non-residential development that may be altered through a site-specific development review). The municipal results are a result of current conditions and application of RMP septic requirements. The analysis below provides a critical planning tool but cannot be used as a definitive prediction of the future or as a basis for parcel-based development potential.

Development in Assigned Sewer Service Areas: As summarized in **Table 15**, 145 residential units and 431,017 square feet of non-residential development result in an additional wastewater demand of 78,807 gpd, or 0.078807 MGD. The build out flows would be associated with MSA (NJ0027821). Panther Lake Camping Resort (NJG0085723), Camp Allamuchy (NJG0136905), Rose Property – Parsons Road Section (NJG0141461), Rose Property – Dennis Hill Section

(NJG0143057), Rose Property – Division Lane Section (NJG0146919), 239 Route 206 LLC (NJG0174726), Jefferson Lake Day Camp (NJG0219851), and Former Adam Todd Restaurant (NJG0292982) do not have a projected build out.

Available Wastewater Utility Capacity and Municipal Build-Out Results

Assigned Sewer Service Area – This table shows wastewater flows within the Sewer Service Area for the facility discussed under the section Municipal Build-Out Results.

	Facility	NJDPEs Permit #	Municipality	Current Flow ¹ , (MGD)	Projected Flow ² (MGD)	Total Build-Out Flow ³ (MGD)	NJDPEs Permitted Flow (MGD)	Surplus (+) or Deficiency ⁴ (-)
Assigned	Musconetcong Sewerage Authority	NJ0027821	Byram Township	0.032	0.078807	0.110807	0.1	-0.010807

Nitrate Dilution Analysis

The build-out method for non-sewer service areas (discharges to groundwater with planning flows of 2,000 gpd or less) in the Highlands Region is based on RMP Policy 2L2 (**Appendix F**). The septic system yields associated with this area are listed in **Tables 12 through 14** below. A Septic Inventory of properties with existing septic systems is provided as **Appendix G**.

Development Reliant on Septic Systems: The build-out analysis identified the potential for zero (0) septic systems in the Planning Area for all RMP LUCZs and six (6) septic systems in the Preservation Area based on the Highlands Act Rules. Additionally, in Byram Township there is the potential for two (2) dwelling units in the Planning Area and 231 dwelling units in the Preservation Area that qualify for either exemption 1 or 2 or underdeveloped lots in the Planning Area.

Table 12 shows the total number of units allowed based on RMP LUCZ in the Planning Area.

RMP LUCZ	Septic Density (acres/du) ⁵
Protection Zone	26
Conservation Zone	10
Existing Community Zone	10

¹ Highest consecutive rolling 12-month average in most recent 5 years of DMR Data from January 2014 to September 2018

² Combined flows from both existing developments not connected to the STP and acreage that can support development within the SSA – See **Appendix EF**– “Highlands Technical Method for WMP Build-Out Analysis”

³ Combined flows of Current and Projected Flows

⁴ A deficiency will constitute a “potential capacity deficiency”

⁵ Du-dwelling unit

Table 13 shows the total number of units allowed based on N.J.A.C. 7:38-3.4(b).

Table 13. Non-Sewer Service Area Nitrate Dilution Build-Out in the Preservation Area	
Preservation Area	Septic Density (acres/du)⁵
Non-Forest	25
Forest	88

Table 14 shows the total number of units projected based on LUCZ in the Planning Area and N.J.A.C. 7:38-3.4(b) in the Preservation Area. Nitrate dilution capacity is exceeded when projecting for potential development of exemptions in the Preservation Area or underdeveloped parcels in the Planning Area.

Table 14. Non-Sewer Service Area Nitrate Dilution Build-Out Analysis				
Highlands Area	Developable Land (acres)	Allowed Units based on Septic Density*	Nitrate Dilution Capacity Exceeded**	Total New Units
Planning Area	5.7	0	2	2
Preservation Area	1,648	6	231	237

*Number of equivalent dwelling units projected based on the results of nitrate dilution capacity build-out analysis

** Number of equivalent dwelling units projected based on the number of parcels exempt from the Highlands Act or not subject to evaluation against the RMP

Table 15. Municipal Build-Out Results Summary			
	Preservation Area	Planning Area	Totals
Residential units – Sewered	0	145	145
Exempt Residential units – Sewered	0	0	0
Septic System Yield (Planning Area: LUCZ) (Preservation Area: 25/88) (equivalent dwelling units)	6	0	6
Exempt or Underdeveloped Residential units- Septic	231	2	233
Non-Residential – Sewered	0 sq. ft.	431,017 sq. ft.	431,017 sq. ft.

Strategies to Address Capacity Deficiencies

Byram Township is allocated 0.1 million gallons per day (MGD) from MSA. However, the proposed build-out plus the existing flow equals 0.110807 MGD, which exceeds the allocated gallonage by 0.010807 MGD. MSA has adequate existing capacity to serve the areas identified as eligible for sewer service but would need to provide an increased allocation to Byram Township to treat the potential full build-out wastewater generation.

Strategies that Byram Township intends to investigate to mitigate for the exceedance of nitrate dilution due to the number of exempt and underdeveloped parcels include: land preservation, analysis of the buildability of identified exempt and underdeveloped parcels, and analysis of potential public health and safety issues. The septic build-out for exempt and underdeveloped parcels is based on some assumptions and does not consider environmental constraints that may affect the buildability of a parcel. Therefore, the total number of equivalent dwelling units is approximate. A future analysis to determine whether these parcels are buildable may be undertaken, thus possibly reducing the number of septic systems that contribute to the predicted exceedance in nitrate dilution. The Highlands Council will assist the Township through the Plan Conformance Grant Program in the development of these studies.

Septic Maintenance Program

The WQMP rules require that WMPs for municipalities with septic systems contain a septic system maintenance program that at a minimum contains the following:

- A current inventory of ISSDS;
- A description of the current practices required to promote ISSDS care and maintenance; and
- A description of planned improvements to the current practices to improve the septic system inventory and promotion of improved septic system care and maintenance.

The septic inventory of all existing septic systems within the municipality can be found in **Appendix G**. Compliance with the maintenance component has been demonstrated through the adoption of a Septic System Maintenance Ordinance [Byram Township Codes, Chapter 272, Sewage Disposal Systems, Articles II and III] and the Septic Maintenance Program (see **Appendix H**). Byram Township has implemented an extensive program for septic system maintenance, focused upon its lake communities, since 1990. Additionally, Byram Township's Septic Maintenance Ordinance includes identifying problem areas, narrative for permitting process, maintenance requirements for owners/users, pump out requirements, education/outreach on proper maintenance, record creation and maintenance, response actions to complaints, or remedial actions required for failing septic systems and reporting to DEP.

Mapping Requirements Pursuant to N.J.A.C. 7:15-4.3(c)

The relevant mapping requirements of the WQMP Rules at N.J.A.C. 7:15-4.3(c) are met through the following maps for Byram Township, as developed specifically for the WMP or as identified and included from the Highlands Plan Conformance documents approved by the Highlands Council. Maps of existing and future treatment works and sewer service areas are used by the DEP for WQMP consistency reviews regarding proposed TWAs and NJPDES permits. They have been developed specifically for this WMP Chapter and are incorporated herein. Maps of environmental and

administrative features are used by DEP as basis and background information for the identification of areas eligible for sewer service.

- **Wastewater Management Plan Area (Map #1) *Jurisdictional Boundaries*** – The affected WMP Area is the municipal boundary of Byram Township and the Areawide WQMP is Sussex County, both of which are shown on the municipal maps. Byram Township is entirely within the Highlands Region, in both the Planning and Preservation Areas.
- **Selected Environmentally Sensitive Features (Map #2)**
 - Suitable habitat for endangered and threatened wildlife species (rank 3, 4, and 5)
 - Natural Heritage Priority Sites
 - Surface waters
 - Category One Waters and their corresponding 300-foot riparian zones (NOTE: Under the Regional Master Plan, all Highlands Open Waters in both the Preservation and Planning Areas are associated with 300-foot buffers.)
 - Freshwater wetlands
 - Environmentally sensitive areas in which 201 Facilities Plan grant limitations prohibit the extension of sewer service
- **Highlands Land Use Capability Zones (Map #3a)**
 - Land Use Capability Zones established within the RMP
- **Wastewater Service Area (Map #3b)**
 - District boundaries of sewerage authority districts, any municipal authorities, or municipal utility authority districts
 - Franchise areas for sewer utilities regulated by the Board of Public Utilities or other contractual boundaries
 - Existing and future domestic and industrial treatment works and their discharge outfalls
 - Assigned sewer service area
 - Musconetcong Sewerage Authority (NJ0027821)
 - Panther Lake Camping Resort (NJG0085723)
 - Camp Allamuchy (NJG0136905)
 - Rose Property – Parsons Road Section (NJG0141461)
 - Rose Property – Dennis Hill Section (NJG0143057)
 - Rose Property – Division Lane Section (NJG0146919)
 - 239 Route 206 LLC (NJG0174726)
 - Jefferson Lake Day Camp (NJG0219851)
 - Former Adam Todd Restaurant (NJG0292982)
 - Non-sewer service area (planning flows of 2,000 gpd or less that discharge to groundwater)
- **Composite Zoning (Map #4)**
 - Parcel mapping
 - Current composite or municipal zoning

List of Appendices

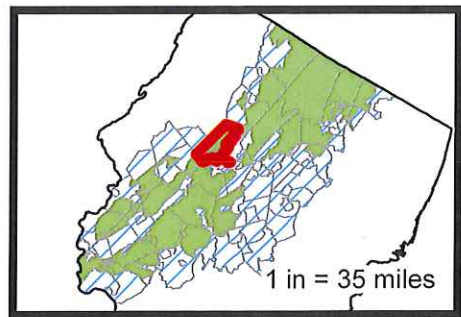
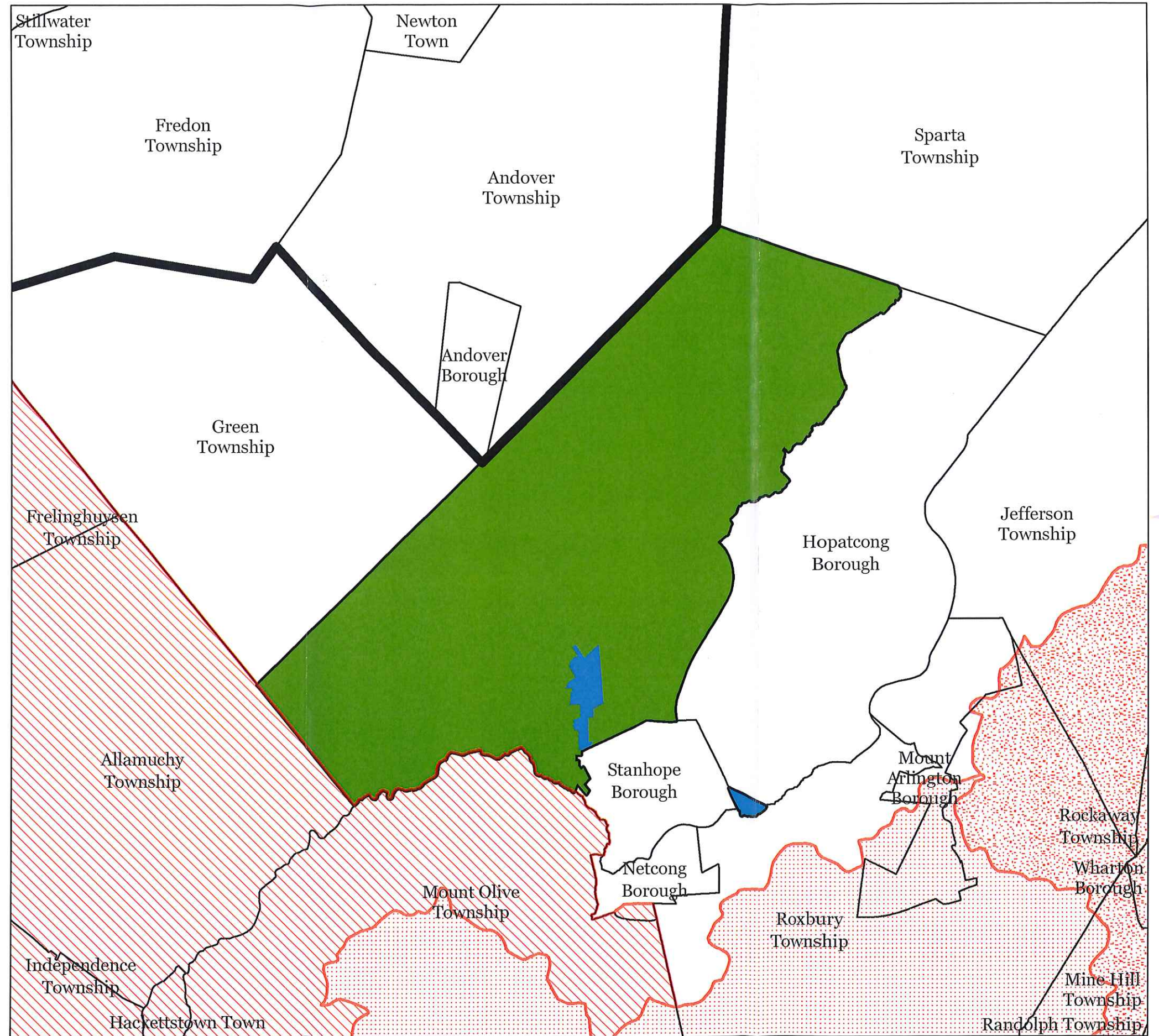
Appendix	Title
A.	Highlands Council Resolution Approving Plan Conformance Petition
B.	Highland Council Final Consistency Review and Recommendations Report
C.	Planning Area Petition Ordinance
D.	Highlands Land Use Ordinance Amendments
E.	Highlands Technical Method for WMP Build-Out Analysis
F.	Select List of Highlands Goals, Policies, and Objectives
G.	Septic Inventory
H.	Septic Maintenance Program

**MAP 1 - TOWNSHIP OF BYRAM
WASTEWATER MANAGEMENT PLAN AREA**

Wastewater Management Plan
Byram Township, SUSSEX County, New Jersey
June 3, 2022

Legend

-  Northeast Water Quality Management Area
-  Sussex County Water Quality Management Area
-  Upper Delaware Water Quality Management Area
-  Upper Raritan Water Quality Management Area
-  Highlands Boundary
-  Municipal Boundaries
-  Highlands Planning Area
-  Highlands Preservation Area












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1 inch = 6,600 feet

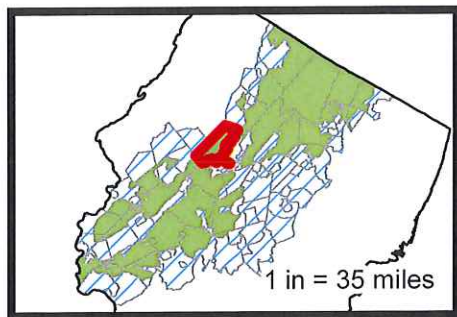
**MAP 2 - TOWNSHIP OF BYRAM
SELECTED ENVIRONMENTALLY SENSITIVE FEATURES**

Wastewater Management Plan
Byram Township, SUSSEX County, New Jersey
June 9, 2022

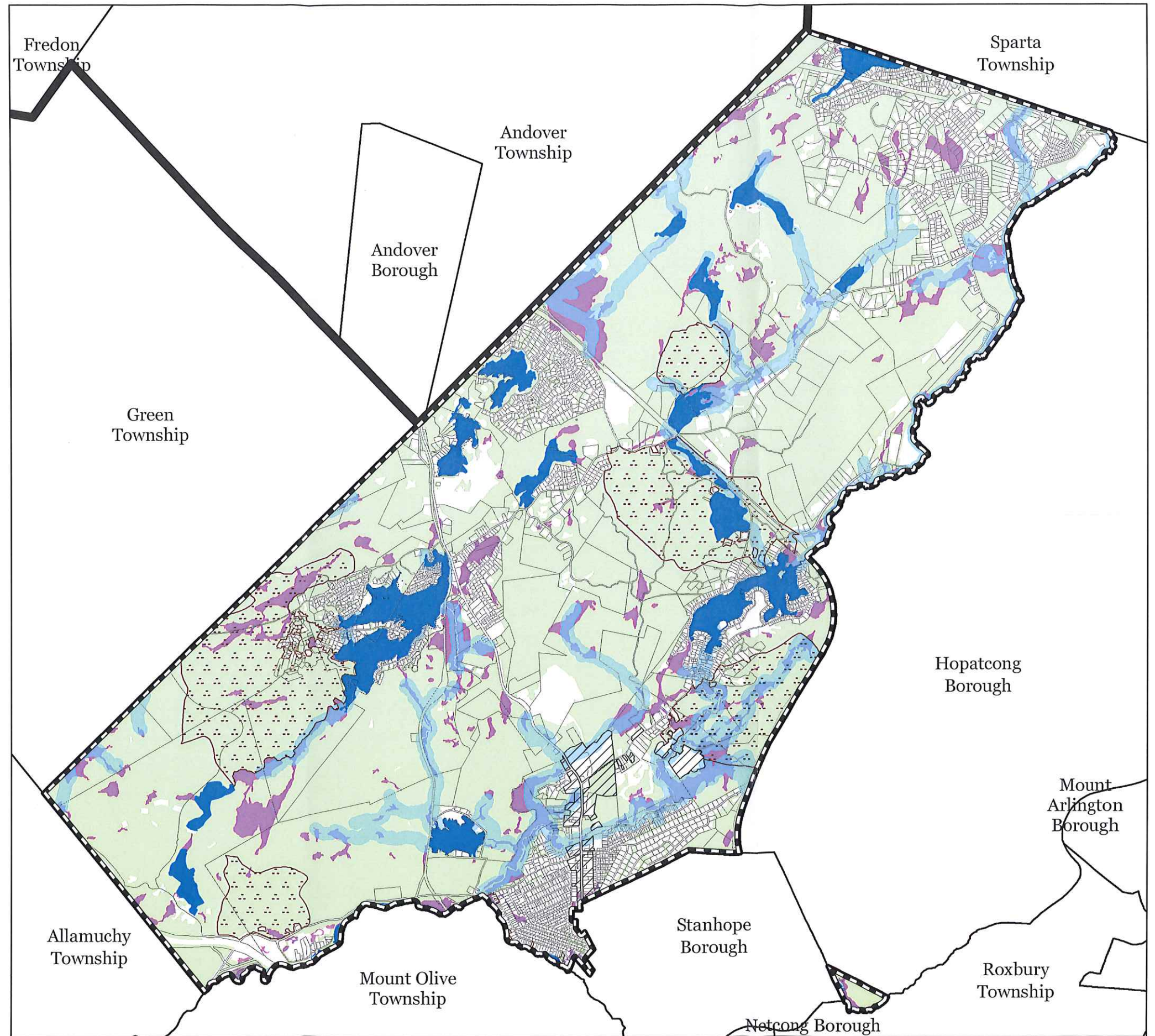
Legend

-  Highlands Boundary
-  Municipal Boundaries
-  Parcel Boundaries
-  Surface Water
-  201 Facility
-  Wetlands
-  Natural Heritage Priority Sites
-  C1 Surface Waters and Associated 300ft Buffer
-  Rank 3, 4, and 5 Habitat

Development in areas mapped as environmentally sensitive features may be subject to special restrictions under Federal or State statutes or rules. Interested persons should check with the Department of Environmental Protection for the latest information. Depiction of environmental features shall be for general information purposes only, and shall not be construed to define the legal geographic jurisdiction of such statutes or rules.






N
1 inch = 0.75 miles
1 inch = 3,960 feet

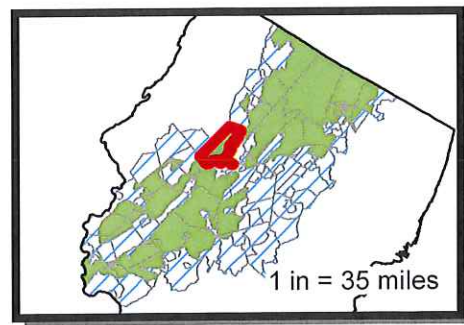
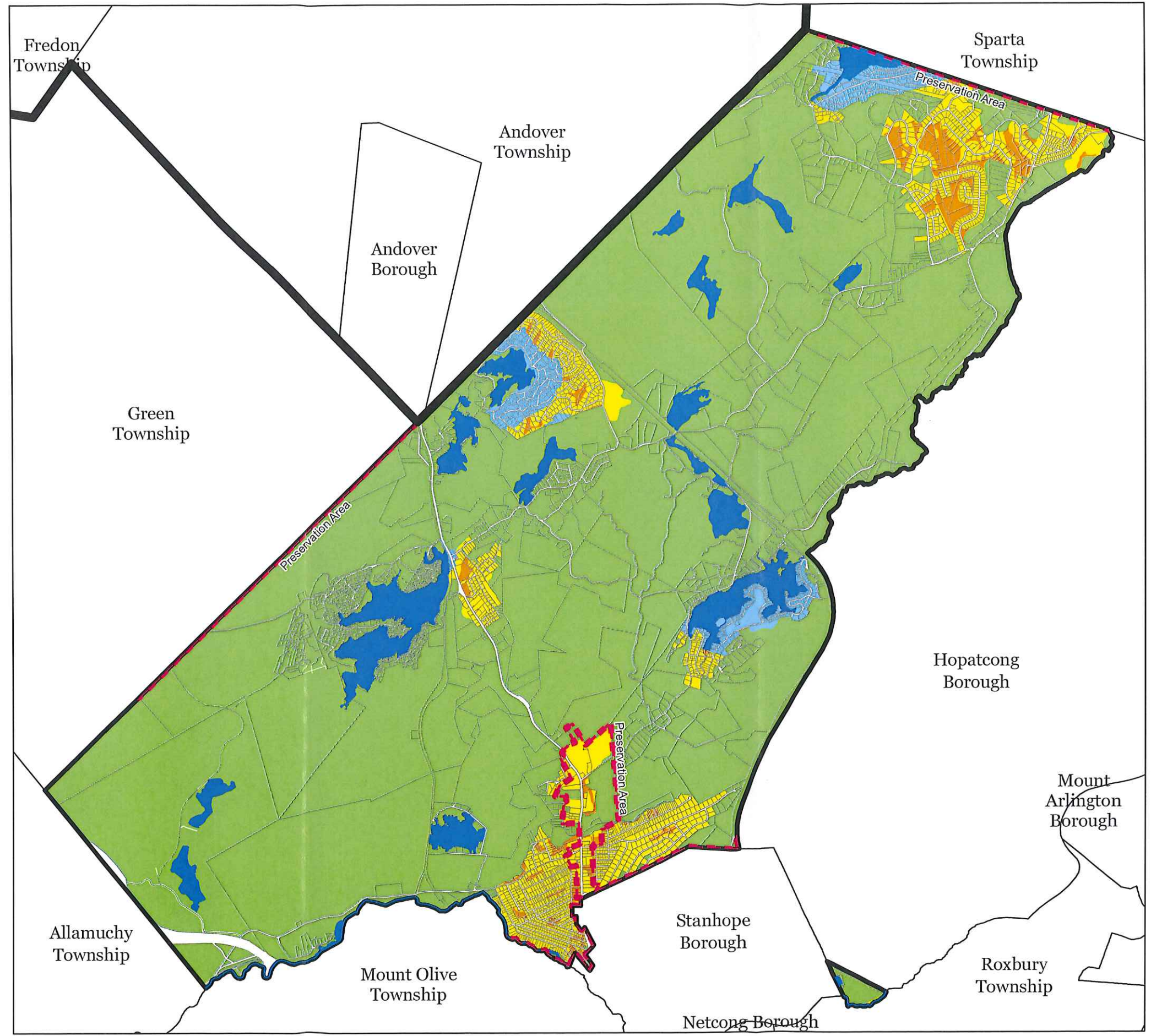



**MAP 3a - TOWNSHIP OF BYRAM
HIGHLANDS LAND USE CAPABILITY ZONES**

Wastewater Management Plan
Byram Township, SUSSEX County, New Jersey
June 3, 2022

Legend

-  Highlands Boundary
-  Municipal Boundaries
-  Parcel Boundaries
-  Surface Water
- Land Use Capability Zones**
-  Existing Community Environmentally Constrained Subzone
-  Existing Community Zone
-  Lake Community Subzone
-  Protection Zone





N

 1 inch = 0.75 miles
 1 inch = 3,960 feet

MAP 3b - TOWNSHIP OF BYRAM WASTEWATER SERVICE AREAS

Wastewater Management Plan
Byram Township, SUSSEX County, New Jersey
June 6, 2022

Legend

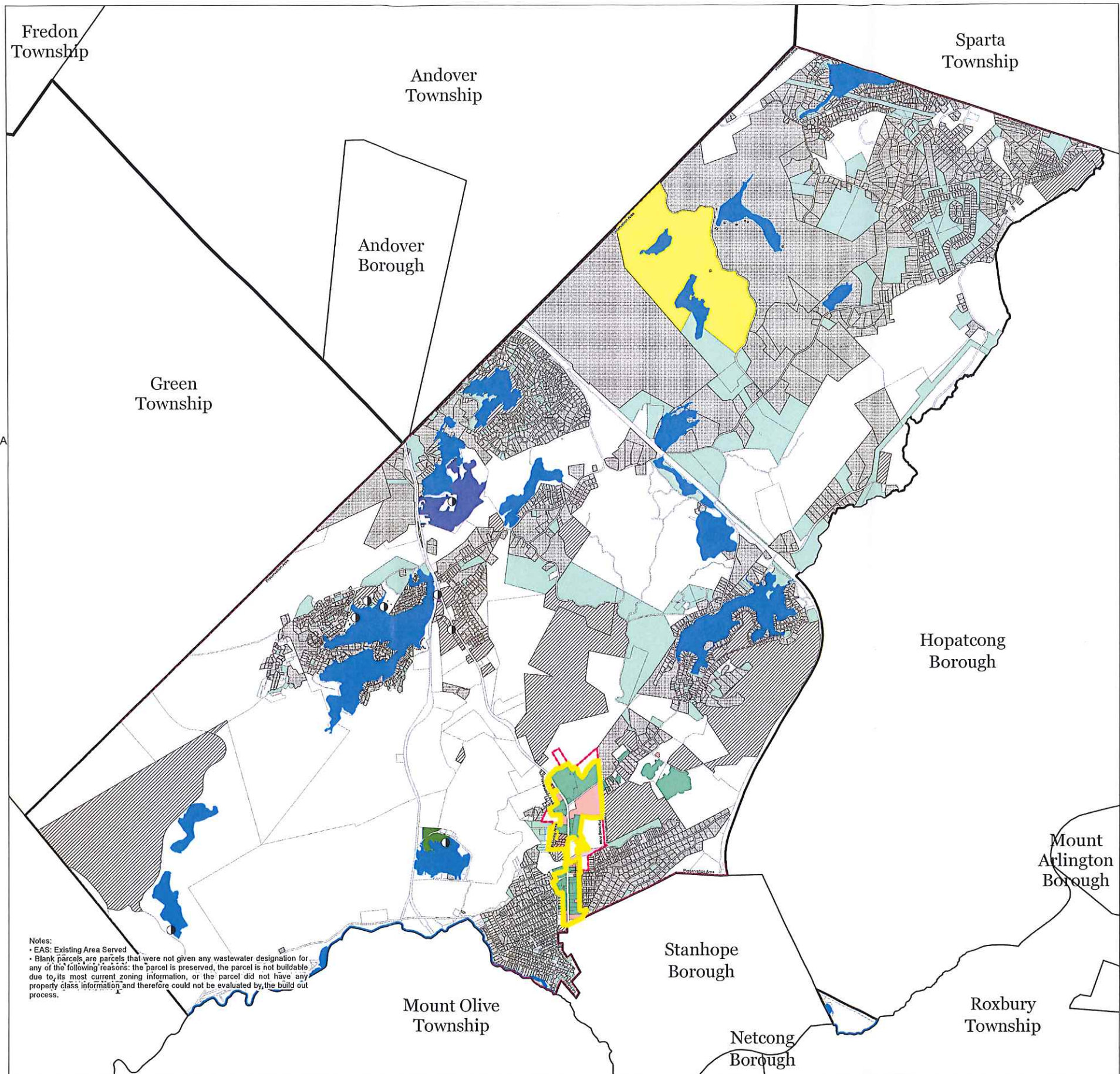
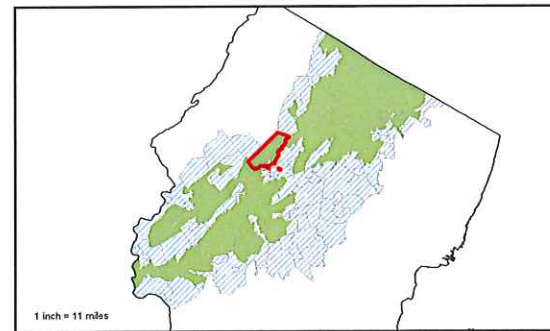
-  Highlands Designated Center
-  Highlands Boundary
-  Highlands Preservation/Planning Area line
-  Municipal Boundaries
-  Parcel Boundaries
-  Surface Water
-  Facility Location and Discharge to Ground Water Location

Assigned Sewer Area

-  EAS - NJ0027821 - Musconetcong SA
-  EAS - NJG0085723 - Panther Lake Camping Resort
-  EAS - NJG0136905 - Camp Allamuchy
-  EAS - NJG0141461 - Rose Property - Parsons Rd
-  EAS - NJG0143057 - Rose Property - Dennis Hill
-  EAS - NJG0146919 - Rose Property - Division Lane
-  EAS - NJG0174726 - 239 Route 206 LLC
-  EAS - NJG0219851 - Jefferson Lake Day Camp
-  EAS - NJG0292982 - Former Adam Todd
-  Future Sewer Service Area - NJ0027821 - Musconetcong SA

Non Sewer Service Area

-  Existing Septic Areas - Residential
-  Existing Septic Areas - Non Residential
-  Septic Exemptions
-  Planning Area Underdeveloped Lots
-  Preservation Area 25/88 Eligible Lots



Notes:
 • EAS: Existing Area Served
 • Blank parcels are parcels that were not given any wastewater designation for any of the following reasons: the parcel is preserved, the parcel is not buildable due to its most current zoning information, or the parcel did not have any property class information and therefore could not be evaluated by the build out process.

The information contained on this map is the best available according to the Highlands Council. However, unintentional inaccuracies may occur, particularly where data or information is derived from sources other than the Highlands Council. The Highlands Council cannot be responsible for the misuse or misinterpretation of the information presented herein. Therefore, under no circumstances shall the State of New Jersey or specifically, the Highlands Council be liable for any actions taken or omissions made from reliance on any information contained herein from whatever source nor shall the State be liable for any other consequences from any such reliance. Additional sources of information may have been used to collect the GIS digital data, but this secondary product has not been verified by those sources.

**MAP 4 - TOWNSHIP OF BYRAM
COMPOSITE ZONING**









Wastewater Management Plan
Byram Township, SUSSEX County, New Jersey
June 3, 2022

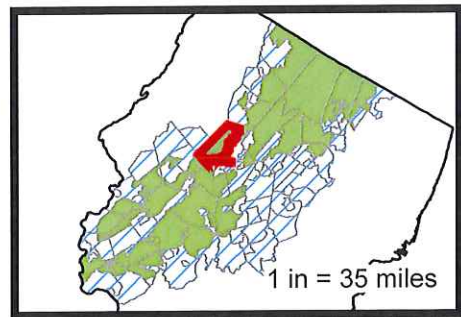
Legend

-  Highlands Boundary
-  Municipal Boundaries
-  Parcel Boundaries
-  Surface Water

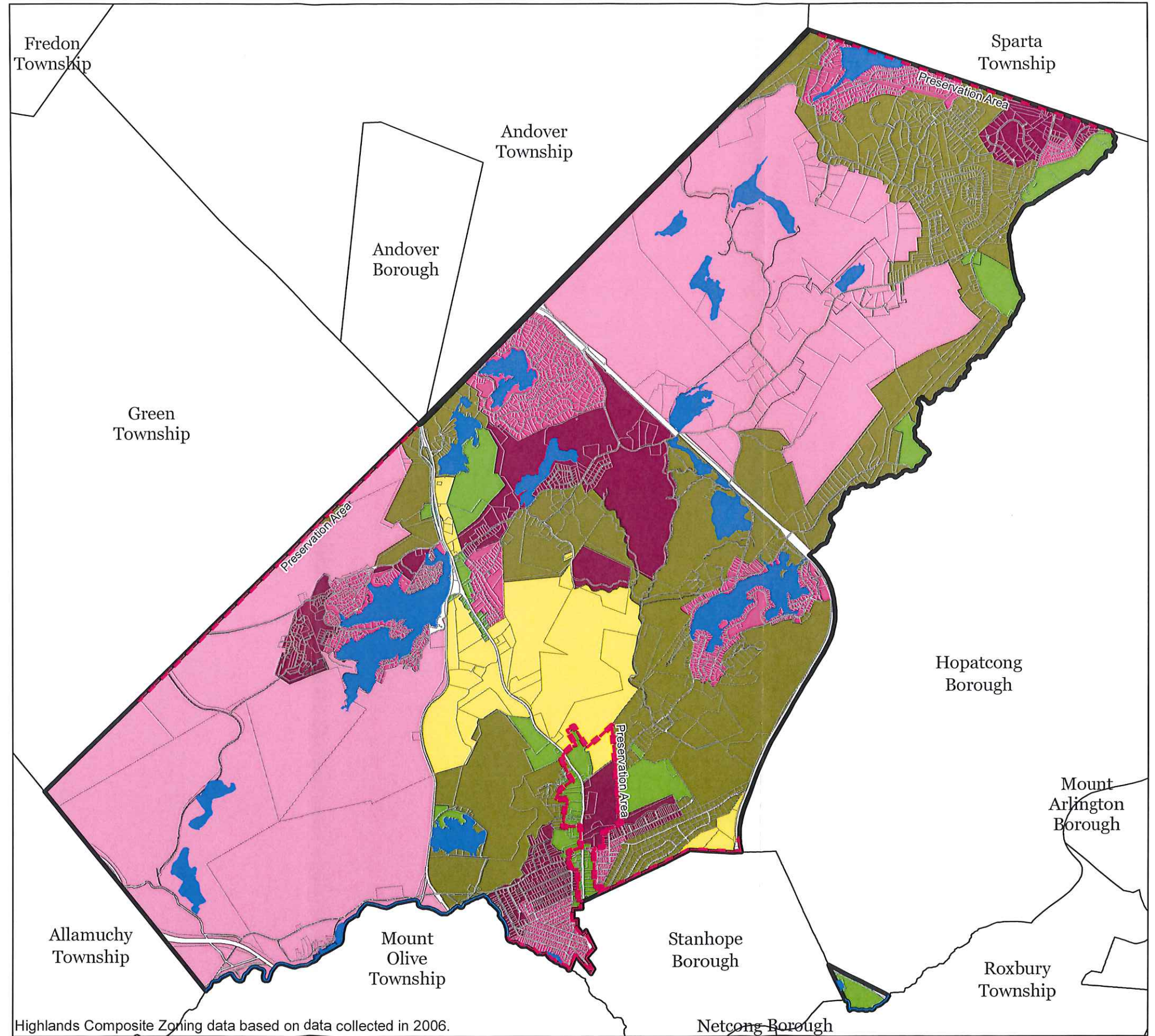
Composite Zoning

based on 2006 municipal zoning

-  High Density Residential
-  Industrial
-  Institutional
-  Medium Density Residential
-  Office/Commercial
-  Retail
-  Rural Residential
-  Suburban Residential



N
1 inch = 0.75 miles
1 inch = 3,960 feet



Highlands Composite Zoning data based on data collected in 2006.