Highlands Council
New Jersey

Highlands Element XIV for Mountain Lakes Master Plan

Prepared by the State of New Jersey Highlands Water Protection and Planning Council
in Support of the Highlands Regional Master Plan

May 22, 2025

HIGHLANDS ELEMENT

MASTER PLAN SUPPLEMENT
BOROUGH OF MOUNTAIN LAKES, MORRIS COUNTY, NEW JERSEY

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The Planning Board presented, discussed, and accepted public comment on this draft Master Plan supplement at its duly-noticed public meeting of May 22, 2025. Copies of the document were made available for review by the public at least 10 days prior to that meeting, and adequate notice of the meeting advising that the Highlands Element was on the agenda for discussion and public comment, was provided.

This document is based on a model Highlands Element prepared and provided to all Highlands municipalities by the New Jersey Highlands Water Protection and Planning Council. Modifications required to tailor it for application to the Borough of Mountain Lakes were provided by the individual indicated below.

PREPARED BY:

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INTRODUCTION

The Borough of Mountain Lakes is located in the New Jersey Highlands Region. It is one of 88 municipalities protected by and subject to the provisions of the Highlands Water Protection and Planning Act ("Highlands Act," N.J.S.A. 13:20-1 et seq.). The Highlands Act was enacted by the State Legislature on August 10, 2004 for the purpose of protecting, enhancing, and restoring Highlands natural resources, in particular water resources, which provide drinking water to over 5 million New Jersey residents. The Highlands Act created the Highlands Water Protection and Planning Council (the "Highlands Council") and charged it with crafting a comprehensive master plan for the Highlands Region.

The Highlands Regional Master Plan (RMP) was adopted by the Highlands Council on July 17, 2008, and became effective on September 8, 2008. As the product of a long-term, participatory, and region-wide planning effort, the RMP is representative of the collective response of the wider community to the Legislature's call for a Highlands comprehensive master plan. The Borough places value in the regional planning process that was undertaken to fully develop the RMP and acknowledges its role in furthering the vision that it represents.

The Highlands Region encompasses some 1,343 square miles in the northwest part of New Jersey. The Highlands Act designates about half of the seven-county Region as Preservation Area (415,000 acres) and the other half as Planning Area (444,000 acres). The Act requires that jurisdictions having lands in the Preservation Area conform to the Highlands RMP with respect to that area, while for lands located in the Planning Area conformance is voluntary.

The Borough of Mountain Lakes is located fully within the Planning Area. The municipality affirmatively seeks to align its land use planning program with the provisions of the RMP with respect to the whole of the municipality. For purposes of this document, these lands shall henceforth be referred to as the "Borough Highlands Area."

The Highlands Element sets forth the policies that shall guide the future land use and development of the Borough Highlands Area. It provides the rationale and the framework for the adoption of land use regulations that are protective of Highlands resources and consistent with the Highlands RMP. This Highlands Element is intended to apply in conjunction with the language of the existing Borough Master Plan to the maximum extent feasible. In the event of conflicts between the two, the Highlands Element shall supersede, unless the existing municipal Master Plan provisions are more restrictive.

POLICIES, GOALS & OBJECTIVES

The Borough Highlands Area encompasses the whole of the municipality. The municipality recognizes the unique value of the Highlands Area and seeks to protect and enhance it in keeping with the Highlands Act and the Highlands RMP. Accordingly, the overarching land use policy with respect to the Highlands Area is to place priority emphasis on the protection, enhancement and restoration of Highlands natural and cultural resources while ensuring that land use and development activities therein occur only in a manner and location that is consistent with the Highlands RMP.

In keeping with this policy, the following goals of the Highlands Act and Highlands RMP are embraced by the municipality and shall guide the land use and development of the Highlands Area:

A. PLANNING AREA GOALS

1. To protect, restore, and enhance the quality and quantity of surface and ground waters;
2. To preserve to the maximum extent possible any environmentally sensitive lands and other lands needed for recreation and conservation purposes;
3. To protect and maintain the essential character of the Highlands Area environment;
4. To preserve farmland, historic sites, and other historic resources;
5. To promote the continuation and expansion of agricultural, horticultural, recreational, and cultural uses and opportunities;
6. To preserve outdoor recreation opportunities on publicly owned land;
7. To promote conservation of water resources;
8. To promote brownfield remediation and redevelopment, where applicable;
9. To encourage as applicable and consistent with the State Development and Redevelopment Plan and smart growth strategies and principles, appropriate patterns of compatible residential, commercial, and industrial development, redevelopment, and economic growth, in or adjacent to areas already utilized for such purposes, and to discourage piecemeal, scattered, and inappropriate development, in order to accommodate local growth and economic development in an orderly way while protecting the Highlands Area environment from the individual and cumulative adverse impacts thereof; and
10. To the extent applicable, promote local transportation opportunities that are consistent with smart growth strategies and principles.

A. HIGHLANDS ZONES AND SUB-ZONES

The Highlands Area includes the Highlands Zones and Sub-Zones listed and described below. These Zones are configured as depicted in Exhibit A and are herewith incorporated into the Land Use Plan as an overlay to the existing Land Use Plan. The Highlands Council delineation of Highlands Zones finds basis in the underlying natural resources, the extent of existing development and supporting infrastructure, and the potential to support new development and/or redevelopment. Highlands Zones are intended to ensure that the density and intensity of future development and/or redevelopment do not exceed the capacity of the land, natural resources, and existing infrastructure to support it.

The Highlands Zones in the Borough of Mountain Lakes include two primary zones (the Protection Zone and Existing Community Zone) and two sub-zones (the Existing Community Zone–Environmentally Constrained Sub-Zone and Lake Management Sub-Zone) each with its own purpose, application and development criteria.

1. **Protection Zone.** The Protection Zone consists of the highest quality natural resource value lands that are essential to maintaining water quality, water quantity and sensitive ecological resources and processes. Land acquisition is a high priority for lands in the Protection Zone and development activities will be extremely limited. Any development will be subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands and natural resources.

2. **Existing Community Zone.** The Existing Community Zone consists of areas of concentrated development representing existing communities. These areas tend to have limited environmental constraints due to previous development patterns and may have existing infrastructure that can support additional development and/or redevelopment. Where served by adequate supporting infrastructure, lands within the Existing Community Zone are suited to higher densities and intensities of development (see Section C, below) than other Zones.

    a. **Existing Community Zone–Environmentally Constrained Sub-Zone.** The Existing Community Zone–Environmentally Constrained Sub-Zone consists of significant contiguous critical habitat, steep slopes and forested lands within the Existing Community Zone that should be protected from further fragmentation. They serve as regional habitat "stepping stones" to larger contiguous critical habitat and forested areas. As such, they are not appropriate for significant development and are best served by land preservation and protection. Development is subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands.

    b. **Lake Community Sub-Zone.** The Lake Community Sub-Zone consists of patterns of community development that are within the Existing Community Zone within 1,000 feet of lakes. Lakes are defined to include those 10 acres or greater in size with lake management areas consisting of lands within the first 1,000 feet (or less, depending on the protection focus) from the lake shoreline. The purpose for the sub-zone is to protect and enhance water quality, resource features, shoreline recreation, scenic quality, and community character. This zone incorporates unique regulatory requirements to prevent degradation of water quality, harm to

lake ecosystems, and watershed pollution, while promoting natural aesthetic values within the Existing Community Zone.

B. LAND USES

The intents and purposes for each municipal land use category or zoning district, as set forth by the underlying Land Use Plan, are herewith amended to recognize and give priority to the intents and purposes listed above for the Highlands Zones and Sub-Zones. Specific immediate changes to permitted uses include the following, each pending the adoption of implementing ordinance provisions approved by the Highlands Council:

1. ***Prime Ground Water Recharge Area.*** Upon adoption of the appropriate regulatory provisions, any principal and/or accessory use or structure related or devoted to a use which has a significant potential for discharge of hazardous materials, where otherwise permitted by the municipal ordinance, shall be prohibited from any portion of the Highlands Area delineated as a "Prime Ground Water Recharge Area" (as defined and delineated in the Conservation Plan Element).

2. ***Wellhead Protection Area (Tier 1 and 2).*** Upon adoption of the appropriate regulatory provisions, any principal and/or accessory use or structure related or devoted to such use, which has a significant potential for discharge of hazardous materials, where otherwise permitted by the municipal ordinance, shall be prohibited from any portion of the Highlands Area delineated as a Tier 1 or Tier 2 "Wellhead Protection Area" (as defined and delineated in the Conservation Plan Element).

3. ***Wellhead Protection Area (Tier 1).*** Upon adoption of the appropriate regulatory provisions, any principal and/or accessory use or structure related or devoted to such use, which is designated as a Major or Minor Potential Contaminant Source (PCS) by the Highlands Council (see Appendices A and B) where otherwise permitted by the municipal ordinance, shall be prohibited from that portion of any Tier 1 Wellhead Protection Area lying within 200 feet of the wellhead (Tier 1 Wellhead Protection Area as defined and delineated in the Conservation Plan Element).

C. DENSITY AND INTENSITY OF DEVELOPMENT

The physical potential for development and/or redevelopment in each Highlands Zone and Sub-Zone of the Highlands Area is limited by existing natural features, resource protection priorities, and the capacity of the land and available infrastructure to support it. This section sets forth a capacity-based planning framework intended to ensure that future development and redevelopment do not exceed carrying capacity.

To the extent that the existing development density and intensity standards of the underlying zone districts (as defined and applied under the existing Land Use Plan and Zoning Ordinance) are consistent with the parameters of this section, they shall remain in effect. Where any density or intensity goals of the existing Land Use Plan are inconsistent with these limits, they are herewith modified with respect to the Highlands Area, to the extent necessary to conform to the Highlands RMP. For purposes of these provisions, density of development standards refer to the requirements of the underlying Zoning Ordinance that regulate the permitted number of dwelling units per acre of land, whether specifically defined as density standards or set forth as minimum lot size requirements for application to specific zoning districts. Intensity of development standards refer to those requirements used to define the relationship between the permitted extent, form and location of development of a lot, to the size, shape, and configuration of the lot on which it is situated (e.g., floor area ratio, building coverage, building height, yard setbacks, number of stories).

In the context herein, modifications to the underlying density or intensity of development standards will occur only to the extent that existing standards conflict with provisions of the Highlands Act or RMP, in particular those concerning water availability or available septic system yield. These modifications shall not apply to lawfully existing or approved development in the Highlands Area at the time of adoption of the ordinances that effectuate such provisions. They shall apply, however, if modifications or improvements to such existing development result in an increase in demand for water availability or septic system yield (excluding any increase directly attributed to exercise of a Highlands Act exemption).

Permitted densities and intensities of development shall comport with the provisions of the Highlands RMP, Highlands Council Technical Reports and all data related thereto. As provided therein, the framework for setting development density/intensity guidelines relies primarily on water and wastewater capacity analyses, with natural resource constraints to be applied largely on a project-specific basis at the development review level. The major criteria for assessing the proposed density/intensity of development include the following:

1. **Water Availability.** As provided under Conservation Plan Element Section D, Water Resources Availability.
2. **Public Water Supply and Wastewater Utilities.** Where properties are served by existing water and wastewater utility infrastructure having sufficient available capacity, the density and intensity of new development shall be consistent with the requirements of existing zoning.
3. **Public Water Supply Utilities – Key Provisions**
    a. **Planning Area – Protection Zone and Environmentally-Constrained Sub-Zones.** New, expanded, or extended public water systems are permitted only where approved by the Highlands Council.
    b. **Planning Area – Existing Community Zone** (excluding Environmentally-Constrained Sub-Zone). Expansion or creation of public water systems is permitted: to serve lands which are appropriate for Transfer of Development Rights (TDR) Receiving Zones, infill development, or redevelopment; to address public health and safety; or to serve new areas for development that address all other requirements of the RMP.
4. **Wastewater Utilities – Key Provisions**
    a. **Planning Area – Protection Zone and Environmentally-Constrained Sub-Zones.** New, expanded or extended wastewater collection and treatment systems and community on-site treatment facilities are permitted only where approved by the Highlands Council.
    b. **Planning Area – Existing Community Zone** (excluding Environmentally-Constrained Sub-Zone). Expansion or creation of wastewater collection and treatment systems and community on-site treatment facilities are permitted: to serve lands which are appropriate for designated TDR Receiving Zones, infill development, or redevelopment; to address public health and safety; or to serve new areas for development that address all other requirements of the RMP. Such systems and facilities will be subject to all conditions of approval associated with amended Areawide Water Quality Management Plans, as authorized by the NJDEP in coordination with the Highlands Council.
5. **Septic Systems – Key Provisions**
    a. **Planning Area.**
        i. **Septic System Density Allowances.** Septic system density (gross acres per septic system) allowances were determined for each Highlands Zone and Sub-Zone based on a modified version of the Trela-Douglas Nitrate Dilution Model. The following septic yields shall apply:
            1. **Existing Community Zone (and Sub-Zones)** – 11 acres
            2. **Protection Zone** – 20 acres

CONSERVATION PLAN

The basis for the Conservation Plan Element is the Highlands Area Environmental Resource Inventory (ERI), which is herewith adopted and incorporated in its entirety as an integral component of the Master Plan. The ERI was developed based on the vast store of resource information, technical data, and scientific analyses that provide foundation for the Highlands Regional Master Plan, including all Highlands Technical Reports and guidance documents. The ERI identifies, categorizes and delineates the wide array of natural resources and resource areas existing in the Highlands Area, and serves as a preeminent guidance document in Highlands Area community planning. In keeping with the general goals of the Highlands Element, it is the overarching policy of the Conservation Plan to safeguard the natural resources of the Highlands Area, ensuring sustainable use of renewable resources, protecting environmentally critical areas, and preserving significant natural areas. This policy directly advances the intents and purposes of the Highlands Act and is consistent with and furthers a number of the specific purposes of zoning as set forth under the MLUL (N.J.S.A 40:55D-2).

A. FOREST RESOURCES

Highlands Area Forest Resource delineations appear in the ERI maps duplicated herein at Exhibit B.

This Plan seeks to balance the need to protect forest resources, biodiversity, and water resources with the economic use and continued sustainable management of forests. It encourages active stewardship of forest resources in order to optimize the benefits and services forests provide such as clean air, clean water, soil protection, recreation area, wildlife habitat, and availability of forest products. The below-listed goals and objectives will guide the regulation and management of Highlands Area Forest Resources.

1. To protect and preserve extensive and, to the maximum extent possible, contiguous forests.
2. To limit development in the Forest Resource Area.
3. To prohibit clear-cutting except in accordance with a Forest Management Plan approved by the State Forester.
4. To require compliance with NJDEP Highlands Area Rules (N.J.A.C. 7:38) regarding forest protection in the case of all "major developments," as defined therein.
5. To avoid deforestation, and where forest disturbance does occur, to require incorporation of Low Impact Development Best Management Practices (see Section K) and adherence to Forest Mitigation Plans.
6. To ensure that site-specific forest resources are identified through project review and that those to remain are protected both during the construction of an approved development project and post-construction.
7. To maintain forest cover in the natural and built environment of the Borough Highlands Area to the maximum extent possible.

B. HIGHLANDS OPEN WATERS

Highlands Open Waters are defined by the Highlands Act as all springs, streams including intermittent streams, wetlands, and bodies of surface water, whether natural or artificial (excluding swimming pools), located wholly or partially within the boundaries of the Highlands Region. The Highlands Act and the Highlands RMP establish the importance of providing protective buffers adjacent to Highlands Open Waters. Key functional values that such buffers provide or contribute to, include but are not limited to habitat, stormwater and flood water retention and filtration, water quality protection, temperature moderation, aquatic

ecosystem integrity, and channel integrity. Highlands Riparian Areas are the lands associated with and bordering Highlands Open Waters, but often extending beyond the Highlands Open Water buffers, that provide critical hydrologic, ecologic, and pollutant attenuation functions for the Open Waters. Highlands Open Waters within the Highlands Area appear in Exhibit C.

The below-listed goals and objectives will guide the regulation and management of Highlands Open Waters and Riparian Areas in the Highlands Area.

1. To protect, restore and enhance Highlands Open Waters and Riparian Areas.
2. To require protective buffers adjacent to Highlands Open Waters of sufficient width and composition to protect the integrity of the water resource from impairment due to proximate land uses and/or development activities. Minimum standards for such buffers should be consistent with those of the NJDEP and the RMP.
3. To seek opportunities to restore the functional value of Highlands Open Waters buffers where existing development or land uses have reduced or impaired their quality.
4. To seek opportunities to enhance Highlands Open Waters buffers by improving functional values while ensuring no net loss (see ERI assessment methodology).
5. To develop a Stream Corridor Protection and Restoration Management Plan that identifies: a) substantially impaired Highlands Open Waters buffer areas in the municipality; b) opportunities for mitigation, restoration, and stabilization of such impaired buffer areas; c) stream corridor areas that require buffers in excess of minimum standards and the characteristics necessary to provide optimum functional value; and d) for Planning Area Category 2 surface waters, only, areas for which scientific analysis indicates that a lesser or alternative buffer is sufficient to maintain or improve protections, while at the same time ensuring no net loss in functional value (see ERI assessment methodology).
6. With the exception of specific disturbances which may be authorized under a Highlands Council-approved Protection/Management Plan, to permit modifications to Highlands Open Waters, Highlands Open Water buffers, and Riparian Areas only for linear development where demonstrated that no feasible alternative exists to locate the linear development outside of such areas.
7. To limit disturbance of existing natural vegetation or increases in impervious area to the minimum feasible in areas beyond Highlands Open Waters buffer requirements; protect the water quality of adjacent Highlands Open Waters; and maintain or restore habitat value of the Riparian Area.

C. STEEP SLOPES

The Borough is particularly concerned with the potential negative impacts of land development practices that do not properly consider the constraints and challenges presented by steep slope areas. As discussed in the ERI, disturbance of such areas can trigger erosion and sedimentation, resulting in the loss of topsoil. Silting of wetlands, lakes, ponds and streams damages and degrades wetland and aquatic habitats, especially trout streams, which require rigorous water quality protections. Steep slope disturbance can also result in the loss of habitat quality, degradation of surface water quality, silting of wetlands, and alteration of drainage patterns. These processes, when severe, can result in land slumping and landslides that can damage both developed property and ecosystems. The severity and extent of slopes, soil characteristics, and land cover all affect the potential for damages from the disturbance of steep slopes. Steep slopes within the Highlands Area appear in the Exhibit D.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Highlands Area Steep Slope Protection Areas.

1. Maps and delineations of Steep Slope Protection Areas should be updated and improved as better information becomes available (i.e., through enhanced mapping anticipated to be made available from the Highlands Council) and/or as new areas are identified through project reviews pertaining to individual sites and properties.
2. Land disturbance within all Steep Slope Protection Areas should incorporate Low Impact Development techniques to minimize the extent of such disturbance and the potential negative impacts resulting from it.
3. Land disturbance within areas of Severely and Moderately Constrained Slopes should be prohibited altogether, with exceptions only for linear development meeting the requirements of NJDEP Highlands Area Rules (at N.J.A.C. 7:38-3.8(c)1-4).

D. CRITICAL HABITAT

Biodiversity is the variety of plant species, animal species, and all other organisms found in a particular environment and is a critical indicator of ecological integrity. Habitat protection is critical to maintaining biodiversity including the many rare, threatened and endangered plant and animal species of the Highlands Region. There are three categories of Critical Habitat in the Highlands Region: 1) Critical Wildlife Habitat (habitat for rare, threatened or endangered animal species); 2) NJDEP Natural Heritage Priority Sites (regionally significant ecological communities, including habitat for documented threatened and endangered plant species); and 3) vernal pools (confined, ephemeral wet depressions that support distinctive, and often endangered, species that are specially adapted to periodic extremes in water pool levels). Critical Wildlife Habitat and NJDEP Natural Heritage Priority Sites are designated based on the presence of, and associated habitat required for, the survival and propagation of species of concern. Vernal pools shown in Exhibit E are certified by the NJDEP. To protect the habitat requirements of vernal pool-breeding wildlife, the Highlands Council has determined that a terrestrial habitat buffer of 300 meters around vernal pools is required. Critical Habitat within the Highlands Area appears in Exhibit E.

The below-listed goals and objectives will guide the regulation and management of Highlands Area Critical Habitat.

1. To prohibit the direct impact of new human development or expansion or increased intensity of existing development within Critical Habitat.
2. To promote the restoration and enhancement of impaired lands in Critical Habitat.
3. To develop and adopt a Habitat Conservation and Management Plan(s), including minimum performance standards and criteria as outlined below, for the protection, enhancement and restoration of lands within Critical Habitat.
    a. Require use of Low Impact Development Best Management Practices (see Section K) to, in this order: 1) avoid the disturbance of Critical Habitat, 2) minimize impacts to Critical Habitat, and 3) mitigate all adverse modification to Critical Habitat so that there is no net loss of habitat value. Habitat value is determined by quantity (e.g., acreage), quality (e.g., core forest vs. edge forest), type (e.g., scrub-shrub), and function (e.g., winter hibernacula for timber rattlesnakes). The mitigation requirement of no net loss of habitat value shall ensure that all four elements are accounted for and included in the mitigation design. Mitigation must meet the habitat and life-cycle requirements of the specific impacted species.

b. Establish criteria for mitigation of disturbed Critical Habitat. Mitigation should be required for all adverse modification to Critical Habitat so that there is no net loss of habitat value.
c. Establish performance standards for the enhancement or restoration of historically disturbed Critical Habitat.
d. Provide a GIS or map-series Critical Habitat Overlay to identify Critical Habitat, that highlights:
   i. Habitat in need of protection from fragmentation and other anthropogenic impacts;
   ii. Habitat critical to maintaining wildlife and plant populations; and
   iii. Habitat that serves other essential ecosystem functions, including, but not limited to, carbon sequestration and ground water recharge.

4. Develop guidelines for habitat stewardship, including, but not limited to prevention of habitat fragmentation through open space preservation and corporate, non-profit, and community involvement in creating, protecting, and restoring habitat.
   a. To require that applications for development affecting Critical Habitat be subject to the standards and criteria outlined in the applicable Habitat Conservation and Management Plan.
   b. Prohibit direct impacts from new development or expansion or increased intensity of existing development that will jeopardize the continued existence of or result in the likelihood of the destruction or adverse modification of Critical Habitat, except as permitted through the issuance of a waiver from the Highlands Council or the NJDEP.
   c. Prohibit indirect impacts from activity that is off-site, adjacent to, or within Critical Habitat that will jeopardize the continued existence of or result in the likelihood of the destruction or adverse modification of Critical Habitat, except as permitted through the issuance of a waiver from the Highlands Council or the NJDEP.
   d. Prohibit modification of a vernal pools protection buffer, except as permitted through the issuance of a waiver from the Highlands Council or the NJDEP.
   e. Prohibit modifications to the delineation of Critical Wildlife Habitat and NJDEP Natural Heritage Priority Sites, except as permitted through the issuance of a waiver from the Highlands Council or the NJDEP.

E. WATER RESOURCES AVAILABILITY

The availability of water for human use is a critical factor in determining the capacity for growth and continued economic vitality in the Borough Highlands Area. The availability of water for ecological purposes is critical to sustaining the aquatic ecosystems of streams, ponds and lakes. Of particular concern to the Borough is the potential for overuse of water to reduce base flows, impair ecological function and integrity, and reduce the reliability of potable water supplies that the municipality depends upon. Highlands Area water availability is represented by Exhibit F.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Highlands Area water availability.

1. To protect, restore (if applicable) and enhance the availability of surface and ground water in the Highlands Area.
2. To ensure that increasing water demands do not exceed Net Water Availability or exacerbate existing deficits of subwatersheds.
3. To strictly limit consumptive and depletive water uses to the water availability in each HUC14 subwatershed.

4. To provide limited water availability (Conditional Water Availability) within a Current Deficit Area with appropriate standards regarding its use and rigorous requirements for mitigation, effective until such time as a municipal Water Use and Conservation Management Plan has been developed and adopted.
5. Within Protection Zone subwatersheds, to give highest priority for the use of non-agricultural Net Water Availability or Conditional Water Availability addressing a documented existing or imminent threat to public health and safety from contaminated domestic and other on-site water supplies that is of sufficient scale to justify a public water supply and where no alternative is feasible that would sufficiently assure long-term protection of public health and safety. To assign secondary priority to the following:
    a. A designated Highlands Redevelopment Area;
    b. A cluster development that complies with the Cluster Development Ordinance; and
    c. Any project proposing affordable housing in excess of the obligation otherwise generated by it.
6. Within Existing Community Zone subwatersheds, to give highest priority for use of Net Water Availability or Conditional Water Availability to addressing a documented threat to public health and safety from contaminated water supplies. To assign secondary priority to the following:
    a. Designated TDR Receiving Zones;
    b. Infill development;
    c. Designated Highlands Redevelopment Areas;
    d. Projects proposing affordable housing in excess of the obligation otherwise generated by them; and
    e. New areas for development that meet all other requirements.
7. To require the use of water conservation, recycling and reuse methods (where appropriate) and devices for any redevelopment or development activity, including renovations to existing buildings, to minimize consumptive water use. This should include mandatory collection and use of stormwater to serve non-agricultural irrigation needs and to the extent feasible, other non-potable purposes.
8. To ensure that proposed public water supply and wastewater service areas, and new or increased water allocations and transfers will not directly or indirectly cause or contribute to a Net Water Availability deficit, and where feasible will help mitigate any existing deficit.
9. To ensure efficient and effective use of water availability, reduction and elimination of water deficits, and mitigation of new consumptive or depletive use in any Current Deficit Areas or subwatersheds that could become deficit areas based on projected development and water uses.
10. To permit new consumptive or depletive water uses within a Current Deficit Area only under the auspices of a Water Use and Conservation Management Plan; or until such a Plan is in place, to permit such uses only within the allocated Conditional Water Availability and provided that mitigation of the proposed use is accomplished within the same HUC14 subwatershed through: a permanent reduction of existing consumptive and depletive water uses; ground water recharge in excess of the requirements of N.J.A.C. 7:8 (Stormwater Management Rules); or other permanent means.
11. To develop and implement a Water Use and Conservation Management Plan that sets forth the manner and mechanisms by which to achieve each of the preceding goals and objectives.
    a. Where developed for Current Deficit Areas, the Plan must include provisions to reduce or manage consumptive and depletive uses of ground and surface waters as necessary to reduce or eliminate deficits in Net Water Availability, or to ensure continued stream flows to downstream Current Deficit Areas from Existing Constrained Areas, to the maximum extent practicable within each HUC14 subwatershed.
    b. For Current Deficit Areas, the Plan must in addition include a detailed implementation plan and schedule indicating how and when the current deficit will be resolved in the applicable

subwatershed(s) prior to approval of new water uses in the subwatersheds with the most severe deficits (e.g., in excess of 0.25 million gallons per day), and the plan shall be implemented prior to initiation of new water uses.

c. The Plan must also ensure that transfers between or from Highlands Subwatersheds occur only where no viable alternative exists to meet public health, safety and welfare needs and where no impairment of subwatershed resources will result.

F. PRIME GROUND WATER RECHARGE AREAS

Prime Ground Water Recharge Areas are those lands within a HUC14 subwatershed that most efficiently provide in the aggregate 40 percent of total drought recharge volume for the HUC14 subwatershed, as determined in accordance with parameters set forth in the ERI. Protection of such areas is clearly vital to maintaining the quality and quantity of the ground water resources upon which both human and non-human communities in the Highlands Area so heavily rely. Prime Ground Water Recharge Areas within the Highlands Area appear in Exhibit G.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Highlands Prime Ground Water Recharge Areas.

1. To protect, enhance, and restore the quantity and quality of Prime Ground Water Recharge Areas.
2. To require use of Low Impact Development (see Section K) and other Best Management Practices to maximize natural ground water recharge and minimize the need for engineered recharge methods.
3. To restrict land use and development activities that reduce natural ground water recharge volumes in PGWRAs or that may contribute to or result in degradation of ground water quality, whether directly or indirectly.
4. To avoid disturbance of lands identified as PGWRAs to the maximum extent feasible, and to minimize such disturbance where it cannot be avoided. Where disturbances do occur in PGWRAs, require mitigation measures to enhance pre-construction recharge volumes.
5. To prohibit land uses and activities that pose significant risk of ground water contamination from locations delineated as PGWRAs.
6. To require that Major Potential Contaminant Sources (PCS) (as listed at Appendix A) in locations delineated as PGWRA, incorporate ongoing management of toxic chemical sources and prohibition of non-permitted discharges, so that the potential for ground water contamination is minimized and the opportunity for discharge discovery and control is maximized.
7. To identify and implement opportunities for the restoration or enhancement of recharge in Prime Ground Water Recharge Areas and other lands through such means as the retrofit or rehabilitation of stormwater recharge facilities, land management improvements and reforestation.
8. To achieve a net improvement in ground water volume and quality through enhanced infiltration, pretreatment and other available means.

G. WATER QUALITY

Water quality is influenced by the type and intensity of land use adjacent to and upstream of the water body. Pollutants are contributed to the environment from a wide variety of nonpoint sources (NPS) including human development (through stormwater and residential runoff, septic systems, fertilizer applications on lawns, and brownfields or contaminated sites), domestic or captive animals, agricultural practices (crop

farming, livestock, and manure applications), and wildlife (large populations). Pollutants from these sources can reach water bodies directly, through overland runoff, or through stormwater conveyance facilities. Point sources also exist, primarily wastewater treatment plants serving communities or industrial facilities.

Accordingly, the below-listed goals and objectives apply to the management and regulation of water quality in the Highlands Area.

1. To protect, restore (if applicable) and enhance water quality in the Highlands Area.
2. To remedy the pollutant sources associated with existing or historic land uses in conjunction with redevelopment opportunities.
3. To ensure that land use and development is permitted only in such locations, at such densities, and in such manner as to ensure sustainable use of Highlands Area water resources and continued protection and management of critical lands for water quality purposes.
4. To ensure that the municipal portion of any Areawide Water Quality Management Plan or Wastewater Management Plan will not directly or indirectly support development that would be in violation of any adopted Total Maximum Daily Load (TMDL) limits established by NJDEP.
5. To adopt and implement stormwater management controls through a municipal Stormwater Management Plan.
6. To require use of applicable Low Impact Development (see Section K) and Best Management Practices to protect the quality of ground and surface waters.

H. WELLHEAD PROTECTION

Protection of ground water resources that directly provide water to potable water supply wells is vital to the public health, safety, and welfare of the community. It is also of primary importance to ensure continued availability of clean drinking water to all that rely upon it. Through regulation of land use, physical facilities and other activities within WHPAs, the potential for ground water contamination can be reduced by preventing the introduction and migration of pollutants into ground water sources that supply water supply wells.

Highlands Area WHPAs are delineated for community water supply wells based upon time of travel, reflecting the time required for ground water to flow into the well. WHPAs are composed of three tiers based upon a 2-year (Tier 1), 5-year (Tier 2), and 12-year (Tier 3) time of travel. Each tier includes the area of each smaller tier within it. Wellhead Protection Areas within the Highlands Area appear in Exhibit H.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Highlands Wellhead Protection Areas.

1. To identify and ensure proper management of existing land uses within Wellhead Protection Areas that have a significant potential for contributing pollutants of concern to ground water.
2. To protect and enhance ground water and water supply resources within Wellhead Protection Areas consistent with the source water assessments for each water supply source.
3. To prohibit land uses and activities that pose significant risk of ground water contamination from locations delineated as Tier 1 and Tier 2 Wellhead Protection Areas, with enhanced protections within the first 200 feet of any public water system wellhead.
4. To require Major Potential Contaminant Sources (PCS) (as listed at Appendix A) in locations delineated as Tier 1 Wellhead Protection Areas, incorporate ongoing management of toxic chemical sources and prohibition of non-permitted discharges, so that the potential for ground

water contamination is minimized and the opportunity for discharge discovery and control is maximized.

5. To ensure that stormwater management plans pertinent to both development applications and municipal-wide planning, address wellhead protection requirements.
6. To encourage stormwater reuse for non-agricultural irrigation and other non-potable water purposes to minimize the volume of stormwater discharges (other than from clean sources) within a Tier 1 or Tier 2 Wellhead Protection Area.
7. To restrict development activities that pose threats to the water quality of public water supply wells.
8. To ensure that development activities and existing land use activities implement best management practices to protect the quality of ground water within Wellhead Protection Areas.
9. To ensure that the uses, structures or activities permitted within utility service areas, as proposed within the municipal portion of the Areawide Water Quality Management Plan or Wastewater Management Plan, will not adversely affect any Wellhead Protection Area.

UTILITY SERVICES PLAN

This Plan recognizes that future development must only occur within the carrying capacity of water resources, as to both quality and quantity. It also recognizes the importance of ensuring that water supply and wastewater utility capacities are made available in ways that provide maximum benefit within the constraints of water availability and water quality protection and are used in ways that provide cost-effective and efficient service. Utility services support more dense development than on-site wells and septic systems and therefore can provide for more housing and job creation per square mile. They also can result in more intensive environmental impacts, however, and a greater strain on available water resources. It is of particular concern to the Borough, that utility service locations occur in the most appropriate portions of the Highlands Area and that development reliant upon wells and/or septic systems occur only at densities that can be sustained by existing environmental characteristics.

Accordingly, the below-listed goals and objectives will guide Borough regulation and management of water and wastewater utilities and use and maintenance of septic systems.

I. PLANNING AREA

1. To ensure that all existing and future development in the Highlands Area using public water supply systems and wastewater collection and treatment systems are served by adequate and appropriate infrastructure.
2. To ensure that proposed public water supply and wastewater service areas will not directly or indirectly cause or contribute to a Net Water Availability deficit, and where feasible, will mitigate any deficit.
3. To prohibit the creation or extension of public water supply systems and wastewater collection and treatment systems within the Protection Zone and the Environmentally-Constrained Sub-Zones until or unless authorized by the Highlands Council.
4. To allow for the creation or extension of public water supply systems and wastewater collection and treatment systems where appropriate within the Existing Community Zone (excluding the Environmentally-Constrained Sub-Zone) in accordance with the conditions of approval applicable to any amended Areawide Water Quality Management Plan (as authorized by the NJDEP in coordination with the Highlands Council).
    d. The highest priority for allocation of excess or additional wastewater treatment capacity is to areas where there are clusters of failed septic systems that are located within or adjacent to Existing Areas Served.
    e. Secondary priority for such systems should be assigned to TDR Receiving Zones, infill development, redevelopment and affordable housing projects.
5. To require that development supported by new or expanded public water supply systems and/or wastewater collection and treatment systems occur at a density and intensity that ensures efficiency and cost-effectiveness of the public infrastructure.
6. To ensure that Carbonate Rock Areas and Wellhead Protection Areas are considered and appropriately protected in the design and construction of any new or expanded wastewater collection/treatment system.
7. To ensure that on-site wastewater system discharges do not exceed the natural capacity of ground water to attenuate loadings, exacerbate existing nitrate impairment, or contribute to potential nitrate impairment for subwatersheds of the Highlands Area.

8. To ensure that all development in areas not served by public water supply or wastewater collection and treatment systems is at a density that can be supported by on-site wells and subsurface septic systems, respectively. With respect to septic systems, to determine such densities on the basis of median nitrate concentrations in ground water and nitrate dilution modeling.
9. To ensure the development of a Borough-wide septic system management/maintenance plan.
10. To develop a Wastewater Management Plan for the Highlands Area.

RELATIONSHIP OF MASTER PLAN TO STATE/REGIONAL/LOCAL PLANS

By adoption of this Highlands Element, the Borough Master Plan is brought into alignment with the Highlands Regional Master Plan (RMP). The Highlands Element incorporates all of the policies, goals, and objectives of the Highlands RMP that are relevant to the use and development of land in the Highlands Area. The Highlands Element calls for the development and adoption of various land use regulations and specific environmental management plans, which together will effectuate its vision and in so doing, advance the intents and purposes of the Highlands RMP.

The Highlands Act provides that as the RMP has attained Plan Endorsement from the State Planning Commission for the Planning Area, Highlands Council approval of Plan Conformance with respect to lands in the Planning Area is deemed the equivalent of Plan Endorsement.

EXHIBITS

A. Highlands Area and Land Use Capability Zones
B. Total Forest Area
C. Highlands Open Waters
D. Steep Slope Protection Areas
E. Critical Wildlife Habitat, Vernal Pools and NJDEP Natural Heritage Priority Sites
F. Net Water Availability
G. Prime Ground Water Recharge Areas
H. Wellhead Protection Areas

APPENDIX A MAJOR POTENTIAL CONTAMINANT SOURCES

Land uses and activities determined by the Highlands Council (based on New Jersey Safe Drinking Water Act regulations and NJDEP regulations) to be Major Potential Contaminant Sources include the following:

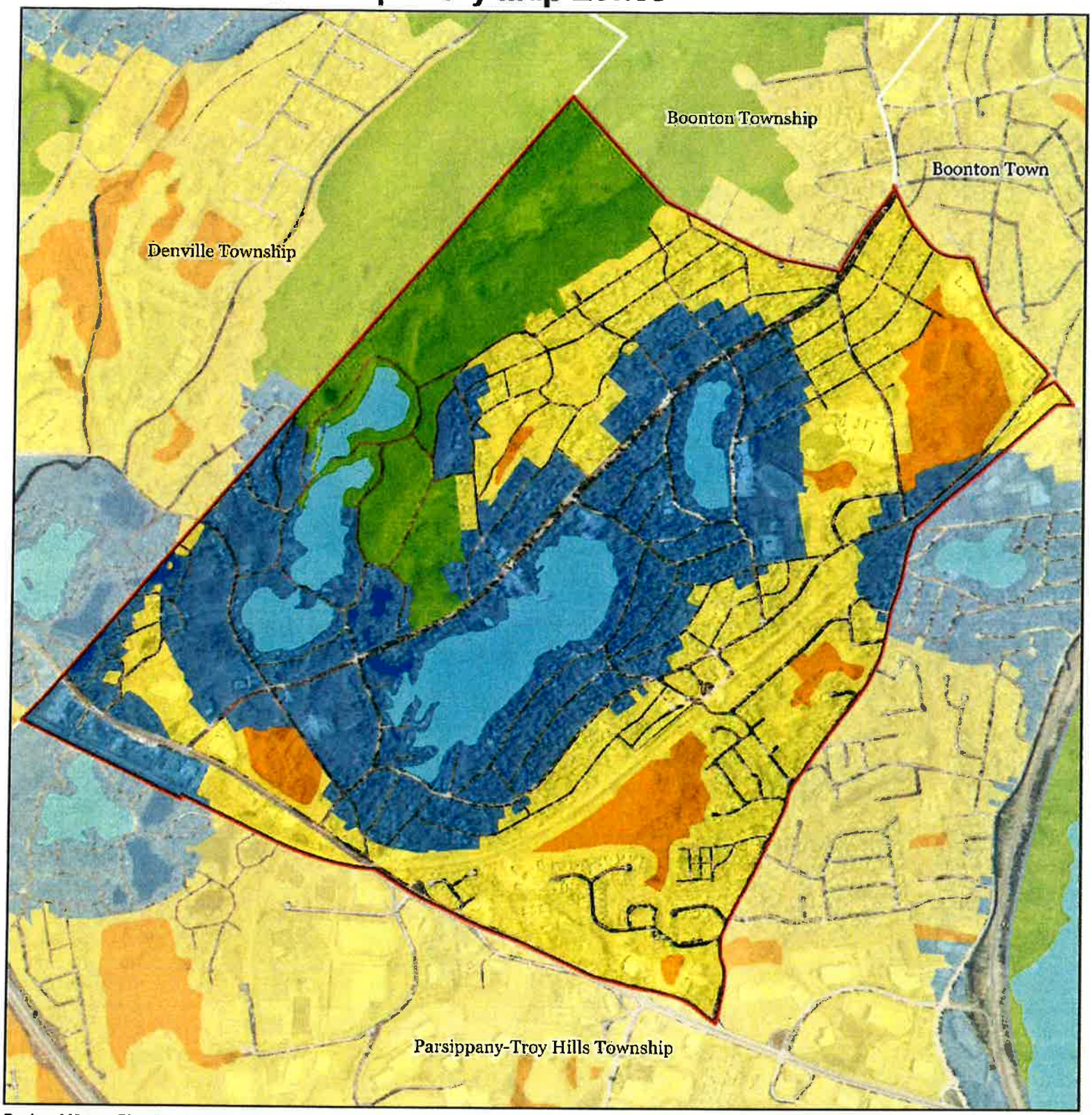
1. Underground fuel and chemical storage and oil tanks regulated by NJDEP under provisions of the Underground Storage of Hazardous Substances Act (N.J.S.A. 58:10A-21 et seq.).
2. Above-ground storage facility for a hazardous substance or waste with a cumulative capacity greater than 2,000 gallons.
3. Automotive service center (repair & maintenance).
4. Dry cleaning processing facility.
5. Road salt storage facility.
6. Cemetery.
7. Highway maintenance yard.
8. Truck, bus, locomotive maintenance yard.
9. Site for storage and maintenance of heavy construction equipment and materials.
10. Site for storage and maintenance of equipment and materials for landscaping, excluding household storage and maintenance of such equipment.
11. Livestock operation containing 300 or more Animal Units (AU) [1 AU= 1000 pounds of live animal weight] as defined by the NJ Department of Agriculture in its Criteria and Standards for Animal Waste Management, at NJAC 2:91.
12. Quarrying and/or mining facility.
13. Asphalt and/or concrete manufacturing facility.
14. Junkyard/auto recycling and scrap metal facility.
15. Residential or agricultural motor fuel in NJDEP exempted underground storage tanks (i.e., under 1,000 gallons).

APPENDIX B MINOR POTENTIAL CONTAMINANT SOURCES

Land uses and activities determined by the Highlands Council (based on New Jersey Safe Drinking Water Act regulations and NJDEP regulations) to be Minor Potential Contaminant Sources include the following:

1. Underground storage of hazardous substance or waste of less than 50 gallons.
2. Underground heating oil storage tank with a capacity of less than 2,000 gallons.
3. Sewage treatment facility regulated by a NJPDES permit granted under NJAC 7:14A.
4. Industrial waste line.
5. Septic system disposal field.
6. Facility requiring a ground water discharge permit issued by the NJDEP pursuant to N.J.A.C 7:14A et seq.
7. Stormwater retention-recharge basin on an industrial property receiving runoff from surfaces other than roof areas.
8. Dry well on an industrial property receiving runoff from surfaces other than roof areas.
9. Waste oil collection, storage and recycling facility.
10. Agricultural chemical bulk storage and mixing or loading facility including crop dusting facilities.
11. Above-ground storage of hazardous substance or waste in quantities of less than 2,000 gallons.
12. Livestock operation containing 8 or more Animal Units (AU) [1 AU= 1000 pounds of live animal weight] or those receiving 142 or more tons of animal waste per year as defined by the NJ Department of Agriculture pursuant to its Criteria and Standards for Animal Waste Management, at NJAC 2:91.

Exhibit A: Land Use Capability Map Zones



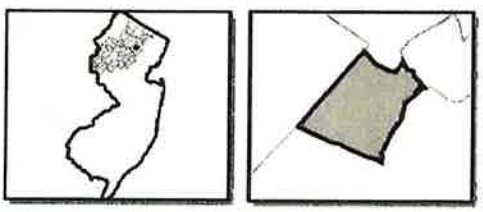
Regional Master Plan Overlay Zone Designation

Zone
- Protection
- Existing Community

Sub-Zone
- Existing Community Environmentally Constrained
- Lake Community

- Preservation Area
- Lakes Greater Than 10 acres
- Municipal Boundaries

Mountain Lakes Borough

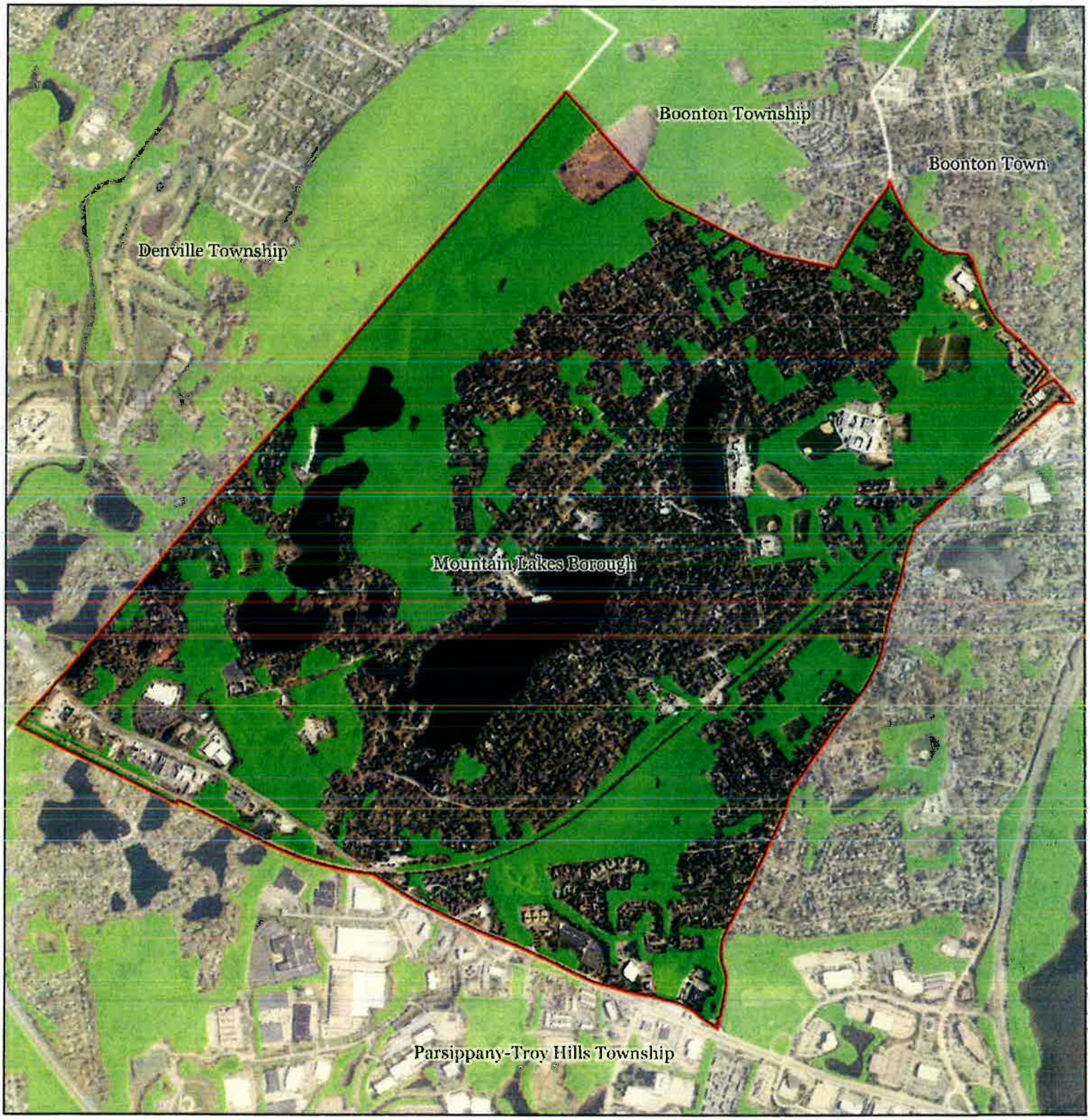


0 0.1 0.2 0.4 0.6 Miles

Highlands Council
New Jersey

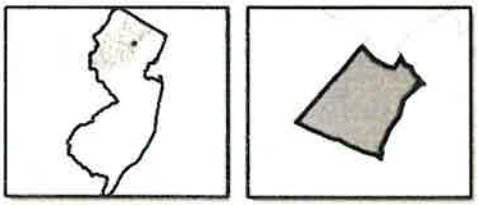
Date Exported: 5/22/2023

Exhibit B: Total Forest Area



Mountain Lakes Borough

Forested Areas
Preservation Area
Municipal Boundaries



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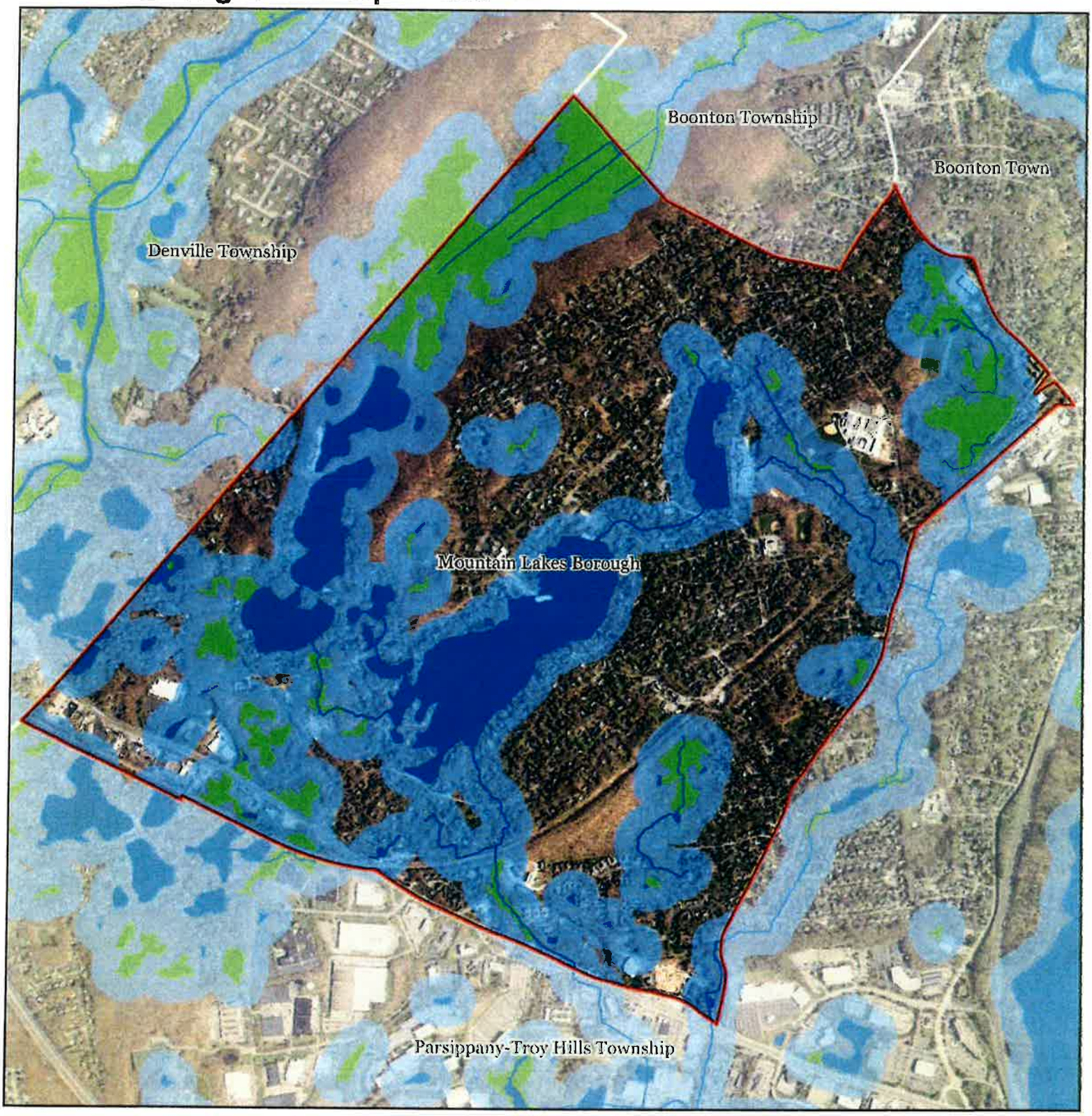
Highlands Council
New Jersey

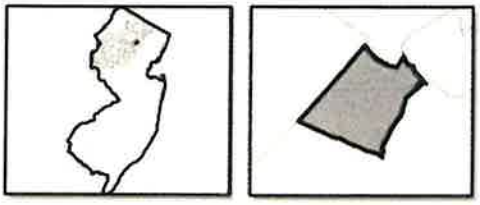
Date Exported: 5/29/2024

Exhibit C: Highlands Open Waters



Highlands Open Water Buffers (300ft)
Streams
Wetlands
Lakes & Ponds
Preservation Area
Municipal Boundaries

Mountain Lakes Borough



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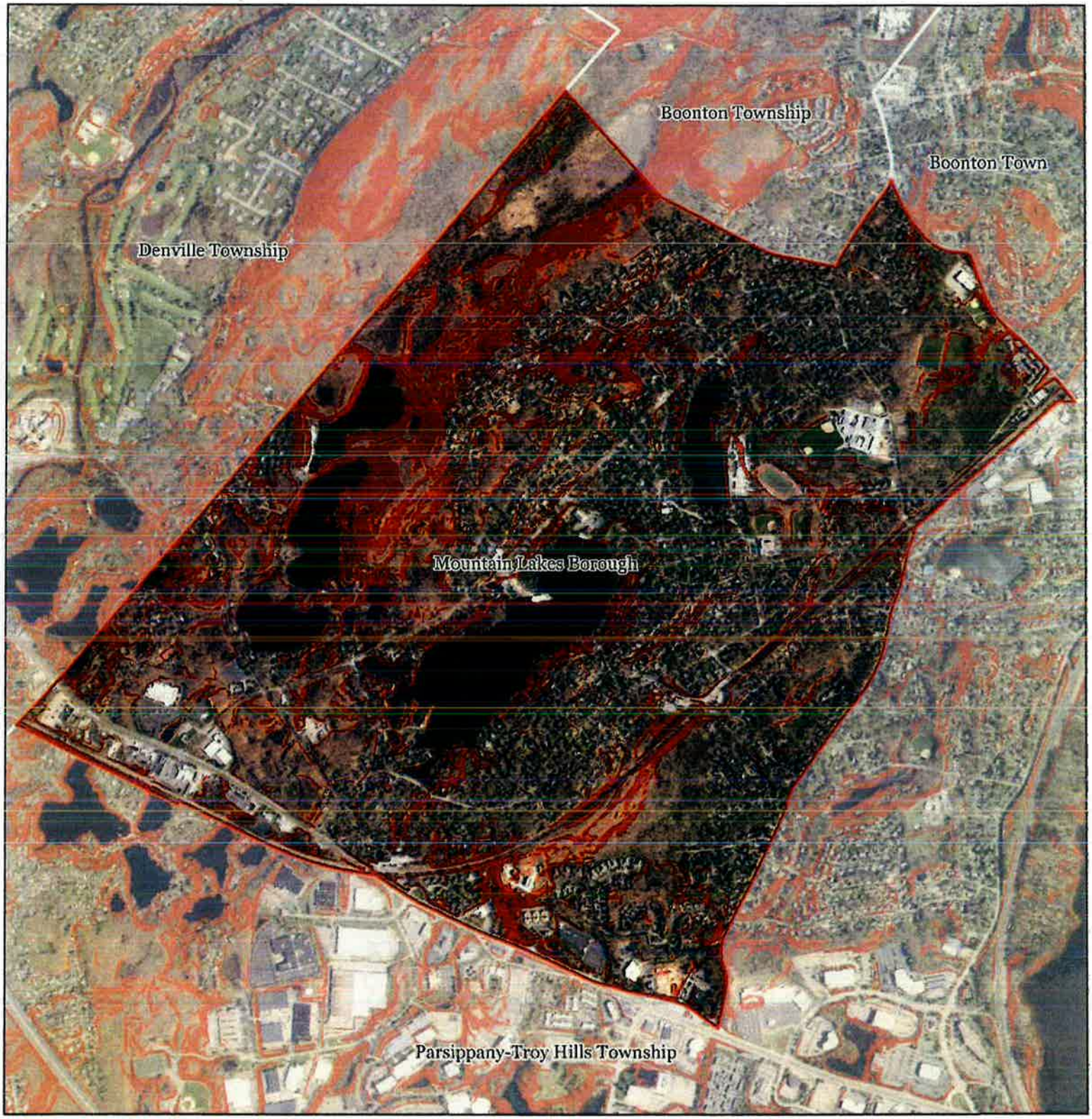
Highlands Council
New Jersey

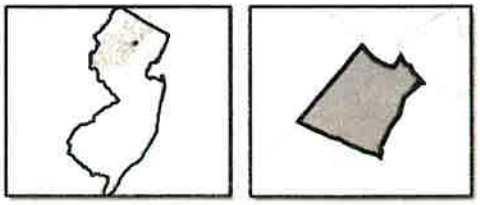
Date Exported: 5/23/2023

Exhibit D: Steep Slope Protection Areas



Steep Slopes
- *Moderate*
- *Severe*
- Preservation Area
- Municipal Boundaries

Mountain Lakes Borough



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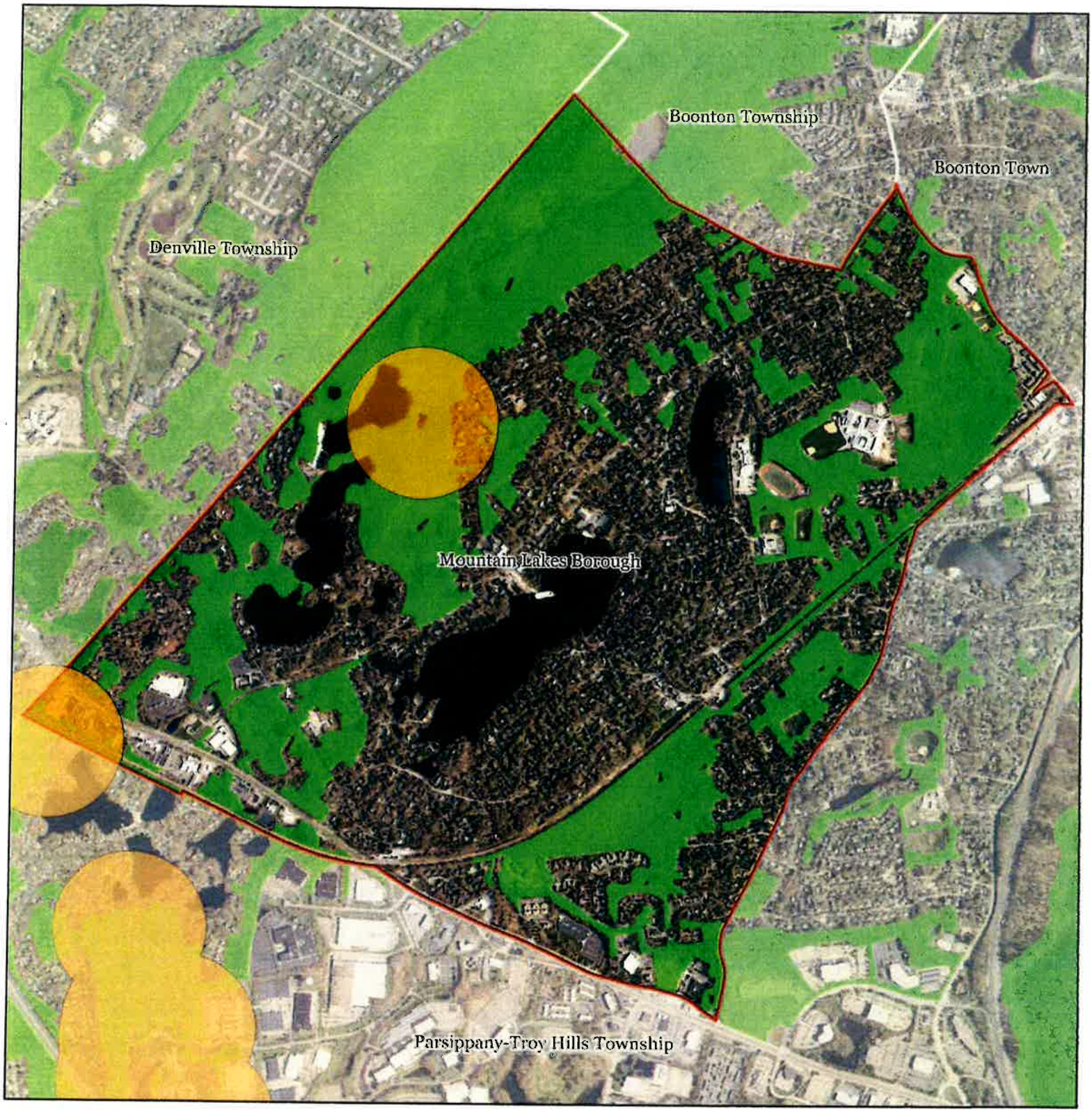
Highlands Council
New Jersey

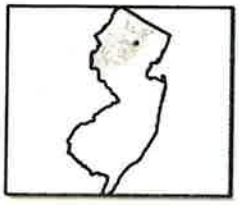
Date Exported:

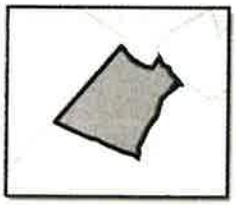
Exhibit E: Critical Wildlife Habitat



Confirmed Vernal Pool Buffer (1,000 ft)
Critical Wildlife Habitat
Preservation Area
Municipal Boundaries

Mountain Lakes Borough



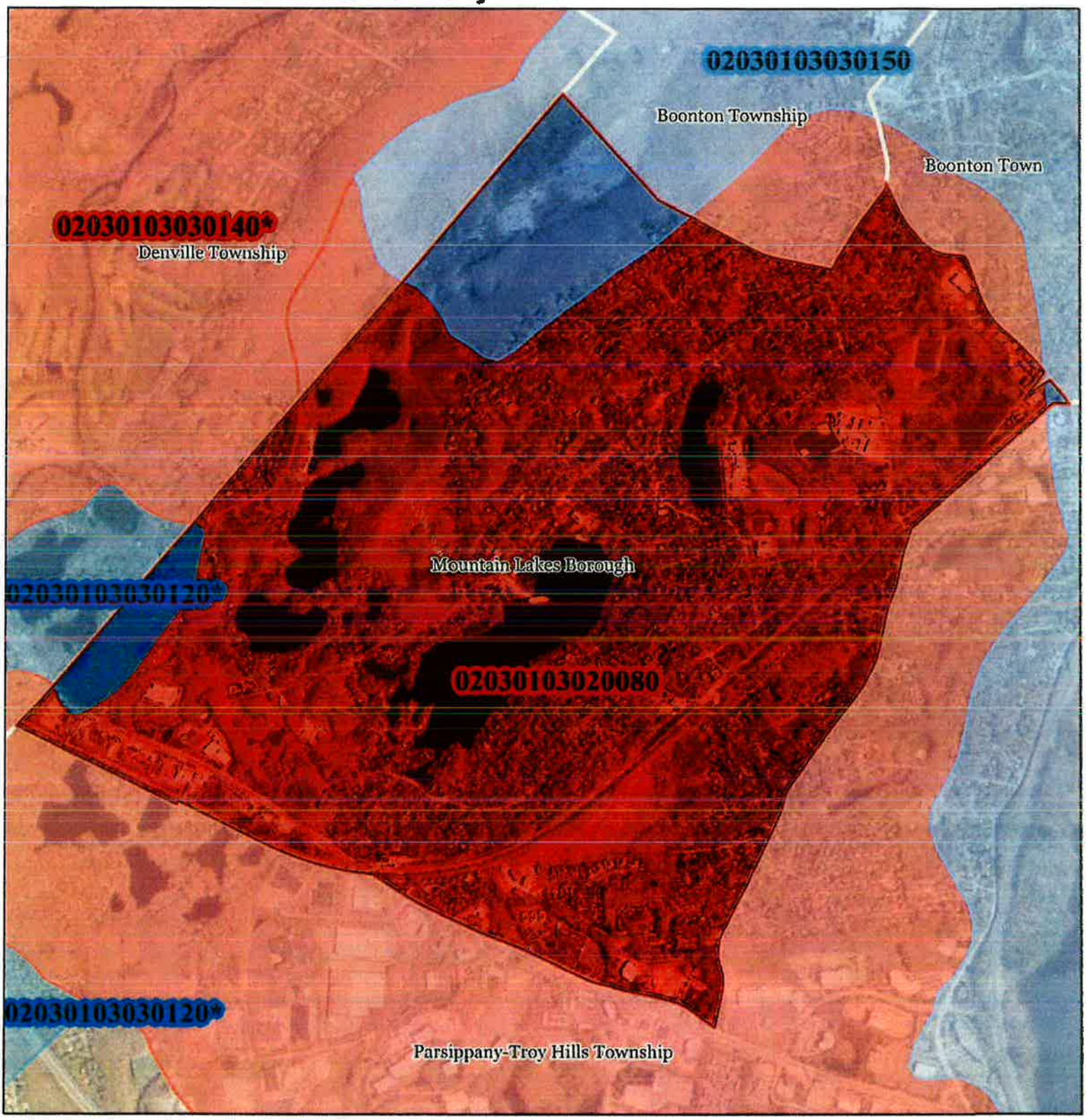


0 0.1 0.2 0.4 0.6 Miles

Highlands Council
New Jersey

Date Exported:

Exhibit F: Net Water Availability



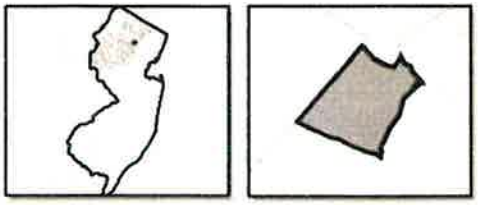
Net Water Availability By HUC14
Million Gallons Per Day (MGD)

- 0.10 - 0.39
- 0.05 - 0.09
- 0.00 - 0.04
- -0.09 - 0.00
- -0.99 - -0.10
- -7.10 - -1.00

* Indicates updated data was used in for this HUC

Preservation Area
Municipal Boundaries

Mountain Lakes Borough

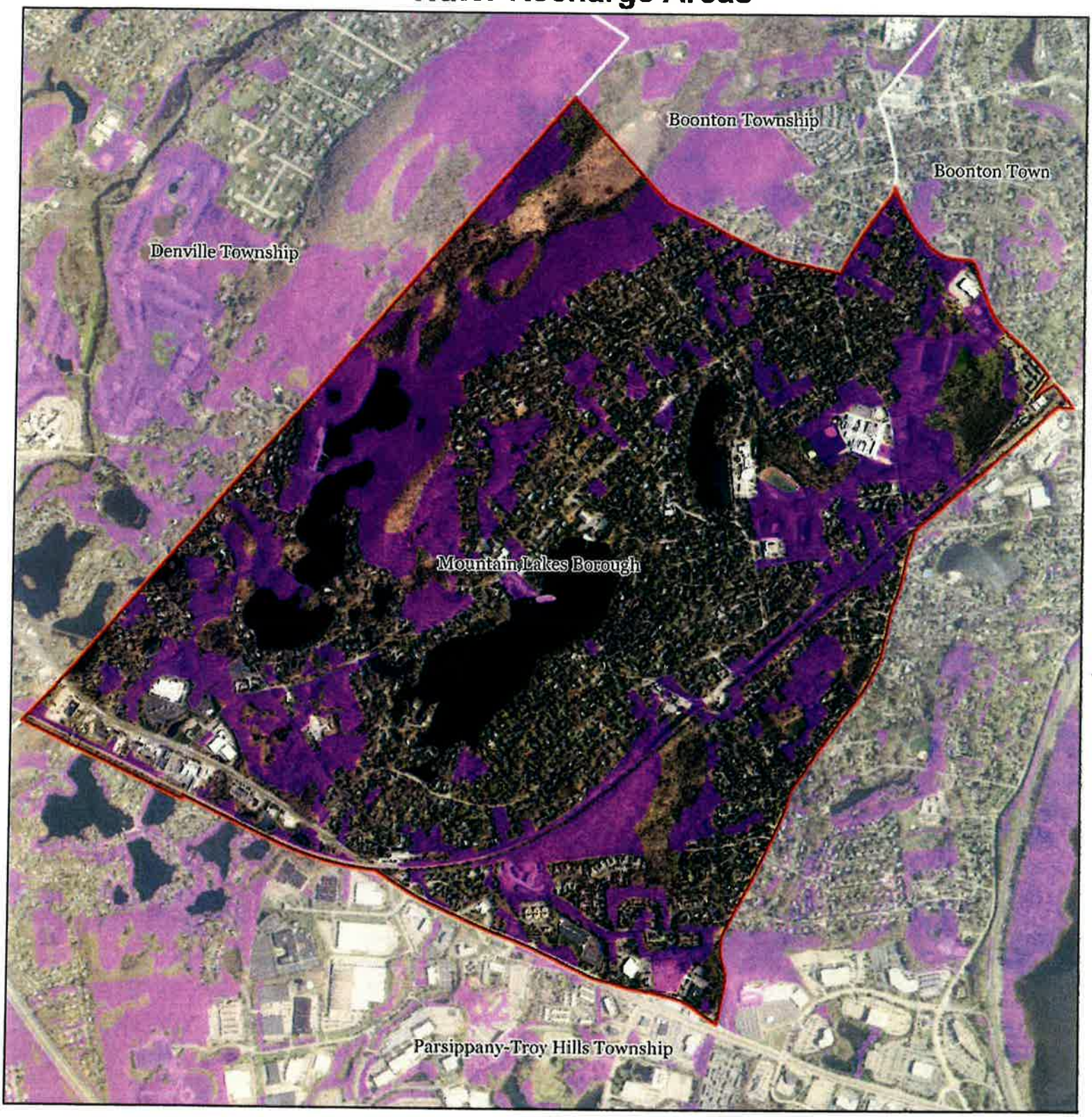


0 0.1 0.2 0.4 0.6 Miles

Highlands Council
New Jersey

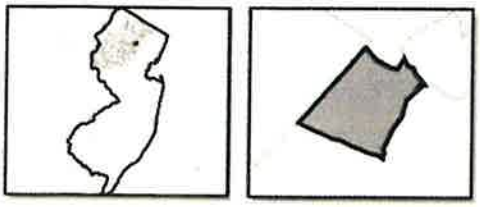
Date Exported:

Exhibit G: Prime Ground Water Recharge Areas



Mountain Lakes Borough

Prime Groundwater Recharge Areas
Preservation Area
Municipal Boundaries



0 0.1 0.2 0.4 0.6 Miles

Highlands Council
New Jersey

Date Exported:

Exhibit H: Wellhead Protection Areas

Mountain Lakes Borough

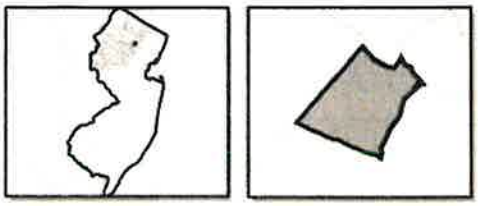
Preservation Area

Wellhead Protection Area

2 - Year Tier

5 - Year Tier

12 - Year Tier



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Highlands Council
New Jersey

Date Exported: