DRAFT FOR PUBLIC COMMENT

Please Note: This document should be read in concert with the Final Draft Consistency Review and Recommendations Report prepared by Highlands Council Staff for the Town of Hackettstown.

Prior to adoption: a) this cover page will be replaced in its entirety with one using the municipality's formatting and logo; b) the document will be finalized; and c) all instructional text will be removed.

Town of Hackettstown Highlands Master Plan Element

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

May 2011

DRAFT

HIGHLANDS ELEMENT

DRAFT MASTER PLAN SUPPLEMENT
TOWN OF HACKETTSTOWN
WARREN COUNTY, NEW JERSEY

DRAFT FOR SUBMISSION TO THE NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL TOWARD ACHIEVING PLAN CONFORMANCE WITH THE HIGHLANDS REGIONAL MASTER PLAN

PLANNING BOARD

Gerald DiMaio, Chairperson
Robert Moore, Vice-Chairperson
Joseph Bristow, Class I
William Conforti, Class II
Gerald DiMaio, Jr., Class III
Al Camporini, Class IV
Shawn Burke, Class IV
Robert Stead, Class IV
Dante Gallo, Class IV

The Planning Board presented, discussed, and accepted public comment on this draft Master Plan supplement at its duly-noticed public meeting of August 25, 2009. 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 Town of Hackettstown were provided by the individual indicated below.

PREPARED BY:

John Madden, PP, AICP Professional License No. 1452

TABLE OF CONTENTS

INTRODUCTION 1
POLICIES, GOALS & OBJECTIVES 3
A. PRESERVATION AREA GOALS 3
B. PLANNING AREA GOALS 4
C. GENERAL PURPOSES OF ZONING 4
D. RELATIONSHIP BETWEEN HIGHLANDS ACT & MLUL 6
LAND USE PLAN 8
A. HIGHLANDS ZONES AND SUB-ZONES 8
B. LAND USES 9
C. DENSITY AND INTENSITY OF DEVELOPMENT 10
D. LAND USE INVENTORY 15
E. REDEVELOPMENT PLANNING 15
F. HIGHLANDS CENTER DESIGNATION 18
HOUSING PLAN 21
CONSERVATION PLAN 22
A. FOREST RESOURCES 22
B. HIGHLANDS OPEN WATERS AND RIPARIAN AREAS 23
C. STEEP SLOPES 25
D. CRITICAL HABITAT 26
E. CARBONATE ROCK 28
F. [*RESERVED*] 29
G. WATER RESOURCES AVAILABILITY 29
H. PRIME GROUND WATER RECHARGE AREAS 31
I. WATER QUALITY 32
J. WELLHEAD PROTECTION 33
K. LOW IMPACT DEVELOPMENT 35
UTILITY SERVICES PLAN 38
A. PRESERVATION AREA 38
B. PLANNING AREA 38

C. PLANNING & PRESERVATION AREAS 39
CIRCULATION PLAN 41
LAND PRESERVATION AND LAND STEWARDSHIP PLAN 44
COMMUNITY FACILITIES PLAN 46
SUSTAINABLE ECONOMIC DEVELOPMENT PLAN 47
HISTORIC PRESERVATION PLAN 48
A. HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES 48
B. SCENIC RESOURCES 50
RELATIONSHIP OF MASTER PLAN TO STATE/REGIONAL/LOCAL PLANS 52
ACRONYMS 54
EXHIBITS 55
APPENDIX A MAJOR POTENTIAL CONTAMINANT SOURCES 56
APPENDIX B MINOR POTENTIAL CONTAMINANT SOURCES 58
APPENDIX C MAJOR POTENTIAL POLLUTANT SOURCES 59

INTRODUCTION

The Town of Hackettstown 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.

To complete that task, the Highlands Council engaged in a four-year planning process involving extensive scientific and technical analysis of the Region, along with an intensive program of public outreach and participation. The Highlands Council solicited the advice and input of all stakeholders and interested parties through a variety of means, including but not limited to: initiation of the "Partnership Program" for municipal and county government representatives; formation of 18 Technical Advisory Committees comprised of technical experts and practitioners in relevant fields such as land use planning, engineering, agriculture, real estate appraisal, transportation, and business; and development of the "Network," a forum for information-sharing and outreach to the general public. In addition, the Highlands Council has held and continues to adhere to a regular schedule of open public meetings providing continuous opportunity for public comment, and has provided for on-going data sharing and access to information through its internet website.

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 Town 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 (445,000 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 Town of Hackettstown is located partially in each, the Preservation and 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 "Town Highlands Area." As to voluntary conformance for the Planning Area, the Governing Body adopted General Ordinance #____ on ___ (insert date) indicating its intention to revise the municipal Master Plan and development ordinances, as applicable to the development and use of land in the Planning Area, to conform with the goals, requirements, and provisions of the Highlands

RMP. This supplement to the Town Master Plan, designated the "Highlands Element," represents a first step toward achieving full conformance with the Highlands RMP.

The Highlands Element sets forth the policies that shall guide the future land use and development of the Town 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. With regard to specific regulatory requirements, these shall apply primarily (but not exclusively) to non-exempt land use activities in the Highlands Area. "Non-exempt" land use and development refers to uses, activities, and development projects not expressly listed as exemptions in the Highlands Act (N.J.S.A. 13:20-28). Highlands Act exemptions pertain to specific "activities, improvements and development projects." With the exception of the lands of federal military installations existing at the time of enactment of the Highlands Act, the exemptions do not apply across-the-board to lots, tracts, or any other divisions of land, whether existing or proposed at the time of passage of the Act. Land use activities, improvements, and development projects that are exempt from the Highlands Act shall remain subject to all other applicable provisions of the underlying municipal Master Plan, Zoning and Land Use Ordinances, and Development Regulations.

The Highlands Element amends or creates in limited form (where not already existing), each of the components of the municipal Master Plan, as provided in the sections that follow. The Highlands Element is intended to apply in conjunction with the language of the existing Town 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 Town Highlands Area encompasses the whole of the municipality. It consists of approximately 2,374 acres of land (see Exhibit A, Town Highlands Area). Of the total acreage, approximately 203 acres (9 percent) lies within the Highlands Preservation Area while 2,171 acres (91 percent) lies within the Planning Area.

The Town Environmental Resource Inventory (ERI) (prepared by Maser Consulting P.A., and dated August 14, 2009) provides detailed information concerning the physical features, natural resources and specific characteristics of the municipal Highlands Area. The municipal ERI includes all of the information available through the Highlands Regional Master Plan and supporting technical documents, which document the wide array of natural and cultural resources that characterize the New Jersey Highlands Region.

The municipality recognizes the unique value of the Town 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 Town 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 Town Highlands Area:

A. PRESERVATION AREA GOALS

1. To protect, restore, and enhance the quality and quantity of surface and ground waters;

2. To preserve extensive and, to the maximum extent possible, contiguous areas of land in its natural state, thereby ensuring retention of the unique and significant natural, scenic, and other resources representative of the Town Highlands Area;

3. To protect the natural, scenic, and other resources of the Town Highlands Area, including but not limited to contiguous forests, wetlands, vegetated stream corridors, steep slopes, and critical habitat for fauna and flora;

4. To preserve farmland, historic sites, and other historic resources;

5. To preserve outdoor recreation opportunities on publicly owned land;

6. To promote conservation of water resources;

7. To promote Brownfield remediation and redevelopment, where applicable;

8. To promote compatible agricultural, horticultural, recreational, and cultural uses and opportunities within the framework of protecting the environment of the Town Highlands Area; and

9. To prohibit or limit to the maximum extent possible construction or development which is incompatible with preservation of this unique area.

B. 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 Town 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 Town Highlands Area environment from the individual and cumulative adverse impacts thereof; and

10. To the extent applicable: To promote local transportation opportunities that are consistent with smart growth strategies and principles.

C. GENERAL PURPOSES OF ZONING

The afore-listed goals for the use and development of lands located within the Town Highlands Area are consistent with and intended to apply equally and in conjunction with the purposes of zoning as expressed by the New Jersey Municipal Land Use Law (MLUL) (N.J.S.A. 40:55D-1 et seq.). Nothing in the body of the Highlands Element shall be construed

to imply that the provisions of the MLUL are not also applicable to the Town in exercising its authority to engage in land use planning and regulation pertinent to the Highlands Area.

The intents and purposes of the MLUL (N.J.S.A. 40:55D-2) are expressly incorporated herein for application to Town land use planning and management of the Highlands Area, as follows:

a. To guide the appropriate use or development of all lands under Town jurisdiction, in a manner which will promote the public health, safety, morals, and general welfare;

b. To secure safety from fire, flood, panic and other natural and man-made disasters;

c. To provide adequate light, air and open space;

d. To ensure that the development of the Town does not conflict with the development and general welfare of neighboring municipalities, the county, or the state as a whole;

e. To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and preservation of the environment;

f. To encourage the appropriate and efficient expenditure of public funds by the coordination of public development with land use policies;

g. To provide sufficient space in appropriate locations for a variety of agricultural, residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all citizens;

h. To encourage the location and design of transportation routes which will promote the free flow of traffic while discouraging location of such facilities and routes which result in congestion or blight;

i. To promote a desirable visual environment through creative development techniques and good civic design and arrangement;

j. To promote the conservation of historic sites and districts, open space, energy resources and valuable natural resources in the Town and to prevent urban sprawl and degradation of the environment through improper use of land;

k. To encourage planned unit developments, where appropriate, which incorporate the best features of design and relate the type, design and layout of residential, commercial, industrial and/or recreational development to the particular site;

l. To ensure sufficient availability of senior citizen community housing;

m. To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and to the more efficient use of land;

n. To promote utilization of renewable energy resources; and

o. To promote the maximum practicable recovery and recycling of recyclable materials from municipal solid waste through the use of planning practices designed to incorporate the State Recycling Plan goals and to complement municipal recycling programs.

D. RELATIONSHIP BETWEEN HIGHLANDS ACT & MLUL

The Municipal Land Use Law gives authority to New Jersey municipalities to govern land use and development within their borders. The Highlands Act augments that authority to allow municipalities the power to enforce the goals, policies, objectives, and programs of the Highlands Regional Master Plan. The Highlands Act and the RMP together provide the regional perspective from which local decisions and actions will emanate.

As a result of the passage of the Highlands Act, the future of land use planning has significantly changed for both municipalities and counties in the Highlands Region. The New Jersey Supreme Court, in upholding the constitutionality of the Highlands Act in OFP, LLC v. State, 197 N.J. 418 (2008), affirmed the Appellate Division's decision, which emphasized the broad scope of the Highlands Act to protect the natural and agricultural resources of the Highlands through a coordinated system of regional land use controls. The Highlands Act creates a system in which a regional plan is designed to be implemented primarily through local government units. The net effect is that the statutory authority of local government units in the Highlands Region, inclusive of that provided under the Municipal Land Use Law (MLUL), is not preempted by the Highlands Act, but rather is supplemented through the passage of the Highlands Act and the adoption of the Highlands Regional Master Plan. The Highlands Act provides, through the conformance of municipal master plans and ordinances with the Highlands RMP, authorities for municipal regulation that are in addition to those of the MLUL.

Accordingly, the criteria for approval of development applications under the ordinances that ultimately effectuate this Highlands Element will incorporate aspects of both the Municipal Land Use Law and the Highlands Act. To the extent that MLUL criteria for approval of variances, waivers, exceptions and/or any other relevant aspect are altered or supplemented by provisions indicated in the Highlands Element, authority for such modifications derives from passage of the Highlands Act.

1. A waiver may be issued or authorized by the Highlands Council on a case-by-case basis from the requirements of the RMP or any amendments to a master plan, development regulations, or other regulations adopted by a local government unit

specifically to conform them with the RMP: 1) if determined to be necessary in order to protect public health and safety; 2) for redevelopment in accordance with a Highlands Redevelopment Area Designation (see Land Use Plan, Section F); or 3) in order to avoid the taking of property without just compensation. Any waiver issued shall be conditioned upon a determination that the proposed development meets the requirements prescribed for a finding as listed in Section 36.a of the Highlands Act to the maximum extent possible. Waivers to requirements of the RMP are addressed separately from New Jersey Department of Environmental Protection (NJDEP) waivers to its Highlands Preservation Area regulations at N.J.A.C. 7:38.

2. Variances for density of development (i.e., permitted number of dwelling units per acre) in excess of that permitted by a Land Use Ordinance that has been approved by the Highlands Council for conformance with the RMP, or for any use, bulk standard, or other requirement of such Ordinance that would result in an increase in the permitted use of septic system yield shall be authorized by the Highlands Council, only where: 1) water availability, water supply utility capacities and either wastewater utility capacities or septic system yield are in excess of development yield based on municipal zoning limitations and moreover, are sufficient to support the development proposal; 2) Highlands resources will not be adversely affected by virtue of the proposed increase in density or use of septic system yield; and 3) the applicant secures Highlands Development Credits (HDCs) in sufficient quantity to meet criteria to be set forth and established by the Highlands Council. This provision shall not apply in the case of a variance requested pursuant to a specific development or land use activity that is exempt from the Highlands Act.

3. With respect only to the Preservation Area, the Highlands Council will coordinate with NJDEP during Highlands permit review for any major Highlands development including the review of waivers on a case-by-case basis: 1) if determined to be necessary in order to protect public health and safety; 2) for redevelopment in accordance with a Highlands Redevelopment Area Designation (see Land Use Plan, Section F); or 3) in order to avoid the taking of property without just compensation.

LAND USE PLAN

A. HIGHLANDS ZONES AND SUB-ZONES

The Town Highlands Area includes the Highlands Zones and Sub-Zones listed and described below. These Zones are configured as depicted in Exhibit A ("Town Highlands Area") 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 Town Highlands Zones include two primary zones (the Protection Zone and Existing Community Zone) and two sub-zones (Wildlife Management Sub-Zone and Existing Community Zone–Environmentally Constrained 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.

    a. **Wildlife Management Sub-Zone.** The Wildlife Management Sub-Zone consists of areas managed by the United States Fish and Wildlife Service as part of the National Wildlife Refuge System, and lands within the Wildlife Management Area System administered by the NJDEP Division of Fish & Wildlife's Bureau of Land Management. These areas are part of a network of lands and waters for conservation, management, and where appropriate, restoration of fish, wildlife and plant resources and their habitats and permit compatible wildlife-dependent recreational uses.

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. [*Optional*: This Zone has the greatest potential to accommodate mixed-use development projects and center-based planning initiatives, generally.]

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.

[*Optional:* In light of the significant environmental constraints that affect many of the Highlands Zones and Sub-Zones, future growth should be channeled into compact centers within them, where feasible, provided suitable locations can be identified. Such development must incorporate smart growth principles and should be designed at densities (see Section C, below) appropriate to the Zone, the community character, and the capacities of the water and wastewater systems (including septic systems) that support them. The Planning Board will examine the potential for such opportunities.]

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. As to land use classifications (e.g., single- or multi-family residential, commercial, industrial) and specific permitted land uses, a thorough review and comparison between municipal and Highlands Zones and Sub-Zones must be undertaken to assess compatibility and to determine whether zoning amendments (pertinent to non-exempt development) are necessary to achieve consistency. Until such time as that examination is complete, permitted uses shall remain in effect for non-exempt development, with the significant caveat that each is subject to compliance with: a) all resource constraints (discussed at length in the Conservation Plan Element); b) all applicable provisions of both the NJDEP Highlands Water Protection and Planning Act Rules (N.J.A.C. 7:38) and the New Jersey Department of Agriculture (NJDA) Agricultural Development in the Highlands Rules (N.J.A.C. 2:92); and c) the density and intensity requirements set forth in the section that follows (see Section C, Density and Intensity of Development).

Specific immediate changes to permitted uses will include the following, each pending the adoption of implementing ordinance provisions approved by the Highlands Council:

1. ***Carbonate Rock Area.*** Upon adoption of the appropriate regulatory provisions, the following principal and/or accessory uses and/or structures, where otherwise permitted by the municipal ordinance, shall be explicitly prohibited from any portion of the Highlands Area designated a "Carbonate Rock Area" (as defined and

delineated in the Conservation Plan Element) or from any lands identified as draining into a designated Carbonate Rock Area: solid waste landfills, hazardous waste storage and disposal facilities, hazardous materials storage and handling facilities, and underground storage tanks.

2. ***Prime Ground Water Recharge Area.*** 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 Potential Contaminant Source (PCS) by the Highlands Council (see Appendices A and C), where otherwise permitted by the municipal ordinance, shall be expressly 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).

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 listed as a Major or Minor Potential Contaminant Source (PCS) or which is designated by the Highlands Council as a potential source of pathogenic contaminants (see Appendices A, B and C), where otherwise permitted by the municipal ordinance, shall be expressly prohibited from any portion of the Highlands Area delineated as a "Tier 1 Wellhead Protection Area" (as defined and delineated in the Conservation Plan Element).

4. ***Wellhead Protection Area (Tier 2).*** 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 Potential Contaminant Source (PCS) by the Highlands Council (see Appendices A and C) where otherwise permitted by the municipal ordinance, shall be expressly prohibited from any portion of the Highlands Preservation Area delineated as a "Tier 2 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 Town 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, NJDEP Preservation Area Rules, 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, and the applicable provisions of the Preservation Area Rules adopted by the NJDEP (N.J.A.C. 7:38). 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.

Permitted density and intensity allowances for the Highlands Area must also reflect municipal intents with respect to growth and development of the community. A comprehensive analysis will be required as follow-up to adoption of the Highlands Element, to determine specific density and intensity allowances for future non-exempt development within the Highlands Area. The Board will, with the assistance of its professionals, complete this analysis to determine: 1) the capacity for future growth and development of the Highlands Area (based on the RMP, Technical Reports, NJDEP Rules); 2) the extent to which such growth may be appropriate within the relevant portions of the community; and 3) the specific allocation of such growth and development over the Highlands Zones and Sub-Zones. (This analysis will take place with assistance from the Highlands Council after the Town has achieved Basic Plan Conformance.)

Until such time as the full analysis can be completed, applications for development within the Highlands Area require reviews for consistency on a project-by-project basis. The major criteria for assessing the proposed density/intensity of development include the following:

1. **Base Maps/Data.** Base data regarding water availability and wastewater treatment capacity appear in the technical information provided in the Conservation Plan and Utility Services Plan Elements, which includes associated mapping identified as Exhibits R, V, and W . These include, respectively, the Town Highlands Area: Net

Water Availability Map, Public Community Water Systems Map, and Highlands Domestic Sewerage Facilities Map. All are herewith adopted and incorporated as a component of the Highlands Element.

2. **Water Availability.** As provided under Conservation Plan Element Section G, Water Resources Availability.

3. **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.

4. **Public Water Supply Utilities – Key Provisions**

    a. **Preservation Area.** New, expanded, or extended public water systems are prohibited unless approved through issuance of either a Highlands Applicability Determination indicating that a project is exempt from the Highlands Act, or a Highlands Preservation Area Approval with waiver pursuant to N.J.A.C. 7:38.

    b. **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.

    c. **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.

5. **Wastewater Utilities – Key Provisions**

    a. **Preservation Area.** New, expanded or extended wastewater collection and treatment systems and community on-site treatment facilities are prohibited unless approved through issuance of either a Highlands Applicability Determination indicating that a project is exempt from the Highlands Act, or a Highlands Preservation Area Approval with waiver pursuant to N.J.A.C. 7:38.

    b. **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.

    c. **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.

6. **Septic Systems – Key Provisions**

a. **Major Highlands Development, Preservation Area.** Development proposals involving the installation of one or more new individual subsurface disposal systems (or aggregate of equivalent disposal units as provided at N.J.A.C. 7:38) shall meet NJDEP septic system density requirements as set forth at N.J.A.C. 7:38.

b. **Non-Major Highlands Development, Preservation Area and all Development, Planning Area.**

i. **Nitrate Targets.** The following nitrate dilution targets shall apply to the calculation of septic system yields:

- **Existing Community Zone (and Sub-Zones)** – 2 mg/L, maximum
- **Protection Zone (and Sub-Zones)** – 0.72 mg/L, maximum

ii. **Septic System Density/Yield.** Septic system densities will vary not only on the basis of nitrate targets for each Zone (as above), but by HUC14 subwatershed, on the basis of drought ground water recharge. Septic system yields will further vary based on the amount of undeveloped and underdeveloped lands where septic system densities can be applied.

iii. **Nitrate Dilution Model.** Development proposals involving any need for new or increased septic system capacity shall demonstrate compliance with the nitrate targets in 6b.i and, where applicable, 6b.ii above. Such compliance shall be determined by application of one of the following methods:

- The modified Trela-Douglas nitrate dilution model used by the NJDEP (for more information see http://www.highlands.state.nj.us/njhighlands/planconformance), but with recharge based on drought conditions. This model provides the minimum acreage required per septic system, to ensure that recharge is sufficient to achieve a specified nitrate dilution target. The following factors, representative of a one-

family household, or wastewater generation of 300 gallons per day, shall be used as inputs to the model: a household size of 4 persons, average nitrate loading of 10 pounds per person per year, and drought ground water recharge for the HUC14 subwatershed as dilution.

- The chart of minimum average lot sizes by HUC14 subwatershed and Highlands Zone (including sub-zones) provided by the Highlands Council indicating the minimum average land area necessary for each new septic system (or equivalent system yield based on an average 300 gallons per day of wastewater generation). A copy of the chart is available at: http://www.highlands.state.nj.us/njhighlands/planconformance/.

iv. **Application of Results.** The septic system yield for a proposed project shall be determined by dividing the total project area by the minimum acreage required per septic system, as determined by one of these models. For non-residential development, the resulting acreage is that necessary to support every 300 gallons of daily wastewater flow generated by the proposed non-residential use (see conversion factors below). Where a project site is located within more than one HUC14 subwatershed, septic system yields shall be computed for and applied to each portion of the site, accordingly.

This approach shall be applied on a project-specific basis until such time as the Septic System Yield is allocated among parcels through municipal zoning; the allocation of yield shall supersede this method. Regardless of whether a project-specific yield analysis or an allocation of Septic System Yield by zoning applies, the subwatershed yield shall in no case be exceeded; an increase in any one portion of a HUC14 subwatershed must be offset by an equivalent decrease elsewhere within the same subwatershed.

- For purposes of these analyses, the RMP septic system yield rules apply (see the Highlands Council *Regional Build-Out Technical Report*). For residential uses, the calculation assumes wastewater generation of 300 gallons per household per day. The RMP equivalent dwelling unit (EDU) value for non-residential septic uses equates to 2,400 square feet of Office/Commercial space and 18,182 square feet of Industrial space.

- For detached single-family residential development, where the underlying density allowances of the Master Plan and zoning

regulations are higher than those resulting from the nitrate dilution analysis as provided herein, septic system yields and resultant system density (typically denoted as minimum average acreage per septic system) may be equated to maximum permitted dwelling unit yield and minimum average lot size. Alternatively, the underlying allowances may be applied over a portion of the project area, to the point at which the calculated septic system yield (by HUC14) is reached, with the remainder of the site left undeveloped.

- For all other forms of development, projects shall be evaluated on the basis of overall wastewater disposal need and the capacity of the calculated septic system yield to support it.

D. LAND USE INVENTORY

Planning for the future of the Highlands Area requires a clear understanding and assessment of existing land uses and development within the Highlands Area, in the areas surrounding the Highlands Area, and throughout the municipality. The Town Land Use Inventory prepared by Richard Thomas Coppola and Associates is representative of land use and development conditions within the municipality through October, 1988 (see Exhibit B). The Land Use Inventory requires an update to accurately represent existing land uses.

E. REDEVELOPMENT PLANNING

The Planning Board will examine the potential for redevelopment opportunities within the community. Redevelopment may occur within the Hackettstown Highlands Center (see discussion Section F, below) or in other areas of the municipality, where appropriate opportunities are identified. The term "redevelopment" is used herein to refer to reconstruction or re-use of previously developed and underutilized properties (which may include Preservation Area sites that have 70% or greater of impervious surface, as well as other redevelopment and "grayfield" sites in the Planning Area), and to the rehabilitation and re-use of "brownfield" sites (identified as such by NJDEP where in the Preservation Area). Unless specifically stated otherwise, neither the term "redevelopment," nor the phrase "in need of redevelopment" is used herein to invoke the definitions, processes, powers or any other facet of the provisions of the New Jersey Local Redevelopment and Housing Law (N.J.S.A. 40A:12A-1 et seq.).

Rather, Highlands Area redevelopment planning refers to the identification of previously developed areas that: a) are suitable for re-use and/or reconstruction, or reversion to "greenfields," such as parklands, conservation areas, or open space; and/or b) may be eligible for designation by the Highlands Council as Highlands Redevelopment Areas. Highlands Redevelopment Areas are typically characterized by ready access to or potential for water and wastewater utility infrastructure (and available or potential capacities);

existing transportation infrastructure and/or services with links to viable transportation networks; proximity to supporting community facilities and services; and suitability for increased development intensity in keeping with smart growth planning principles. Where brownfields are involved in the Preservation Area, NJDEP identification of the brownfield site is a necessary step prior to Highlands Council designation of a Highlands Redevelopment Area. In the Preservation Area, such applications must be submitted to NJDEP for a Highlands Preservation Area Approval (HPAA) with Redevelopment Waiver. Where redevelopment is planned for locations within the Hackettstown Highlands Center (Section F, below), no separate Highlands designation will apply, and all such activities will be governed under the plan and regulatory provisions developed and approved by the Highlands Council, for specific application thereto.

It is the intent of this Plan to encourage redevelopment where appropriate within the Highlands Area, to ensure optimal and efficient use of land. By maximizing the use of previously developed areas and areas in need of environmental clean-up or other improvements, the municipality may provide for desirable new development (or new green spaces), while protecting lands that contain sensitive environmental features and important Highlands resources. This approach is intended to guide development toward the most suitable locations in the municipality, to encourage environmental clean-up where needed, and to maximize the use of existing infrastructure to meet future needs.

Redevelopment projects and activities that conform to density/intensity allowances and meet all other requirements of the applicable land use ordinances (specifically including those developed for the Highlands Area and the Highlands Preservation Area Rules at N.J.A.C. 7:38), do not require Highlands Redevelopment Area designation and may proceed as of right in accordance with all municipal procedural requirements. Any municipally-sponsored redevelopment project proposed pursuant to N.J.S.A. 40A:12A, while perhaps also requiring Highlands Council Redevelopment Area designation, must be advanced in accordance with all applicable statutory requirements, including preparation and adoption by the Governing Body of a Redevelopment Plan. The Planning Board, in making any Highlands Area determination of "area in need of redevelopment" pursuant to N.J.S.A. 40A:12A, will incorporate the considerations listed below for Highlands Redevelopment Area designations in evaluating the applicable criteria under N.J.S.A. 40A:12A-5.

1. **Definitions.**

    a. A "brownfield" site consists of a commercial or industrial site that is currently vacant or underutilized and on which there has been or is suspected to have been, a contaminant discharge.

    b. A "grayfield" site consists of a site supported by existing infrastructure that contains an industrial or commercial facility (not excluding one having a residential component) exhibiting signs of abandonment or underutilization, but without evidence or expectation of contamination.

c. A "redevelopment project" or "redevelopment activity" refers to the re-use, reconstruction, or conversion to alternate use, of a brownfield site, a grayfield site, or a previously developed site that is currently vacant or underutilized in the Highlands Area. Redevelopment projects and activities may include but are not limited to: removal, reconstruction, or adaptive reuse of existing buildings and other structures; construction of new buildings and other structures; and conversion/restoration of a site or portions of a site for open space, recreation or conservation purposes of any kind.

d. A "Highlands Redevelopment Area" consists of a property or group of properties designated as such by the Highlands Council, and which includes one or more of the following: a) a brownfield site; b) a grayfield site; and c) any previously developed site in the Highlands Area. A Highlands Redevelopment Area may include the intervening or surrounding lands which are significantly affected by or are necessary to support such sites, and will be subject to a Highlands Council-approved redevelopment plan setting forth the full scope and details of the proposed redevelopment project(s) and/or activities.

2. **Redevelopment Projects and Activities.**

a. Redevelopment projects and activities that comply with all applicable land use ordinances (specifically including those developed for the Highlands Area) are encouraged in all Areas, Zones, and Subzones of the Highlands Area. Such projects and activities are also subject to all applicable county, state, and federal regulatory requirements.

b. Redevelopment projects and activities involving conversion to greenfields are particularly encouraged in environmentally constrained areas, where compliance with Highlands Area ordinance provisions for new development may not be feasible.

c. In consideration of the foregoing, the Board will determine whether specific sites, consisting of brownfields, grayfields, and/or other previously developed vacant or underutilized properties, should be considered for potential redevelopment projects and/or activities in accordance with all applicable ordinances and regulatory requirements.

3. **Highlands Redevelopment Areas.** In assessing the potential for Highlands Redevelopment Area designations, the Planning Board incorporates the following relevant considerations:

a. Highlands Redevelopment Area designation in the Preservation Area is confined to: a) sites having 70% or greater impervious coverage, and/or b) sites designated as "Highlands brownfields" in accordance with NJDEP Preservation Area Rules (at N.J.A.C. 7:38-6.6). In addition to Highlands Council approval, a

waiver is required from the NJDEP in conjunction with a Highlands Preservation Area Approval (HPAA).

b. Highlands Redevelopment Area designation within the Planning Area will require Highlands Council approval of a detailed redevelopment plan. This plan will supersede all ordinances otherwise applicable to the Highlands Redevelopment Area, including those developed specifically for the Borough/Township/Town Highlands Area, and will fully regulate the use and development of lands within the Highlands Redevelopment Area.

c. Highlands Redevelopment Area designation will only be considered where lands are particularly suited to the proposed redevelopment plan, by virtue of a preponderance of existing characteristics such as, but not limited to: appropriate community location; availability of water and wastewater utility infrastructure and capacity; access to transit and/or other suitable transportation systems and networks; suitability for increased land use intensity or conversion to greenfields, as applicable; extensive coverage by impervious surfaces; proximity to community facilities and services; potential to embody and/or further smart growth principles; opportunity to protect resources; and potential to contribute to a sustainable local and/or regional economy.

d. Any redevelopment project or activity permitted under the auspices of Highlands Redevelopment Area redevelopment plan must be designed and developed in accordance with smart growth and Low Impact Development principles (see Section K).

e. Identification of opportunities for redevelopment projects and activities that are potentially suitable for Highlands Redevelopment Area designation in the Highlands Area should be assisted by the Highlands Council Redevelopment and Infill Analysis Tool. This review should also include any sites depicted in Exhibit C, "Highlands Contaminated Sites Inventory. Information on Highlands Contaminated Site Inventories is available in the Highlands Council *Regional Land Use Conditions and Smart Design Guidelines Technical Report*.

f. In consideration of the foregoing, the Planning Board will determine the potential for Highlands Redevelopment Area designations, as applicable, in the future development of the community.

F. HIGHLANDS CENTER DESIGNATION

With funding provided by the Highlands Council, the Town commissioned the community planning firm of Maser Consulting, P.A., to undertake and complete the Town of Hackettstown "Highlands Center Designation Study." The final report, completed in March

2011, provides the background information and preliminary analysis needed to form the basis for a proposed Hackettstown Highlands Center. This Plan embraces the Center concept, and anticipates that planning to fully develop all components in its support will occur after approval by the Highlands Council of the municipality's Petition for Plan Conformance.

The preliminarily proposed Center boundary lines encompass approximately 743 acres, and include only Planning Area lands which are served by public water and sewer utilities. The Center would include the central business district of the community, its Historic District, the Centenary College Campus, the Stiger Street Redevelopment Zone (designated in 1999), the Hackettstown Regional Medical Center, major manufacturers, and various areas of existing, and formerly existing, industrial/manufacturing uses. The Center would include affordable housing sites, major employers, and the Town's train station, in addition to major roadways.

With a focus on the core of the municipality, the Center would be designed to promote compact development using Smart Growth principles and Low Impact Development techniques. It would include pedestrian-oriented streetscape improvements, downtown enhancement and redevelopment programs, and requirements for context sensitive design, potentially including form-based zoning.

The goals and intents of the Center would include, but by no means be limited to, the following:

- To provide for sustainable economic development in the Town of Hackettstown;
- To establish the area as a hub for regional commerce and employment, providing needed goods and services to the local community and the sub-region of the Highlands in which it is located;
- To direct future development and redevelopment to the core of the community, where existing transportation and utility infrastructure can support it;
- To encourage development, redevelopment, and infill development of brownfields, grayfields, and other underutilized areas within the Center;
- To create a distinctive, attractive downtown and residential areas that provide a sense of place;
- To protect Highlands resources within the Center, adjacent to the Center, and surrounding it in outlying areas;
- To identify and spur opportunities for eco-tourism;
- To advance the goals and intents of the Regional Master Plan, and the principles of Smart Growth, by incorporation of such features as:
    - Mixed land uses, where appropriate;

  - Compact design;
  - Walkable neighborhoods;
  - Affordable housing;
  - Enhanced parks and open space;
  - Access to different modes of transportation; opportunities to capitalize upon the existing train station; and
- To ensure community and stakeholder collaboration in development decision-making.

Detailed information on the proposed Hackettstown Highlands Center will be developed in concert with the Highlands Council to ensure that the proposed Center is consistent with the Highlands Act and the RMP. Upon receiving Highlands Council approval, all planning documents relevant to the Center, inclusive of the land use regulations applicable thereto, will be adopted as the overriding planning and regulatory provisions applicable to the lands within its specified boundary lines.

HOUSING PLAN

The Planning Board adopted the Third Round Housing Element and Fair Share Plan, prepared by Maser Consulting, PA as amendments to the Town of Hackettstown Master Plan, on April 27, 2010. The Town Council endorsed the Third Round Housing Element and Fair Share Plan on May 24, 2010. The Housing Element and Fair Share Plan is maintained separately from this Highlands Element; however, it is important to note that all goals and objectives required for purposes of Plan Conformance as set forth by the Highlands Council have been incorporated into the Housing Element portion. The Town submitted a petition to the Council on Affordable Housing seeking substantive certification of its Housing Element and Fair Share Plan on June 3, 2010.

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 (which will be further supplemented through the Plan Conformance process) 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 Town 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 Town 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 E, "Forest Resource Area," Exhibit F, "Total Forest Area," and Exhibit G, "Forest Subwatersheds."

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 Town Highlands Area Forest Resources.

1. **Preservation Area**

    a. To protect and preserve extensive and, to the maximum extent possible, contiguous forests.

    b. To limit development in the Forest Resource Area.

    c. Where development is permitted in the Forest Resource Area, to avoid deforestation and require submission of and compliance with a Forest Mitigation Plan.

    d. To prohibit clear-cutting in the Forest Resource Area except in accordance with a Forest Management Plan approved by the State Forester.

e. To require compliance with NJDEP Preservation Area Rules (N.J.A.C. 7:38) regarding forest protection in the case of all "major developments," as defined therein.

2. **Planning Area**

a. ***Protection Zone.*** To limit development of High- and Moderate Integrity Forest Subwatersheds, while requiring for all Forest Resource Areas and all Forest Subwatersheds, incorporation of Low Impact Development Best Management Practices (see Section K) and adherence to Forest Mitigation Plans.

b. ***Existing Community Zone.*** To limit deforestation in connection with development in the Forest Resource Area and in High Integrity Forest Subwatersheds to that which will not diminish forest integrity, while requiring incorporation of Low Impact Development Best Management Practices and adherence to Forest Mitigation Plans.

3. **Planning & Preservation Areas**

a. 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 by conservation easement post-construction.

b. To prohibit clear-cutting within any portion of the Total Forest Area except pursuant to a Forest Management Plan approved by the State Forester.

c. To permit forestry activities within a Forest Resource Area or within the forested lands within a High Integrity Forest Subwatershed only in compliance with an approved Forest Management Plan.

d. To maintain forest cover in the natural and built environment of the Town Highlands Area to the maximum extent possible.

B. HIGHLANDS OPEN WATERS AND RIPARIAN AREAS

Highlands Open Waters and Riparian Areas within the Highlands Area appear in ERI mappings duplicated herein at Exhibit H, "Highlands Open Waters" and Exhibit I, "Highlands Riparian Areas." Closely related and also duplicated herein, are Exhibit J, "Watershed Value," and Exhibit K, "Riparian Integrity." This Plan recognizes and incorporates the descriptions, definitions, delineations, and values regarding Highlands Open Waters and Riparian Areas as discussed in the ERI.

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.

The below-listed goals and objectives will guide the regulation and management of Highlands Open Waters and Riparian Areas in the Town 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 limit disturbances within established Highlands Open Waters buffer areas to previously disturbed areas, only, with jurisdiction over any waivers from this restriction left to the Highlands Council and/or the NJDEP, as applicable. Approval of buffer disturbances in previously disturbed areas should occur only where an applicant can satisfactorily demonstrate that: a) the encroachment cannot be avoided, b) the disturbance is the minimum feasible, and c) any adverse impacts will be mitigated to result in no net loss of functional value (in accordance with the functional value assessment methodology provided in the ERI).

4. 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.

5. To seek opportunities to enhance Highlands Open Waters buffers by improving functional values while ensuring no net loss (see ERI assessment methodology).

6. 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).

7. To prohibit modifications to Riparian Areas in the Protection Zone except where a waiver is approved by the NJDEP or the Highlands Council.

8. To limit disturbance of existing natural vegetation or increases in impervious area within High and Moderate Integrity Riparian Areas in all other Zones and Sub-Zones 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.

9. To restrict modifications to Riparian Areas in Existing Community Zones, other than those addressed by Objective 8, above, that would alter or be detrimental to the water quality and habitat value of a Riparian Area.

10. To require use of Low Impact Development Best Management Practices (see Section K) for any development activity proposed within a Riparian Area to minimize both alteration of natural vegetation and increase in impervious area and to provide for mitigation through restoration of impaired Riparian Areas in the same HUC14 subwatershed.

C. STEEP SLOPES

Steep slopes within the Highlands Area appear in the ERI mapping duplicated herein at Exhibit L, "Steep Slope Protection Areas." This Plan recognizes and incorporates the descriptions, definitions, delineations and values regarding steep slopes as discussed in the ERI.

The Town 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.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Town 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 (see Section K) 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 Preservation Area Rules (at N.J.A.C. 7:38-3.8(c)1-4).

D. CRITICAL HABITAT

Critical Habitat within the Highlands Area appears in the ERI mappings duplicated herein at Exhibit M, "Critical Wildlife Habitat," and Exhibit O, "Vernal Pools." There are no "Significant Natural Areas" within the Town's borders. This Plan recognizes and incorporates the descriptions, definitions, delineations and values regarding Critical Habitat as discussed in the ERI.

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) Significant Natural Areas (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 Significant Natural Areas 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 O are those 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 1,000 feet around vernal pools is required.

The below-listed goals and objectives will guide the regulation and management of Town 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.

e. 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.

4. 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.

   a. 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.

   b. 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.

c. Prohibit modification of a vernal pools protection buffer, except as permitted through the issuance of a waiver from the Highlands Council or the NJDEP.

d. Prohibit modifications to the delineation of Critical Wildlife Habitat, except as permitted through the issuance of a waiver from the Highlands Council or the NJDEP.

E. CARBONATE ROCK

Carbonate Rock Areas within the Highlands Area appear in the ERI mapping duplicated herein at Exhibit P, "Carbonate Rock Areas." This Plan recognizes and incorporates the descriptions, definitions, delineations, and issues of concern regarding carbonate rock areas as discussed in the ERI.

Of particular concern to the Town, are the potential negative impacts of land development practices that do not properly consider the constraints and challenges presented by carbonate rock areas. As discussed in the ERI, dissolution of underlying carbonate rocks (such as limestone and dolomite) by surface water or ground water can cause surface depressions and the development of such features as sinkholes, sinking streams, enlarged bedrock fractures, caves and underground streams. Sinkholes function as funnels, directing surface water runoff into karst aquifers with little or no attenuation of any transported contaminants. Stormwater basins, septic system leaching fields, sewers, agricultural runoff, lawn runoff, underground pipelines, and soil disturbance may also contribute contaminants directly to ground water through karst features. Soils in sinkhole bottoms may be thin or non-existent. In addition to ground water concerns, karst areas can lead to public safety concerns. Sinkholes present a geologic hazard as they may undermine such infrastructure as stormwater basins, roads, sewer lines, septic systems, and natural gas lines.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Town Highlands Area Carbonate Rock Areas.

1. To update and improve maps and delineations of Carbonate Rock Areas as better information becomes available (i.e., through enhanced mapping technologies) and/or as new areas are identified through project reviews pertaining to individual sites and properties.

2. To develop maps identifying all lands that drain into established Carbonate Rock Areas, for easy reference by applicants, reviewing officials, and Land Use Boards. This will ensure that consideration is given to the protection of affected Carbonate Rock Areas (whether on- or off-site) during the course of development reviews.

3. To carefully examine land development applications for potential impacts to Carbonate Rock Areas, whether by direct disturbance, or by indirect means such as introduction of additional stormwater runoff.

a. To require submission of any and all information, technical data, geotechnical studies and/or analyses that may be necessary to locate and determine the extent of affected carbonate rock features during the course of development reviews.

b. To ensure that potential carbonate-rock-related hazards to public health or safety, to existing structures (including public infrastructure), and to ground or surface water quality are avoided, minimized or otherwise addressed by incorporation of appropriate measures and/or design features into project plans prior to approval of such development applications. Preference should be given to nonstructural approaches, where feasible, such as avoiding carbonate rock features altogether, and ensuring that existing conditions relating to them (where satisfactory) are not modified.

4. To ensure that issues and concerns related to carbonate rock are similarly evaluated and addressed in the planning, design, construction and maintenance of public infrastructure projects, including those discussed in the Utilities Service and Transportation/Circulation Plan Elements of this Master Plan.

5. To prohibit, from Carbonate Rock Areas and from lands identified as draining into such areas, the construction or installation of new uses, structures or facilities that present an unacceptable risk of discharge, including but not limited to: solid waste landfills, hazardous waste storage and disposal facilities, hazardous materials storage and handling facilities, and underground storage tanks.

F. [*RESERVED*]

G. WATER RESOURCES AVAILABILITY

Highlands Area water availability is represented by the ERI mapping duplicated herein at Exhibit R, "Net Water Availability." This Plan recognizes and incorporates the descriptions, definitions, analyses and issues of concern regarding water availability as discussed in the ERI. Based on the Low Flow Margin analytical method described in the ERI, the Town lies within two (2) HUC14's determined to be in deficit.

The availability of water for human use is a critical factor in determining the capacity for growth and continued economic vitality in the Town 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 Town 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.

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

1. To protect, restore (if applicable) and enhance the availability of surface and ground water in the Town 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 only 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 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; and

    b. 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. Infill development;

    b. Designated Highlands Redevelopment Areas;

    c. Projects proposing affordable housing in excess of the obligation otherwise generated by them; and

    d. 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.

H. PRIME GROUND WATER RECHARGE AREAS

Prime Ground Water Recharge Areas within the Highlands Area appear in the ERI mapping duplicated herein at Exhibit S, "Prime Ground Water Recharge Areas." This Plan recognizes and incorporates the descriptions, definitions and delineations for Prime Ground Water Recharge Areas (PGWRAs) as discussed in the ERI. 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.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Town 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, to 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. Such uses (and any structures devoted or related thereto) should include at minimum, those designated as Major and/or Minor Potential Contaminant Sources (PCS) by the Highlands Council (see Appendices A, B and C)).

6. 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.

7. To achieve a net improvement in ground water volume and quality through enhanced infiltration, pretreatment and other available means.

I. WATER QUALITY

This Plan incorporates the descriptions, definitions and summary data regarding water quality by HUC14, as discussed in the ERI. In addition, it incorporates as Exhibit T, "HUC 14s on NJDEP Impaired Waters List," as duplicated from the ERI. Water quality affects drinking water, recreation, ecosystems and aesthetic beauty. The most common parameters that may impair surface and ground water quality are fecal coliform bacteria, phosphorus,

temperature, arsenic and nitrate-nitrogen. These and other contaminants can either cause health risks if ingested or harm native biota, resulting in non-attainment of designated water uses for the water body.

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 Town 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.

J. WELLHEAD PROTECTION

Wellhead Protection Areas within the Highlands Area appear in the ERI mapping duplicated herein at Exhibit U, "Wellhead Protection Areas." This Plan recognizes and incorporates the descriptions, definitions and delineations for Wellhead Protection Areas (WHPAs) as discussed in the ERI. 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.

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.

Accordingly, the below-listed goals and objectives will guide the regulation and management of Town 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 Wellhead Protection Areas. Such uses (and any structures devoted or related thereto) should include at minimum, those designated by the Highlands Council as Major and/or Minor Potential Contaminant Source (PCS) and/or as potential sources of pathogenic contaminants (see Appendices A, B and C).

4. To prohibit land uses and activities that pose significant risk of ground water contamination from locations delineated as Tier 2 Wellhead Protection Areas. Such uses (and any structures devoted or related thereto) should include at minimum, those designated as Major and/or Minor Potential Contaminant Source (PCS) by the Highlands Council (see Appendices A, B and C).

5. To require that land uses and activities that pose significant risk of ground water contamination in locations delineated as Tier 3 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.

6. To ensure that stormwater management plans pertinent to both development applications and municipal-wide planning, address wellhead protection requirements.

7. 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.

8. To restrict development activities that pose threats to the water quality of public water supply wells.

9. 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.

10. 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.

K. LOW IMPACT DEVELOPMENT

This Plan embraces the concept of Low Impact Development (LID) and seeks to ensure its maximum use in land development activities throughout the Highlands Area. LID encompasses a broad array of development and management techniques that can minimize or mitigate the potential adverse impacts of land use and development on the natural environment. LID is used in stormwater management, resource management, "green" building, and sustainable site design. In stormwater management for example, LID techniques can be employed to capture rainfall, filter it through existing vegetation, and maximize its absorption by on-site soils in order to recharge ground water supplies. In site design, LID would incorporate strategies to reduce site disturbance, limit impervious coverage, and integrate existing natural features affecting the site and/or its immediate surroundings into the proposed layout and design.

To accomplish such aims, specific LID standards should be developed and incorporated into Town land use regulations. Because LID practices and innovations continue to emerge, these should include, but by no means be limited to the following:

1. Stormwater management LID standards that preserve or mimic the natural hydrologic features and characteristics of the land.

    a. Use of stormwater management features that maintain, restore and enhance the pre-existing natural drainage patterns of the site.

    b. Limitations on impervious coverage allowances to maximize stormwater infiltration and reduce runoff.

    c. Requirements for site-specific hydrologic studies which identify the velocity, volume and pattern of water flow into, through and flowing from a parcel proposed for development.

    d. Requirements that stormwater management systems employ a "design with nature" approach by use of grass channels, dry swales, wet swales (vegetated

channels designed to retain water or marshy conditions that support wetland vegetation), infiltration basins, bio-swales and water gardens, constructed wetlands, green roofs, and other low impact approaches to attenuate and control stormwater and provide multiple environmental benefits.

2. LID practices that minimize land disturbance during construction activities.

   a. Requirements for site-specific analysis of environmental features and constraints as an integral component of site design.

   b. Limitations on site disturbance, soil compaction, clearing and grading to the minimum necessary to allow for permissible development.

   c. Provisions to minimize soil erosion and airborne dust during construction and to protect streams and other water bodies from silt and sedimentation.

3. LID best management practices where any development application proposes disturbance of a Highlands Area resource, including but not limited to Steep Slope Protection Areas, Forest Areas, Critical Habitat Areas, Highlands Open Waters and Riparian Areas, and Prime Ground Water Recharge Areas.

   a. Highlands Area resources should be identified as a first step in site planning.

   b. To the maximum extent practicable Highlands Area resources should be avoided or their disturbance minimized through site design.

   c. The quality and value of Highlands Area resources located on development sites should be maintained by use of LID strategies that minimize the impacts of development to the maximum extent possible.

4. LID practices in design of sites, buildings, structures and roadways. Development and redevelopment projects should follow a prescribed conservation design planning process that considers existing site features and site context; maximizes opportunities for open space and connections to open space systems; and incorporates LID practices in all aspects of stormwater management, site layout, and resource protection. In addition to the previously listed items (1-3, above) these include but are not limited to the following:

   a. Use of water conservation measures in site layout and structures, including but not limited to such practices as water efficient landscaping (including use of native and drought-tolerant plant species), rain collection systems, use of gray water, and water-efficient landscape irrigation.

   b. Use of low maintenance landscaping that encourages retention and planting of native vegetation and minimizes lawn areas and use of fertilizers and pesticides.

   c. Use of pervious paving materials and minimization of impervious surfaces.

d. Use of micro-climate conditions to maximize solar gain for winter heating and minimize solar gain during high temperature summer conditions.

e. Re-use and recycling of building materials when development involves demolition.

f. Inclusion of energy-efficient features in site layouts and buildings.

g. Roadway design standards (subject to RSIS limitations) that incorporate LID techniques to address stormwater management, limit impervious coverage, ensure planting of native and drought-resistant vegetation, and integrate other "green street" design initiatives.

UTILITY SERVICES PLAN

It is the overarching policy of this Plan to ensure that development of the Highlands Area does not exceed the available environmental and infrastructural capacity to support it. The Utilities Services Plan recognizes and incorporates the following Exhibits, as described and discussed in the ERI and duplicated herein: Public Community Water Systems Map (Exhibit V); and Highlands Domestic Sewerage Facilities Map (Exhibit W).

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 Town, that utility service locations occur in the most appropriate portions of the Highlands Preservation 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 Town regulation and management of water and wastewater utilities, and use and maintenance of septic systems.

A. PRESERVATION AREA

1. To prohibit the expansion or creation of public water supply systems, wastewater collection and treatment systems and community on-site treatment facilities in the Preservation Area unless approved through a Highlands Applicability Determination (HAD) or an HPAA with waiver pursuant to the NJDEP Preservation Area rules at N.J.A.C. 7:38.

2. To identify those lands of the Preservation Area that may be appropriate for the extension or creation of public water supply systems, wastewater collection and treatment systems and community on-site treatment facilities for redevelopment that would meet the waiver requirements of the NJDEP Preservation Area rules at N.J.A.C. 7:38 regarding public health and safety or redevelopment.

B. 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, the Conservation 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).

    a. 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.

    b. Secondary priority for such systems should be assigned to infill development, redevelopment and affordable housing projects.

C. PLANNING & PRESERVATION AREAS

1. 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.

2. 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.

3. 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.

4. 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.

5. To ensure the development of a Town-wide septic system management/maintenance plan.

6. To develop a Wastewater Management Plan for the Town Highlands Area.

CIRCULATION PLAN

The existing Master Plan has a Circulation Plan Element providing detailed information on existing and proposed transportation infrastructure within, or providing access to and from the municipality, including information on all modes and supporting facilities and services. In addition, Master Plan Reexamination Reports subsequent to the October 1988 Master Plan have included recommendations on traffic circulation. This Plan supplements the existing Element, as applicable to the Highlands Area, to include the additional information and goals and objectives listed below.

The "Highlands Roadway Network" (Exhibit Y) and "Highlands Transit Network" (Exhibit Z) maps together illustrate the regional transportation network and facilities of the Town Highlands Area. Municipal roadways and transportation features interface with those of the region and the state as a whole, as discussed and illustrated in the Circulation Plan Element for the Highlands Preservation Area.

The Planning Board does not anticipate, propose and/or has identified the need for modifications to the portion of the transportation system located within the Highlands Area since little or no development is anticipated in the Highlands Area. [*For example:*]

a. Railway infrastructure improvements;
b. Transit station upgrades;
c. Bus availability/routing enhancements;
d. Parking improvements;
e. Bicycle lanes or bike trail installations;
f. Pedestrian safety enhancements;
g. Sidewalk/lighting improvements;
h. Provision of multi-modal linkages to/between community facilities;
i. Roadway infrastructure improvements.

As discussed in the ERI, future and existing development and redevelopment in the Highlands Area relies upon a complex network of roads, railways and bridges serving not only the municipality, but the county, the region and the state as a whole. A variety of modes of transportation are vital to ensuring efficient movement of people and goods, including but not limited to automobile, bus, rail, truck, bicycle and pedestrian. By promoting smart growth principles and efficient land use, the municipality and the Highlands Region as a whole can expand access to a multi-modal transportation system while protecting environmentally sensitive areas and Highlands resources.

Accordingly, the following goals and objectives shall guide the development, improvement, and on-going management of the transportation network and supporting facilities of the Town Highlands Area if improvements are to be made in the future.

1. To ensure that transportation facilities and infrastructure are designed and located in a manner that achieves optimal efficiencies in land use and provision of service, while at the same time, protecting the environmental resources and critical environmental areas of the Highlands Area.

2. To enhance opportunities for pedestrian and bicycle access, mobility and safety, through provision of sidewalks, walking trails, pedestrian crosswalks, bicycle lanes and trails, bicycle racks, and networked linkages that both access and connect community facilities, parks, schools and shopping areas.

3. To improve public safety through implementation of traffic calming measures in areas with high pedestrian activity.

4. To provide for safe and efficient pedestrian connections including features such as sidewalks, proper lighting, signage, shelters and "green street" initiatives such as those of the New Jersey Department of Transportation's (NJDOT) Pedestrian Safety Initiative.

5. To enhance roadway corridors and encourage pedestrian activity, where appropriate, by installation of ample sidewalk areas with aesthetic enhancements such as street trees, decorative lighting, and benches.

6. To promote safe routes for children to travel to and from school, potentially with the financial and technical assistance of NJDOT's Safe Routes to School Program.

7. To optimize use of existing roadway capacity by appropriate means, such as increased bus, van, jitney and car pool ridership.

8. To identify roadways designated as scenic byways and, to the extent of municipal jurisdiction, to protect and preserve their defining characteristics in conjunction with the scenic viewsheds they provide access to.

9. To recognize and support the unique needs of the agricultural industry to move farm vehicles and goods along transportation corridors, and to establish safe travel routes for farmers and agri-tourism, as appropriate in the Highlands Area, to ensure the safety and viability of farming as an occupation.

10. To evaluate the potential growth-inducing effects of roadway improvements that will increase traffic capacity, such as substantial new land use, new residents or new employment.

11. To prohibit road improvements in areas for which a Growth-Inducing Study demonstrates that proposed improvements do not support the resource protection and smart growth policies otherwise established by the Highlands Element, or that are likely to be growth-inducing for lands with limited or no capacity to support human development without adverse impact on Highlands Area resources.

12. To limit road improvements where roads are constrained by topography, adjacent forested lands, or other sensitive environmental features such as critical habitat.

13. To ensure that road improvements are designed to enhance community character and to avoid adverse impacts to adjoining or otherwise affected properties.

14. To promote land use patterns that support a balance of jobs to housing as a means of reducing motor vehicle trips and average trip lengths.

15. To seek and encourage to the extent applicable, development and redevelopment in areas proximate to rail stations and along bus routes.

16. To promote development of mixed land uses, where appropriate, in locations that result in reduced motor vehicular trips and average trip lengths.

17. To permit and encourage use of shared parking areas, driveways, and other such infrastructure to limit paved surfaces and maximize efficiencies.

18. To ensure coordination between transportation planning and the Land Use Plan Element and to integrate smart growth principles into both.

LAND PRESERVATION AND LAND STEWARDSHIP PLAN

The existing Master Plan has an Open Space and Recreation Plan Element providing detailed information on existing and proposed open space preservation and recreational opportunities in the community. This Plan supplements the existing Element, as applicable to the Highlands Area, to include the additional information and goals and objectives listed below.

A mapped inventory of Preserved Lands in the Town Highlands Area, current through August, 2009, appears at Exhibit AA, "Preserved Lands" (duplicated from the ERI). This Plan in addition incorporates (from the ERI) Exhibit BB, "Highlands Conservation Priority Areas," Exhibit CC, "Highlands Special Environmental Zone," and Exhibit GG, "Highlands Agricultural Priority Area." This Plan recognizes and incorporates the definitions, derivations and delineations used to develop these maps, as provided in the ERI.

Preserved Lands in the Town Highlands Area include lands under ownership by the municipality, the county, the State. In addition, Preserved Lands includes dedicated easements (such as Conservation Easements) to the extent these are currently known and identified (i.e., by deed description) for mapping purposes. (The Planning Board recognizes and will address the need for a more complete inventory of all such easements after Basic Plan Conformance has been attained, with the assistance of the Highlands Council.) In total, the maps indicate 119 acres of Preserved Lands in the Town Highlands Area. Approximately ___% is currently used for active recreational purposes, ___ % constitutes preserved farmland, and ___% is set aside for other preservation purposes, including passive recreational uses.

Highlands Conservation Priority Area lands are those designated a high priority for preservation due to exceptional water and ecological resource value. The priority order derives from the Highlands Council Resource Assessment methodology, which identifies and ranks Highlands lands based on a combination of indicators, including but not limited to: watershed conditions, Highlands Open Waters, riparian areas, prime ground water recharge areas, forests, critical habitat and steep slopes.

The following goals and objectives will guide the future identification, prioritization, dedication, and stewardship of Preserved Lands in the Town Highlands Area:

j. To apply Highlands Council prioritization criteria in making determinations regarding non-agricultural Land Preservation (whether by fee simple or easement dedication), which are ordered as follows:

   a. Lands within Highlands Conservation Priority Areas; and

   b. Lands within Highlands Resource Areas generally, including but not limited to forested portions of Forest Resource Areas, Critical Habitat Areas, and Riparian

Areas, particularly any portion of a Resource Area designated as "High Integrity" or "High Resource Value."

k. To maintain a current Recreation and Open Space Inventory (ROSI) where required by the NJDEP Green Acres Program.

l. To seek ways to establish and fund local land acquisition for preservation and stewardship programs or to expand existing open space and stewardship programs.

m. To identify lands subject to stewardship programs within this Land Preservation and Land Stewardship Plan and to provide that information to the Highlands Council.

n. To require that conservation or land stewardship easements imposed during the course of development applications be enforceable by the Highlands Council and at least one of the following entities, as qualified and amenable in accordance with the particular circumstances: the Town, the County Agriculture Development Board, the SADC, Green Acres, or a non-profit land trust organized pursuant to § 501 (c)(3) of the federal tax code and engaged in the protection of land for the purpose of providing long-term stewardship of land resources.

o. To establish a stewardship and monitoring program for preserved lands owned by or dedicated to the Town. This objective may be accomplished with the assistance of a non-profit land trust organized pursuant to § 501 (c)(3) of the federal tax code and engaged in the protection of land for the purpose of providing long-term stewardship of land resources.

p. To develop and implement a Forest Management Plan or Forest Stewardship Plan consistent with the standards of the NJ Forest Stewardship Program for application to municipally-owned forest lands.

q. To ensure periodic monitoring of easement restrictions protecting Critical Habitat Areas, associated species and ecological communities from any changes in land use or management practices that would impair these resources.

r. To implement Riparian Area restoration practices on Preserved Lands that give priority to ecological and watershed protection measures.

s. To identify and preserve opportunities for outdoor recreation, including a variety of active and passive recreation options, in such locations and in such manner as to ensure environmental resource protections, while addressing the needs of the local population for physical activity, social interaction, connection with nature and the natural environment, and enjoyment of the outdoors.

COMMUNITY FACILITIES PLAN

The existing Master Plan has a Community Facilities Plan Element providing detailed information on all existing community facilities, including but not limited to government offices, fire, police, and rescue squad facilities, parks and playgrounds, educational facilities, libraries, public works facilities and yards, treatment works, storage depots, and so forth. This Plan supplements the existing Element, as applicable to the Highlands Area, to include the additional goals and objectives listed below.

The overriding policy of this Plan is to ensure that community facilities reflect community needs while minimizing resource impacts and maximizing the efficiency of resource use. Achieving this aim requires attention to the design and location of community facilities. Accordingly, the below-listed goals and objectives will guide community facilities in the Town.

1. To locate and maintain community facilities and services that support compact development patterns and shared services, and provide a high level of service.

2. To identify existing and planned community facilities and to encourage shared service opportunities, whether at intra- or inter-municipal levels.

3. To identify for all such facilities, realistic options to enhance energy efficiencies, incorporate "green" building materials and technologies, reduce pollutant emissions, and minimize "carbon footprints;" and to develop a community strategy for implementing them.

4. To consider and incorporate all feasible Low Impact Development techniques in the design, development, operation and management of existing and proposed community facilities. (For description and discussion of LID techniques, see Conservation Plan Element.)

5. To incorporate the goals, objectives and resource protections discussed throughout this Highlands Element into the planning and development of properties and facilities under municipal jurisdiction.

SUSTAINABLE ECONOMIC DEVELOPMENT PLAN

A sustainable economy is important to the well-being of the Town and the wider economic region of which it is a part. It is the intent of the Planning Board to examine this issue and to prepare an economic development plan for future adoption, which will set forth strategies for strengthening the local economy and/or the municipal contribution toward the wider economy to which it belongs. A major focus of this plan element will include identification and enhancement of opportunities for sustainable growth and development within the proposed Hackettstown Highlands Center.

The goals and objectives of the Sustainable Economic Development Plan in addition include, but are not limited to:

1. To develop appropriate strategies to improve the local tax base and create jobs and economic opportunities, while remaining consistent with the other policies and objectives of the Highlands Element.

2. To ensure opportunities for home office, entrepreneurial and other small business activities, as appropriate.

3. To identify appropriate opportunities for development and/or redevelopment, including possible brownfield redevelopment that may further the goal of economic sustainability.

4. To encourage development of small business incubator programs, particularly those focused on advancing specific goals and objectives of the Highlands Element, such as initiatives in compact design, native species landscaping, Low Impact Development, energy efficiency and resource conservation.

5. To coordinate with the Highlands Council and other applicable state and/or county agencies to develop or participate in eco-, agri-, and/or heritage tourism programs, as appropriate.

HISTORIC PRESERVATION PLAN

The existing Master Plan has an Historic Preservation Plan Element setting forth the applicable goals and objectives, criteria for historic designation, and specific properties of historic interest in the community. This Plan supplements the existing Element, as applicable to the Highlands Preservation Area, to include the additional information and goals and objectives listed below.

A. HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES

The Town survey of historic sites appears as a map within the ERI, which is duplicated herein at Exhibit HH, "Historic, Cultural, and Archaeological Resource Inventory." The specific list of affected properties and a brief discussion pertaining to each is provided below. The list comes directly from the Highlands Region Historic, Cultural, and Archaeological Resources Inventory (as of November 2007), which includes: 1) all properties listed on the State or National Register of Historic Places; 2) all properties which have been deemed eligible for listing on the State or National Register; and 3) all properties for which a formal State Historic Preservation Office (SHPO) opinion has been issued.

This Plan recognizes that the historic, cultural and archaeological resources of the Highlands Area form an essential component of its character and aesthetic quality. They preserve a part of the history of the Town Highlands Area and provide a link to its past. They remind us of significant people, places and events in our history and they provide vital information about what life was like in this community in earlier times.

[*Municipalities that anticipate adoption of historic preservation ordinances should consider inclusion of the language hereunder, denoted as "Alternative 1." Adoption of such ordinances is encouraged but not required. For those that do not intend to adopt historic preservation ordinances, please use the language provided in the section denoted "Alternative 2," which follows below.*]

[*Alternative 1:*] Accordingly, the below-listed goals and objectives shall apply to the future preservation of Historic, Cultural, and Archaeological resources in the Highlands Area.

1. To ensure that human development does not adversely affect the character or value of resources which are listed on the Historic and Cultural Resource Inventory to the maximum extent practicable.

2. To require that all development and redevelopment applications include submission of a report identifying potential historic, cultural and archaeological resources on the subject property or immediately adjacent properties.

3. To ensure that historic, cultural and archaeological resources identified through the development review process are: a) evaluated for inclusion on the survey of historic

sites within this document; and b) submitted to the Highlands Council for possible inclusion in the Highlands Region Historic and Cultural Resources Inventory.

4. To ensure that the impact of proposed human development on the historic and cultural resources of the Highlands Area is addressed during development review.

5. To at minimum utilize State and National Register criteria, as applied at the local level, in considering sites and districts for historic designation.

6. To use the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties as guidance for historic and cultural preservation review and to seek and encourage preservation and adaptive re-use of historic structures.

[*Alternative 2:*] Accordingly, the below-listed goals and objectives shall apply to the Historic, Cultural, and Archaeological resources in the Highlands Area.

1. To examine the character and qualities of the community's Historic, Cultural, and Archaeological resources to gain further understanding of the extent of their contributions to the aesthetics, character, economic vitality, and sense of place of the community.

2. To consider the educational value of the community's Historic, Cultural, and Archaeological resources and encourage opportunities to celebrate and share information about the community's heritage.

3. To consider the character and qualities of the community's Historic, Cultural, and Archaeological resources in any development application that may affect them, whether directly or indirectly.

4. To examine the potential for development and adoption of regulatory provisions that are protective of the Historic, Cultural, and Archaeological resources of the community.

5. To consider the character and qualities of the community's Historic, Cultural, and Archaeological resources in development of the Land Use Plan, Community Facilities Plan, Circulation Plan, and all other aspects of the Highlands Element.

The following sites, districts and properties are listed in the Highlands Historic and Cultural Resources Inventory for Hackettstown:

a) Centenary Collegiate Institute

b) Clarendon Hotel

c) Hackettstown Historic District

d) Hackettstown Iron and Manufacturing Company's Warren Furnace

e) Helms Property Site

f) Jacob C. Allen House

g) Morris Canal

h) Old Main Delaware, Lackawanna and Western Railroad Historic District

h. Union Cemetery Bridge

B. SCENIC RESOURCES

The Town baseline survey of scenic resources appears at Exhibit II, "Baseline Scenic Resources Inventory," duplicated from the ERI. The specific list of affected properties and a brief discussion pertaining to each is provided below. The list comes directly from the Highlands Council as a first-step inventory of Scenic Resources having potential for local and/or regional designation. It includes national historic landmarks and federal, state and county publicly-owned parks, forests, and recreation areas.

The Highlands Council also adopted a Procedure for Nomination, Evaluation and Inventory of Highlands Regionally Significant Scenic Resources which establishes the process for formal nomination and inclusion of additional scenic resources in the Highlands Scenic Resource Inventory. The process requires the adoption and implementation of management plans to ensure that the scenic resources are protected and maintained.

This Plan recognizes the value and importance of scenic resources in preserving the aesthetic qualities of the Town Highlands Area. Accordingly, the below-listed goals and objectives shall apply to the future management of Scenic Resources in the Highlands Area.

1. To ensure that human development does not adversely affect the character or value of resources which are listed on the Highlands Scenic Resources Inventory.

2. To require that the impact of proposed human development on the scenic resources of the Highlands Area be addressed during local development review.

3. To utilize Highlands Scenic Resource designation standards, as applied at the local level, in considering scenic resources for designation.

4. To require that all development applications include identification of any scenic resources in the Highlands Region that are listed on the Highlands Scenic Resources Inventory and may be affected by the proposed development.

5. To develop regulatory standards to protect Scenic Resources from negative impacts due to development.

6. To develop minimum standards for the protection and enhancement of the Scenic Resources listed in the Highlands Scenic Resources Inventory.

The following locations are listed in the Highlands Scenic Resources Inventory:

a) Stephens State Park;

b. Hackettstown Fish Hatchery;

c. Musconetcong River Greenway; and

d. Allamuchy Mountain State Park.

RELATIONSHIP OF MASTER PLAN TO STATE/REGIONAL/LOCAL PLANS

By adoption of this Highlands Element, the Town 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 Town 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 any portion of a municipality located in the Highlands Preservation Area is exempt from the State Planning Commission (SPC) Plan Endorsement process. It provides further that once the RMP has attained Plan Endorsement from the SPC for the Planning Area, Highlands Council approval of Plan Conformance with respect to lands in the Planning Area shall be deemed the equivalent of Plan Endorsement.

By aligning the municipal Master Plan with the Highlands RMP, its consistency with the State Development and Redevelopment Plan (SDRP) is achieved. A map depicting the municipality's SDRP Planning Areas appears at Exhibit JJ. The Highlands Element furthers SDRP policies, goals, and objectives in many ways, not least of which are the following:

1. Seeking to protect, preserve, restore, and enhance the natural resources of the Highlands Area;

2. Encouraging the use of smart growth principles in locations of the Area deemed appropriate for development and/or redevelopment;

3. Protecting historic, cultural and aesthetic resources;

4. Encouraging a sustainable local economy;

5. Protecting agricultural resources, supporting local agricultural businesses, and promoting sustainable agricultural practices;

6. Preserving open space and providing for an array of active and passive recreational opportunities; and

7. Ensuring a viable and well-integrated transportation network that incorporates and encourages multi-modal options and efficiency of land use.

The Highlands Element modifies the relationship of the Town development plan to those of the county and contiguous municipalities insofar as it affects the intents for land use and development within the Town Highlands Area. Given that the Highlands Element introduces a substantial number of new constraints to development based on environmental resources and carrying capacities, it is anticipated that the future impacts from development of the Highlands Area will be reduced from previous trends. A complete understanding will not exist however, until further analysis is undertaken to determine the full impacts of conformance with the RMP on the municipal Land Use Plan. An important component of

that analysis will be in regard to watershed-based planning. To the extent that the Town shares a HUC14 subwatershed with other municipal and/or county entities, a cooperative planning effort involving all parties will be vital to ensuring sound use and management of the available water resources. It will also be important to understand which, if any, of the adjoining municipalities and/or the county conform to the Highlands RMP and for what portions of their land areas. The land uses, the permitted densities and intensities of development, and the locations and extent of anticipated growth in neighboring Highlands communities that are also pursuing conformance with the RMP are all subject to change. Until information is available concerning such decision-making, a comparison between these master plans will not be meaningful. Further discussion of these aspects will therefore be provided in the next amendment to the Master Plan.

ACRONYMS

CADB	County Agriculture Development Board
ERI	Environmental Resourced Inventory
EDU	Equivalent Dwelling Unit
FAR	Floor Area Ratio
GIS	Geographic Information Systems
HAD	Highlands Applicability Determination
HDC	Highlands Development Credit
HPAA	Highlands Preservation Area Approval
HUC	Hydrologic Unit Code
LID	Low Impact Development
MLUL	Municipal Land Use Law (of the State of New Jersey)
NJDA	New Jersey Department of Agriculture
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJDOT	New Jersey Department of Transportation
NJSA	New Jersey Statutes Annotated
NPS	Nonpoint Source
NRCS	Natural Resources Conservation Service
PCS	Potential Contaminant Source
PGWRA	Prime Ground Water Recharge Area
RMP	Regional Master Plan (of the New Jersey Highlands Water Protection and Planning Council)
ROSI	Recreation and Open Space Inventory
SADC	State Agriculture Development Committee
SCD	Soil Conservation District
SDRP	State Development and Redevelopment Plan
SHPO	State Historic Preservation Office
SPC	State Planning Commission
TDR	Transfer of Development Rights
TMDL	Total Maximum Daily Load
TSP	Technical Service Provider
USDA	United States Department of Agriculture
WHPA	Wellhead Protection Area

EXHIBITS

A. Town Highlands Area
B. Town Land Use Inventory
C. Highlands Contaminated Sites Inventory
D. [*Reserved*]
E. Forest Resource Area
F. Total Forest Area
G. Forest Subwatersheds
H. Highlands Open Waters
I. Highlands Riparian Areas
J. Watershed Values
K. Riparian Integrity
L. Steep Slope Protection Areas
M. Critical Wildlife Habitat
N. [*Reserved*]
O. Vernal Pools
P. Carbonate Rock Areas
Q. [*Reserved*]
R. Net Water Availability
S. Prime Ground Water Recharge Areas
T. HUC 14s on NJDEP Impaired Waters List
U. Wellhead Protection Areas
V. Public Community Water Systems Map
W. Highlands Domestic Sewerage Facilities Map
X. [*Reserved*]
Y. Highlands Roadway Network
Z. Highlands Transit Network
AA. Preserved Lands
BB. Highlands Conservation Priority Areas
CC. [*Reserved*]
DD. Preserved Farms, SADC Easements, All Agricultural Uses
EE. Important Farmland Soils
FF. [*Reserved*]
GG. [*Reserved*]
HH. Historic, Cultural, and Archaeological Resource Inventory
II. Baseline Scenic Resources Inventory
JJ. SDRP Planning 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. Permanent storage or disposal of hazardous wastes, industrial or municipal sludge or radioactive materials, including solid waste landfills.
2. Collection and transfer facilities for hazardous wastes, solid wastes that contain hazardous materials, and radioactive materials.
3. Any use or activity requiring the underground storage of a hazardous substance or waste in excess of an aggregate total of 50 gallons.
4. 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.).
5. Above-ground storage facility for a hazardous substance or waste with a cumulative capacity greater than 2,000 gallons.
6. Any industrial treatment facility lagoon.
7. Any industrial facility with a North American Industry Classification System (NAICS) Code number included under the New Jersey Safe Drinking Water Act Regulations at N.J.A.C 7:10A-1.14, Table II(N)A, with a toxicity number of II or greater. (See Appendix C.)
8. Automotive service center (repair & maintenance).
9. Landfill.
10. Dry cleaning processing facility.
11. Road salt storage facility.
12. Cemetery.
13. Highway maintenance yard.
14. Truck, bus, locomotive maintenance yard.
15. Site for storage and maintenance of heavy construction equipment and materials.
16. Site for storage and maintenance of equipment and materials for landscaping, excluding household storage and maintenance of such equipment.

17. 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.

18. Quarrying and/or mining facility.

19. Asphalt and/or concrete manufacturing facility.

20. Junkyard/auto recycling and scrap metal facility.

21. 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. Sanitary sewer system, including sewer line, manhole, or pump station.
5. Industrial waste line.
6. Septic leaching field.
7. Facility requiring a ground water discharge permit issued by the NJDEP pursuant to N.J.A.C 7:14A et seq.
8. Stormwater retention-recharge basin.
9. Dry well.
10. Storm water conveyance line.
11. Waste oil collection, storage and recycling facility.
12. Agricultural chemical bulk storage and mixing or loading facility including crop dusting facilities.
13. Above-ground storage of hazardous substance or waste in quantities of less than 2,000 gallons.
14. 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.
15. [*Optional – Insert other Potential Contaminant Sources of similar nature that are not listed in (1) through (14) above, or as Major Potential Contaminant Sources in Appendix B, but are of concern to the municipality.*]

APPENDIX C MAJOR POTENTIAL POLLUTANT SOURCES

Facilities with Toxicity Ratings of II or Greater
Adapted From N.J.A.C. 7:10A-1.14(c)4, Table II(N)A

2007 NAICS Code	2007 NAICS Definition	Toxicity Rating
321219	Reconstituted Wood Product Manufacturing	II
323110	Newspaper Publishers	
323111	Internet Publishing and Broadcasting	
323112	Periodical Publishers	
323113	Book Publishers	
323114	Music Publishers	
323115	Book Printing	
323116	Directory and Mailing List Publishers	
323117	All Other Publishers	
323118	Commercial Lithographic Printing	
323119	Quick Printing	
323121	Commercial Gravure Printing	
511110	Commercial Flexographic Printing	
511120	Commercial Screen Printing	
511130	Digital Printing	
511140	Other Commercial Printing	
511191	Manifold Business Form Printing	
511199	Manifold Business Form Printing	
512230	Blankbook, Loose-leaf Binder, and Device Manufacturing	
516110	Tradebinding and Related Work	
325120	Industrial Gas Manufacturing	
812320	Drycleaning and Laundry Services (except Coin-Operated)	
812310	Coin-Operated Laundries and Drycleaners	
812320	Drycleaning and Laundry Services (except Coin-Operated)	
561740	Carpet and Upholstery Cleaning Services	
811192	Car Washes	
21211	Bituminous Coal and Lignite Surface Mining	III
21212	Bituminous Coal Underground Mining	
21213	Anthracite Mining	
325191	Soap and Other Detergent Manufacturing	
325510	Polish and Other Sanitation Good Manufacturing	
325611	Surface Active Agent Manufacturing	
325612	Toilet Preparation Manufacturing	
325620	Gum and Wood Chemical Manufacturing	
331112	Electrometallurgical Ferroalloy Product Manufacturing	
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	
334310	Audio and Video Equipment Manufacturing	
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	
334419	Other Electronic Component Manufacturing	
488490	Other Support Activities for Road Transportation	
713930	Marinas	
483211	Inland Water Freight Transportation	

2007 NAICS Code	2007 NAICS Definition	Toxicity Rating
488310	Port and Harbor Operations	
488330	Navigational Services to Shipping	
488390	Other Support Activities for Water Transportation	
532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	
541990	All Other Professional, Scientific, and Technical Services	
115112	Soil Preparation, Planting, and Cultivating	IV
2123	Non Mineral Mining and Quarrying	
325131	Inorganic Dye and Pigment Manufacturing,	
325182	Carbon Black Manufacturing	
211112	Natural Gas Liquid Extraction	
325613	Paint and Coating Manufacturing	
325182	Carbon Black Manufacturing	
311942	Spice and Extract Manufacturing	
325910	Printing Ink Manufacturing	
325920	Explosives Manufacturing	
316211	Rubber and Plastics Footwear Manufacturing	
326211	Tire Manufacturing (except Retreading)	
326220	Rubber and Plastics Hoses and Belting Manufacturing	
339991	Gasket, Packing, and Sealing Device Manufacturing	
326291	Rubber Product Manufacturing for Mechanical Use	
313320	Fabric Coating Mills	
314911	Textile Bag Mills	
315299	All Other Cut and Sew Apparel Manufacturing	
315999	Other Apparel Accessories and Other Apparel Manufacturing	
326192	Resilient Floor Covering Manufacturing	
326299	All Other Rubber Product Manufacturing	
339113	Surgical and Appliance and Supplies Manufacturing	
339920	Sporting and Athletic Goods Manufacturing	
339932	Game, Toy, and Children's Vehicle Manufacturing	
316110	Leather and Hide Tanning and Finishing	
332995	Other Ordnance and Accessories Manufacturing	
335911	Storage Battery Manufacturing	
335912	Primary Battery Manufacturing	
336611	Ship Building and Repairing	
488390	Other Support Activities for Water Transportation	
221111	Hydroelectric Power Generation	
221112	Fossil Fuel Electric Power Generation	
221113	Nuclear Electric Power Generation	
221119	Other Electric Power Generation	
221121	Electric Bulk Power Transmission and Control	
221122	Electric Power Distribution	
221210	Natural Gas Distribution	
221310	Water Supply and Irrigation Systems	
562212	Solid Waste Landfill	
424910	Farm Supplies Merchant Wholesalers	
444220	Nurseries, Garden Centers, and Farm Supply Stores	
812331	Linen Supply	
812332	Industrial Launderers	

2007 NAICS Code	2007 NAICS Definition	Toxicity Rating
541710	Research and Development in Biotechnology	
541720	Research and Development in the Social Sciences and Humanities	
2122	Metal Ore, Mining	V
313	Textile Mills	
336	Transportation Equipment Manufacturing	
337	Furniture and Related Product Manufacturing	
322	Paper Mills	
325181	Alkalies and Chlorine Manufacturing	
325211	Plastics Material and Resin Manufacturing	
325212	Synthetic Rubber Manufacturing	
325221	Cellulosic Organic Fiber Manufacturing	
325222	Noncellulosic Organic Fiber Manufacturing	
325411	Medicinal and Botanical Manufacturing	
325412	Pharmaceutical Preparation Manufacturing	
325413	In-Vitro Diagnostic Substance Manufacturing	
325414	Biological Product (except Diagnostic) Manufacturing	
325520	Adhesive Manufacturing	
3241	Petroleum and Coal Products Manufacturing	
3315	Foundries	
331	Secondary Smelting	
332	Fabricated Metal Product Manufacturing	
331	Alumina, Aluminum, Nonferrous Metal (except Aluminum) Production and Processing	
	Non-Ferrous Foundries	
332811	Metal Heat Treating	
332618	Other Fabricated Wire Product Manufacturing	
332813	Electroplating, Plating, Polishing, Anodizing and Coloring	
332112	Nonferrous Forging	
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	
332992	Small Arms Ammunition Manufacturing, Ammunition (except Small Arms) Manufacturing, Small Arms Manufacturing	
332	Fabricated Metal Product Manufacturing	
333	Machinery Manufacturing	
31-33	Manufacturing (**75 Specific Industries Defined**)	
335991	Carbon and Graphite Product Manufacturing	
334411	Electron Tube Manufacturing	
334412	Electron Tube Manufacturing	
332	Automotive, Trucks, Armored Vehicles and Aircraft Manufacturing	
3222	Converted Paper Product Manufacturing	
3259	All Other Chemical Product and Preparation Manufacturing	
3333	Commercial and Service Industry Machinery Manufacturing	
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
334517	Irradiation Apparatus Manufacturing	
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	
325992	Photographic Film, Paper, Plate, and Chemical Manufacturing	
3161	Leather and Hide Tanning and Finishing	
3119	Other Wood Product Manufacturing	
3231	Printing and Related Support Activities	
3259	Other Chemical Product and Preparation Manufacturing;	
3261	Plastics Product Manufacturing	

2007 NAICS Code	2007 NAICS Definition	Toxicity Rating
3322	Cutlery and Handtool Manufacturing	
3328	Coating, Engraving, Heat Treating, and Allied Activities;	
3329	Other Fabricated Metal Product Manufacturing	
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing;	
3399	All Other Miscellaneous Manufacturing	
486,	Pipeline Transportation	
42352	Coal and Other Mineral and Ore Merchant Wholesalers	
424710	Petroleum Bulk Stations and Terminals	
454311	Heating Oil Dealers	
454312	Liquefied Petroleum Gas (Bottled Gas) Dealers	
115210	Support Activities for Animal Production	
238220	Plumbing, Heating, and Air-Conditioning Contractors	
444210	Outdoor Power Equipment Stores	
561790	Other Services to Buildings and Dwellings	
562991	Septic Tank and Related Services	
562998	All Other Miscellaneous Waste Management Services	
811219	Other Electronic and Precision Equipment Repair and Maintenance	
811411	Home and Garden Equipment Repair and Maintenance	
811412	Appliance Repair and Maintenance	
321114	Wood Preservation	VI
325110	Petrochemical Manufacturing	
325132	Synthetic Organic Dye and Pigment Manufacturing	
325192	Cyclic Crude and Intermediate Manufacturing	
332998	Enameled Iron and Metal Sanitary Ware Manufacturing	
325193	Ethyl Alcohol Manufacturing	
325199	All Other Basic Organic Chemical Manufacturing	
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	
325320	Pesticide and Other Agricultural Chemical Manufacturing	
324199	All Other Petroleum and Coal Products Manufacturing	
331111	Iron and Steel Mills	
331221	Rolled Steel Shape Manufacturing	
331411	Primary Smelting and Refining of Copper	
331312	Primary Aluminum Production	
331419	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)	
332998	Enameled Iron and Metal Sanitary Ware Manufacturing	
334413	Semiconductor and Related Device Manufacturing	
562211	Hazardous Waste Treatment and Disposal	
562213	Solid Waste Combustors and Incinerators	
562219	Other Nonhazardous Waste Treatment and Disposal	
562920	Materials Recovery Facilities	
423930	Recyclable Material Merchant Wholesalers	
424690	Other Chemical and Allied Products Merchant Wholesalers	
561710	Exterminating and Pest Control Services	
561720	Janitorial Services	
325998	Aerosol packaging, solvent recovery service-contract	
622110	General Medical and Surgical Hospitals	
622210	Psychiatric and Substance Abuse Hospitals	
621511	Medical Laboratories	