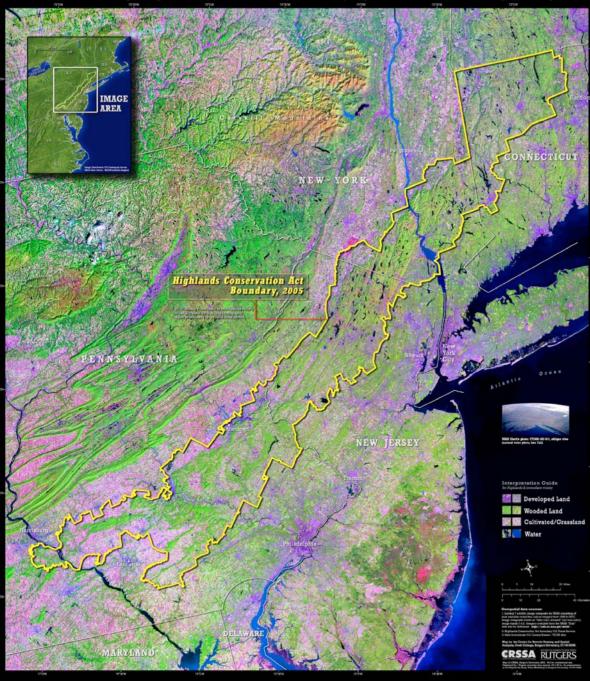


The New
Jersey
Highlands
Water
Protection
and Planning
Council



HIGHLANDS REGION: LANDSAT SATELLITE IMAGERY

Landsat 7 satellite image composite: 1999-2002 of the Pennsylvania, New Jersey, New York, and Connecticut Highlands Region



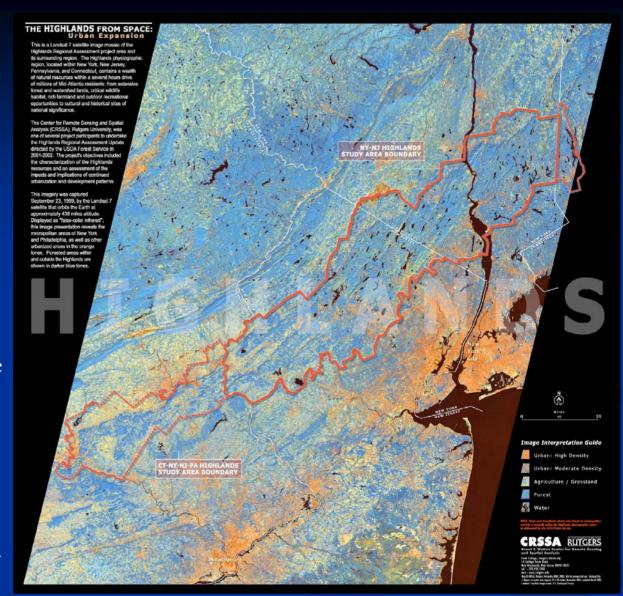
The federal Highlands Region is a 3.5 million-acre region stretching across Pennsylvania, New Jersey, New York and Connecticut.

The US Forest Service, in cooperation with New York and New Jersey, issued a federal study on the Highlands in 1992.

The study was updated in 2002 and found an 11% population increase from 1990 to 2000.

The Federal Highlands Conservation Act

- The Highlands
 Conservation Act was signed by President
 Bush on November 30, 2004.
- The Act is designed to provide federal assistance to Connecticut, New Jersey, New York and Pennsylvania to conserve land and natural resources in the Highlands Region.
- The Highlands
 Conservation Act
 authorizes \$10,000,000
 per year for each of fiscal
 years 2005 through 2014
 to be appropriated to the
 Secretary of Interior.

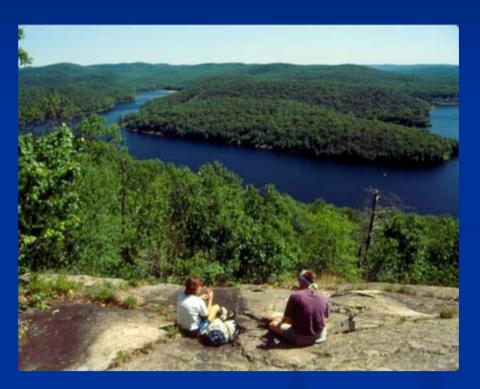


The New Jersey Highlands

- The 859,358-acre region is roughly divided in half into the Preservation Area and Planning Area.
 - 444,394 acres in the Planning area
 - 414,965 acres in the Preservation Area
- 88 municipalities from seven counties are included in the Highlands Region:
 - 5 are entirely in the Preservation Area
 - 36 are entirely in the Planning Area
 - 47 are in both areas

Resource Assessment

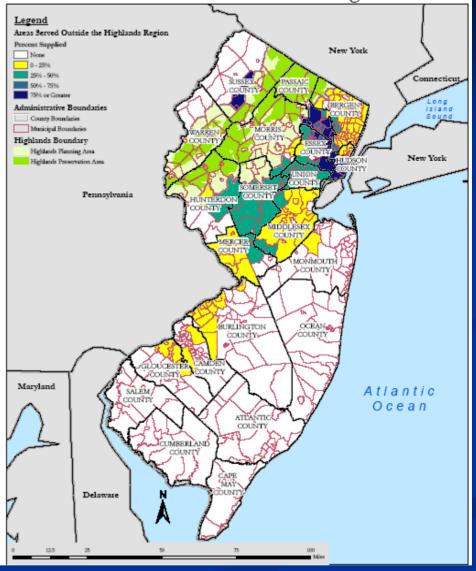
- Determine the amount and type of development that can be accommodated while sustaining the overall values of the Highlands:
 - ✓ Surface and Ground Water
 - ✓ Terrestrial and Aquatic Ecology
 - ✓ Scenic and Aesthetic
 - ✓ Cultural and Historic
 - ✓ Open Space
 - ✓ Farmland
 - ✓ Recreation
- Establish land use policies required to maintain and enhance such resources.



Water Supplies of the Highlands Region

- The Highlands Region includes 18% of the State's land base. The Highlands supplies 65% of the State's drinking water supplies for 5.4 million residents.
- Public water supply service includes the greater New Jersey Metropolitan Area, as well as, portions of Middlesex, Mercer, Burlington, Camden and Gloucester Counties.
- The needs of Highlands residents and municipalities are largely met through withdrawals from groundwater wells tapping local aquifers.

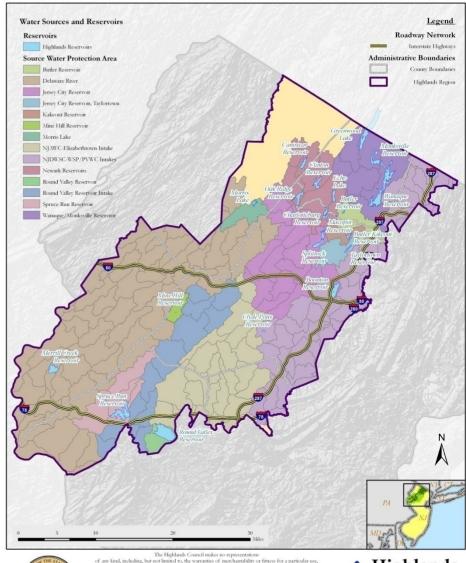
Areas Served by Highlands Water



Source Water Protection

- More than 115 billion gallons are consumed each year by residents both within and outside the Highlands Region.
- The reservoir systems that supply water to major urban areas outside the Highlands Region account for the vast majority of potable use, almost 626 million gallons per day.
- The demand for water through 2030 may exceed the safe yields (the amount of water that can be safely withdrawn from a reservoir over time) of several Highlands reservoirs.

Source Water Protection Areas and Reservoirs





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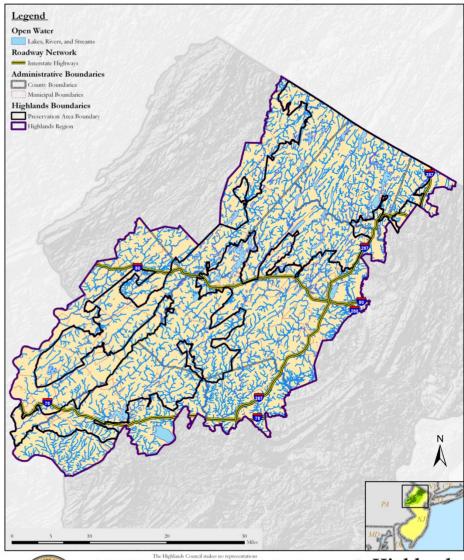
Sources: s Council, 2006

New Jersey Highlands Council, 2006 New Jersey Department of Environmental Protection, 2006

Lakes, Rivers & Streams

- More than 75%, or 2,700 miles, of streams within the Highlands Region are afforded high levels of protection by the State.
- The Highlands Region includes more than 90,000 acres of wetlands which serve as important habitat for the Region's wildlife and an important filter for the Region's drinking water supplies.

Lakes, Rivers and Streams





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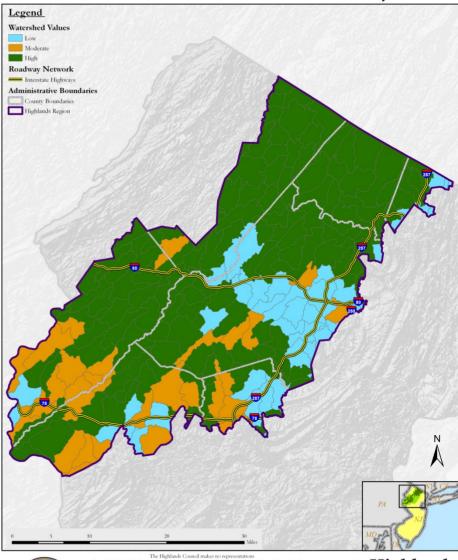


Sources: New Jersey Highlands Council, 2006 New Jersey Department of Environmental Protection, 2006

Watershed Integrity

- The Highlands Council utilized a watershed-based assessment to evaluate the integrity and protection needs of Highlands Open Waters.
- The 183 subwatershed boundaries were used for this analysis.

Watershed Values by HUC14



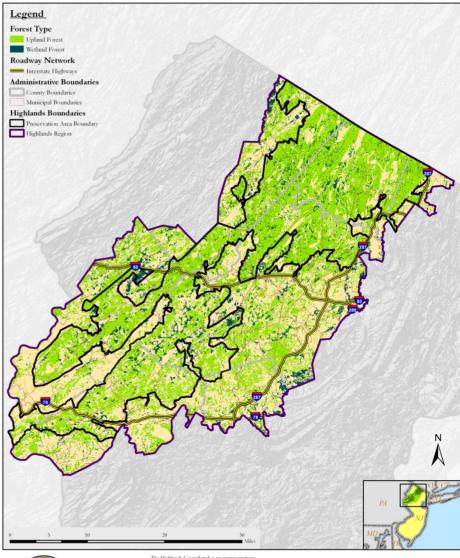


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- Forests account for more than one-half the total land area in the Highlands Region. Upland and wetland forested areas are on 464,200 acres or 54% of the total of land area.
- Forests provide essential ecosystem functions, including surface water filtration, which is important to protecting essential drinking water supplies for the Highlands Region
- Forests serve as habitat for animal and plant species and are critically important to the maintenance of biodiversity in the Highlands Region.





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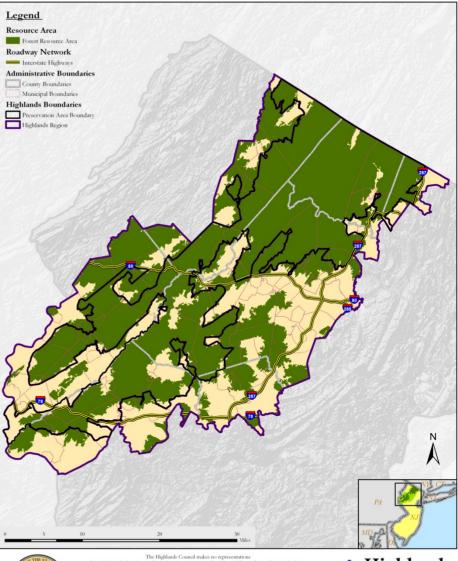
Highlands Regional Master Plan Final Draft, November 2007



Forest Resource Area

The Forest Resource Area includes high ecological value forest areas, including those forested areas that exhibit the least fragmentation and vital for the maintenance of ecological processes.

Forest Resource Area





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> Highlands Regional Master Plan Final Draft, November 2007

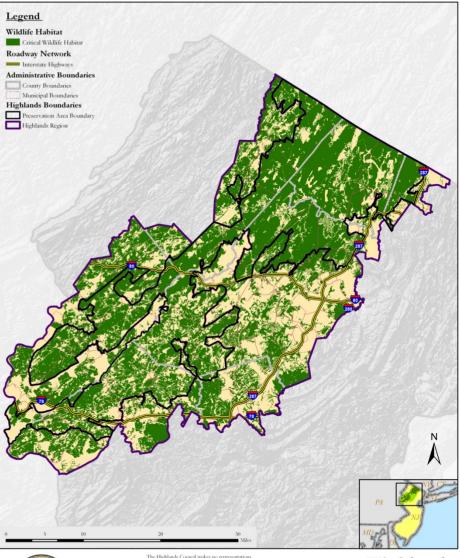


Sources: New Jersey Highlands Council, 2006

Critical Habitat Area

- Three types of habitats are defined as "critical habitat areas" for:
 - 1) Animal species identified as rare, threatened, or endangered;
 - 2) Significant Natural Areas, including habitat for rare and endangered plant species, unique or regionally significant ecological communities, and other significant natural sites or features; and
 - 3) Vernal pools confined wet depressions that provide important breeding habitat to many species of amphibians.

Critical Wildlife Habitat





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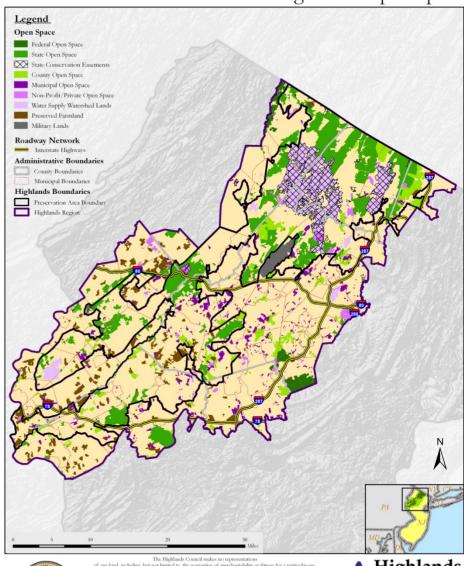
> Highlands Regional Master Plan Final Draft, November 2007



Highlands Open Space

- Of the nearly 860,000 acres in the Highlands Region, a total of 274,675 acres (32%) are considered open space lands or preserved farmlands.
- These lands are held in a combination of federal, State, county, municipal, nonprofit, and private ownership.
- 186,211 acres (68%) of these lands are located in the Preservation Area and the remaining 88,464 acres are situated in the Planning Area.

Highlands Open Space





Hunterdon County Division of GIS 2005 Green Acres Program, NJ DEP, 2007 Morris County Planning, Development & Technology, 2005

New Jersey Conservation Foundation, 2005

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Highlands Regional Master Plan

Final Draft, November 2007

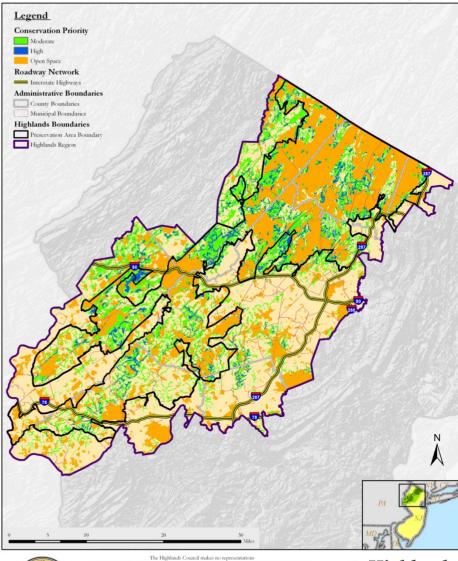


Sussex County Office of GIS Management 2005 The Nature Conservancy, 2004 US Fish and Wildlife Service, 2001 County of Warren Department of Planning, 2005

Conservation Priority Area

- Assessment were used to identify those lands in the Highlands Region which have the highest ecological resource value.
- The Conservation Priority Area will assist in the prioritization of open space acquisitions.

Conservation Priority Area





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> Highlands Regional Master Plan Final Draft, November 2007

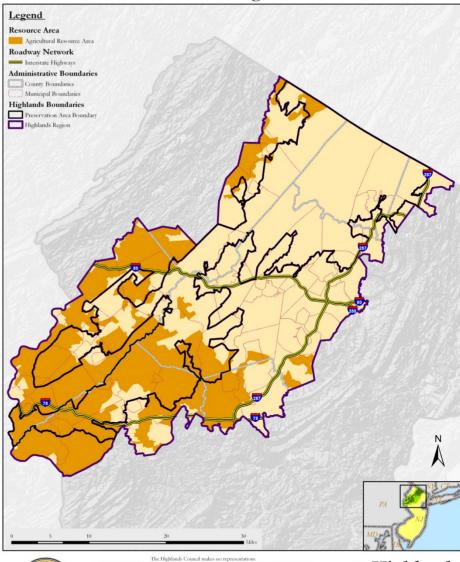


Sources: New Jersey Highlands Council, 2007

Agricultural Resources

- The Highlands Region has experienced a steady loss of agricultural lands of 1,700 acres per year - a 19% decline between 1986 and 2002, representing over 27,500 acres.
- The Farmland Preservation Program has preserved 26,123 acres in the Highlands Region - 16,099 acres in the Planning Area and 10,024 acres in the Preservation Area.
- The Agricultural Resource Area was based on 250 acres or more of contiguous farmland, important farmland soils, adjoining lands that is in agricultural use, and concentrations of Preserved Farmland.

Agricultural Resource Area





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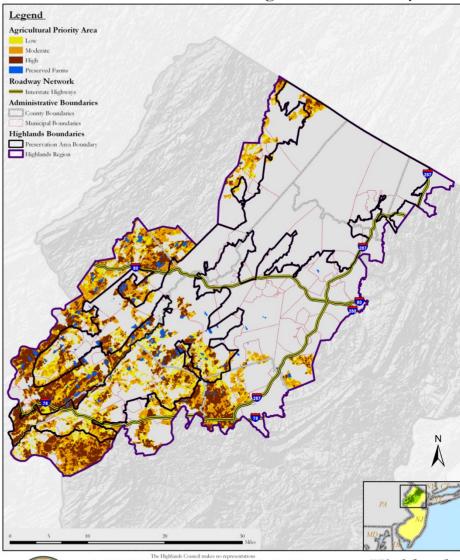


New Jersey Highlands Council, 2006

Agricultural Priority Area

- The results of the
 Agricultural resource
 assessment were used to
 identify those lands in the
 Highlands Region which
 have the highest agricultural
 resource value.
- The Agricultural Priority
 Area will assist in the
 prioritization of farmland
 preservation.

Agricultural Priority Area





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Highlands Regional Master Plan Final Draft, November 2007



Sources: New Jersey Highlands Council, 2007 State Agriculture Development Committee, 2006

A Regional Master Plan

- The Highlands Act mandates the Highlands Council to develop a Regional Master Plan with the goals to protect, enhance and restore the significant values of the abundant and critical resources in this area.
- The first draft was released in November 2006.
- More than 3,600 comments were received The final draft of the RMP was released in November 2007.

Major RMP Changes from 2006 -2007

Organization

CHAPTER I. INTRODUCTION
CHAPTER II. ANALYSIS OF THE HIGHLANDS REGION

Part 1. Natural Resources

Part 2. Water Resources

Part 3. Agricultural Resources

Part 4. Historic, Cultural, Archaeological and Scenic Resources.

Part 5. Transportation

Part 6. Community Character

Part 7. Landowner Fairness

Part 8. Sustainable Economic Development

Part 9. Air Quality

CHAPTER III. REGIONAL AND LOCAL COMMUNITY CHARACTER CHAPTER IV. GOALS, POLICIES AND OBJECTIVES CHAPTER V. PROGRAMS

CHAPTER VI. IMPLEMENTATION

Major RMP Changes from 2006 -2007

- Land Use Capability Map
- Septic System Densities
- TDR Potential Receiving Zones
- Lake Management Areas and Lake Community sub-zone
- Forest Management
- Karst Topography
- Agricultural Preservation Priorities

Major RMP Changes from 2006 -2007 Continued

- Cluster Development
- Net Water Availability and Water Deficit Mitigation
- Transportation Infrastructure
- Plan Conformance
- Regional Master Plan Update and Map Adjustments

Land Use Capability Map

The Highlands Act requires that the Council prepare a Land Use Capability Map. To address this requirement, the Council created a Land Use Capability Map Series that includes the following maps:

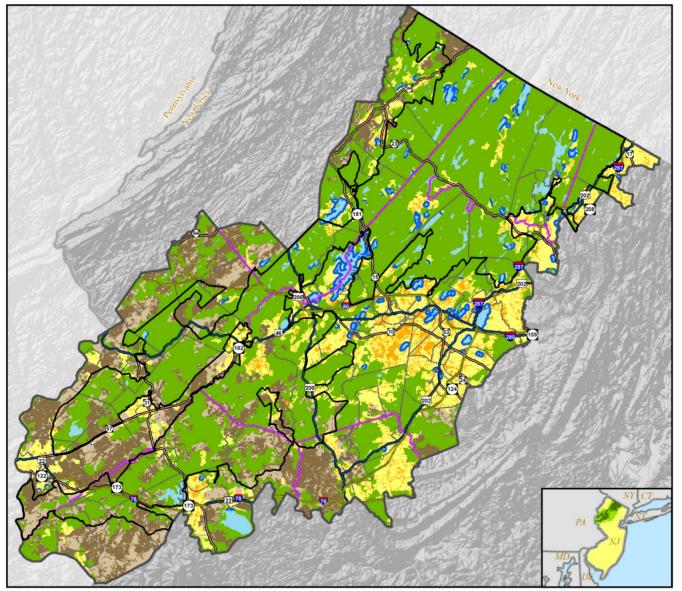
- 1. Land Use Capability Zone Map
- 2. Land Use Capability Water Availability Map
- 3. Land Use Capability Public Community Water Systems Map
- 4. Land Use Capability Domestic Sewerage Facilities Map
- 5. Land Use Capability Septic System Yield Map

Three Primary Zones

- The Protection Zone (PZ) consists of high resource value lands that are important to maintaining water quality, quantity, and sensitive ecological resources. Land acquisition is a priority in the Protection Zone and development activities will be extremely limited.
- The Conservation Zone (CZ) consists of areas with significant agricultural use lands interspersed with associated woodlands and environmental features that should be preserved when possible. Non-agricultural development activities will be limited.
- The Existing Community Zone (ECZ) consists of areas with regionally significant concentrated development signifying existing communities. These areas may have existing infrastructure that may support development and redevelopment provided that it is compatible with the protection and character of the Highlands environment, at levels that are appropriate to maintain the character of established communities.
- The LANDS model utilized a 75 acre minimum mapping threshold for the delineation of the three Primary Zones.

Three sub-zones

- The Conservation Zone Environmental Constrained Sub-Zone (CZ-EC) consists of significant environmental features within the Conservation Zone that should be preserved and protected from non-agricultural development.
- The Existing Community Zone Environmental Constrained Sub-Zone (ECZ-EC) consists of significant contiguous critical habitat, steep slopes and forested lands within the Existing Community Zone that should be protected form further fragmentation.
- The Lake Community Sub-Zone (LCZ) consists of existing community development around lakes within the Existing Community Zone. This sub-zone is where the Existing Community Zone overlaps the Lake Management Area. This zone has unique policies to prevent degradation of water quality and watershed pollution, harm to lake ecosystems, and to protect the community character of lake communities.

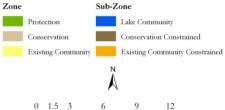


LAND USE CAPABILITY Zone Map (Map 1 of 5)

Source: New Jersey Highlands Council, 2007

Legend Preservation Area Boundary Administrative Boundaries County Boundaries Highlands Boundary Municipal Boundaries Roadway Network Interstate Highways Lakes Greater Than 10 Acres U.S. Routes State Routes Regional Master Plan

Overlay Zone Designation



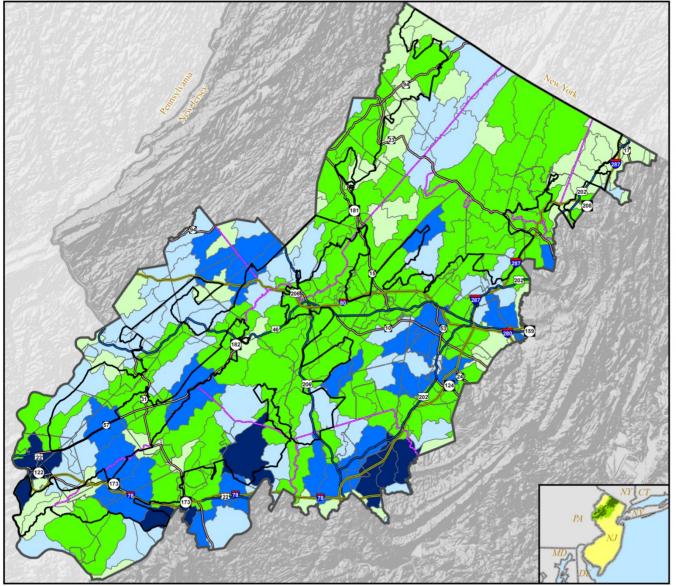
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November 2007







LAND USE CAPABILITY Water Availability Map (Map 2 of 5)

Source: New Jersey Highlands Council, 2007

Legend

Preservation Area Boundar	y Administrative Boundaries
Highlands Boundary	County Boundaries
Roadway Network	Municipal Boundaries
Interstate Highways	Hydrologic Unit Code(HUC14)
IIS Poutes	

Net Water Availability By HUC14

Million Gallons Per Day (MGD) 0.00 - 0.05

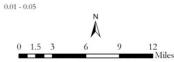
State Routes

0.05 - 0.10 0.10 - 0.39

Conditional Net Water Availability By HUC14

Million Gallons Per Day (MGD)

0.00 - 0.01



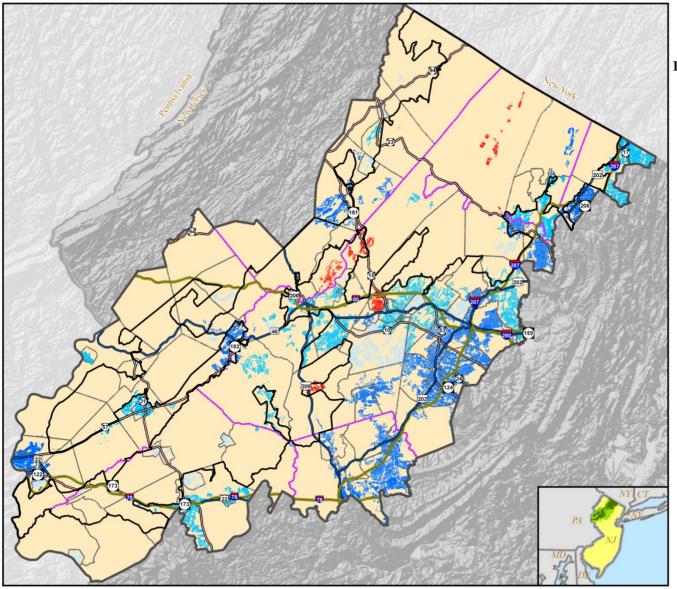
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LAND USE CAPABILITY Public Community Water Systems Map (Map 3 of 5)

Source: New Jersey Highlands Council, 2007

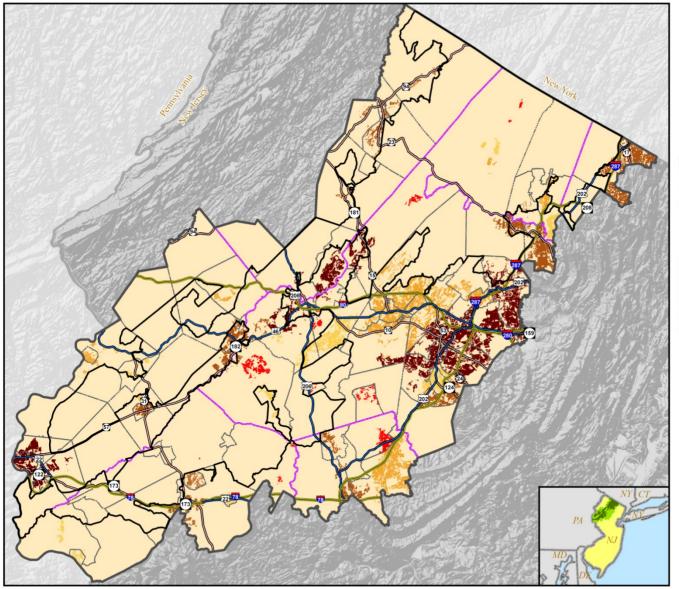
Legend Preservation Area Boundary Highlands Boundary Roadway Network U.S. Routes State Routes Highlands Public Community Water Systems Available Capacity in Million Gallons Per Month (MGM) > 25 MGM 0.01 - 5 MGM No Capacity No Capacity

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LAND USE CAPABILITY **Domestic Sewerage Facilities Map**(Map 4 of 5)

Source: New Jersey Highlands Council, 2007

Legend Preservation Area Boundary Administrative Boundaries Highlands Boundary County Boundaries Roadway Network Municipal Boundaries Interstate Highways U.S. Routes State Routes

Highlands Domestic Sewerage Facilities

Current Available Highlands Wastwater Capacity in Million Gallons Per Day (MGD)

1.0 - 2 .52 MGD 0.5 - 0.99 MGD 0.1 - 0.49 MGD 0.01 - 0.09 MGD

No Capacity



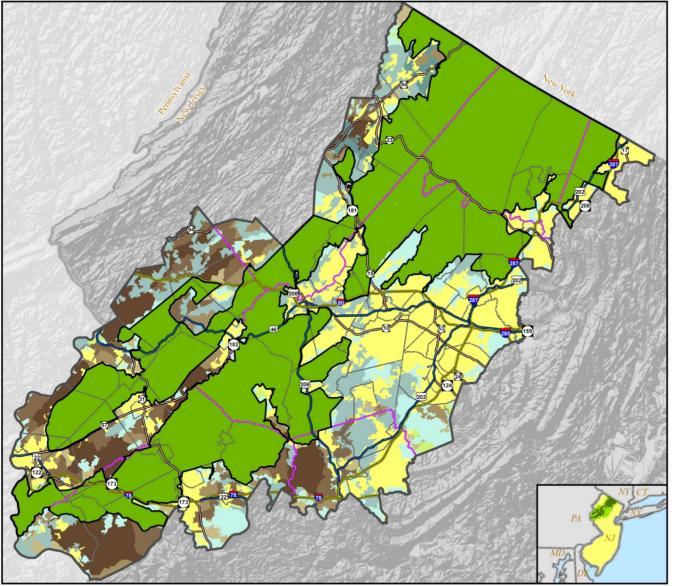
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Prepared By: New Jersey Highlands Council

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LAND USE CAPABILITY Septic System Yield Map

For Planning Area: Conservation and Protection Zones
(Map 5 of 5)

Source:

New Jersey Highlands Council, 2007

Legend Preservation Area Boundary Administrative Boundaries Highlands Boundary County Boundaries Roadway Network Municipal Boundaries Interstate Highways Highlands Preservation Area U.S. Routes Existing Community Zone State Routes Planning Area Zones Septic Yield in Protection Zone Septic Yield in Conservation Zone Septic Yield in Protection Zone 0 - 10 0 - 10 133 - 297

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Region-wide Goals for Preservation Area and Planning Area

Protect, restore, and enhance the quality and quantity of surface and ground waters

Preserve farmland and historic sites and other historic resources

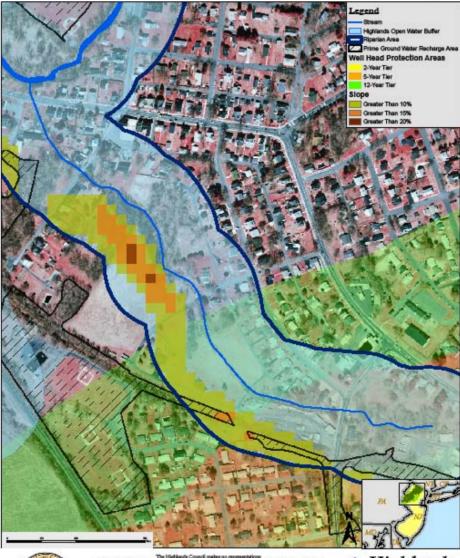
Preserve outdoor recreation opportunities, including hunting and fishing, on publicly owned land

Promote conservation of water resources

Promote brownfield remediation and redevelopment

Promote brownfield remediation and redevelopment	
Goals Specific to Preservation Area	Goals Specific to Planning Area
Preserve extensive and, to the maximum extent possible, contiguous areas of land in its natural state, thereby ensuring the continuation of Highlands environment which contains the unique and significant natural, scenic, and other resources representative of the Highlands Region	Preserve to the maximum extent possible any environmentally sensitive lands and other lands needed for recreation and conservation purposes.
Protect the natural, scenic, and other resources of the Highlands Region, including, but not limited to contiguous forests, wetlands, vegetated stream corridors, steep slopes, and critical habitat for fauna and flora	Protect and maintain the essential character of the Highlands environment
Promote compatible agricultural, horticultural, recreational, and cultural, uses and opportunities within the framework of protecting the Highlands environment	Promote the continuation and expansion of agricultural, horticultural, recreational, and cultural uses and opportunities
Prohibit or limit to the maximum extent possible construction or development which is incompatible with preservation of this unique area	Encourage, 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 discourage piecemeal, scattered, and inappropriate development, in order to accommodate local and regional growth and economic development in an orderly way while protecting the Highlands environment from the individual and cumulative adverse impacts thereof
	Promote a sound, balanced transportation system that is consistent with smart growth strategies and principles and which preserves mobility in the Highlands Region

Site Specific Constraints Analysis





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Highlands Regional Master Plan Final Draft, November 2007 Highlands Council New Jersey

New Jersey Highlands Council, 2006
New Jersey Department of Environmental Protection, 2006
New Jersey Water Supply Authority, 2006
Natural Resources Conservation Service, 2006

Benefits to Conforming Municipalities

- <u>Legal Shield</u>
- Strong presumption of validity to master plans, land use ordinances and local decisions
- Provides for direct legal representation where needed
- Grants
- Provide grants to conform master plans and land use ordinances
- State Plan Endorsement
- Any municipal master plan and development regulations approved by the Council are deemed the equivalent of having those plans endorsed by the State Planning Commission and receive all the same benefits
- Council on Affordable Housing Obligations
- Requires COAH to consider the Regional Master Plan prior to determining third round obligation for all of the 88 municipalities
- Preserves the protections of substantive certification previously granted to municipalities

Benefits to Conforming Municipalities

- <u>Transfer of Development Rights, Impact Fees and Enhanced Planning</u>
 <u>Grants</u>
- Financial incentives voluntary TDR receiving zones
 - Enhanced planning grants up to \$250,000
 - Reimbursement for costs of amending local ordinances
 - Impact fees up to \$15,000 per unit
 - Priority status for state infrastructure spending
- Priority Open Space Acquisition Funding
- Priority funding under Green Acres and State Farmland Preservation within the Preservation Area and for Planning Area TDR municipalities
- <u>Tax Stabilization Funding</u>
- Compensate qualified municipalities for the decline in the aggregate true value of vacant land