

New Jersey Highlands Water Protection and Planning Council

Highlands Regional Master Plan Update

Monitoring Program Recommendation Report Stakeholder Meeting Briefing Book

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Abstract

This is a briefing book for participants of the stakeholder outreach workshops for the Highlands Regional Master Plan (RMP) Monitoring Program Recommendation Report (MPRR). The document provides background on the Highlands RMP, the MPRR process, the project team, the topic area, draft indicators and technical advisory committees.

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Introduction to the Monitoring Program Recommendation Report & Process

Background

In the early 2000s, the State of New Jersey and committed stakeholders advocated for the protection of the NJ Highlands through growth management. These efforts lead to the landmark 2004 Highlands Water Protection and Planning Act (the Act). The Act set into motion a comprehensive approach to planning and preservation in the area which covers over 1,300 square miles and includes 88 municipalities that are part of seven counties in northwest New Jersey.

The Act established the Highlands Water Protection and Planning Council (Highlands Council), a regional entity with state and local participation charged with “carrying out the provisions of the Act, including the development of a Regional Master Plan for the Highlands Region.”¹ The Regional Master Plan (RMP) was prepared in the years following the adoption of the Act and was itself adopted on July 17, 2008. The primary goal of the RMP is “to protect and enhance the significant values of the resources” in the Highlands region by protecting critical environmental areas, protecting water quality, and determining appropriate land use patterns for areas within the Highlands.² It also established a Transfer of Development Rights Program for the region.

The RMP serves to guide the implementation of the Act, but also serves as a critical resource for information about the Highlands Region for its residents, technical experts, local governments, developers and all others interested in the region and how the Act is implemented. The RMP lays out the goals, policies and objectives for Natural Resources; Water Resources and Water Utilities; Agricultural Resources; Historic, Cultural, Archaeological and Scenic Resources; Transportation; and Future Land Use (including guidance for development and redevelopment and encouragement for smart growth). It describes programs for each of the above topic areas as well as for Landowner Equity; Sustainable Economic Development and Air Quality. Finally, the RMP clearly lays out the process for Implementation of the Act by detailing the processes for Regional Master Plan Conformance, Consistency and Coordination; Project Review; Improvement of the Master Plan and Highlands Council Implementation Programs. The elements of Implementation are crucial components that require cooperation from local governments and their residents.

The Highlands Regional Master Plan is continually updated as a result of new or corrected information received from municipalities as part of the Plan Conformance process. Further, the

¹ Highlands Water Protection and Planning Act. 7 June 2004

² NJ Highlands Council website <<http://www.state.nj.us/njhighlands/master>>

Highlands Act requires a substantive review take place every six years. The RMP outlined a Monitoring Program to meet this requirement:

The RMP Monitoring Program and associated Monitoring Review Report will evaluate the progress in achieving the goals of the RMP through implementation of policies and programs. The implementation of a monitoring program will ensure that the RMP remain effective and current.

(Highland Regional Master Plan, p. 416)

The objectives of the Monitoring Program are:

- Identify indicators and milestones that will allow measurement of progress toward goals outlined in the Highlands Act and RMP.
- To the extent practical, measure progress to date.
- Establish process for continued monitoring going forward.

The monitoring program is not intended to amend the RMP, but rather develop the factual foundation on which potential amendments to the RMP may be made.

In accordance with RMP *Policy 10.A5*, a Regional Master Plan Monitoring Program briefing document and report that develops indicators and milestones for the evaluation of regional conditions, identifies new or emerging issues, and recommends new or modified RMP priorities, must be created. This document, known as the RMP Monitoring Program Recommendations Report (MPRR), will provide baseline assessment of the effect of the 2008 RMP on the Highlands region.

In further support of the RMP Monitoring Program and in accordance with RMP *Policy 10.A5b*, a fiscal impact assessment (FIA) that measures the overall economic health of the Region as compared to the rest of the State is to be conducted. The FIA will include an assessment of the Highlands Act (2004) and RMP (2008) that includes population, real estate, economic growth and municipal finance trends related to the 2004 to 2014 timeframe.

Process

Regional Plan Association (RPA) is the contracted consultant working with the Highlands Council, its staff, and State Agency advisors - while receiving input from Highlands focused advocacy organizations and the general public - to update the Regional Master Plan (RMP) through the development of an informative, visually appealing Regional Master Plan Recommendation Report (MPRR) and help to set the science and research agenda of the Highlands Council into the future.

The project team will work over five phases to: RESEARCH data and develop indicators and milestones based on trends of the past (2004-2014), and that reflect emerging trends for the future (2014-2024) in the Highlands region and beyond; CONSULT technical experts and stakeholders

within State Agencies and advocacy groups to guide the research and development of indicators and milestones; ENGAGE residents of the Highlands Region and the general public to both educate and gather feedback on the RMP and initiatives of the Highlands Council; help PLAN the future of the Highlands Region through the development of the MPRR which will include indicators and milestones, and relevant information from the concurrent Fiscal Impact Analysis (FIA) project; and UPDATE the science and research agenda for the RMP that reflects the findings of the project work.

We are currently in the RESEARCH and CONSULT phases of the project. This briefing book is meant to prepare participants for targeted stakeholder meetings that provide opportunity for dialogue early in the research phase to discuss the MPRR process, initial thoughts about potential indicators, milestones and monitoring activities, and data availability.

Stakeholder Meeting Agenda

1. Introductions
2. Overview of Monitoring Program Process
3. Discussion Items:
 - Interaction and coordination with the RMP and Highlands Council
 - RMP topics/information to be monitored
 - Potential indicators
 - Data Availability
4. Identification of Potential TAC Members
5. Wrap up/Next Steps

Introduction to the Highlands Regional Master Plan

(Source Highlands Regional Master Plan and Related Technical Reports)

Natural Resources

The New Jersey Highlands supports the greatest diversity of natural resources of any region of the State, with 70 percent of its lands classified as environmentally sensitive (Highlands Task Force Action Plan, March 2004). The biological diversity of the Highlands is comprised of an assemblage and linkages of diverse wetlands, streams and rivers, forests, wildlife habitats, and ridges and valleys. Active management, stewardship, and restoration on public and private lands are required to protect and enhance these critical resources.

The Regional Master Plan evaluates the effect of land development and other stresses on the natural and ecological resources of the Highlands Region, and establishes the overall strategies necessary to maintain and enhance their value. These resources include: a) Forest Resources; b) Steep Slopes; c) Critical Habitat; d) Land Preservation and Stewardship; e) Carbonate Rock (Karst) Topography; f) Highlands Open Waters and Riparian Areas; and g) Lakes, Ponds, and Reservoirs. These are each interrelated and interdependent systems presented in an integrated ecosystem protection and management framework. The purpose of the ecosystem management analysis is to highlight areas of the Highlands Region with exceptionally high ecological values that should be conserved, those with lesser value that may be restored, and those previously impaired by past human activity that may be appropriate to support growth.

Water Resources

The protection, enhancement, and restoration of water resources is a fundamental goal of the Highlands Act. A primary mechanism to meet

this goal is the assessment of surface water bodies, known as Highlands Open Waters, and lands adjacent to these waters, known as Riparian Areas. Highlands Open Waters are a critical public trust resource and an essential source of drinking water for the State. These surface waters and the associated Riparian Areas provide protection against floods and help to ameliorate the effects of prolonged droughts. They are also important habitat for numerous plant and animal species, including many rare, threatened, or endangered species in the State. Highlands Open Waters and Riparian Areas provide a wealth of agricultural, recreational, and aesthetic uses for both residents and visitors alike, helping to contribute to a vibrant regional economy.

Agricultural Resources

Agriculture is a vital component of the economy, culture and landscape of the Highlands Region. It provides economic benefits through both agricultural production and by maintaining the rural character of Highlands communities. The loss of farmland over recent decades emphasizes the crucial need to promote and encourage a positive agricultural business climate. In order to encourage a positive agricultural business climate and enhance agricultural viability, agricultural operations need to evolve over time to adapt to ever changing climate and market conditions.

The Highlands Region has experienced a steady loss of agricultural lands representing an average rate of loss of 1,700 acres per year, a 19 percent decline between 1986 and 2002, representing over 27,500 acres. According to the NJDA, between 1998 and 2003 there was an 8 percent decrease in farmland.

In addition to the direct loss of agricultural lands, other measures of agricultural losses, such as the amount of farmland in field crop production, show a similar decrease. In 1998, the total acreage of field crops, which includes corn, wheat, soybeans, hay and other cover crops, was 81,313 acres. These crop lands decreased to 70,567 acres in 2003. The loss of over 10,000 acres of field crops during this five-year period represents a 13 percent loss for the Highlands Region.

Historic, Cultural, Archeological, and Scenic Resources

Historic, scenic, and recreational resources play a critical role in defining the character of the Highlands. These resources will continue to attract people to the Region and must be managed to take advantage of their contribution to economic vitality and a high quality environment for the future. The Highlands Region contains important historic, cultural, archaeological, and scenic resources. Historic resources include buildings, structures, objects, districts, sites, or areas that are significant in the history, architecture, archaeology, engineering, or culture of a place or time. Historic resources help connect people to the past, reminding them of a community's origins.

Water and Wastewater Utilities

The Highlands RMP inventory of existing areas served by water supply systems, cover a total of 20 percent of the Highlands Region, with 6 percent in the Preservation Area and 32 percent in the Planning Area. Highlands water supply systems extend beyond the boundaries of the Highlands Region (e.g., Southeast Morris Municipal Utility Authority), and non-Highlands water supply sources may have the capacity to provide water to municipalities in

the Region (e.g., New Jersey American Water Company--Elizabethtown Division).

There are 162 major water systems in the Highlands Region. Of these facilities, 72 are small systems, such as those that serve a single apartment complex, that have no additional capacity to support growth. The remaining systems were grouped into 61 unique utilities, generating the vast majority of total demand. The demand generated from uses primarily within the Region is estimated at 2,691 million gallons per month.

The primary wastewater collection systems identified in the Highlands RMP predominantly treat residential wastewater. A Highlands Domestic Sewerage Facility, which includes publicly-owned and investor-owned domestic wastewater treatment facilities, provides wastewater treatment to municipalities and has collection systems that can support redevelopment and regional growth opportunities. These facilities generally have the NJDEP-permitted discharge capacity of more than either 0.150 million gallons per day (MGD) for discharge to surface water or 0.075 MGD for discharge to ground water.

There are 42 Highlands Domestic Sewerage Facilities representing a total wastewater treatment capacity of approximately 121.61 MGD and a total discharge flow at the maximum three month rate of 99.98 MGD. Some of these facilities have service areas that extend beyond the Highlands Region so a pro rata allocation based on the relative portion of the service area in and outside of the Highlands Region was used to estimate a Highlands Region treatment capacity of approximately 78.41 MGD and a total discharge flow at the maximum three month rate of 63.11 MGD, or approximately 80 percent of the total treatment capacity. Individual facilities have discharge flow (at the maximum three month rate) ranging from 42 percent to 192 percent

(indicating a deficit) of total treatment capacity, and from a deficit of 0.21 MGD to 2.52 MGD of current available capacity.

Transportation

The Highlands transportation system is a complex network of roads, railways, and bridges that supports various modes of travel including automobile, bus, rail, truck, bicycle, and pedestrian. The Highlands Region also includes seven airport facilities. There are four limited-access highways in the Highlands Region, which include Interstate Routes 78, 287, 80, and 280. There are also numerous US, State, and County routes and local roads providing extensive roadway access in the Region (see [Roadway Network Map](#)). There are also four major commuter rail lines in the Highlands Region: the Boonton Line, the Main Line and Bergen County Line, the Morris and Essex Line, and the Raritan Valley Line (see [Transit Network Map](#)).

Air Quality

Air quality is directly correlated with on-road mobile sources such as automobiles, buses and trucks; however, air toxics also come from many other sources, including industrial facilities, utilities, commercial businesses, residential activities, and non-road mobile sources. Therefore air quality in the Highlands Region is influenced by mobile and stationary sources within and outside the Region. In 2004, 48 facilities reported releases in the Highlands Region. Five of these facilities that release more than 10,000 pounds per year of air toxics (all chemicals combined) account for over four-fifths of the point (industrial facilities and power plants) source releases in the Highlands Region. Haze consists of air pollutants from a variety of natural and manmade sources including windblown dust and soot from wildfires, fireplaces, motor vehicles, electric utility, and industrial fuel burning, and manufacturing operations. Power plants

located outside the State also have a great impact on air quality in the Highlands Region.

Automobiles in New Jersey contribute 40 percent of the airborne pollutants and more than 80 percent of the airborne carcinogens. Since the Highlands Region is currently an air quality non-attainment area, federal guidelines require that new transportation plans and projects do not further contribute to air quality degradation.

Future Land Use

The Council used the results of the Smart Growth analysis to identify the nature and extent of developed lands that have limited and dispersed environmental and agricultural resources. Areas were identified based upon existing patterns of development with particular emphasis on areas that are currently served by existing water and wastewater infrastructure. These findings were used to develop the Land Use Capability Map Series as follows:

- [Land Use Capability Zone Map](#)
- [Land Use Capability Water Availability Map](#)
- [Land Use Capability Public Community Water Systems Map](#)
- [Land Use Capability Domestic Sewerage Facilities Map](#)
- [Land Use Capability Septic System Yield Map](#)

The goal of the Land Use Capability Zone Map is to address the requirements of the Highlands Act and provide regional guidance for the implementation of the policies contained in the Regional Master Plan. The challenge of the Land Use Capability Zone Map was to recognize the range and nature of land throughout the Highlands Region, and assign an overlay zone that best represents the requirements of the Highlands Act and the policies of the Regional Master Plan. Twenty-

one indicators were used to characterize the Highlands Region and to assign the most appropriate overlay zone classification. The Highlands Council has developed three primary overlay zones (the Protection Zone, Conservation Zone, and Existing Community Zone) and four subzones (Wildlife Management Sub-Zone, Conservation Zone – Environmentally Constrained, Existing Community Zone – Environmentally Constrained, and Lake Community) each with their own purpose, application, and development criteria. These zones apply within both the Preservation and Planning Areas, though at times with distinct policies and standards in compliance with Highlands Act requirements.

Housing

Housing contributes significantly to the land use pattern of the Highlands Region and is characterized by a diverse mix of older houses in smaller municipalities, more modern housing recently constructed in suburban and rural developments, and some infill developments. According to the 2000 Census, the Highlands Region had 296,543 housing units and an overall vacancy rate of approximately 4 percent. The housing stock is characterized by largely owner-occupied, single family detached homes, with 79 percent owner-occupied and 21 percent renter-occupied. Approximately half of the municipalities in the Highlands have a housing stock whose median age is 40 years or older.

Implementation

Plan Conformance is intended to align municipal and county plans, regulations, and programs with the goals, requirements, and provisions of the RMP. The process to achieve Conformance will be logical, time efficient and comprehensive, and the Highlands Council will provide grant funding to assist local jurisdictions in completing it. The

Conformance process will begin with the development of detailed guidance for municipalities and counties, which will be provided along with planning and technical assistance from the Highlands Council. Each municipality and county going through the Conformance process will follow a general approach that includes an assessment of current plans and regulations, an evaluation of future planning needs and conditions, modification of plans and regulations as necessary, and a public involvement process. The Highlands Council will review Petitions for Plan Conformance and decide to approve with conditions or reject the petitions. Conformance approval will in most cases be with conditions, where a finding is made that the municipality or county has conformed with all immediate mandatory Conformance requirements, and will conform with all other mandatory Conformance requirements within an agreed upon implementation schedule. The Highlands Council will then track the progress of the municipality or county in meeting that schedule, and will monitor development reviews and capital projects for compliance with the Conformance approval. *A detailed description of Plan Conformance process is included in Highlands Regional Master Plan, Chapter 6, Part 1.*

Land Owner Equity

The Highlands Act recognizes that implementation of the Regional Master Plan, which directs and guides future development, inevitably has an impact on landowner expectations regarding future land use potential. The Act provides several mechanisms that seek to mitigate such impacts, including, but not limited to transfer of development rights, exemptions, waivers, and land acquisition.

Transfer of Development Rights

Transfer of Development Rights (TDR) is a land use tool that permits the transfer of

development potential from areas identified for preservation, called sending zones, to areas that are more appropriate to accommodate increased growth, called receiving zones. Landowners in the sending zones receive compensation for the transferable development potential of their property that has been restricted in support of preservation.

Payment for this lost development potential comes from purchasers who buy credits representing the lost development potential of parcels in the sending zones. The credits then entitle the purchaser to build in a receiving zone at a density greater than that permitted in the existing zoning.

Introduction to Potential Indicators

The MPRR will recommend appropriate indicators, milestones, and monitoring mechanisms related to the Regional Master Plan. The following represents general information areas that could be monitored by the Highlands Council. During the stakeholder meeting, we will begin a dialogue to narrow the list of potential indicators, as well as discuss data availability, format, and update frequency.

Stakeholder Meeting Discussion

- Opportunities for improvements to the RMP.
- How can outreach and education from the Highlands Council be improved?
- What RMP topics/information are most appropriate for ongoing monitoring?
- Do you have access to and/or relevant information about data that can be used for the ongoing monitoring of the RMP?

Potential Indicator Topics

Natural Resources

Forests
Riparian Areas
Steep Slopes
Critical Habitat
Open Waters
Wetlands
Conservation lands
Vernal Pools
Grasslands

Water Resource Protection

Open Waters
Wetlands
Reservoirs
Water Quality
Water Quantity (flow & levels)
Aquifers

Water Resource Protection

(cont.)

Flood Areas
Conservation lands
Contaminants
Septic Density
Stormwater Management
Prime GW Recharge Areas

Water and Wastewater Utilities

Wastewater Treatment (existing areas served & sewer service areas)
Septic Management
Water Supply (existing areas served)
Wellhead Protection Areas

Transportation and Air Quality

Air Quality (Quantitative Factors)
Commuting Patterns
Transit options
Freight Rail connections
Health Impacts

Historic, Cultural, Archeological, and Scenic Resources

Scenic Corridors
Viewsheds
Cultural Resources
Historic Resources
Archeological Resources
Recreational Areas & Trails
Preserved Open Space
Tourism

Agriculture Resources

Important Farmland Soils

Crop production
Livestock production
Value added products
Agricultural labor
Agricultural business
Preserved Farmland
Right to Farm

Implementation

Conformance
Communication
Coordination
Master Plan & Zoning Changes
Training and Education Programs

Future Land Use

Housing
Land use capacity
Redevelopment
Centers

Land Owner Equity

Preserved lands
Transfer of Development Rights
(TDR)
Exemptions
Waivers

Economic Development

Income
Employment
Wages
Labor Force Qualifications
Business
Population w/characteristics
Households w/characteristics
Housing units w/characteristics
Building Permits
Property Value
Non-residential Lease Rates
Equalized Property Values
Property Tax Revenue
Household Expenditures/Revenues
Foreclosures
School Enrollment
Tourism
Farm Labor
National Agriculture Statistics

Introduction to Technical Advisory Committees

The Technical Advisory Committees (TACs) will include technical experts in each of the topic areas representing academic institutions, business and industry, regulatory agencies, individuals, and non-government organizations. The initial screening for individuals/participants will include those previously engaged in the TACs during the drafting of the RMP. Participant lists will then be refined and supplemented based on feedback from the Highlands Council and its staff, as well as the project team consultants.

Technical Advisory Committees

The TACs serve to engage those with specific technical content knowledge across the following areas:

- Natural Resources
- Water Resource Protection
- Water and Wastewater Utilities
- Agricultural Resources
- Historic, Cultural, Archeological, and Scenic Resources
- Transportation and Air Quality
- Future Land Use
- Land Owner Equity
- Economic Development
- Implementation (Includes RMP conformance consistency and coordination, Highlands project review, RMP amendments/revisions, and Highlands Council Implementation Programs)

The first meeting of the TACs will occur toward the middle of the research phase in order to review draft indicator findings and discuss data needs. The second meeting will occur after the indicators have been applied to identify key trends in the region during the 2004 to 2014 period. Based on these findings, the TACs will engage in a dialogue to deliberate milestones and monitoring activities for the 2015-2025 period and suggest research priorities.

Stakeholder Meeting Discussion

- Suggestions for potential TAC participants (organization and/or individual).