

RMP Component: Smart Growth
RMP Program Element: Utility Capacity
Policy Consideration: **Wastewater Utility Treatment Capacity Limitations**
Status: Final Draft for Consideration by Council
Date: September 11, 2006

I. STAFF POLICY RECOMMENDATIONS

- 1) **Highlands Domestic Sewer Facilities** will be defined as those wastewater treatment facilities that have the potential to service regional growth and/or redevelopment opportunities within the Highlands. **Existing Areas Served** will be mapped as those parcels with current connections to Highlands Domestic Sewer Facilities.

Rationale: The Highlands Act at Section 11.a(6) requires a Smart Growth component that in part will “identify transportation, water, wastewater, and power infrastructure that would support or limit development and redevelopment in the planning area.” In addition, Section 42 revoked designated sewer service areas in the Preservation Area for which wastewater collection systems had not been installed on the date of enactment. For these reasons, it is important to identify wastewater treatment facilities in all parts of the Highlands Region. Larger domestic treatment work facilities with “community based” service areas provide the greatest potential to support regional development and redevelopment opportunities. Small domestic treatment works that provide treatment for individual sites or specific development projects such as an individual business, school, apartment complex or institution are constructed and permitted to handle only the projected flows from those facilities. Therefore, they lack capacity to provide sewer services to additional areas. Non-domestic treatment works such as industrial and non-contact cooling water treatment facilities do not have capacity to support future residential or commercial development. The mapping of Existing Areas Served provides a basis for wastewater service area planning, identification of potential redevelopment areas within such areas, etc.

- 2) **Available Wastewater Treatment Capacity** will be estimated for each Highlands Domestic Sewer Facility as the capacity that may be available to support regional growth and/or redevelopment opportunities within the Highlands Region, by subtracting the actual sewage flows for the maximum three month period from the total facility capacity.

Rationale: Wastewater flows are seasonal. Permit limits are generally based either on design capacity or pollutant assimilation capacity. Estimation of available capacity based on a comparison of seasonal high discharge levels to the permitted capacity is a valid method for determining the amount of treatment capacity that may be available to support future development and/or redevelopment opportunities. For facilities with service areas that extend outside the Highlands region, the estimate of Wastewater Treatment Capacity is based on a pro-rata share of capacity based on the relative amount of the proposed service area within the Highlands Region. More detailed information on the ability of these facilities to provide service within the Highlands Region was not available for plan development, but can be determined in specific areas during the conformance process where necessary.

- 3) Each Highlands Domestic Sewer Facility will be assigned a projected demand within its Existing Areas Served for **Redevelopment Treatment Capacity**, using 20% of existing

maximum three month demands, to assess whether there is adequate treatment capacity to encourage appropriate redevelopment opportunities and/or TDR Receiving Areas.

Rationale: Section 42 of the Highlands Act limits wastewater service areas in the preservation area to existing areas served but allows for redevelopment under limited conditions. In the planning area, providing sufficient capacity for redevelopment opportunities within areas already utilized for such purposes is critical to defining appropriate future service areas that are consistent with the regional smart growth principles, treatment capacity limitations and resource protection goals of the RMP. The 20 percent factor was selected as a preliminary estimate of increased demands due to redevelopment and can be adjusted during conformance as more detailed information becomes available for each Highlands Domestic Sewer Facility.

- 4) **Highlands Wastewater Sewer Service Areas** will be defined that incorporate the areas appropriate for regional growth and/or redevelopment, that already have sufficient treatment capacity by existing Highlands Domestic Sewer Facilities to service projected wastewater treatment demand.

Rationale: NJDEP is currently compiling information on the location and extent of approved service areas and requiring amendments to Wastewater Management Plans where appropriate. The Highlands Council may recommend modifications to wastewater service areas based on wastewater treatment capacity limitations and consistency with the Land Use Capability Map and the resource protection and smart growth principles of the RMP. Sections 11.a.(1) , 11.a.(6) and 12.

- 5) **Potential Wastewater Treatment Expansion Areas** will be identified that incorporate the areas otherwise appropriate to serve as regional growth and/or redevelopment areas, but where existing Highlands Domestic Sewer Facilities lack sufficient treatment capacity to service the projected wastewater treatment demand.

Rationale: The RMP may identify areas otherwise appropriate for regional growth or redevelopment in conformance with Highlands Act goals that do not currently have the necessary wastewater treatment capacity to service that growth. Although the quality of receiving water may pose significant limitations on expansion of wastewater treatment capacity, some existing treatment facilities may experience excessive inflow and infiltration (I&I) that limits available treatment capacity. I & I is the introduction of non-wastewater flow, such as ground water or stormwater, into sewer lines, creating flows above the levels caused by actual wastewater treatment demand within the service area and thereby may limit development opportunity. Water conservation may also be used to restore some level of capacity, where appropriate. Sections 11.a.(1) , 11.a.(6) and 12.

- 6) The following standards shall be incorporated into the **Regional Protection Zone** of the Land Use Capability Map (LUCM) in furtherance of the goals and requirements of the Highlands Act to preserve extensive and, to the maximum extent possible, contiguous areas of land in its natural state; to identify special critical environmental areas and other critical natural resource lands where development should be limited; and to promote compatible brownfield remediation and redevelopment, as follows:

- Prohibit expansion of wastewater treatment collection systems beyond Existing Areas Served within the Regional Protection Zone, including the Highlands Preservation Area,

except for those areas identified in the RMP to be a Special Planned Area, projects that are exempt from the Highlands Act, or areas required to be served to address a clear and imminent threat to public health, as determined by the Highlands Council in consultation with the NJDEP.

Rationale: The Highlands Act requires the development of Land Use Capability Map and minimum standards based upon the Resource Assessment and Smart Growth Component. Sections 11.a.(1) , 11.a.(6) and 12. These provisions emphasize the importance of preserving large areas of contiguous lands with high environmental sensitivity, but also the desirability of redevelopment and brownfields remediation. The Regional Protection Zone contains the most concentrated areas of contiguous, high quality environmental resources, and therefore extension or creation of wastewater capacity should be very stringently limited within this zone, including the Preservation Area based on NJDEP regulations pursuant to Section 30 of the Act.

- 7) The following standards shall be incorporated into the **Regional Conservation Zone** of the Land Use Capability Map in furtherance of the goals and requirements of the Highlands Act to protect contiguous areas of high quality environmental resources, to protect farmland and provide for compatible, sustainable agriculture, and to promote compatible brownfield remediation and redevelopment, as follows:
- Allow for the expansion of wastewater collection systems within and immediately adjacent to Existing Areas Served within the Rural Conservation Zone to serve areas identified in the RMP to be a Special Planned Area, or an area required to be served to address a clear and imminent threat to public health as determined by the Highlands Council in consultation with the NJDEP.
 - Provide for compact development served by existing or proposed Highlands Domestic Sewer Facilities only where such development within the Regional Conservation Zone adequately protects farmland and sensitive environmental resources through dedication of at least 80 percent of the site to farmland and open space preservation.
 - Ensure that areas not served by Highlands Domestic Sewer Facilities have development densities suitable for on-site wastewater treatment systems.

Rationale: The Highlands Act requires the development of Land Use Capability Map and minimum standards based upon the Resource Assessment and Smart Growth Component. Sections 11.a.(1) , 11.a.(6) and 12. The Rural Conservation Zone includes significant agricultural areas and sensitive natural resources. Significant expansion of sewer service areas in this zone would be contrary to protection of these resources except for two instances – redevelopment of previously developed areas, and concentration of development potential from large areas into compact development areas with preservation, through a conservation easement, of the undeveloped areas. Wherever sewerage is not provided for under these two exceptions, development density should be limited to ensure proper dilution of on-site wastewater systems.

- 8) The following standards shall be incorporated into the **Regional Development Zone** of the Land Use Capability Map in furtherance of the goals and requirements of the Highlands Act to encourage appropriate patterns of compatible development and redevelopment in or adjacent to developed areas, including the potential use of voluntary TDR Receiving Zones

based on infrastructure and land use conditions and local desire, and to discourage inappropriate development patterns, all while protecting the Highlands environment, as follows:

- Give highest priority for allocation of existing wastewater treatment capacity to redevelopment areas or regional growth areas that can accommodate TDR Receiving Zones.

Rationale: The Highlands Act requires the development of Land Use Capability Map and minimum standards based upon the Resource Assessment and Smart Growth Component. Sections 11.a.(1) , 11.a.(6) and 12. These provisions emphasize protection of Highlands resources, but then encourage development that is consistent with smart growth and State Development and Redevelopment Plan provisions, are supported by infrastructure, and will result in appropriate development patterns.

- 9) The following **Resource Protection Standards** are recommended for the RMP in furtherance of the goals and requirements of the Highlands Act to protect and enhance Highlands resources, including:

- Prohibit construction of sewer lines within Tier 1 of Well Head Protection Areas that may result in seepage of untreated sewage into ground water supplies.
- Prohibit expansion of a future sewer service area within critical natural resource areas in any LUCM zone, including the Highlands Preservation Area. Critical natural resource areas include HOW Protection Areas, Riparian Areas, Significant Natural Areas, Regional Forest Conservation Area, and Critical Wildlife Habitat.

Rationale: RMP standards are assigned based on regional indicators of Highlands riparian area quality. The RMP Standards support the necessity to determine the amount and type of human development and activity the Highlands Region can sustain while still maintaining the ecological value of the Highlands Region. Section 11.a.(1)(a). The Highlands Act requires the development of Land Use Capability Map and minimum standards based upon the Resource Assessment and Smart Growth Component. Sections 11.a.(1) , 11.a.(6) and 12. Well head protection areas provide source water protection for public water supply wells; leaking sewer lines can damage well water quality. Critical natural areas are incompatible with sewer-supported development densities, and therefore sewer service areas should avoid them. This provision is a continuation and expansion of USEPA policies to prohibit sewerage of wetland and flood plain areas for any treatment facilities receiving federal grants.

- 10) The following **Smart Design Standards** are recommended for the RMP in furtherance of the goals and requirements of the Highlands Act to encourage appropriate conservation based design throughout the region, including:

- Require use of water conservation devices for any redevelopment or development activity including renovations to existing single family residences and commercial/industrial buildings.
- Incorporate standards for mandatory inspection of new or existing single family residences or commercial/industrial development to prevent non-wastewater inflow to wastewater collection systems.

- Establish requirements for inspection and reporting of individual on-site wastewater disposal systems (i.e. septic)

Rationale: RMP standards are assigned based on regional indicators of Highlands riparian area quality. The RMP Standards support the necessity to determine the amount and type of human development and activity the Highlands Region can sustain while still maintaining the ecological value of the Highlands Region. Section 11.a.(1)(a). The Highlands Act requires the development of Land Use Capability Map and minimum standards based upon the Resource Assessment and Smart Growth Component. Sections 11.a.(1) , 11.a.(6) and 12. Wastewater capacity should be used efficiently wherever provided. Therefore, standards are needed to ensure water conservation and prevent non-wastewater flows to sewer lines, and to identify areas that may be appropriately served by sewer collection systems to correct an imminent threat to public health due to a high incidence of failing septic systems.

11) The following **Regional Growth Standards** are recommended for the RMP in furtherance of the goals and requirements of the Highlands Water Protection and Planning Act to encourage appropriate economic development opportunity throughout the region, including:

- Require adoption of an approved wastewater management plan or amendment to an existing plan substantially consistent with the Highlands Service Area included in the RMP.
- Require minimum development standards for residential properties served by wastewater treatment facilities at a density of no more than 1/2 acre per dwelling unit, and equivalent commercial and business Floor to Area Ratios (FAR) to ensure cost-effective utility service.
- Give highest priority to allocation of available wastewater treatment capacity within TDR Receiving Zones adopted by a municipality and approved by the Highlands Council.

Rationale: RMP standards are assigned based on regional indicators of Highlands riparian area quality. The RMP Standards support the necessity to determine the amount and type of human development and activity the Highlands Region can sustain while still maintaining the ecological value of the Highlands Region. Section 11.a.(1)(a). The Highlands Act requires the development of Land Use Capability Map and minimum standards based upon the Resource Assessment and Smart Growth Component. Sections 11.a.(1) , 11.a.(6) and 12. The RMP establishes areas suitable for sewer service based on goals and provisions of the Highlands Act, and therefore wastewater management plans should likewise be in conformance with the RMP. Construction and maintenance of wastewater collection systems are a significant societal and household expense, and therefore should not support large-lot development. Finally, allocation of wastewater capacity to TDR Receiving Zones maximizes the benefit of the capacity to society, supporting both compact development forms and the preservation of critical natural resources (in the TDR Sending Zones).

12) The following **Pre-Conformance** strategies are recommended in furtherance of the goals and requirements of the Highlands Act to ensure successful implementation of the RMP prior to the conformance period, including:

- Submit the Highlands Wastewater Service Area map to NJDEP for review as a basis for review of subsequent wastewater planning and treatment works approvals.

- Develop guidelines to incorporate appropriate Highlands Preservation Area exemptions or prior-approved projects into the Highlands Wastewater Service Area map.
- Develop guidelines in consultation with NJDEP regarding standardized procedures for preparing Wastewater Management Plans.
- Obtain designation establishing the Highlands Council as the designated water quality planning agency for the Highlands Region.

Rationale: RMP Implementation Strategies support the necessity to determine what activities, data and programs will be required of both the Highlands Council and municipal and county stakeholders during the Plan Conformance process as well as what initiatives will require longer term planning goals. Sections 11.a.(3), 14 and 15. The RMP is a “living document” and will continue to be refined and developed in support of regional planning goals. In order to facilitate regional planning goals it is imperative that the RMP have State, County, and local support from all levels of government and the support of the stakeholders of the Highlands Region. For wastewater management planning, a close coordination with NJDEP will provide benefits to RMP implementation.

13) The following **Conformance** strategies are recommended in furtherance of the goals and requirements of the Highlands Act to ensure successful implementation of the RMP during the conformance period, including:

- Require that municipal conformance approval include an approved wastewater management plan that conforms with both NJDEP rules and is consistent with the Highlands Wastewater Service Area identified in the RMP.
- Require that municipal and county conformance require delineation of existing sewer collection systems and identification of properties served by those systems.
- Allow for adjustments and revisions to Highlands Wastewater Service Area to include Special Planned Areas, projects deemed exempt from the requirements of the Highlands Act, areas that obtained final subdivision approval and Treatment Works approval prior to the effective date of the Act, or areas that possess an imminent threat to public health upon demonstration that the critical natural resources of the Highlands will be maintained.

Rationale: RMP Implementation Strategies support the necessity to determine what activities, data and programs will be required of both the Council and municipal and county stakeholders during the Plan Conformance process as well as what initiatives will require longer term planning goals. Sections 11.a.(3), 14 and 15. The RMP is a “living document” and will continue to be refined and developed in support of regional planning goals. In order to facilitate regional planning goals it is imperative that the RMP have State, County, and local support from all levels of government and the support of the stakeholders of the Highlands Region. Ensuring conformity of wastewater management plans to the RMP (and by extension, to the local plans based on their conformance with the RMP) will provide for more efficient governance, clearer standards for landowners, etc.

14) The following **5-year Resource Protection and Planning Goals** are recommended in furtherance of the goals and requirements of the Highlands Act to ensure continued refinement and development of the RMP, including:

- Coordinate with and facilitate NJDEP review and approval of wastewater management plan amendments for proposed service areas that are consistent with the Highlands Wastewater Service Areas identified in the RMP.
- Coordinate efforts with NJDEP and wastewater utility authorities to develop standardized water quality models to evaluate the assimilative capacity of waters that receive wastewater discharges consistent with TMDL requirements established by NJDEP.

Rationale: The Highlands Act requires the Highlands Council to periodically revise and update the RMP at least once every six years. Section 8.a. RMP Implementation Strategies support the necessity to determine what activities, data and programs will be required of both the Council and municipal and county stakeholders during the Plan Conformance process as well as what initiatives will require longer term planning goals. The RMP is a “living document” and will continue to be refined and developed in support of regional planning goals. In order to facilitate regional planning goals it is imperative that the RMP have State, County, and local support from all levels of government and the support of the stakeholders of the Highlands Region. Sections 11.a.(3), 14 and 15. An emphasis on water quality modeling will help determine where the Highlands Council can work with other stakeholders to actually improve the quality of Highlands water resources.

15) The following **Coordination and Consistency Considerations** are recommended to promote active participation in the implementation of the RMP among state and federal agencies:

- Develop a coordinated program with the NJDEP to track ground water and surface water wastewater discharges within the Highlands and maintain current estimates of available capacity consistent with the RMP.
- Develop a coordinated monitoring program with the NJDEP and the USGS to identify and monitor water quality concerns related to surface water effluent discharges.
- Develop a coordinated regulatory review program with the NJDEP to ensure consistency of domestic treatment works approvals and wastewater management plans with the resource protection and smart growth goals of the RMP.
- Develop technical guidance with the NJDEP to promote water conservation measures in Highlands municipalities and in municipalities supplied with Highlands water.

Rationale: RMP Implementation Strategies support the necessity to determine what local, State, and federal programs and policies may best be coordinated to promote the goals, purposes, policies, and provisions of the RMP. Sections 11.a.(4). The RMP is a “living document” and will continue to be refined and developed in support of regional planning goals. In order to facilitate regional planning goals it is imperative that the RMP have State, County, and local support from all levels of government and the support of the stakeholders of the Highlands Region. Coordination on wastewater management issues will be a critical aspect of RMP implementation.

16) The following **Local Participation Considerations** are recommended to promote the understanding and support for the RMP resource protection goals at the local level:

- Develop educational program for municipal officials on water conservation measures and methods to control infiltration and inflow to maximize available wastewater treatment capacity.
- Develop training and educational program for municipal and county planning board and environmental commissioners on methods for using the Regional Master Plan to develop updated wastewater management plans.

Rationale: RMP Implementation Strategies support the necessity to provide for the maximum feasible local government and public input into the Highlands Council's operations. Section 11.a.(3). The RMP is a “living document” and will continue to be refined and developed in support of regional planning goals. In order to facilitate regional planning goals it is imperative that the RMP have State, County, and local support from all levels of government and the support of the stakeholders of the Highlands Region.

II. REQUIREMENTS OF THE HIGHLANDS ACT AND RMP GOALS RELATED TO WASTEWATER UTILITY CAPACITY:

Goals of the Highlands Act:

In accordance with Section 10 of the Highlands Act, the overarching goal of the Regional Master Plan “with respect to the entire Highlands Region shall be to protect and enhance the significant values of the resources thereof in a manner which is consistent with the purposes and provisions of this act.” Section 10.a.

The Highlands Act establishes specific goals relating to Wastewater Utility Treatment Capacity. Those goals with respect to the Preservation Area shall be to:

- protect, restore, and enhance the quality and quantity of surface and ground waters. Section 10.b.(1).
- promote conservation of water resources. Section 10.b.(6).

In addition, the goals with relating to protection of riparian areas with respect to the Planning Area shall be to:

- protect, restore, and enhance the quality and quantity of surface and ground waters. Section 10.c.(1).
- preserve to the maximum extent possible any environmentally sensitive lands and other lands needed for recreation and conservation purposes. Section 10.c.(2).
- protect and maintain the essential character of the Highlands environment. Section 10.c.(3).
- promote conservation of water resources. Section 10.c.(7).
- 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. Section 10.c.(9).

Requirements of the Highlands Act:

Resource Assessment

The Highlands Act does not include specific Resource Assessment requirements relating to Wastewater Utility Treatment Capacity. However, the designation of wastewater service areas will be affected by the Resource Assessment, which “(a) determines the amount and type of human development and activity which the ecosystem of the Highlands Region can sustain while still maintaining the overall ecological values thereof, with special reference to surface and ground water quality and supply; contiguous forests and woodlands; endangered and threatened animals, plants, and biotic communities; ecological factors relating to the protection and enhancement of agricultural or horticultural production or activity; air quality; and other appropriate considerations affecting the ecological integrity of the Highlands Region.” Section 11.a.(1)(a).

Smart Growth Component

The Highlands Act includes specific requirements relating to wastewater capacity, requiring the development of a Smart Growth component that includes “A smart growth component that includes an assessment, based upon the {the Resource Assessment}, of opportunities for appropriate development, redevelopment, and economic growth, and a transfer of development rights program which shall include **consideration of public investment priorities, infrastructure investments**, economic development, revitalization, housing, transportation, energy resources, waste management, recycling, brownfields, and design such as mixed-use, compact design, and transit villages. In preparing this component, the council shall:

- (a) prepare a land use capability map;
- (b) **identify existing developed areas capable of sustaining redevelopment activities and investment;**
- (c) **identify undeveloped areas in the planning area, which are not significantly constrained by environmental limitations such as steep slopes, wetlands, or dense forests, are not prime agricultural areas, and are located near or adjacent to existing development and infrastructure, that could be developed;**
- (d) identify transportation, water, **wastewater**, and power infrastructure that would support or limit development and redevelopment in the planning area. This analysis shall also provide proposed densities for development, redevelopment, or voluntary receiving zones for the transfer of development rights;
- (e) identify potential voluntary receiving zones in the planning area for the transfer of development rights through the **appropriate expansion of infrastructure or the modified uses of existing infrastructure;**
- (f) issue model minimum standards for municipal and county master planning and development regulations outside of the preservation area, including density standards for center-based development to encourage, where appropriate, the adoption of such standards;
- (g) **identify special critical environmental areas and other critical natural resource lands where development should be limited;** and
- (h) identify areas appropriate for redevelopment and set appropriate density standards for redevelopment. Any area identified for possible redevelopment pursuant to this subparagraph shall be either a brownfield site designated by the Department of Environmental Protection or a site at which at least 70% of the area thereof is covered with impervious surface.” Section 11.a.(6)(emphasis added).

Preservation Area Assessment

For the Preservation Area, Section 12 of the Highlands Act requires “a land use capability map and a comprehensive statement of policies for planning and managing the development and use of land in the preservation area, which shall be based upon, comply with, and implement the environmental standards” adopted by NJDEP and the Resource Assessment prepared the Highlands Council under Section 11. Section 12.

Section 12 specifically requires implementation “that will ensure the continued, uniform, and consistent protection of the Highlands Region in accordance with the goals, purposes, policies, and provisions of this act, and shall include:

- a. a preservation zone element that identifies zones within the preservation area where development shall not occur in order to protect water resources and environmentally sensitive lands and which shall be permanently preserved through use of a variety of tools, including but not limited to land acquisition and the transfer of development rights; and
- b. minimum standards governing municipal and county master planning, development regulations, and other regulations concerning the development and use of land in the preservation area, including, but not limited to, standards for minimum lot sizes and stream setbacks, construction on steep slopes, maximum appropriate population densities, and regulated or prohibited uses for specific portions of the preservation area. Section 12.

Preservation Area Requirements

Section 42 of the Highlands Act requires the following:

42. Notwithstanding the provisions of the "Water Pollution Control Act," P.L.1977, c.74 (C.58:10A-1 et seq.) and the "Water Quality Planning Act," P.L.1977, c.75 (C.58:11A-1 et seq.), or any rule or regulation adopted pursuant thereto, to the contrary, within the Highlands preservation area as defined in section 3 of P.L.2004, c.120 (C.13:20-3), designated sewer service areas for which wastewater collection systems have not been installed on the date of enactment of P.L.2004, c.120 (C.13:20-1 et al.) are hereby revoked, and any associated treatment works approvals in the impacted areas shall expire on the date of enactment of P.L.2004, c.120 (C.13:20-1 et al.), except that any designated sewer service area shall not be revoked and any associated treatment works approvals shall not expire if necessary to serve development in the Highlands preservation area that is exempt from the provisions of P.L.2004, c.120 (C.13:20-1 et al.) pursuant to subsection a. of section 30 of P.L.2004, c.120 (C.13:20-28). The Department of Environmental Protection shall implement measures to amend any water quality management plan as appropriate to reflect the revocation of designated sewer service areas pursuant to this section.”

Section 34.b. requires “measures to ensure that existing water quality shall be maintained, restored, or enhanced, as required pursuant to the "Water Pollution Control Act," P.L.1977, c. 74 (C.58:10A-1 et seq.) or the "Water Quality Planning Act," P.L.1977, c. 75 (C.58:11A-1 et seq.), or any rule or regulation adopted pursuant thereto, in all Highlands open waters and waters of the Highlands.”

In addition, Section 36 of the Highlands Act requires that NJDEP’s permitting review approval without a waiver may be issued only upon a finding that the proposed major Highlands development:

- (1) would have a de minimis impact on water resources and would not cause or contribute to a significant degradation of surface or ground waters. In making this determination, the

commissioner shall consider the extent of any impacts on water resources resulting from the proposed major Highlands development, including, but not limited to, the regenerative capacity of aquifers or other surface or ground water supplies, increases in stormwater generated, increases in impervious surface, increases in stormwater pollutant loading, changes in land use, and changes in vegetative cover;

(2) would cause minimal feasible interference with the natural functioning of animal, plant, and other natural resources at the site and within the surrounding area, and minimal feasible individual and cumulative adverse impacts to the environment both onsite and offsite of the major Highlands development;

(3) will result in minimum feasible alteration or impairment of the aquatic ecosystem including existing contour, vegetation, fish and wildlife resources, and aquatic circulation of a freshwater wetland;

(4) will not jeopardize the continued existence of species listed pursuant to "The Endangered and Nongame Species Conservation Act," P.L.1973, c. 309 (C.23:2A-1 et seq.) or the "Endangered Plant Species List Act," P.L.1989, c. 56 (C.13:1B-15.151 et seq.), or which appear on the federal endangered or threatened species list, and will not result in the likelihood of the destruction or adverse modification of habitat for any rare, threatened, or endangered species of animal or plant;

(5) is located or constructed so as to neither endanger human life or property nor otherwise impair the public health, safety, and welfare;

(6) would result in minimal practicable degradation of unique or irreplaceable land types, historical or archeological areas, and existing public scenic attributes at the site and within the surrounding area; and

(7) meets all other applicable department standards, rules, and regulations and State laws." Section 36.

Local Participation Component

A component to provide for the maximum feasible local government and public input into the council's operations, which shall include a framework for developing policies for the planning area in conjunction with those local government units in the planning area who choose to conform to the regional master plan. Section 11.a.(3).

Coordination and Consistency Component

A coordination and consistency component which details the ways in which local, State, and federal programs and policies may best be coordinated to promote the goals, purposes, policies, and provisions of the regional master plan, and which details how land, water, and structures managed by governmental or nongovernmental entities in the public interest within the Highlands Region may be integrated into the regional master plan. Section 11.a.(4).

III. TECHNICAL BASIS AND JUSTIFICATION FOR STAFF RECOMMENDATIONS

The smart growth element of the RMP seeks to identify the treatment capacity limitations of existing **Highlands Domestic Sewer Facilities** and their associated wastewater service areas (both existing area served and full sewer service areas) to estimate the amount of wastewater utility treatment capacity available for redevelopment and regional growth opportunity. The RMP then seeks to identify where development and redevelopment can be reasonably accommodated within the

Highlands Region within available treatment capacity limitations and without harm to ecological and water resources.

The purpose of this element is to establish the Wastewater Utility Treatment Capacity limitations within the Highlands region to inform identification of appropriate redevelopment and regional growth opportunities for inclusion in the Land Use Capability Map consistent with the resource protection requirements contained in the RMP. This element includes the following components:

- identify areas currently served by existing wastewater facilities
- identify proposed wastewater service areas for these facilities
- determine available treatment capacity for facilities that have the ability to support some level of regional growth and or redevelopment,
- determine areas where the projected redevelopment and development treatment capacity demands may exceed the available capacity of these facilities
- identify appropriate wastewater service areas consistent with regional growth or redevelopment areas that have existing treatment capacity sufficient to accommodate the projected wastewater treatment demand
- evaluate the potential or limitations for future expansion of wastewater treatment capacity where there is a clearly identified benefit to the RMP, based on existing water quality concerns and other limitations, and through the control of infiltration and inflow

Domestic treatment works are wastewater treatment facilities that process human effluent as their primary wastewater flow, though they may also treat industrial effluent from within their service area. They may discharge to ground water (DGW) or surface water (DSW), and have capacities ranging from less than 20,000 gallons per day to over 10 million gallons per day. Each has an associated service area. The existing areas served have been identified through a combination of NJDEP and utility data, billing records, etc. The full **Proposed Sewer Service Areas** are subject to prior review and approval by NJDEP, in consultation with the Highlands Council, to determine that there is sufficient treatment capacity to accommodate projected treatment demand within areas appropriate for development or redevelopment.

As part of the RMP the Highlands Council determined existing areas served by domestic treatment works and examined their existing flows to estimate available wastewater treatment capacity. The Highlands Council worked in cooperation with Hatch Mott MacDonald and NJDEP to compile background information to establish capacity limitations, existing area served and proposed service areas for individual wastewater treatment facilities. A technical memorandum titled *Wastewater Treatment Utility Infrastructure Capacity* discusses the methods and results of this effort.

IV. GLOSSARY

Available Wastewater Treatment Capacity – The capacity of an existing wastewater treatment facility resulting from the subtraction of the maximum three month average flows from the permitted flow.

Domestic Treatment Works - Wastewater treatment facilities that process human wastewater as their primary wastewater flow, though they may also treat industrial effluent from within their service area.

Existing Area Served - Properties that are currently, actively served by a Highlands Domestic Sewer Facility, based on the extent of existing collection systems.

Future Wastewater Treatment Expansion Areas – A portion of a Proposed Sewer Service Area that may be appropriate for regional growth but whose projected wastewater demand exceeds available wastewater treatment capacity.

Highlands Domestic Sewer Facility – A Domestic Treatment Works that provides wastewater treatment to municipalities and include treatment capacities sufficient to support redevelopment and regional growth opportunities.

Highlands Wastewater Service Area – The area that can be served by a Highlands Domestic Sewer Facility within available treatment capacity and consistent with the resource protection and smart growth planning goals of the RMP.

Projected Wastewater Demand – The total anticipated wastewater treatment requirements for a Proposed Wastewater Service Area based upon full build out in accordance with current municipal zoning.

Proposed Sewer Service Area – The extent of a sewer service area envisioned by a wastewater utility authority that may be subject to prior review and approval by NJDEP in consultation with the Highlands Council.

Redevelopment Treatment Capacity – A portion of the available Wastewater Treatment Capacity dedicated for redevelopment activities within Existing Areas Served based on 20% of the maximum three month average flows.

Special Planned Area – Previous developed lands that provides opportunities for redevelopment, including infill and adaptive reuse, based on limited resource constraints due to past development patterns. Within the Preservation Area a Special Planned Area is limited to an area or site that contains at least 70% impervious area or is a Brownfield site determined to be Special Planned Area by the Highlands Council and NJDEP.