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**DRAFT FOR REVIEW BY THE HIGHLANDS COUNCIL**

# ***RMP Program: Water and Wastewater Utilities***

***Version: April 9, 2008***

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| **Issue Overview** | The Regional Master Plan includes many policies and objectives regarding water supply and wastewater utility capacity, service areas, service densities, and environmental protection requirements. 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 and a greater drain on available water resources. For this reason, the RMP's emphasis on utilities is critical to protection of Highlands Region resources.<br><br>Smart growth principles emphasize the concentration of development in centers and other compact forms, to bring jobs and housing together, reduce commutes, make efficient use of infrastructure and protect the landscape from fragmented "sprawl" development. Provision of water supply and wastewater utilities to such areas is a prerequisite of smart growth. In more rural landscapes, the extension or creation of water supply and wastewater utility services is also important for supporting clustered development adjacent to or distinct from existing areas served, respectively. Clustered development is an important approach for preserving large areas where land preservation does not take the land out of the marketplace.<br><br>Management of water and wastewater utilities is a shared responsibility of utilities, municipalities, and State agencies such as the Highlands Council, the New Jersey Department of Environmental Protection (NJDEP) and the Board of Public Utilities. The RMP provides a framework for coordination of these entities by ensuring that compact growth requiring such utilities happens only where utility capacity and resource capacity exist, the growth is at densities that ensure cost-effective service provision, and environmental resources are protected. Each component is related to the others. Municipal comprehensive planning under Plan Conformance must provide an analytical framework that will drive decisions in conformance with the RMP. The intent of RMP policies is to ensure that any development in conformance with the RMP will also be in conformance with NJDEP planning requirements under the Water Quality Planning Act, providing a basis for approval by both State agencies. Where a County Wastewater Management Plan already incorporates the necessary information, a municipality may rely on that information as appropriate. Because the resource constraints regarding water availability are linked to this process, conformance with the RMP should also address NJDEP planning requirements for water supply. The RMP does not address specific |

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| | design, permitting or operational aspects of water and wastewater utilities; rather, it leaves those issues to NJDEP regulation. |
| **RMP Policies and Objectives Addressed** | **Water Supply and Sewer Service Area Policies and Objectives**<br>**Objective 1A2d** To prohibit through local development review and Highlands Project Review the expansion of public water supply systems or public wastewater collection and treatment systems or community-based on-site wastewater facilities into the Forest Resource Area except as shown to be necessary for and is approved by the Highlands Council to support clustered development (see Objectives 2K3d and 2K3f) that cannot feasibly be located outside the Forest Resource Area or the forested portion of the Forest Resource Area, to serve a designated Highlands Redevelopment Area, to address a documented threat to public health and safety where no alternative is feasible, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of forest.<br>**Policy 2I1** To ensure compliance with the statutory revocation of designated sewer service areas in the Preservation Area unless the wastewater collection systems had been installed by August 10, 2004, and unless extensions are approved through a HPAA or an exemption determination in accordance with N.J.A.C. 7:38 ~~warranted to address documented threats to public health and safety or are exempt from the Highlands Act~~.<br>**Policy 2J4** To minimize, through Plan Conformance, local development review and Highlands Project Review, the extension of public water supply systems within the Protection Zone and the Conservation Zone for the protection of water resources.<br>**Objective 2J4a** Prohibit new, expanded or extended public water systems unless they are shown to be necessary for and are approved by the Highlands Council to address documented threat to public health and safety where no alternative is feasible, to serve a designated Highlands Redevelopment Area, or cluster development, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of sensitive environmental resources.<br>**Objective 2J4b** Accommodate compact development served by existing or proposed public water systems only where such development is within or immediately adjacent to an existing service area and provides for the clustering or aggregation of development that will preserve at least 80 percent of the project area in perpetuity for environmental protection or agriculture purposes and the development impacts are otherwise consistent with the goals and requirements of the Plan. Where agricultural purposes are involved, increased impervious surfaces of greater than 3% but less than 9% of the agricultural lands requires the approval of a Farm Conservation Plan from the USDA Natural Resource Conservation Service and impervious surfaces of 9% or greater requires the approval of a Resource Management System Plan from the USDA Natural Resource Conservation Service.<br>**Objective 2J9b** Coordinate with NJDEP, water purveyors and water utilities to ensure that service areas and franchise areas are supplied by and consistent with sustainable yields from their designated sources.<br>**Objective 2K3b** Prohibit new, expanded, or extended wastewater collection or treatment outside of Existing Areas Served unless they are shown to be necessary for and are approved by the Highlands Council to address documented threat to public health and safety where no alternative is feasible, to serve a Highlands Redevelopment Area, or cluster development, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of sensitive environmental |

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| | resources.<br>**Objective 2K3c** Expansion of wastewater service shall be permitted in areas where there is a demonstrated threat to public health caused by a pattern of documented failing septic systems located within Existing Areas Served, or adjacent to Existing Areas Served where the failing septic systems cannot reasonably be addressed through rehabilitation or replacement of the existing septic system.<br>**Objective 2K3d** Permit cluster development served by existing or expanded wastewater collection and treatment systems in an Agricultural Resource Area only where such development is within or immediately adjacent to an Existing Areas Served and adequate provision is made for the preservation of at least 80 percent of the project area in perpetuity for environmental protection or agricultural purposes and provided that the proposed development is otherwise consistent with the goals and requirements of the Plan. Where agricultural purposes are involved, increased impervious surfaces of greater than 3% but less than 9% of the agricultural lands requires the approval of a Farm Conservation Plan from the USDA Natural Resource Conservation Service and impervious surfaces of 9% or greater requires the approval of a Resource Management System Plan from the USDA Natural Resource Conservation Service.<br>**Objective 2K3f** Cluster development utilizing community-based on-site treatment facilities shall be permitted: (1) where such development is not within an Existing Area Served or adjacent to an Existing Area Served with available capacity, (2) where the system is designed and has capacity only for the cluster development, (3) where the system does not create the potential for future expansion into areas that are not the subject of cluster developments immediately adjacent to the initial cluster served, (4) where adequate provision is made for the preservation of at least 80 percent of the project area in perpetuity for environmental protection or agriculture purposes, (5) where agricultural purposes are involved, increased impervious surfaces of greater than 3% but less than 9% of the agricultural lands requires the approval of a Farm Conservation Plan from the USDA Natural Resource Conservation Service and impervious surfaces of 9% or greater requires the approval of a Resource Management System Plan from the USDA Natural Resource Conservation Service , and (6) provided that the proposed development is otherwise consistent with the goals and requirements of the Plan.<br>**Objective 2K4c** Allow the expansion or creation of wastewater collection systems beyond Existing Areas Served to serve lands which are appropriate for infill or redevelopment, or to serve areas if they are shown to be necessary for and are approved by the Highlands Council to address a documented threat to public health and safety where no alternative is feasible, to serve cluster development, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of sensitive environmental resources.<br>**Objective 2K5a** Allow community-based on-site treatment facilities for those areas located outside Existing Areas Served that are shown to be necessary for and are approved by the Highlands Council to address a documented threat to public health and safety due to failing septic systems; these facilities shall only serve existing wastewater and shall not include infrastructure to support future growth.<br>**Objective 2K5c** Prohibit expansion of a public wastewater collection and treatment systems and community on-site treatment facilities within the Preservation Area, except as provided by the Highlands Act. Further, prohibit such systems and facilities within Open Water buffer areas, Riparian Areas, the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas, Steep |

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| | Slopes, and Critical Habitat Areas unless they are shown to be necessary for and are approved by the Highlands Council to address documented threat to public health and safety where no alternative is feasible, cluster development (see Objectives 2K3d and 2K3f), Highlands Redevelopment Areas, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of these sensitive environmental resources.<br>**Objective 2K5f** Wastewater Management Plan or amendments thereto, or to an Areawide Water Quality Management Plan, shall be consistent with requirements of this Plan.<br>**Policy 3C1** To prohibit through Plan Conformance, local development review and Highlands Project Review the development of additional water and wastewater infrastructure in a Agricultural Resource Area within the Protection Zone and the Preservation Area, unless they are shown to be necessary for and are approved by the Highlands Council to address documented threat to public health and safety where no alternative is feasible, to serve a Highlands Redevelopment Area or mandatory cluster development, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of agricultural lands within the Agricultural Resource Area.<br>**Policy 3C2** To prohibit through Plan Conformance, local development review and Highlands Project Review the development of additional water and wastewater infrastructure in a Agricultural Resource Area in a Conservation Zone, unless they are shown to be necessary for and are approved by the Highlands Council to address documented threat to public health and safety where no alternative is feasible, to serve a Highlands Redevelopment Area or mandatory cluster development, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of agricultural lands within the Agricultural Resource Area.<br>**Objective 6B1e** Prevent the extension or creation of water and wastewater utility services in environmentally constrained sub-zones, unless they are shown to be necessary for and are approved by the Highlands Council to address documented threat to public health and safety where no alternative is feasible, to serve a Highlands Redevelopment Area or cluster development, or to provide for minimum practical use in the absence of any alternative through issuance of a waiver by NJDEP or the Highlands Council, and will maximize the protection of sensitive environmental resources.<br>**Objective 6B7a** Center based development initiatives should be planned within the Existing Community Zone to meet minimum density thresholds of three dwelling units per acre. Higher densities of five dwelling units and above are encouraged in areas designated as TDR Receiving Zones. Attainment of these density thresholds is discretionary, and shall be consistent with the resource and capacity goals and requirements in this plan. Centers in the Protection Zone and Conservation Zone, potentially including clustered development, shall be at densities appropriate to the zone, the community character and the use of septic systems or community wastewater systems.<br><br>**<u>Sewerage Allocation Policies and Objectives</u>**<br>**Policy 2K2** To base projected demand for appropriate economic revitalization and opportunities for designated Receiving Zones within Existing Areas Served on existing maximum three month demands plus an estimate of redevelopment needs based on either Highlands Council regional analyses or more detailed local analyses, |

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| | to assess whether there is adequate treatment capacity to encourage redevelopment.<br>**Objective 2K3a** Allocate any available sewer system capacity to address documented threats to public health from failing septic systems on a priority basis.<br>**Policy 2K4** To provide new growth and development in the Existing Community Zone with adequate and appropriate wastewater treatment, through Plan Conformance, local development review and Highlands Project Review.<br>**Objective 2K4a** 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.<br>**Objective 2K4b** The second highest priority for the allocation of excess or additional wastewater treatment capacity is to regional growth and redevelopment areas that can serve as designated Receiving Zones.<br>**Objective 2K5e** Existing wastewater collection and treatments systems which are non-compliant with state water quality standards for wastewater treatment and effluent discharge shall be prohibited from collecting and treating additional wastewater until the treatment systems are fully compliant with State permit requirements.<br><br>**<u>Water Supply Allocation Policies and Objectives</u>**<br>**Objective 2B3a** Water utilities that rely for their water sources on a HUC14 subwatershed that have a positive Net Water Availability for potable supplies shall be given priority for public community water systems serving the Existing Community Zone, based on the development capacity for that Zone.<br>**Policy 2B4** To require through Plan Conformance the development and implementation of Water Management Plans to address any Current Deficit Areas or subwatershed that could become deficit areas based on projected development and water uses, to ensure sustainable water supply, water resource and ecological values.<br>**Objective 2B4a** Water Management Plans shall include provisions to reduce consumptive and depletive uses of ground and surface waters as necessary to reduce or prevent deficits in Net Water Availability; or to ensure continued stream flows to downstream Current Deficit Areas from Existing Constrained Areas, to the extent practicable within each zone.<br>**Objective 2B4b** Proposed increases in water use, including consumptive or depletive water uses, within a Current Deficit Area or an area where the proposed increase would cause the HUC14 subwatershed to become a Current Deficit Area shall provide mitigation equal to 125% of the proposed new consumptive or depletive water uses 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.<br>**Policy 2B6** To require, through local development review and Highlands Project Review, the use of water conservation, recycling and reuse methods (where appropriate) and devices for any redevelopment or development activity, including renovations to existing residential, institutional, commercial or industrial buildings, to minimize consumptive water use tailored to meet the resource protection and other goals for each Zone and considering subwatershed-specific conditions and Net Water Availability status.<br>**Policy 2B7** To require through Highlands Project Review that Wastewater Management Plans or amendments demonstrate that the proposed service area will not directly or indirectly cause or contribute to, or could help mitigate, a Net Water Availability deficit.<br>**Objective 2B8e** PZ: Ensure, through NJDEP Water Allocation regulations, that |

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| | any new or increased water allocation permits do not result in significant reductions in safe yields for any water supply facility with an existing water allocation permit and NJDEP-approved safe yield.<br>**Objective 2B9f** CZ: Ensure, through NJDEP Water Allocation regulations, that any new or increased water allocation permits do not result in significant reductions in safe yields for any water supply facility with an existing water allocation permit and NJDEP-approved safe yield.<br>**Objective 2B10h** ECZ: Ensure, through NJDEP Water Allocation regulations, that any new or increased water allocation permits do not result in significant reductions in safe yields for any water supply facility with an existing water allocation permit and NJDEP-approved safe yield.<br>**Objective 2J1d** The identification of remaining available water supply system capacity to support regional growth opportunities within the Highlands Region.<br>**Policy 2J2** To ensure, through Plan Conformance and Highlands Project Review, that the service areas, water allocation permits and bulk water purchases of Highlands Public Community Water Systems shall be limited such that the maximum monthly demand shall not exceed or contribute to an exceedance of the water availability of its source waters.<br>**Policy 2J3** To identify potential opportunities for public water systems where domestic water supplies have been documented as a threat to public health due to source contamination.<br>**Policy 2J5** To allocate available water supply in the Existing Community Zone to provide for the maximum direct and indirect protection of water resources in the Highlands Region.<br>**Objective 2J5a** The highest priority for the allocation of available utility capacity in Existing Community Zones shall be given to areas of regional growth opportunities that constitute designated Receiving Zones.<br>**Objective 2J5c** Limit future water system demand and/or reducing existing demand by water systems that are dependent on Current Water Availability Deficit Areas or Existing Water Availability Constrained Areas as a source of water.<br>**Objective 2J5d** Limit future water system demands to levels that will not cause a Current Water Availability Deficit where one does not currently exist.<br>**Policy 2J6** To prohibit, through local development review and Highlands Project Review, new or increased water resource transfers between subwatersheds unless it is demonstrated that no other option exists to meet public health, safety and welfare objectives and where such transfers do not result in impairment of resources in the subwatershed from which water is proposed to be transferred.<br><br>**<u>Design and Operation Policies and Objectives</u>**<br>**Objective 1K4d** Public works projects, including but not limited to water supply, sewerage, stormwater and transportation facilities, shall be constructed and maintained such that the potential for damage from karst features and the contamination of ground water are avoided.<br>**Objective 2G3c** Wastewater Management Plans or amendments shall demonstrate that the proposed service area will not directly or indirectly support development that would be in violation of an adopted TMDL.<br>**Objective 2H2a** Prohibit land uses that have a significant potential to result in the discharge of pathogens (including but not limited to septic systems and engineered stormwater infiltration from surfaces with significant potential for contact with pathogenic contaminants) to ground water or to the land surface within a designated Tier 1 Wellhead Protection Area, such that they may degrade or contribute to the degradation of ground water quality. |

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| | **Objective 2H5d** Amend Wastewater Management Plans for conforming municipalities and counties to ensure that any activity associated with the proposed service area will not adversely affect a Wellhead Protection Area.<br>**Objective 2J8c** Require that new residential development served by public community water systems be at a minimum density of 1/2 acre per dwelling unit for the developed part of the site (i.e., not including wetlands, open water buffers, recreational space), to ensure cost-effective utility service.<br>**Objective 2J8c** Require that new non-residential development served by public wastewater collection and treatment systems be designed to target a floor area ratio (FAR) of 0.84 for the developed part of the site (i.e., not including wetlands, open water buffers, recreational space) to the maximum extent feasible, as a means to maximize parking and employment efficiency and compact development.<br>**Objective 2K5b** Prohibit the construction of sewer lines within Tier 1 of Well Head Protection Areas that may result in seepage of untreated sewage into ground water supplies.<br>**Objective 2K6a** Require that new residential development served by public wastewater collection and treatment systems be at a minimum density of 1/2 acre per dwelling unit for the developed part of the site (i.e., not including wetlands, open water buffers, and recreational space) to ensure cost-effective utility service.<br>**Objective 2K6b** Require that new non-residential development served by public wastewater collection and treatment systems be designed to target a floor area ratio (FAR) of 0.84 for the developed part of the site (i.e., not including wetlands, open water buffers, recreational space) to the maximum extent feasible, as a means to maximize parking and employment efficiency and compact development.<br>**Policy 6J1** To encourage Preservation Area redevelopment of sites with 70% or greater impervious surfaces or a brownfield in areas designated by the Highlands Council as Highlands Redevelopment Areas in accordance with N.J.A.C 7:38-6.6.<br>**Policy 6J2** To encourage redevelopment activities in the Existing Community Zone in the Planning Area on sites that meet the Preservation Area redevelopment site designation criteria, grayfields and other previously developed lands that have adequate water, wastewater, transportation capacity and are appropriate for increased land use intensity or conversion to greenfields.<br>**Policy 6J3** To encourage redevelopment activities in the Conservation and Protection Zones in the Planning Area on sites that meet the Preservation Area Highlands Redevelopment Area designation criteria, or are grayfields, and that have adequate water, wastewater, transportation capacity and are appropriate for increased land use intensity or conversion to greenfields. |
| **Program Summary** | The Water and Wastewater Utilities Program provides a step-wise approach to determining the existing and potential capacity for service provision within the Highlands Region, identification of appropriate and inappropriate areas for the provision of utility services, and how capacity will be allocated among Existing Areas Served and proposed areas for new services both adjacent to and distinct from Existing Areas Served. Provision is made for incorporation of resource constraints and the protection of sensitive environmental features. |
| **Verification of Available Facility Capacity for Water Supply and Wastewater** | The RMP's estimation of available utility capacity is based on a comparison of the NJDEP-approved facility capacity to the maximum monthly demand for water supply and the maximum three month flows for wastewater through the year 2004. Municipalities and utilities may provide updated or more detailed information to revise the RMP estimates, through the RMP Update process. Updated or detailed information may include, but is not limited to: |

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| **Utilities** | • Updated or corrected information on NJDEP-approved facility capacity, such as approved Wastewater Management Plans, NJPDES permits, treatment works approvals and Capacity Assurance Plans (for facilities where three month average flows exceed 80% of their facility capacity) for wastewater utilities, or water allocation permits, "safe yield" and "firm capacity" for water supply utilities.<br>• Corrections regarding the water demands or wastewater flows during the period used in the RMP estimates, including information from Discharge Monitoring Reports, Water Allocation Permit reports, or Safe Drinking Water Permit reports.<br>• More recent estimates of the maximum monthly water demands or rolling three month wastewater flows based on information reported to NJDEP.<br>• Documentation of temporary demands (especially for water supply) that should not be included in the demand analysis, such as temporary bulk sales of water to an adjacent utility to address an emergency or other temporary situation.<br>• Documentation of the permanent conversion of a land use that will significantly change (increase or decrease) its water use or wastewater generating characteristics.<br>• Documentation of any temporary cessation or major reduction in water demand or wastewater generation, where renewal previous levels is anticipated and should be reflected in the calculation of existing demands.<br>• Documentation of contractual commitments for new water use or wastewater generation with all relevant regulatory approvals, which should be added to the existing demands. (Note: these values must not include general contracts for service that are not directly connected to approved land uses, such as contracts between a regional utility and a municipality.)<br>• Court-ordered commitments for new water use or wastewater generation (e.g., scarce resource orders), which should be added to the existing demands.<br>• Estimates regarding the impact of RMP requirements for water conservation and efficiency methods on water demands and wastewater flows.<br>The results of any reanalysis of available utility capacity must be provided to the Highlands Council with supporting documentation for consideration as an RMP Update. If approved, the updated estimates will become the basis for planning. Changes in system ownership, identification or permit limits resulting from privatization, transfer of ownership or utility consolidation should also be reported. These changes do not modify the estimated utility capacity, but allow the Highlands Council to track utility capacity through ownership changes. |
| **Identification of Resource and Regulatory Constraints on Utility Capacity** | Each water and wastewater utility faces unique constraints on its ability to provide services to a defined service area. In addition to facility capacity as discussed above, resource and regulatory constraints may exist and must be identified. Some of these factors are addressed under the *Land Use Capability Analysis Program*, and are briefly discussed here as well. In each case, the Highlands Council may consider RMP Updates based on the corrections or updated information provided. Constraints include but are not limited to: |

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| | • Net water availability, which may constrain both water supply service and the resulting wastewater generation. Water availability may constrain growth potential in an area, regardless of water treatment facility capacity. If the areas within a sewer service area lack sufficient water supply, then wastewater generation will be constrained regardless of facility size. Where net water availability is zero or negative, no extension of service from an existing utility facility may occur unless all RMP mitigation requirements are met. No increase in utility facility capacity for an existing facility shall occur unless a Water Management Plan has been approved that will provide sufficient water availability to support the additional capacity. In such instances the operator or municipality must agree to implement the Water Management Plan in a timeframe that achieves continuing and routine reductions in the deficit in advance of additional water uses. Full implementation shall be mandatory in accordance with a schedule established in the Water Management Plan.<br>• NJDEP Preservation Area rules at N.J.A.C. 7:38-2.5 and 3.2 regarding restrictions on increased or new water allocations of 50,000 gallons per day, and N.J.A.C. 7:38-2.6 and 3.4, prohibiting new or expanded NJPDES-permitted wastewater treatment works except where exemptions or waivers apply.<br>• Safe yields for reservoirs, which will limit water supply capacity regardless of water treatment facility capacity.<br>• Source water quality, which may constrain the capacity of water supply facilities due to treatment requirements that the current facilities cannot meet.<br>• Areawide Water Quality Management Plans, including:<br>o Wastewater Management Plans, which define the maximum sewer service area and wastewater facility capacity allowable (both of which may be further constrained by the RMP), as modified to address Preservation Area restrictions;<br>o Total Maximum Daily Loads, which may limit additional discharges of an existing wastewater treatment facility to a water body, or may require facility upgrades;<br>o Other direct limits on wastewater treatment facility capacity, such as court orders or the USEPA limit of 12 MGD on the Rockaway Valley Regional Sewerage Authority facility to protect safe yield in the Jersey City Reservoir System from upstream water withdrawals.<br>Under any of these scenarios, the resource capacity, rather than the utility facility capacity, may become the limiting factor. In most cases, with the notable exception of Net Water Availability, changes to the resource limitations must first be approved by the relevant agency (usually NJDEP or USEPA), and then provided to the Highlands Council as an RMP Update. |
| **Identification of Additional Constraints on Utility Capacity** | In some instances, franchise agreements or other contractual tools may directly limit utility capacity. Where such constraints exist, they should be identified as part of the local planning process and incorporated into the Utility Services Element of the municipal master plan. |
| **Protection of Environmental** | Proposed service areas, including Existing Areas Served, must be defined and regulated to ensure that sensitive environmental resources are protected from |

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| **Resources Within Service Areas** | development that relies on water and wastewater service. Contiguous areas of sensitive environmental resources using the thresholds for Land Use Capability Zone designation under the RMP must be excluded from the service areas unless proof is provided through the RMP Update process that the basis for the resource mapping is incorrect. Smaller areas may also be excluded from the service areas at the discretion of the municipality. Where the smaller areas are included in the service areas, they must be protected from proposed development through municipal ordinances and local development review that meets all relevant RMP standards, including but not limited to:<br>• Preservation Area restrictions in accordance with N.J.A.C. 7:38<br>• Agricultural Resource Areas and agricultural lands of such Areas<br>• Forest Resource Areas and the forested portion of such Areas<br>• Conservation and Protection Zones of the Planning Area<br>• Environmentally-constrained Sub-Zones of the Conservation and Existing Community Zones of the Planning Area<br>• Highlands Open Water buffer areas, Riparian Areas, Steep Slopes, Karst Topography, Prime Ground Water Recharge Areas, Wellhead Protection Areas and Critical Habitat Areas<br>Stringent limitations exist on utility service areas in the Preservation Area, regardless of LUCM Zone, including the NJDEP Preservation Area rules at N.J.A.C. 7:38-3.3 regarding restrictions on the extension of water supply utility service, and N.J.A.C. 7:38-2.6 regarding the revocation of sewer service areas. These requirements are not applicable to exempt activities, and the requirements may be modified through a HPAA with a waiver in accordance with N.J.A.C. 7:38. Cluster development in the Preservation Area is not eligible for infrastructure waivers, and therefore will use septic systems where it occurs at all. In general, the creation or extension of water supply and wastewater infrastructure in the Preservation Area will be extremely limited.<br>The RMP includes exceptions to serve certain kinds of cluster development, to address a documented threat to public health and safety where no alternative is feasible, and to provide for minimum practical use in the absence of any alternative. Permission for these exceptions where applicable occurs by issuance of a HPAA with a waiver in the Preservation Area or by approval of the Highlands Council in the Planning Area. In all cases, the extent of the exception is limited to maximize the protection of sensitive environmental resources. Clustering and known public health and safety issues may be planned for and included in Plan Conformance, but most often these exceptions will be addressed through specific RMP Plan Adjustments and Highlands Project Reviews. It should be noted that the "minimum practical use" exception will very rarely require the extension of public water or wastewater services, but this may occur in limited situations where lots are highly constrained (i.e., unable to support on-site water and wastewater systems) and adjacent to existing utility services. |
| **Build Out Analysis for the Existing Area Served in the** | Once the available capacity of the utility facility has been verified or modified and the impacts of resource, regulatory, and other constraints have been applied, a complete picture will be available of the ability of a water supply or wastewater utility to serve additional development – the net utility capacity. Where zero or |

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| **Highlands, and Non-Highlands Approved Service Areas** | negative, no additional services should be provided until management efforts (e.g., water conservation, service line rehabilitation, facility changes) result in a positive net utility capacity. Potential development drawing upon net utility capacity may consist of infill, rehabilitation, redevelopment, cluster development or general greenfields development.<br>The first step is to determine how much capacity is likely to be demanded by development in the Existing Area Served in the Highlands Region (reflecting, among other issues, restrictions on service areas in the Preservation Area imposed by the Highlands Act and implemented through the NJDEP Preservation Area rules at N.J.A.C. 7:38), and by development outside the Highlands Region in approved service areas. The analyses should include:<br>• Estimated needs within the Existing Area Served for available sewer system capacity to address documented threats to public health from failing septic systems, or for water supply capacity to address a public health threat due to water supply contamination. These have the highest priority for capacity.<br>• Estimated needs within the Existing Area Served for available sewer system capacity and water supply capacity to address TDR Receiving Areas, which shall be the second highest priority for capacity.<br>• Estimated needs of redevelopment within the Existing Areas Served based on either Highlands Council regional analyses or more detailed local analyses.<br>• Estimated needs of infill development within the Existing Areas Served, providing capacity to lots that have not previously been developed or are currently vacant and would be developed at zoning capacity.<br>• Estimated needs for existing development based on anticipated trends in per capita and commercial needs, known shifts in water use and wastewater generation patterns from industrial development, potential for increased or decreased demands based on infrastructure aging and maintenance, etc.<br>• Estimated needs for portions of the service areas that are outside of the Highlands Region. The RMP analyses are based on a pro rata allocation of demands based on service area both inside and outside the Highlands Region. Corrections to this allocation may be provided as RMP Updates.<br>The results of this analysis must then be compared to the net utility capacity. Where available capacity is insufficient, expectations for new development must be constrained or utility capacity must be enhanced to meet the identified needs. In the absence of capacity, an <u>expansion</u> of the service areas in the Highlands Region would not be allowed under the RMP. |
| **Proposed Service Areas, Infrastructure Needs and Densities in Highlands Existing Community Zones** | Growth is not a mandatory aspect of the RMP. Rather, the RMP clearly specifies that growth is at the discretion of municipalities. However, where a municipality <u>chooses</u> growth supported by utilities, the RMP provides certain standards to ensure that the growth is well planned, protective of environmental resources, and cost-efficient.<br>RMP density standards (but <u>not</u> environmental protection standards, as discussed above) are discretionary within current Existing Areas Served. All RMP standards must be met where a municipality proposes the creation or extension of public water supply or wastewater systems for new service areas. New residential development in such areas must have a density of at least two dwelling |

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| | units per acre (2 DU/acre) in developed portions of the property. Differential densities may be required where a municipality is voluntarily seeking a designated center or is seeking to be eligible for the additional incentives for Highlands TDR Receiving Zones. For commercial development, the intensity standard is a floor area ratio (FAR) of 0.84 for the developed portion of the property. It is important to note that these thresholds do not apply to existing developed areas, and that "the developed portion of the property" is defined to exclude environmentally constrained areas, agriculture and similar open space. Where a municipality does not wish to meet these standards, development on septic systems and on-site wells must be proposed at densities appropriate for such development, as defined by the RMP.<br><br>The purpose of these standards is to ensure that development based on utilities has sufficient density to make cost-effective use of utility lines, minimizing the costs per unit development of construction, operation, maintenance and reconstruction. Part of the cost of development is driven by the efficiency of land use and utility provision. The length of utility lines per unit development is a critical metric. Higher densities (for the developed portion of a property) can both help reduce housing costs and reduce land consumption (helping to protect natural resources). The combined policies on water and wastewater infrastructure and septic system densities will result in development patterns consistent with the principles of Smart Growth, with a clear distinction in development intensities – more concentrated development where utilities are used, and low density growth where utilities are absent. |
| **Build-out Analysis for Proposed Service Areas in Highlands Existing Community Zones** | A mandatory component of municipal Plan Conformance is the analysis of build out conditions in the municipality (see *Regional Master Plan Conformance, Consistency and Coordination, Part 1, Plan Conformance*). This build out analysis must incorporate an evaluation of proposed water supply and wastewater utility services, incorporating the factors discussed above. The results of this analysis are used to estimate the anticipated utility demands, first within the Existing Areas Served (as discussed above) and then in new service areas proposed for the Existing Community Zone (ECZ). These proposed ECZ demands must then be compared to the net utility capacity to determine whether sufficient capacity exists. If so, <u>and</u> if all resource protection policies and objectives of the RMP are met within the proposed ECZ service area, then the area may be included in the utility plan and service area. If not, then the area must be excluded from public water or wastewater service. Where the answers are different for the two utilities, a municipality may propose public sewerage with on-site water supply (if safe supplies can be assured), but may not propose public water supply with on-site septic systems as the septic system densities would be far too high. A municipality may also propose taking action to increase utility capacity, if feasible within the policies and objectives of the RMP.<br><br>In some cases, utility facility capacity from a regional system may be available to more than one municipality. In such instances, utility capacity shall be directed to potential new service areas in the following manner:<br><br>1. If a specific contractual obligation exists between a utility and a municipality regarding remaining capacity, that municipality may allocate that capacity to new service areas that meet RMP requirements and local needs. If the resulting service areas are insufficient to use the remaining |

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| | contractual obligation, even with consideration of the potential for TDR receiving zones and redevelopment within the Existing Area Served, then the municipality may negotiate with any other municipality served by the utility for the sale of the remaining contractual obligation, which may then be allocated to areas that meet RMP requirements and local needs.<br>2. If no contractual obligation exists for service to individual municipalities (i.e., the utility uses "first come, first served" allocations), then the utility capacity shall be allocated to the first municipality that achieves Plan Conformance, and to each municipality that subsequently achieves Plan Conformance, until the net utility capacity is fully allocated. In each municipality, the priorities for new sewerage shall be in accordance with the RMP policies discussed above. |
| **Proposed Service Areas, Infrastructure Needs and Densities in Highlands Protection and Conservation Zones** | Nearly all new water supply and wastewater infrastructure in the Protection and Conservation Zones will address existing public health problems or the creation of clusters, both of which are constrained in terms of the allowable service areas as discussed below. In addition, RMP policies restrict the development yield of clusters as discussed in the *Cluster Development Program* and summarized below. An exception to the Centers density standard (but <u>not</u> the 2 DU/acre threshold) applies in the Protection and Conservation Zones; utility service in such Centers shall be at densities appropriate to the Zone, the community character and the use of public water and wastewater systems. |
| **Potential Service Areas for Clusters, Redevelopment Areas, Exempt Parcels and Public Health Exemptions** | If net utility capacity still exists after consideration of all factors previously discussed, or if on-site community systems are proposed to be built (e.g., for clustered development in areas non-adjacent to Existing Areas Served, or to adjacent areas where no utility capacity exists), the municipality may propose service areas to address the needs for clustering, exempt development, or public health and redevelopment site waivers where these needs can be identified, planned for, and incorporated in full compliance with RMP policies and objectives including consideration of net water availability and sensitive environmental land features.<br>Cluster development must meet the requirements of the RMP regarding the extension of services from an adjacent Existing Area Served, or for the creation of new utility facilities elsewhere. Cluster development yields where wastewater utility services are provided must meet RMP requirements as discussed in the *Cluster Development Program*, including the protection of at least 90% of the property associated with the project (as differentiated from the 80% requirement for clusters on septic systems). As discussed in that program, the RMP encourages municipalities to plan ahead for clustering, for example, to minimize the potential for scattered, uncoordinated cluster development that does not maximize the protection of environmental and agricultural resources and rural community character.<br>Likewise, planning ahead for exempt development can reduce the need for multiple extensions, uncoordinated action, etc. Planning for redevelopment is somewhat more problematic, as some sites may be readily apparent while others may not. Municipalities should not attempt to plan for "takings waivers" as these cannot be anticipated and will rarely require the extension of public water or wastewater infrastructure. |

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| | The public health exemption requires that a documented health threat exist, caused by a pattern of septic system failures, where the failing systems cannot reasonably be addressed through rehabilitation or replacement. Factors to be considered include but are not limited to:<br>1. Documented health threat: Is the existence of failing systems widespread or spotty? Has an inventory of failing systems documented a broader issue? Note that the area need not show that a large number of systems are currently failing at any one time; rather, the area must show that a pattern of failure is longstanding, pervasive and anticipated to continue.<br>2. Geology and soils: Do the soils and local geology pose major constraints on septic system function, such that standard septic systems cannot be expected to function properly?<br>3. Lot size and environmental constraints: Are the lots so small or constrained by slopes, wetlands, floodplains, etc., that installing a replacement system would be environmentally damaging or pose a continuing threat to on-site or neighboring wells?<br>4. Development density: Is the overall development density such that the average nitrate loadings for the developed portion exceed the cluster development limitation of 10 mg/L? Is the density in excess of or close to the 2 DU/acre minimum density for new sewerage?<br>5. Development pattern: Does the pattern of existing development provide an opportunity for cost-effective sewerage, with minimal potential for secondary impacts such as sewerage for infill lots?<br>6. Service area constraints: Does the proposed service area align tightly with the area of documented public health threats, and include provisions to ensure that undeveloped lots proximate to the new service area or along any resulting wastewater lines cannot connect in violation of RMP requirements for the affected Zone?<br>7. Treatment system constraints: Where a new community system is proposed, does the capacity match the intended service area with no provision for additional customers? |
| **Utility Services Element** | The net result of the planning and analysis discussed in this program will be the water and wastewater utility components of a Utility Services Element for a municipal master plan. The Element should include a summary of each step of the analysis, supported by a basis and background document that fully documents all aspects of the planning methodology. The Element must specifically include:<br>• A list of RMP Updates submitted for Highlands Council validation and incorporation into the RMP.<br>• A list and description of proposed RMP Adjustments submitted for Highlands Council consideration.<br>Where a County Wastewater Management Plan has been approved by NJDEP that includes the necessary information for part or all of the municipal Plan Conformance requirement, it may be incorporated by reference. |
| **Project Review Standards** | The Highlands Council shall prepare, and municipalities shall adopt by reference through Plan Conformance, Highlands and local project review standards regarding water and wastewater utility capacity, service areas, service densities, |

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| | environmental protection requirements and other relevant issues. |