

CHAPTER IV. GOALS, POLICIES, AND OBJECTIVES

Part 2. Water Resources and Water Utilities

A fundamental purpose of the Highlands Act is to protect water supplies for human use and ecological sustainability both within and outside of the Highlands Region. The Highlands Regional Master Plan addresses five fundamental issues with regard to water resources in the Highlands Region:

- The availability of water resources for human and ecological use;
- The protection and restoration of water resource availability;
- The protection, restoration, and enhancement of water quality;
- The management of land development patterns and densities to ensure that the carrying capacity of water resources are not exceeded; and
- The cost-effective and efficient provision and use of water utility capacity in a manner that ensures compatibility with the carrying capacity of water resources.

Subpart a. Water Resources Availability

The availability of water for human use is a critical factor in determining the capacity for growth and continued economic vitality for both existing development and agriculture within and outside the Highlands Region. The availability of water for ecological purposes is critical to sustaining the aquatic ecosystems of streams, ponds and lakes in the Highlands Region. The Highlands Regional Master Plan provides a method for identifying the quantity of available water resources in the Highlands Region, which is used to identify areas where water resources are or are not sufficient to support existing human and ecological uses, and to support future uses. Where sufficient water availability exists, the method fairly allocates available water resources among future human uses as shown in the Land Use Capability Zone Map. Where water resources have been stressed, additional planning and mitigation is necessary.

The Goals, Policies and Objectives for water resources availability establish a method for determining available water for human use by each subwatershed (HUC14), of which 183 are in (or partially in) the Highlands Region. Surface water availability from existing reservoir systems are addressed through regulations of NJDEP and a major purpose of the RMP is to protect the safe yields of those reservoir systems by limiting upstream use of ground waters, which has the added benefit of protecting aquatic ecosystems. Ground water availability is determined using stream flow information, with thresholds based upon the predominant Land Use Capability Zone for each subwatershed. Net water availability reflects current uses, and may show surpluses or deficits. For all subwatersheds, municipal Plan Conformance requires development of Water Use and Conservation Plans that will set priorities for the use of available water (where net water availability is positive) and will establish methods to reduce and, where feasible, eliminate deficits where they exist. In all cases, efficient use of water is required to make best use of limited resources. Where deficits exist and a Water Use and Conservation Plan has not yet been adopted, limited amounts of conditional water availability are provided for uses that will be permitted while the deficits are reduced through water conservation and enhanced recharge. The amount of mitigation is determined based on the amount of water use proposed and the severity of the current deficit, but is never less than 125 percent; mitigation will be required prior to the water use where either the proposed water use or current deficit is large.

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GOAL 2A	PROTECTION OF THE VALUE OF THE HIGHLANDS REGION AS AN “ESSENTIAL SOURCE OF DRINKING WATER, PROVIDING CLEAN AND PLENTIFUL DRINKING WATER FOR ONE-HALF OF THE STATE’S POPULATION” (HIGHLANDS ACT, SECTION 2), ALONG WITH THE ECOLOGICAL VALUES OF CLEAN WATER, THROUGH THE PROTECTION, ENHANCEMENT AND RESTORATION OF WATER RESOURCES QUANTITY, FLOW CHARACTERISTICS AND QUALITY AS FUNDAMENTAL TO ENSURING THAT THERE ARE ADEQUATE WATER SUPPLIES TO SUPPORT THESE NEEDS.
Policy 2A1	To identify and periodically update net water availability and water deficits as a factor in the Land Use Capability Water Availability Map.
Policy 2A2	To ensure that increasing water demands do not exceed Net Water Availability or exacerbate existing deficits of subwatersheds. Net Water Availability is affected at a subwatershed level by location and extent of Land Use Capability Map Zone Map and its status as Current Deficit Area or Existing Constrained Area.
GOAL 2B	PROTECTION, RESTORATION AND ENHANCEMENT OF WATER QUALITY AND QUANTITY OF SURFACE AND GROUND WATERS (SECTIONS 10.B(1) AND 10.C(1)), AND TO DETERMINE “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...” (SECTION 11.A.(1)(A)).
Policy 2B1	To track and consider water availability in local development review and Highlands Project Review.
Policy 2B2	To estimate Net Water Availability on a HUC14 subwatershed basis.
Objective 2B2a	Establish Ground Water Capacity by HUC14 subwatershed by subtracting the subwatershed’s MA7CD10 (minimum average seven day low flow with a return period of ten years, also known as the 7Q10) from the September median stream flow.
Objective 2B2b	Establish Ground Water Availability thresholds for application to HUC14 subwatersheds based on the Land Use Capability Zone and watershed resource value, and as modified by status as an Existing Constrained Area. Ground Water Availability shall be determined by multiplying Ground Water Capacity by percentage thresholds specified in the following table that are related to the nature of the environmental resources and conservation objectives of the Plan for each Zone.

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Ground Water Availability Thresholds As Percentage Of Ground Water Capacity		
Predominant Land Use Capability Zone (or Watershed Value)	Standard Threshold	Existing Constrained Area*
Protection Zone (High)	5%	5%
Conservation Zone (Moderate)	5% non-agricultural 10% agricultural	5% + 2003 Depletive & Consumptive Use (up to Standard Threshold)
Existing Community Zone (Low)	20%	5% + 2003 Depletive & Consumptive Use (up to Standard Threshold)

*Within HUC14 Subwatershed upstream of a Current Deficit Area

Objective 2B2c	Estimate Net Water Availability for each HUC14 subwatershed by subtracting from Ground Water Availability an estimate of maximum monthly consumptive and depletive ground water and surface water use (other than from reservoir storage or other supply with a NJDEP approved safe yield). Adjust consumptive and depletive water use to account for the return of wastewater to the same HUC14 subwatershed from which the water originated, or as appropriate, water originating from another HUC14 subwatershed.
Objective 2B2d	Designate Current Deficit Areas as those HUC14 subwatersheds where the Net Water Availability is less than zero.
Objective 2B2e	Designate Existing Constrained Areas as those HUC14 subwatersheds that have positive Net Water Availability and are upstream of and contributing flow to a Current Deficit Area.
Objective 2B2f (from 2B8b, 2B9c, 2B10c)	Modify Net Water Availability in Existing Constrained Areas to be the 2003 consumptive and depletive ground and surface water use plus 5 percent of the Ground Water Capacity (up to the standard thresholds assigned to each Land Use Capability Zone) to ensure continued stream flows to downstream Current Deficit Areas, emphasizing techniques including, but not limited to, water reuse, recycling and conservation
Policy 2B3	To conditionally provide water availability (Conditional Water Availability) within a Current Deficit Area with appropriate standards regarding its use.
Objective 2B3a	A Current Deficit Area subwatershed that is primarily within the Protection Zone or Conservation Zone shall be assigned Conditional Water Availability not to exceed an aggregate of 1 percent of Ground Water Capacity, and will be applied to consumptive and depletive water uses that comply with the mitigation requirement in Objective 2B9b.
Objective 2B3b	A Current Deficit Area subwatershed that is primarily within the Existing Community Zone shall be assigned Conditional Water Availability not to exceed an aggregate of 2 percent of Ground Water Capacity, and will be applied to consumptive and depletive water uses that comply with the mitigation requirement in Objective 2B9b.
Objective 2B3c	The Highlands Council will track the use of Conditional Water Availability within each Current Deficit Area allocated during local development review and Highlands Project Review and adjust remaining Conditional Water

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	Availability accordingly.
Policy 2B4 (from 2B8, 2B9)	To apply water resource standards in the Protection Zone and Conservation Zone that maintain the integrity of aquatic ecosystems, recognizing the regional significance of these resources. Consumptive and depletive water uses for non-agricultural uses shall be stringently limited.
Objective 2B4a (from 2B8d, 2B9d, 2B9e)	<p>Give highest priority for the use of non-agricultural Net Water Availability or Conditional Water Availability within Protection Zone and Conservation Zone subwatersheds, through a Water Use and Conservation Plan developed under Objective 2B9c, local development review and Highlands Project review:</p> <ol style="list-style-type: none"> 1. to address a documented existing or imminent threat to public health and safety from contaminated domestic and other on-site water supplies that is of sufficient scale to justify a public water supply and where no alternative is feasible that would sufficiently assure long-term protection of public health and safety. Such needs shall have highest priority for Net Water Availability; 2. to serve a designated Highlands Redevelopment Area; 3. to serve a cluster development that complies with Objective 2J4b. 4. to serve affordable housing projects where at least 10% of the units are affordable.
Policy 2B5	To apply standards within Existing Community Zone subwatersheds to provide for the protection of water supply, water resources and ecological values of the Region.
Objective 2B5a	The highest priority for use of Net Water Availability or Conditional Water Availability within Existing Community Zone subwatersheds, through a Water Use and Conservation Plan developed under Objective 2B9c, local development review and Highlands Project review to serve documented threats to public health and safety from contaminated water supplies, designated TDR Receiving Zones, infill development, designated Highlands Redevelopment Area, affordable housing projects where at least 10% of the units are affordable, or new areas for development that meet all other requirements of the RMP.
Objective 2B5b	Establish and implement mandatory stormwater reuse for recreational and other non-agricultural irrigation, as well as other non-potable water purposes to minimize both the volume of stormwater discharges and water withdrawals for these purposes.
Policy 2B6	To require, through Plan Conformance (including , through a Water Use and Conservation Plan developed under Objective 2B9c), 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.
Policy 2B7	To require through Plan Conformance (including through a Water Use and Conservation Plan developed under Objective 2B9c), local development

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	review, Highlands Project Review, and interagency coordination that proposed public water supply and wastewater service areas, new or increased water allocations and bulk water purchases will not directly or indirectly cause or contribute to a Net Water Availability deficit, and where feasible will help mitigate any existing deficit.
Objective 2B7a	Areawide Water Quality Management Plans, Wastewater Management Plans or their amendments shall ensure that the proposed service area will not directly or indirectly cause or contribute to a Net Water Availability deficit, and shall be in conformance with any Water Use and Conservation Plan developed under Objective 2B9c.
Objective 2B7b (from 2B8e, 2B9f, 2B10h)	NJDEP Water Allocation decisions and Highlands Project Reviews shall ensure that any new or increased water allocation permits within the Highlands Region are in conformance with the policies and objectives of the RMP policies and objectives and 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.
Policy 2B8	To ensure through Plan Conformance (including through a Water Use and Conservation Plan developed under Objective 2B9c), local development review, and Highlands Project Review that the use of Net Water Availability and Conditional Water Availability within each subwatershed supports development patterns that are in conformance with RMP policies and objectives.
Objective 2B8a	Establish and implement best management practices for recreational, landscape irrigation and other practices through applicable State and federal programs.
Policy 2B9	To require through Plan Conformance, local development review, and Highlands Project Review the efficient and effective use of water availability, the planning for future water needs, the reduction and elimination of water deficits, and the mitigation of new consumptive or depletive use in any Current Deficit Areas or subwatersheds that could become deficit areas based on projected development and water uses, to ensure sustainable water supply, water resource and ecological values in conformance with RMP policies and objectives.
Objective 2B9a (from 2B8b, 2B9b, 2B10b)	Prevent net increases in consumptive or depletive water uses in Current Water Deficit Areas to prevent exacerbation of and help reduce or eliminate the deficit to ensure sustainable water supply, water resource and ecological values, emphasizing techniques including, but not limited to water reuse, recycling and conservation.
Objective 2B9b	Proposed increases in consumptive or depletive water uses within a Current Deficit Area shall only occur under the auspices of a Water Use and Conservation Management Plan approved under Objective 2B9c or through mitigation of the proposed consumptive or depletive use 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. Where a Water Use and Conservation Management Plan has not been approved:

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1. Each project shall achieve mitigation ranging from 125% to 200%, based on the severity of the Current Deficit and the amount of consumptive or depletive water use proposed, and for large consumptive and depletive water uses or high Current Deficits will require achievement of the mitigation prior to initiating the water use;
2. Total consumptive and depletive water uses from any single project and all projects combined are not to exceed the Conditional Water Availability of Objectives 2B3a or 2B3b;
3. Mitigation shall be completed by one year of final municipal development approval or prior to initiation of the water use, whichever is later, for any mitigation volumes of less than or equal to 20,000 gallons per day in the Planning Area or 10,000 gallons per day in the Preservation Area. Mitigation may be phased in keeping with project development;
4. Mitigation shall occur prior to initiation of the water use, for water uses where the combination of proposed consumptive and depletive water uses and current subwatershed deficit is high, according to a schedule established by the Highlands Council. Mitigation may be phased in keeping with the level of consumptive or depletive water uses;
5. Mitigation for projects not addressed by #3 and #4 above shall occur within a schedule established through local development review and Highlands Project Review. The schedule is to be the shortest feasible time, shall be phased to ensure continuing implementation, and shall not exceed five years from project approval; and
6. Mitigation shall be guaranteed through performance bonds.

Objective 2B9c

Water Use and Conservation Management Plans shall be required through municipal Plan Conformance for all subwatersheds to meet the policies and objectives of Goal 2B, to ensure efficient use of water through water conservation and low impact development best management practices, and to avoid the creation of new deficits in Net Water Availability. Where developed for Current Deficit Areas, the plans shall include provisions to reduce or manage consumptive and depletive uses of ground and surface waters as necessary to reduce or eliminate deficits in Net Water Availability, or to ensure continued stream flows to downstream Current Deficit Areas from Existing Constrained Areas, to the maximum extent practicable within each HUC14 subwatershed.

Objective 2B9d

All water users within a Current Deficit Area shall seek funding and opportunities to meet the intent of Objective 2B4b.

Objective 2B9e

Allow water resource transfers between or from Highlands subwatersheds only when there is no other viable alternative and where such transfers would demonstrably not result in impairment of resources in any subwatershed. Potential effects on upstream and downstream subwatersheds should be included in any such evaluation.