



# State of New Jersey

Highlands Water Protection and Planning Council  
100 North Road (Route 513)  
Chester, New Jersey 07930-2322  
(908) 879-6737  
(908) 879-4205 (fax)  
www.highlands.state.nj.us



## WQMP AMENDMENT REVIEW CHECKLIST

PROJECT INFORMATION	
<b>WQMP Name:</b> Parker/Circle/Southard Sanitary Sewer Improvements	<b>Date:</b> March 3, 2008
<b>Sewer Service Area/Facility:</b> Musconetcong Sewerage Authority Water Pollution Control Plant	
<b>WQMP:</b> Sussex County, Upper Raritan and Upper Delaware Water Quality Management Plan	
<b>WMP Agency:</b> Musconetcong Sewage Authority Wastewater Management Plan	
<b>Name of Facility:</b> Parker/Circle/Southard Sanitary Sewer Improvements	
<b>Name of Applicant:</b> Borough of Mt. Arlington	
<b>Sewer Service Area/Facility:</b> New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> <i>If existing provide the following:</i>	
<b>Proposed Change in Service Area Wastewater Flow:</b> 14,325 GPD	
<b>NJPDES No:</b> NJ0027821	
<b>Permit Discharge (MGD):</b> 4.3 MGD	
<b>Type of Discharge:</b> GW <input type="checkbox"/> SW <input checked="" type="checkbox"/>	
<b>Receiving Waterbody:</b> Musconetcong River	
<b>Total Proposed Service Area (acres):</b> ~2.3 acres	
<b>Lot and Block, if applicable:</b> 45 existing residential parcels located along Southard Road, Parker Road and Circle Drive in the Borough of Mt. Arlington and Roxbury Township	
<b>Description of Project:</b> The project would amend the Sussex County, Upper Raritan and Upper Delaware WQMPs to modify the Musconetcong Sewerage Authority (MSA) WMP by expanding the sewer service area to include 45 existing developed residential parcels. The Borough of Mt. Arlington is requesting a recommendation from the Highlands Council to the NJDEP regarding a proposed Highlands Preservation Area Approval (HPAA) with waiver for the Parker/Circle/Southard Sanitary Sewer Improvement project on the basis that the project directly affects the protection of public health.	
<p>The Proposed Amendment would consist of the installation of roughly 3,000 linear feet of gravity and low pressure force mains. Wastewater from the existing residential area would be conveyed by new gravity collection mains and would connect to existing manholes. A low pressure force main would be utilized on a portion of Southard Street due to the fact that the closest existing sanitary sewer manhole is approximately ten feet higher in elevation than the lowest point of Southard Road. The existing sewer manholes connect to the Borough of Mt. Arlington's existing sanitary sewer collection system, which connects to the MSA sewage treatment plant (STP).</p>	
<p>In an effort to assist in the prevention and remediation of the impaired Lake Hopatcong, the NJDEP has given a high priority to reserving/dedicating the MSA STP flow allocation to serve existing unsewered portions of the Lake Hopatcong Watershed. As a result of the findings contained in the Lake Hopatcong TMDL, the NJDEP determined that the proposed connection of the existing 45 aging septic systems would aid in the accomplishment of restoration of water quality and hence, satisfied the criteria for a waiver for the protection of public health and safety (N.J.A.C. 7:38-6.5).</p>	

LAND USE CAPABILITY MAP ZONES	
Sewer Service Areas Encroach Within Which LUCM Zone? (Check all that apply.):	
Protection Zone <input checked="" type="checkbox"/>	Conservation Constrained Zone <input type="checkbox"/>
Conservation Zone <input type="checkbox"/>	Existing Community Constrained Zone <input type="checkbox"/>
Existing Community Zone <input checked="" type="checkbox"/>	
HIGHLANDS ACT AREAS	
Project located in which Highlands Act Area? (Check all that apply.):	
Preservation Area <input checked="" type="checkbox"/>	
Planning Area <input type="checkbox"/>	

TOPOGRAPHY	
Parcel Underlain by Limestone?	No
Steep Slopes >20% in Any Areas?	NA
Steep Slopes >15% in Forested Areas?	NA
Steep Slopes >10% in Riparian in Undeveloped Lands?	NA
Findings: There is no new development footprint. The proposed activities would occur within existing developed residential parcels and roads.	
Policy statement: n/a	
Recommendation: No recommendation	

HIGHLANDS OPEN WATERS	
Parcel includes Highlands Open Waters Protection Area Buffer?	Yes
<i>If No, disregard remainder of Highlands Open Waters checklist.</i>	
Highlands Open Waters description:	
Drainage HUCs Name and Number: Lake Hopatcong 02040105150020	
Name of nearest waterway: Unnamed tributary of Musconetcong River	
Open Waters Protection Areas within the Service Area:	
Streams <input checked="" type="checkbox"/>	
Lakes & Ponds <input type="checkbox"/>	
Wetlands <input type="checkbox"/>	
Highlands Open Waters category:	
Highlands Waters <input checked="" type="checkbox"/>	
Special Waters <input type="checkbox"/>	
Exceptional Waters <input type="checkbox"/>	
Intermediate Waters <input type="checkbox"/>	
Watershed Value (Check one):	
High <input type="checkbox"/>	
Medium <input type="checkbox"/>	
Low <input checked="" type="checkbox"/>	
Findings: Four of the developed parcels currently encroach into the Highlands Open Waters protection area buffers.	
Policy Statement: Highlands Open Waters shall include a protection buffer of 300 feet from the edge of the Highlands Open Water feature. All development shall comply with buffer standards which provide for the protection of Highlands Open Waters reviewed on a site-specific basis during local	

development review and Highlands Project Review. (1D4)

Preservation Area buffers for Highlands Open Waters shall comply with the Highlands Preservation Area rules at N.J.A.C. 7:38. (1D4b)

**Recommendation:** There should be no further development in the Highlands Open Waters protection area buffer. No development is proposed through this WQMP amendment.

**RIPARIAN AREA**

**Parcel includes Riparian Area?**

*If No, disregard remainder of Riparian Area checklist.*

Yes

**Specific Riparian Area Features** (Check all that apply.):

Flood Prone Areas  Waters   
 Riparian Soils  Wetlands   
 Wildlife Corridor

**Riparian Integrity Value** (Check one):

High   
 Medium   
 Low

**Findings:** Four of the developed parcels currently encroach into the Riparian Area

**Policy Statement:** Limit alterations to existing natural vegetation or increases in impervious area within High and Moderate Integrity Riparian Areas to the minimum extent feasible in areas beyond the Highlands Open Water buffer requirements; protect the water quality of adjacent Highlands Open Water; and maintain or restore habitat value of the Riparian Area. (1D5b)

Implement Low Impact Development Best Management Practices for any development activity proposed within a Riparian Area, which minimize both alterations of natural vegetation and increases in impervious area, and provide for mitigation through restoration of impaired Riparian Areas in the same HUC14 subwatershed. (1D5c)

**Recommendation:** There should be no further development in the Riparian Area.

**FOREST**

**Parcel within Forest Resource Area?**

Yes

**If yes to above, is there Encroachment into a Forest within Forest Resource Area?**

No

**Forest Indicators** (check all that apply):

Total Forest   
 Core Forest   
 Forest Patch

**Forest Integrity Value** (check one):

High   
 Medium   
 Low

**Findings:** The proposed project location is within the Forest Resource Area, but not into the forested portion of the Forest Resource Area (the project site consists of existing developed residential parcels and roads).

**Policy Statement:** n/a

**Recommendation:** No recommendation

CRITICAL HABITAT							
<b>Critical Habitat (Landscape 2-5)?</b>							No
<b>Significant Natural Area?</b>							No
<b>Vernal Habitat +1,000 ft?</b>							No
<b>Species of Concern:</b>							
<b>Landscape Rank:</b>							
<p><b>Findings:</b> The proposed activities do not encroach upon sensitive environmental resources. The project location is bordered by critical habitat to the west, south and east but no disturbance is proposed.</p> <p><b>Policy Statement:</b> To prohibit, through Plan Conformance, local development review, and Highlands Project Review, the direct impact of new human development or expansion or increased intensity of existing development within Critical Wildlife Habitats, Significant Natural Areas, or within 1,000 feet of Vernal Pools (1F1).</p> <p>Prohibit alteration or disturbance of Critical Wildlife Habitat, Significant Natural Areas, and within 1,000 feet of Vernal Pools, except as necessary to protect public health and safety, or to provide for minimum practical use of in the absence of any alternative (1F5a).</p> <p>Require that any disturbance to a critical habitat feature include mitigation for all adverse modification and provide for no net loss of habitat value (1F5b).</p> <p><b>Recommendation:</b> The critical habitat area should be avoided during project construction activities.</p>							
AGRICULTURE							
<b>Parcel within Agricultural Resource Area?</b>							No
<b>Important Farmland Soils?</b>							No
<p><b>Findings:</b> n/a</p> <p><b>Policy Statement:</b> n/a</p> <p><b>Recommendation:</b> No recommendation</p>							
WATER QUALITY							
<b>Parcel Prime Ground Water Recharge Area?</b>							No
<b>Parcel Wellhead Protection Area?</b>							Yes
<p>If yes to above, check one box below:</p> <p>Tier 1 <input type="checkbox"/></p> <p>Tier 2 <input type="checkbox"/></p> <p>Tier 3 <input checked="" type="checkbox"/></p>							
<p><b>Drainage HUCs Name and Number:</b> Lake Hopatcong 02040105150020</p> <p><b>Name of nearest waterways:</b> Lake Hopatcong</p> <p><b>SWQS Classification:</b> FW2-TM</p> <p><b>Description of Impairments, or TMDL:</b> TMDLs for phosphorous and fecal coliform</p>							
<p><b>Findings:</b> In June 2003, the NJDEP established TMDLs for phosphorous for four lakes, including Lake Hopatcong. The TMDL study attributes approximately 32% of the Lake Hopatcong total phosphorous load to septic systems in the watershed areas around the lake, including Mt. Arlington.</p> <p>In September 2007, the NJDEP also established TMDLs for pathogens for eleven lakes including the Lake Hopatcong watershed (specifically, fecal coliform in Lake Hopatcong). The TMDL states that failing septic systems can be a source of fecal coliform. The construction of collection systems to</p>							

connect the unsewered existing development within the municipalities of the TMDL study area is consistent with the TMDL reports and is recommended by NJDEP. In an effort to assist in the prevention and remediation of the impaired Lake Hopatcong, the NJDEP has given a high priority to reserving/dedicating the MSA STP flow allocation to serve existing unsewered portions of the Lake Hopatcong Watershed. As a result of the findings contained in the Lake Hopatcong TMDL, the NJDEP determined that the proposed connection of the existing 45 aging septic systems would aid in the accomplishment of restoration of water quality and hence, satisfied the criteria for a waiver for the protection of public health and safety (N.J.A.C. 7:38-6.5).

The septic systems that would be removed are within Tier 3 of a WHPA, which will reduce the pollutant loading to the affected well.

**Policy Statement:** To identify surface and ground water resources currently impaired or at risk of impairment, and in need of protection, restoration or enhancement. (2F1)

To coordinate with NJDEP and other agencies to identify impairments and implement improved regulatory actions and management practices that will also support the water quality goals of the Highlands Act. (2F5)

To remediate the pollutant sources associated with existing or historic land uses in conjunction with redevelopment. (2F6)

To determine where water quality improvements are necessary or beneficial for the improvement of water availability, develop watershed-based plans to achieve such improvements such as restoration techniques including disconnection and reduction of existing impervious surfaces, develop implementation mechanisms, and implement these plans. (2G4)

**Recommendation:** The proposed connection of the existing 45 aging septic systems would address a documented threat to public health, and would aid in the remediation of pollutant sources to Lake Hopatcong, which is consistent with the water quality goals, policies and objectives of the RMP.

**WATER CAPACITY**

**Site:** Parker/Circle/Southard Sanitary Sewer Improvements

**Potable Water Supply:** n/a

**Domestic?** Yes

**If Domestic, source HUC:** Lake Hopatcong 02040105150020

**Public Community Water System?** No

**If PCWS, Name of Facility:** n/a

**PCWS ID No.?** n/a

<b>Source Water HUC:</b>	<b>Net Availability (MGD)</b>	<b>Conditional Availability (MGD)</b>
02040105150020		0.0541

**Total Projected Water Demand (MGD):** ~0.0113 (0.008 MGD increased water loss)

**HUC Constraint:**

**Current Deficit Area**

**Existing Constrained Area**

**Findings:** The proposed connection of the existing 45 aging septic systems to the existing Musconetcong Sewage Authority system will result in a conversion of the water use from consumptive to depletive, as the MSA facility discharge is downstream of Lake Hopatcong but within the same HUC11 watershed. The increased impact to the source subwatershed is approximately 8000 gallons per day, or 0.008 MGD. The proposed depletive water use is within a Current Deficit Area.

**Policy Statements:** 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. (2B4b).

A Current Deficit Area subwatershed that is primarily within the Existing Community Zone shall be assigned a Conditional Net Water Availability of 2 percent of Ground Water Capacity, based on the Low Flow Margin Method, conditioned upon prior implementation or commitment for implementation of the 125% mitigation requirement in Objective 2B4b. (2B5a).

A Current Deficit Area subwatershed that is primarily within the Protection Zone or Conservation Zone shall be assigned a Conditional Net Water Availability of 1 percent of Ground Water Capacity, based on the Low Flow Margin Method, conditioned upon prior implementation or commitment for implementation of the 125% mitigation requirement in Objective 2B4b. (2B5b).

**Recommendation:** This application is eligible for a public health and safety waiver (see below), which is supported by RMP policies. While it will result in increased depletive water uses in a Current Deficit Area, this is a necessary and limited impact of the waiver and therefore is acceptable under the Highlands Act. However, Mt. Arlington, as part of mandatory Plan Conformance for the Preservation Area, will be required to develop a Water Management Plan for this subwatershed, and will at that time address deficit reduction needs including mitigation equal to 125% of the proposed new depletive water uses (10,000 gallons per day) within the same HUC14 subwatershed.

**WASTEWATER CAPACITY**

**Name of Facility:** Musconetcong Sewage Authority Water Pollution Control Plant

**NJPDES Permit Number:** NJ0027821

**Projected Flow (GPD):** 14,325 GPD

**HDSF Facility?** Yes

**HDSF Available Capacity (MGD):** 4.3 MGD

**Subject to Allocation Agreement?** UNK

**Allocating Capacity:**

**Extent of HDSF Service Area Included in WMP:** Full  Partial

**Wastewater Treatment Facility:**

**New:** **Wastewater Discharge Flow (MGD)**

**Individual Septic:** Existing  Proposed  Existing: Future:

**NJPDES-DGW:** Existing  Proposed  Existing: Future:

**NJPDES-DSW:** Existing  Proposed  Existing: 4.3MGD Future:

**Findings:** The project will connect into the Musconetcong Sewerage Authority STP collection system, which is an existing HDSF. While the Highlands Act revokes designated sewer service areas for which wastewater collection systems have not been installed on the date of enactment of the Highlands Act into the Preservation Area, the NJDEP has determined that the proposed connection of the existing 45 aging septic systems satisfied the criteria for a waiver for the protection of public health and safety and would aid in the accomplishment of restoration of water quality. The area is immediately adjacent to the Existing Area Served for MSA.

**Policy Statement:** The Highlands Act revokes designated sewer service areas for which wastewater

collection systems have not been installed on the date of enactment of the Highlands Act into the Preservation Area except if necessary to serve development in the Preservation Area that is exempt (2I1).

Prohibit new, expanded, or extended wastewater collection or treatment outside of Existing Areas Served (in the Protection and Conservation 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 (2K3b).

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 (2K4c)/

**Recommendation:** Because the proposed project would serve existing public health and safety needs and would serve to correct existing environmental degradation (and it is not intended or designed to support future development), the proposed action is consistent with the wastewater capacity goals, policies, and objectives of the RMP.

**HISTORIC, ARCHAEOLOGICAL AND SCENIC**

**Presence of Absence of Resources:**

<b>Highlands Historic District Polygons</b>	Absence
<b>Highlands Historic Properties Polygons</b>	Absence
<b>Highlands Historic Property Points</b>	Absence
<b>Archaeological Grids</b>	Absence
<b>Highlands Scenic Resource Inventory</b>	Absence

**Description of Resources:**

**Findings:** Historic, archaeological, and scenic resources are not located onsite.

**Policy Statement:** n/a

**Recommendation:** No recommendation

**CONCLUSIONS AND RECOMMENDATIONS**

The staff finds that the proposed project is consistent with the goals, policies, and objectives of the Final Draft RMP. Further, because the proposed project would serve existing public health and safety needs, would serve to correct existing environmental degradation (and it is not intended or designed to support future development), and would not encroach upon sensitive environmental resources, the Council staff recommends that the Highlands Council authorize the issuance of a letter stating that the Proposed Amendment and HPAA waiver request is consistent with the Final Draft RMP.