

# **Washington Township, Morris County Wastewater Management Plan**

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Prepared by the State of New Jersey Highlands Water Protection and Planning Council in support of Washington Township's approved Petition for Plan Conformance and the Water Quality Management Planning Rules, N.J.A.C. 7:15

**ADOPTED  
July 24, 2012**

# WASHINGTON TOWNSHIP WASTEWATER MANAGEMENT PLAN

## Introduction and Methods

Of the 88 municipalities in the Highlands Region, 77 have submitted to the Highlands Water Protection and Planning Council (Highlands Council) a Notice of Intent to conform to the Highlands Regional Master Plan (RMP, effective date September 8, 2008) regarding the Preservation Area, Planning Area or (where applicable) both within their municipalities. The New Jersey Department of Environmental Protection (NJDEP) is responsible for ensuring that all areas of New Jersey are addressed by Wastewater Management Plans (WMPs) that comply with the provisions of the Water Quality Management Planning Rules at N.J.A.C. 7:15-5. Within the Highlands Region, this process will be achieved through a coordinated process with the Highlands Council as provided in N.J.A.C. 7:15-3.10 and N.J.A.C. 7:38-1.1. One of the conditions for each municipality that fully conforms to the RMP (“Plan Conformance” for the entire municipality) is the development of a WMP, in conformance with the RMP and N.J.A.C. 7:15. The purpose of the WMP is to ensure that future sewer service areas and septic areas for planning flows of 2,000 gallons per day (gpd) or less (individual subsurface sewage disposal systems – ISSDS) are consistent with the Land Use Capability Zone Map designations and policies of the Highlands RMP. The WMP is therefore a direct result of the Plan Conformance process, intended to be adopted as a stand-alone document. Municipalities that do not pursue Plan Conformance for the Planning Area will address their wastewater planning responsibilities in cooperation with their counties or directly with NJDEP, which in turn will request a consistency determination from the Highlands Council.

On May 19, 2011, the Highlands Council adopted Resolution #2011-14 (attached as Attachment 1, including the Final Consistency Review and Recommendations Report) which approved Washington Township’s Petition for Plan Conformance, subject to conditions as set forth in the Final Consistency Review and Recommendation Report for Washington Township. Plan Conformance applies to the entirety of Washington Township – both the Highlands Planning and Preservation Areas. A condition of the approved Petition for Plan Conformance, as detailed in the Final Consistency Review and Recommendation Report, is the requirement that Washington Township adopt a WMP working with the Highlands Council under Plan Conformance. As such, this Washington Township WMP is developed under Plan Conformance for the entire Township (see Figures Washington Township-1 through Washington Township-3). The Highlands Council worked cooperatively with Washington Township throughout the Plan Conformance process to conduct an extensive analysis of the complete land area of the municipality, using a geodatabase that documents for each parcel the status of development, water supply and wastewater utility service, build-out potential, etc. Using the Washington Township Highlands Municipal Build-Out Report, the Final Consistency Review and Recommendation Report and additional data compiled for Washington Township, the Highlands Council has identified and mapped the following areas:

- 1. Existing Areas Served** – As defined by the RMP, these are developed lands for which sewer service exists and is connected and operational. Sewer service is defined as the service area for any NJPDES-permitted domestic treatment works, including but not limited to Highlands Domestic Sewerage Facilities as defined by the RMP. Specifically, Existing Area Served “means areas connected to ... an existing public wastewater collection system ... where such infrastructure is already constructed. It does not include areas of designated sewer service areas ... where collection, transmission, or distribution systems do not currently exist.” These areas are generally but not exclusively located within the Existing Community Zone defined by the RMP, and may be within the Preservation Area or the Planning Area.

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2. **Existing Sewer Service Area** – These areas include, in any RMP Land Use Capability Zone, as applicable for the municipality:
- a. the Existing Areas Served including for all NJPDES-permitted wastewater treatment facilities including domestic or industrial, and whether discharging to surface or ground water, including T1 sites (NJPDES general permit for sanitary wastewater discharges to ground water), and
  - b. any other lands previously approved by the NJDEP as sewer service areas for which a currently valid municipal development approval and valid NJDEP treatment works approval have been received and are currently in effect, where such information was documented by the municipality or the NJDEP and provided to the Highlands Council, including through the geodatabase for the Highlands Municipal Build-Out Report. Specifically included is the following projects:
    - i. Planning Area – Block 19, Lots 5, 6 and 7: A development project (“Greenbriar Riverview”) has been locally approved and received NJDEP treatment works approvals (TWP #06-0636), within the previously-approved Future SSA of the Hackettstown Municipal Utilities Authority (HMUA), on Route 517 (Schooley’s Mountain Road) near Newburgh Road across from Heath Village. The project involves 360 age-restricted condominiums and a clubhouse, with a design flow of 126,300 gpd, according to the treatment works approval. This project does have Highlands resource constraints but has obtained all local and NJDEP approvals and thus is not regulated by the Washington Township Highlands Land Use Ordinance for such time as prior approvals remain valid. Therefore, the property is included within the Existing SSA for this WMP.
    - ii. Planning Area – Block 8 Lot 6: This parcel has been subdivided into two additional parcels with Lots designated as 6.02 (formally Lot 6), 6.03, and 6.04. This subdivision has previous approvals but not built.

NOTE: For any Existing Area Served parcel that is greater than 1 acre in total size and located in the Conservation Zone, Protection Zone or Existing Community Zone Environmentally-Constrained Sub-Zone, the map shows as Existing Sewer Service Area (SSA) only the developed portion of the parcel. Undeveloped portions of such parcels are not shown as Existing SSA. Within the Highlands Center, Existing Community Zone, and Lake Community Sub-Zone only, the undeveloped portions of such Existing Area Served parcels are included as Existing SSA regardless of size. For any Existing Area Served parcel that is less than or equal to 1 acre in total size, the map shows the entire parcel as Existing SSA regardless of development status and Land Use Capability Zone. Such parcels are considered fully developed.

3. **General Service Area for Wastewater Facilities with Planning Flows of Less Than 2,000 gpd which Discharge to Ground Water** – Included in Figure Washington Township-1 are areas served by septic systems (ISSDS) and other wastewater systems with planning flows of less than 2,000 gpd. This term incorporates such areas in WMPs adopted under previous versions of N.J.A.C. 7:15.

#### 4. **Future Sewer Service Area**

- a. Planning Area: These areas include all lands in the Existing SSA, plus all lands in the Highlands Planning Area identified by the RMP as being both within the Existing Community Zone (not including the Environmentally-Constrained Sub-Zone) and Lake Community Sub-Zone, and also located within areas identified by the municipality for sewer service and approved by the Highlands Council as part of the municipality’s Petition for Plan Conformance. Under this WMP, permits will not be granted by NJDEP for extension of sewer service into any other lands of the Planning Area unless:
  - i. The extension is consistent with municipal plans and ordinances approved by the Highlands Council pursuant to the municipal Petition for Plan Conformance; or
  - ii. A consistency determination has been approved by the Highlands Council, pursuant to N.J.A.C. 7:38-1.1(k) and 7:15-3.10(a); and for either (a) or (b).

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- iii. An amendment or revision to this WMP has been approved by NJDEP pursuant to N.J.A.C. 7:15.

The NJDEP and Highlands Council will coordinate regarding potential provision of sewer service to any areas facing imminent public health and safety threats due to failing septic systems within the Planning Area, which may be addressed as a revision to this WMP if found eligible.

- b. Planning Area – Historic Long Valley Center: The approved Petition for Plan Conformance for Washington Township incorporated approval of a Highlands Center Designation for the Historic Long Valley Highlands Center. This Highlands Center is within a previously approved NJDEP sewer service area associated with the Washington Center (expired May 19, 2010), as designated by the State Planning Commission pursuant to the standards and criteria of the State Development and Redevelopment Plan. Therefore, the Historic Long Valley Highlands Center is part of the Future SSA, to the extent depicted in this WMP on Figure Washington HC-1 and incorporated in Figure Washington Township-2. Most of this Highlands Center is developed, including a public school, commercial businesses and homes within the Long Valley Historic District. A portion is currently undeveloped, and was reserved for municipal use during preservation of the “Scott Farm.” This area was previously approved by NJDEP as part of the Future Sewer Service Area. With approval of the Historic Long Valley Highlands Center, continuation of the Future Sewer Service Area mapping for this area is consistent with the RMP.
- c. Planning Area – Valley View Chapel: The approved Petition for Plan Conformance for Washington Township also incorporated approval of sewer service to the Valley View Chapel (115 East Mill Road, Block 36 Lots 43 and 43.01), which shall be limited to the footprint of the locally approved development at the flow of 4,300 gpd (as previously approved by NJDEP for an on-site wastewater disposal facility), within the developed portion of the property only.
- d. Preservation Area: The Highlands Act limits future sewer service in the Highlands Preservation Area to those developments for which an exemption from the Highlands Act has been determined and remains valid, or where a Highlands Preservation Area Approval (HPAA) with waiver has been granted by the NJDEP. For all other areas of the Preservation Area, Future SSA were rescinded by the Highlands Act (Section 42, N.J.S.A. 58:11A-7.1). However, the NJDEP entered into a settlement agreement with the Black Oak Golf Course certifying an exemption from the Highlands Act for construction of a clubhouse with a flow of 2,000 gallons per day or less. On June 23, 2011, the NJDEP notified the Black Oak Golf Course that “a sewer connection is not prohibited under the terms of the settlement agreement. More specifically, a sewer line is described on Sheet 8 of the plans referenced in settlement agreement [sic].” Therefore, in response to requests by Washington Township, the clubhouse of the Black Oak Golf Course is shown within the Future SSA of the Long Valley Village STP.
- e. Failing Septic Systems in the Preservation Area: The Washington Township Health Officer has identified failing septic systems in the Preservation Area. The Highlands Council has determined that certain parcels should be connected to sewer service due to an imminent threat to public health and safety that cannot be rectified through replacement septic systems due to site constraints. (See the Final Consistency Review and Recommendations Report, Appendix D, in Attachment 1.) In each case, sewer service shall be provided in a manner that minimizes sewer line extensions and the secondary potential for new sewer development. Additional parcels have been identified as potential areas of concern, but have not been included in the Future SSA at this time. Future revisions to the WMP may be processed upon specific findings that failing septic systems meet the requirements of the RMP and NJDEP regulations for connection to sewer service.
  - i. Municipal facilities: Palmer Park on Bartley Road (Block 18 Lot 28), and Harrington Park on Rock Road (Block 22 Lot 3.03 & 3.27). The Future SSA shall be limited to the comfort stations area of the parks.

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- ii. Residential properties:
    - 266 Bartley Road (Block 16 Lot 12) and three homes directly to the west of the West Morris Regional High School between the current sewer line and 266 Bartley Road; and
    - The cluster of development surrounding Sandt Lane. The Highlands Council conditioned inclusion of this area upon formal verification by the Washington Township Health Office of a pattern of failing septic systems. Attachment 2 is the Highlands Council evaluation of the resulting information. The Highlands Council concludes that the Sandt Lane area, including the adjacent homes on East Springtown Road, evidences a pattern of failing septic systems on small lots (generally 1 acre or less) with highly constraining soils such that replacement with new septic systems is not a viable option. Therefore, the following parcels are included in the Future Sewer Service Area: Block 23 Lots 13.01, 14 (house area only), 9.01, 9.02 and 9.03; and Block 23.01 Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14. Note: Block 23 Lot 13 and Block 23.01 Lot 13 are currently connected to the sewer line along Rock Road.
  - iii. Commercial property: 141 Schooley's Mountain Road (Block 33 Lots 2 and 3).
5. **Septic Area (Planning Flows of 2,000 gallons per day (gpd) or less)** – This category applies to all lands not included within the above categories, for which the density of new septic system development will be consistent with applicable septic density/nitrate dilution analyses. At a minimum, areas identified by the Highlands RMP as Protection Zone, Conservation Zone and Existing Community Zone-Environmentally Constrained Sub-Zone, which are outside of the Existing or Future SSA, are designated as “Septic Area (Planning Flows of 2,000 gallons per day (gpd) or less).” Portions of the Existing Community Zone that are not sewered and are not intended to receive sewer service may be designated in the same manner.
- a. Permits or approvals for projects in this area with cumulative wastewater flows of 2,000 gpd or less shall not be permitted by NJDEP unless:
    - i. The project is approved under septic system density provisions of the Highlands Checklist Ordinance (#RO-09-12) adopted by Washington Township pursuant to Highlands Council approval of its Petition for Plan Conformance. (NOTE: Approval pursuant to these provisions of the Highlands Land Use Ordinance is deemed in conformance with the septic system density requirements of N.J.A.C. 7:15); or
    - ii. Within the Preservation Area, the development activity is exempt from the Highlands Act or receives a Highlands Preservation Area Approval from NJDEP. Within the Planning Area, the development activity is exempt from the Highlands Act. Such development shall be in conformance with N.J.A.C. 7:15 regarding septic system densities.
  - b. Permits or approvals for projects in this area with cumulative wastewater flows in excess of 2,000 gpd shall not be permitted by NJDEP unless:
    - i. The project is approved under septic system density provisions of the Highlands Land Use Ordinance adopted by Washington Township pursuant to Highlands Council approval of its Petition for Plan Conformance. (NOTE: Approval pursuant to these provisions of the Highlands Land Use Ordinance is deemed in conformance with the septic system density requirements of N.J.A.C. 7:15); or
    - ii. The Highlands Council has determined that the discharge is consistent with the RMP and the discharge is approved by NJDEP as a revision or amendment to this Wastewater Management Plan; or

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- iii. Within the Planning Area, the development activity is exempt from the Highlands Act and the discharge is approved by NJDEP as a revision or amendment to this Wastewater Management Plan; or
  - iv. Within the Preservation Area, the development activity is exempt from the Highlands Act or receives a Highlands Preservation Area Approval from NJDEP and the discharge is approved by NJDEP as a revision or amendment to this Wastewater Management Plan. Such development shall be in conformance with N.J.A.C. 7:15 regarding septic system densities.
6. **Consistency Determinations:** Any proposed modification to this Wastewater Management Plan will not be approved without a determination of consistency from the Highlands Council as required by N.J.A.C. 7:38-1.1(k) and 7:15-3.10(a).

### **Mapping Requirements Pursuant to N.J.A.C. 7:15-5**

The relevant mapping requirements of the Water Quality Management Planning Rules at N.J.A.C. 7:15-5 are met through the following mapping for Washington Township, as developed specifically for the Wastewater Management Plan or as incorporated by reference from the Highlands Plan Conformance documents approved by the Highlands Council. Maps of existing and future domestic treatment works and service areas are used by the NJDEP for WQMP consistency reviews regarding proposed Treatment Works Approvals and NJPDES permits. They have been developed specifically for this WMP and are incorporated herein. Maps of environmental and administrative features are used by NJDEP as basis and background information for the identification of future sewer service areas. However, in the case of Washington Township, the Washington Township WMP is based upon approval of Plan Conformance by the Highlands Council, which includes requirements that are as or more stringent than those of N.J.A.C. 7:15. Therefore, the relevant maps are incorporated by reference to the Highlands Council approval of Plan Conformance. These features are included in maps associated with the Highlands Municipal Build-Out Report, Highlands Environmental Resource Inventory (ERI), Highlands Element and Highlands Land Use Ordinance (as specified below) for Washington Township, approved for Plan Conformance by the Highlands Council<sup>1</sup>. GIS spatial data have also been provided to NJDEP, Morris County and the municipality.

- **Jurisdictional Boundaries** – The affected WMP Area is Morris County, within the Upper Raritan and Upper Delaware Areawide Water Quality Management Plans, as shown on the municipal maps. Washington Township is entirely within the Highlands Region, with the Planning and Preservation Areas and major roads being shown in the WMP Figures Washington Township-1, -2 and -3.
- **Existing domestic treatment works and service areas** – See Figure Washington Township-1
- **Existing industrial treatment works and service areas** – See Figure Washington Township-1
- **Future domestic treatment works and service areas** – See Figure Washington Township-2
- **Future industrial treatment works and service areas** – See Figure Washington Township-2
- **Freshwater wetlands** – Washington Township Highlands ERI
- **Flood prone areas**, including flood hazard areas – Washington Township Highlands ERI
- **Public open space and recreational areas** – Washington Township Highlands ERI
- **Preserved agricultural lands** – Washington Township Highlands ERI
- **Wild and Scenic River** areas designated under the New Jersey Wild and Scenic Rivers Act or the Federal Wild and Scenic Rivers Act – Washington Township Highlands ERI. Applicable to Musconetcong River.
- **Category One Water, trout production waters, and trout maintenance waters** – Washington Township Highlands ERI (NOTE: Under the Regional Master Plan, all Highlands Open Waters in both the Preservation and Planning Areas are associated with 300 foot buffers.)

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<sup>1</sup> [http://www.highlands.state.nj.us/njhighlands/planconformance/wash\\_twp\\_morris.html](http://www.highlands.state.nj.us/njhighlands/planconformance/wash_twp_morris.html)

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- **Surface waters and HUC14 boundaries** – Washington Township Highlands ERI
- **Suitable habitat for endangered and threatened wildlife species** – Washington Township Highlands ERI
- **Natural Heritage Priority Sites** – Washington Township Highlands ERI
- **Riparian Zones** – Washington Township Highlands ERI (NOTE: this map uses the Highlands Council definition, which is more expansive than the NJDEP definition.)
- **Steep slopes** – Washington Township Highlands ERI (NOTE: this map uses the Highlands Council definition and LiDAR data)
- **Current composite or municipal zoning** – Highlands Land Use Ordinance Exhibit 1, “Highlands Zones and Sub-Zones.” (In addition, Highlands Council approval of Plan Conformance and municipal adoption of the Highlands Land Use Ordinance addresses this requirement.)
- **Municipal parcel mapping and Roads** – WMP Figures Washington Township-1, -2 and -3, and also on all Highlands Land Use Ordinance Exhibits
- **Undeveloped and underdeveloped property** – Washington Township Highlands Municipal Build-Out Report
- **Public water supply service area** – See Figure Washington Township-3

### Special Provisions Regarding Future Sewer Service Areas

The following are required statements of constraints, jurisdiction and caveats regarding the map of Future Sewer Service Areas (Figure Washington Township-2) used in the Washington Township WMP:

1. **Highlands Restrictions:** New, expanded, or extended public wastewater collection and treatment systems and community on-site treatment facilities within the Protection Zone, the Conservation Zone and the Environmentally-constrained Sub-Zones of the Planning Area are prohibited unless they are shown to be necessary for and are approved by the Highlands Council for one or more of the purposes listed below. For approvals regarding purposes 1, 2 and 3, the project must maximize the protection of sensitive environmental resources such as Highlands Open Waters buffer areas, Riparian Areas, the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas (ARAs), Steep Slopes, Prime Ground Water Recharge Areas and Critical Habitat. For approvals regarding purpose 3, the project must avoid disturbance of Highlands Open Waters buffer areas, Riparian Areas, Steep Slopes, and Critical Habitat, and must minimize disturbance of the forested portion of the Forest Resource Area, agricultural lands of ARAs, and Prime Ground Water Recharge Areas. The choice of extension or creation of systems shall follow the requirements in Objective 2K3d (2 and 3). The applicable purposes are:
  - 1) To address through a waiver under Policy 7G1 or 7G2 a documented existing or imminent threat to public health and safety from a pattern of failing septic systems (where the failing systems cannot reasonably be addressed through rehabilitation or replacement) or highly concentrated septic systems, where the threat is of sufficient scale to justify a public wastewater collection and treatment system or community on-site treatment facility and where no alternative is feasible that would sufficiently assure long-term protection of public health and safety. To address other issues of public health and safety, such needs shall have highest priority for allocation of existing system capacity;
  - 2) To address development permitted through a Highlands Redevelopment Area or takings waiver under Policy 7G1 or 7G2; or
  - 3) To serve a cluster development that meets all requirements of Objective 2K3d.
2. **Highlands Open Water Buffers/Riparian Zones:** Pursuant to the Highlands Regional Master Plan, Highlands Open Water buffers extend to 300 feet from top of bank (or centerline of a first order stream where no bank is apparent). This requirement applies to all Highlands Open Waters within the Highlands Region, regardless of stream classification in the Surface Water Quality Standards at N.J.A.C. 7:9B. The Highlands Open Water buffers have not been graphically removed from the sewer service area but are not proposed for sewer service. Such buffers will be regulated

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through the Highlands Land Use Ordinance adopted by the Township, applicable to both the Planning and Preservation Areas. The Highlands Land Use Ordinance is equivalent with or more stringent than the Department's riparian zone standard, the Flood Hazard Control Act Rules (N.J.A.C. 7:13) and Water Quality Management Rules (N.J.A.C. 7:15).

3. **NJDEP Riparian Zones:** For any proposed development that is not subject to the Highlands Land Use Ordinance or Highlands Regional Master Plan (i.e., exempt from the Highlands Act), pursuant to N.J.A.C. 7:15, riparian zones are:
  - a. 300 feet from top of bank (or centerline of a first order stream where no bank is apparent) for waters designated as Category One (C1) and all upstream tributaries within the same HUC 14 subwatershed;
  - b. 150 feet for waters designated Trout Production and all upstream waters;
  - c. 150 feet for water designated Trout Maintenance and all upstream waters within one linear mile as measured along the length of the regulated water;
  - d. 150 feet for any segments of water flowing through an area that contains documented habitat for a threatened or endangered species of plant or animal, which is critically dependent on the surface water body for survival, and all upstream waters (including tributaries) within one linear mile as measured along the length of the surface water body;
  - e. 150 feet for waters that run through acid-producing soils; and
  - f. 50 feet for all waters not designated as C1, trout waters, critically water dependent Threatened and/or Endangered Species Habitat, or associated with acid soils.

Surface waters that are designated C1 are listed in the Surface Water Quality Standards at N.J.A.C. 7:9B. The Department's "Surface Water Quality Standards" GIS data layer was utilized to determine these waters. Jurisdictional determinations by the Department will be utilized to determine the extent of the sewer service area on individual lots. The riparian zones have not been graphically removed from the sewer service area but are not proposed for sewer service.

4. **Industrial Pretreatment Facilities:** All existing, new, or expanded industrial pretreatment facilities requiring Significant Indirect User (SIU) permits and/or Treatment Works Approvals, and which are located within the specified sewer service area, are deemed to be consistent.
5. **Applicability of Grant Conditions:** Pre-existing grant conditions and requirements (from Federal and State grants or loans for sewerage facilities) that provide for restriction of sewer service to environmentally sensitive areas are unaffected by adoption of this WMP and compliance is required.
6. **Limitations on Individual Subsurface Sewage Disposal Systems:** Individual subsurface sewage disposal systems (ISSDS) for individual residences may be constructed in depicted sewer service areas (Figure Washington Township-2) only if legally enforceable guarantees are provided, before such construction, that use of such systems will be discontinued when the depicted sewer service becomes available. This applies to ISSDS that require certification from the Department under the Realty Improvement Sewerage and Facilities Act (N.J.S.A. 58:11-23) or individual Treatment Works Approval or New Jersey Pollutant Discharge Elimination System Permits (under N.J.A.C. 7:14A). It also applies to ISSDS which require only local approvals. However, this provision does not apply in the Preservation Area for properties not specifically denoted as Future Sewer Service Area in Figure Washington Township-2. Additional properties may be included in Figure Washington Township-2 through NJDEP approval of revision(s) to this Wastewater Management Plan, where determined to be exempt from the Highlands Act or consistent with (through a Highlands Council consistency determination) the Regional Master Plan. Specifically, revisions may be approved to address public health and safety issues related to failure of ISSDS on properties upon which repair or replacement with compliant systems is not practicable. Further, in both the Preservation Area and the Planning Area, connection of additional properties or expansion of flows from existing connections is subject to municipal approval regarding availability of utility capacity, regarding both remaining available utility capacity (i.e., wastewater flows) and infrastructure capacity (e.g., pump stations, mains).

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Compliance with the connection requirement has been demonstrated through adoption of Washington Township Ordinance [#RO-09-12].

7. **Environmental Features:** Development in areas mapped as wetlands, flood prone areas, suitable habitat for endangered and threatened species as identified on the Department's Landscape Project Maps of Habitat for Endangered, Threatened and Other Priority Wildlife as Rank 3, 4 and 5 (Version 3.0 or more recent), Natural Heritage Priority Sites, riparian zones as defined above, steep slopes (including steep slopes as defined and mapped in the Highlands Land Use Ordinance of Washington Township), or designated river areas may be subject to special regulation under Federal or State statutes or rules, and interested persons should check with the Department for the latest information. Depiction of environmental features shall be for general information purposes only, and shall not be construed to define the legal geographic jurisdiction of such statutes or rules.
8. **Future Treatment Works:** Locations of future pump stations, major interceptors, and trunk sewers are being provided for general information only and will not serve as the basis for any future WQMP consistency determinations or permit reviews unless the pump station, major interceptor or trunk sewer is part of a State or federally funded project.
9. **Water Quality Standards:** Areas located within the watershed of a Freshwater One (FW1) stream, as classified in the Surface Water Quality Standards, and/or that have Class 1-A ground water (Ground Water of Special Ecological Significance), as classified in the Ground Water Quality Standards, are identified as "Non-degradation water area based on the Surface Water Quality Standards at N.J.A.C. 7:9B, or the Ground Water Quality Standards at N.J.A.C. 7:9C." Non-degradation water areas shall be maintained in their natural state (set aside for posterity) and are subject to restrictions including, but not limited to, the following:
  - a. The Department will not approve any pollutant discharge to ground water nor approve any human activity which results in a degradation of natural quality except for the upgrade or continued operation of existing facilities serving existing development.
  - b. For additional information please see the Surface Water Quality Standards at N.J.A.C. 7:9B, and/or the Ground Water Quality Standards at N.J.A.C. 7:9C.

### Municipal Build-Out Results

Washington Township is located within both the Preservation Area and Planning Area. The Highlands municipal build-out analysis reported in this document for Washington Township is based upon the Washington Township Highlands Municipal Build-Out Report,<sup>2</sup> available information on developments with prior and valid approvals, and the Highlands Council approval of the Historic Long Valley Highlands Center and other specific sewer service areas. The Highlands Council estimated the following new development results for potential developable lands for the entire municipality, as summarized in **Table 1** below. As specified in the Highlands Municipal Build-Out Report, the results of the municipal build-out analysis are designed to be utilized at a municipal scale and are not appropriate for determining if a particular parcel or development project is consistent with the RMP (for example, the report includes certain results regarding residential or non-residential development that may be altered through a specific development review). Affected public water supply and wastewater facilities are discussed below. As noted in the Washington Township Highlands Municipal Build-Out Report, the municipal results are a result of current conditions and application of RMP requirements. The Report and the analysis below provide a critical planning tool but cannot be used as a definitive prediction of the future or as a basis for parcel-based development potential.

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<sup>2</sup> [www.highlands.state.nj.us/njhighlands/morris\\_county/washington\\_township/2\\_Washington\\_\(Morris\)\\_Buildout\\_Report.pdf](http://www.highlands.state.nj.us/njhighlands/morris_county/washington_township/2_Washington_(Morris)_Buildout_Report.pdf)

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**1. Development in Sewer Service Areas:** All new developments proposed to be served by public wastewater systems are within the Planning Area portion of Washington Township. No new wastewater demand for domestic treatment works is projected in the Preservation Area.

- a. Total Projected Development: As summarized in **Table 1**, zero (0) residential dwelling units and 252,339 square feet of non-residential development, resulting in a wastewater demand of 25,076 gallons per day (gpd), or 0.025076 million gallons per day (MGD), and estimated public water supply demands of 25,981 gpd, or 0.025981 MGD. However, it should be noted that these values do not include the potential water supply demand and wastewater generation associated with inclusionary residential projects that may be or are approved by the Township, as the build-out model used for the Highlands Municipal Build-Out Reports are based upon local zoning in place, rather than development plans that may have taken place through court settlements or other processes, such as the “Greenbriar Riverview” project discussed below.

<b>Table 1 – Municipal Build-Out Report Results Summary (Not Reflecting Capacity Constraints)</b>			
	<b>Preservation Area</b>	<b>Planning Area</b>	<b>Totals</b>
<b>Residential units – Sewered</b>	0	0	0
<b>Septic System Yield</b>	63	38	101
<b>Total Residential Units</b>	63	38	<b>101</b>
<b>Non-Residential – Sewered</b>	0	252,339 sq ft	252,339 sq ft

- b. Historic Long Valley Highlands Center: Most parcels in the Highlands Center are fully developed and are part of the Existing SSA for the Long Valley Village Wastewater Treatment Plant. One parcel proposed for municipal use is not currently served but will be included within the Future SSA and is proposed to be connected to the Long Valley Village Wastewater Treatment Plant. The anticipated flow from this project has not been determined, but the flow based on existing zoning would be approximately 7 residential units generating 2100 gpd. However, the current R-5 zoning will not be applicable to the municipal project, which may generate more or less wastewater flow depending on the selected use. The Long Valley Village WTP has sufficient capacity to address any reasonable flows from this area, as discussed below.
- c. Valley View Chapel (115 East Mill Road, Block 36 Lots 43 and 43.01): Limited to 4,300 gpd as previously approved by NJDEP for an on-site wastewater treatment system with discharge to ground water. Based upon Highlands Council approval of the Township’s Petition for Plan Conformance, incorporation of the developed portion of the parcel within the Future SSA for the Long Valley Village WTP is consistent with the RMP (See Attachment 2).
- d. Block 19, Lots 5, 6 and 7: As noted on page 4, a development project (“Greenbriar Riverview”) has been locally approved and received NJDEP treatment works approvals (TWP #06-0636), within the previously-approved Future SSA of the Hackettstown Municipal Utilities Authority (HMUA), on Route 517 (Schooley’s Mountain Road) near Newburgh Road across from Heath Village. The project involves 360 age-restricted condominiums and a clubhouse, with a design flow of 126,300 gpd, according to the treatment works approval. This project does have Highlands resource constraints but has obtained all local and NJDEP approvals and thus will not be regulated by the Washington Township Highlands Land Use Ordinance for such time as prior approvals remain valid.
- e. Preservation Area Public Health and Safety Waivers: As noted on pages 4 and 5, several properties are included for sewer service that pose imminent threats to public health and safety due to failing septic systems or the absence of wastewater service to major public parks. These properties are:

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- a. Palmer Park on Bartley Road (Block 18 Lot 28), and Harrington Park on Rock Road (Block 22 Lot 3.03 & 3.27). The Future SSA shall be limited to the comfort stations area of the parks. Wastewater flow has not been estimated, but will be seasonal in nature and primarily on evenings and weekends.
  - b. Residential properties:
    - i. Bartley Road Cluster: Block 16 Lots 12, 12.01 and 13, and Block 17, Lot 1. Four existing homes, with a planning flow of 1,000 gallons per day.
    - ii. Sandt Lane Cluster: Block 23 Lots 13.01, 14 (house area only), 9.01, 9.02 and 9.03; and Block 23.01 Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14. 18 existing homes, with a planning flow of 5,040 gallons per day.
    - iii. Block 33 Lots 2 and 3. Commercial property with restaurant area and florist. Total planning flow is not available at this time, but is estimated at 2,000 gallons per day based on a 50 seat restaurant and 200 customers per day.
  - f. Black Oak Golf Course: Based on the NJDEP settlement agreement with the Black Oak Golf Course certifying an exemption from the Highlands Act for construction of a clubhouse with a flow of 2,000 gallons per day or less, and NJDEP correspondence of June 23, 2011 clarifying that a sewer connection is not prohibited under the terms of the settlement agreement, the clubhouse of the Black Oak Golf Course is shown within the Future SSA of the Long Valley Village STP. Sewage flows shall be 2,000 gpd or less.
2. **Development Reliant on Septic Systems:** 63 septic systems in the Planning Area for all RMP Land Use Capability Zones and HUC14 subwatersheds, and 38 septic systems in the Preservation Area. (See **Table 10** for details.)

The build-out results based on potential developable lands are not constrained by wastewater supply utility capacity and water supply utility capacity, as discussed in the next sections. The water supply demands from the build-out are constrained by water availability, defined as Net Water Availability per the RMP. Assuming that all water demand for development in Washington Township is derived from wells within the local HUC14 subwatershed, Net Water Availability represents a constraint on build-out potential of 0.005258 MGD. Therefore, impacts on Net Water Availability will be addressed through the development and implementation of Water Use and Conservation Management Plans for any affected subwatersheds.

### **Available Wastewater Utility Capacity and Municipal Build-Out Results**

NJPDES permitted facilities affecting Washington Township are listed in **Table 6**.

#### **Washington Township MUA - Long Valley**

A Highlands Domestic Sewerage Facility (HDSF) serving Washington Township is the Long Valley Village Wastewater Treatment, which at this time has an approved and operative total permitted system capacity of 0.244 MGD, as described in NPDES Permit No. NJ0109061. The current available Highlands Region and municipal capacity for the utility is 0.054 MGD, based on flow data of January 2005 through July 2010 (see **Table 2**), using the Highlands Regional Master Plan method which subtracts the maximum 3-month flow (MAX3MO) from the permitted capacity, with the most limiting MAX3MO from 2007. However, more recent data support information from the WTMUA that improvements to the system have reduced both peak flows and the ratio of MAX3MO to annual average flows (i.e., from 1.46 in 2007 to values of 1.16 to 1.23 in 2008 through 2010). Therefore, it is more appropriate to conclude that the current available capacity based on the most limiting recent flow data (2010) is approximately 0.84 MGD. Note: NJDEP calculates available

## Washington Township Wastewater Management Plan

capacity by subtracting the most recent available 12-month average, which is 0.134 MGD for Long Valley Village Wastewater Treatment for the period of January 2010 through December 2010, from the permitted capacity resulting in an available capacity of 0.11 MGD. This method applies to all non-conforming municipalities in the Highlands Region, and to NJDEP determinations regarding whether a facility expansion is required to accommodate existing or necessary future flows. The Highlands Council's calculations used in the RMP are more conservative, and are used to determine whether extension of sewer service beyond the Existing Sewer Service Area may occur, other than for activities eligible for a waiver from the Regional Master Plan or Highlands Act.

Regardless of the method used, some available capacity is contracted to individual customers or allocated for specific future projects, including several inclusionary connections due to failing septic systems in Washington Township. The total estimated wastewater generation from the Washington Township build-out report for the Long Valley Village Wastewater Treatment facility is 0.003027 MGD for the Planning Area and 0 MGD for the Preservation Area. With inclusion of the Historic Long Valley Highlands Center, Valley View Chapel, Black Oak Golf Course clubhouse, and limited connections for failing septic systems, the totals do not exceed the utility capacity conditions. Therefore, the build out demands associated with the wastewater utility are supported by utility available capacity. **Table 8** provides additional information.

	<b>Permitted Flow</b>	<b>Maximum Three Month (MAX3MO) Average Flow</b>	<b>Remaining Available Capacity (RMP)</b>	<b>Annual Average Flow</b>	<b>Remaining Available Capacity (NJDEP)</b>
<b>2005</b>	<b>0.244</b>	0.120	0.124	0.106	0.138
<b>2006</b>	<b>0.244</b>	0.147	0.097	0.095	0.147
<b>2007</b>	<b>0.244</b>	0.190	<b>0.054</b>	0.130	0.114
<b>2008</b>	<b>0.244</b>	0.133	0.111	0.115	0.129
<b>2009</b>	<b>0.244</b>	0.130	0.114	0.106	0.138
<b>2010</b>	<b>0.244</b>	0.160	0.084	0.134	<b>0.104</b>

**NOTE:** All flows are in MGD. Any allocations identified in this document are neither NJDEP-determined nor NJDEP-enforced. They are used by the utility and its customers for internal allocation and billing purposes.

### Washington Township MUA - Schooley's Mountain WTP

Another Highlands Domestic Sewerage Facility (HDSF) serving Washington Township is the Washington Township MUA- Schooley's Mountain WTP, which at this time has an approved and operative total permitted system capacity of 0.5 MGD, as described in NPDES Permit No. NJ0023493. The current available Highlands Region capacity for the utility is -0.097 MGD (2008 data), based on flow data of January 2005 through July 2010 (see **Table 3**), using the Highlands Regional Master Plan method which subtracts the maximum 3-month flow (MAX3MO) from the permitted capacity. Note: NJDEP calculates available capacity by subtracting the most recent available 12-month average, which is 0.401 MGD for Washington Township MUA- Schooley's Mountain for the period of January 2010 through December 2010, from the permitted capacity resulting in an available capacity of 0.099 MGD. This method applies to all non-conforming municipalities in the Highlands Region, and to NJDEP determinations regarding whether a facility expansion is required to accommodate existing or necessary future flows. The Highlands Council's calculations used in the RMP are more conservative, and are used to determine whether extension of sewer service beyond the Existing Sewer Service Area may occur, other than for activities eligible for a waiver from the Regional Master Plan or Highlands Act. As the RMP calculations show a deficit, the Future SSA is limited to the Existing SSA except where necessary to address public health and safety issues, for which the Highlands Council will provide a Consistency Determination. Specifically, the only expansions approved for the sewer service area for the Schooley's Mountain WTP are for the properties discussed in Attachment 1, as approved by the Highlands Council through its approval of the Township's Petition for Plan Conformance, as noted in Attachment 2.

## Washington Township Wastewater Management Plan

Regardless of the method used, this Existing SSA is within the Preservation Area, and therefore new flows should only be incurred to address threats to public health and safety, where existing buildings are located adjacent to or within short distances of existing sewer lines. There is no estimated future wastewater generation from the Washington Township build out for the Washington Township MUA- Schooley's Mountain facility. **Table 8** provides additional information on planned flows from Washington Township.

	<b>Permitted Flow</b>	<b>Maximum Three Month (MAX3MO) Average Flow</b>	<b>Remaining Available Capacity (RMP)</b>	<b>Annual Average Flow</b>	<b>Remaining Available Capacity (NJDEP)</b>
<b>2005</b>	<b>0.5</b>	0.580	-0.080	0.446	0.054
<b>2006</b>	<b>0.5</b>	0.560	-0.060	0.449	0.051
<b>2007</b>	<b>0.5</b>	0.497	0.003	0.405	0.095
<b>2008</b>	<b>0.5</b>	0.597	<b>-0.097</b>	0.419	0.081
<b>2009</b>	<b>0.5</b>	0.470	0.03	0.397	0.103
<b>2010</b>	<b>0.5</b>	0.560	-0.060	0.401	<b>0.099</b>

**NOTE:** All flows are in MGD. Any allocations identified in this document are neither NJDEP-determined nor NJDEP-enforced. They are used by the utility and its customers for internal allocation and billing purposes.

### Hackettstown MUA

The third Highlands Domestic Sewerage Facility (HDSF) serving Washington Township is the Hackettstown MUA, which at this time has an approved and operative total permitted system capacity of 3.39 MGD, as described in NPDES Permit No. NJ0021369. Hackettstown MUA is a utility authority that provides sewer service to Washington Township and other municipalities (primarily Hackettstown). Hackettstown MUA does not have a specific contract with Washington Township to treat a specific flow, but rather serves all customers within its approved Future SSA equitably. The current available Highlands Region capacity for the utility is 0.785 MGD (2010 data) for all municipalities served by the system, based on flow data of January 2005 through July 2010 (see **Table 4**), using the Highlands Regional Master Plan method which subtracts the maximum 3-month flow (MAX3MO) from the permitted capacity, with 2010 being the most limiting year (other than 2006 which is only marginally lower). Note: NJDEP calculates available capacity by subtracting the most recent available 12-month average, which is 2.249 MGD for Hackettstown MUA for the period of January 2010 through December 2010, from the permitted capacity resulting in an available capacity of 1.141 MGD. This method applies to all non-conforming municipalities in the Highlands Region, and to NJDEP determinations regarding whether a facility expansion is required to accommodate existing or necessary future flows, including some municipalities within the Hackettstown MUA service area. The Highlands Council's calculations used in the RMP are more conservative and are used to determine whether extension of sewer service beyond the Existing Sewer Service Area may occur, other than for activities eligible for a waiver from the Regional Master Plan or Highlands Act.

Regardless of the method used, a portion of the available capacity is contracted to individual customers or allocated for specific future projects, including the "Greenbriar Riverview" inclusionary housing projects in Washington Township. All development planned for connection to the Hackettstown MUA sewer service area have commitments of flow from the MUA, and are within current available capacity. The total estimated wastewater generation from the build out for the Hackettstown MUA facility is 0.141967 MGD (including the 0.1263 MGD from Block 19 Lots 5, 6 and 7, "Greenbriar Riverview") for the Planning Area and 0 MGD for the Preservation Area. Estimated flows from Washington Township other than Greenbriar Riverview are 0.015667 MGD, based on the Washington Township Highlands Municipal Build-Out Report, as modified. The combined Washington Township flows of 0.141967 MGD do not exceed the utility capacity conditions. Therefore, the build out associated with the wastewater utility is supported by utility available capacity. **Table 8** provides additional information on planned flows from Hackettstown MUA.

**Washington Township Wastewater Management Plan**

<b>Table 4 – Hackettstown MUA Remaining Available Capacity</b>					
	<b>Permitted Flow</b>	<b>Maximum Three Month (MAX3MO) Average Flow</b>	<b>Remaining Available Capacity (RMP)</b>	<b>Annual Average Flow</b>	<b>Remaining Available Capacity (NJDEP)</b>
<b>2005</b>	<b>3.39</b>	2.571	0.819	2.250	1.140
<b>2006</b>	<b>3.39</b>	2.636	<b>0.754</b>	2.347	1.043
<b>2007</b>	<b>3.39</b>	2.461	0.929	2.246	1.144
<b>2008</b>	<b>3.39</b>	2.485	0.905	2.315	1.075
<b>2009</b>	<b>3.39</b>	2.393	0.997	2.234	1.156
<b>2010</b>	<b>3.39</b>	2.605	0.785	2.249	<b>1.141</b>
<b>NOTE:</b> All flows are in MGD. Any allocations identified in this document are neither NJDEP-determined nor NJDEP-enforced. They are used by the utility and its customers for internal allocation and billing purposes.					

**Other NJPDES Permitted Facilities**

There are three NJPDES permitted T1 facilities that serve in Washington Township (see **Table 7**). They include Hacklebarney State Park (NJG0133230), St Luke Parish (NJG0155748), and Sherwood Village (NJG0105902). There is no additional wastewater generation for these facilities from the build-out analysis (see **Table 8**).

**Available Public Community Water System Utility Capacity and Municipal Build-Out Results**

Public Water Supply utilities serving and proposed to serve Washington Township are listed in **Table 5**. The primary public water supply utility serving Washington Township is the Washington Township MUA (Hagar and Schooley’s Mountain facilities). The 2003 available Highlands Region and municipal capacity for the utility is 11.56 million gallons per month (MGM). The total estimated public water demand from the build out is 0.003784 MGD for the Planning Area and 0 MGD for the Preservation Area (0.001 MGD of consumptive water use) and does not exceed the utility capacity conditions.

The second facility serving Washington Township is the Hackettstown MUA. The 2003 available Highlands Region capacity for the utility is 27.58 million gallons per month (MGM). The current capacity available to Washington Township is approximately 9.02 MGM. The total estimated public water demand from the build out is 0.022197 MGD for the Planning Area and 0 MGD for the Preservation Area (0.006 MGD of consumptive water use) and does not exceed the utility capacity conditions.

See Figure Washington Township-3 for additional details regarding all of the above facilities.

**Washington Township Wastewater Management Plan**

<b>Table 5. Future Water Demand for Facilities Serving Washington Township</b>				
<b>Purveyor (Approval ID)</b>	<b>Water Allocation/ Approved Diversion (MGM)</b>	<b>Water Allocation/ Approved Diversion (MGD)</b>	<b>Projected Water Demand (MGD)</b>	<b>Excess (Deficit) MGD*</b>
Washington Twp MUA-Hagar System (PWSID #1438004)	35	1.167	0.003784	0.0243
Washington Twp MUA-Schooley's Mountain System (PWSID #1438003)	Included in above	Included in above	Waivers only	0.0
Hackettstown MUA (PWSID #2108001)	123.7	4.123	0.022197	0.9724

\* Reflects maximum monthly demands and reported commitments for the complete system; see <http://www.nj.gov/dep/watersupply/pws.htm>.

**Designation of Wastewater Service Areas within Washington Township**

The following maps are provided to show the existing and future sewer service areas for NJPDES-permitted sanitary wastewater treatment facilities, and to show the existing water supply service areas for major public water systems serving the municipality:

1. **Existing Sewer Service Area** – This map (**Figure Washington Township-1**) shows the parcels and portions of parcels within the Existing Sewer Service Area as described in the Introduction, for the facilities discussed under the section Available Wastewater Utility Capacity and Municipal Build-Out Results and listed in **Table 6**.
2. **Future Sewer Service Area** – This map (**Figure Washington Township-2**) shows the parcels and portions of parcels within the future sewer service area as described in the Introduction, for the facilities discussed under the section Available Wastewater Utility Capacity and Municipal Build-Out Results and listed in **Table 6**. Finally, Figure Washington Township-2 indicates all “Septic Area (Planning Flows of 2,000 gallons per day (gpd) or less).” The septic system yields associated with this latter area are listed in **Tables 9 and 10**.
3. **Public Community Water System Utilities** – This map (**Figure Washington Township-3**) shows the parcels and portions of parcels within the existing service area for public community water supply systems as described in the Introduction, for the facilities discussed under the section Available Public Community Water System Utility Capacity and Municipal Build-Out Results.

**Municipal Ordinances Required by N.J.A.C. 7:15-5.25**

The following ordinances are required by the Water Quality Management Planning Rules. Most of the ordinance requirements are implemented through municipal adoption of the Highlands Land Use Ordinance in compliance with the Plan Conformance approval of the Highlands Council, as noted. Others are adopted independently by the municipality, where noted.

- **Zoning** – See Highlands Land Use Ordinance and the Highlands Checklist Ordinance (#RO-09-12). All extensions of sewer service must be in conformance with the Highlands Land Use Ordinance and the Highlands Checklist Ordinance and subject to Plan Conformance approval and requirements of the Highlands Council. The Highlands Land Use Ordinance also regulated septic system density for new development that is subject to the ordinance.

## Washington Township Wastewater Management Plan

- **Water Conservation** – See Highlands Land Use Ordinance, which is more stringent than the NJDEP model ordinance provisions.
- **Stormwater Management** – Washington Township has adopted the required stormwater management ordinance in compliance with its NJPDES MS4 stormwater permit (Chapter 170 of the General Ordinances of Washington Township, Adopted 12-19-2005 by Ord. No. 46-05). Also, see Highlands Land Use Ordinance, which is more stringent than the NJDEP model ordinance provisions.
- **Riparian Zone** – See Highlands Land Use Ordinance and the Highlands Checklist Ordinance (#RO-09-12), which are more stringent than the NJDEP model ordinance provisions.
- **Steep Slope** – See Highlands Land Use Ordinance and the Highlands Checklist Ordinance (#RO-09-12), which are more stringent than the NJDEP model ordinance provisions.
- **Septic System Maintenance** – NJDEP has determined that municipality-wide septic system maintenance ordinances are not required at this time under N.J.A.C. 7:15, but rather that septic system maintenance plans are required. NJDEP has further deferred applicability of this requirement for a mandatory maintenance program, during the current round of WMP development, although the WQMP rules at N.J.A.C. 7:15 continue to require such programs. The RMP also requires a septic system maintenance program, but this provision has not been triggered by inclusion in Plan Conformance approvals for Washington Township, through the relevant Highlands Implementation Plan & Schedule. Compliance with this requirement will be demonstrated through the Wastewater Management Plan, which will incorporate a plan for septic system maintenance that is applicable to the full county, including Washington Township.
- **Required Connection of Septic Systems to Sanitary Sewers in Adopted Sewer Service Areas** – Compliance with this requirement has been demonstrated through adoption of Washington Township Ordinance Chapter 155, Adopted 10-18-1993 by Ord. No. 30-93 (Sec. 14A of the Revised General Ordinances). Not addressed by Highlands Land Use Ordinance.

**Washington Township Wastewater Management Plan**

<b>Table 6 – NJPDES Permitted Wastewater Facilities in or Serving Washington Township</b>							<b>Discharge Location</b>	
<b>NJPDES Permit #</b>	<b>PI #</b>	<b>Facility Name</b>	<b>Discharge Category Code</b>	<b>Street Address</b>	<b>Post Office</b>	<b>ZIP</b>	<b>Longitude</b>	<b>Latitude</b>
NJ0021369	46415	Hackettstown MUA	A	Esna Dr	Washington Twp	07840	74 48' 04"	40 50' 59"
NJ0023493	47067	Washington Township MUA (Schooley's Mountain WTP)	A	Sylvan Circle	Washington Twp	07853	75 45' 42"	40 47' 42"
NJ0109061	47764	Washington Township MUA (Long Valley Village WTP)	A	46 East Mill Rd	Long Valley	07853	74 46' 31"	40 47' 10"
NJG0105902	47585	Sherwood Village	T1	RT 24 & East Mill Rd	Long Valley	07853		
NJG0133230	49667	Hacklebarney State Park	T1	119 Hacklebarney Rd	Long Valley	07853-9525		
NJG0155748	222779	St. Luke Parish	T1	255 West Mill Rd	Long Valley	07853		

**Selected NJPDES Discharge Activity Category Codes**

**Discharge to Surface Water (DSW)**

- A – Domestic Surface Water Discharge

**Discharge to Ground Water (DGW)**

- T1 – General Permit Sanitary Subsurface Disposal

<b>Table 7. Washington Township NJPDES T1 Facilities</b>								
<b>NJPDES</b>	<b>Facility Name</b>	<b>Project Summary</b>	<b>Block</b>	<b>Lot</b>	<b>Street Address</b>	<b>Street City</b>	<b>X Coord. Number</b>	<b>Y Coord. Number</b>
NJG0105902	Sherwood Village	The facility is a residential mobile home park which is served by an onsite septic system with septic tanks and 15,600 square feet of disposal area. The system authorized for the discharge of sanitary waste only.	29	13	RT 24 & East Mill Rd	Washington Twp	424,419	711,727
NJG0133230	Hacklebarney State Park	The existing facility consists of two 1000 gallon septic tanks, one for each building, and a 1140 square foot disposal field. The system authorized for the discharge of sanitary waste only.	62	7	119 Hacklebarney Rd	Washington Twp	426,844	698,611
NJG0155748	St. Luke Parish	Existing church with 14 classrooms. Design flow is 2,265 gpd. Existing septic designed for 1,350 gpd. Septic is comprised of 2 septic tanks discharging to existing disposal field.	34	38.01	255 West Mill Rd	Washington Twp	407,587	704,513

**Washington Township Wastewater Management Plan**

Facility	Facility Type	NJPDES Permit	Permitted Flow (GPD)	2010 Flow (GPD)*	I&I Portion (GPD)**	Projected Washington Township Wastewater Generation by Source	Projected Flow (GPD)
Hackettstown MUA	DSW	NJ0021369	3,390,000	2,605,000 (2,249,000)	67,000	Existing Flows (NJDEP, 2010)	315,000
						Township Projected Residential	126,300
						Township Projected Commercial	15,667
						<b>Total Projected</b>	<b>456,967</b>
Washington Township MUA (Schooley's Mountain WTP)	DSW	NJ0023493	500,000	560,000 (401,000)	108,000	Existing Flows (NJDEP, 2010)	401,000
						Township Projected Residential	Waiver only
						Township Projected Commercial	Waiver only
						<b>Total Projected</b>	<b>401,000+</b>
Washington Township MUA (Long Valley Village WTP)	DSW	NJ0109061	244,000	160,000 (134,000)	10,000	Existing Flows (NJDEP, 2010)	134,000
						Township Projected Residential	1,000
						Township Projected Commercial	6,300
						<b>Total Projected</b>	<b>141,300</b>

\* 2010 Maximum Three Month Flows (Annual Average Flows). Based upon RMP and NJDEP methods.

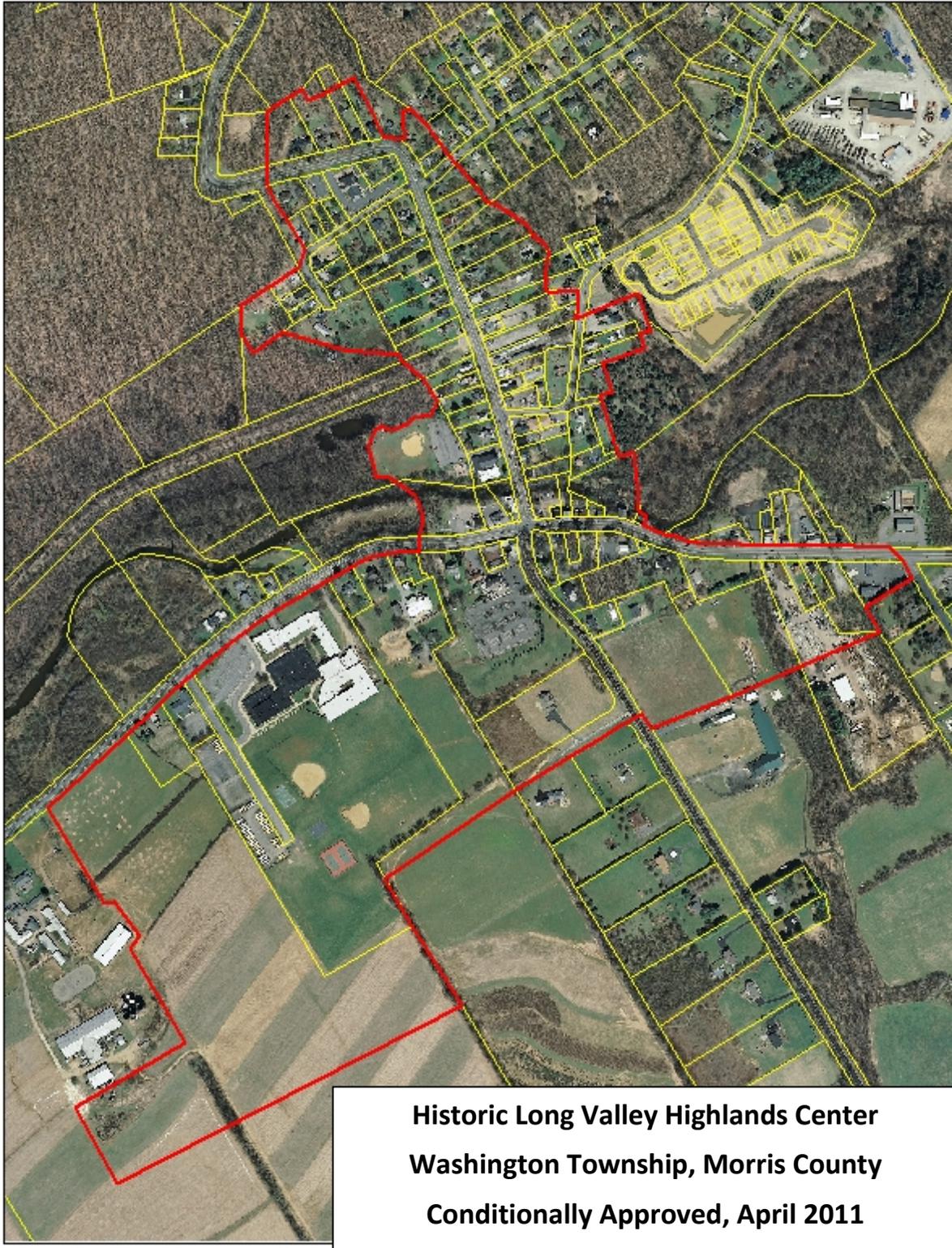
\*\* Infiltration and Inflow, provided from NJDEP.

HUC14 Subwatershed	Subwatershed Name	Density (Average Recharge) NJAC 7:15	Density (Drought Recharge) RMP	Total Units Allowed (Average Recharge) NJAC 7:15	Total Units Allowed (Drought Recharge) RMP (See Table 8)
02030105010050	Raritan R SB (Long Valley br to 74d44m15s)	N/A	By LUCZ	N/A	2
02030105010060	Raritan R SB(Califon br to Long Valley)	N/A	By LUCZ	N/A	1
02030105050030	Lamington R (Furnace Rd to Hillside Rd)	N/A	By LUCZ	N/A	1
02030105050040	Lamington R (Pottersville gage-FurnaceRd)	N/A	By LUCZ	N/A	39
02030105050070	Lamington R (HallsBrRd-Pottersville gage)	N/A	By LUCZ	N/A	11
02030105050080	Rockaway Ck (above McCrea Mills)	N/A	By LUCZ	N/A	0
02040105150090	Mine Brook (Morris Co)	N/A	By LUCZ	N/A	4
02040105150100	Musconetcong R (Trout Bk to SaxtonFalls)	N/A	By LUCZ	N/A	2
02040105160010	Musconetcong R (Hances Bk thru Trout Bk)	N/A	By LUCZ	N/A	3

Washington Township Wastewater Management Plan

<b>Table 10. Washington Township RMP Build-Out Septic System Yield Analysis: Planning Area</b>				
<b>HUC14 Subwatershed</b>	<b>Subwatershed Name</b>	<b>CZ Yield</b>	<b>ECZ Yield</b>	<b>PZ Yield</b>
02030105010050	Raritan R SB (Long Valley br to 74d44m15s)	1	1	0
02030105010060	Raritan R SB (Califon br to Long Valley)	0	0	1
02030105050030	Lamington R (Furnace Rd to Hillside Rd)	0	1	0
02030105050040	Lamington R (Pottersville gage-FurnaceRd)	38	1	0
02030105050070	Lamington R (HallsBrRd-Pottersville gage)	11	0	0
02030105050080	Rockaway Ck (above McCrea Mills)	0	0	0
02040105150090	Mine Brook (Morris Co)	0	0	4
02040105150100	Musconetcong R (Trout Bk to SaxtonFalls)	0	0	2
02040105160010	Musconetcong R (Hances Bk thru Trout Bk)	0	0	3
	<b>totals</b>	<b>50</b>	<b>3</b>	<b>10</b>
<b>Preservation Area</b>	<b>38 units (Not disaggregated by HUC14)</b>			

Figure Washington HC-1



**Washington Township Wastewater Management Plan**

**Attachment 1: Appendix D of Final Consistency Review and Recommendations Report**

**NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL  
Petition for Plan Conformance – Final Consistency Review and Recommendations Report**

**APPENDIX D**

**EVALUATION OF FAILING SEPTIC SYSTEMS  
Township of Washington, Morris County**

Washington Township referred a number of Preservation Area parcels to the Highlands Council for assessment regarding potential or confirmed septic system failure and whether these properties could be connected to the sewer lines of the Washington Township Municipal Utilities Authority (MUA). This process was initiated following action by the New Jersey Department of Environmental Protection (NJDEP) requiring that the Township work with the Highlands Council on development of a new Wastewater Management Plan (WMP), which will be adopted as a standalone document. NJDEP determined that this cooperative approach was necessary and appropriate, as Washington Township has submitted a Notice of Intent and Petition for Plan Conformance for both the Preservation and Planning Areas within the Township, so that the entire township will be within the jurisdiction of the Highlands Regional Master Plan (RMP). Within the Preservation Area, the Highlands Act generally prohibits extension of sewers unless a waiver is approved through a Highlands Preservation Area Approval (HPAA). Approval of any extensions to address Preservation Area parcels must be in compliance with the Regional Master Plan (RMP) and N.J.A.C. 7:38 (Highlands Rules), and be addressed through an amendment or revision to the wastewater management plan. Washington Township cooperated with the Highlands Council in this process, to ensure that these issues are addressed through a coordinated approach leading to Highlands Council approval of the Township’s Petition for Plan Conformance, and NJDEP approval of the Wastewater Management Plan and, as needed, HPAA with public health and safety waiver. These parcels have been examined for a potential threat to public health and safety based upon documented evidence provided by the Township Health Officer. All involve existing structures, not new development. In addition to the specific parcels, the Highlands Council worked with Washington Township to determine whether the existing failing systems reflected a broader pattern of threats to public health that should be addressed at the same time.

<b>Parcels of Concern</b>	<b>Land Use</b>	<b>WTMUA Facility</b>	<b>Soils and Constraints*</b>	<b>Connect?</b>
266 Bartley Road (Bl. 16 Lot 12)	SF Home	Long Valley	Turbotville loam, part hydric, very limited	Yes (4 SFD)
Sandt Lane (Multiple parcels)	SF Homes in Subdivision	Schooley’s Mountain	Parker gravelly-loam, excessive stone, very limited	Yes (Cluster)
141 Schooley’s Mountain Road (Bl. 33 Lot 2 & 3)	Commercial	Schooley’s Mountain	Annandale gravelly loam, part hydric, very limited	Yes
Palmer Park – Bartley Road (Bl. 18 Lot 28)	Park	Long Valley	Turbotville loam, part hydric, very limited	Yes, w/ conditions
Harrington Park – Rock Road (Bl. 22 Lot 3.03 & 3.27)	Park	Schooley’s Mountain	Annandale gravelly loam, part hydric, very limited	Yes, w/ conditions

\* All soil data come from the SSURGO database, developed by the US Dept. of Agriculture.

A GIS analysis was conducted for each parcel. By evaluating proximity of Existing Area Served (EAS), identifying Highlands resource constraints (as per the RMP), and analyzing utility information about in-the-road sewer lines, a determination regarding the suitability of connecting each parcel of concern to existing

## Washington Township Wastewater Management Plan

sewer mains or laterals has been developed. A very brief history of the parcel and reported problems with existing septic is summarized below. In addition, Washington Township has proposed providing sewer service to a municipal property in the Planning Area, which will be incorporated into the Historic Long Valley Highlands Center discussed in Appendix C. Finally, other properties have been identified where septic system failure may be occurring but has not been verified. Upon verification of failure, an analysis similar to the current evaluation will be conducted to determine whether the WMP should be revised to allow further connections to sewer service within the Preservation Area.

### Evaluation and Recommendations

**266 Bartley Road (Block 16 Lot 12):** Confirmed malfunctioning septic system in the Preservation Area; homeowner under extreme water conservation measures and routinely pumps the system to avoid overflows. The home was constructed in 1969. This system has been documented as failing for at least 6 years. A sewer connection fee was paid by the homeowner in 2007. The parcel is located in the floodplain of the South Branch of the Raritan River; the soils are hydric. Installation of a new system is constrained by unsuitable soils, hydrology and setting. The Health Officer states that soils are clay to 10 feet. The nearest EAS is across Bartley Road at the West Morris Regional High School, less than 300 feet to the southeast. Three additional homes (260, 262, & 271 Bartley Road) are in close proximity to the High School and lateral and could be considered for connection. The four properties are on approximately 3 acres of land total, equating to one system per 0.75 acres, which is significantly less than the one system per 1.90 acres required to achieve a nitrate target of 10 mg/L, using the Highlands Council nitrate dilution model for clusters of septic systems. The soils and the environmental setting for the other three lots are also constrained in the same manner as for Block 16, Lot 12. A review of other nearby properties did not identify additional homes that should be considered for sewerage.

- **Recommendation:** Approve for four existing homes. A connection to the existing line would be an appropriate solution to the confirmed failure at this property, and should be approved for the other three properties as well given the high density and existing site constraints. The short extension of the sewer line in Bartley Road would require that the WTMUA apply for a Highlands Preservation Area Approval (HPAA) with public health and safety waiver, through the NJDEP. A WMP revision is appropriate pursuant to N.J.A.C. 7:15-3.4(b)ix. The Future Sewer Service Area (SSA) should be limited in size to the developed area of these parcels only.

**Sandt Lane (Multiple Parcels):** One residential property in a neighborhood of 21 similarly-sized parcels of approximately 1 acre each, all in the Preservation Area, is reported but not formally verified to have a malfunctioning septic system. Soils in the area are mapped as Parker gravelly loam; excessively stony. According to the Health Department however, the soils are deep clays, and the Health Officer states that creating mounded septic systems on deep clays does not work, as the systems don't have enough depth for infiltration of the effluent (4 feet of treatment depth plus 4 feet of native soils that infiltrate). Two parcels at the entrance to the Sandt Lane cul de sac are served by sewers and a lateral could be extended to serve the Sandt Lane parcel of concern and the remainder of the neighborhood if a pattern of failures is established. The farthest distance to the EAS is less than 400 feet from any part of the subdivision. The Health Officer conducted a confidential survey of homeowners in the neighborhood to determine existing septic system conditions, and numerous owners reported ongoing problems with their septic systems. At the 10 mg/L nitrate level, the target maximum density would be 1 septic system per 1.6 acres, significantly lower in density than the existing cluster. This is the only situation among the parcels recommended by Washington Township that is associated with significant neighborhood cluster of this nature.

- **Recommendation:** Conditional approval. The cluster could be served without development impacts, as it is completely built out, with a sewer service area delineated tightly around the cluster. This area can qualify for a WMP revision pursuant to N.J.A.C. 7:15-3.4(b)4ix for the failing systems. To the extent there are homes without failing systems in the neighborhood, they would also qualify for a WMP revision under N.J.A.C. 7:15-3.4(b)4v (i.e., maximum of 100 acres and 8,000 gpd, and not creating a significantly new pattern of development), except for the lack of a current WMP affecting

## Washington Township Wastewater Management Plan

the area and their existence in the Preservation Area. The primary condition of approval is formal verification by the Washington Township Health Department of the failing septic system (for the target parcel) and of a broader pattern of failing septic systems such that inclusion of the full Sandt Lane area is justified, for existing homes only. The Future SSA should be limited in size to the developed area of these parcels only.

**141 Schooley's Mountain Road (Block 33 Lot 2 & 3):** A commercial restaurant property in the Preservation Area that is a pre-existing, non-conforming use. Two buildings are both on the same parcel facing a parking area. The septic system has been confirmed as malfunctioning for many years. It was replaced in 1989 and quickly had problems. The property owner must routinely pump the system to avoid overflows. The soils are quite shallow and hydric and a small mapped stream runs through the rear of the property. The parcel would connect with the EAS present across Schooley's Mountain Road, approximately 150 feet away, at the Washington Township Police Department. The line would avoid vacant lots.

- **Recommendation:** Approve. Linkage through the Police Department lot would be an appropriate solution to address the current failure, pursuant to N.J.A.C. 7:15-3.4(b)ix. The parcels would then be restricted from further development by Preservation Area rules and the Township. The Future SSA should be limited in size to the developed area of these parcels only.

### Municipal Facilities

**Palmer Park (Bartley Road, Block 18 Lot 28):** Municipally owned baseball complex in the Preservation Area currently served by portable comfort stations. The majority of the parcel is underlain by hydric and shallow soils, specifically Turbotville loam, described as very limited for septic field disposal. The closest sewer line to the parcel is in Bartley Road at the entrance to the park. Connection of this park to the sewer service is appropriate pursuant to N.J.A.C. 7:15-3.4(b)v. However, special consideration should be made regarding the location of the comfort station in order to limit the length of any future lateral.

- **Recommendation:** Approval of sewer extension to serve a single, small area within the park, as shown in the figure below. A simple lateral that would be solely for the purposes of connecting this parcel of concern would be an appropriate WMP revision pursuant to N.J.A.C. 7:15-3.4(b)v, except for the lack of a current WMP affecting the area. It would be critical to ensure no further extensions, by limiting the use of the lateral.

**Harrington Park (Rock Road, Block 22 Lots 3.03 & 3.27):** Municipally owned recreational fields in the Preservation Area currently served by portable comfort stations. The parcels are fully underlain by hydric, shallow soils. The parcels are surrounded on three sides by sewer EAS. Connection of this park to the sewer service is appropriate pursuant to N.J.A.C. 7:15-3.4(b)v. However, special consideration should be made regarding the location of the comfort station in order to limit the length of any future lateral.

- **Recommendation:** Approval of sewer extension to serve a single area within the park, as shown in the figure below. A simple lateral that would be solely for the purposes of connecting this parcel of concern would be an appropriate WMP revision pursuant to N.J.A.C. 7:15-3.4(b)v, except for the lack of a current WMP affecting the area. It would be critical to ensure no further extensions, by limiting the use of the lateral.

# Washington Township Wastewater Management Plan



**Palmer Park Proposed Future Sewer Service Area**  
 Book 18, Lots 28 and 29  
 Washington Township  
 Morris County, New Jersey

Proposed Future Sewer Service Area  
 Adjusted Palmer Park Lot Line  
 Road  
 Parcel

Date: March 2011  
 Data Source: NJDEP  
 Morris County, Barrister Associates, Inc.  
 B.A.M.I.C. LLC  
 Environmental Design



**Harrington Park Proposed Future Sewer Service Area**  
 Book 22, Lot 3.03  
 Washington Township  
 Morris County, New Jersey

Proposed Future Sewer Service Area  
 Proposed Future Sewer Service Area  
 Parcel  
 Road

Date: March 2011  
 Data Source: NJDEP  
 Morris County, Barrister Associates, Inc.  
 B.A.M.I.C. LLC  
 Environmental Design

**Attachment 2: Excerpt from Conditions of Approval, Final Consistency Review and Recommendations Report**

NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL  
Petition for Plan Conformance – Final Consistency Review and Recommendations Report

**D. STAFF RECOMMENDATIONS**

On the basis of the comprehensive review completed and discussed in detail as described in the preceding Sections, which examined both sufficiency of administrative submittals and consistency of all substantive materials with the Highlands Regional Master Plan, Highlands Council Staff recommends that the Petition for Plan Conformance of the Township of Washington, as currently proposed by the municipality, be approved with conditions as outlined below. This conditional approval specifically incorporates conditional designation of the Historic Long Valley Highlands Center, in accordance with Appendix C. Detailed work (e.g., master plan and regulatory provisions) to finalize the designation will occur in the post-Petition approval phase of Plan Conformance.

**1. Approval with Conditions.** Highlands Council Staff recommend that this Petition for Plan Conformance be approved by the Highlands Council, including designation of the Historic Long Valley Highlands Center for a portion of the Planning Area (accompanied by conditions that address the consistency requirements of the RMP related to the various projects and project sites proposed therein, as discussed in Appendix C). Approval of this Petition should be conditioned upon satisfactory completion of all items noted within Sections A through C of this Report (including all items addressed in the herein-referenced Highlands Council Staff-provided MSWord “Track-Changes” versions of the various Petition documents), and in addition, satisfaction of the below-listed requirements.

**i. Wastewater Management Plan (WMP).** The Highlands Council and the Township shall coordinate in the preparation of a municipal WMP on a parallel path with the Plan Conformance process, for approval by the NJDEP. This plan will be adopted in accordance with NJDEP Administrative Order 2010-03 and all applicable NJDEP rules and requirements. The WMP shall incorporate the most up-to-date information available on existing areas served for both public wastewater and public water supply, as shown on Exhibit #10 for the Highlands Land Use Ordinance, based on a collaborative effort with the Township of Washington officials, the Washington Township Municipal Utilities Authority (WTMUA) and the Hackettstown Municipal Utilities Authority (HMUA).

Further, the WMP shall incorporate the Historic Long Valley Highlands Center as Future Sewer Service Area (SSA). Within the Planning Area, the WMP shall identify as Future SSA the area approved for expansion of the Valley View Chapel. This religious facility is located on parcels located in both the Planning and Preservation Areas. Washington Township approved an expansion of the facility on a portion of the property, and NJDEP approved a WMP revision allowing for development using an on-site treatment facility with discharge to ground water. The Chapel’s estimated flow is 4,320 gpd, upon which its septic system approval was based. The Highlands Council issued a WQMP Consistency Determination for this project in 2007. As a result of that determination, the remainder of the Valley View Chapel property is affected by a Conservation Restriction granted to the Highlands Council, filed July 14, 2009. However, at that time the Highlands Council recommended consideration for connecting this parcel to the sewer line in East Mill Road, which is currently estimated as 81 feet from the Chapel property. A simple lateral would be

## Washington Township Wastewater Management Plan

an appropriate WMP revision pursuant to N.J.A.C. 7:15-3.4(b)v (if solely for the purposes of connecting this parcel of concern), except for the lack of a current WMP affecting the area. Thus the site will be included in the Future SSA but the lateral will be limited to ensure no further extensions. The Township approved Heath 2 development would also be included in the future SSA.

Finally, the WMP shall incorporate the results of investigations by the Washington Township Health Department regarding failing septic systems in the Preservation Area that pose a significant risk to public health and safety, that cannot reasonably be replaced by septic systems that conform to State regulations, and for which sewer extensions will not pose a significant risk for further connections by major Highlands Development. Approval of any extension of sewer lines to address specific failing septic systems must be in compliance with the Regional Master Plan (RMP) regarding all areas and N.J.A.C. 7:38 (Highlands Rules) regarding the Preservation Area, and be addressed through an amendment or revision to the wastewater management plan. Washington Township has provided detailed information to the Highlands Council in this process, with the expectation of addressing these issues through a coordinated approach leading to Highlands Council approval of the township's Petition for Plan Conformance and NJDEP approval of the wastewater management plan and, as needed, issuance of Highlands permits (HPAA) with public health and safety waiver. In addition to specific parcels being addressed through this cooperative effort, the Highlands Council is working with Washington Township to determine whether the identified failing septic systems reflect a broader pattern of threats to public health that should be addressed at the same time. Appendix D provides a detailed discussion of existing development in the Preservation Area for which the Highlands Council has concluded that sufficient evidence exists to support sewer connections. Other parcels are being investigated and may be included as Future Sewer Service Area at a later date, through approval of a Consistency Determination by the Highlands Council and approval of a WMP Revision by the NJDEP.

**Attachment 3: Sandt Lane Evaluation**

**Washington Township Wastewater Management Plan:  
Inclusion of Sandt Lane Area within Future Sewer Service Area**

Executive Summary

The Highlands Water Protection and Planning Council (Highlands Council) approved with conditions the Petition for Plan Conformance of Washington Township, Morris County, on May 19, 2011 (see [http://www.highlands.state.nj.us/njhighlands/planconformance/wash\\_twp\\_morris.html](http://www.highlands.state.nj.us/njhighlands/planconformance/wash_twp_morris.html)). As part of that approval, the Highlands Council deemed conditionally acceptable the identification of the Sandt Lane neighborhood in the Preservation Area as Future Sewer Service Area within the to-be-developed Washington Township Wastewater Management Plan due to failing septic systems. Upon approval by the New Jersey Department of Environmental Protection (NJDEP), such identification would allow provision of sewer services. Approval of a waiver from the Regional Master Plan for the Sandt Lane area was conditioned upon confirmation from the Township Health Officer that a pattern of failing septic systems exists.

The Highlands Council has evaluated the information provided by Cristianna Cooke-Gibbs, MPH, Health Officer for Washington Township. The Highlands Council concludes that the Sandt Lane neighborhood, including the immediately adjacent homes on East Springtown Road, evidences a pattern of failing septic systems on small lots (generally 1 acre or less) with highly constrained soils such that replacement with new septic systems is not a viable option. Therefore, the Highlands Council concludes that inclusion of the following parcels in the Future Sewer Service Area for the Schooley's Mountain Sewage Treatment Plant, owned and operated by the Washington Township Municipal Utilities Authority, is consistent with the Regional Master Plan (see Figure 1): Block 23 Lots 13.01, 14 (house area only, not including the rear yard area), 9.01, 9.02 and 9.03; and Block 23.01 Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14. Note: Block 23, Lot 13 and Block 23.01, Lot 13 are currently connected to the sewer line that traverses Rock Road. The sewer extension shall be designed to minimize the potential for connections from properties not within the depicted Future Sewer Service Area, particularly those that are not currently developed.

Background on Regional Master Plan Policies and Highlands Council Approvals

Extension of sewer service in the Preservation Area beyond the Existing Area Served may be approved by the Highlands Council under Objective 2I1a of the Regional Master Plan (RMP), which reflects requirements of the Highlands Act and states:

***Objective 2I1a:*** Designated sewer service areas in the Preservation Area shall be restricted to the Existing Area Served as of August 10, 2004, except to serve development that is approved through a HAD or a HPAA with waiver pursuant to N.J.A.C. 7:38 and Policy 7G1.

Policy 7G1 further states (emphasis added):

**Policy 7G1:** For the Preservation Area, coordinate with NJDEP during Highlands permit review for any major Highlands development including the review of waivers on a case-by-case basis: **1) if determined to be necessary in order to protect public health and safety;** 2) for redevelopment in certain previously developed areas as identified by the Highlands Council, or 3) in order to avoid the taking of property without just compensation.

The Highlands Council will only issue a determination of consistency with the RMP in such cases, which in turn supports NJDEP approval of the Future Sewer Service Area within the Wastewater Management Plan

## Washington Township Wastewater Management Plan

and also NJDEP approval of a Highlands Preservation Area Approval with waiver for public health and safety pursuant to N.J.A.C. 7:38.

The Sandt Lane neighborhood is designated by the RMP as being in the Protection Zone of the Preservation Area. The Highlands Council, in considering sewer extensions under Objective 2I1a, uses Objective 2K3c of the RMP (which applies to the Planning Area) as further guidance regarding a waiver to protect public health and safety (emphasis added):

**Objective 2K3c:** Prohibit new, expanded, or extended public wastewater collection and treatment systems and community on-site treatment facilities within the Protection Zone, the Conservation Zone, and the Environmentally-Constrained Sub-zones of the Planning Area unless they are shown to be necessary for and are approved by the Highlands Council for one or more of the purposes listed below. For approvals regarding parts 1, 2 and 3, the project must maximize the protection of sensitive environmental resources such as Highlands Open Waters buffer areas, Riparian Areas, the forested portion of the Forest Resource Area, agricultural lands of ARAs, Steep Slopes, Prime Ground Water Recharge Areas and Critical Habitat. ... The choice of extension or creation of systems shall follow the requirements in Objective 2K3d (2 and 3). The applicable purposes are:

**1. To address through a waiver under Policy 7G1 or 7G2 a documented existing or imminent threat to public health and safety from a pattern of failing septic systems (where the failing systems cannot reasonably be addressed through rehabilitation or replacement) or highly concentrated septic systems, where the threat is of sufficient scale to justify a public wastewater collection and treatment system or community on-site treatment facility and where no alternative is feasible that would sufficiently assure long-term protection of public health and safety.** To address other issues of public health and safety, such needs shall have highest priority for allocation of existing system capacity; ...

Likewise, while applicable to the Planning Area, Objective 2K3d is useful in providing guidance on the issue of wastewater infrastructure choice regarding clusters, or in this case, areas of existing concentrated development (emphasis added):

**Objective 2K3d:** Clustered development served by a public wastewater collection and treatment system or community on-site treatment facility within the Protection Zone, the Conservation Zone, and the Environmentally-Constrained Sub-zones of the Planning Area shall be approved only if the following conditions are met:

1. ...

**2. Extension of an existing public wastewater collection and treatment system will occur only where the cluster development is within or immediately adjacent to an Existing Area Served with available capacity;**

**3. Creation of a community on-site treatment facility will occur only where such development is not within or immediately adjacent to an Existing Area Served** with available capacity, where the proposed system is designed, permitted, and constructed at a capacity limited to the needs of the clustered development, and 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; ...

The Final Consistency Review and Recommendations Report, Appendix D, includes the following discussion and conditions for approval regarding sewerage in the Sandt Lane area:

**Sandt Lane (Multiple Parcels):** One residential property in a neighborhood of 21 similarly-sized parcels of approximately 1 acre each, all in the Preservation Area, is reported but not formally verified to have a malfunctioning septic system. Soils in the area are mapped as Parker gravelly loam; excessively stony. According to the Health Department however, the soils are deep clays, and the Health Officer

## Washington Township Wastewater Management Plan

states that creating mounded septic systems on deep clays does not work, as the systems don't have enough depth for infiltration of the effluent (4 feet of treatment depth plus 4 feet of native soils that infiltrate). Two parcels at the entrance to the Sandt Lane cul de sac are served by sewers and a lateral could be extended to serve the Sandt Lane parcel of concern and the remainder of the neighborhood if a pattern of failures is established. The farthest distance to the EAS is less than 400 feet from any part of the subdivision. The Health Officer conducted a confidential survey of homeowners in the neighborhood to determine existing septic system conditions, and numerous owners reported ongoing problems with their septic systems. At the 10 mg/L nitrate level, the target maximum density would be 1 septic system per 1.6 acres, significantly lower in density than the existing cluster. This is the only situation among the parcels recommended by Washington Township that is associated with significant neighborhood cluster of this nature.

- **Recommendation:** Conditional approval. The cluster could be served without development impacts, as it is completely built out, with a sewer service area delineated tightly around the cluster. This area can qualify for a WMP revision pursuant to N.J.A.C. 7:15-3.4(b)4ix for the failing systems. To the extent there are homes without failing systems in the neighborhood, they would also qualify for a WMP revision under N.J.A.C. 7:15-3.4(b)4v (i.e., maximum of 100 acres and 8,000 gpd, and not creating a significantly new pattern of development), except for the lack of a current WMP affecting the area and their existence in the Preservation Area. The primary condition of approval is formal verification by the Washington Township Health Department of the failing septic system (for the target parcel) and of a broader pattern of failing septic systems such that inclusion of the full Sandt Lane area is justified, for existing homes only. The Future SSA should be limited in size to the developed area of these parcels only.

### Health Officer Evaluation

Highlands Council received detailed information from the Health Officer of Washington Township, Cristianna Cooke-Gibbs, MPH. In summary, Ms. Cooke-Gibbs identified the following issues related to septic system function in the Sandt Lane area:

1. **Currently Connected Parcels:** Block 23 Lot 13 and Block 23.01 Lot 13, both at the intersection of Sandt Lane and Rock Road, were previously connected to the existing sewer line running down Rock Road due to failing septic systems. See Figure 1.
2. **Failing Septic Systems:** Four septic systems have been confirmed by the Health Department as failing. They are Block 23 Lot 9.01, and Block 23.01 Lots 2, 4 and 7. As shown on Figure 1, the first three of these parcels are near the eastern end of the Sandt Lane cul de sac, and the final parcel (Lot 7) is along East Springtown Road directly to the south of Lots 2 and 4. Specific findings are as follows:
  - a. *Block 23 Lot 9.01* – Onsite inspection in 2003 confirmed failing system. Owner has septic tank pumped regularly, in response to Health Department requirement of 2003. Berms constructed to divert surface water from septic field area as temporary expedient. System remains inadequate. Original soil log indicates 80% clay content.
  - b. *Block 23.01 Lot 2* – Onsite inspection in 2011 confirms level of effluent above invert in septic tank, with water level static. Owner states that backups into the house can occur if water use is not highly restricted during high water seasons, and that laundry must be done offsite.

## Washington Township Wastewater Management Plan

- c. *Block 23.01 Lot 4* – Onsite inspection in 2011 confirms malfunction, with deep depressions in septic field, spongy area, and water pooled at one end of the field. Owners directed to pump septic tank pending permanent solution.
    - d. *Block 23.01 Lot 7* – Certified septic inspector in 2011 confirmed “unsatisfactory condition” based upon existence of a cesspool with effluent levels above the inlet, indicating capacity has reached maximum and the system no longer functions as designed.
  3. **Parcel Constraints:** The septic systems for four parcels (Block 23 Lots 9.02 and 9.03, Block 23.01 Lots 1 and 14) were previously reconstructed or modified. At that time, soil limitations were noted that raised concerns about the potential for eventual failure of the septic systems. As shown on Figure 1, these parcels are interspersed with those having confirmed failing septic systems.
    - a. *Block 23 Lot 9.02* – Septic system alteration in 2001 required deviation from N.J.A.C. 7:9A. Ground water encountered at 24 inches.
    - b. *Block 23 Lot 9.03* – Septic system alteration in 1988 revealed poor soil, requiring curtain drain to divert high ground water from bed.
    - c. *Block 23.01 Lot 1* – Septic system repair in 1988 on a “best efforts” basis, as soils did not meet requirements for a new system. Clay soils encountered from 16 – 66 inches, with decomposing rock clay below that.
    - d. *Block 23.01 Lot 14* – Septic system alteration in 1989 revealed poor soils, with soil mottling at 27 inches, and soils with significant clay content.
  4. **Domestic Well Contamination:** Eight domestic wells in the Sandt Lane area have been identified as having elevated nitrate levels at concentrations (4 mg/L or higher) that clearly indicate anthropogenic impacts. The surrounding area is not agricultural in nature, indicating that the elevated nitrate concentrations are related to the residential development. Most of the homes in the area are on septic systems. As noted above in the Background section, the Highlands Council staff evaluated parcel constraints and concluded that at the 10 mg/L nitrate level, the target maximum density would be 1 septic system per 1.6 acres, significantly lower in density than the existing cluster (21 homes on roughly 21 acres). This estimate correlates well with the elevated nitrate levels. While not above the safe drinking water standard, the concentrations are significantly higher than the state average (approximately 2 mg/L) and the averages for both developed and agricultural areas in the Highlands Region (slightly lower and higher than 2 mg/L, respectively).
    - a. Block 23 Lot 13.01 – Nitrate levels of 4.23 mg/L in 2006
    - b. Block 23 Lot 14 – Nitrate levels of 4.95 mg/L in 2001
    - c. Block 23.01 Lot 1 – Nitrate levels of 6.77 in 1995.
    - d. Block 23.01 Lot 5 – Nitrate levels of 4.2 mg/L in 1989
    - e. Block 23.01 Lot 9 – Nitrate levels of 5.12 mg/L in 2000
    - f. Block 23.01 Lot 3 – Nitrate levels of 5.3 mg/L in 1985, and 4.85 mg/L in 2005
    - g. Block 23.01 Lot 11 – Nitrate levels of 9.24 mg/L in 2005
    - h. Block 24 Lot 7.01 – Nitrate levels of 4.9 mg/L in 2011
  5. **Summary:** The Health Officer states that the cumulate data presented herein support the need for sewers in the Sandt Lane-East Springtown Road area. “Poor soils, average lot sizes of less than one acre, and onsite wells with elevated nitrate levels in an area absent of historical farming activities render this area marginally suitable for the continued reliance on onsite septic systems. Providing the opportunity for residents in this area to connect to sewers when necessary would be a benefit to both the public health and environmental well being of our community.”

## Washington Township Wastewater Management Plan

### Highlands Council Evaluation

Highlands Council staff evaluated information provided by the Health Officer of Washington Township, summarized above. The evaluation addresses conformance with RMP policies and objectives for extension of sewers in the Preservation Area pursuant to Objective 2I1a and Policy 7G1, using as guidance the general approach of Objectives 2K3c and 2K3d.

1. **Pattern of failing septic systems:** The Health Officer's report clearly indicates that multiple systems are failing and that the systems are not concentrated in one area of the neighborhood. In addition, prior reports on septic system alterations and repairs clearly indicate that the soil conditions causing the current failures are common to the entire neighborhood. The Highlands Council recognizes that septic systems will not all fail simultaneously, and looks for patterns and concentrations. In this case, four of 18 septic systems (22%) are verified as currently failing, and four additional septic systems were identified as having previously experienced problems, with soil conditions noted as constrained, for a total of 44% of the systems with clear evidence of problems. These septic systems are not concentrated in any one portion of the neighborhood. Therefore, the Highlands Council concludes that a pattern of failing septic systems has been proved.
2. **Ability to reasonably address the failing systems through rehabilitation or replacement:** Recent inspections and reports as far back as 1988 indicate that rehabilitation and replacement are not viable options due to the small lot size and poor soil conditions. Further, rehabilitation and replacement would not address the issue of elevated nitrate levels in the domestic wells, given that properly functioning septic systems discharge nitrates at concentrations generally estimated at 35-40 mg/L. Related to this issue, it should be noted that nitrates are both a health threat themselves, when above 10 mg/L, and an indicator for other pollutants that are not generally monitored other than at the sale of residential property. The water quality of one well is nearly 10 mg/L, and a number of wells exceed 4 and even 5 mg/L, indicating that other pollutants are likely present in the wells. Therefore, the Highlands Council concludes that rehabilitation and replacement of failing septic systems will not address the public health issues in this neighborhood.
3. **Highly concentrated septic systems:** Based on use of a mass balance nitrate dilution model, the smallest average lot size to support septic systems at an average nitrate concentration of 10 mg/L (the safe drinking water standard) is 1.6 acres. In this case, average lot sizes for the Sandt Lane area are approximately 1 acre or less. (Conversely, surrounding parcels are generally greater than 2.5 acres.) Therefore, based on RMP requirements for the approval of cluster development, the Highlands Council concludes that the targeted homes constitute an area of highly concentrated septic systems.
4. **Scale of threat:** The pattern of failing septic systems, confirmed soil limitations and elevated nitrate levels in domestic wells clearly indicates that the entire neighborhood is at risk. Therefore, the Highlands Council concludes that the public health threat is significant enough to require action.
5. **Documented existing or imminent threat to Public Health and Safety:** Based on the findings in #1 through #4, the Highlands Council concludes that the Sandt Lane neighborhood faces an existing or imminent threat to public health and safety due to both failing septic systems and elevated pollutant levels in domestic wells. Therefore, a waiver under Policy 7G1 is appropriate.
6. **Feasible alternatives to sufficiently assure long-term protection of public health and safety:** Once a threat to public health and safety has been confirmed, alternatives must be considered to address the threat. Objective 2K3d indicates that at least two options should be considered.
  - a. *Community on-site wastewater treatment system:* A community on-site wastewater treatment system could be constructed to collect effluent from the neighborhood and discharge treated effluent to ground or surface water. The effluent could be liquids only (where the septic tank is retained to process solids but the liquid effluent outlet is connected to a sewer line) or

## Washington Township Wastewater Management Plan

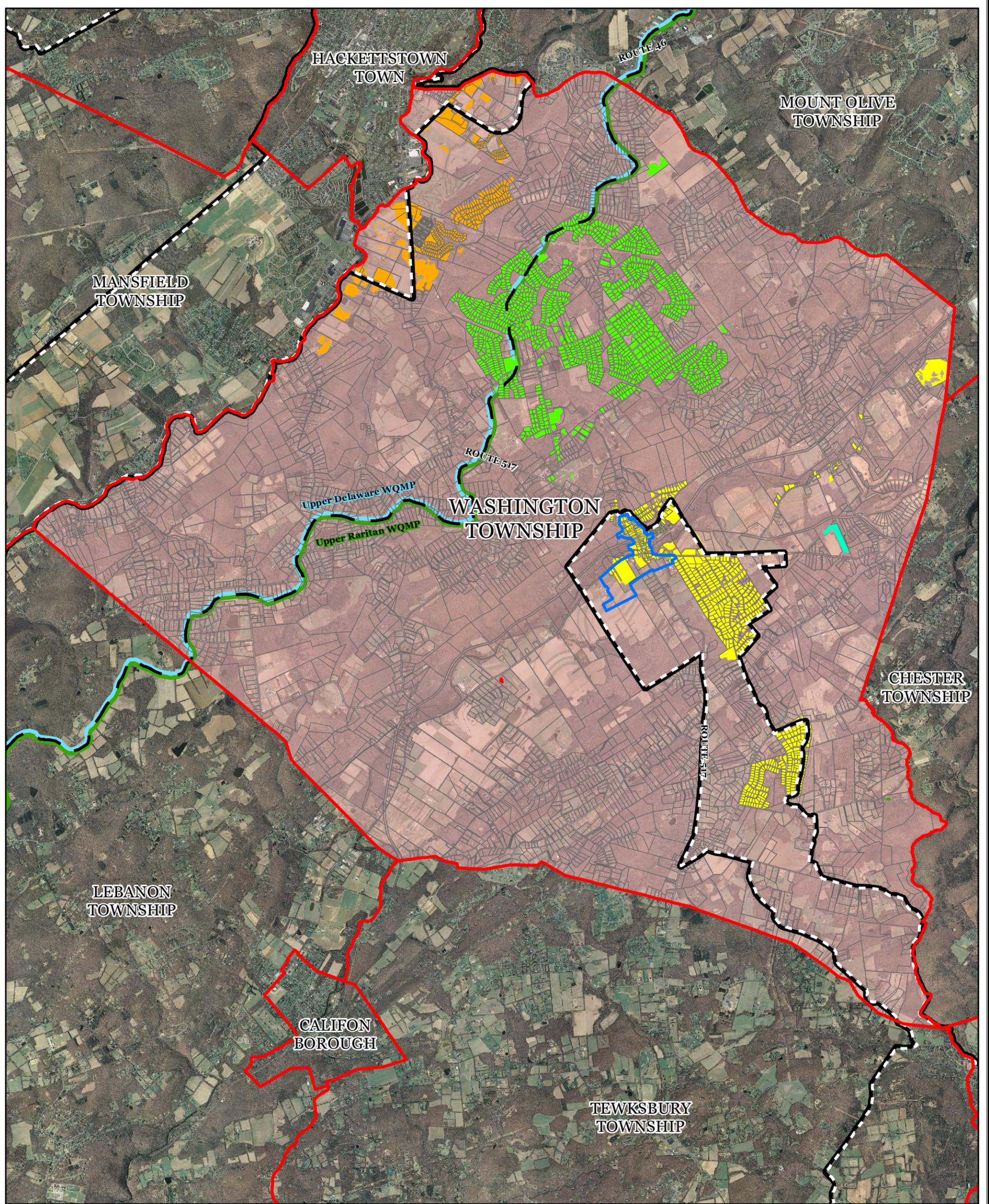
for the complete household waste stream (where the entire septic system is eliminated and the house is connected directly to a sewer line). This alternative is most feasible for new construction, but can be implemented in existing neighborhoods if land is available for the treatment system and disposal site. However, such systems are expensive in general and even more so where the number of homes is small. While no firm threshold is available, in general the minimum number of homes for new construction is considered somewhere between 25 and 40. In this case, 18 homes are targeted for connection to a wastewater system. Therefore, the Highlands Council concludes that a community on-site wastewater treatment system is not a feasible alternative for this case.

- b. *Connection to Schooley's Mountain STP sewer service:* An existing sewer line runs along Rock Road at the western terminus of Sandt Lane, and two homes in the immediate neighborhood are already connected to that line due to failing septic systems. In addition, application of the approach of Objective 2K3d(2) would suggest that community on-site wastewater treatment system should only be implemented where the extension would serve development that is not contiguous to the Existing Area Served. The Sandt Lane neighborhood is directly adjacent to, and in fact partially within, the Existing Area Served for the Schooley's Mountain STP. It should be noted that this facility has limited capacity based on the NJDEP approach for evaluating remaining capacity (permitted flow minus annual average flow) and has no remaining capacity based on the RMP approach (permitted flow minus maximum average flow). In situations where remaining utility capacity using the RMP approach is zero or negative, no further expansion of the Future Sewer Service Area may be deemed consistent with the RMP except where a waiver is appropriate under Policy 7G1. As noted above (#5), the Highlands Council concludes that a waiver is appropriate. Therefore, the Highlands Council concludes that an extension of sewer lines from Rock Road is feasible to serve the Sandt Lane neighborhood.

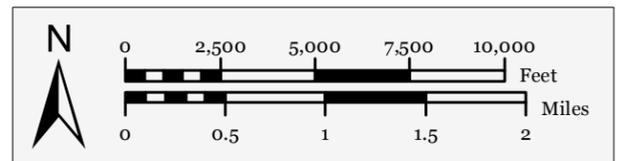
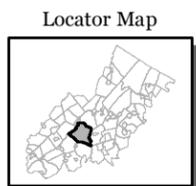
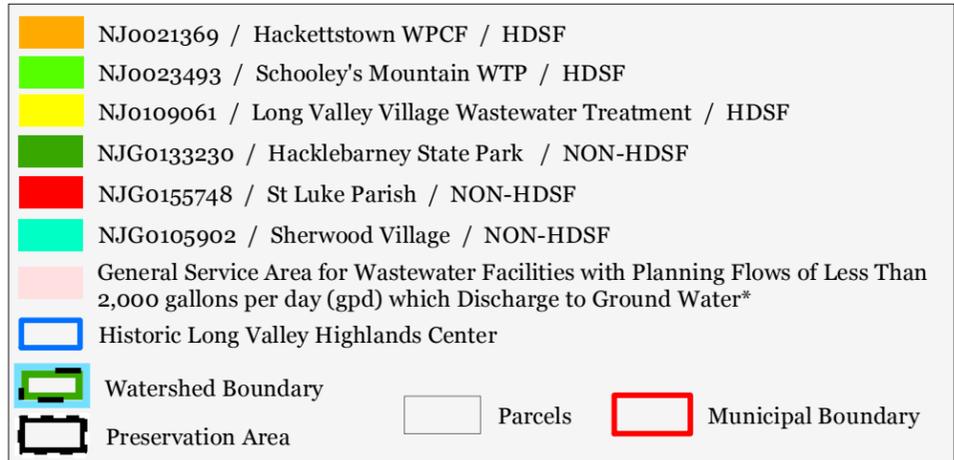
### Highlands Council Finding

In conclusion, based upon the condition within the Highlands Council's approval of the Washington Township Petition for Plan Conformance (as documented in Appendix D of the Final Consistency Review and Recommendations Report), the report of the Health Officer of Washington Township, and the analysis above, the Highlands Council concludes that the following action is consistent with the Regional Master Plan:

Future Sewer Service Area for the Schooley's Mountain Sewage Treatment Plant owned and operated by the Washington Township Municipal Utilities Authority to include the following parcels in the Sandt Lane-East Springfield Road area near Rock Road (see Figure 1): Block 23 Lots 13.01, 14 (house area only, not including the rear yard area), 9.01, 9.02 and 9.03; and Block 23.01 Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14. Note: Block 23 Lot 13 and Block 23.01 Lot 13 are currently connected to the sewer line along Rock Road. The sewer extension shall be designed to minimize the potential for connections from properties not within the Future Sewer Service Area, particularly those that are not currently developed.



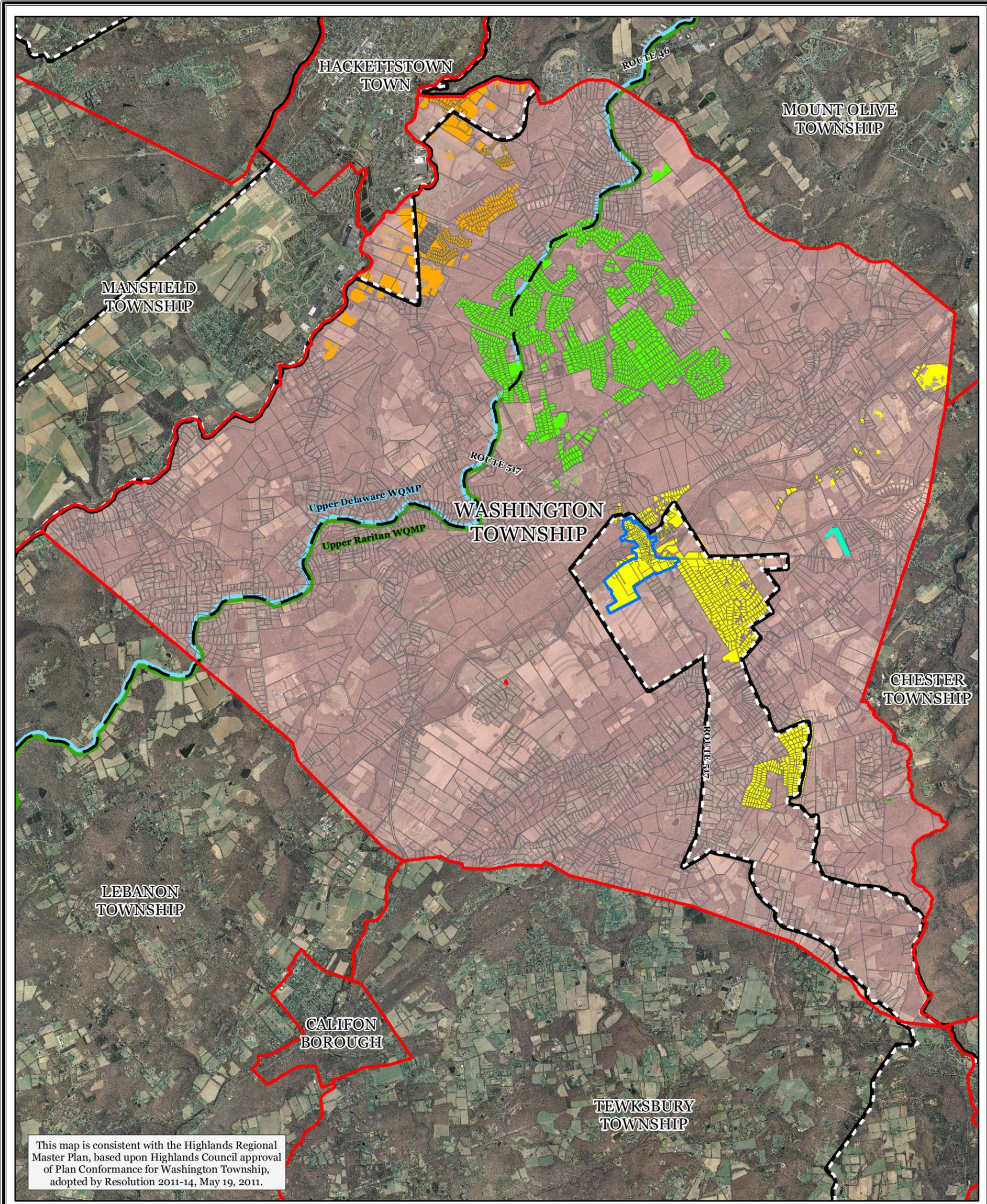
**FIGURE WASHINGTON TOWNSHIP - 1**  
**EXISTING SEWER SERVICE AREAS**  
 Wastewater Management Plan  
 Washington Township, Morris County, New Jersey  
 June 22, 2012



The information contained on this map is the best available according to the Highlands Council. However, unintentional inaccuracies may occur, particularly where data or information is derived from sources other than the Highlands Council. The Highlands Council cannot be responsible for the misuse or misinterpretation of the information presented herein. Therefore, under no circumstances shall the State of New Jersey or specifically, the Highlands Council be liable for any actions taken or omissions made from reliance on any information contained herein from whatever source nor shall the State be liable for any other consequences from any such reliance. Additional sources of information may have been used to collect the GIS digital data, but this secondary product has not been verified by those sources.

\*Wastewater flows in excess of 2,000 gpd shall not be permitted in this area unless the Highlands Council has determined that the discharge is consistent with the Regional Master Plan and the discharge is approved by NJDEP as a revision or amendment to this Wastewater Management Plan. This designation includes restriction of individual subsurface sewage disposal system development or subdivisions of 6 units or greater, unless approved under septic system density provisions of the Highlands Land Use Ordinance adopted by Washington Township pursuant to Highlands Council approval of its Petition for Plan Conformance.

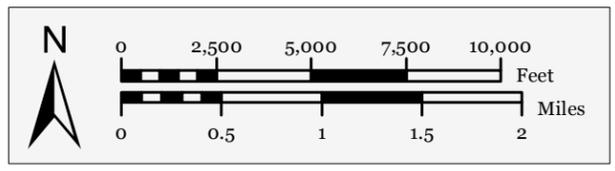
Note: This figure incorporates by reference the Mapping Requirements pursuant to N.J.A.C. 7:15-5. See page 6 of the Washington Township Chapter of the Morris County Wastewater Management Plan.



This map is consistent with the Highlands Regional Master Plan, based upon Highlands Council approval of Plan Conformance for Washington Township, adopted by Resolution 2011-14, May 19, 2011.

**FIGURE WASHINGTON TOWNSHIP - 2**  
**FUTURE SEWER SERVICE AREAS**  
 Wastewater Management Plan  
 Washington Township, Morris County, New Jersey  
 June 22, 2012

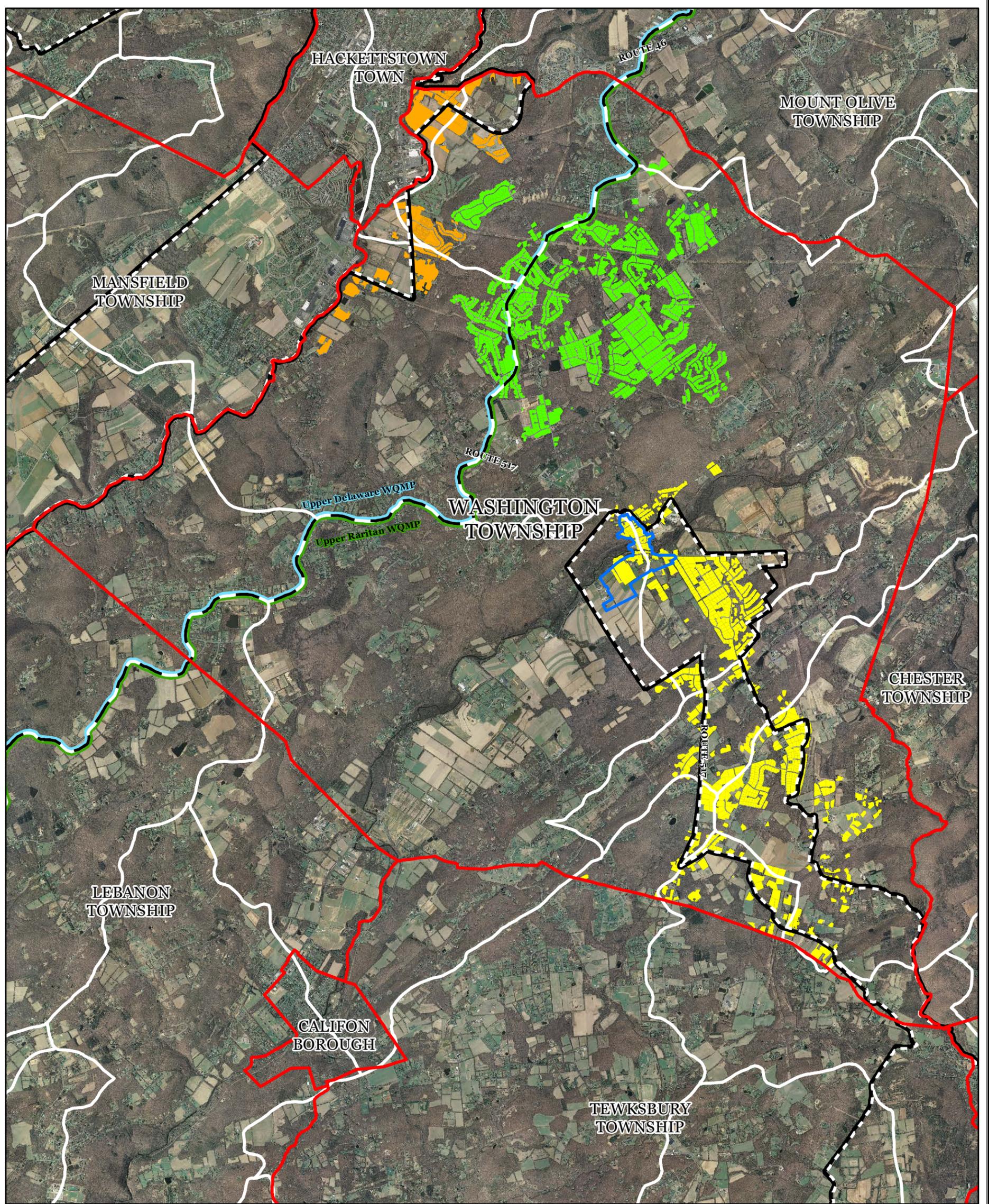
- NJ0021369 / Hackettstown WPCF / HDSF
- NJ0023493 / Schooley's Mountain WTP / HDSF
- NJ0109061 / Long Valley Village Wastewater Treatment / HDSF
- NJG0133230 / Hacklebarney State Park / NON-HDSF
- NJG0155748 / St Luke Parish / NON-HDSF
- NJG0105902 / Sherwood Village / NON-HDSF
- Septic Area (Planning Flows of 2,000 gallons per day (gpd) or less)\*
- Historic Long Valley Highlands Center
- Watershed Boundary
- Preservation Area
- Parcels
- Municipal Boundary



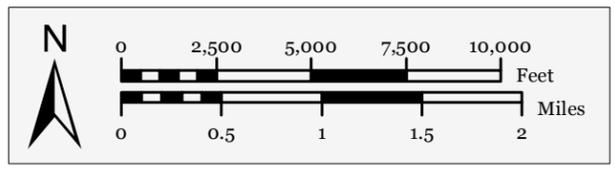
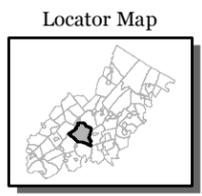
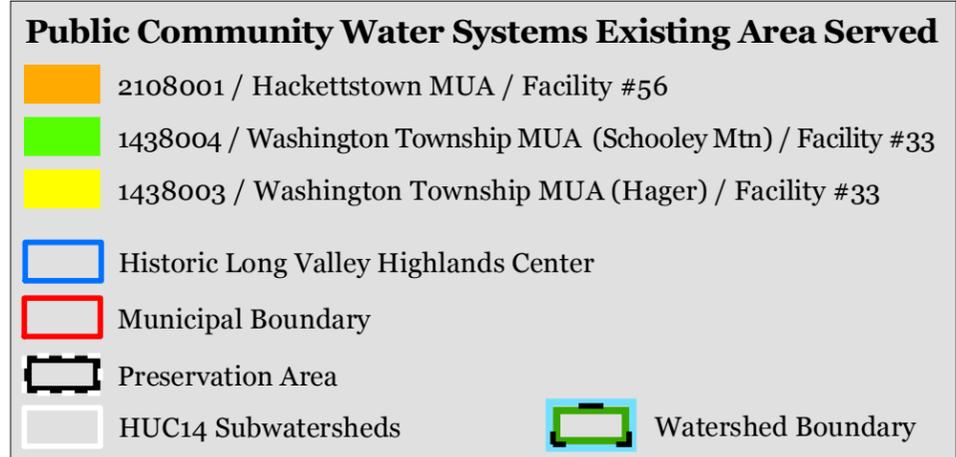
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Note: This figure incorporates by reference the Mapping Requirements pursuant to N.J.A.C. 7:15-5. See page 6 of the Washington Township Chapter of the Morris County Wastewater Management Plan.



**FIGURE WASHINGTON TOWNSHIP - 3  
PUBLIC COMMUNITY WATER SYSTEMS**  
Wastewater Management Plan  
Washington Township, Morris County, New Jersey  
June 22, 2012



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Note: This figure incorporates by reference the Mapping Requirements pursuant to N.J.A.C. 7:15-5. See page 6 of the Washington Township Chapter of the Morris County Wastewater Management Plan.