Lopatcong Township
Wastewater Management Plan

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

Adopted: November 19, 2013
LOPATCONG 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 municipal 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 March 17, 2011, the Highlands Council adopted Resolution #2011-11 (attached as Appendix 1) which approved Lopatcong Township’s Petition for Plan Conformance, subject to conditions as set forth in the Final Consistency Review and Recommendation Report for Lopatcong Township. Plan Conformance applies to the entirety of Lopatcong 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 Lopatcong adopt a WMP working with the Highlands Council under Plan Conformance. As such, this Lopatcong Township WMP is developed under Plan Conformance for the entire Township (see Figures Lopatcong-1 through Lopatcong-3). The Highlands Council worked cooperatively with Lopatcong 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 Highlands Municipal Build-Out Report and the Final Consistency Review and Recommendation Report for Lopatcong 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.
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 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. These projects include the following (see also Table 10), all of which are within the Existing Community Zone:

i. **Planning Area- Warren Heights**: Townhouse/condominium project on either side of Baltimore Street between Red School Lane and Strykers Road is substantially complete. Three one-bedroom units and two two-bedroom units are anticipated to be built to close out the project, and generate planning flows of 900 gpd of wastewater.

ii. **Planning Area- Delaware Crossing**: Age-restricted duplexes near Edward Street are partially occupied with additional units under construction. Eighty-eight two-bedroom units are projected to be built to close out the project, which will generate planning flows of 14,960 gpd of wastewater.

iii. **Planning Area- Scenic Ridge Estates**: Single family homes north of Belvidere Road are partially occupied with additional units under construction. Forty-four units are projected to be built to close out the project, which will generate planning flows of 12,600 gpd of wastewater.

iv. **Planning Area- School House Village Shopping Center (Unistar) - Block 95, Lots 36.01, 37, 38, 39, 40, and 41**: A small existing strip mall has a failing septic system. The sewer connection per Treatment Works Approval (TWA) #11-0010 will serve the shopping center, an expansion of that building and three detached single family homes on Strykers Road between the shopping center building and Baltimore Street that are currently served by septic systems. The Township has committed 3,200 gpd to serve this facility.

v. **Planning Area- Block 102 Lot 3**: A project involving 240 multi-family units recently received preliminary approval from the Planning Board. A TWA application will be considered by the governing body. It is anticipated that approximate planning flows of 50,000 gpd will be committed at that time.

vi. **Planning Area- Phillipsburg High School- Block 2 Lot 44**: The site received a TWA to construct, but is not connected to Phillipsburg STP and the TWA has since expired. Site preparation and athletic facilities have been completed, but the school buildings were not contrasted by the School Development Authority and the project is currently on hold. However, the sewer line for the full project has been installed, with an anticipated flow of 60,000 gpd, which will be provided from the Town of Phillipsburg allocation. This amount is not considered a demand against the Lopatcong allocation of 801,000 gpd, despite its location within Lopatcong Township, as it is a Phillipsburg facility.

**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 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 Lopatcong-1 are areas served by septic systems (ISSDS) and other wastewater systems with planning flows of less than 2,000 gpd. This term incorporates those “septic areas” in WMPs adopted under previous versions of N.J.A.C. 7:15.

4. **Future Sewer Service Area** – As discussed below, in addition to the Existing SSA, a Highlands Center and a Highlands Redevelopment Area (which is within the Highlands Center) are proposed to be included within the Future SSA. The Township of Lopatcong has committed to ensuring that all sewer flow commitments remain within the 801,000 gpd in maximum monthly flows, as established by two contracts between the Township of Lopatcong and the Town of Phillipsburg, for treatment of sewerage by the Phillipsburg STP. Further, 20,000 gpd of the 801,000 gpd total may or may not be available pending resolution of contractual commitments involving other municipalities. The contractual amounts identified in this document are neither NJDEP-determined nor NJDEP-enforced. To the extent that any one project results in higher flows than listed below, another project will be subject to more stringent limitations than listed below.

   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 also are 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),

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

   b. **Planning Area – Lopatcong Township Highlands Center Designation** – The Township petitioned the Highlands Council to amend its previously-approved Petition for Plan Conformance for Lopatcong Township to incorporate approval of a Highlands Center Designation for the Lopatcong Township Highlands Center. Designation of the Highlands Center was approved by the Highlands Council on January 19, 2012, Resolution No. 2012-3 (enclosed). This Highlands Center is partially within a previously approved NJDEP sewer service area, but in part is an expansion of Future SSA beyond previously approved areas. A portion of the Lopatcong Township Highlands Center will be served by sewers, but a portion will be served by on-site systems or require no sewer service. Therefore, only the portion of the Lopatcong Township Highlands Center proposed for sewerage is incorporated as part of the Future SSA, to the extent depicted in this WMP on Figure Lopatcong HC-1. The Highlands Center and related Future SSA is described in more detail below. Should any parcel within the Highlands Center but outside of the Future SSA require an on-site wastewater facility with planning flows greater than 2,000 gpd, a site-specific WQMP amendment will be required. As listed in Table 10, 44,500 gpd is allocated to a proposed Data Center on Block 99 Lot 6, and 41,800 gpd remain to be allocated for other parcels within the Highlands Center, with the exception of the Ingersoll-Rand Redevelopment Site which is addressed separately.

   c. **Planning Area- Ingersoll Rand Redevelopment Site**: The site consists of approximately 103.17 acres along State Route 22 and is a designated brownfield site for which the Highlands Council
has provided redevelopment planning funds through the Plan Conformance process. There have been several preliminary proposals for the site. The floor areas associated with the proposals were in the range of 500,000 to 600,000 sq ft. For planning purposes, a mid-range of 550,000 sq ft will be used, which projects into a sewerage flow of 55,000 gpd. This site is located within the Lopatcong Township Highlands Center but has a separate allocation as shown in Table 10.

d. **Planning Area** - Municipal Recreational Facilities: The Future SSA shall be limited to the comfort station areas of the two parks.

- Block 2 Lots 30.09: This site contains two septic systems, one for the pavilion building and the second for the football/concession stand. The Township proposes to abandon the septic systems and connect to the public sewer in the future. A flow of 2,000 gpd is allocated to connect the existing buildings to the sewer.
- Block 2 Lot 30.01: A building with a concession stand and bathrooms will be built to service the park. A flow of 2,400 gpd is allocated to service the recreational facilities in the future.

e. **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 SSAs were rescinded by the Highlands Act (Section 42, N.J.S.A. 58:11A-7.1).

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 (ISSDS) 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 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 (#13-08) adopted by Lopatcong Township pursuant to Highlands Council approval of its Petition for Plan Conformance. (NOTE: Approval pursuant to these provisions of the Highlands Checklist 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 Checklist Ordinance adopted by Lopatcong Township pursuant to Highlands Council approval of its Petition for Plan Conformance. (NOTE: Approval pursuant to these provisions of the
Highlands Checklist 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

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 Lopatcong 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 Lopatcong Township, the Lopatcong 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 Checklist Ordinance (as specified below) for Lopatcong Township, approved for Plan Conformance by the Highlands Council.\(^1\) GIS spatial data have also been provided to NJDEP, Warren County and the municipality.

- **Jurisdictional Boundaries** – The affected WMP Area is Lopatcong Township, and the Areawide Water Quality Management Plan is the Upper Delaware WQMP; both are not shown on the municipal maps. Lopatcong Township is entirely within the Highlands Region, with the Planning and Preservation Areas and major roads being shown in the WMP Figures Lopatcong-1, -2 and -3.

- **Existing domestic treatment works and service areas** – See Figure Lopatcong-1

- **Existing industrial treatment works and service areas** – See Figure Lopatcong-1

- **Future domestic treatment works and service areas** – See Figure Lopatcong-2

- **Future industrial treatment works and service areas** – See Figure Lopatcong-2

- **Freshwater wetlands** – Lopatcong Township Highlands ERI

- **Flood prone areas**, including flood hazard areas – Lopatcong Township Highlands ERI

- **Public open space and recreational areas** – Lopatcong Township Highlands ERI

- **Preserved agricultural lands** – Lopatcong Township Highlands ERI

\(^1\) [http://www.highlands.state.nj.us/njhighlands/planconformance/lopatcong.html](http://www.highlands.state.nj.us/njhighlands/planconformance/lopatcong.html)
Wild and Scenic River areas designated under the New Jersey Wild and Scenic Rivers Act or the Federal Wild and Scenic Rivers Act – Not applicable to Lopatcong Township

Category One Water, trout production waters, and trout maintenance waters – Lopatcong 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.)

Surface waters and HUC14 boundaries – Lopatcong Township Highlands ERI

Suitable habitat for endangered and threatened wildlife species – Lopatcong Township Highlands ERI

Natural Heritage Priority Sites – Lopatcong Township Highlands ERI

Riparian Zones – Lopatcong Township Highlands ERI (NOTE: this map uses the Highlands Council definition, which is more expansive than the NJDEP definition.)

Steep slopes – Lopatcong Township Highlands ERI (NOTE: this map uses the Highlands Council definition and LiDAR data)

Current composite or municipal zoning – Lopatcong Township Highlands Checklist Ordinance Exhibit 1, “Highlands Zones and Sub-Zones.” (In addition, Highlands Council approval of Plan Conformance and municipal adoption of the Highlands Checklist Ordinance addresses this requirement.)

Municipal parcel mapping and Roads – WMP Figures Lopatcong-1, -2 and -3, and also on all Lopatcong Township Highlands Checklist Ordinance Exhibits

Undeveloped and underdeveloped property – Lopatcong Township Highlands Municipal Build-Out Report

Public water supply service area – See Figure Lopatcong-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 Lopatcong-2) used in the Lopatcong 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 through the Highlands Checklist Ordinance adopted by the Township, applicable to both the Planning and Preservation Areas. The Highlands Checklist 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 Checklist 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 Lopatcong-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 Lopatcong-2. Additional properties may be included in Figure Lopatcong-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), as required by
Lopatcong Township Codes, Chapter 179, Section 179-1. Compliance with the connection
requirement has been demonstrated through adoption of Lopatcong Township Ordinance
[Lopatcong Township Codes, Chapter 179].

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 Checklist Ordinance of Lopatcong
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

Lopatcong Township is located within both the Preservation Area and Planning Area. The Highlands
municipal build-out analysis for Lopatcong Township is based upon a combination of the Highlands
Municipal Build-Out Report, available information on developments with prior and valid approvals, and the
Highlands Council approval of the Lopatcong Township Highlands Center and other specific sewer service
areas. However, since publication of this report, Lopatcong has provided more detailed and current
information regarding development capacity within the Existing SSA, which has been used in lieu of the
Highlands Municipal Build-Out Report regarding sewered development. The Highlands Council estimated

2 http://www.highlands.state.nj.us/njhighlands/warren_county/lopatcong/lopat_bor_revised_0910.pdf
The following new development results for potential developable lands for the entire municipality using the Township data for sewer areas, and the Highlands Municipal Build-Out Report for septic system development, 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 Lopatcong 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. However, the municipal information (see also Table 10) is primarily based on existing approvals and applications.

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

   a. Total Projected Development: As indicated in Table 10, the committed or projected flow from approved but undeveloped properties within the current sewer service area equals 31,660 gpd and the flow from committed or projected flows from other approved or anticipated but undeveloped properties equals 173,900 (including 70,000 gpd for 305 residential dwelling units, and 99,500 gpd for 1,450,000 square feet of non-residential development) for a total of 205,560 gpd or 0.2 MGD. In addition, the remaining balance of 39,440 gpd in unallocated sewer capacity is dedicated to future projects within the Future SSA portion of the Lopatcong Township Highlands Center, and will be limited to this amount. The estimated public water supply demands are 639,436 gpd, or 0.639436 MGD.

   b. Phillipsburg High School (Block 2 Lot 44): As discussed on page 3, the site received approved a Treatment Works Approval (since expired) to construct a connection to the Phillipsburg STP. The pipeline was constructed but the school has not been built. Further, any flows from this facility will be addressed through the Town of Phillipsburg WMP, as any flows will accrue to the Town of Phillipsburg allocation as a Phillipsburg project. Therefore, this parcel is not reflected in the current wastewater flows for Lopatcong Township.

2. Development Reliant on Septic Systems: 38 septic systems in the Planning Area for all RMP Land Use Capability Zones and HUC14 subwatersheds, and 1 septic system in the Preservation Area.

The build-out results based on potential developable lands are not constrained by water supply utility capacity (which will be provided to the Lopatcong Highlands Center as discussed below) and wastewater utility capacity from the Phillipsburg STP, though with the creation of the Lopatcong Township Highlands Center, essentially all available wastewater utility capacity will be committed or allocated.

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 Lopatcong Township is derived from wells within the local HUC14 subwatershed, Net Water Availability represents a constraint on build-out potential. However, Aqua NJ, the public water supplier serving Lopatcong Township, has adequate water supply available for the Highlands Center within its existing water allocation permit. Water supply is provided by Aqua New Jersey using wells from another HUC14 subwatershed. The Highlands Council determined that these wells draw essentially all of their supply from the Delaware River through induced recharge, and therefore do not represent a consumptive or depletive water use relative to the source subwatershed.
Overview of the Lopatcong Township Highlands Center

The Lopatcong Highlands Center will provide for significant community enhancement, redevelopment and development within a portion of the Planning Area, both north and south of State Route 57 and immediately east of the Town of Phillipsburg. It incorporates the most densely developed areas of the Township north of Route 57, east of the Town of Phillipsburg and west of Strykers Road, and a portion of the area south of Route 57 and north of the border with the Township of Greenwich that is currently designated Conservation Zone in the Regional Master Plan. This latter area has a combination of agricultural uses, existing industries, the Ingersoll Rand Redevelopment Area (Block 101 Lots 1 and 1.01) as discussed in the Final Consistency Review and Recommendations Report (April 20, 2011), approved industrial developments that were not known to exist as of the creation of the Land Use Capability Map (LUCM) Zones for the Township of Lopatcong, and significant proposed industrial uses. Also designated with the Highlands Center is a portion of the Phillipsburg Mall on Route 22, the other part of which is already contained in the Pohatcong Township Highlands Center, and the adjacent parcel to the north (Block 102 Lot 3) which has preliminary approval for 240 residential units. The Phillipsburg Mall is not projected for additional sewer flows, while Block 102 Lot 3 has allocated flows as listed in Table 10.

A portion of the Lopatcong Township Highlands Center is included within the Future SSA, to the extent depicted in this WMP on Figure Lopatcong HC-1. The Lopatcong Township Highlands Center, among other developments, incorporates a Data Center, Ingersoll Rand site, Warren Heights, Delaware Crossing, Scenic Ridge, the School House Village Shopping Center (Unistar), and the remaining affordable housing obligations (see also Table 10). As discussed in the Introduction, Warren Heights, Delaware Crossing and Scenic Ridge are under construction, with committed flows that will be gradually converted to actual flows through the development process. Regarding future development, the Data Center includes two buildings with approximately 50 employees each (at 25 gallons an employee per day) and a process discharge of 21,000 gallons per day (noncontact cooling water), resulting in a planned total discharge of 44,500 gpd. The Ingersoll Rand site consists of approximately 103.17 acres along Route 22. For planning purposes, a mid-range project size of 550,000 sq ft will be used, which projects into a sewerage flow of 55,000 gpd. Lopatcong Township Highlands Center also integrates the municipality’s Prior Round affordable housing obligation of 65 units throughout the project area.

Lopatcong Township has provided information indicating that the Township has sufficient remaining available sewer capacity from the Phillipsburg Sewage Treatment Plant (STP) to address the wastewater needs of this proposed Highlands Center, as shown in Table 10. With all committed and planned flows accounted for, the Township estimates approximately 42,000 gpd in unallocated flows, which will be available to projects within the Highlands Center to replace existing on-site discharges or support development and redevelopment not currently listed on Table 10. No further extensions of the Future Sewer Service Area will be approved in the Lopatcong Township Wastewater Management Plan (WMP) absent proof that sufficient capacity exists for such extensions after consideration of all planned and potential flows within the Highlands Center, and approval of the Highlands Council of a Map Adjustment, extension of the Highlands Center, or public health and safety waiver. Aqua New Jersey is the public water supply system serving Lopatcong Township, and has adequate water supply available for the Highlands Center within its existing water allocation permit.

The Lopatcong Township Highlands Center also identifies Highlands Environmental Resource Sites that are to be protected from future disturbance (Lopatcong Creek between Pudding Stone Way and Buckley Hill

### Table 1 – Municipal Build-Out and Approved/Planned Development Results Summary

<table>
<thead>
<tr>
<th></th>
<th>Preservation Area</th>
<th>Planning Area</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential units – Sewered</td>
<td>0</td>
<td>317</td>
<td>317</td>
</tr>
<tr>
<td>Septic System Yield</td>
<td>1</td>
<td>38</td>
<td>39</td>
</tr>
<tr>
<td>Total Residential Units</td>
<td>1</td>
<td>355</td>
<td>356</td>
</tr>
<tr>
<td>Total Non-Residential – Sewered</td>
<td>0</td>
<td>1,464,600 sq ft</td>
<td>1,464,600 sq ft</td>
</tr>
</tbody>
</table>

...
Lopatcong Township Wastewater Management Plan

Drive), and incorporates Low Impact Development guidelines and requirements pertaining to related aspects of development and redevelopment.

Available Wastewater Utility Capacity and Municipal Build-Out Results

NJPDES permitted facilities affecting Lopatcong Township are listed in Table 5. The Highlands Domestic Sewerage Facility (HDSF) serving Lopatcong Township is Phillipsburg STP, which at this time has an approved and operative total capacity of 3.5 million gallons per day (MGD), as described in NJPDES Permit No. NJ0024716. Phillipsburg STP is a municipally-owned utility that provides service under contracts to Lopatcong Township and four other municipalities (Pohatcong Township, Alpha Borough, Greenwich Township, and Phillipsburg Town). The current available Highlands Region capacity for the utility is 0.464 MGD for all municipalities served by the system, based on flow data of January 2005 through October 2011, 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 2011. However, NJDEP calculates available capacity by subtracting the most recent available 12-month average from the permitted capacity, which is 2.604 MGD for Phillipsburg STP for the period of November 2010 through October 2011, resulting in an available capacity of 0.896 MGD. This method applies to all non-conforming municipalities in the Highlands Region. The Highlands Council’s calculations used in the RMP are more conservative. Regardless of the method used, most if not all of the available capacity is contracted to specific municipalities or individual customers.

Table 2 – Phillipsburg Sewage Treatment Plant Remaining Available Capacity

<table>
<thead>
<tr>
<th>Permitted Flow</th>
<th>Maximum Three Month (MAX3MO) Average Flow</th>
<th>Remaining Available Capacity (RMP)</th>
<th>Annual Average Flow</th>
<th>Remaining Available Capacity (NJDEP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 3.5</td>
<td>2.42</td>
<td>1.080</td>
<td>2.242</td>
<td>1.258</td>
</tr>
<tr>
<td>2006 3.5</td>
<td>2.317</td>
<td>1.183</td>
<td>2.202</td>
<td>1.298</td>
</tr>
<tr>
<td>2007 3.5</td>
<td>2.437</td>
<td>1.063</td>
<td>2.252</td>
<td>1.248</td>
</tr>
<tr>
<td>2008 3.5</td>
<td>2.457</td>
<td>1.043</td>
<td>2.22</td>
<td>1.28</td>
</tr>
<tr>
<td>2009 3.5</td>
<td>2.179</td>
<td>1.321</td>
<td>2.042</td>
<td>1.458</td>
</tr>
<tr>
<td>2010 3.5</td>
<td>2.397</td>
<td>1.103</td>
<td>2.209</td>
<td>1.291</td>
</tr>
<tr>
<td>2011* 3.5</td>
<td>3.036</td>
<td>0.464</td>
<td>2.604</td>
<td>0.896</td>
</tr>
</tbody>
</table>

NOTE: All flows are in MGD. Any allocations identified in this document are neither NJDEP-determined nor NJDEP-enforced.

*2011 flows through October. Please note that the flows for August through October 2011 reflect extraordinary wet weather events, the implications of which are addressed below regarding remaining available capacity for Lopatcong Township.

The lowest dry weather sewage flow (the lowest consecutive three months of flow) for the Phillipsburg STP during the period of 2008 through mid-2011 was 1,189,566 gpd, in 2009. For the same year, annual average flows were 2,041,583 gpd, resulting in an estimated annualized I&I (Inflow & Infiltration) rate of roughly 7.2%. I&I for each calendar year has ranged from 6% to 12% from 2005 through 2011 with the highest I & I rate of 13% in 2011. I&I for the maximum month (September 2011, 3.571 MGD) was 13%, based on the lowest three-month flow for that year.

The Township of Lopatcong has two contracts with Phillipsburg for sewer capacity in the Phillipsburg STP. The first, signed December 31, 1998, authorizes monthly average flows up to 676,000 gpd. The second, signed January 15, 1999, authorizes an additional monthly average flow up to 125,000 gpd, for a total of 801,000 gpd. However, 20,000 gpd of the 801,000 gpd total contract may or may not be available pending resolution of contractual commitments involving other municipalities, as discussed above. The Township of Lopatcong represents that all of these flows are for benefit of existing and future customers within the
Township of Lopatcong. Recent flows are shown in Table 3. Note that the 2011 MAX3MO for 2011 is actually 0.598 MGD. However, that represents flows from extraordinary weather events of Hurricane Irene followed by Tropical Storm Lee. A more representative MAX3MO is from the months of February through April 2011, of 0.556 MGD, which is used in the calculations for remaining available capacity.

<table>
<thead>
<tr>
<th>Year</th>
<th>Contracted Flow</th>
<th>Maximum Three Month (MAX3MO) Average Flow</th>
<th>Remaining Available Capacity (RMP)</th>
<th>Annual Average Flow</th>
<th>Remaining Available Capacity (NJDEP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>0.801</td>
<td>0.468</td>
<td>0.333</td>
<td>0.436</td>
<td>0.365</td>
</tr>
<tr>
<td>2010</td>
<td>0.801</td>
<td>0.546</td>
<td>0.255</td>
<td>0.455</td>
<td>0.346</td>
</tr>
<tr>
<td>2011*</td>
<td>0.801</td>
<td>0.556</td>
<td>0.245</td>
<td>0.506</td>
<td>0.295</td>
</tr>
</tbody>
</table>

**NOTE:** All flows are in MGD. Any allocations identified in this document are neither NJDEP-determined nor NJDEP-enforced.

* 2011 flows through October.

The total estimated wastewater generation from the build out for Phillipsburg STP in Lopatcong Township is 0.20556 MGD for the Planning Area, including the committed flows and the development potential of the Lopatcong Township Highlands Center, and 0 MGD for the Preservation Area and does not exceed the utility capacity conditions, as shown in Table 7 and detailed in Table 10.

**Other NJPDES Permitted Facilities**

There are three NJPDES permitted facilities that serve in Lopatcong Township (see Table 6), the latter two of which are T1 facilities. They include Phillipsburg Marble Co (NJ0069698), and Avantor Performance Materials (formerly Mallinckrodt Baker Inc) (NJG0109797). There is no additional wastewater generation for these facilities from the build-out analysis. However, Avantor Performance Materials has received a Treatment Works Approval (TWA #11-00150) that provides for a gravity sewer line/ Cesspool Closure Plan with a flow of 13,600 gpd to the Phillipsburg Town STP. The TWA for the Avantor Performance Materials Inc indicates that the line is actually in Phillipsburg Town. The primary buildings are also in Phillipsburg, and therefore flows from this facility will be from the Phillipsburg allocation, not the Lopatcong allocation.

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

Public Water Supply utilities serving and proposed to serve Lopatcong Township are listed in Table 4. The main public water utility serving Lopatcong Township is Aqua-NJ (Phillipsburg). The current available Highlands Region capacity for the utility is 36.214 million gallons per month (MGM). The build-out analysis above identifies the total estimated public water demand from the build out as 0.639436 MGD for the Planning Area and 0 MGD for the Preservation Area (0.185 MGD of consumptive water use).
**Lopatcong Township Wastewater Management Plan**

**Table 4. Future Water Demand for Existing and Proposed Facilities Serving Lopatcong Township**

<table>
<thead>
<tr>
<th>Purveyor (Approval ID)</th>
<th>Water Allocation/Approved Diversion (MGM)</th>
<th>Water Allocation/Approved Diversion (MGD)</th>
<th>Projected Water Demand (MGD)</th>
<th>Excess (Deficit) MGD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua NJ (Phillipsburg)</td>
<td>178</td>
<td>5.93</td>
<td>0.639436</td>
<td>1.207</td>
</tr>
<tr>
<td>(PWSID # 2119001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Reflects maximum monthly demands where available, see [http://www.nj.gov/dep/watersupply/pws.htm](http://www.nj.gov/dep/watersupply/pws.htm)

**Designation of Wastewater Service Areas within Lopatcong 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 Lopatcong-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 5. A listing of affected properties is provided as Attachment A. However, please note that Figure Lopatcong-1 is considered definitive by NJDEP for purposes of permit approvals.

2. **Future Sewer Service Area** – This map (Figure Lopatcong-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 5. Figure Lopatcong-2 includes the approved Lopatcong Township Highlands Center showing parcels that are within the Future SSA. Finally, Figure Lopatcong-2 indicates all “Septic Area (Planning Flows of 2,000 gpd or Less).” The septic system yields associated with this latter area are listed in Tables 8 and 9.

   a. **Lopatcong Township Highlands Center Designation** – This map (Figure Lopatcong HC-I) shows the parcels and portions of parcels within the Lopatcong Township Highlands Center and those areas that are within the Future SSA as described above.

3. **Public Community Water System Utilities** – This map (Figure Lopatcong-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. Water service for the approved Lopatcong Highlands Center will approximate that of the Future SSA for the same area.

**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 Checklist 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 Checklist Ordinance [#13-08]. All extensions of sewer service must be in conformance with the Highlands Checklist Ordinance and subject to Plan Conformance approval and requirements of the Highlands Council. The Highlands Checklist Ordinance also regulated septic system density for new development that is subject to the ordinance.

- **Water Conservation** – See Highlands Checklist Ordinance, which is more stringent than the NJDEP model ordinance provisions.
Lopatcong Township Wastewater Management Plan

- **Stormwater Management** – Lopatcong Township has adopted the required stormwater management ordinance in compliance with its NJPDES MS4 stormwater permit (Chapter# 199-06). Also, see Highlands Checklist Ordinance, which is more stringent than the NJDEP model ordinance provisions.

- **Riparian Zone** – See Highlands Checklist Ordinance, which is more stringent than the NJDEP model ordinance provisions.

- **Steep Slope** – See Highlands Checklist Ordinance, which is 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. The Township commits to development of such plans in cooperation with the Highlands Council.

- **Required Connection of Septic Systems to Sanitary Sewers in Adopted Sewer Service Areas** – Compliance with this requirement has been demonstrated through adoption of Lopatcong Township Ordinance [Lopatcong Township Codes, Chapter 179, Part 1 (to be amended, subject to constraints on sewer capacity as defined by Chapter 179, Section 179-1)]. Not addressed by Highlands Checklist Ordinance.
Table 5 – NJPDES Permitted Facilities in or Serving Lopatcong Township

<table>
<thead>
<tr>
<th>NJPDES Permit #</th>
<th>PI #</th>
<th>Facility Name</th>
<th>Discharge Category Code</th>
<th>Street Address</th>
<th>Post Office</th>
<th>ZIP</th>
<th>Longitude</th>
<th>Latitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ0024716</td>
<td>46785</td>
<td>Phillipsburg Town STP</td>
<td>A</td>
<td>900 South Main St</td>
<td>Phillipsburg</td>
<td>08865</td>
<td>-75.172411</td>
<td>40.677326</td>
</tr>
<tr>
<td>NJ0069698</td>
<td>46784</td>
<td>Phillipsburg Marble Co</td>
<td>GW</td>
<td>1355 River Rd</td>
<td>Phillipsburg</td>
<td>08865-0172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJG0109797</td>
<td></td>
<td>Avantor Performance Materials (formerly Mallinckrodt Baker Inc)</td>
<td>T1</td>
<td>1051, 1071-1085 River Road</td>
<td>Lopatcong</td>
<td>08865</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
- GW - Discharge to Groundwater

Table 6. Lopatcong Township NJPDES T1 /GW Facilities

<table>
<thead>
<tr>
<th>NJPDES</th>
<th>Facility Name</th>
<th>Project Summary</th>
<th>Block</th>
<th>Lot</th>
<th>Street Address</th>
<th>Street City</th>
<th>X Coord. Number</th>
<th>Y Coord. Number</th>
</tr>
</thead>
</table>
### Table 6. Lopatcong Township NJPDES T1 /GW Facilities

<table>
<thead>
<tr>
<th>NJPDES</th>
<th>Facility Name</th>
<th>Project Summary</th>
<th>Block</th>
<th>Lot</th>
<th>Street Address</th>
<th>Street City</th>
<th>X Coord. Number</th>
<th>Y Coord. Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ0069698</td>
<td>Phillipsburg Marble Co</td>
<td>Company fabricates dimensional stone for a variety of granite, marble, limestone and other natural stone. It provides complete start to finish fabrication.</td>
<td>1; 4; 4.01; 1; 5</td>
<td>3, 3.01; 1; 5</td>
<td>1355 River Rd</td>
<td>Lopatcong</td>
<td>75.1846</td>
<td>40.7235</td>
</tr>
</tbody>
</table>

### Table 7. Lopatcong Township Projected Wastewater Generation by Sewage Treatment Facility

<table>
<thead>
<tr>
<th>Facility</th>
<th>Facility Type</th>
<th>NJPDES Permit</th>
<th>Permitted Flow (GPD)</th>
<th>Existing Flow (GPD)*</th>
<th>Lopatcong Township Source</th>
<th>Projected Flow (GPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phillipsburg STP</td>
<td>DSW</td>
<td>NJ0024716</td>
<td>3,500,000</td>
<td>506,000 (Max3Month 556,000)</td>
<td>Existing Flows (Includes estimated I&amp;I)</td>
<td>506,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Projected Residential</td>
<td>98,460</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Projected Commercial</td>
<td>107,100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total Projected</td>
<td>711,560</td>
</tr>
</tbody>
</table>

* Based on Monthly Report for period between January 2010 and November 2011.

### Table 8. Lopatcong Township Septic System Densities and Allocations by HUC14 for Annual Average and Drought Ground Water Recharge Using GSR-32

<table>
<thead>
<tr>
<th>HUC14 Subwatershed</th>
<th>Subwatershed Name</th>
<th>Density (Average Recharge) NJAC 7:15</th>
<th>Density (Drought Recharge) RMP</th>
<th>Total Units Allowed (Average Recharge) NJAC 7:15</th>
<th>Total Units Allowed (Drought Recharge) RMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>02040105110030</td>
<td>UDRV tris (Rt 22 to Buckhorn Ck)</td>
<td>N/A</td>
<td>By LUCZ</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>02040105120010</td>
<td>Lopatcong Creek (above Rt 57)</td>
<td>N/A</td>
<td>By LUCZ</td>
<td>N/A</td>
<td>11</td>
</tr>
<tr>
<td>02040105120020</td>
<td>Lopatcong Creek (below Rt 57) incl UDRV</td>
<td>N/A</td>
<td>By LUCZ</td>
<td>N/A</td>
<td>27</td>
</tr>
</tbody>
</table>
### Table 9. Lopatcong Township RMP Build-Out Septic System Yield Analysis

<table>
<thead>
<tr>
<th>Planning Area</th>
<th>HUC14 Subwatershed</th>
<th>Subwatershed Name</th>
<th>CZ Yield</th>
<th>ECZ Yield</th>
<th>PZ Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>02040105110030</td>
<td>UDRV tribs (Rt 22 to Buckhorn Ck)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>02040105120010</td>
<td>Lopatcong Creek (above Rt 57)</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>02040105120020</td>
<td>Lopatcong Creek (below Rt 57) incl UDRV</td>
<td>26</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>totals</td>
<td>37</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Preservation Area</td>
<td></td>
<td>1 unit (Not disaggregated by HUC14)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure Lopatcong HC. Lopatcong Township Highlands Center Delineation
Table 10
Township of Lopatcong Sewer Service Commitments*

<table>
<thead>
<tr>
<th>Actual (GPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>505,733</td>
</tr>
<tr>
<td>556,300</td>
</tr>
</tbody>
</table>

Note: MAX3MO in gpd as of early 2010. A higher MAX3MO flow (598,200 gpd) occurred in 2011, affected by tropical storms that occurred in August/September 2011. However, the 2010 value is considered a more appropriate measure of high flow periods.

Properties | Block | Lot | Design Flow (GPD)
--- | --- | --- | ---
Committed or Projected Flows from Approved but Undeveloped Properties within the Current Service Area
Warren Heights (1BR) - 3 units |  |  | 450
Warren Heights (2BR) - 2 units |  |  | 450
Delaware Crossing (2BR AR) – 88 units |  |  | 14,960
Scenic Ridge – 42 units |  |  | 12,600
School House Village Shopping Center (Unistar) – failing septic system, existing development | 95 | 36.01, 37, 38, 39, 40, and 41 | 3,200

(Sub-Total) | 31,660 |

Committed or Projected Flows from Other Approved or Anticipated but Undeveloped Properties
Ingersoll Rand Site (550,000 sq. ft.) | 101 | 1, 1.01 | 55,000
Remaining Affordable Housing Obligations – 65 units | 102 | 3 | 20,000
Data Center | 99 | 6 | 44,500
Municipal Recreational Facilities | 2 | 30.01; 30.09 | 4,400

(Sub-Total) | 173,900 |

Total Commitments (GPD) | 205,560 |

MAX3MO Flow Plus Existing/Anticipated Commitments (GPD) | 761,560 |
Lopatcong Allocation to STP (GPD Monthly Max)** | 801,000 |
Balance (GPD) | 39,440 |
(Allocated to remaining undeveloped parcels in the Lopatcong Township Highlands Center)

*Information provided on behalf of Lopatcong Township by Joseph Pryor, PE, Kupper Associates.
**Subject to the resolution of contractual issues regarding an intermunicipal dispute regarding a 20,000 gpd transfer to Pohatcong. Lopatcong Township has provided a copy of two contractual agreements with the Town of Phillipsburg documenting the 801,000 gpd of total allocated capacity to Lopatcong Township.