

Robbinsville Township (1112)

Introduction

This municipal chapter is an element of the Mercer County Wastewater Management Plan prepared by the Mercer County Planning Division in accordance with N.J.A.C. 7:15.

Robbinsville Township has an adopted WMP. The WMP was adopted in November 2008. The WMP will be incorporated by reference into the County WMP, once adopted. However, the Robbinsville sewer service area is being amended through the adoption of the Mercer County Wastewater Management Plan.

Robbinsville Township is located in the southern portion of Mercer County and encompasses approximately 21 square miles. The Township is primarily suburban with large areas of contiguous preserved land. There are three primary major stream corridors running through the Township, most bisecting preserved open space. A portion of the Township's land is located in the agriculture development area and is eligible for farmland preservation programs. In addition, approximately 26 percent of the Township is comprised of public parks and preserved open space. These areas include municipal and large, regional parks. The remaining land within the Township consists mainly of residential housing, commercial uses, and industrial campuses. A mix of residential housing is found throughout the Township especially in the area known as "Town Center". Commercial and commercially-zoned land uses are also found throughout the Township, but primarily along Route 33 and along the major transportation, Route 130 corridor.

The Township is intersected by the New Jersey Turnpike, 195, Route 130 and Route 33. Route 130 is identified in the Mercer County Master Plan as a growth corridor.

The 2005 DVRPC (Delaware Valley Regional Planning Commission) population projection estimates Robbinsville's population in 2010 to be 13,320 up from the 2005 projection of 11,730. The 2007 DVRPC population projection estimates an increase in Robbinsville's 2010 population to be 13,568.

Following are some important considerations for this municipality with respect to wastewater management planning:

- Robbinsville Township is considered a non-urban municipality.

In this document the following terms are used frequently:

EDUs - Equivalent Dwelling Units - a measure where one unit is equivalent to wastewater effluent from one dwelling unit. NJDEP defines a dwelling unit to mean any building or portion of a building, permanent or temporary, used or proposed to be used as a residence either seasonally or throughout the year. Most often, EDU is used in reference to a single family home.

gpd – gallons per day, a unit of flow measurement.

GSA - General Service Area (GSA) - represents the area to be served by septic systems or discharges to groundwater. For the purpose of this municipal chapter, GSAs are analogous to Individual Subsurface Sewage Disposal Systems (ISSDS).

GW – groundwater

HUC11 - Hydrologic Unit Code consisting of 11 digits – a United States Geological Survey (USGS) standard designation for subwatersheds delineated based on topography.

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ISSDS – Individual Subsurface Sewage Disposal System – Also known as septic systems.

mgd – million gallons per day, a unit of flow measurement.

Nitrate Dilution Model (NDM) –The NDM is required by NJDEP and follows the calculations methodology developed by the New Jersey Geological Service (NJGS). The NDM uses the soils type (SSURGO (NRCS) digital soils GIS layer revised by DEP) to estimate the minimum lot size needed to provide enough recharge to dilute nitrate to a specified target. This method is intended to be a guide for estimating the impact of nitrate from septic tanks on groundwater quality. The NDM uses the minimum lot size to calculate the number of EDUs possible for a given area.

Non-discharge areas - areas where additional wastewater generation and/or discharge are prohibited.

Non-urban municipality - any municipality not officially designated as an urban municipality.

Sewer Service Area (SSA) – represents the area to be served by a centralized treatment facility.

STP – Sewage Treatment Plant

SW – surface water

WMP – Wastewater Management Plan

WPCF – Water Pollution Control Facility

WPCP – Water Pollution Control Plant

WTF – Water Treatment Facility

WWTP – Wastewater Treatment Plant

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Existing Infrastructure

The existing wastewater collection and conveyance infrastructure within this municipality consists of the following:

- Collection System – Robbinsville Township is a developed Township. The collection system and associated trunk sewers convey flow from these populated areas to the Hamilton Township WPCF.
- Pumping Stations – Robbinsville Township currently has a total of 12 pumping stations within the municipality. The pump stations service the sewers in Robbinsville Township's SSA.

The existing major wastewater treatment facilities located within the municipality include:

- There is currently no major wastewater treatment facility within the Robbinsville serving the municipality.

Tables 1a and 1b include additional minor facilities in Robbinsville Township regulated through NJDEP that have individual New Jersey Pollutant Discharge Elimination System (NJPDES) discharge permits. Table 1a shows facilities which are indicated as discharge to groundwater (DGW). Table 1b shows facilities which are indicated as discharge to surface water.

The reference sources for Tables 1a and 1b were facility owners, NJDEP Dataminer, EPA Envirofacts Database, and NJDEP Bulletin.

The existing treatment facilities, if any, are illustrated on Map 2M.

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Table 1a: Additional NJPDES (DGW) Minor Permitted Facilities within Robbinsville Township

NJPDES Permit Number	Facility Name	Permit Program Code	Receiving Stream or Aquifer	Classification	Permittee	Contact Organization Name	Block	Lot	Permitted Flow (gpd)	Existing Flow (gpd)	Future Flow (gpd)	Discharge Category
None												

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Table 1b: Additional NJPDES (DSW) Minor Permitted Facilities within Robbinsville Township

NJPDES Permit Number	Facility Name	Permit Program Code	Receiving Stream or Aquifer	Classification	Permittee	Contact Organization Name	Block	Lot	Permitted Flow (gpd)	Existing Flow (gpd)	Future Flow (gpd)	Discharge Category
None												

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Environmental Features

Robbinsville Township is near the intersection of US Route 130 and Route 33 and bordered by East Windsor Township and Hamilton Township. The Township contains protected open space and recreational areas including but not limited to the following:

- Tantum Park
- Community Park
- Municipal Complex

Delineation of Service Areas and Planning Integration

Sewer Service Areas

Following are the sewer service areas within Robbinsville Township. Existing areas served and future SSAs are shown on Maps 2M and 3M, respectively. The facilities providing treatment to these service areas have an associated facilities table in the Appendix.

- Hamilton Township WPCF (NJPDES NJ0026301) –

An explanation of the mapping method used to delineate the SSA is included in Appendix A to this chapter.

General Service Area (Septic Service)

General Service Areas (GSAs) consist of those areas with planning flows of less than 20,000 gallons for commercial properties or less than 2,000 gallons per day (i.e. residential septic systems) that are neither designated for sewer service nor as non-discharge areas. These areas can be seen in Maps 2M and 3M.

Future Wastewater Demand and Facilities

For the purposes of evaluating capacity and future sanitary flow rates, the full build-out of undeveloped or underdeveloped land in the Township was derived from existing zoning and the development potential of land parcels within the Township. The results of the build-out were compared to the permitted treatment capacity of major wastewater treatment facilities. This analysis is not required for the minor facilities.

The County used CommunityViz, a land use planning software package offered through Placeways, LLC. CommunityViz is an extension for ESRI's ArcGIS platform that uses existing zoning information to estimate future development. CommunityViz uses zoning data such as minimum lot size and set back requirements to evaluate potential number of future residential units or square feet of commercial space on individual parcels or within the municipality.

The County has identified a category of service indicated as "open with facilities". This category was created in response to a number of comments received from municipalities to include recreational lands, many purchased through public funding, in the Future SSA. The requests pertain to open space properties that currently have support facilities or may have them in the future. The intent of this service type category is to account for up to 2,000 gpd of wastewater generation from these parcels, while recognizing they will continue to function as municipal open space and recreational facilities. The estimated flow has been included in the capacity analysis for the facility serving the closest sewer service area. This category gives municipalities

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flexibility in planning for essential facilities that support existing and future recreational programming at the local level.

Sewer Service Area Wastewater Capacity Analysis

Table 2a presents the results of the Build-out Analysis within the SSAs indicated above.

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Table 2a: Hamilton Township Build-out Table (SSAs)

NJPDES Permit Number	Major Public Wastewater Treatment Facility	Capacity Allocation/ Permitted Capacity (mgd)	Total Existing Flow (mgd)	Total Flow Attributed to TWAs Approved But Unconnected (mgd)	Residential Build-out Flow (mgd)	Non-Residential Build-out Flow (mgd)	Existing Septic Systems Flow (mgd)	Total Projected Build-out Flow (mgd)	Remaining Capacity (mgd)
NJ0026301	Hamilton Twp WPCF	2.500	1.260	0.391	1.062	0.937	0.110	2.500	0.000

*Refer to Facility Table for Hamilton Township WPCF.

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Treatment Works Approvals (TWAs) approved by NJDEP for unconnected projects within Robbinsville Township consist of the following:

Table 2b – Treatment Works Approvals

TWA	Facility	Unconnected Flow (mgd)
Various (see Robbinsville WMP Table 6-9)	Hamilton Township WPCF	0.391
Total		0.391

The capacity of Hamilton Township WPCF is shown in the Facility Table. The facility has no formal agreements with regard to allocation of treatment capacity. Flow to the facility comes almost entirely from within Hamilton Township.

Undeveloped and underdeveloped parcels are shown on Map 3M.

General Service Area Wastewater Capacity Analysis

Robbinsville Township is considered a non-urban municipality; however the Township currently possesses its own WMP and therefore Build-out Analysis within the GSA will not be necessary as the land will not be further developed based on existing zoning as compared to the potential EDUs predicted by the Nitrate Dilution Model. The GSA is shown on Map 3M.

A list of zoning codes and descriptions are included on Map 4M.

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Appendix A – Basis for Service Area Delineations

SSA (Sewer Service Area)

The SSA designation is for areas from which wastewater is designated to flow to a permitted wastewater treatment facility.

In assigning the SSA designations shown, several data sources were considered:

- Cross-Acceptance proceedings (2004)
- NJDEP's adopted SSA map for Mercer County (2006)
- NJDEP's draft SSA map for Mercer County (2008) including revised editions based on public comments received from 1/2009 through 12/2009; two editions of the original 2008 map resulted from County/DEP review in 7/2009 and 10/2009. The 10/2009 edition is reflected on this Draft SSA map prepared by CDM on 12/2009.
- Data (such as collection system extent) obtained from municipalities or private entities.
- Existing TWA permits
- Sewer service areas provided by existing sewerage authorities and wastewater treatment facilities

Parcels that were within previous draft or adopted sewer service areas, or existing sewer service areas provided by sewerage authorities or wastewater facilities, were given the SSA designation, unless specific guidance was provided to remove them.

Proximity to existing collection system was considered if service for a given parcel was indeterminate based on other criteria.

Parcels with valid NJDEP Treatment Works Approvals (TWA) were automatically given an SSA designation.

GSA (General Service Area)

The GSA designation represents those areas served by septic systems. For the purpose of mapping, the GSA designation also represents those areas that are not designated as any of the other categories (SSA or Open/Utility as described below).

Open & Utility (Open Space, Utility)

The Open & Utility designation identifies the following:

- Open Space – Mercer County Planning Division maintains an open space layer. The county boundary is the layer's geographic extent. The open space layers is developed from several sources including a county-owned land inventory, Green Acres ROSI, preserved farmland inventory, municipal open space inventories, and state and non-profit open space inventories. The open space layer served as the basis for identifying undevelopable land designated through the Plan as Municipal, County, or State Land, Deed Restricted properties, Conservation Easements, and certain lands overseen by non-profit entities.
- Utility - tax assessment data was used to identify lands owned by public utilities.

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This designation indicates that these parcels are undevelopable, except for instances where public programs require the construction of public facilities. Such instances will require that the public facilities be designated as SSA or GSA, but that the remainder of the parcel be undeveloped.

Environmentally Sensitive Areas

The Environmentally Sensitive Areas (ESAs) designation applies to those areas that have been mapped as such by NJDEP. They consist of the following:

- Wetlands – areas based on NJDEP’s Land Use/Land Cover feature class (2002)
- Stream corridors – areas which incorporate the appropriate buffer along surface waters based on NJDEP’s stream classification (2008)
- Natural Heritage Priority Sites – areas of critical importance due to the presence of rare plant species and ecological communities (2007)
- Landscape Project Areas (Rank 3, 4, and 5) – areas representing wildlife habitat mapping for community planning and endangered species conservation. Rank 3 is associated with NJ State threatened species. Rank 4 is associated with NJ State endangered species. Rank 5 is associated with Federal threatened or endangered species (2007)

Methodology

The following methodology was employed to designate all parcels within Mercer County as either SSA or GSA, except for parcels designated as Open/Utility as described above. The following is the general methodology used for preparing the Draft SSA Map.

1. Parcels were evaluated to determine if:
 - a. It was designated under the Mercer County’s open space inventory.
 - b. It was owned by a public utility.Any parcels falling within the above categories were designated as Open/Utility.
2. The remaining parcels were evaluated to determine if they were part of previous SSA. If so, these parcels were designated SSA, unless directed otherwise by NJDEP, Mercer County, or the Municipality.
3. The remaining parcels not designated as previously part of an SSA were also evaluated to determine if any existing wastewater generating structures were present onsite using Mercer County’s building footprint (January 2009) layer and aerial photography (2007). County staff further reviewed these parcels with more current aerial photography (2009). COAH and local approvals were also considered in this evaluation. If sewage generating potential was identified, the parcel was further evaluated to determine if it was readily sewerable by an existing collection system without extending it. If this was the case, the parcel was designated as SSA unless:
 - a. A significant portion of the parcel is undeveloped and falls within the constrained boundary AND
 - b. Comments were received from NJDEP indicating the constrained portion of the parcel was to be excluded from the SSA.

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In cases where a) and b) above apply, the parcel was split along the Constrained boundary. In this case, the portion of the parcel within the Constrained boundary was designated GSA and the remaining unconstrained portion was designated SSA.

4. For parcels not addressed under 1, 2, or 3 above, any vacant lands were evaluated to determine if it was readily sewerable by an existing collection system without extending it. If this was the case, the parcel was designated as SSA unless:
 - a. Comments were received from NJDEP, Mercer County, or the Municipality indicating the subject parcel should be excluded from SSA category. If such was the case, the parcel was designated GSA.
 - b. The parcel was constrained in whole or in part by Environmentally Sensitive Areas (ESA). If this was the case, the portion of the parcel within the Constrained boundary was designated as GSA and the remaining unconstrained portion was designated as SSA.

Parcels that were not designated under 1, 2, 3, or 4 above were designated as GSA.

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