



## **VII. UTILITIES ELEMENT**



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### 1.0 INTRODUCTION

The Township's sanitary sewer system, water system and stormwater management program have all been studied at length during the past few years. Recommendations for the future of Township utilities were presented as part of the reports that resulted from this study. These recommendations have been embraced by the Township and are highlighted below.

### 2.0 SANITARY SEWER SYSTEM

As per the 1992 Township Master Plan, the northern and eastern area of Randolph Township is served by a sanitary sewer collection and conveyance system which is owned and operated by the Township. The Township of Randolph does not own or operate a wastewater treatment and disposal facility. The Township currently has agreements with two publicly owned treatment works for the ultimate disposal of sanitary wastes.

Two sewer service areas have been designated for the Township of Randolph. The sewer service areas are referred to as the Rockaway Valley Regional Sewer Area (RVRSA) and the Butterworth Service Area (BSA). The RVRSA Service Area includes most of the north and east portions of the Township including the Route 10 area and a majority of the residential area north of West Hanover Road and East of Millbrook Avenue.

The BSA is located in the southern half of the Township along Sussex Turnpike and is divided into two drainage basins; the Whippany and the Raritan. These service areas have been revised as per the most recent version of the Sanitary Sewer Master Plan prepared in 2004 by Suburban Consulting Engineers. These service areas are illustrated on Figure VII-1 *Sewer Service Areas*.

The Township has been placed under a sewer moratorium by Morris Township (owner/operator of the Butterworth Treatment Plant) pending upgrades to the Butterworth sewer interceptor which carries Randolph's sewer flow through Morris Township to the Butterworth Treatment Plant. The two townships have made significant progress in negotiating an agreement for the improvement of the Butterworth sewer interceptor. Given extensive environmental permitting issues and the need to acquire easements to accommodate the interceptor improvement, it is likely that reconstruction of the

sewer line will occur within the next decade. The benefits of the planned enhancements will be limited to the Whippanny Basin with the Raritan basin designated as a future sewer service area. In November 2005, the New Jersey Department of Environmental Protection (NJDEP) proposed amendments to the Areawide Water Quality Management Plans that would revoke all sewer service designations in Planning Areas 3, 4 and 5 where the Wastewater Management Plan is outdated or never adopted. The adoption of these rules was suspended by the acting governor and deferred to the new governor's administration. If these rules are eventually adopted, they will have a significant impact on Randolph, since there is a sizable area within Planning Area 3 on the south side of Route 10 that is in a sewer service area. The Township should monitor the status of these proposed amendments and forward the community's position to the NJDEP.

The remaining un-sewered areas of the Township are generally served by individual sub-surface disposal systems, which are regulated by the Township health department and the New Jersey Department of Environmental Protection (NJDEP).

In April 2002, Suburban Consulting Engineers, Inc. prepared the Sanitary Sewer Master Plan, Volumes I and II. The Sanitary Sewer Master Plan was most recently revised in May, 2004. The plan presents a description of the existing sanitary sewer system as well as a detailed analysis of future needs. The implementation program contained in the Sewer Master Plan is summarized below.

## **2.1 Implementation Program of the Sanitary Sewer Master Plan**

Based on the analysis and recommendations contained in the Sanitary Sewer Master Plan, the following summary of recommendations is provided to further the successful and effective operation and maintenance of the sanitary sewer systems of the Township.

1. Create and implement sanitary system facilities numbering system for manholes. Maintain current mapping and as-built information.
2. Renegotiate agreement with Morris Township to address proposed sewer service area changes, update of the Butterworth upgrade design concept, schedule, and cost estimate of future interceptor capacity upgrade, possible adjustment in capital cost contribution for plant capacity reserved for Randolph Township, and updated status of the Morris Township Butterworth Wastewater Management Plan adoption by NJDEP.
3. Prepare new request for amendment on RVRSA WMP Amendment to reflect sewer service area depicted on Figure 4-3 of the Sewer Master Plan.
4. Monitor status of RVRSA plant re-rating, with view towards preserving sewer rates.
5. Request preliminary consistency determination from NJDEP regarding proposed Raritan basin sewer service areas, prior to final design of Butterworth upgrades.
6. Revise RVRSA amendment to reflect newest service area boundaries.
7. Assist Morris Township on obtaining Butterworth Wastewater Management Plan approval.
8. Implement new septic ordinances, such as design of reserve areas, field testing of imported fill, and septic maintenance ordinance.

9. Continue to check and calibrate Mt. Pleasant meter and confirm the accuracy at both low and high flows.
10. Conduct more frequent maintenance at Raynor meter to ensure sediment buildup is kept to a minimum.
11. Research identified sewer account inconsistencies.
12. Develop preliminary designs for sewer extensions and cost estimates for same on a case by case basis, subject to local property owner interest and needs.
13. Coordinate any future sewer extensions with upcoming roadway improvement projects, such as Sussex Turnpike project in Butterworth service area.
14. Develop preliminary design of Butterworth interceptor upgrade project (force main) as basis for renegotiated agreement with Morris Township.
15. Develop written Standard Operating Procedures for facility O&M.
16. Develop written Emergency Response Plan for wastewater facilities.
17. Maintain duplicate records for pump station, and consider implementing digital database for all records.

### 3.0 WATER SYSTEM

As per the 1992 Township Master Plan, the Township owns and operates a public community water system, as shown on Figure VII-2 *Existing Water*. Randolph does not own or operate a water supply source or a water treatment facility. The Township currently has an agreement with the Morris County Municipal Utilities Authority (MCMUA) for the bulk purchase of all its water. The Township distribution system serves the Randolph Township and small surrounding areas of the Townships of Mendham and Chester. A section of the Township generally north of Route 10 and east of Dover-Chester Road is served by the Town of Dover under a separate franchise agreement. The Township is currently seeking to revise its contract with MCMUA to comply with state mandate to establish water allocation limitations. The remaining properties throughout the Township are served by private wells.

In April 2002, Killam Associates prepared the Water System Master Plan, Volumes I and II. The plan presents a description of the existing water system, water system demands, and an evaluation of regulatory compliance current water rate and Water Department operations.

The conclusions provided in the Water System Master Plan reached by Killam Associates' review and evaluation of the existing water system are provided below with a summary of the recommendations and priorities provided in water system plan as well.

As per the Water System Master Plan, the Township water system is in need of water main and pump station improvements to provide greater system reliability, improve operating pressures and increase the level of fire protection for select areas of the Township. The recommended improvements will increase fire protection in areas that have a current capability of less than 750 gpm. In addition, recommended improvements will provide significant improvements by looping the water system and decreasing system vulnerability resulting from main breaks. At the same time, several of the

recommended improvements will also provide for service from the municipal water system for private wells that are either contaminated or experience problems during prolonged dry periods.

### **3.1 Recommendations of the Water System Master Plan**

The Water System Master Plan recommendations for improvements are stated below. The Township has received the necessary permits and has funding for the implementation of the recommendations. The following recommendations will be completed during the next three years.

- Construct booster/fire pumping facilities to serve the Tamari Court and Overlook Avenue/Longwood Drive areas.
- 700 lf of 12" water main on Center Grove Road
- 2,200 lf of 8" water main on Lawrence Road
- 2,600 lf of 8" water main on Everdale Road
- 2,900 lf of 8" water main along Route 10 (near Mountainside Dr.)
- 1,500 lf of 8" water main on South Road
- 2,900 lf of 12" water main on Carrell Road
- 1,800 lf of 8" water main on Longview Avenue
- 2,650 lf of water main on Schoolhouse Road
- PRV installation on Everdale Road
- Reconstruction/repairs to reactivate PRV # 1

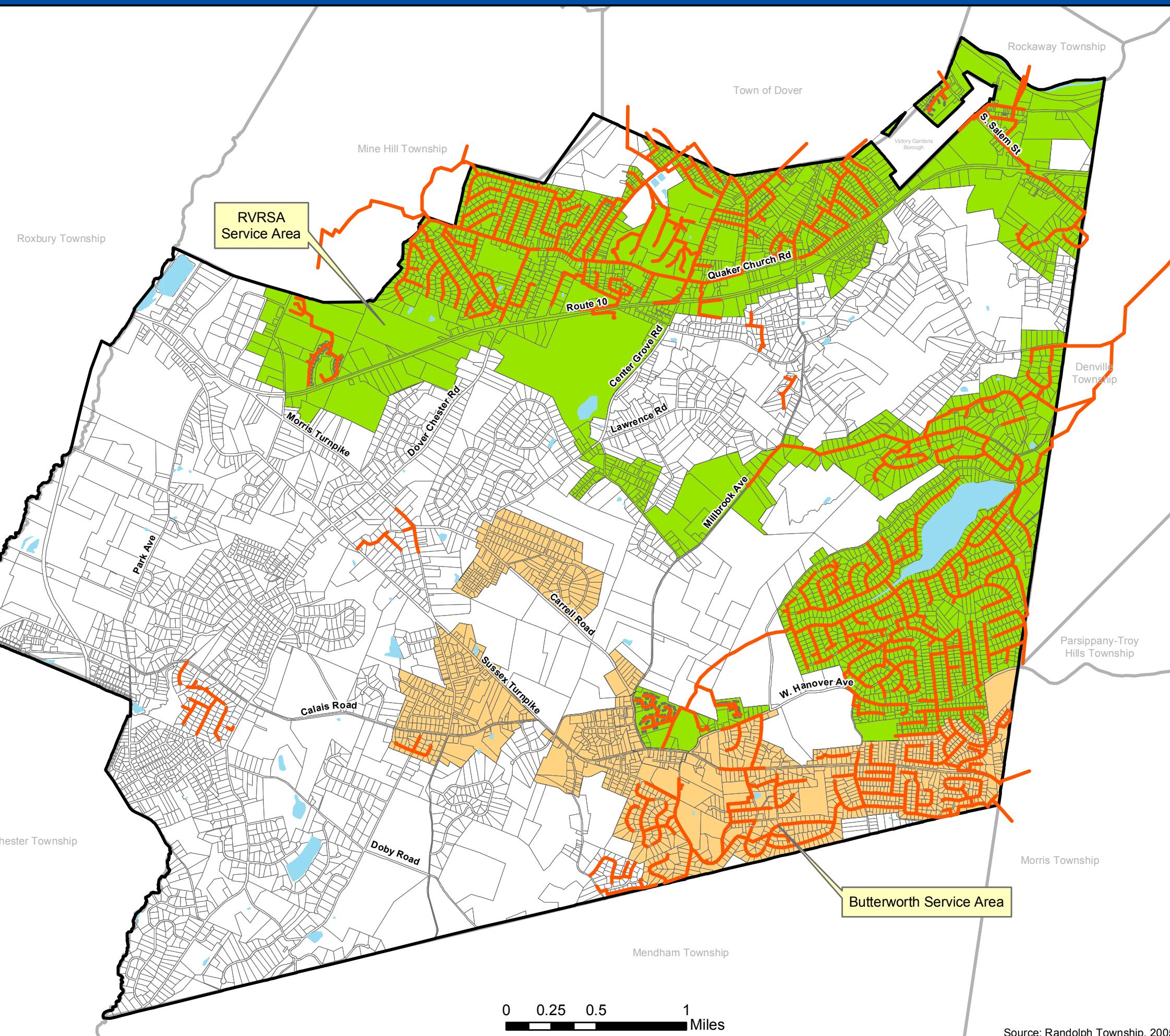
## **4.0 STORM WATER MANAGEMENT**

Suburban Consulting Engineers, Inc. prepared the Municipal Stormwater Management Plan for the Township, dated March 2005. The plan is required by NJAC 7:14A-25, Municipal Stormwater Regulations and contains all of the requirements of the newly adopted Stormwater Management Rules. The plan addresses groundwater recharge, stormwater quantity and quality impacts, and the incorporation of design and performance standards for new major residential development. The goals of the plan are to:

1. Reduce flood damage, including damage to life and property
2. Minimize increases in stormwater runoff from any new development
3. Reduce soil erosion from construction project areas
4. Assure adequacy of existing and proposed culverts and bridges
5. Maintain groundwater recharge
6. Prevent an increase in non-point pollution
7. Maintain the integrity of stream channels for their biological functions, as well as drainage

8. Minimize pollutants in stormwater runoff from new and existing development to restore, enhance and maintain the integrity of waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance other uses of water
9. Protect public safety through proper design and operation of stormwater basins

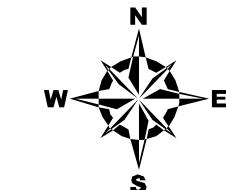
To achieve these goals, the plan outlines specific stormwater design and performance standards for new development. The plan also proposes stormwater management controls to address impacts from existing development. Preventative and corrective maintenance strategies are also included in the plan. The Township will be required to adopt a new stormwater ordinance in 2006. The plan provides a discussion of stormwater issues, design and performance standards, management strategies and a land use/build-out analysis. A mitigation plan is required and the Township needs to bring its department of public works operations under compliance.



# SEWER SERVICE AREAS

## Randolph Master Plan

Randolph Township, New Jersey



### Legend

— Township Boundary

— Existing Sewer Lines

Parcels

### Sewer Service Areas

Butterworth Service Area

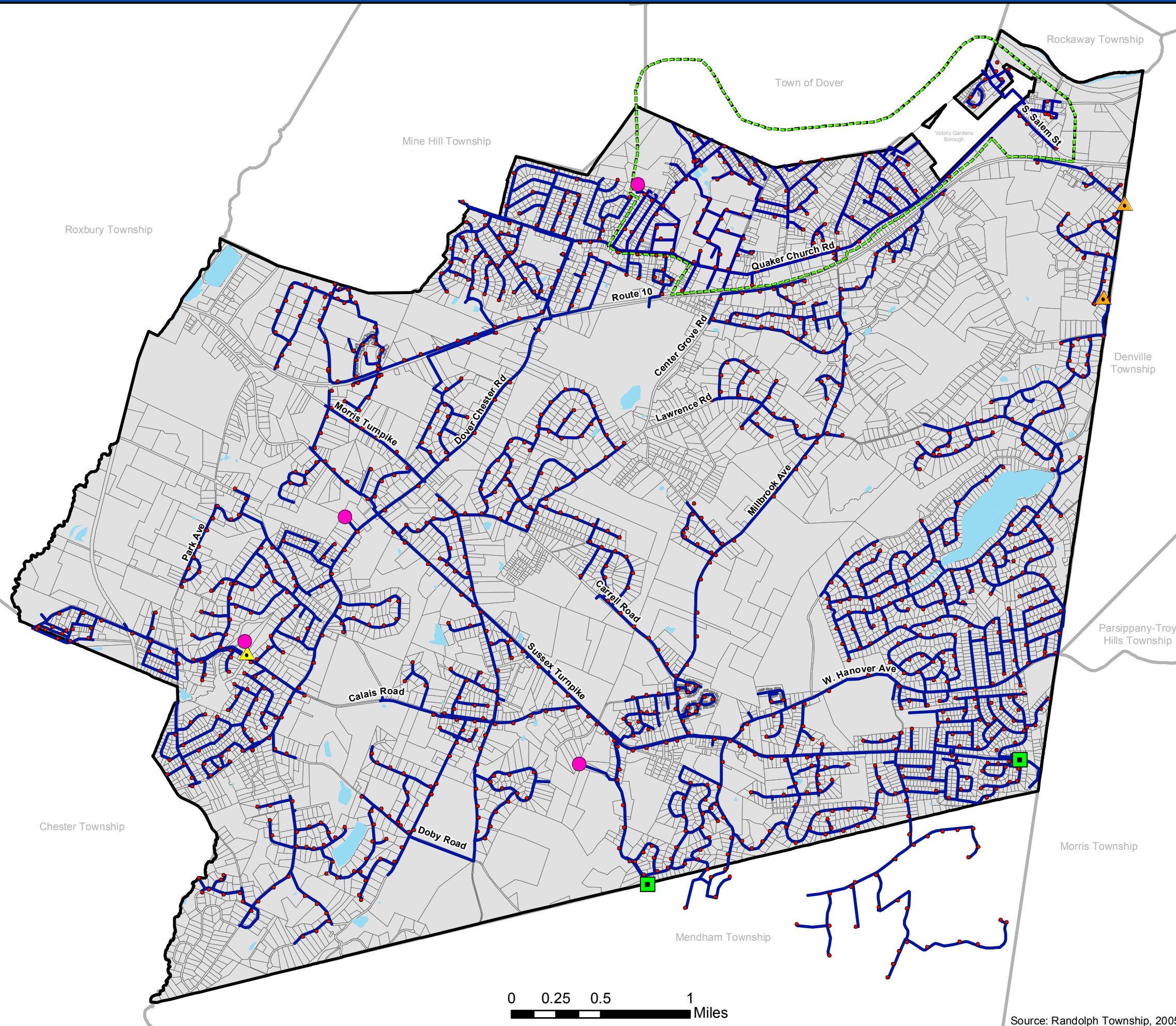
RVRSA Service Area

**FIGURE VII-1**



ROBERT  
MICHAELS  
& ASSOCIATES

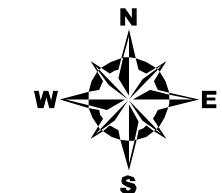
**CHA**  
CLOUGH HARBOUR & ASSOCIATES LLP



## EXISTING WATER

### Randolph Master Plan

Randolph Township, New Jersey



#### Legend

- Hydrants
- Meter
- ▲ Interconnection
- ▲ Booster Station
- Storage Tank
- Water Lines
- - - Dover
- Township Boundary
- Parcels

FIGURE VII-2



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