

PART I - HISTORY

Identifying wastewater disposal needs for Hopewell Township has been a continual challenge for Hopewell Township since the 1960's. With an existing population using on-site wells and septic systems on various sized lots having geologic and soil characteristics that were not conducive to suitable long-term performance of on-site systems, the idea of public sewers in Hopewell Township arose. During the late 1960's and early 1970's there was an abundance of Federal and State funding for wastewater infrastructure construction. This, combined with regionalization of sewage treatment facilities being favored during that time period as a best management practice for wastewater disposal, helped spur detailed considerations for providing public sewers to several areas of Hopewell Township.

These considerations included debates over whether or not Hopewell Township should become part of regional wastewater programs in order to get sewer service to the most densely populated areas of the Township. It was ultimately decided that Hopewell Township would not seek public sewers, primarily due to extreme fear of the uncontrolled growth that public sewers would bring. There were several exceptions to this policy as follows:

- In the 1970's, the Ewing Lawrence Sewerage Authority (ELSA), the Township of Hopewell, and Pittman-Moore Inc, entered into an agreement to provide wastewater treatment to a small Research Facility located on Bear Tavern Road, which was limited to 100,000 gallons per day (gpd) of wastewater.
- As part of Ewing Lawrence Sewerage Authority's (ELSA) application for funding for upgrades to its treatment plant in the 1970's, the United States Environmental Protection Agency (USEPA) and the New Jersey Department of Environmental Protection (NJDEP) mandated that ELSA reserve 400,000 gpd to Hopewell Township for wastewater generated within the Delaware River watershed portion

of the Township. This funding approval came with the stipulation that there be no wastewater treatment plants permitted to discharge to surface water that drain into the Delaware River within Hopewell Township because of its location upstream of the Trenton Water plant intake. The 100,000 gpd serving Pittman-Moore was included in this 400,000 gpd reserve.

- During the late 1980's, Hopewell Township and K. Hovnanain Companies entered into negotiations with ELSA to provide wastewater treatment for an affordable housing development proposed within Hopewell Township. These negotiations made available the remaining 300,000 gpd within the ELSA plant that were designated for Hopewell Township. Wastewater resulting from this development would flow from Hopewell Township, through Ewing Township, and into the ELSA treatment facility.
- In 1982 a Wastewater Facilities Plan was prepared for the Hopewell Township Municipal Utilities Authority. This plan again identified several possible alternatives for providing public sewer service to portions of Hopewell Township where clusters of small lots with on-site septic systems and wells existed. The preferred alternative selected in 1982 was small community systems discharging to groundwater serving small core areas (Exhibit 1).

The Mercer County 208 Area-Wide Water Quality Management Plan (WQMP), dated 1987, identified certain developed portions of Hopewell Township for sewer service (Exhibit 2). These areas were consistent with the "core" areas recommended for sewer service by the Hopewell Township Municipal Utilities Authority (HTMUA) in 1982. The Mercer County 208 Area-Wide Water Quality Management Plan served as the only official document for wastewater planning in Hopewell Township prior to the creation and adoption of the Wastewater Management Plan (WMP) for Hopewell Township.

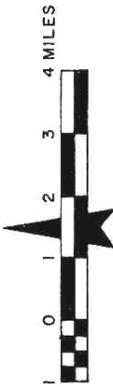
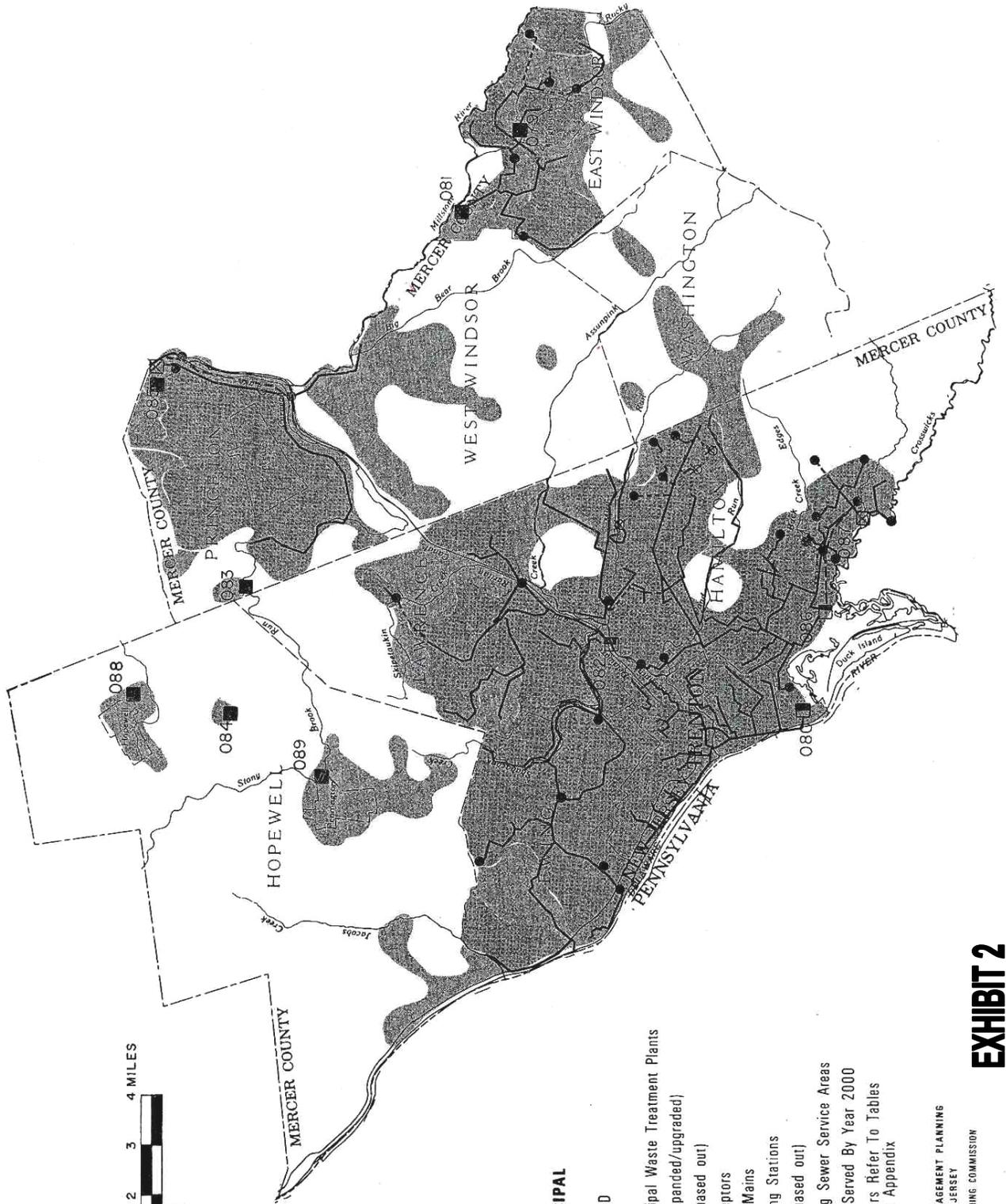


PLATE 4-1
**EXISTING AND PROPOSED MUNICIPAL
 WASTE TREATMENT FACILITIES**

- LEGEND**
- | | |
|----------|------------------------------|
| Existing | Proposed |
| ■ | ■ |
| □ | ■ (expanded/upgraded) |
| ⊗ | --- (phased out) |
| --- | Interceptors |
| --- | Force Mains |
| ● | Pumping Stations |
| ⊗ | --- (phased out) |
| ● | Existing Sewer Service Areas |
| ⊗ | Areas Served By Year 2000 |
| ● | Numbers Refer To Tables |
| ⊗ | In The Appendix |

Consistency with a Wastewater Management Plan is required for approvals for wetlands and other watershed based activities. Hopewell Township's first Wastewater Management Plan was prepared in 1989 in accordance with the provisions of the New Jersey Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq. and the Statewide Water Quality Management Planning rules (N.J.A.C. 7:15)¹. Preparation of this plan was required by NJDEP in order to obtain the construction permits for a reconfiguration of the Princeton Farms wastewater treatment plant². This reconstruction relocated the discharge location from a nearby tributary to Honey Brook into the Stony Brook Regional Sewerage Authority Treatment Facility located on Aunt Molly Road in Hopewell Township. This reconfiguration concluded a debate by the Township that ended with a policy decision that Hopewell Township was no longer desirous of owning and operating sewage treatment facilities.

There have been several amendments to the original wastewater management plan. The most significant and controversial of the amendments was in 1998 when Hopewell Township sought approval to provide public sewer service to approximately 8% of its land area adjacent to the Ewing Township boundary. This Wastewater Management Plan amendment was initiated on the basis that the City of Trenton's wastewater treatment facility had adequate and immediate treatment capacity for Hopewell Township. This amendment was approved by the New Jersey Department of Environmental Protection on September 8, 1998. Included in the approval letter from the Department, were certain stipulations. These stipulations ultimately became the framework for future planning in Hopewell Township and are described in the following excerpt:

¹ All wastewater disposal methods, and the areas where those methods are in use or where those methods may be used in Hopewell Township, must be identified on the Wastewater Management Plan. This document serves as the master plan for all wastewater planning and disposal in Hopewell Township.

² Princeton Farms was Hopewell Township's only owned and operated sewer collection system and treatment plant that was acquired through developer default. The system required major upgrades to satisfy NJDEP permitting criteria.

“The following provisos are incorporated into this amendment in order to minimize secondary impacts that could be associated with development consistent with current zoning as well as to advance protection of water resources from the effects of nonpoint pollution throughout the Township. These provisos are also included in the loan agreements to be executed by the New Jersey Environmental Infrastructure Trust and the Department:

Sewer connections beyond the residential units and commercial square footage identified in the “New Jersey Infrastructure Financing Program Environmental Appraisal Table 2” dated August 19, 1998 and any changes to the sewer service area and/or the specific development identity (zoning, residential/commercial units and flows) will not be allowed without the approval of the Office of Environmental Planning and an amendment to the Mercer County Water Quality Management Plan. Any such changes, as referenced above, shall also be consistent with the State Development and Redevelopment Plan, which shall include, but not be limited to, the development of an Open Space Preservation Plan within the context of the Master Plan Cross-Acceptance process and in coordination with the development of a Town Center designation. In order for the Department to consider any change, Hopewell Township must demonstrate that any proposed density increase is a result of transfer of development potential from elsewhere in the Township. Such transfers would be based on a re-evaluation and correction of zoning to be compatible with preserving water quality and recharge.

No wastewater treatment services will be provided to environmentally constrained areas, except where development requiring wastewater treatment facilities is specifically permitted by the Department.

Hopewell Township shall revise and implement their current stormwater ordinance within six months of the date of execution of the Loan Agreements. The development of the revised stormwater ordinance shall be coordinated with and approved by the Office of Environmental Planning and must meet current Department of Environmental Protection and Department of Community Affairs standards with respect to post-construction stormwater flows applied to all forms of development. The ordinance must include provisions to protect the integrity of stream channels, reduce potential flooding and

nonpoint source pollution problems, reduce soil erosion and maintain natural drainageways.

Hopewell Township shall coordinate with the Delaware River Keeper Network, the Delaware River Basin Commission, the Stony Brook Millstone Watershed Association, Mercer County, the MSM Regional Council, and the Townships of Ewing and Lawrence in conjunction with the Office of Environmental Planning, to develop a watershed-based storm water management plan within two years of the date of execution of the Loan Agreements. Upon the Department's approval of the watershed-based stormwater management plan, the recommendations shall be incorporated within the Township's stormwater ordinance, and shall include provisions to limit impervious cover and encourage groundwater recharge."

In March 1999, the Hopewell Township Committee terminated its contract for wastewater service with the City of Trenton, invalidating the September 8, 1998 Wastewater Management Plan approval. On May 20, 1999, Lance Miller, Director of the New Jersey Department of Environmental Protection, Division of Watershed Management authored a letter that included the following stipulation:

"As you know, the Department of Environmental Protection (Department) formally adopted the subject Wastewater Management Plan (WMP), that was based upon the construction of the Trenton pipeline, on September 8, 1998. Consequently, if there is no reasonable expectation that the Trenton pipeline proposal can be implemented in accordance with the adopted WMP, then Hopewell Township, as the wastewater management planning agency, must propose and submit an appropriate WMP amendment reflecting this change in circumstance to Mercer County, the designated planning agency, and the Department.

Such an amendment shall also contain comprehensive proposals that address the planning needs and the outstanding planning issues for all of Hopewell Township and shall consolidate or be integrated with other upcoming or planned WMP amendments in Hopewell Township (such as for the township's Stony Brook Regional Sewerage Authority service districts) in order to avoid the need for multiple amendment reviews and public hearings by Mercer County and the Department.

Finally, said amendment must also include an alternative planning proposal to address properties with failing septic systems in the Ingleside and Morningside sections of Hopewell Township (that are identified as Trenton service area in the adopted WMP in order to provide sewers for these sections) and the proposed planning disposition of the Ewing-Lawrence Sewerage Authority service area in the Titusville and Washington Crossing sections of the township as discussed in the Department's September 8, 1998 adoption."

In 2000, Hopewell Township entered into a settlement agreement settling a lawsuit on sewer rate structure between the Ewing Lawrence Sewerage Authority, the Brandon Farms Property Owners Association and itself. This order mandated that Hopewell Township undertake revision of its wastewater management plan to delete any designated ELSA sewer service areas that did not have an associated contract for sewer service. This wastewater management plan revision was withheld pending completion of Hopewell Township planning efforts, then underway, to address issues raised in the 1999 NJDEP letter.

In order to advance an amendment of its wastewater management plan, Hopewell Township was compelled to consider the comprehensive criteria that were outlined by NJDEP in its 1999 letter. These criteria have since been satisfied through an extensive process that included:

Hopewell Township Master Plan: A comprehensive revision to the Hopewell Township Master Plan was undertaken. The most critical element to this master Plan, the land use element, was revised in 2002 and the complementing land use ordinances were also adopted in 2002. The changes prescribed by this comprehensive revision were underwritten by a detailed evaluation of Hopewell Township's groundwater resources. This evaluation was summarized in a report by M² Associates, Inc. dated March 2, 2001, entitled "Evaluation of Groundwater Resources of Hopewell Township, Mercer County, New Jersey". Other elements of the Master Plan such as recreation and circulation continue to be reviewed and revised as required. However, revision of

the most important element as it relates to long term planning and development related affects, has been completed.

Land Use Zoning Revisions: Land Use Zoning was implemented to coincide with the land use element of the Master Plan. This zoning has been the subject of ongoing legal challenges since its adoption in 2002.

Hopewell Township also enlisted the Stony Brook-Millstone Watershed Association (SBMWSA) to conduct a peer review of its planning policies and ordinances as part of its SBMWSA Municipal Assessment Project. The Municipal Assessment Project is intended to assist municipalities in developing additional proactive measures to ensure that natural resources are preserved and the necessary regulatory structure established. In March 2002, SBMWSA published a document entitled “Taking the **Next Step**: Hopewell Township Municipal Assessment.” This document underscored the SBMWSA’s statement that the protection and health of a watershed relies a great deal on the land use laws and policies that govern development. In this assessment, the SBMWSA recommended:

- Adopting a septic system monitoring policy/ordinance for residential systems to detect failing septic systems. The Township should assess alternatives for failing septic systems.
- Continuing to distribute and revise educational information concerning septic system maintenance. Include information on who to contact in the Township if the resident has problems or questions. This is a critical first step in a long-term Township septic system management plan.
- Regularly scheduling educational programs on septic system upkeep.
- Adopting an ordinance requiring regular pumpouts and upgrades or expansions when a house is expanded or altered.
- Applying for a Smart Growth grant for community septic systems, retrofitting the current failing systems.

- Providing incentives, and perhaps financial assistance, for septic system maintenance.

Septic System Considerations: Prior to the 1998 WMP approval, Hopewell Township had received petitions from several neighborhoods for public sewer service. In the 1998 WMP amendment, Hopewell Township relied upon research on septic systems conducted for the Hopewell Township Municipal Utilities Authority in the 1970's and 1980's. Following termination of its contract with the City of Trenton:

- Hopewell Township contracted with the firm Cerenzio and Panaro, P.C. who issued a document entitled Wastewater Needs Analysis/Feasibility Study, Phase 1 Report on September 27, 2000. The purpose of this document was to review septic system failures in Hopewell Township and advise the Township if any specific areas should be considered for public sewer service. This report concluded that certain "Areas of Concern" should be further evaluated. These "Areas of Concern" included Mt. Rose, Timberlane, Ingleside, Diverty Road and Morningside.
- In April 2001, the results of a follow-up investigation into the costs of providing localized and regionalized wastewater disposal alternatives to the Areas of Concern, entitled "Feasibility Analysis for Selected Wastewater Alternatives Serving Areas of Concern", was presented by Van Cleef Engineering Associates. This analysis included additional Areas of Concern known as Penn View Heights, Tree Streets, Indian Village, Orchard Avenue and Brandon Road. These additional areas were added to the original Areas of Concern because they too were developed areas in close proximity to the original Areas of Concern and exhibited similar characteristics to the original Areas of Concern.
- Following the issuance of the two aforementioned reports, the Hopewell Township Committee formed an advisory committee that conducted public

meetings with each of the designated Areas of Concern³. Each neighborhood was surveyed to determine if any particular sewer option would be favored over another. Consensus was mixed with a general indication that the public sewer option should be pursued if costs could be kept to a minimum.

- An evaluation of environmental consequences of providing public sewer to the Areas of Concern was then commissioned by the Hopewell Township Committee. While awaiting this report, the Township reorganized the sewer advisory committee and began researching alternative septic system technologies and septic system management initiatives as an alternative to providing public sewers. It was during this time period that an assessment prepared by M² Associates, Inc. entitled “Assessment of Groundwater Quality and Quantity Impacts from Sewer Area Expansion in Hopewell Township, Mercer County, New Jersey”, was released. This assessment identified that installing public sewers would eliminate groundwater recharge being provided by septic systems in the Areas of Concern and could impact groundwater resources in some of the Areas of Concern by creating a groundwater export (depletion) condition.
- Following the release of the M² Associates, Inc. assessment, an extensive effort was made by the sewer advisory committee to consider septic system management as a viable alternative to public sewers. This idea involved Hopewell Township as a Responsible Management Entity and was presented to the public at a special public presentation on May 18, 2004. This public presentation was attended by over 900 people and resulted in a clear demonstration that septic system management by the municipality would not be acceptable.

³ Included Areas of Concern identified by both Cerenzio and Panaro and Van Cleef Engineering Associates.

In July 2004, the Hopewell Township Committee dissolved its wastewater advisory committee and solicited recommendations for wastewater management planning from its Township Engineer.