Town of Mansfield
Mansfield Four Corners Sewer Facilities Study
February 2008

The Town of Mansfield has initiated a study to determine the best means for sewage disposal in the Four Corners area, generally identified as the area surrounding the intersection of Routes 195 and 44. Earth Tech, Inc. of Glastonbury, Connecticut, has been retained to conduct the study.

The tasks that were conducted in the study include evaluating the existing conditions in the study area, developing future wastewater flow estimates, investigating alternative wastewater conveyance and disposal options and developing a selected plan to support existing and anticipated development in the planning area consistent with the Town's Plan of Conservation and Development.

Development within the study area currently relies exclusively on individual subsurface wastewater disposal systems for disposal of sanitary wastes with varying degrees of success. A review of prior studies, regulatory agency records, wetlands maps, soils mapping data, zoning regulations, conservation and development plans, sensitive environmental area data and a field walk through survey was performed as a part of this facilities planning effort. This investigation determined that numerous properties have had, and continue to have, chronic wastewater disposal difficulties due to a combination of density of development, lot size, or site constraint factors. Some of the properties within the study area have lot sizes or configurations that do not allow sufficient room to site a water supply well and a septic tank absorption field in conformance with Connecticut Department of Health technical standards. Other parcels have existing development densities that cannot be supported within the parcel's site constraints. Continued reliance upon onsite subsurface wastewater disposal systems will result in continued exposure of the public to the health hazards associated with exposure to untreated wastewater, degradation of surface waters, severe limitations for potential development, and a failure to provide for tax base growth due to the inability to capitalize on potential commercial and higher density residential economic development opportunities.

To evaluate future wastewater treatment and disposal system needs over the 20 year planning period, historic trends in the study area, available land and other factors affecting residential, commercial, and industrial development, water uses, and population growth, were all considered. Wastewater flows are projected to increase from approximately 47,000 gallons per day to 170,000 gallons per day over the twenty year planning period.

This study then evaluated a number of wastewater treatment and disposal alternatives that are capable of reliably and cost effectively meeting the wastewater disposal needs in the study area. Collection system alternatives considered included traditional gravity sewer collection systems in combination with pumping station(s) and force main(s) as needed, pressure sewers, and vacuum sewers. Community or centralized wastewater treatment alternatives considered included subsurface wastewater disposal systems serving multiple properties or communities, small pre-engineered packaged wastewater treatment facilities, and connection to a centralized wastewater treatment facility such as the University of Connecticut wastewater treatment plant. The most feasible and cost effective methods of wastewater collection and disposal were determined to be a traditional gravity sewer collection system transporting wastewater flows for disposal at the University of Connecticut wastewater treatment plant. Three collection system alternatives were developed for this study with estimated costs ranging from $5.10 to $5.43 million dollars.

The recommended plan, which is the lowest cost alternative, includes a gravity sewer collection system serving the Four Corners community sewer service area, a wastewater pumping station, and a force main to convey the wastewater from the pumping station to the existing University of Connecticut wastewater collection and treatment system.

Approval of the project by various municipal and state regulatory and governmental agencies is required. It will take approximately 26 months from the date of project initiation to design and construct the new facilities.

Aerial View of the Study Area

For more information …
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