

Section 7

Utilities

Sewer Districts

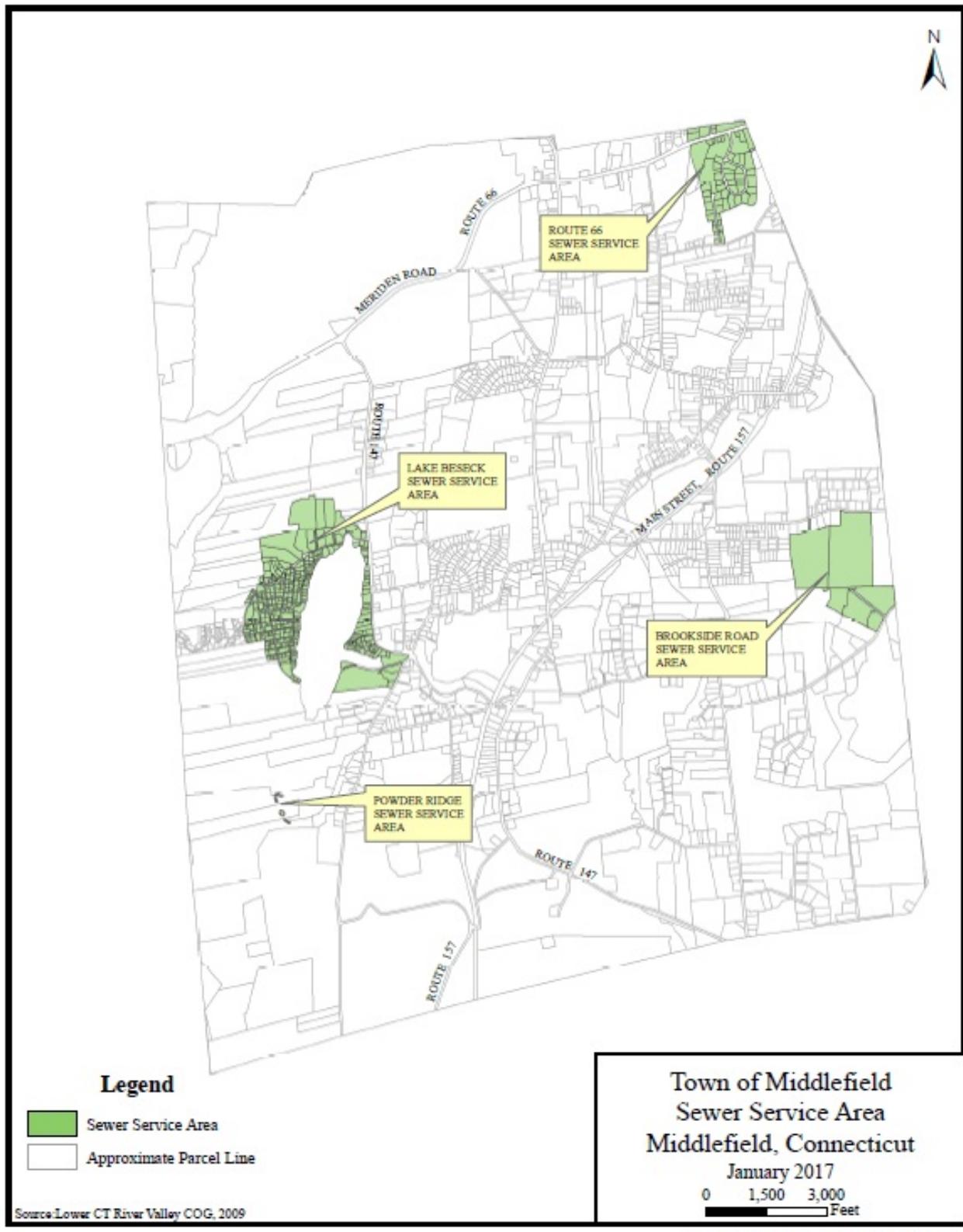
Middlefield has three distinct sewer districts constructed over three decades.

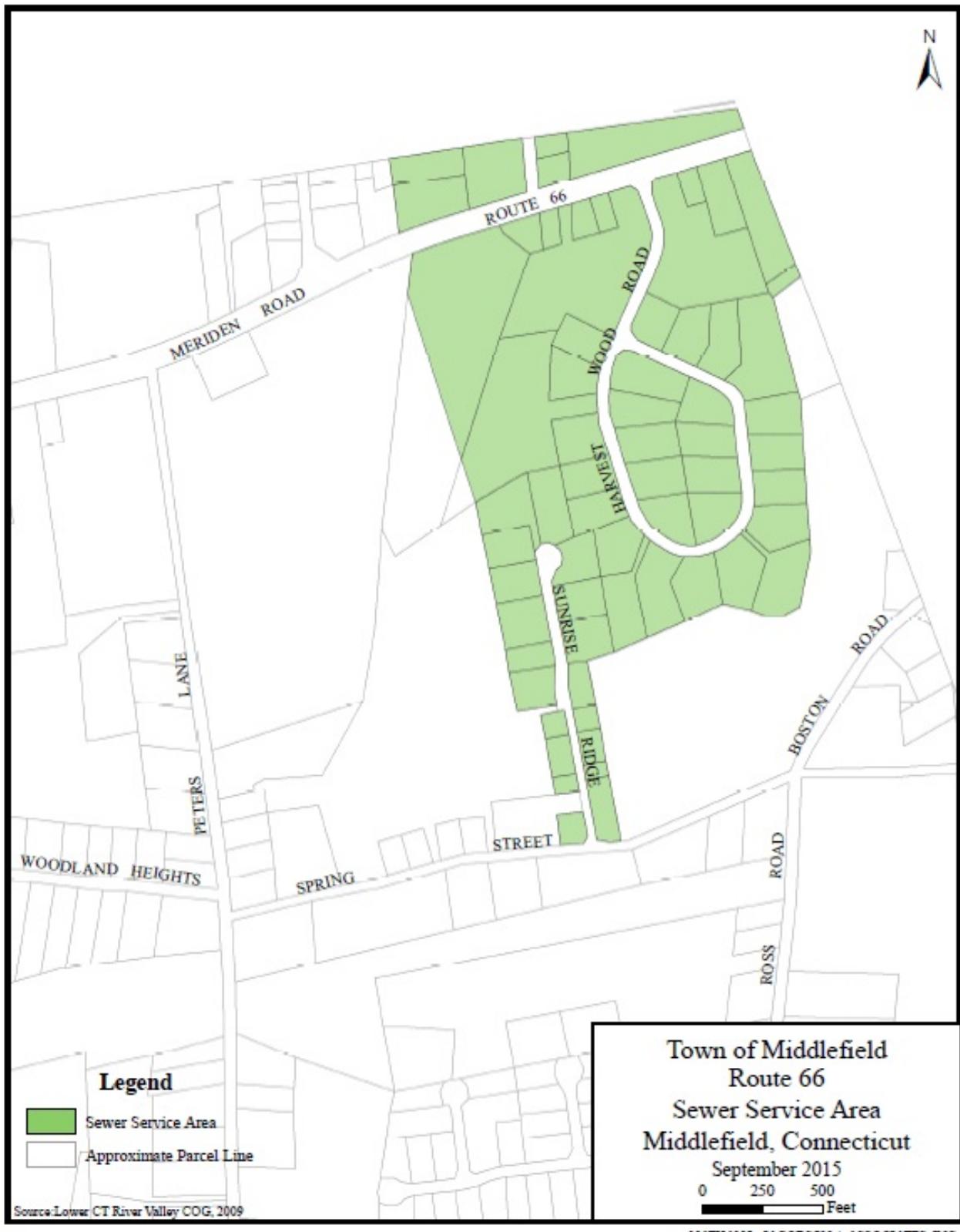
Brookside Drive – This was originally developed to service the second Zygo building constructed in the 1970's. Its service area includes both sides of the road and could provide service to the building currently owned by Cooper Thermometer at the intersection of Brookside Drive and Laurel Brook Road. Effluent from this district is pumped into the Middletown sewer systems via Laurel Brook/Anderson Road. Expansion of this system would be limited to the remainder of the IPD-1 Industrial District to the north of the existing system. The City of Middletown also provides public water to Zygo. Middletown bills Zygo directly for both utilities.

Harvest Woods – This system services several commercial operations on a small segment of Connecticut Route 66 as well as residential subdivisions on Harvest Woods Road and Sunrise Ridge. The residences located in the lower portions of the collection area have individual grinder pumps, maintained by the lot owners, which feed into a common force main then flow by gravity, along with the wastewater generated by the other residences in the subdivision, to Middletown's collection system. The wastewater generated by the commercial operations also flows, by gravity, into Middletown's collection system. The WPCA Commission will not support any expansion which could compromise the existing soil-based residential zoning densities/adjacent to the commercially-zoned areas.

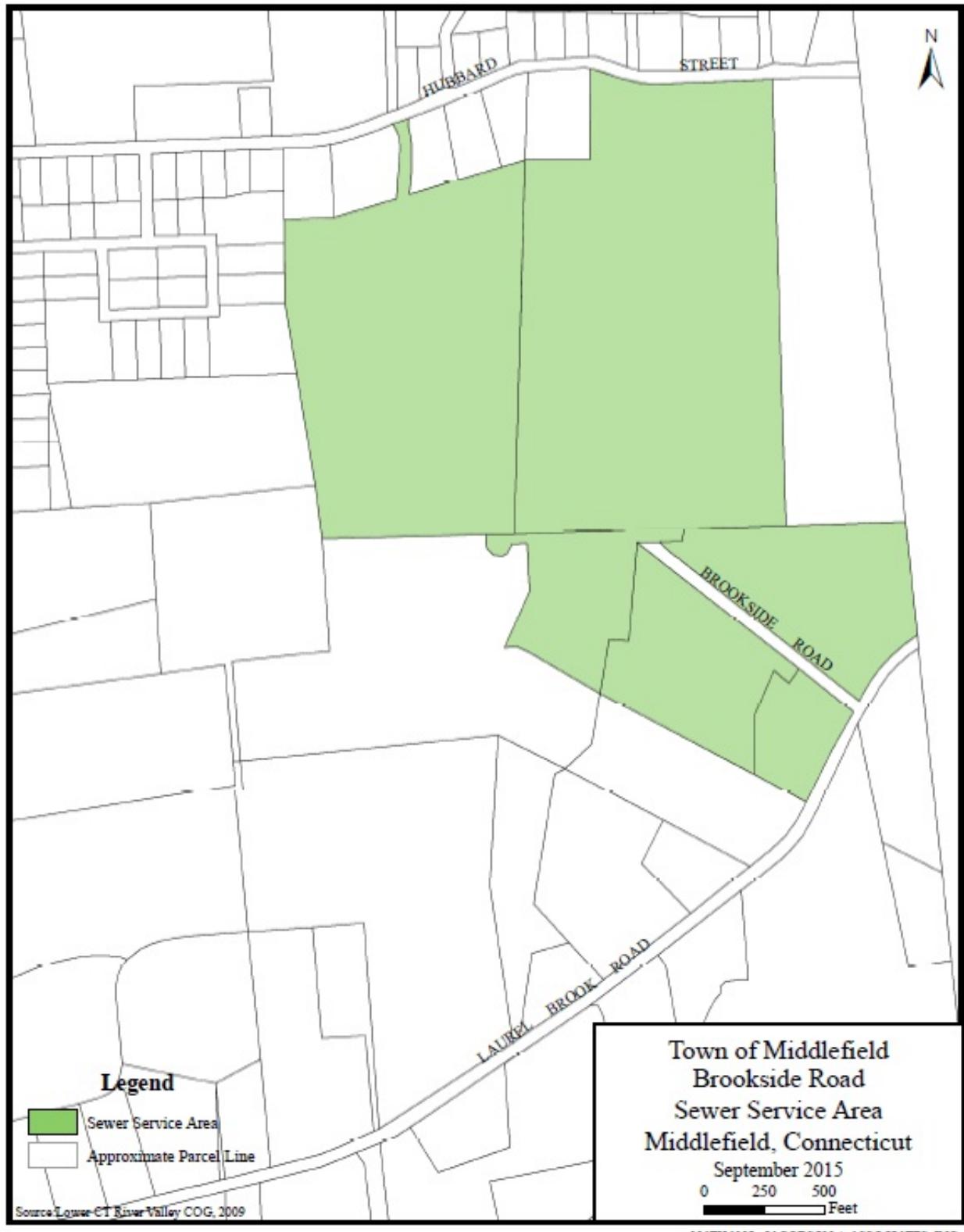
Lake Beseck – This system was completed in 2001 and currently serves approximately 325 sewer customers. The system was designed to handle the capacity of a complete build-out of the Lake Beseck Sewer Area which is projected to be approximately 350 connections. This system is the result of a Department of Environmental Protection order issued to the Town in 1990. Sewage from this system is pumped to the Meriden system and connects on East Main Street near Black Pond. This system cannot be easily expanded nor is it desirable. It was designed to alleviate pollution problems or potential problems related to existing development. Meriden has placed a cap on the total gallons of effluent they will accept and DEEP has mandated that the system not serve vacant land outside of the district. The Water Pollution Control Authority has passed an ordinance that only allows a sewer connection to vacant lots within the District that could meet the current State of Connecticut Public Health Code as it relates to on-site sewage disposal.

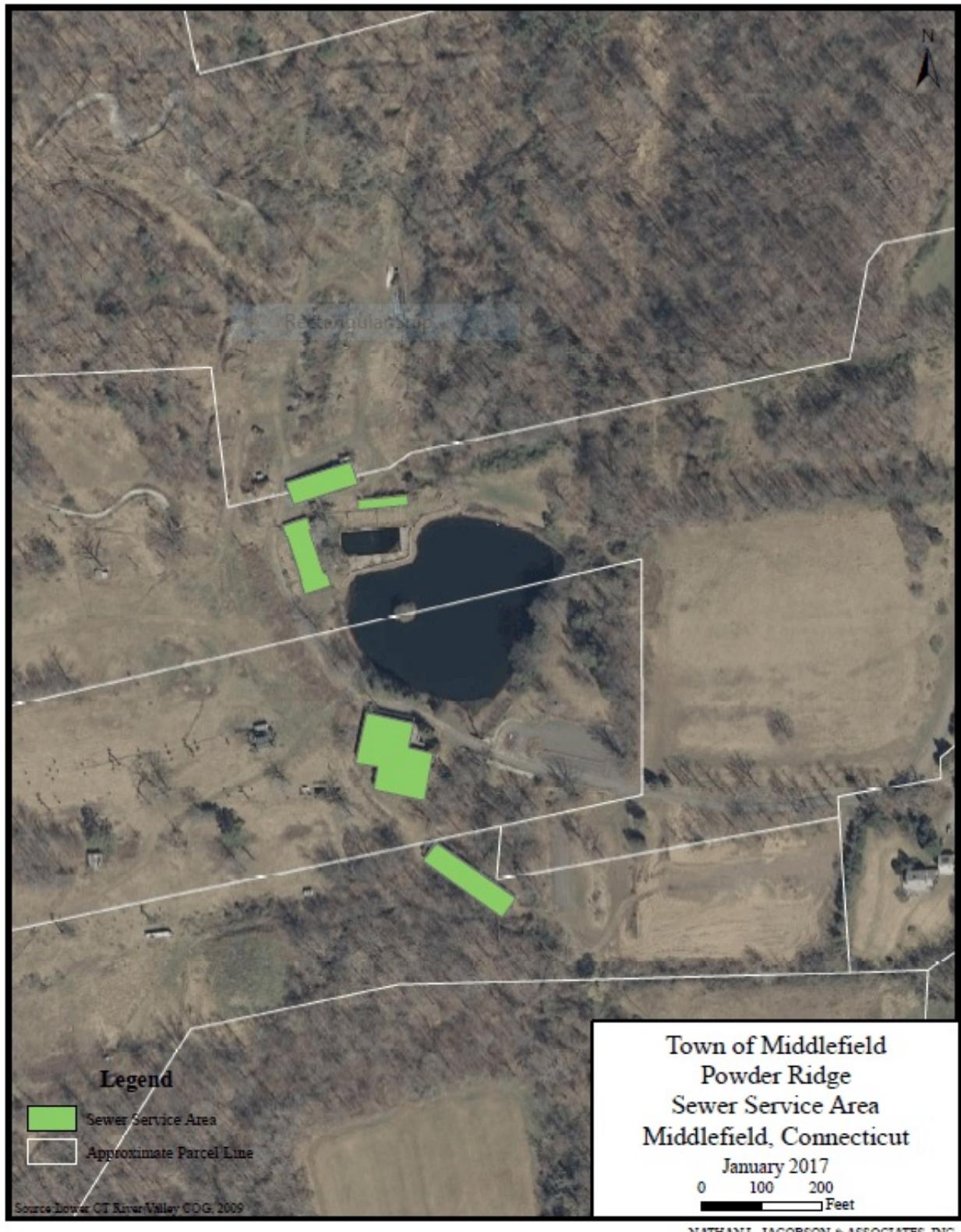
The following maps depict the existing sewer districts and their service areas.











WATER SERVICE AREAS

Groundwater Development

Surficial geology information and a study prepared by DEEP suggested that the greatest potential for groundwater development in stratified drift (sand and gravel) areas was in the vicinity of Peckham Park and the Lucy Strickland skating rink. The Town enlisted the expertise and resources of Professor Gelle DeBoer at Wesleyan University in 1992 to conduct studies to determine the potential of developing a municipal water supply in this area.

The conclusion of these studies was that there may be adequate amounts of water to warrant the development of a municipal water supply, but a significant potential exists of inducing pollutants into the well(s) from the closed landfill upstream. Professor DeBoer recommended that this source of potential water supply not be developed and that if a municipal water supply was necessary that it be developed in the Besalt formation to the west of Powder Hill Road.

No testing by the Town has been performed in this area. However, there are two high-yield, deep (1,000 feet) wells located on the White Water property. At this point, the Town owns over 100 acres south of the Lake Beseck community which could be suitable for a significant municipal water supply.

Service Areas

Middlefield is serviced by 34 public water supply systems. Systems that are either operated by or under the jurisdiction of the Town include the following. Middletown installed a water main loop under Meriden Road (Route 66) between the Middletown/Middlefield border and Ballfall Road and then continuing under Ballfall Road north to the Middlefield/Middletown border. This main was installed to provide better water flow, pressure control and redundancy for the Middletown municipal water system. This installation provided a hydrant at the corner of Harvest Wood Road and Meriden Road (Route 66), providing improved fire protection to this dense residential area. The Town of Middlefield has permitted one property to connect to this water main since its installation. Several properties near the Middletown border along Meriden Road (Route 66), Lorraine Terrace and Falcon Terrace in the past were connected to older mains. The cost and operation of these water connections are borne by the property owners and Middletown Water Department.

Additional connections to the Middletown water mains in this area are likely to be approved by the Town in the future on a case-by-case basis.

The Town purchased the rights to the Eastern Connecticut water system and decommissioned this system. Properties that were previously serviced by this system are now providing their own water via wells. The last user of this system was disconnected in 2012.

The Indian Trail water system is currently undergoing upgrades. Middlefield and Durham have concluded that the cost of connecting to a proposed water line under Main Street, Durham is not economically feasible.

The following list contains information on Connecticut's drinking water system. The systems are divided by "Classification" or "type of system. There are three types of public drinking systems: "Community Water Systems" which serve at least 25 residents throughout the year; "Non-Transient, Non-Community" which are not community systems and regularly serve at least 25 of the same people which are not over six months of year at places like schools and office buildings; and "Transient Non-Community" systems which do not meet the definition of a non-transient, non-community water system, such as restaurants and parks.

Public Drinking Water System Susceptibility

PWSID	System Name	Pop. Served	Susceptibility	Contaminants Detected	Well Condition
Community Systems					
CT0827081	BITTERSWEET RIDGE WATER ASSOC WELL #1	40	Moderate	Nitrate	Good
CT0827081	BITTERSWEET RIDGE WATER ASSOC WELL #2		Moderate	Nitrate	Good
CT0827071	HAPPY ACRES	84	Moderate	Nitrate	Good
CT0820031	MIDDLEFIELD HOUSING AUTHORITY WELL #1	40	Moderate	None	Minor Deficiencies
CT0820031	MIDDLEFIELD HOUSING AUTHORITY WELL #2		Moderate	None	Minor Deficiencies
CT0820501	OLD INDIAN TRAIL	32	Moderate	Nitrate	Good
CT0821001	REJA - RAINBOW SPRING WATER COMPANY	36	Moderate	Nitrate	Significant Deficiencies
CT0826061	SYLVAN RIDGE CONDOMINIUMS WELL #2	84	Moderate	None	Good
CT0826061	SYLVAN RIDGE CONDOMINIUMS WELL #4	0	Moderate	None	Good
Non-Transient, Non-Community					
CT0820172	COOPER INSTRUMENT CORPORATION	86	High	Nitrate	Average
CT0820382	INDEPENDENT DAY SCHOOL	199	Moderate	Nitrate	Needs Improvement
CT0820013	JOHN LYMAN SCHOOL	285	Moderate	Nitrate	Needs Improvement
CT0820023	LYMAN ORCHARD COUNTRY FARMS COMPLEX	60	High	Coliform	Unknown
CT0820392	MEMORIAL ELEMENTARY SCHOOL	359	High	Nitrate	Good
CT0820362	MIDDLEFIELD FEDERATED CHURCH	30	High	Nitrate/Coliform	Good
CT0820072	THE ROGERS MANUFACTURING COMPANY	100	High	Nitrate/Coliform	Unknown
Transient Non-Community					
CT0820014	CALVI BUILDING	25	Low	None	Needs Improvement
CT0820024	COGINCHAUG MARKET	25	Moderate	Nitrate	Unknown
CT0820034	CONNECTICUT CABLE	25	High	None	Unknown
CT0820054	CRESTLINE MOTEL	25	Low	None	Needs Improvement
CT0820074	GUIDAS DRIVE-IN RESTAURANT	40	Low	Nitrate	Unknown
CT0820084	INDIAN SPRING GOLF COURSE	25	Moderate	Nitrate/Coliform	Unknown
CT0820461	LAKE BESECK SYSTEM (ROVERS LODGE)	25	Moderate	Nitrate	Good
CT0820094	LAKESIDE DELI & MINI MARKET	25	Moderate	Coliform	Unknown
CT0820104	LEVI COE LIBRARY	25	Moderate	None	Unknown
CT0820073	LYMAN ORCHARDS - LABOR CAMP	45	High	Nitrate/Coliform	Unknown
CT0820134	MIDDLEFIELD ADMINISTRATION BLDG	25	High	Coliform	Unknown
CT0820144	MIDDLEFIELD COMMUNITY CTR & FIREHOUSE	25	High	Coliform	Needs Improvement
CT0820164	PECKHAM PARK	25	Moderate	Coliform	Needs Improvement
CT0820174	POWDER RIDGE SKI AREA - RESTAURANT	25	High	Coliform	Unknown
CT0820051	POWDER RIDGE SKI LODGE	25	High	None	Unknown
CT0820184	POWERHOLD, INC.	25	High	Nitrate/Coliform	Needs Improvement
CT0820204	RED DOG SALOON	25	Low	Nitrate	Average
CT0820234	ST COLMAN RECTORY	25	Moderate	Nitrate	Needs Improvement
CT0820244	TEMPLE OF ECK	25	Low	None	Average
CT0820254	VICTORY TABERNACLE CHURCH	25	Moderate	Nitrate	Unknown
CT0820264	WADSWORTH FALLS/BATHROOM WELL	527	Low	None	Unknown

Public Water Supplies Appendix II
Wellhead Protection Areas (WHPAs)

Middlefield Wellhead
Protection Areas

