

# **TOWN OF CORTLANDT MASTER PLAN**

## **CHAPTER 6: Utilities**

*GOAL: Develop and maintain adequate utilities to serve the Town's population and businesses*

### **A. INTRODUCTION**

Public utilities such as water and sewer systems are essential to ensure public health & safety by providing safer drinking water and lessening the discharge of pollutants to the environment. Currently, approximately 85% of all Cortlandt households are served by a public water system and less than 15% of all households are served by public sewers. In recent years, residential and commercial growth has impacted the environment and has reduced the available capacity in the receiving sanitary sewer system and has created a need to further expand the potable water storage capacity. Furthermore, aging and inadequate (per current standards) septic systems, and the wintertime use of salt on town roadways (affecting the quality of some wells) further necessitate the need to improve and expand central water and sewer systems. Since the cost of developing and maintaining public utilities is increasing, strategies for reducing and controlling such costs is critical. The recently completed GIS mapping of all storm water, sewer and water systems in the Town will permit the proper evaluation of existing facilities and foster proactive planning of all system improvements.



*A water project in Cortlandt*

### **B. BASE STUDIES SUMMARY**

**Water Supply:**

Supply of adequate water for the residents and businesses of Cortlandt is a critical community need. Water is provided either by private wells or by municipal or other public utility water districts that charge water usage fees and/or levy taxes for the underground water mains that carry water to individual users and to fire hydrants.

These water districts are the Cortlandt Consolidated Water District, the Montrose Improvement District, and the Northern Westchester Joint Water Works, which together serve the majority of Cortlandt residents. Households outside of a public water district are dependent on wells except for Camp Smith which is served by its own reservoir.

In Cortlandt, the public water supply system is a significant issue for the Master Plan process. In particular, the availability of water service is a critical factor in determining the potential density for new development in a given area. In areas where private wells are required, lower densities are necessary to protect groundwater quality. Limited access to water for firefighting purposes may also restrict the potential density of new development.

Although water delivery systems are now meeting demand, they are operating essentially at or close to their capacity to meet that demand. Limited opportunities exist to extend the service areas of the districts, or to correct problem areas within the districts (e.g., areas of higher elevation). In addition, there are concerns of limited water storage (total storage in the Cortlandt Consolidated Water District is less than one day of average use) or contingency systems in case of disruptions to the normal flow of water. Furthermore, since some pipe networks are old and badly corroded, the capacity is limited and many of these pipes are subject to leaks and breakage.

**Sewers/Septic Systems:**

The disposal of domestic and commercial sewage is also an important concern. Municipal sewage collection and treatment systems, local private collection and treatment, or individual septic systems all have the capability of treating wastewater. However, as with most of northern Westchester County, the majority of sewage is disposed via private septic systems.

Many septic systems in densely populated areas such as the northeast and central sections of town including Verplanck, Montrose and Crugers are old and not functioning properly and therefore contribute to the degradation of surface and ground water supplies. It should be noted that many of these areas of septic system failure are in Critical Environmental Areas.

Similar to the provision of water, sewage treatment directly affects the potential density of development because dependence on septic systems. This is especially true on lots where both wells and septic systems are utilized.

Approximately 20% of the northern part of the Town is served by the Westchester County Peekskill Sanitary Sewer District. Another 5-10% of the Town is served by private sewage treatment plants such as Springvale, Amberlands, Valeria and Coachlight Square.

The VA FDR Hospital and Camp Smith have their own sewage treatment plants. In addition there are capacity limitations with the gravity sewer systems on Westbrook Drive and at the Stevens Lane pump station. These capacity limitation issues must be addressed before additional connections are made in these areas of Town.

Since the 1991 Master Plan was adopted, the Town continues to expand water and sewer infrastructure town wide. Examples of these improvements and expansions includes the Joint Northern Westchester Water Works facility on Route 6, the Lake Peekskill water main and fire pump station, the Route 6 sewer and water main installations, the Waterbury Manor Sewer District and the Conklin East Sewer District (under construction). In addition, there are plans on the table currently to bring sewer service to areas such as Tammarack (off Route 202), and the area surrounding the Panas High School (off Route 202).

**Drainage:**

Stormwater drainage systems are important to control flooding and non-point source pollution. In the last 25 to 30 years, the Town has witnessed major new residential and commercial developments throughout the Town. During that time, the Town has required and continues to require developers to provide on-site drainage control systems in terms of stormwater collection, water quality controls and detention of stormwater runoff.

To guarantee continued and proper maintenance of these stormwater facilities, local drainage districts have been established to fund maintenance programs and required improvements. As part of ongoing maintenance program of storm water drains, the Town regularly cleans catch basins of dirt and debris to increase capacity and enhance water quality.

### **C. OBJECTIVES AND POLICIES**

The following objectives and policies are intended to implement the goal for the development and maintenance of adequate public utilities to serve the Town's residents and businesses and to ensure that allowable growth does not exceed the capacity of such utilities.

**OBJECTIVE: Evaluate, replace and rehabilitate existing water, storm drainage and sanitary sewer systems, establish priorities for upgrades and expansions to these systems to improve capacity and enhance water quality.**

**Policy 95: Establish utility planning as a specific technical area within the municipal government to develop a schedule of utility evaluation relating to future districts and to prioritize capital projects.**

Within the Department of Technical Services the town should provide for utility planning to proactively plan for future utility improvements and capital projects.

**Policy 96: Continue to clean and line older cast iron water pipes and replace the nearly 20 miles of brittle transite pipe which is subject to leaks and breakage.**

Within the Cortlandt Consolidated Water District the Town should continue the program of cleaning and lining old cast iron pipes and replacing brittle pipe to avoid the loss of water due to leaks and breakage.

**Policy 97: Conduct regular flow measurements within the sewer system in areas where the capacity is limited.**

Closely monitor the sewer system where capacity problems are known to cause backups on a regular basis such as on Westbrook Drive. The monitoring should include conducting flow measurements to determine if there are illegal sewer connections for roof and footing drains and sump pumps.

**Policy 98: Finalize the formation of the commercial Route 6 Sanitary Sewer District and assess fees for rehabilitation of the Westbrook sewer system.**

Currently commercial and residential properties along Route 6 are served by the public sewer system but there are also currently 'out of district' property owners which are not part of a local sewer district.

By creating a local sewer district in which the 'out of district' property owners are obligated to join, fees can be assessed on each property in the local sewer district to help pay for needed improvements such as the rehabilitation of the Westbrook sewer system. This local sewer district could eventually include other properties (not currently serviced by sewer) which can be connected to future sewer extensions along Route 6.

**Policy 99: Expand the water system backflow prevention and grease trap inspection program for sewers.**

By increasing the Town's efforts for water system backflow prevention and grease trap inspections for sewers serious problems can be avoided before they occur. Currently, County and Town law require backflow prevention devices on water service lines which can be the source of pollutants if backflow occurs due to a pressure drop in a water main. Pollutants can enter the water main from commonplace maintenance practices involving cleaning solutions that are drawn into the water main when a pressure drop in the main occurs. (The cleaning solution is usually in a bucket connected to the spigot via a hose). Grease traps at individual sites such as restaurants and retail food stores are important because grease accumulation is a major cause of backups in storm and sanitary sewer lines.

**Policy 100: Lobby Westchester County to expand their ‘trunk’ system to Route 202 and Westbrook Drive to better serve the Peekskill Sanitary Sewer District.**

As recommended in the Sewer Master Plan the Town should lobby Westchester County to expand their ‘trunk’ system to Route 202 and Westbrook Drive to better serve the Peekskill Sanitary Sewer District and to provide sewers to areas of that Town that need it. There are existing properties along Route 6 which cannot connect to the sewer because of inadequate available capacity at Westbrook Drive.

**Policy 101: Establish a sewer maintenance program which would involve training workers and purchasing equipment and assessing a maintenance tax within the district to pay for it.**

As recommended in the Sewer Master Plan the Town should establish a sewer maintenance program which would involve training workers and purchasing equipment. This maintenance program should be financed through the Town’s assessing a maintenance tax on district properties. It is anticipated that the proposed maintenance tax would be a small amount of a property owners total tax bill and the proceeds would be used to maintain the system to avoid costly repairs.

**Policy 102: Explore methods to reclaim lost capacity in receiving utilities.**

When appropriate, existing infrastructure should be upgraded to compensate for the reduced capacity resulting from new development. Methods that should be explored include:

- Evaluate existing infrastructure to determine condition of lines
- Clean and lining older badly corroded water pipe
- Slip line existing sewer pipe
- Repairing catch basins and manholes
- Replace existing lines.

**OBJECTIVE: Develop sewer and water infrastructure, where needed.**

**Policy 103: Expand water and sanitary sewer infrastructure in a manner that supports the land use objectives of the Master Plan and discourage future small privately owned sewer treatment plants.**

Since the 1991 Master Plan policy was adopted, the Town has completed and continues to expand water and sewer infrastructure town wide. Examples of these improvements and expansions include: the Joint Northern Westchester Water Works facility on Route 6, the Route 6 sewer and water main installations, the Lake Peekskill water main and the Waterbury Manor Sewer District and the Conklin East Sewer District.

Future growth within the existing districts and additions thereto should also be guided by current studies including "The Long Term Water Needs of the Members of the Northern Westchester Joint Water Works" dated June 28, 2002 and the "Sewer Master Plan" (SMP) for the Town of Cortlandt dated March 2, 2002.

The SMP recommends the formation of a sewer district within the Critical Environmental Area along Albany Post Road (Route 9A) from Watch Hill Road to Kings Ferry Road. This district would be served by an expanded sewer treatment plant located in the recently approved Roundtop development.

It should be noted that the land use recommendations contained in this Master Plan under residential and commercial policies cannot be fully implemented without a central sewer system. It should be further noted that the land use recommendations contained in this master plan do not increase the full build out potential compared to current zoning.

Future Town sewer studies should explore the feasibility of tying existing small sewer treatment plants into larger districts. Small package plants such as Valeria, Springvale or Amberlands may discharge into smaller streams that cannot readily dilute the effluent or may need to be upgraded to meet current standards. The Town discourages the future use of privately owned sewage treatment plants and instead encourages future development to connect to existing public facilities, where possible.

Future improvements to the Town's existing water distribution system should also provide for additional water storage tanks and maintaining proper water pressure throughout the system.

**Policy 104: Focus future sewer expansion planning resources to existing hamlet areas such as Verplanck, Montrose, Crugers, and Toddville.**

Existing hamlet areas such as Verplanck, Montrose, Crugers and Toddville as well as other areas where lot sizes are small and two-family houses are permitted should be given priority in sewer expansion planning. The Town should explore utilizing the federally owned treatment plant located at the FDR Hospital site in Montrose.

Likewise, new development should allow for the expansion of sanitary sewers in commercial and residential areas

**Policy 105: Explore the feasibility of extending a sewer main along Route 9/9A to the Ossining Treatment Plant and the Buchanan Treatment Plant.**

As recommended in the Sewer Master Plan the Town should explore extending a sewer main to the Ossining Treatment Plant and/or the Buchanan Treatment Plant for the Montrose, Verplanck and Crugers areas to eliminate existing smaller individual sewer treatment plants and to bring sewer service to areas of failing septic systems.

Among other things, this evaluation should include capacity analysis within the receiving infrastructure which includes the Ossining Treatment Plant and the Buchanan Treatment Plant.

Future buildout in these areas will be consistent with current zoning as proposed under the Master Plan.

**Policy 106: Continue to liaison with neighboring communities to coordinate large infrastructure projects in order to maximize efficiency and minimize cost.**

As envisioned by the 1991 Master Plan, the Town has benefited from inter-municipal cooperation on large infrastructure improvements such as the formation of the Northern Westchester Joint Waterworks and the on-going Route 6/202/Bear Mountain Parkway Sustainable Development Study. The Town is also working with Westchester County and other municipalities such as Ossining, Croton, Buchanan and Yorktown to construct and operate a recyclable solid waste material transfer station and material recovery facility in Cortlandt on Roa Hook Road.

The Town of Cortlandt also continues to share various Town services and equipment with the Villages of Croton-on-Hudson and Buchanan.

In addition, the March 2002 Sewer Master Plan has identified areas along the easterly municipal border between the Towns of Cortlandt and Yorktown that would benefit from a cooperative effort between the communities with respect to water, sewer and drainage.

The County's proposal to serve areas outside the Sewer District and create a "diversion" through Cortlandt will not be endorsed unless it is absolutely clear that sewer capacity at the Westchester County Plant is available to Cortlandt residents and that there is net positive environmental and financial benefit.

**Policy 107: Continue to seek funding to offset the cost of water and sewer improvements.**

Funding is available through various County and State programs to improve the quality of water supply and reduce impacts to the environment from septic system failures. The Town has been successful in establishing sewer districts that would not otherwise be economically viable without assistance from Community Development Block Grants and the Clean Water/Clean Air Bond Act. Furthermore the City of New York currently has money available to fund sewer improvements within their watershed.

**OBJECTIVE: Complete the development and implementation of a Geographic Information System (GIS).**

For the past 5 years, the Town's Capital Improvement Program has funded the establishment of a Geographic Information System. During that time, the Town has been working on a phased development of GIS which will ultimately provide a framework for information management and geographic data utilization for use by all of the Town Departments and services.

Town maps were prepared utilizing GIS technology for the 2003 Master Plan through a cooperative effort between the Westchester County GIS Department working with town staff and the Master Plan Committee. Completed GIS Maps from the 2003 Master Plan will be part of the town's new GIS system.

**Policy 108: Utilize and expand the Town's GIS program to manage and monitor water, sewer and drainage systems.**

The Town is currently mapping existing water and drainage systems to assist with management and monitoring of water, sewer and drainage systems and plan for future improvements. GIS will continue to be a major tool for providing updates and enhancements to this vital information in the future.

**Policy 109: Establish GIS as a specific technical area within the municipal government.**

GIS is and will continue to be a major source of vital information to many departments and services throughout the Town. As part of the effort to complete the mapping for the 2003 Master Plan, the Committee has learned first-hand the necessity of having the technical skills "in-house" to complete needed maps.

The Plan recommends the Town consider the establishment of GIS as a specific technical area within the municipal government which involves continual planning, technical training for staff and identifying tasks that should be outsourced.

**OBJECTIVE: Maintain and improve stormwater drainage systems  
Town-wide to control flooding and reduce non-point source  
pollution and soil erosion.**

The Federal Environmental Protection Agency is requiring municipalities nationwide to develop stormwater management plans by March 2003 and to implement them by 2008. Such management plans must include public education and outreach, detection and elimination of illegal sewage and stormwater runoff connections, prevention of construction runoff and promotion of "good housekeeping" measures. A stormwater management program will also help to control flooding and reduce non-point source pollution and soil erosion. The Town is encouraged to make use of the Geographic Information System being established to map existing stormwater drainage facilities to locate and identify potential problem areas and to plan needed improvements.



**Policy 110: Town storm water management practices should include public education and outreach programs on storm water impacts and should include various techniques to provide for public involvement and participation, including a “stream-walk” program.**

Storm water public education and outreach programs should include use of the town’s web page, distribution of printed material at public buildings and mailings, speakers at community group meetings and use of the town’s local cable channel. Storm water practices to be encouraged should include: proper lawn and garden care in the use of fertilizers and pesticides, low impact development, pollution prevention for businesses, trash management and water conservation practices.

In addition, the Town should utilize various techniques to provide for public involvement and participation including the support of a volunteer “stream-walk” program. In order to allow for public involvement and participation in storm water management practices there should be; (1) public notice and access to documents and information; (2) public presentation and comments on the storm water management plan and on annual reports; (3) a public involvement/participation program; (4) a contact person identified and; (5) community hot lines.

Public participation activities could include storm drain stenciling and volunteer monitoring. Additionally, the Town should consider working with Westchester County on providing materials for public notice with respect to storm water management practices.

**Policy 111: Town storm water management practices should include detection and elimination of illicit discharge.**

Storm water management detection and elimination activities should include; (1) outfall mapping; (2) prohibition of illicit discharges and hookups to Town utilities (3) informing the public, employees and businesses of hazards from illicit discharges; (4) system mapping and; (5) system inspections. Some types of discharges to target include: failing septic systems, illegal dumping, industrial and business connections, recreational sewage, sanitary sewer overflows and wastewater connections to the storm water system. Significant penalties for violators should be imposed.

**Policy 112: Town storm water management practices should require site storm water runoff controls.**

In order to control the quality and quantity of storm water runoff the town should implement the following practices:

- Require erosion and sedimentation controls through an ordinance or other regulatory mechanism which would be in addition to those already contained in the “Westchester County Best Management Practices Manual”.
- Provide opportunity for public comment on construction plans.
- Require construction site plan review.
- Require overall construction site waste management.
- Site inspections and enforcement

- Coordinate efforts to control storm water runoff with adjacent municipalities such as the Town of Yorktown.
- Education and training of construction site operators.

Construction program criteria should include the New York State Standards for Erosion and Sediment Control and the New York State Stormwater Management Design Manual.

**Policy 113: Town storm water management practices should include post-construction requirements.**

Post-construction stormwater management should include the following;

- Assess existing conditions throughout the Town and identify appropriate management practices to reduce pollutant discharge to the maximum extent practicable.
- Establishment of drainage districts to fund future maintenance should be required of all major developments.
- Regulate post-construction runoff from development through an ordinance or other regulatory mechanism.
- Develop management practice inspection and maintenance program.
- Post-construction program criteria should include the New York State Management Design Manual.



Croton Reservoir

**Policy 114: Town storm water management practices should include pollution prevention/good housekeeping for municipal operations.**

Program requirements for pollution prevention/good housekeeping for municipal operations should include the following;

- Prevent discharge of pollutants form municipal operations.
- Follow DEC Non-Point Source Management Practices Catalog, or equivalent.
- Conduct employee education with respect to pollution prevention training.
- For new development, the Town should consider forming a drainage district so that fees can be collected for future maintenance activities.

Town storm water management practices should include the following;

- Street cleaning
- Catch Basin and storm drain system cleaning
- Alternative discharge options for chlorinated water
- Hazardous and waste material management
- Landscaping and lawn care and integrated pest management
- Road salt storage
- Municipally-owned septic system management
- Spill response and prevention

