CHAPTER 9

Public Sewer and Water Service

Statement of Purpose

Ensuring that all of the region's residents have an adequate and consistently high quality water supply is of utmost importance. The Capitol Region has a mix of private and public water supplies, individual septic systems and large public sewer systems. The existence and safety of wastewater management systems is necessary to maintain the health of not only the region's population, but its environment as well. The existing and planned water and sewer infrastructure is also a key component to guiding the growth and development of the region.

Current Conditions

Though on a region-wide basis, the great majority of residents are served by both public water and sewer systems, the town-to-town range is wide. While rural towns such as Andover and Hebron rely almost entirely on private wells and septic systems, the urbanized areas of Hartford and East Hartford have almost complete service coverage. To ensure its continued service to the region, the Metropolitan District (MDC) is currently replacing its infrastructure. This project will take 15 years to complete.

Table 9.1 Percent of Regional Land Area Covered by Public Water and Sewer Service

Year	Water	Sewer
1978	20.2%	14.8%
1990	21.5%	19.9%
1995	22.7%	20.3%
2005	22.7%	
2010		27.3%

Sources: CRCOG and State of Connecticut databases

While public utilities serve approximately three-quarters of the housing units in the region, the percentage of land area served by water and sewer lines is much lower. As Table 9.1 indicates, about a quarter of the region's land area lies within reach of public water and sewer utilities. The relatively high housing unit density in and surrounding Hartford makes such public service efficient and necessary. Between 1980 and 2010, there was a nearly 28 percent increase in housing units in the Capitol Region. However, this growth did not occur evenly throughout the region. Growth in housing units in the region's rural towns (which have less extensive water and sewer service areas) was especially robust over the past three decades, and nearly doubled the amount of housing in some communities. Housing unit growth in the region's rural towns as a group exceeded 65 percent, and growth in suburban towns increased by 54 percent. Over this same time, growth in the fully suburban towns increased by only 23 percent while Hartford lost 6 percent of its housing units. Comparing the growth of the area served by public water and sewer between 1978 and 2010 to the region's housing unit growth between 1980 and 2010, indicates that most new development is occurring away from public water and sewer lines.

Public Water Service

Regulation of existing and future public water supply in the Capitol Region is handled largely by the Connecticut Department of Public Health (DPH) in conjunction with the Department of Energy and Environmental Protection's Public Utilities Regulatory Authority (PURA). Planning for public water supply systems is administered through DPH under the Water Utility Coordinating Committee (WUCC) planning process. Most Capitol Region communities belong to the Upper Connecticut WUCC. Marlborough and Hebron are in the Southeast WUCC and Andover, Bolton, Tolland and Stafford are assigned to the Northeast WUCC which has not yet convened.

Each WUCC, and hence the region, like much of the state, is divided up into "exclusive service areas" (ESAs). Each ESA is the domain of a single water utility provider, which is responsible for existing and future water customers in that area. The water provider is obligated to extend water service to any customer in their ESA who requests it. This service extension can be accomplished either by tying the new customer in with existing water infrastructure or by developing a new local public water supply. However, the complete cost of extending service is often borne by the consumer. In the Capitol Region, Stafford, Tolland, Andover and Bolton are the only towns currently unassigned to an ESA, although the DPH is working toward incorporation of these towns into ESAs.

The DPH requires each water utility company to file plans of development with five, twenty and fifty-year projections. Aside from the continued effort for improving drinking water quality, the DPH is working with rural towns and water utility companies to encourage the consolidation of small residential and commercial public systems into larger community systems. This would improve regulation of the water supply quantity as well as quality and also help to guide growth.

Public Sewer Service

Unlike public water service, public sewer systems do not have exclusive service areas. In most cases where the region's towns have public sewer lines, these systems are managed by a utility district such as the MDC or by the towns themselves. Sewer lines are installed by public works staff and a wastewater treatment facility is locally or regionally controlled. Where density does not require public sewers, private septic systems are generally the preferred method for treating wastewater. As 65 percent of the region's residentially zoned area requires one-acre minimum lot size or larger, private septic systems are very common.

Both public and private sewage treatment systems may create environmental problems. Two of the region's largest municipalities, Hartford and Enfield, still have Combined Sewer Overflow (CSO) systems, which convey stormwater and sewage in the same pipe system. During intense rainstorms, CSOs can dump raw sewage into the Connecticut River.

Sanitary Sewer Overflow (SSO) systems also exist in the region. While these systems use two pipes to separate sewage and storm water, some of these pipes are over 100 years old with cracks allowing groundwater to infiltrate. During heavy storms, these pipes are also prone to overflowing into rivers and streams.

Private septic systems are sometimes neglected and difficult to regulate. As a result, their failure can cause significant local pollution problems.

MDC Clean Water Project

Several years ago, the MDC began a 15 year, multi-phase Clean Water Project in response to an U.S. EPA sanitary sewer overflow Federal consent decree and a Connecticut Department of Energy and Environmental Protection combined sewer overflow consent order to achieve the Federal Clean Water Act goals by 2021. The Clean Water Project will work toward combined sewer overflow reduction as well as sanitary sewer overflow elimination and nitrogen removal. Phase I CSO projects target six areas in Hartford to relieve the problems of combined sewage overflow and to channel sewage to an upgraded Hartford Water Pollution Control Facility (WPCF). SSO reduction will eliminate structural SSOs in Wethersfield, West Hartford, Windsor, Rocky Hill and Newington. Nitrogen removal will require modifications and additions to the WPCFs in Hartford, and Rocky Hill as well as the wastewater collection and sanitary pumping facilities that convey water to these WPCFs. The cost of the entire project is $2.1 billion, of which $800 million has already been approved and committed for Phase I. An additional $800 million referendum to fund Phase II work passed in November 2012.

In combination, these projects will ultimately help to eliminate sewage overflows to area waterways during an average year, thus significantly improving the region's water quality.

GOALS & POLICY RECOMMENDATIONS

A. Ensure an Adequate and High Quality Water Supply

As was detailed in the Watersheds and Water Quality section of the *Plan*, an ample and clean water supply is crucial to the health and vitality of the region. Because the region's population is served by a broad spectrum of drinking water systems, a wide range of tools must be employed to regulate and ensure the quality of that water for everyone. Natural disasters such as hurricanes and flooding can create public health issues if public water supplies and wells become contaminated. It is important that public water suppliers and well owners are prepared for loss of power, contamination and other adverse effects of natural disasters on the water supply.

Policy Recommendations

1. Work with the Connecticut Department of Public Health (DPH) and the towns of Tolland, Stafford, Andover and Bolton to develop a partnership with water service providers or encourage their assignment to an Exclusive Service Area (ESA).
2. Encourage the region's towns to cooperate with the DPH in consolidating older, private water systems, particularly in town centers or higher-density areas.
3. Support education and other efforts to promote water conservation and reduction of nonpoint source pollution.
4. Continue efforts to identify and protect high-yield aquifer areas and water supply watershed areas to ensure a stable and clean water supply.
5. Work with local, state, and federal officials to ensure that local water pollution control facilities are operating at a high standard of efficiency.
6. Encourage the region's towns and water utilities to evaluate their vulnerabilities and develop hazard mitigation strategies to prepare for potential contamination, loss of power, and other disruptions to our water supply.

B. Continue Reduction of Environmental Impacts of Sewage Discharge

As stated above, both public and private sewage systems can potentially create environmental problems. Whether a city Combined Sewer Overflow (CSO) system or Sanitary Sewer Overflow (SSO) system is overloaded or a private septic system fails, the result is raw sewage deposited into the region's watersheds. High levels of nitrogen and coliform bacteria can be toxic to the wildlife of the receiving waters, and can potentially contaminate downstream drinking water supplies.

Policy Recommendations

1. Support MDC in obtaining the goals and objectives of its Clean Water Project.
2. Support efforts to upgrade local wastewater treatment facilities.
3. Work with local, state, and federal officials to upgrade old CSO and SSO systems.
4. Educate local officials and residents about the importance of private septic system maintenance.
5. Encourage the region's towns and wastewater utilities to evaluate their vulnerabilities and develop hazard mitigation strategies to prepare for potential flooding of facilities, loss of power, and other disruptions to our wastewater treatment systems.

C. Use Existing Water and Sewer Infrastructure to Guide Future Growth

In areas of high population density, as well as in heavy commercial or industrial areas, public water and sewer systems are necessities. The 50,000 households in Hartford simply could not survive with individual wells and septic systems. Conversely, it would be logistically and economically burdensome to extend sewer and water lines out to the remote subdivisions of Andover or Tolland unless warranted for pollution control. Just as the growth patterns in the region have led to decisions about the extension of these utilities, the presence or absence of these utilities can guide future regional growth patterns.

Policy Recommendations

1. Work with local officials and utility providers to encourage the development of an infrastructure system that meets desired local and regional growth patterns.
2. Encourage communication between town departments to ensure that planning efforts align with both pipeline and plant capacity.
3. Encourage towns to understand and plan for limits on phosphorous discharge at plants that will limit future growth.
4. Encourage infill development in areas already served by sewer and water lines.
5. Support efforts to redevelop and revitalize older areas within existing water and sewer service areas.
6. Discourage the joint extension of sewer and water service into unserved rural areas, except for extensions scaled to serve areas planned for significant commercial or industrial development.
7. Encourage municipalities to adopt a service area map for public sewer and water, and then designate the balance of town lands as on-site management areas.
8. Work with developers and town officials to consider smaller, on-site wastewater treatment systems that would allow for cluster or village residential development at selected locations not served by public utilities.
9. Encourage streamlining the permitting process at DEEP and DPH so as not to discourage strategic development investment.
10. Support clarifying and streamlining the local and state permitting procedures to facilitate the increased use of small community on-site wastewater treatment systems.

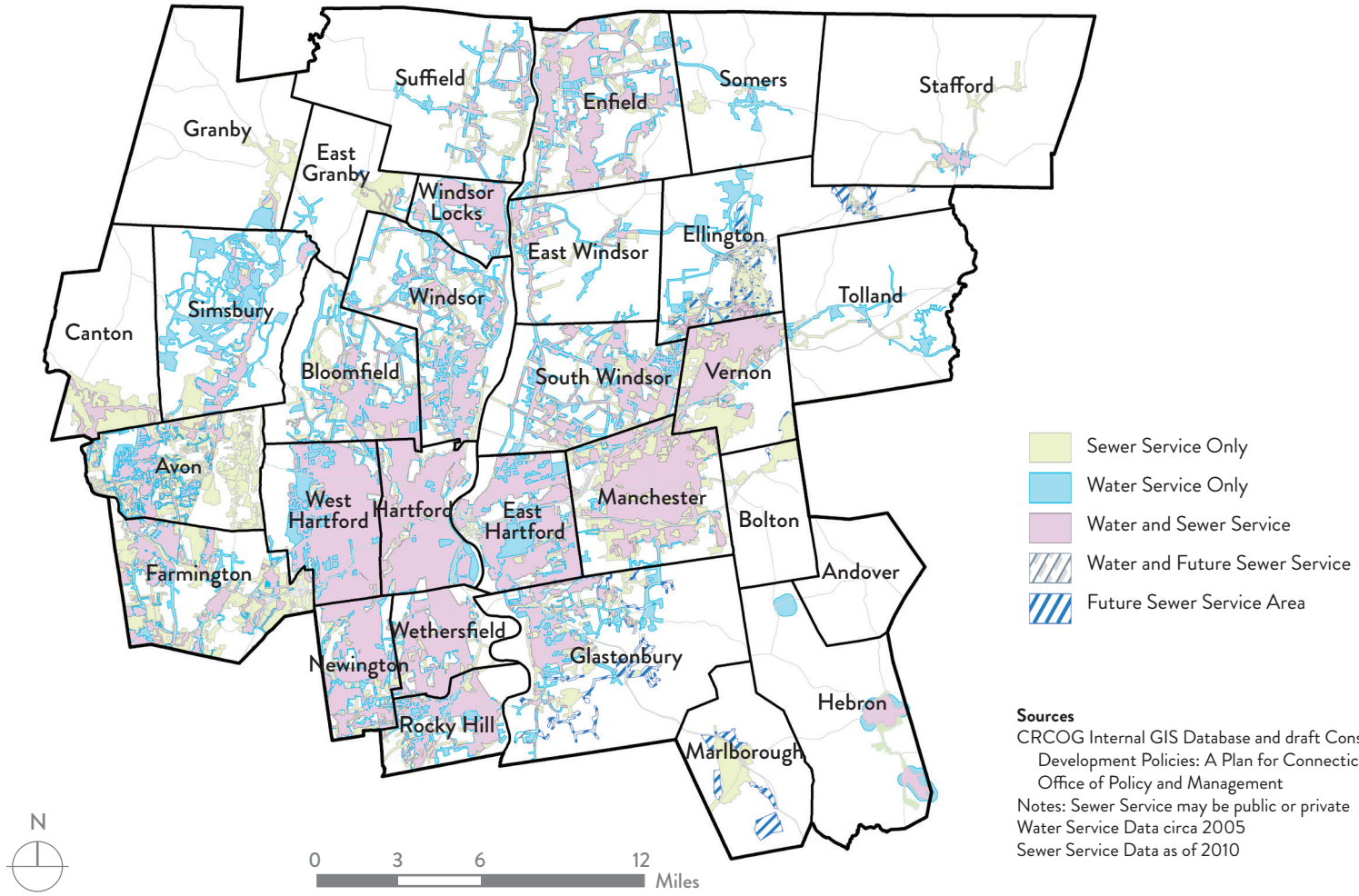
D. Balance Water Supply and Ecosystem Considerations

Several state agencies, including the Department of Energy and Environmental Protection, Department of Public Health, and Office of Policy and Management, are responsible for permitting water companies to expand water utility service to businesses or residences. These permits can include the expansion or development of well fields, consolidation of small, formerly privately held water supplies, or the diversion of surface water from rivers and streams. Crucial goals of this process are sustaining both an adequate water supply and the health of the ecosystem from which the water is to be taken.

Policy Recommendations

1. Support the efforts of State of Connecticut regulatory agencies to establish clear and scientifically valid criteria for permitting the expansion of water service.
2. Encourage research to determine minimum instream flow levels to support healthy stream and river ecosystems and prevent over diversion for water supply purposes.
3. Oppose interbasin diversion of surface and ground water, unless demonstrated to be the most reasonable and feasible alternative for meeting critical need(s) which are supported through state and regional plans.

Map 9.1. Sewer and Water Service Areas



Sources
CRCOG Internal GIS Database and draft Conservation and Development Policies: A Plan for Connecticut 2013 - 2018, Office of Policy and Management
Notes: Sewer Service may be public or private
Water Service Data circa 2005
Sewer Service Data as of 2010