

WATER POLLUTION CONTROL PLAN

FOR THE TOWN OF
GOSHEN CONNECTICUT

Prepared by the
GOSHEN WATER POLLUTION CONTROL AUTHORITY

December, 2016

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TABLE OF CONTENTS

Section

WATER POLLUTION CONTROL PLAN SUMMARY

A.	Summary
B.	Policies and Recommendations
C.	
2.0	INTRODUCTION
2.1	Sewer Avoidance Program
2.2	State and Regional designations of Goshen
2.2.1	State Plan of Conservation and Development
2.2.2	Northwest Hills Council of Governments Plan of Sewer , Water and Drainage
2.3	Watersheds within Goshen
2.3.1	Hollenbeck River
2.3.2	Shepaug River
2.3.3	Bantam River
2.3.4	Naugatuck River
2.4	Woodridge Lake Sewer District
2.4.1	History and Boundaries
2.4.2	Design and Capacity
2.5	Physiology and Geography
2.5.1	Physiology
2.5.2	Geography
2.6	Soils
2.6.1	Paxton-Woodbridge Soil Association
2.6.2	Hollis-Carlton Soil Association
2.6.3	Charlton-Paxton-Hollis Soil Association
2.7	Demography
2.7.1	Population Centers
2.7.2	Population Projections
2.7.3	Open Space
2.8	Water Supply
2.9	Wastewater Disposal – Existing Conditions
3.0	WATER POLLUTION CONTROL PLAN
3.1	Role of the Water Pollution Control Authority
3.2	Role of the Torrington Area Health District and other town agencies
4.0	REFERENCES
4.1	2016 Goshen Plan of Conservation & Development

1.0 WATER POLLUTION CONTROL PLAN SUMMARY

1.1 Summary

In 1978, Connecticut formalized a "Sewer Avoidance" Program in an attempt to control the expansion of sewer systems into rural and suburban area of Connecticut. The Town of Goshen elected to participate in the program and established its Water Pollution Control Authority to oversee it.

Nearly all of Goshen is designated as an "Environmentally Sensitive Area" in the latest state Plan of Conservation and Development (1987-1992) Except for the rural village center and a small portion of North Goshen, which is designated as "Rural Land" in the state plan, the rest of the town is either "preservation," "conservation," or "existing open space land". This is consistent with previous state plans and is also the case for the twenty -one (21) towns of Northwest Hills Council of Governments. In the council's plan for sewer, water and drainage, 100% of Goshen's land is outside of areas where major utility services, such as water and sewer lines are recommended before the year 2020. Goshen is the only town in the region so designated.

More than 70% of Goshen is within public water supply watersheds. Four major watersheds begin at a point near Ivy Mountain in north central Goshen. The smallest of these, the Hollenbeck River watershed in the northwest corner of the town, is not a public water supply although all its surface waters are classified as potential drinking water by the state.

The other three water sheds each serve as a drinking water supply for town and cities downstream. The Shepaug River Watershed flows southwest and is the headwaters of the public water supply for the City of Waterbury. The Bantam River watershed flows to the southeast and across the acquifers near the town line where the Town of Litchfield has its public water supply wells. The Naugatuck River Watershed begins in the northeast corner of Goshen where the Torrington Water Company owns thousands of acres at the headwaters of the drinking water supply for the City of Torrington.

A small sewage treatment plant is located in Goshen within the Woodridge Lake Sewer District. This facility was designed and constructed to treat 200,000 gallons per day in 1969-70 to serve the 760 homes expected to be constructed within the Woodridge Lake community. The State Department of Environmental Protection has, to date, licensed the plant for 100,000 gallons per day, and because of the nature of all the of town's streams, the effluent is dispersed in a ridge and furrow leaching system rather than into a watercourse.

At the time the Woodridge Lake sewer plant was designed, numerous environmental studies were performed. These studies all ruled out the discharge of effluent into any stream within

Goshen. Review by several state agencies recommend that no additional sewage from anywhere in Goshen outside the sewer district should be brought into the district for treatment. In preparing the design for Woodridge plant, consideration was given to adding Goshen Center, and the areas around Tyler and Dog Ponds to the district. Once the State ruled that out, the town had studies done on the feasibility of connecting those areas to either the Torrington or Litchfield treatment plants. But these studies concluded that it would not be financially feasible or practical for the town to plan on using either plant.

Of Goshen's 45.6 square miles (approximately 29,000 acres), only about 1,300 acres are within the sewer district. In the rest of Goshen, all wastewater disposal is through the use of subsurface sewage disposal (septic) systems. The dominant soils in Goshen are the shallow-to-bedrock and shallow-to-hardpan groups typified by the Paxton-Woodbridge soil association, Hollis-Charlton soil association and Charlton-Paxton-Hollis soil association. The scattered wetlands and watercourses within these soil types account for more than 30% of the town's area.

All of these soils impose severe restrictions for the construction and operation of standard leaching systems. These restrictions result from the limited downward movement of groundwater and effluent subsequent high ground water levels. Extensive modifications to the design of leaching systems, including the use of large quantities of fill, groundwater control (curtain) drains and extensive water conservation are required to initially install or repair existing leaching systems over these soils.

Goshen's present population is estimated to be 2,957. Population projections for the year 2020 range from the UCONN state data center estimates the population will be 3,175. According to soil studies, the town could support a population of about 21,500 based on a lot size of four acres for each home and its water supply well and septic system.

Only Goshen Center (at the junction of routes 4 and 63) and the area on the west side of Tyler Pond are extensively developed (not counting the Woodridge Lake Sewer District). The remaining dwellings are scattered along the major thoroughfares. The open space plan has inventoried all of the town's natural resources and provides for property tax breaks for residents who choose to leave their land undeveloped. The Open Space Plan was made part of the town's comprehensive plan of development in 1985.

Because of the predominant soils in Goshen, nearly all of the homes can be expected to have septic systems constructed in soil with severe limitations for septic disposal, but failures have not been frequent and the repairs that have been facilitated have been successful. Since 1974, the town has been a member of the Torrington Area Health District, and the health district has overseen the installation of all systems since that time as well as the repair of older systems when needed.

The health district has developed several regulations which are stricter than the state health code, and uses them in all 112 towns served by the district including Goshen. The

Health District also wrote a rule for the conversion of summer cottages in year-round dwellings that has since been adopted as part of the state code.

No areas in Goshen are currently experiencing severe wastewater disposal problems and all the repairs to septic systems which have been instituted to date, have been successful. It is anticipated that future septic system failures will likely be replaceable using conventional systems (e.g. expansion of leaching fields, utilization of fill to elevate the leaching systems, etc.).

There does not appear to be any need for collection and off-site treatment of wastewater from any developed area in Goshen at this time.

1.2 Policies and Recommendations

It is the goal of Goshen to avoid sewers anywhere within the town, outside of the Woodridge Lake Sewer District. To do so, the town must continue its strategy including both structural and non-structural alternatives, through which leaching system failures can be prevented and/or abated should they occur. The following policies and recommendations are the basis of the Water Pollution Control Plan for Goshen:

1. The entire Town of Goshen, excluding the Woodridge Lake Sewer District, is declared a Sewer Avoidance Area.
2. Goshen should remain as a member of the Torrington Area Health District.
3. The Water Pollution Control Authority will maintain its active role in monitoring land use in Goshen by:

Regularly reviewing land use rules to ensure that the town's regulations are consistent with the goal of sewer avoidance

Working with the Torrington Area Health District to change, modify or add requirement for septic disposal in Goshen when needed

Developing an educational program for all residents on the proper operation and maintenance of septic systems, particularly for new residents who will be living for the first time in a home served by a well and septic system rather than city utilities

Cooperating with the Woodridge Lake Sewer District for the safe and efficient disposal of septage at the Woodridge facility

Developing a long-range program for the disposal of Goshen septage.

4. The Zoning Enforcement Officer and the Building Official must ensure that all requests for building or expansion are referred to the health district to determine if water supply and sewage disposal facilities are adequate for the proposal.

1.3 Regional sewerage Connection Project

The proposed Regional Sewer Connection Project is consistent with the Plans of Conservation and Development within both the Town of Goshen and the City of Torrington. There are no changes to either sewer service area. The proposed wastewater transmission main will traverse areas outside the sewer service areas but no connections will be allowed. In December 2015, WLS D met with the City of Torrington Planning & Zoning Commission to present the proposed Project. The City of Torrington Planning & Zoning Commission issued a positive 8-24 Referral supporting the concept. WLS D then met with the Town of Goshen and its Planning & Zoning Commission in January 2016, and the Project obtained a similar positive 8-24 Referral.

The proposed Regional Sewer Connection Project is also consistent with the State's preference to regionalize wastewater infrastructure, when feasible. Based on the limitations of WLS D's existing effluent disposal system and constraints related to the GAA groundwater designation in the vicinity of the WLS D system, a regional alternative became the only feasible solution. Maintaining sewer avoidance areas in the portions of Goshen and Torrington that are outside the sewer service areas is also consistent with the State's overall Plan of Conservation and Development program.

Town residents and officials have consistently supported "sewer avoidance" policies. These are policies aimed at avoiding the need for additional development served by a sewage treatment plant and sewer lines. Except for the Woodridge Lake Sewer District area, Goshen is served by onsite septic disposal systems.

Sewer avoidance policies are consistent with the goal of maintaining the Town's rural density of population and avoiding water pollution. Accordingly, the Town's land use and Inland Wetland Regulations, the policies of the Water Pollution Control Authority, and the requirements of the Torrington Area Health District have been formulated and enforced to ensure septic system performance and to avoid the need for sewers.

MAY 1988 PLAN

Atlas of the Public Water Supply Sources and Drainage Basis of Connecticut by the State Department of Environmental Protection Natural Resources Center, Hartford, CT June 1982. (A complete inventory of water supply systems statewide with maps on a scale of 1:50,000 showing all surface reservoirs, groundwater wells and springs used for public water supply).

Comprehensive Engineering Study of the Wastewater Collection, Treatment and Disposal Facilities for the Woodridge Lake Sewer District and the Town of Goshen, E. D'Appolonia Engineers, Pittsburg, PA, April 1971. (The entire town and its drainage system were studied for the feasibility of sewage disposal in Goshen. This original study looked into the possibility of sewer the Tyler Lake, Goshen Center and Dog Pond areas of town along with Woodridge Lake.)

Addendum to the above report: November 1971. (Additional studies done in response to questions and recommendations from the State Water Resources Commission and the State DEEP – which concluded that no area outside the Woodridge District should be sewered through the Woodridge Plant.)

Environmental Review Team Report – Woodridge Lake, King's Mark Resource Conservation and Development Area, Warren CT., January 1981. (A study of geology, hydrology and soils within the Woodridge District which discusses possible well failure because sewerage is removing groundwater from one watershed to another.)

Goshen Open Space Plan, Conservation Commission and Steering Committee, 1984. (An inventory of all natural, farms, scenic and historic resources in Goshen with strategies for preserving them).

Report to the Joint Standing Committee on the Environment on the Establishment and Administration of a Municipal and Town Sewer Avoidance Program, State Department of Environmental Protections, January, 1978. (This report led to the adoption of state statute 7-246 which establishes Water Pollution Control Authorities and advises towns to develop Water Pollution Control Authorities and advises town to develop Water Pollution Control Plans.)

Septage Treatment and Disposal Report for Goshen, by Hiram A. Tuttle and Associates, Niantic Connecticut, July 1981. (Preliminary study for the town septage disposal facility, eventually built in 1984 at the Woodridge Treatment Plant.)

Sewer, Water, and Drainage in the Litchfield Hills Region, Litchfield Hill Planning Agency, Torrington, Connecticut, June 1973. (Studies of the 11 regional town and existing and proposed areas for major utility service, such as sewer and water line from 1973 with a projection of 50 years growth in population.)

Soil Survey – Litchfield County Connecticut; U. S. D. A Soil Conservation Service, Storrs, CT, November, 1970. (Complete soils maps of the county along with descriptions of each pertaining to the soil's limitations for development.)

State Policies Plan for the Conservation and Development of Connecticut, 1987-1992 (with Location Guide Map), State Office of Policy and Management, Hartford, Connecticut. Studies of projected growth of the state with plans for diverse areas, such as health services, education and natural resources. State plan for water supply is pertinent to this report.)

Wastewater Feasibility for Goshen, Roger Whitney, Engineers, Avon, Connecticut, May 1971. (Written concurrently with the Woodridge Lake Sewer Study to investigate sewage disposal in Torrington and Litchfield for Goshen.)

Water Quality Classification Map of Connecticut, compiled by James Murphy, State Department of Environmental Protection, Water Compliance Unit, 1987. (Shows both ground and surface water classifications regarding drinkability.)