

COMPREHENSIVE SEWER PLAN -- EXECUTIVE SUMMARY

The purpose of this Comprehensive Sewer Plan is to provide the Clinton Water District with versatile, concept-level options for planning wastewater management in the community.

A variety of modern wastewater treatment options are available that can significantly reduce the threat of pollution to the local environment, improve public health conditions and meet potential future population growth land utilization opportunities. Over the past decade, many new technologies have been approved for wastewater collection, treatment and disposal. These new technologies expand the viable options available for rural communities such as Clinton.

The purpose of this Comprehensive Sewer Plan, therefore, is to present these options within the framework of the particular characteristics of Clinton's community. These characteristics include, but are not limited to, its topography (three distinct drainage basins); the mixed uses of upland and beachfront properties; its rural character; the seasonal occupancy of residential housing; that currently all wastewater treatment and disposal is some form of on-site septic system; land-use zoning regulations, and, finally, the variety of localized needs regarding wastewater management.

A versatile set of options will allow a greater range of choices to address wastewater collection, treatment and disposal in conjunction with the specific characteristics of Clinton. In the chapters that follow, five options are developed. No single option is recommended consistent with the above-stated purpose.

The five options are:

Option (1) Onsite Wastewater Systems: This option involves the continued use of traditional, privately-owned septic systems and advanced onsite systems for single lots as well as cluster systems. The objective of this option is to actively promote good operation and maintenance practices of existing onsite systems and to develop solutions for replacing or upgrading existing systems and for designing and building new systems in the future. Such onsite systems would be permitted and regulated by Island County Health Department; however, DOH or DOE may regulate some larger systems. This option was developed by the public and is not intended to be offered as an equivalent to the other options. This option is, however, an immediate positive step toward preventing pollution of groundwater and provides the community with direction for solving some existing and future wastewater management issues. Refer to Appendix B for a detailed presentation of this option.

Option (2) Three De-Centralized MBR Plants with Reclamation and Reuse: This option suggests locating three separate small MBR treatment plants at selected sites within the proposed service area and effluent disposal is accomplished by reclamation and reuse methods. Solids are not conveyed to

the treatment plant and individual septic tanks are used to retain solid onsite. Wastewater is conveyed to the treatment plant by a low-pressure STEP system; however, grinder pump systems could be used as well.

Option (3) Single Centralized MBR Plant with Reclamation and Reuse: The treatment technology and method of sewage collection and disposal are the same as Option (2) but with one single plant instead of three small-sized treatment plants.

Option (4) Single Centralized SBR Plant with Reclamation and Reuse: Sequencing Batch Reactor process (SBR technology) with tertiary filtration allowing reclamation and reuse of wastewater effluent. A single treatment facility would serve the entire proposed service area. All wastewater is conveyed to the treatment plant by a combination of gravity pipeline and, for certain areas, by vacuum and grinder systems. No onsite septic tanks are required

Option (5) Single Centralized SBR Plant with Marine Outfall: SBR treatment process would produce secondary effluent (not reclaimed water) and effluent disposal is by marine outfall instead of reclamation and reuse methods. A single treatment facility would serve the entire proposed service area. Sewage collection system is generally the same as Option (4).

Recommendation:

A specific, single recommended option is not offered by this plan but rather it is suggested that any of the five options may be pursued by the community depending on the circumstances at the time of decision-making. This plan outlines the advantages and disadvantages of Options 2 through 5 and provides estimates of costs and timeframes for implementation. Option 1 is a community-driven alternative that could be implemented immediately, that is expected to have positive environmental impacts and might potentially serve as a conditional-long-term solution.