

# COUNTY OF SUFFOLK



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DEPARTMENT OF HEALTH SERVICES

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Commissioner

**May 5, 2014**

**SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES  
GENERAL GUIDANCE MEMORANDUM #28  
GUIDELINES FOR SITING PROPOSED OR EXPANDED  
SEWAGE TREATMENT PLANTS**

## **AUTHORITY**

The Suffolk County Department of Health Services (“SCDHS,” the “Department”) performs siting reviews of proposed or expanded wastewater treatment plants to ensure conformance to Article 6, Sections 760-605 and 760-607, and Article 2, Section 760-221 of the Suffolk County Sanitary Code (SCSC). In addition, siting of these systems is necessary as stipulated in Section A3 of Appendix A, Section B3 of Appendix B, and Section XI of the Department’s “*Standards for Approval and Plans and Construction for Sewage Disposal Systems for Other Than Single Family Residences.*” Also, the Department performs siting reviews to help in protecting our water resources in accordance with Article 3, Section 760- 306, paragraphs 3 & 4 of the SCSC.

## **PURPOSE**

This document updates and replaces *General Guidance Memorandum #1- Guidelines for Siting Sewage Treatment Plants and Other Disposal Systems*, issued by the Office of Water Resources, dated June 29, 2009.

This document has been prepared to provide guidance based upon outcomes of a long history of Sewage Treatment Plant (STP) siting reviews performed by SCDHS, and outlines the requirements necessary for siting proposed or expanded STPs to determine potential impacts to existing or planned drinking water supplies, and surface water features such as wetlands, lakes, streams and embayments. Potential impacts to neighboring properties that may occur as a result of elevated groundwater levels or flooding may also be evaluated as required.

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## **GUIDANCE**

All proposed or expanded STPs will require a separate siting review by the SCDHS. The Department will continue to coordinate reviews with the appropriate public water suppliers that may be affected, and review potential impacts to private drinking water wells and surface water features as indicated above. Alternatives to the construction of on-site STPs that should always be explored include connection of the project to a municipal sewer district or to an existing off-site treatment facility. When performing siting reviews, the Department will evaluate potential impacts to existing or planned public water supply wells and private drinking water supplies wells from STPs using a variety of resources. These may include, but not be limited to Source Water Assessment data, hydrogeologic reports, and historical water quality results. In addition, potential impacts should be evaluated as part of the Environmental Impact Statement (EIS) as part of the SEQRA process.

Listed below is additional guidance that may be used when siting proposed or expanded STPs.

### **Drinking Water Supplies**

- It is recommended that STPs not be located within the 0-2 year groundwater contributing areas to public supply wells, as identified as part of the 2007 Source Water Assessments prepared by Camp Dresser & McKee Environmental Consultants (CDM). This travel time was determined as part of the NYSDOH's sensitivity analysis of microbial contaminants performed for the 2003 Source Water Assessment Plan (SWAP).
- The siting of STP discharges within the 2-50 year groundwater contributing areas to public supply wells should be minimized to the extent feasible. However, when an STP is located within this travel time, the applicant shall provide an advanced treatment process that consistently reduces the total nitrogen concentration to the maximum practical extent. Also, the SPDES permit conditions issued for these systems shall require the nitrogen discharge goal be significantly lower than 10 mg/l.
- For STP discharges within the 2-50 year groundwater contributing areas to public supply wells, the applicant shall demonstrate that the nitrogen mass loading is significantly reduced by the proposed project, as compared with the mass loading that can occur with a development that complies with the density requirements of Article 6 of the SCSC. A total nitrogen concentration of 50 mg/l may be used when calculating the equivalent mass loadings.
- When it is determined that private drinking water supplies may be impacted by the proposed project, the department may require that the applicant offer to connect affected dwellings served with private wells to a public water supply (this may necessitate the extension of public water to affected properties).

### **Surface Waters**

- The siting of STP discharges within 0-25 year groundwater contributing areas to sensitive surface waters should be minimized to the extent feasible. However, when an STP is located within this travel time, the applicant shall provide an advanced treatment process that consistently reduces the total nitrogen concentration to the maximum practical extent. Also, the SPDES permit conditions issued for these systems shall require the nitrogen discharge goal be significantly lower than 10 mg/l.

- For STP discharges within 0-25 year groundwater contributing areas to sensitive surface waters, the applicant shall demonstrate that the nitrogen mass loading is significantly reduced by the proposed project, as compared with the mass loading that can occur with a development that complies with the density requirements of Article 6 of the SCSC. A total nitrogen concentration of 50 mg/l may be used when calculating the equivalent mass loadings.

### **Potential Impacts to Neighboring Properties**

- The Department may require the applicant to evaluate potential impacts to neighboring properties that may result from the construction and operation of a new STP. (e.g. flooding that may occur from elevated groundwater conditions). For these situations, the submission of a supplemental detailed technical report prepared by a design professional may be necessary.

## **PROCEDURE**

### **Submission of Preliminary Plans**

All design professionals are encouraged to submit preliminary plans that show the location of treatment and discharge facilities for any proposed or expanded STP prior to the environmental review process in order to ascertain general water resource concerns. Once the Department has reviewed the preliminary plans, additional information and/or submittals may be necessary to address any comments; it is also possible that an alternative site or revised proposal will be recommended prior to the SEQRA process. Submittal of preliminary proposals may be made prior to the submission of a formal application to the Department's Office of Wastewater Management. A comprehensive engineering report is not typically required for these preliminary submissions; however, a sufficient amount of information must be provided to the department for our review and evaluation. This includes:

- The proposed design flow and overall description of the treatment process
- A detailed site plan and layout of the plant and disposal facilities
- Surface contours, grading and elevations
- Soils borings, and groundwater elevations
- The nearest locations of the nearest public water supply wells and/or surface waters
- The location of any private wells within 500 feet of the proposed STP

## **EXCEPTIONS**

Siting evaluations are performed on a case-by-case, site specific basis, and include numerous complex variables, such as hydrogeology, soil conditions, projected sewage flow rates, and existing groundwater quality. As such, the information listed above is for general guidance purposes only. In certain situations, alternative approaches and guidelines may be necessary to protect environmental health. In these cases, the Department will provide the rationale in writing for any variations to the above guidelines.

**EFFECTIVE**

This document is for guidance purposes only and becomes effective for all applications received after the date of this memorandum. It should apply to most cases, but it is not a standard and is not meant to substitute for the discretion of the reviewer.

Issued by: *Signature on file*  
Walter J. Hilbert, PE, Chief  
Office of Wastewater Management