

COUNTY OF SUFFOLK



Steven Bellone
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES
JAMES L. TOMARKEN, MD, MSW, MPH, MBA, FRCP, FACP
Commissioner

Barry Paul
Deputy Commissioner

Office of Wastewater Management

Report on the Sewage Treatment Plants of Suffolk County
2012 Performance Evaluation

Walter Dawydiak, P.E.
Acting Director
Division of Environmental Quality

Walter Hilbert P.E.
Chief
Office of Wastewater Management



Prepared by: Charles Olsen
Senior Public Health Sanitarian

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Executive Summary

In 2012 there were 195 sewage treatment plants (STP) operating in Suffolk County. These plants are regulated under the terms and conditions of a State Pollution Discharge Elimination System (SPDES) Permit. In 2012, Suffolk County Department of Health Services (SCDHS) performed inspections of all of the aforementioned STPs under its jurisdiction. Out of 195 STPs, 168 plants are capable of reducing BOD₅ (Biochemical Oxygen Demand), SS (Total Suspended Solids), and N (Total Nitrogen) and are categorized as tertiary plants and 27 plants are capable of reducing BOD₅ and SS only and are categorized as secondary plants. Of the existing tertiary facilities, 11 plants are either seasonal, or not in steady-state making the total number of tertiary plants 157 for consideration in the performance average.

SCDHS has been actively requiring the older plants that are underperforming and/or lacking nitrogen removal capability, to undergo major renovations or replacement by a new treatment plant. Currently, 22 tertiary plants that are in non-compliance with their SPDES Permits are undergoing upgrade and/or repairs. 15 of the 27 existing secondary plants are in the process of transition to tertiary treatments with the addition of a nitrogen removal system. Renovations of a significant number of the tertiary plants are expected to be completed during 2013. Furthermore, most of the secondary facilities are expected to complete their upgrades by the middle of 2014.

The life expectancy of a sewage treatment plant is approximately 30 years. There are many plants in Suffolk County that have been operating in the range of 25 to 40 years. Therefore, a few plants always undergo repairs and/or major renovations and during the construction it is expected that the plants' effluent quality would deviate from their SPDES Permit limitations. For such cases, the Department always enforces maintenance of the effluent quality to the extent reasonably achievable under the circumstances.

During 2012, the STP inspection program was modified. Instead of a standardized schedule of quarterly inspection of each plant, the number of inspections per year per facility was modified based on pollution risk factor. Well operated plants complying with their SPDES Permit were inspected bi-annually and high risk plants were inspected quarterly. A total of 633 inspections were performed and samples were collected at the time of inspections. The analyses reports of these samples along with the NYSDEC Discharge Monitoring Reports (DMR) were evaluated. The categories are color coded and the facilities have been sorted based upon their ownership, level of performance and physical conditions as shown on the following table:

Color	Ownership	Risk Level	No. of Plants	No. of Tertiary Plants	Average TN (Tertiary Only) in mg/L	Average TN (All Tertiary Plants Combined) In mg/L
Blue	Municipal	Low	43	34	5.5	8.6
Green	Private	Low	92	83	5.9	
Red	Private	High	60	40	17.0	

Furthermore, all the 16 treatment plants that discharge to surface waters met the required fecal coliform limit of <800 MPN/100 ml with only a few excursions. The average total nitrogen concentration for all the 157 tertiary treatment plants operating in steady state condition was 8.6 mg/L. The average BOD₅ and SS of all the 24 secondary plants operating in steady state condition was 20.8 and 16.6 respectively. The results are within the NYSDEC permit limits.

Based upon the following evaluation criteria of number of inspections, total number of high risk facilities, and total nitrogen performance, the new risk based program has been a success.

	2011	2012	2013
Inspections Required	768 (4 inspections/yr)	633 (new program as of July 2012)	510 (fully implemented program)
Inspection Performed	768	633	510 (Planned)
Number of High Risk Facilities	N/A	60	60
Total Nitrogen	9.9 mg/L	8.6 mg/L	To be determined

STP Program Overview

Purpose

The residents of Suffolk County depend upon groundwater for their drinking water needs. The groundwater is contained within a sole source aquifer that extends throughout Long Island. For this reason it is extremely important that the quality of the aquifer remain as pristine and pure as possible. Every effort must be made to prevent this natural resource from being polluted.

Suffolk County has a population of approximately 1.5 million and much of the wastewater generated by this population is discharged back into the aquifer. One potential pollutant contained within the wastewater is nitrogen. The Suffolk County Sanitary Code limits building density throughout the region as one method of limiting the detrimental effects of nitrogen from human sources to our aquifer. Another method of limiting nitrogen is by mandating an on-site sewage treatment plant when a proposed project exceeds the allowable population density of the parcel selected for the project. Approximately 70 – 75% of the County’s population is served by conventional on-site sewage disposal systems consisting of septic tanks and leaching pools. The remaining 25 – 30% of the population is served by sewage treatment plants.

In 2012 there were 195 STPs in operation in Suffolk County. 168 plants were designed to remove nitrogen from the wastewater stream all year long and are considered as “Tertiary Plants”. They typically have a discharge limit of 10 mg/L of total nitrogen. 27 facilities are considered as “Secondary Plants” and are required to reduce BOD₅ and SS to 30 mg/L in accordance with their SPDES Permit. Of the existing tertiary facilities, 11 plants are either seasonal, or not in steady-state making the total number of tertiary plants 157 for consideration in the performance average. The Department requires installation of monitoring wells at each sewage treatment facility that discharges to groundwater in order to detect any impacts on the groundwater in the area by the discharge of the effluent.

All the 195 treatment plants have a discharge limitation range of 5.5 – 8.5 for pH. Furthermore, facilities that discharge to surface water are subjected to a total fecal coliform standard that varies upon location, but is generally within the range 200 – 800 MPN/100 ml. There are 16 facilities that discharge to surface waters and must meet the aforementioned coliform limitations.

Program Aspects

The goal of the program is to ensure that the overall yearly rolling average of nitrogen concentration of all the tertiary plants operating in Suffolk County is maintained at or below 10 mg/L and the overall yearly rolling average for BOD₅ and SS of all the tertiary and secondary plants remain at or below 30 mg/L and in strict compliance with their SPDES Permit requirements. A number of various activities were formulated in order to achieve this goal and the mechanism has proven to be effective, as the annual reports of last several years show gradual improvement and advancement towards the goal.

The activities may be categorized as follows:

- Engineering
- Inspection
- Clerical

Engineering Activities: The following responsibilities are performed:

- Issuance of SPDES Permit
- Approval of applications for new construction - Approval involves review of engineering report, detail design plans and specifications, and shop drawings for equipment for the proposed treatment plant. Also, review of site plans for sewage collection and water distribution systems, water design report, and preparation of other pertinent paperwork.
- Approval of applications for repair/upgrade/replacement of existing plants – Approval involves review of engineering report, detail design plans and specifications, and shop drawings for equipment.
- Approval of applications for municipal sewer extension – Approval involves review of engineering report, detail design plans and specifications in coordination with other municipalities as well as the County Sewer District.
- Inspection of construction at various phases.
- Inspection of equipment start-up prior to commencement of plant operation.
- Evaluation of new technologies for acceptance in Suffolk County.
- Involvement with various studies, for example, OSDS Study, Sewer Study, etc.
- Discuss sampling analyses data with the inspectors.

Inspection: The responsibilities involve the following:

- Quarterly inspection of each of the 195 plants. Samples are collected at the time of inspection.
- Preparation of violation notices for underperforming facilities or facilities with deteriorating physical conditions.
- Inspection of the required repairs to bring the non-conforming facilities into compliance.
- Emergency inspections.
- Preparation of Orders on Consent for consistently non-conforming facilities.
- Review of sampling analyses reports and monthly Discharge Monitoring Reports (DMRs) furnished by the plant operators.
- Updating SPDES Database.
- Updating records of Capital Fund and Maintenance Fund for each treatment plant.

Clerical: The responsibilities involve the following:

- Input data from analyses reports and DMRs.
- Process of SPDES Permits.
- Follow-up of violation notices sent by inspectors.
- Keeping track of submission deadlines for facilities with Order on Consent.
- Assisting inspectors in preparation and execution of Order on Consent.
- Maintaining updated status of Letters of Credit.

STP Program Description

History

The STP Program was organized in 1998 in response to the new NYSDEC Regulations that required all the existing facilities that were discharging sanitary wastewater in excess of 30,000 gallons per day to groundwater and new STPs to strictly comply with their nitrogen removal standards. The requirement caused proliferation of sewage treatment facilities in Suffolk County necessitating management and control of the performance of these facilities to protect the quality of groundwater from deterioration as most of the treatment plants discharged treated wastewater into the ground. The Department assigned two NYS certified wastewater treatment plant operators to work under the supervision of a NYS licensed engineer specialized in sewage treatment plant design and operation. A set of criteria was formulated based on experience and good engineering practice. The inspectors utilized these criteria to evaluate each STP's performance and physical condition. The program commenced quarterly inspection of all the STPs.

In April 2008, a policy involving more stringent enforcement was enacted. The policy requires a legal action for any unsatisfactory conditions noted at a sewage treatment facility at the time of an inspection. This legal action involves monetary penalties for the first time violation and doubling the dollar amount for each repeated violation. Furthermore, the policy requires issuance of Consent Orders for facility in need for substantial upgrade involving considerable construction time and funds. The purpose of the Consent Order was to organize the required construction within a fixed time frame in order to bring a failing treatment facility into compliance without unnecessary delays.

During the last 15 years 100 new STPs were constructed which includes 20 plants that replaced existing facilities whose physical conditions and/or treatment capability deteriorated over the years. 14 existing plants were upgraded from secondary to tertiary treatment and over 70% of the existing plants have undergone extensive repairs in accordance with the Department's requirements.

By the end of 2010, the total number of STPs in the County increased to 193. In order to handle the increased workload one additional engineer and one clerical staff were assigned to the program.

Suffolk County receives reimbursement from the NYSDEC for inspection of the treatment plants per an existing contract between the Department and NYSDEC. The Department is responsible to inspect all the 195 STPs, while only 155 private plants fall under the Department's jurisdiction. The rest of the 40 plants are municipal and are regulated by NYSDEC under their jurisdiction.

New Initiatives in 2012

In 2012, the STP program was reorganized due to staff reduction. One engineer and the clerical staff were reassigned to other programs within the Department. The program is now operating with one full time NYS licensed engineer and two full time NYS certified operators. The inspectors assumed all the duties performed by the clerical staff. In order to handle all the workload as efficiently as possible, yet maintaining the continuity of routine inspections of all the STPs, the inspection program was restructured with the inception of the "Risk Based Inspection Program".

The new inspection program instituted inspection and sampling of each of the well operated treatment facilities bi-annually and all the underperformed or "high risk" facilities will be inspected four times a year. According to this plan, all the facilities will be inspected during January, February March and April. During May and June, only the "high Risk" facilities will be re-inspected. The schedule will then be repeated for the second half of the year. However in 2012, all the 195 STPs were inspected and sampled during the first, second and third quarters till October. The high risk facilities were re-inspected during the following two months. All the facilities are categorized into three color coded groups as shown in the following table:

Group	Facility Description	Risk Level	Yearly Inspections
Blue	Municipal, Industrial and DPW operated plants meeting SPDES Permit. Enforcement is under NYDEC's Jurisdiction	Low	2
Green	Privately owned plants meeting SPDES Permit	Low	2
Red	Privately owned plants not in steady state and/or not meeting SPDES Permit	High	4

The following table further categorizes the Red group based on the associated issues:

Issue	Description
A	Facility is currently under Order on Consent
B	Facility is currently under Voluntary Compliance Agreement
C	Facility does not consistently comply with the conditions of its SPDES Permit
D	Past history warrants follow up inspections
E	DMR Laboratory results are inconsistent with SCDHS data
F	Plant is not yet in steady state.

A reader must refer to the above table while going through the sample results for 2012 provided under the appendix.

Planned Initiatives

The Department receives monthly NYSDEC Discharge Monitoring Reports (DMR). The STP staff review the DMR data along with the analyses report of samples collected by the staff during inspection of the treatment facilities. Based on the evaluation of these data, the level of performance of each facility is determined. In order to keep all the facilities in strict compliance with their SPDES Permit requirements, effective January 1, 2013, the department will implement the following method as a basis of detecting a non-complying facility:

A facility will be considered a "Significant Non Complier" (SNC) whenever the facility exceeds its permit limit(s) by greater than 40% three times in six consecutive months, Or,

A facility will be considered a “Significant Non Complier” (SNC) whenever a six-month rolling average exceeds its permit limit(s).

Note that failing to submit a DMR or Submitting an incomplete DMR will be considered as “Significant Non Complier” (SNC) as well. Upon classifying a facility as a SNC, the Department will initiate legal actions against the facility which may incur monetary penalties.

In order to handle all the paperwork associated with reviews and inspections more effectively and efficiently, The Department is planning to modify the STP database in order to enable it to automatically generate inspection follow up letters and legal documents by gathering pertinent information from its inspection files. Several need-based form letters will be composed for this modification so that only address, salutation, date, and in some cases, reason sections will be automatically populated prior to printing out the letter making it a simple and less time consuming task for the staff.

The Department is currently revising the operating and maintenance standards for sewage and industrial section of Article 7, Suffolk County Sanitary Code and planning on completing it in 2013. The new revision will enhance the requirements to be met by operators and the owners of the treatment plants. The new standards will clearly describe the responsibilities of the operators, the owners and the engineer of record. This will help augment the level of performance and physical conditions of the facilities.

Sample Results for 2012

Effluent data from all the STPs in Suffolk County are evaluated to determine compliance with their SPDES permit conditions. Tertiary plants that discharge to groundwater are subjected to limitations for TN, BOD₅, SS, and pH. Secondary plants discharging to groundwater have limitations for BOD₅, SS and pH. The plants that discharge to surface water are subjected to a limitation for Fecal Coliform. It must be noted that some plants have within their SPDES Permits with varying limitations for BOD and SS depending on different calculated averages; 7 day, 30 day or 6 hr. For the Department’s enforcement work, 30 day monthly average of BOD and SS is used. The following table lists the aforementioned parameters and the corresponding limits:

Parameter	TN	BOD ₅	SS	Fecal Coliform	pH
Limit/Range	10 mg/L	30 mg/L	30 mg/L	800 MPN/100 ml	5.5 to 8.5 S.U.

In 2012, all of the active plants in Suffolk County were inspected and sampled a minimum of 3 times in a 12 month period. 60 plants were considered to be high risk and were inspected 4 times. A total of 633 inspections were performed and over 2700 sample parameters were analyzed. The parameters included total nitrogen, BOD₅, SS, total and fecal coliform and pH. Some additional samples were taken from plant effluent for organic and metal analyses from some municipal sewer districts. All of the samples collected for analyses by the Department staff were grab samples. Samples analyzed for DMR were collected by the treatment plant representatives. All the samples were collected prior to discharging into the groundwater or surface water. There were some treatment facilities that had effluent flow well below their permitted flow. This was due to the low occupancy of the communities they served and hence a low daily discharge into their systems causing difficulty in meeting their SPDES discharge standards. The Department classified these plants as “Not in Steady State”.

The results are displayed in the Appendix. Equipment failure at any facilities and /or operational transients can negatively affect the reported numbers by skewing the average higher. While reviewing the averages it must be kept in mind that Suffolk County never eliminates transients from their calculations.

The following table shows average effluent data for the color coded categories for 2012 under the “Risk Based Inspection Program”:

Effluent Parameter	Limit (mg/L)	Blue (Municipal, Low Risk) (mg/L)	Green (Private, Low Risk) (mg/L)	Red (All High Risk Plants) (mg/L)	Average (mg/L)
TN	10	5.5	5.9	17.0	8.6
BOD ₅	30	12.9	16.7	26.8	19.9
SS	30	14.6	15.0	18.4	16.6

Facility Status for 2012

In order to ensure adequate operation of all the sewage treatment plants located within the County, Suffolk County Department of Health Services, in accordance with the Environmental Protection Agency and the State Department of Environmental Conservation (NYSDEC) has adopted the State Pollutant Discharge Elimination System (“SPDES”) Permit Program. This program has been operating for the past 30+ years and has proven to be effective in monitoring and overseeing all sewage treatment plants. Under this program, every sewage treatment plant must obtain a “SPDES” Permit prior to commencing operation in Suffolk County. In accordance with the terms and conditions of the Permit, facilities are to be under the responsible supervision of a certified New York State operator and meet certain effluent discharge standards. These facilities are subject to inspections and samplings performed through the Suffolk County Department of Health Services and other agencies.

In addition to the SPDES program, Suffolk County promulgated Article 7 which regulates sewage and industrial waste treatment plants. This health code regulates facility operation and maintenance and is effective as an enforcement tool in keeping the wastewater facilities well managed and compliant.

All operators of sewage treatment plants in New York State are required by the facility SPDES permit to sample and monitor the influent, effluent, process tank mixture and test wells and record the results in a DMR. The DMR monthly data is required to be submitted to the SCDHS and NYSDEC for review and any permit excursions must be explained within the reports. Any DMR excursions are evaluated by the NYSDEC and SCDHS for possible legal action.

When inspections of the plants indicate violations, especially on a follow up basis, legal action is taken against the owner of the facility. Legal action is enforced through fines and consent orders (CO). Fine involves monetary penalty up to \$2,000/day. Consent Orders are issued for plants requiring substantial repairs/upgrades that involve considerable construction time and fund. Consent order limits completion of construction of the required repairs/upgrades within a fixed time frame. There have been a total of 38 legal actions and 5 consent orders issued against sewage treatment plants in 2012.

Currently, 22 treatment plants that are designed to remove nitrogen are in the process of undergoing upgrades and repairs with the goal to bring these facilities into compliance. 15 of the 27 existing secondary plants are in the process of adding a nitrogen removal system to their process. Since many plants in Suffolk County have been operating in the range of 25 to 40 years, a few plants are always under repair or in need of replacement. It must be noted that the life expectancy of a plant is approximately 30 years and it may take up to 2 years to replace an aging plant. A vast majority of the tertiary plants will complete their renovations during 2013. Most of the secondary facilities will be completing their upgrades before the middle of 2014.

Conclusion

During 2012 the office of Wastewater Management executed 633 inspections and sampled the effluent leaving the 195 STPs in the County during each of these inspections. Along with the corresponding data from these sampling events, data that was reported on New York State Department of Environmental Conservation (NYSDEC) Discharge Monitoring Reports (DMR) are analyzed. The average Total Nitrogen of all the 126 tertiary facilities that were in steady state and were not covered under an Order on Consent was 5.4 mg/L. The average Total nitrogen for all the 157 tertiary plants including the “high risk” plants was 8.6 mg/L. Based on the evaluation of the data it can be said that the technologies currently utilized in Suffolk County have the potentiality of effectively treating wastewater and thereby, protecting the County’s aquifer.

It is important to note that regulations limiting nitrogen loading from sewage treatment plants are more restrictive than those permitted for residential housing units per acre of development. Sewage treatment plants that service communities in Suffolk County typically contribute less nitrogen loading per unit to groundwater than does a typical residential housing unit per acre. Even when a STP discharges a Total Nitrogen of 20 mg/L it discharges less nitrogen loading per unit than residential homes built on a ½ acre lot. In 2012, 92% of the tertiary plants discharged effluent nitrogen less than this amount. This includes those facilities considered as “High Risk” by the Department. Therefore, treatment plants are more effective in protecting the drinking water of Suffolk County than on-site conventional sub-surface sewage disposal systems for single family homes.

The plants that are required to perform secondary treatment are performing equally well. Sampling has shown that the overall effluent concentrations for BOD₅ averaged 19.9 mg/L and suspended solids averaged 16.6 mg/L for all the tertiary and the secondary plants. The discharge limit for suspended solids and for BOD₅ is 30 mg/L. In addition, all the 16 treatment plants that discharge to surface waters met the required fecal coliform effluent guideline of <800 MPN/100 ml with only a few excursions.

The plants utilizing newer technologies such as SBR, oxidation ditch, modular aeration and BESST have improved efficiency in removing nitrogen compared to the older denitrification plants. As the older denitrification plants are upgraded, it is expected that the overall effluent results will show noticeable improvement of the current numbers.

The new risk based inspection program has proven successful in 2012. Since the program commenced in July 2012, the total number of inspections required was 633 and the total number of inspections performed was 633. Moving forward in 2013, the annual program will result in approximately 510 inspections per year being performed. In addition, based upon the following evaluation criteria of number of inspections, total number of high risk facilities, and total nitrogen performance, the new program has been a success.

	2011	2012	2013
Inspections Required	768 (4 inspections/yr)	633 (new program as of July 2012)	510 (fully implemented program)
Inspection Performed	768	633	510 (Planned)
Number of High Risk Facilities	N/A	60	60
Total Nitrogen	9.9 mg/L	8.6 mg/L	To be determined

From the data, it is apparent that when treatment plants are operated and maintained properly, they can generate effluent quality below drinking water standards. Overall, these results show that the surface waters and the groundwater of Suffolk County are receiving treatment plant discharges that are well processed and mostly meeting effluent limitations. The results also reveal that the averages of the last year's effluent samples have improved over the past years. This improvement is due to the Department's enhanced inspection and enforcement program predicated on plant operations, facility maintenance and plant structural conditions. It is anticipated that the Department's wastewater management program and policies will continue to keep the facilities operating at the desired level in the coming years.

APPENDIX

DMR DATA & SCDHS COLLECTED SAMPLE DATA

2012 SCDHS Inspection Data and Monthly DMR Data
Municipal/Industrial/DPW Plants
BOD and SS

Sewage Plant Name	OOO	Sample	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SC#1	SC#2	SC#3	SC#4	Avg.
Bergin Point	No	BOD	9.0	9.0	6.0	4.0	7.0	8.0	8.0	6.0	9.0	9.0	17.0	7.0	12.0	1.0	7.0		7.9
		SS	21.0	20.0	12.0	8.0	20.0	15.0	20.0	25.0	24.0	23.0	37.0	15.0	5.0	5.0	5.0		17.0
Brookhaven Town	No	BOD	STP converted to a secondary facility. No Data.												64.0	1.0	1.0		22.0
		SS	STP converted to a secondary facility. No Data.												5.0	38.0	5.0		16.0
Calverton Ent. Park	No	BOD	15.0	36.0	16.0	16.0	35.0	24.0	40.0	19.0	9.0	20.0			50.0	2.0	25.0		23.6
		SS	11.0	35.0	32.0	32.0	20.0	12.0	14.0	12.0	17.0	30.0				20.0	5.0		20.0
Ocean Beach	No	BOD	2.0	2.0	6.0	4.0	4.0	14.0	8.0	27.0	23.0				1.0	1.0	42.0		11.2
		SS	4.0	4.0	4.0	5.0	4.0	4.0	11.0	8.0	11.0				5.0	5.0	5.0		5.8
Plum Island	No	BOD	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		5.0	2.0	1.0	24.0	1.0		3.6
		SS	12.0	17.0	12.0	11.0	12.0	12.0	8.0	7.0	12.0		11.0	6.0	5.0	5.0	5.0		9.6
Riverhead Town	No	BOD	4.0	6.0	4.0	7.0	7.0	10.0	4.0	6.0	6.0	18.0	21.0	12.0					8.8
		SS	7.0	7.0	4.0	1.0	5.0	12.0	30.0	22.0	10.0	18.0	99.0	18.0					19.4
																Average BOD			12.9
																Average SS			14.6

Total Facilities	6
Facilities Considered in Average	6
Facilities Omitted From Average	0

2012 SCDHS Inspection Data and Monthly DMR Data

Low Risk Plants
BOD and SS Results

Sewage Plant Name	OOC	Sample	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SC#1	SC#2	SC#3	SC#4	Avg.	
Cedar Lodge	No	BOD	2.0	6.0	9.0	13.0	11.0	9.0	9.0	6.0	2.0	5.0	13.0	4.0	16.0	44.0	1.0		10.0	
		SS	42.0	23.0	36.0	48.0	25.0	27.0	20.0	10.0	10.0	10.0	13.0	31.0	6.0		5.0	50.0		24.7
Fairhaven Nesconest	No	BOD	14.0	18.0	7.0	15.0	11.0	2.0	4.0	4.0	2.0	2.0	4.0	9.0	26.0	16.0	12.0		9.7	
		SS	21.0	14.0	6.0	11.0	13.0	4.0	10.0	10.0	10.0	10.0	10.0	10.0	14.0	24.0	5.0	5.0		11.1
Sloan Kettering	No	BOD	6.0	7.6	1.0	6.0	16.0	17.0	1.0	49.0	1.0	6.0		1.0	70.0	10.0	20.0		15.1	
		SS	4.0	3.0	5.0	2.0	1.0	15.0	1.0	3.0	1.0	5.0		2.0	5.0	16.0	50.0		8.1	
Rocky Point Apts.	No	BOD	90.0	61.0	19.0	7.0	8.0	6.0	1.0	5.0	7.0	2.0	8.0	5.0	78.0	17.0	1.0		21.0	
		SS	67.0	16.0	33.0	20.0	5.0	23.0	5.0	22.0	5.0	5.0	5.0	5.0	64.0	1.0	5.0		18.7	
Shelter Island Heights	No	BOD	7.0	3.0	6.0	5.0	11.0	4.0	35.0	24.0	52.0	7.0	2.0	2.0	8.0	80.0	48.0		19.6	
		SS	9.0	6.0	5.0	6.0	4.0	8.0	58.0	45.0	16.0	8.0	7.0	4.0	9.0	5.0	42.0		15.5	
Somerset Woods	No	BOD	23.0	30.0	4.0	1.0	80.0	44.0	30.0	8.0	11.0	22.0	36.0	1.0	24.0	45.0	14.0		24.9	
		SS	31.0	23.0	7.0	5.0	5.0	2.0	1.0	3.0	1.0	3.0	13.0	1.0	52.0	28.0	5.0		12.0	
																Average BOD				16.7
																Average SS				13.9

Total Facilities	6
Facilities Considered in Average	6
Facilities Omitted From Average	0

2012 SCDHS Inspection Data and Monthly DMR Data
Municipal/Industrial/DPW Plants
BOD and SS

Sewage Plant Name	OOO	Sample	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SC#1	SC#2	SC#3	SC#4	Avg.
Bergin Point	No	BOD	9.0	9.0	6.0	4.0	7.0	8.0	8.0	6.0	9.0	9.0	17.0	7.0	12.0	1.0	7.0		7.9
		SS	21.0	20.0	12.0	8.0	20.0	15.0	20.0	25.0	24.0	23.0	37.0	15.0	5.0	5.0	5.0		17.0
Brookhaven Town	No	BOD	STP converted to a secondary facility. No Data.												64.0	1.0	1.0		22.0
		SS	STP converted to a secondary facility. No Data.												5.0	38.0	5.0		16.0
Calverton Ent. Park	No	BOD	15.0	36.0	16.0	16.0	35.0	24.0	40.0	19.0	9.0	20.0			50.0	2.0	25.0		23.6
		SS	11.0	35.0	32.0	32.0	20.0	12.0	14.0	12.0	17.0	30.0				20.0	5.0		20.0
Ocean Beach	No	BOD	2.0	2.0	6.0	4.0	4.0	14.0	8.0	27.0	23.0				1.0	1.0	42.0		11.2
		SS	4.0	4.0	4.0	5.0	4.0	4.0	11.0	8.0	11.0				5.0	5.0	5.0		5.8
Plum Island	No	BOD	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		5.0	2.0	1.0	24.0	1.0		3.6
		SS	12.0	17.0	12.0	11.0	12.0	12.0	8.0	7.0	12.0		11.0	6.0	5.0	5.0	5.0		9.6
Riverhead Town	No	BOD	4.0	6.0	4.0	7.0	7.0	10.0	4.0	6.0	6.0	18.0	21.0	12.0					8.8
		SS	7.0	7.0	4.0	1.0	5.0	12.0	30.0	22.0	10.0	18.0	99.0	18.0					19.4
																Average BOD			12.9
																Average SS			14.6

Total Facilities	6
Facilities Considered in Average	6
Facilities Omitted From Average	0

2012 SCDHS Inspection Data and Monthly DMR Data

High Risk Plants

BOD and SS

Sewage Plant Name	OOC	Sample	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SC#1	SC#2	SC#3	SC#4	Avg.
Calverton Hills	Yes	BOD	94.0	13.0	11.0	96.0	76.0	81.0	69.0	170.0	65.0	62.0	37.0	150.0	24.0	64.0	60.0		71.5
		SS	15.0	14.0	15.0	5.0	21.0	13.0	25.0	37.0	70.0	50.0	40.0	2.0	28.0	26.0	54.0		27.7
Fairfield on the Bay	Yes	BOD	7.0	12.0	2.0	9.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	22.0	1.0	20.0	4.0	1.0	5.8
		SS	5.0	4.0	6.0	10.0	10.0	11.0	11.0	10.0	12.0	16.0	25.0	49.0	5.0	24.0	5.0	50.0	15.8
Fairfield Commack	Yes	BOD	19.0	13.0	7.0	2.0	15.0	7.0	8.0	9.0	32.0	22.0	9.0	21.0	47.0	51.0	9.0	12.0	17.7
		SS	14.0	3.0	16.0	7.0	6.0	7.0	17.0	6.0	6.0	24.0	15.0	16.0		20.0	19.0		12.6
Heatherwood House	Yes	BOD	14.0	4.0	13.0	2.0	2.0	15.0	2.0	2.0	2.0	5.0	6.0	4.0	1.0	46.0	49.0	37.0	12.8
		SS	11.0	11.0	6.0	18.0	28.0	6.0	10.0	9.0	10.0	5.0	10.0	22.0	5.0	5.0	5.0	5.0	10.4
Heritage Gardens	Yes	BOD	New facility under construction. All sewage flow going to a temporary treatment system. No Data.																
		SS	New facility under construction. All sewage flow going to a temporary treatment system. No Data.																
La Bonne Vie	Yes	BOD	26.0	24.0	1.0	12.0	42.0	38.0	78.0	1.0	1.0	1.0	59.0		17.0	60.0	65.0	50.0	31.7
		SS	3.0	1.0	1.0	7.0	8.0	6.0	20.0	9.0	6.0	4.0	12.0		5.0	42.0	10.0	19.0	10.2
Lexington Village	Yes	BOD	STP is a secondary facility that monitors for Total Nitrogen. No Data.																
		SS	STP is a secondary facility that monitors for Total Nitrogen. No Data.																
Melville Mall	Yes	BOD						34.0	1.0	96.0	90.0			170.0	55.0	62.0		14.0	65.3
		SS						38.0	60.0	40.0	27.0			69.0	5.0	5.0			34.9
Middle Island Co-op	Yes	BOD	11.0	1.0	1.0	7.0	1.0	1.0	1.0	53.0	1.0	8.0		1.0	1.0	1.0	96.0	13.0	9.3
		SS	1.0	1.0	1.0	1.0	1.0	4.0	1.0	1.0	8.0	1.0		1.0	11.0	5.0	76.0	27.0	9.3
Ross Nursing Home	Yes	BOD	Facility under construction. All sewage flow temporarily going to leaching pools. No Data.																
		SS	Facility under construction. All sewage flow temporarily going to leaching pools. No Data.																
Sunrise Garden Apts.	Yes	BOD	33.0	16.0	11.0	16.0	2.0	4.0	17.0	2.0	13.0	2.0		26.0	48.0	55.0	68.0	1.0	20.9
		SS	11.0	5.0	13.0	31.0	16.0	9.0	14.0	15.0	16.0	6.0		12.0	16.0	5.0	5.0	5.0	11.9
Tall Oaks	Yes	BOD	39.0	35.0	38.0	28.0	14.0	15.0	12.0	10.0	11.0	44.0	46.0	101.0	39.0		37.0	20.0	32.6
		SS	22.0	19.0	31.0	14.0	22.0	16.0	25.0	18.0	22.0	18.0	70.0	76.0	72.0	90.0	66.0	68.0	40.6
Townhouse North	Yes	BOD	12.0	26.0	11.0	2.0	18.0	2.0	2.0	8.0	4.0	12.0	25.0		26.0	90.0	9.0	33.0	18.7
		SS	6.0	6.0	10.0	4.0	1.0	10.0	11.0	14.0	16.0	10.0	5.0		5.0	5.0	5.0	5.0	7.5
Townhouse South	Yes	BOD	13.0	48.0	6.0	55.0	56.0	12.0	25.0	2.0	6.0	10.0	11.0	4.0	61.0		26.0	24.0	23.9
		SS	9.0	38.0	2.0	14.0	69.0	17.0	78.0	82.0	13.0	12.0	8.0	10.0	37.0	69.0	19.0	26.0	31.4
Woodhaven Manor	Yes	BOD	2.0	8.0	4.0	4.0	2.0	16.0	107.0	2.0	2.0	5.0	5.0	4.0	14.0	1.0	1.0		11.8
		SS	9.0	3.0	11.0	10.0	6.0	8.0	7.0	8.0	10.0	10.0	7.0	4.0	13.0	5.0	5.0	23.0	8.7

Average BOD	26.8
Average SS	17.0

Total Facilities	15
Facilities Considered in Average	12
Facilities Omitted From Average	3