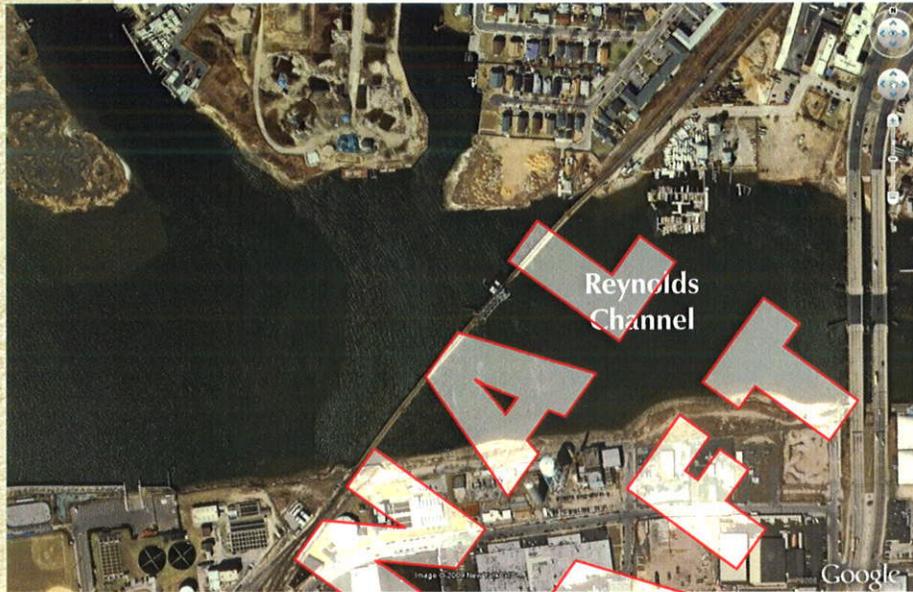


# City of Long Beach

Nassau County, New York



## Long Beach Sewage Treatment Plant Alternatives Feasibility Study



# **FINAL DRAFT**

## **LONG BEACH SEWAGE TREATMENT PLANT ALTERNATIVES FEASIBILITY STUDY**

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**CITY OF LONG BEACH**

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**OCTOBER 2009**

**LONG BEACH SEWAGE TREATMENT PLANT  
ALTERNATIVES FEASIBILITY STUDY**

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**Section 1**

## 1.0 EXECUTIVE SUMMARY

On December 20, 2008 the New York State Department of Environmental Conservation modified the City of Long Beach's State Pollutant Discharge Elimination System (SPDES) permit imposing a compliance schedule to achieve the new discharge effluent limits for ammonia and total residual chlorine. To achieve these new effluent limits and meet the compliance schedule, several options are available to the City. The goal of this report is provide feasible alternatives, preliminary costs of the necessary improvements and recommendations.

Several scenarios have been evaluated as potential options for the City. These are:

1. The City rehabilitates and upgrades its Sewage Treatment Plant (STP) to include nitrification and ultraviolet disinfection facilities.
2. Nassau County takes over the operation of the City's wastewater collection system, constructs a new pump station and force main to convey the City's wastewater to Nassau County's Bay Park Sewage Treatment Plant for treatment.
3. The City operates its wastewater collection system, constructs a new pump station and diverts its wastewater to a County constructed force main to convey its wastewater to the Bay Park facility for treatment.
4. The City rehabilitates and upgrades its Sewage Treatment Plant to include nitrification and ultraviolet disinfection facilities, and expands the plant to serve the Greater Atlantic Beach Water Reclamation District (GABWRD), Point Lookout and Jones Beach State Park, and continues to serve the Lido Beach Collection District.
5. The City rehabilitates and upgrades its Sewage Treatment Plant to include nitrification and ultraviolet disinfection facilities, expands the plant to serve Point Lookout and continues to serve the Lido Beach Collection District.

Each scenario has been evaluated on a conceptual basis including preliminary costs. The most viable options include Scenario 1, upgrading of the Long Beach STP and the decommissioning of the City's sewage treatment plant which includes construction of a pump station and force main to convey all wastewater to the Bay Park Sewage Treatment Plant (Scenarios 2 and 3). Scenario 1, potentially, has the highest cost to the City's residents, whereas the Nassau County diversion alternatives require negotiation and determination of short term and long term detailed costs. In scenario 4, both GABWRD and the New York State Department of

Parks are exploring other alternatives to their wastewater disposal problems, and have not expressed any interest in conveying their wastewater to the City for treatment. In Scenario 5, Nassau County would need to construct a sewer system for the Point Lookout area.

On a preliminary basis, based on past discussions with Nassau County, it appears that during the first five years of operation the cost to the City's residents would be lowest if the County assumes complete operation of the City's sewer collection and diverts all wastewater flows to the Bay Park plant for treatment. After the initial five years a new rate structure would need to be negotiated. If the rate is double, this option would still be the lowest cost alternative to the City's residents. However, negotiation is necessary to determine long term costs.

To comply with the new SPDES permit, the City must hire an engineering firm to develop a preliminary engineering report to further evaluate the most viable alternatives. These include upgrading the existing Long Beach Sewage Treatment Plant to provide nitrification and ultraviolet disinfection facilities and diversion alternatives which would divert the City's wastewater to the Bay Park Sewage Treatment Plant. It is recommended that renew negotiations with Nassau County to divert its wastewater to the Bay Park facility in order to determine short term and long term costs to the City's residents versus continued operation of the City's wastewater collection and treatment facilities. Assistance with the negotiation can be included in the scope of work for the Engineering Report required by the NYSDEC through the modified SPDES permit.

**Section 2**

## **2.0 INTRODUCTION**

### **2.1 Study Objective**

The goal of this report is to provide an evaluation of feasible alternatives available to the City to comply with the new State Pollutant Discharge Elimination System (SPDES) permit standards for effluent discharge into Reynolds Channel, specifically for total residual chlorine (TRC); nitrogen (ammonia removal) and dissolved oxygen. Study outputs will include a conceptual outline with preliminary costs of necessary improvements to the existing Long Beach Sewage Treatment Plant (STP) and additional improvements necessary to regionalize the plant to accept sewage flows from the Lido Beach Collection District, Greater Atlantic Beach Water Reclamation District (GABWRD) and potentially Point Lookout. Flow from the Jones Beach STP, envisioned as a possible contributor to Long Beach, is currently being considered for inclusion into the County's Cedar Creek facilities; however we have incorporated projected flows into this analysis. These scenarios will be compared to the County's proposed Consolidation Plan for Long Beach which would result in the abandonment of the City STP; the construction of a pump station and the installation of a force main conveying sewage to the County's Bay Park Sewage Treatment Plant (STP). Information utilized in the preparation of this report was obtained primarily from technical reports recently prepared for the Nassau County Department of Public Works and internal records, memoranda, reports and documents obtained from the City of Long Beach files.

### **2.2 Regulatory Mandates**

On January 17, 2008 the New York State Department of Environmental Conservation (NYSDEC) filed a Notice of Adoption for Amendments to parts 700 – 704 of Title 6 of the Official Compilation of Codes, Water Quality Standards Rules and Regulations of the State of New York (6 NYCRR) with the New York State Department of State effective February 16, 2008. These revisions were conducted in accordance with the triennial review of the State's water quality standards required by Section 303(c) of the Federal Clean Water Act, and its implementing regulations at 40 CFR Part 131.

The amendments add new acute and chronic aquatic life standards for ammonia for marine waters, based on EPA's 1989 ambient water quality criteria document for ammonia for saltwater. New York State previously did not have a marine water standard or guidance value for ammonia. The new marine water quality standards for each water classification are identified in Table 2-1.

**Table 2-1**  
**NEW MARINE CRITERIA FOR AMMONIA**

Substance	Water Class	Previous Standard	New Standard (ug/l)	Type
Ammonia, total	SA, SB, SC, I	None	35*	Acute
Ammonia, total	SA, SB, SC, I, SD	None	230*	Chronic

\*Applies to unionized ammonia as NH<sub>3</sub>

In June 18, 2008, the NYSDEC pursuant to New York State's Environmental Benefits Permit Strategy notified the City of its intention to modify its SPDES permit (NY0020567) to reflect the new water quality based effluent limitations established for Reynolds Channel. Reynolds Channel is classified as a Class SB tidal salt waterway and is suitable for such uses as sports, bathing, recreation and fishing. Shellfish harvesting is excluded.

The permit was modified on August 6, 2008. However, due to a miscommunication, the City's written comments regarding the Schedule of Compliance were not addressed prior to this issuance. Subsequently, the NYSDEC agreed to conference with the City to hear their concerns. The outcome of these discussions resulted in a proposed extension to the overall implementation schedule in order to reflect:

1. More realistic time frames associated with procurement activities and obtaining NYSDEC approval.
2. Ongoing discussions with the Nassau County Department of Public Works (NCDPW) regarding the possible elimination of the Long Beach STP and the diversion of flows to the County's Bay Park Sewage Treatment Plant.

3. The new effluent discharge parameters were to remain the same , as detailed in Table 2-2 below:

**Table 2-2**  
**PERMIT MODIFICATION – NEW PARAMETERS**

<b>Chemical Parameter</b>	<b>Interim Effluent Limit</b>	<b>Final Effluent Limit*</b>
Total Residual Chlorine (TRC)	3.0 mg/l	0.5 mg/l
Dissolved Oxygen (DO)		2.0 mg/l (design limit)
Nitrogen, Ammonia (total NH <sub>3</sub> + NH <sub>4</sub> )	23.0 mg/l	9.5 mg/l

\*Will take effect upon completion of plant improvements consistent with the schedule delineated within the Schedule of Compliance; that is, on or before 8 years from the date of this permit modification (EDPM). However a phased implementation schedule will be required to achieve TRC compliance early during the construction phase.

In November 2008, the NYSDEC prepared a second modification to the City's SPDES permit for public comment. The revised modified permit (Appendix 1), was issued on December 20, 2008 and became effective on January 12, 2009. The modifications from the August 6, 2008 Permit Modification are detailed in Table 2-3 below.

**Table 2-3**  
**PERMIT MODIFICATIONS**

<b>Compliance Action</b>	<b>Due Date (per 8/2008 Modification)</b>	<b>Due Date (per 11/2008 Modification)</b>
Prepare Storm Water Pollution Prevention Plan (SWPPP)	2/20/09	2/20/09
Submit Engineering Report on proposed improvements	8/20/09	EDPM <sup>(1)</sup> + 24 mos.
Submit Final Design Plans and Specifications	DEC Approval + 12 mos.	DEC Approval + 24 mos.
Progress Reports every 6 Months	Initiation of Construction	Initiation of Construction
Construction completed (no later than)	EDPM + 3 years	EDPM + 8 years

<b>Compliance Action</b>	<b>Due Date (per 8/2008 Modification)</b>	<b>Due Date (per 11/2008 Modification)</b>
Conduct Sampling for Total Copper and Bis (2-Tehylhexyl) (One per week for 3 months)	1/20/09	2/20/09
Plan for Rehabilitation of Sewers	2/20/09	Annual Update Due 1/31/___
Approval of Implementation Plan	DEC Approval = 3 mos.	
<b>Maximum Allowable Time from EPDM</b>	<b>August 2011</b>	<b>January 2017</b>

<sup>(1)</sup> EPDM – Permit Modification Date – 1/12/09

### 2.3 Consolidation Background – Recent History

On April 21, 1966, the City of Long Beach entered into a fifteen (15) year Agreement with the County of Nassau (No. S38001) to accept and treat sewage collected within the Lido Beach Collection District. Subsequent agreements were entered into in September 1982 and June 2000. The City was compensated based upon an agreed upon unit price for a million gallons of sewage which was recorded at a meter at the Lido Pumping Station located on Regent Drive. A provision in these agreements allowed for periodic adjustments to this fee based upon increases in operational costs. As detailed in Table 2-4 the fee has changed marginally over the last 40 years, from \$500 to \$1300/million gallons (or \$0.50 to \$1.30/1000 gallons) of sewage.

**Table 2-4**

#### **LIDO BEACH COLLECTION DISTRICT – RATE HISTORY**

<b>Period</b>	<b>Applied Rate \$/million gallons</b>	<b>Adjustments</b>
1966 through 7/88	500	
7/88 through 1/92	572	
Retro-active adjustment made by County		\$328,883 for period of 7/88 through 7/91
1/92 through 1/99	1050	
1/99 through 1/01	1204	

Period	Applied Rate \$/million gallons	Adjustments
Retro-active adjustment made by County		\$222,597 for period prior to 1999 (made in 6 payments)
1/01 through 1/02	1240	
1/02 through 1/03	1260	
1/03 through 7/08	1300	

In early 2004, the City during an evaluation of its local code of ordinance realized that the sewage fee being charged the County was significantly less than the rate being charged to Long Beach residents. Long Beach residents are billed based upon potable water usage quantities, whereby the sewage charge is equivalent to the water charge. At that time the water and sewer rates were both \$2.20/1000 gallons. The disparity has further widened in recent years as illustrated in Table 2-5, with City's water rate increases.

**Table 2-5**  
**CITY OF LONG BEACH**  
**WATER RATE HISTORY SUMMARY**

Effective Date	New Water Rate (\$/ 1,000 gallons)	Percent Change	Years Since Last Change
July 1, 1976	1.27		
July 1, 1978	1.34	5%	2
October 1, 1979	1.39	3%	1 ¼
October 1, 1981	1.36	-2%	2
July 1, 1986	1.46	7.35%	5
July 1, 1987	1.60	9.58%	1
August 2, 1989	Excess use ≥ 50,000 Rate at 3.20 <sup>(1)</sup>	Double	
May 1, 1992	1.80	12%	4.8
	Excess use ≥ 16,000 ( <i>non-</i> <i>domestic</i> use) Rate at 3.60 <sup>(1)</sup>	Double	
January 1, 1997	2.20	22.2%	4.5

Effective Date	New Water Rate (\$/ 1,000 gallons)	Percent Change	Years Since Last Change
	Excess use $\geq$ 16,000 ( <i>non-domestic</i> use) Rate at 5.40 <sup>(1)</sup>	2.45 times	
July 1, 2004	2.86	30%	7.5
	2.91 (150–300,000) 3.05 (301–600,000) 3.35 (601,000 +)	2% 5% 10%	
April 20, 2005	3.29	15%	.75
	3.35 (150–300,000) 3.51 (301–600,000) 3.85 (601,000 +)	2% 5% 10%	

<sup>(1)</sup>Provision was apparently included to address excessive use by incinerator (cooling water) at approximately 100,000 gallons per day of operation.

A unique anomaly exists in the western portion of Lido Beach, where wastewater does not go through the County's pumping station but discharges directly into the City's collection system. Sewage fees for these customers are calculated in a similar fashion to Long Beach residents that is, utilizing water rates. However, according to the Long Beach Code (Section 25-142.2(d) – see Appendix 2) properties that received sewer service outside the City limits using the sewer system were billed at a sewer rate equivalent to 150% of their metered water bills. In 2004, this equated to a \$3.30/1000 gallons charge to these Lido residents, approximately 150% higher than the fees (\$1.30/1000 gallons) applied to the neighboring Lido Beach Collection District.

The City notified the County regarding this apparent disparity between the agreement and the City's Code, and requested that the County revisit the rate structure for the Lido Beach Collection District. The County in response cited the fee adjustment provisions within the inter-municipal agreement, indicating that routine adjustments were appropriate with supportive expense documentation. A major rate structure change proposed by the City would not be consistent with the terms of the agreement. In response, the City issued on May 21, 2004, a formal notice (see Appendix 3) to the County informing them of the City's intention to terminate their inter-municipal sewage collection agreement effective on May 21, 2009.

The City, however, did propose to the County the possible option of converting the City's plant into a regional pumping station and transporting sewage generated within Long Beach, Lido Beach and potentially Point Lookout to the County's Bay Park STP. At the time, it was envisioned that such a regional approach would provide positive financial and environmental benefits.

In 2005, the NCDPW commissioned the services of the engineering consulting firm of Malcolm Pirnie and their sub-consultant Cameron Engineering to prepare a Technical Feasibility Study to identify practical and viable alternatives for conveying and treating sewage flows generated in the Lido Beach Collection District. As part of this study, Malcolm Pirnie identified 10 preliminary options which represented a range of projects that included constructing a Lido Beach treatment plant to conveying Lido wastewater to facilities at West Long Beach, Jones Beach, Cedar Creek as well as Bay Park. The City's proposed option to pump sewage to Bay Park via a new Long Beach pumping station was included within the analysis. Alternatives were screened with consideration given to regulatory and environmental implications; public acceptability and present value costs which included capital and projected operation and maintenance expenditures. Ultimately six potential options were identified in a document entitled *The Draft (Final) Technical Feasibility Study – Lido Beach Collection Service Area*, issued in December 2005. The conclusions generated remain viable and therefore various site plans, impacts assessments and cost estimates were incorporated within this report. The financial implications of complying with the new SPDES requirements were not fully reflected within this analysis.

In the following years, negotiations between the City and County continued in an effort to develop an "equitable" rate for the Lido Beach Collection District. Independent of these discussions, Nassau County developed an initiative to investigate ways to streamline and consolidate various services throughout the County, with wastewater management being a plausible candidate. In early 2007, the NCDPW enlisted the services of the joint venture of Malcolm Pirnie and Dvirka and Bartilucci and their sub-consultant, Cameron Engineering to prepare a comprehensive study of County-wide treatment plants and collection systems. The objective of the study was to identify feasible options for consolidating services through

decommissioning plants and diverting flows to larger regional facilities. The economic, social and environmental benefits of each scenario were to be assessed. A secondary task was to assess the feasibility of consolidating operation and maintenance functions in regard to the local collection systems that historically have been the responsibility of the various municipalities and/or sewer districts. A final draft of this document, *Sewer System Master Plan Consolidation Feasibility Study*, was issued in August 2007, and provided a comprehensive inventory and assessment of County-wide municipal wastewater facilities. Technical evaluations regarding the physical components of the various facilities were projected. Costs of prospective consolidation scenarios were presented and compared with anticipated costs of retaining and improving/updating existing operations. The technical and cost data generated in this Master Plan (2007) remains relevant; however modifications would be required to reflect projected costs associated with meeting the new effluent permit requirements. It would be the intent to utilize and update where appropriate technical and costs data in the development of this study.

On November 26, 2007, a draft Sewer Consolidation Inter-municipal Agreement was forwarded from the County to the then Long Beach City Manager, Edwin Eaton (see Appendix 4). The agreement called for the complete takeover of the City's wastewater collection and treatment systems with the Long Beach STP being converted to a pumping station conveying flow to Bay Park. While no formal action was taken by the City on this agreement, interest continued. An internal memorandum prepared by Mr. Eaton presenting "talking point" issues (Appendix 5) regarding this option. The validity of the consolidation concept remains a debatable issue among City employees and administration. However, discussions between the City and the County have continued. A recent scenario presented by the City represents a somewhat scaled back concept, whereby the City would retain ownership and operation and maintenance functions of a proposed Long Beach Pumping Station and the existing collection system. However, sewage would be conveyed to Bay Park for treatment.

Regarding the current rate structure for the Lido Beach Collection District, a proposed amendment to the Inter-municipal Agreement between the City and the County establishing a new rate as well as retro-active fees due the City is being negotiated.

**Section 3**

### **3.0 DESCRIPTION OF EXISTING LONG BEACH WASTEWATER TREATMENT AND COLLECTION SYSTEMS**

#### **3.1 Long Beach Sewage Treatment Plant**

The Long Beach Sewage Treatment Plant (STP) located on a 5+ acre parcel at the northeast corner of National Boulevard and West Pine Street was constructed in 1951. The plant was designed to treat a permitted 6.36 million gallons per day (mgd) utilizing a trickling filter process. This secondary treatment facility originally consisted of influent grit removal, primary clarifiers, trickling filters and secondary clarifier tanks. Chlorine gas was applied to the waste stream as a disinfectant prior to discharge to Reynolds Channel. Solids removed during the treatment process were directed to two anaerobic digester units, which are used in series with the primary unit providing stabilization of the solids, and the secondary digester providing solids thickening. Historically, the sludge was dewatered in centrifuges and disposed of off-site.

In the 1970s–1980s, the City entered into an agreement with Nassau County to barge liquid sludge to an Ocean Disposal Site (situated approximately 12 miles offshore). Liquid sludge was piped from the secondary digester to the County's barge. Sludge dewatering was dismantled and removed. However, in the late 1980s, the USEPA imposed a ban on ocean disposal of wastewater sludge, in part due to a chronic floatable issue. The City chose to forego the installation of permanent dewatering units and procured temporary dewatering services (portable belt press). The dewatered sludge was and continues to be trucked to a permitted landfill.

Minor plant modifications and improvements were made periodically at the facility. In the mid-1980s the trickling filter arms were reconstructed and plastic media replaced the former stone units. The first major rehabilitation of the plant began in the late 1980s when the plant was redesigned to accept an average daily design flow of 7.5 mgd (a 15% increase). At the time, an increasing population brought on by a rebuilding "Renaissance" coupled with a sewer system inflow and infiltration (I/I) issue created greater flows at the plant. This resulted in chronic violations of the SPDES permit for effluent discharge. Under a Consent Order issued by the NYSDEC, the City instituted a \$9+ million reconstruction and rehabilitation program that

included an increase in plant treatment capacity and provided for improved grit and debris (comminutors) removal as well as enhanced filtering of the waste stream via sand filtration. In addition, modernization of much of the antiquated equipment and controls was undertaken. A sodium hypochlorite feed system was installed to replace a chlorine gas disinfection system

In the early 1990s, the City was recording chronic violations of its permit discharge limit for total residual chlorine (TRC). To correct this problem, a chlorine contact tank was installed in 1995, at a cost of \$1.4 million. Violations of coliform and BOD effluent limits plagued the plant in the late 1990s, resulting in a second Consent Order issued by the NYSDEC. Based upon a comprehensive technical evaluation of the plant's physical and mechanical components, it was determined that an overall upgrade of the facility would be required to make structural repairs, clean-out and rehabilitate the anaerobic digesters and modernize controls and operating procedures. To accomplish these objectives, a multi-phase construction strategy (see Table 3-1) was developed in early 2000. The City implemented Phase I which concentrated upon rehabilitating the major plant processes necessary to achieve permit compliance. Phase 2, proposed for a future period, would focus upon installations that would improve/enhance plant performance and modernize operations.

**Table 3-1**  
**YEAR 2000 WASTEWATER COLLECTION**  
**SYSTEM AND TREATMENT PLAN IMPROVEMENT STRATEGY**

<b>Phase 1: Improvements/Repairs – Completed</b>
1. Sodium Hypochlorite Storage and Feed System
2. Trickling Filters
3. Anaerobic Sludge Digesters
4. Sand Filters
5. Recirculation Lift Station
6. Computer System
7. Sand Filter Lift Station
8. Influent Screening Chamber
9. Influent Pumping Station

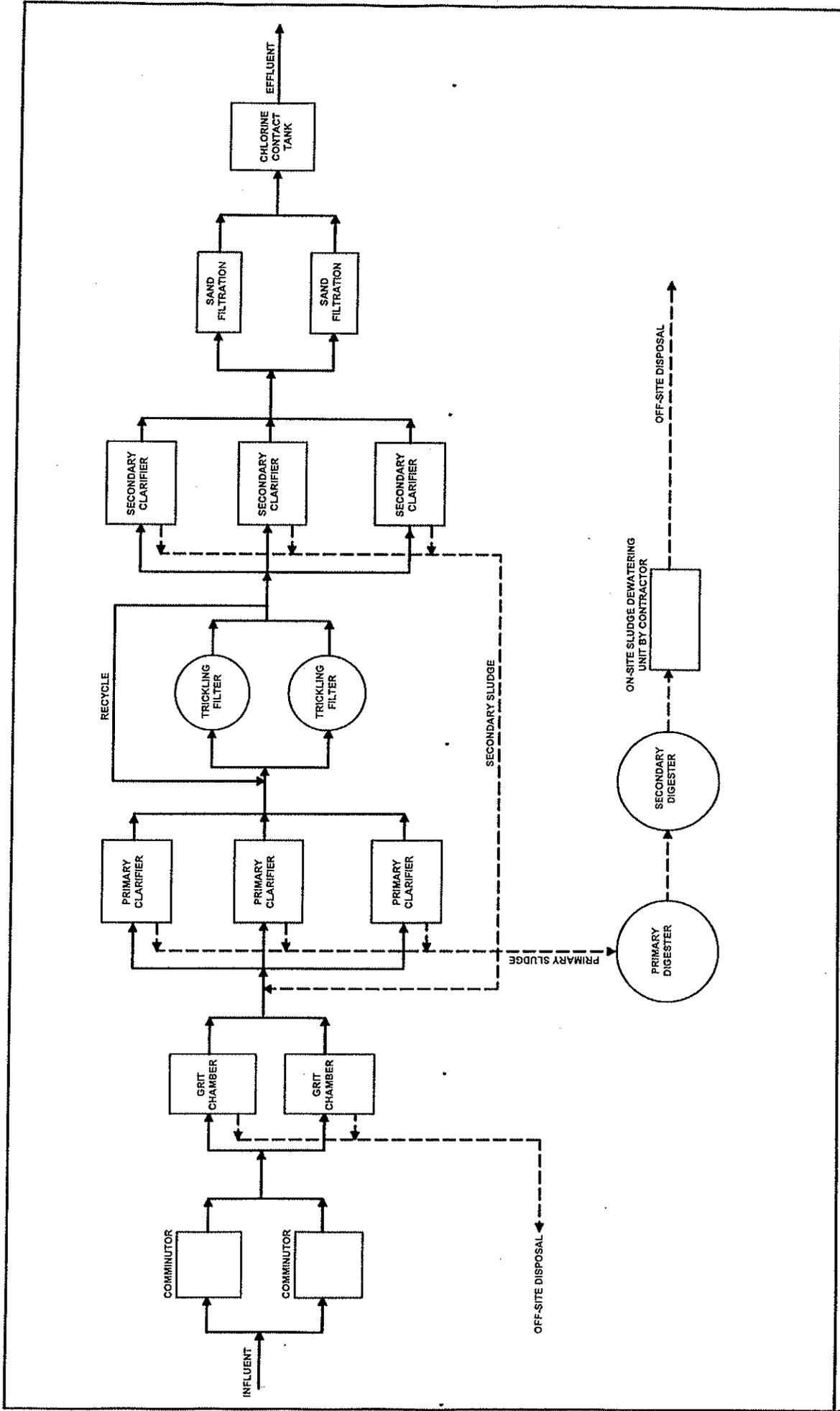
<b>Phase 2: (Future Improvements)</b>
1. Final Settling Tanks
2. Primary Settling Tanks
3. Gravity Thickener
4. Plant Drain and Water System
5. Permanent Sludge Dewatering
6. Site Storm Water Management

A schematic identifying the current plant processes is presented in Figure 3-1, “Long Beach STP Flow Diagram.”

### **3.2 Collection System**

The City of Long Beach is completely serviced by sewers. The collection system is approximately 50 miles long and is composed of an array of piping, including clay tile, concrete, reinforced concrete, transite pipe with current installations being PVC. Pipe diameters range from 6 inches (in the Walk Area and along various easements) to 48 inches entering the plant. Approximately 2 miles of the system extends into Lido Beach. The majority of the system flows by gravity. Slopes are generally gradual. The overall condition of the sewer system is poor-fair, though a substantial amount of piping has been replaced (approximately 10 miles) within the last 20 years as a result of deterioration or failure. Major issues regarding the sewer lines identified over the years include:

- A substantial portion of the sewer system is situated in groundwater and open joints and cracks have led to excessive infiltration.
- Extensive grease build up is a chronic concern within the sewer (often large diameter pipes with minimal flow) in the business districts.
- Lengths of pipe and manholes structure have deteriorated and settled resulting in back-pitched flow conditions.



LONG BEACH SEWAGE TREATMENT PLANT ALTERNATIVES FEASIBILITY STUDY

LONG BEACH STP FLOW DESIGN

- Sewer failures are commonplace resulting from many factors including the deterioration of the pipe material due to sewer gas accumulations; tree root invasion and/or breaks due to improper house connection tie-ins.
- Pumping station inadequacies have resulted in daily, peak period flow surcharges upstream of the stations, especially at Roosevelt Boulevard. This situation is compounded during rain events.

The City maintains house service connections from the main to the curb line. In most cases service line cleanouts are not available. It is not atypical to find multiple homes being serviced off of a single house connection. When such situations are encountered it has been the practice to provide individual home service connections.

To facilitate the flow of sewage to the plant, three pumping stations are required. These are located at Roosevelt Boulevard, New York Avenue and Indiana Avenue. Little upgrading (structural or electro-mechanical) has been undertaken at the pumping stations, which average 50 years in age. Original pumps and motors are still in use.

- Roosevelt Boulevard Pumping Station: Located along the westerly side of the center mall at the intersection of Roosevelt Boulevard and East Park Avenue, this facility is the newest of the City's pumping stations (circa 1958). This facility performs a vital function receiving a significant portion of the City's east end sewage flow as well as sewage emanating from Lido Beach. Sewage enters this station's wet well via a 30-inch diameter sewer. Discharge from the station is through a 16-inch diameter force main that extends for approximately 100 feet. The wet well and the dry well are not completely separated at this station. The wells share first floor (ground level) space.
- Indiana Avenue Pumping Station: Situated completely below grade and below a building overhang at the City's Indiana Avenue Firehouse (West Park Avenue), this facility exhibits the most deterioration. Constructed in the 1940s, this facility collects flow from the westerly portion of the City's West End community. The influent pipe is 15 inches in diameter and discharges directly into the wet well. A 5-inch diameter force main exits the station and is directed to the gravity sewer system running east on West Park Avenue.
- New York Avenue Pumping Station: This facility (circa 1955) is situated at the intersection of New York Avenue and West Park Avenue. Flow from the majority of the City's West End enters this station, via a 30-inch diameter pipe. The force main (10-inch diameter) is quite long, approximately 1,300 linear feet. Deterioration of the structural and mechanical components makes this facility the top priority for

rehabilitation. Due to a lack of pumping system redundancy, any pump failure could potentially be extremely problematic since sewage bypassing options are limited.

To address the inadequacies at these facilities, the City retained the services of Dvirka and Bartilucci Consulting Engineers to prepare detailed plans and specifications for their rehabilitation. Due to financial constraints, the City has elected to bid the rehabilitation of these facilities in a phased approach. The Rehabilitation of the New York Avenue Pumping Station contract has been awarded for \$1.87 million. The Notice to Proceed was issued on February 26, 2009. The anticipated contract completion date is February 21, 2010.

**Section 4**

#### 4.0 CITY OF LONG BEACH WASTEWATER FLOW TRENDS

Long Beach has experienced a gradual increase in documented population over the last two decades. As presented in the City of Long Beach Comprehensive Plan (May 2005), historical and projected population figures for the City are as follows:

**Table 4-1  
REGIONAL POPULATION PROJECTIONS**

	Long Beach	Nassau County
Year 1990	33,510	1,287,248
Year 2000	35,462	1,334,544
% Change 1990-2000	5.8	3.7
Year 2004	36,100	1,346,451
Forecasted% Change 2000-2004	1.8	0.9
Year 2009	36,727	1,361,557
Forecasted% Change 2004-2009	1.7	1.1

NOTE: As reported in Newsday (12/10/08), the U.S. Census Bureau has recently accepted revised population figures for the year 2007 submitted by the Nassau County. A 2007 population of 1,353,061 is approximately 4.5% higher than the Bureau's reported total of 1,306,533.

As indicated, in the late 1980s, the City expanded the treatment capacity of its plant to address a steadily increasing daily flow that routinely exceeded the permitted limit of 6.36 mgd. The renovations provided for an approximate 15% increase in capacity. This increase factored in projected population growth consistent with regional developmental trends and provided added capacity to accommodate groundwater infiltration entering the aging sewer system. However in years following the expansion, while populations increased, flow records at the plant reflected a steady decline in annual quantities of wastewater being treated. Based upon evaluations performed by the City's Department of Public Works, the decline appeared to be directly related to the replacement of defective sanitary sewers as part of the City's annual Road Reconstruction Program instituted in the late 1980's. As illustrated in Table 4-2 and as summarized in Table 4-3 below, the average daily flow since the early 1990s has decreased substantially. This represents an approximate 13% daily reduction in effluent discharges to Reynolds Channel.

**Table 4-2**  
**CITY OF LONG BEACH**  
**WATER POLLUTION CONTROL FACILITY**  
**SPDES PERMIT NO.: NY 0020567**

**Annual Flow Records**

Year	Total Treated Annual Gallons (in millions)	Average Daily Flow (in million gallons)
1991	2,136	5.85
1992	2,157	5.91
1993	2,358	6.46
1994	2,237	6.13
1995	2,157	5.91
1996	2,434	6.67
1997	2,313	6.34
1998	2,466	6.76
1999	2,343	6.42
2000	2,001	5.48
2001	1,802	4.94
2002	2,195	6.01
2003	1,958	5.36
2004	2,045	5.60
2005	1,977	5.42
2006	1,994	5.46
2007	1,764	4.83

Original plant design flow: 6.46 mgd  
Expanded/upgraded plant flow (1990): 7.50 mgd

Table 4-3

**LONG BEACH STP – AVERAGE DAILY FLOW SUMMARY**

Period	Average Daily Flow (mgd)
1991 through 2000	6.19
2001 through 2007	5.37

The Lido Beach Collection District wastewater flow has remained relatively consistent over the same period (see Table 4-4). Over the last decade Nassau County has undertaken various sewer system rehabilitation projects on their main trunk line on Lido Boulevard, including sewer and manhole re-lining. During this period the Lido Beach Pumping Station meter was replaced to address flow discrepancies. While annual percentages vary between 10% and 14%, in more recent years, the Lido component of the waste stream has become more substantial, as shown in Table 4-5.

Table 4-4

**LIDO BEACH COLLECTION DISTRICT  
ANNUAL WASTEWATER FLOW CONTRIBUTIONS**

Calendar Year	County Flow Annual Gallons (in millions) Lido Pump Station Meter	Total Usage Annual Gallons (in millions) Long Beach Plant	County Usage % of Total
1991	291	2,136	13.6
1992	309	2,157	14.3
1993	289	2,358	12.2
1994	223	2,237	10.0
1995	215	2,157	10.0
1996	259	2,434	10.2
1997	303	2,313	13.1
1998	368	2,466	14.9
1999	237	2,343	10.1
2000	237	2,001	11.8
2001	235	1,802	13.1
2002	251	2,195	11.4
2003	251	1,958	12.8

<b>Calendar Year</b>	<b>County Flow Annual Gallons (in millions) Lido Pump Station Meter</b>	<b>Total Usage Annual Gallons (in millions) Long Beach Plant</b>	<b>County Usage % of Total</b>
2004	244	2,045	11.9
2005	276	1,977	14.0
2006	265	1,994	13.0
2007	230	1,764	13.0

**Table 4-5  
PERCENTAGE OF LIDO FLOW AT LONG BEACH STP**

<b>Period</b>	<b>Average Annual% of Flow Attributable to the Lido Beach Collection District</b>
1991 through 2000	10.9
2001 through 2007	12.7

This proportional change would be expected in light of the recent reduction in groundwater infiltration within the Long Beach collection system. As future collection system work is undertaken by the City to replace defective sewers and manholes and rehabilitating its pumping stations, it is envisioned that Lido's percentage of flow will continue to rise. Based upon the current billing method, it would be expected that the annual per million gallon fee collected for Lido, should continually increase.

The easterly portion of Lido Beach discharges sewage directly into City of Long Beach owned and maintained sewer lines. The service area consists primarily of single family residences (approximately 220 houses) with one large ocean front condominium. Few if any developable parcels of land exist and therefore sewage generated from this area should remain relatively constant. As the deteriorating sewer mains age, groundwater infiltration levels can be expected to rise.

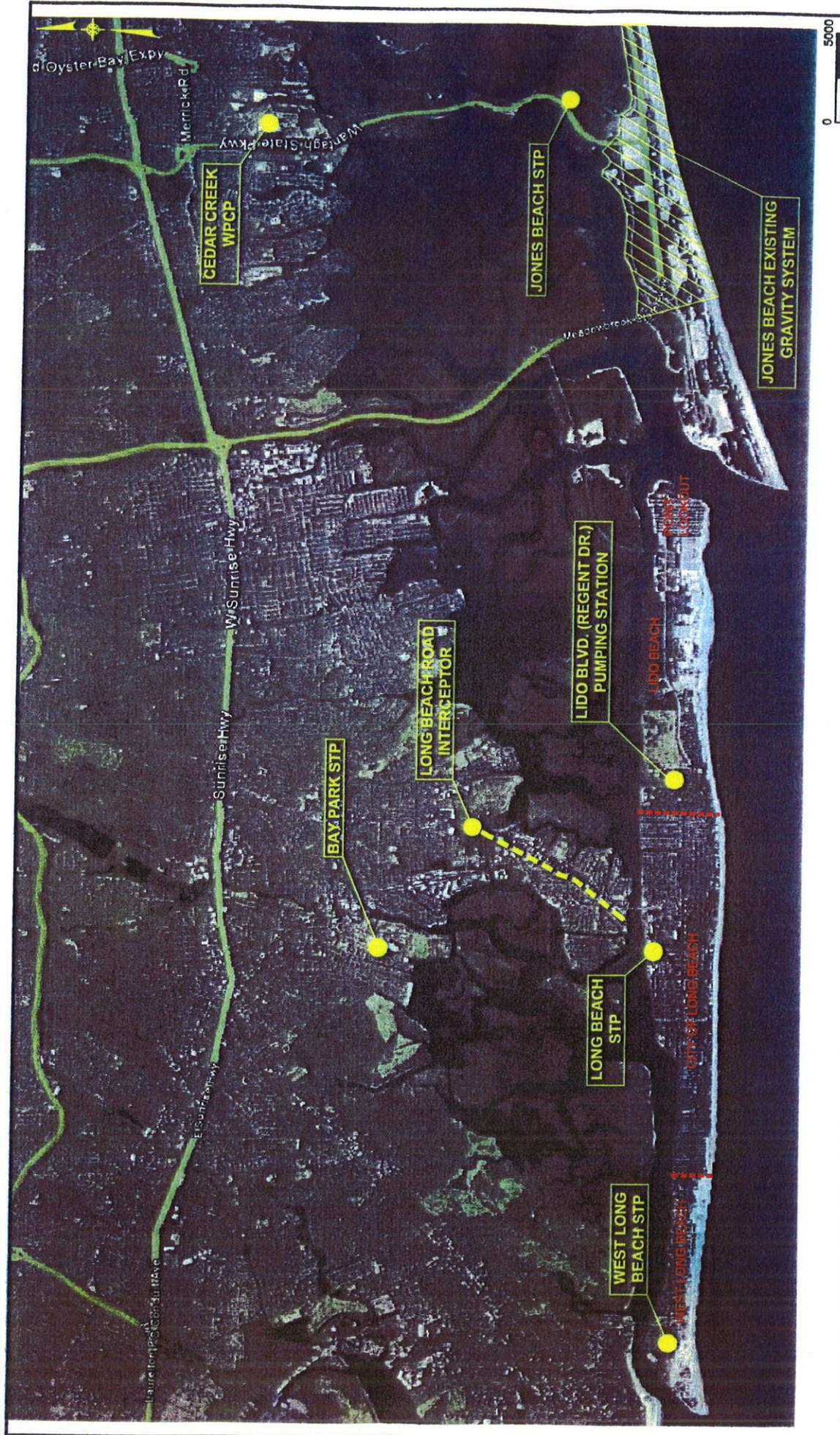
**Section 5**

## 5.0 POTENTIAL WASTEWATER FLOW CONTRIBUTORS

The Long Beach STP treats the majority of wastewater generated on the Long Beach Barrier Island. The potential for converting the Long Beach STP into a regional treatment facility and accepting sewage from the adjoining communities of Atlantic Beach, Point Lookout and possible Jones Beach State Park has been discussed (see Figure 5-1). In each case a potential connection to the Long Beach system appears feasible however at a significant capital cost. The seasonal flow from these communities varies significantly, impacted by substantial population increases during the summer months. The current capacity of the Long Beach STP may not be sufficient to handle the historical spike in wastewater generated flow during the summer months if all of the potential areas are treated at Long Beach.

The communities of Atlantic Beach and East Atlantic Beach are serviced by the Greater Atlantic Beach Water Reclamation District (GABWRD) which operates a trickling filter treatment plant. The facility is located on Bay Boulevard in the Village of Atlantic Beach. Effluent is chlorinated (liquid sodium hypochlorite) and discharged to Reynolds Channel. The sludge is anaerobically digested. Periodically digested sludge is drawn from the secondary digester and trucked to the County's Bay Park STP for dewatering and disposal. The sewage collection system consists of two pumping stations and approximately 18 miles of varying diameter pipe. The design capacity of GABWRD's plant is 1.5 mgd and this flow is routinely approached during the summer months when daily population spikes are experienced. Daily flow during the winter is significantly less, averaging below 1.0 mgd.

Point Lookout is situated at the easterly end of the barrier island. This community of approximately 800 homes and 2500-3000 year round residents (Point Lookout Community website) utilizes on-site treatment and disposal (cesspools) to handle wastewater. As a beachfront community, it would be expected that this figure increases substantially during the summer season, with estimates approaching 5,000. The small lot sizes coupled with a high ground water table make on-site systems problematic on both an operational and environmental level. Ultimately, providing a sewer system for this community may prove to be a priority. It would be expected that peak wastewater flows of .5 mgd could be expected from Point Lookout.



LONG BEACH SEWAGE TREATMENT PLANT ALTERNATIVES FEASIBILITY STUDY

TECHNICAL FEASIBILITY STUDY - LIDO BEACH COLLECTION SERVICE AREA

The Jones Beach STP serves the State Park and has a capacity of 2.5 mgd. A trickling filter process is used. The plant treats only a fraction of its permitted flow, with peak summer flows averaging 53,000 gpd and an off-peak flow averaging 24,000 gpd. Plant efficiency is routinely fair-good and violations for an array of SPDES permit parameters have been recorded in recent years. A major upgrade of this facility to address the chronic violations as well as to meet new ammonia requirements will be necessary in the near future. The Consolidation Study explored options to address the sewage issues at Jones Beach. The two most viable options presented for NYS Office of Parks, Recreation and Historic Preservation consideration were (1) maintain the plant and construct a small pumping station that would convey treated wastewater to the Cedar Creek Water Pollution Control Plant (WPCP) ocean outfall pipe (where it traverses Ocean Parkway), and (2) eliminate the existing plant and build a pumping station and an 18,000-foot force main to convey wastewater to the Cedar Creek WPCP.

The option to pump Jones Beach flow to the Lido Beach gravity sewer and ultimately to the Long Beach STP was not evaluated in this study. This force main distance to make such a connection has been estimated to be approximately 20,000 feet. Multiple subaqueous creek and channel crossings would be required for a connection from the Jones Beach STP to Cedar Creek WPCP and or to the Lido Beach gravity sewer.

In each case, the connection of Atlantic Beach, Point Lookout and possibly the Jones Beach State Park into the Long Beach collection system will involve a major expenditure of funds to either retrofit existing or install new sewage conveyance systems. General estimates are provided in Table 5-1.

For the Long Beach plant to become a regional plant, it is probable that as part of future facility improvements, a plant expansion may be necessary. Based upon historical flow data garnered from existing reports, Table 5-2 has been assembled to reflect typical sewage flows generated within the various communities considered as future contributors to the Long Beach facility.

**Table 5-1**

**POTENTIAL FLOW CONTRIBUTORS  
PROJECTED INFRASTRUCTURE NEEDS**

Community	Infrastructure Needs	Cost Considerations
Atlantic Beach	<ul style="list-style-type: none"> <li>• Convert STP to pump station and construct a 12,000 lf force main to the Long Beach sewer system.</li> </ul>	<ul style="list-style-type: none"> <li>• \$9–10 M installation cost.</li> <li>• \$12 M+ will be saved in potential STP upgrades to meet permit modifications for de-chlorination and ammonia removal.</li> <li>• Waterfront property would become available with the decommissioning of STP.</li> <li>• City rate structure versus County rate structure could be an issue.</li> </ul>
Point Lookout	<ul style="list-style-type: none"> <li>• Construct approximately 36,000 lf of 8 to 12-inch-diameter sanitary sewer and 800–900 house service connections. New system will tie into the County Lido Blvd. sewer main.</li> <li>• May require pump station at entry to County system.</li> </ul>	<ul style="list-style-type: none"> <li>• \$9 M installation of sewer system cost plus abandonment of on-site cesspools and tie-in to service line (\$3 M). Pumps station could add additional \$6 M. O&amp;M costs could be \$300,000.</li> <li>• Residents will be subject to a sewage disposal fee or tax.</li> </ul>
Jones Beach	<ul style="list-style-type: none"> <li>• Convert STP to pump station and construct a 20,000 lf force main to the Long Beach sewer system.</li> </ul>	<ul style="list-style-type: none"> <li>• \$5 M+ installation cost.</li> <li>• \$12 M+ will be saved in potential STP upgrades to meet permit modifications for de-chlorination and ammonia removal.</li> </ul>

**Table 5-2**

**HISTORICAL SEWAGE GENERATION BY COMMUNITY**

<b>Community</b>	<b>Average Daily Flow (mgd)</b>	<b>Summer Daily Flow (mgd)</b>
Long Beach/Lido Beach	5.4	6.20 *
Point Lookout	0.25	0.50
Atlantic Beach	1.0	1.50
Jones Beach	0.025	0.05
<b>TOTAL</b>	<b>6.675</b>	<b>8.25</b>

\*Proportionally, average daily flow for the summer season of 2007 (June–July–August) was approximately 15% higher than rest of year.

Obviously, whether there would be a need to expand the City’s plant to accommodate these communities will depend on numerous factors and considerations. Some points are listed below:

1. Recent discussion between the County and the NYS Office of Parks, Recreation and Historic Preservation could mean that a future connection between Jones Beach and the County’s facilities at Cedar Creek are being pursued. However, the Jones Beach flow is minimal, and should be able to be incorporated within the Long Beach system if desired.
2. The probability that Point Lookout will install sewers at some time in the future is quite high. Recent contamination in Reynolds Channel apparently has been linked to cesspool discharges. However such a project may be years away and probably beyond the current schedule for improvements to the Long Beach Plant. It may be prudent during the design phase, to make provisions to allow for future expansion to accommodate Point Lookout.
3. In lieu of a plant expansion, continuing the City’s sewer replacement program may prove to be the cost-effective approach. Average sewage flows generated in Long Beach should continue to decrease which should facilitate future flows from adjoining communities as well as provide capacity for future City wide development (Superblock Project, Bay Front Development, etc).
4. It is understood that the GABWRD has told Nassau County that it is not interested in consolidation into a County or other system. In addition, the GABWRD is planning for improvements to its STP to meet the new effluent limits and therefore it is not likely that this area will be incorporated into a regional plant at Long Beach in the current 20-year planning timeframe.

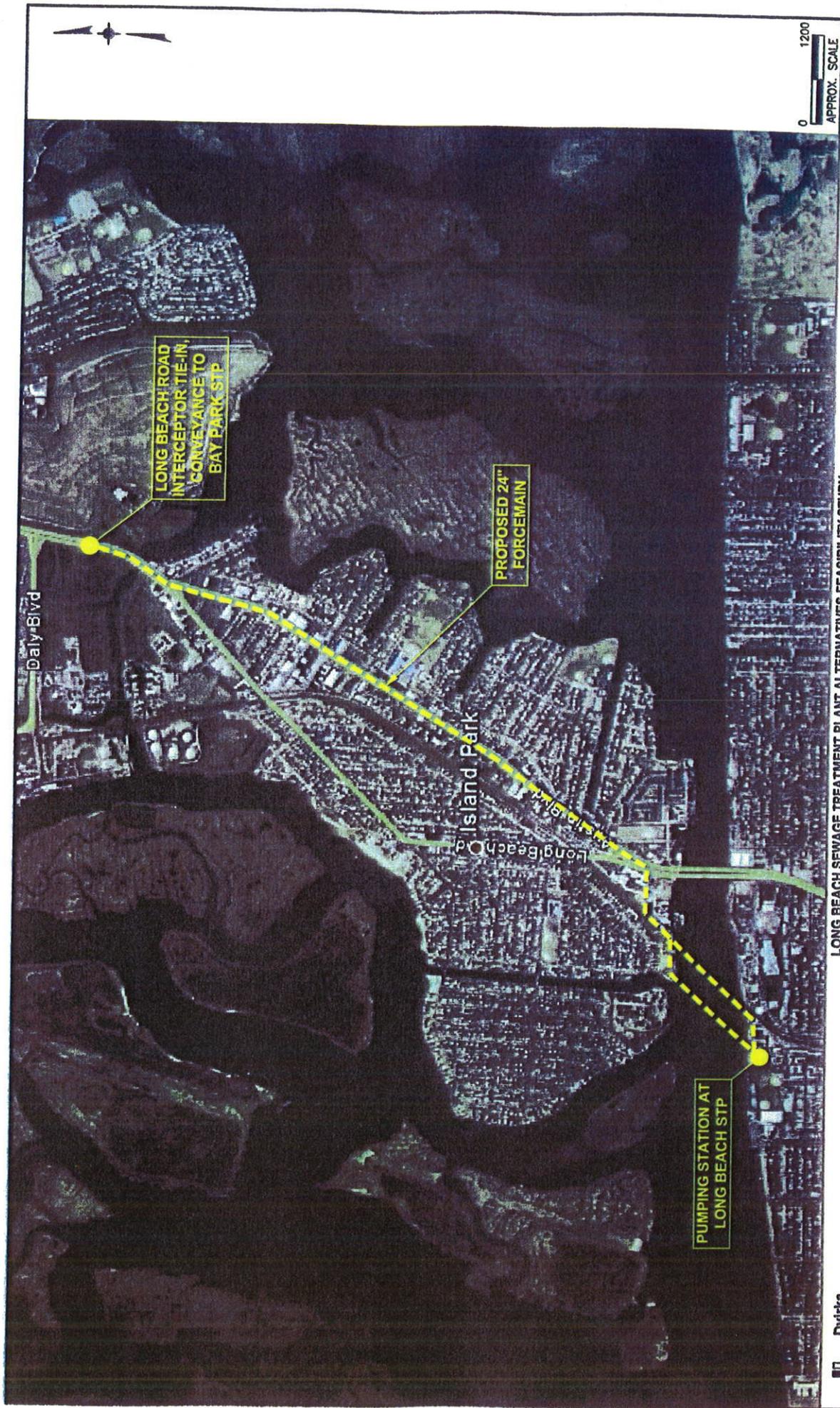
**Section 6**

## 6.0 ALTERNATIVE ASSESSMENT

The City is currently faced with a major financial decision as they balance the cost of plant modifications with their mandate to provide the maximum service at the least cost for its residents. The NYSDEC acknowledging the complexity of this decision (recognition of this issue) has provided some relief within the Schedule of Compliance to allow the City to consider both the Consolidation Plan offered by the County as well as independently proceeding with the modifications required. In the assessment of the consolidation strategy, a further decision must be made as to whether the City's collection system is to be included within the plan. Since the original offer, the County has indicated that they may be amenable to the City retaining this service. Therefore, two major Consolidation options appear relevant though additional permutations may also be possible (see Figure 6-1 and 6-2):

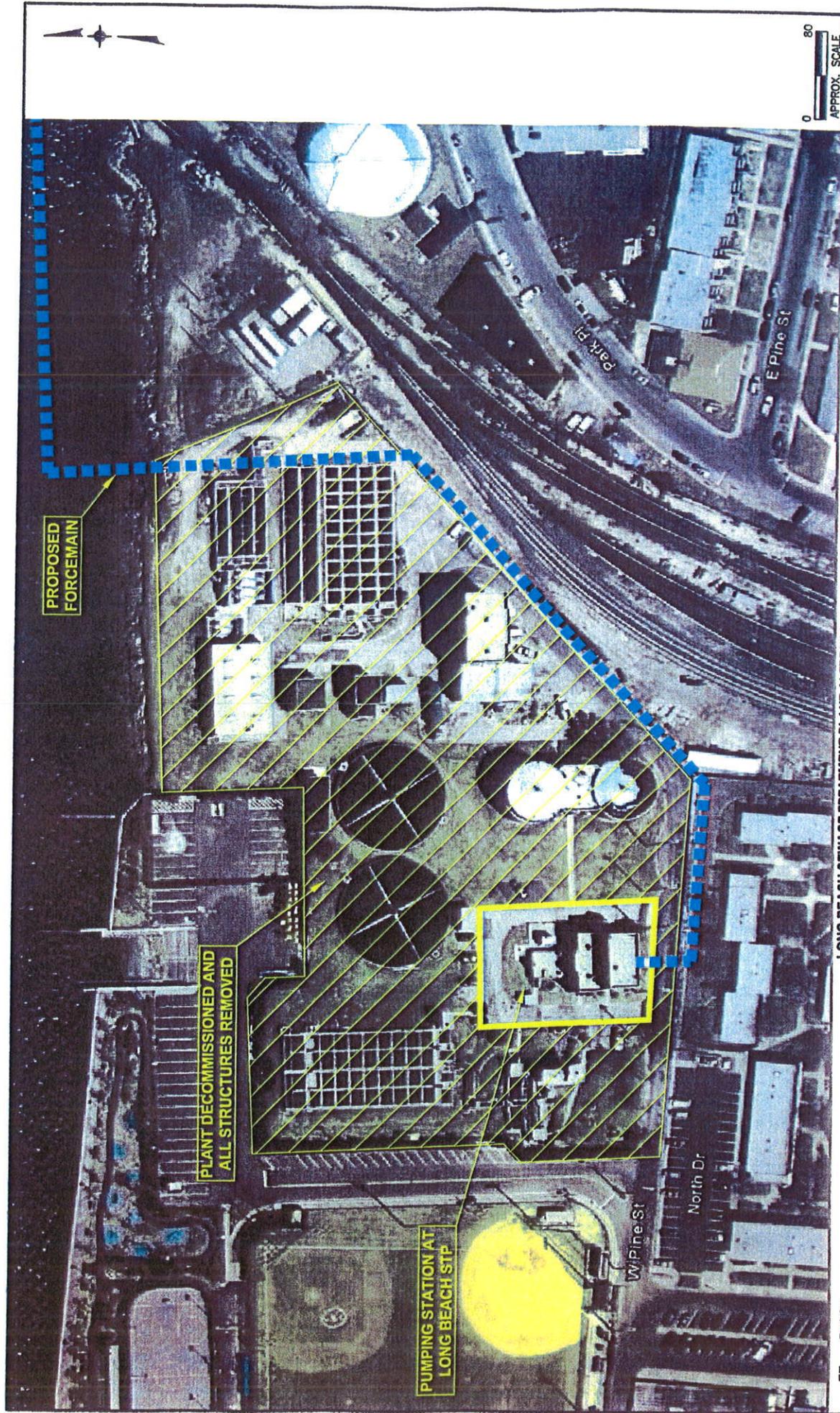
1. The City would transfer all wastewater facilities to the County. City users would be taxed for sewerage service based upon assessed evaluation of their properties. The County would be responsible for constructing a pump station at the site of the Long Beach STP and installing a 12,000 lf force main below Reynolds Channel to the Long Beach Road Interceptor located in Oceanside (see Figure 5-1). Wastewater would be treated at the County's Bay Park STP. The County would also be responsible for the operation and maintenance of the new facility as well as the City's collection system including its three existing pump stations. Repairs and replacement of sewers would be the County's responsibility. The City would retain ownership of unused property at the decommissioned wastewater treatment plant site. City users would be taxed for sewerage services by the County.
2. The City would construct a pump station at the site of the wastewater plant and the County would install the force main from the northern limits of the site to the Long Beach Road Interceptor located in Oceanside. The City would retain ownership and maintain its 50 miles of sewers and four pumping stations (including the new station at the plant). A payment schedule would be negotiated with the County, possibly similar to the approach taken in the current Lido Beach Collection District Agreement.

For each option, the City's projected capital costs as well as operational costs were calculated for a period of 20 years starting in 2012. While capital costs figures provided in the Master Plan were utilized where applicable, in some cases prices appeared low for this region for similar type projects. In such cases, modifications to the capital costs were made and noted.



LONG BEACH SEWAGE TREATMENT PLANT ALTERNATIVES FEASIBILITY STUDY  
**ALTERNATIVE 2 - PUMPING STATION AT LONG BEACH STP/NEW FORCE MAIN TO  
 BAY PARK STP - CONCEPTUAL LAYOUT OF FORCE MAIN**

FIGURE 6-1



LONG BEACH SEWAGE TREATMENT PLANT ALTERNATIVES FEASIBILITY STUDY

**ALTERNATIVE 2-PUMPING STATION AT LONG BEACH STP/NEW FORCE MAIN TO BAY PARK STP  
CONCEPTUAL LAYOUT OF MODIFIED PUMPING STATION AT LONG BEACH STP**

FIGURE 6-2

Due to the many variables involved in each option, certain assumptions were made. In some cases providing anticipated ranges of cost appeared more appropriate. A comparable present value methodology was utilized to allow for a comparison of the options. The assumption, where feasible, mirrored the approach taken by County consultants in the previous studies.

1. The present value for the construction project begins at Year "0" which has been set at the year that construction is proposed to be initiated (per compliance schedule). Based upon the projected permit modification date it will be 2012 (January).
2. The capital costs for the improvements are assumed to be expended in the first year, in the case of the treatment plant – Year "0".
3. Since a 20 year operational period is utilized from Year "0" an annual inflation increase was applied and then discounted to Year "0".
4. A major improvement project is proposed at Year "10" for either the new treatment plant or pump station. A minimum of 25% of the initial capital costs cost was utilized.

## **6.1 OPTION 1: Rehabilitation and Modification of Wastewater Treatment Facilities by the City**

To best illustrate the financial commitment required of the City to update and modify its treatment processes as well as maintain service throughout the community, a tabular format presented in the County's *Sewer System Master Plan Consolidation Feasibility Study*, appears to be the most efficient method of listing the elements. Taking the finding of this report, D&B has updated and expounded further on the cost estimates, incorporating projected expenditures related to achieving compliance with the SPDES permit modifications.

### **6.1.1 Required Plant Improvements**

Significant modification to plant processes will be necessary to achieve compliance with the newly imposed effluent limits for total chlorine residual and ammonia reduction (nitrification). In addition, to providing advanced treatment capabilities, certain future improvements to the plant identified during the rehabilitation effort at the plant undertaken during the early 2000s should be incorporated in the overall plant upgrading effort. These

additional improvements are delineated in Table 3-1, Year 2000 Wastewater Collection System and Treatment Plant Improvement Strategy.

For purposes of this evaluation the following assumptions were made:

1. The renovated plant would meet the new permit requirements for TRC and ammonia reduction.
2. The major plant improvements would be completed by the beginning of 2017, the time frame established within the Schedule of Compliance.
3. Improvements to the plant to address Phase 2 elements were included within the proposed plant modifications. It would be expected that at some point in the 20 years period that an additional upgrading/improvement effort would be required at the plant (projected for the year 2022).
4. Provisions should be made in the design allowing for future modular increases in plant capacity.
5. The iron sludge issue which apparently is being addressed via cooperation between the operational staff at the Water Purification and Sewage Treatment Plant was not factored into this assessment.

To improve water quality within the South Shore Estuary, the NYSDEC is imposing more stringent ammonia removal standard for wastewater treatment facilities that discharge effluent into Reynolds Channel. Ammonia-nitrogen a naturally occurring component of wastewater currently exits the City's plant in levels that routinely exceed 20 mg/l. To meet the new discharge limits of 9.5 mg/l for ammonia, a "nitrification" treatment step will be necessary, requiring substantial modifications to the plants processes. This standard is actually less stringent than the requirements being required for facilities that discharge to the Long Island Sound where additional treatment in the form of de-nitrification (further nitrogen removal) is being imposed.

D&B has reviewed possible treatment technologies that may be employed at the Long Beach plant that would be compatible with existing processes. Spatial limitations at the facility will impact various cost-effective approaches. Therefore, efforts were made to identify options that would maximize retrofitting or modifying existing structures. To achieve the reduction of

ammonia, one approach would be to effectuate treatment at the plant's trickling filters. If space precludes the installation of an additional filter, modifications to the existing filters (expand volume by raising tank heights from 5 feet to 30+ feet) may be necessary. A preliminary cost estimate for this option is included in Table 7-1. The estimate includes new trickling filter tanks, new trickling filter media, new motorized trickling filter mechanisms, new pump station, foundation support, pH control, new screens and grinders, demolition, dewatering, excavation and landscaping. Newer technologies are also available and are being utilized at or proposed for other Long Island facilities to reduce nitrogen levels in the effluent. However, many of these processes including oxidation ditches (in lieu of the trickling filters) require substantial space. More space tolerant biological aeration and/or membrane filtering processes are options that could be employed as a polishing treatment step after the trickling filters. However, while these provide a high rate of nitrogen removal, their installation and operation/maintenance costs can be quite expensive.

To destroy pathogens, disinfection of the wastewater is achieved by injecting a solution of sodium hypochlorite at the chlorine contact tanks prior to discharge to Reynolds Channel. This current system is effective and safer than the chlorine gas system employed prior to 1990. Current NYSDEC requirements mandate that the chlorine levels in the effluent be reduced substantially from a maximum limit of 3.0 mg/l to 0.5 mg/l. In essence chlorine is applied to kill the pathogens and then remaining amounts must be removed prior to discharge. In lieu of maintaining chlorination and adding a de-chlorination step, many facilities are replacing existing processes with ultraviolet (UV) disinfection. In the case of Long Beach, this would appear to be a logical application for the following reasons:

1. The use of sodium hypochlorite while effective has been a maintenance issue at the plant due to the highly corrosive nature of this liquid.
2. The existing chlorine contact tanks can be modified to accept the UV equipment. A similar retrofit is currently being undertaken at the Port Washington WPCP and many other WWTPS in the region.
3. While the electrical costs for a UV system can be substantially higher than a de-chlorination process, the recent increases in chemical costs for sodium hypochlorite make the UV system cost-effective.

### 6.1.2 Collection System Rehabilitation

A significant portion of the City's 50 miles of sewer main is original, and therefore in excess of 80 years old. Locally adverse conditions, such as a high ground water table and boggy soils, accelerate the aging of the pipe, which is already well beyond the normal life expectancies of 40 years. The City has been aggressive in the last two decades in replacing deteriorated sewers. Approximately 10 miles of sewer have been repaired or replaced, though collapses and failures have been occurring with greater frequency. In Long Beach, it has been estimated that replacing the sewer system as a component of a roadway reconstruction project costs are approximately \$150–\$200 per linear foot of sewer. The City, when fiscally feasible, has expended approximately \$1 million/year on sewer replacement efforts. This per annum expenditure for sewer replacement was increased by 5% per year to reflect construction cost increases. A payback has been realized in the form of less flow entering the plant, due to reductions of groundwater infiltration into the pipes. A continuation of this program will potentially reduce flow further and provide future capacity to accommodate expansion of the service area and/or future development within the City.

The three aged pumping stations are scheduled for phased reconstruction. The rehabilitation of the New York Avenue Station is in construction at a cost of \$1.87 million. The Indiana Avenue and Roosevelt Boulevard Stations are projected to be reconstructed within the next 3–4 years at a similar cost of \$2 million each.

### 6.1.3 Operation and Maintenance Requirements

The City would continue maintenance responsibilities for its wastewater treatment and collection systems. Since additional labor will be required at the plant to oversee the new processes, it is anticipated that operational costs will increase substantially upon completion of the reconstructed plant (projected to be 2017). Some revenue increases can be expected in the future if Atlantic Beach and/or Point Lookout flow is accepted at the plant.

The rapid response level by the City in dealing with residential sewage issues may be a major intangible that may not be comparable within the County's consolidation proposal.

**6.2 OPTION 2A – Consolidation Scenario 1: County Takes Over City of Long Beach Wastewater Collection and Treatment Systems; Constructs Pump Station and Force Main to Bay Park STP**

The original intent of the Nassau County Consolidation proposal was to incorporate the City of Long Beach wastewater collection and treatment options and incorporate and incorporate within the County system. The County would construct the necessary pump station at the Long Beach STP and force main which will convey sewage to the Bay Park STP for treatment. The new pump station would require approximately one acre of the existing 5+ acres occupied by the plant. The County also indicated that they would be responsible for past debt incurred by the City on its wastewater systems. All future operations and maintenance would be performed by the County which would include the operation of four pump stations within the City, roadway sanitary sewers and house service lines (to the curb). Future sewer replacement and repairs would be included in this service. The City would no longer bill its residents for sewage collection. Wastewater fees for a property would be incorporated within the County tax bill and will be calculated based upon the assessed valuation of a property.

Under the County's initial proposal, the fees for City residents would remain unchanged for an initial period, indicated to be 5 years.

**6.3 Option 2B – Consolidation Scenario 2: City Constructs Pump Station and Diverts Sewage to a County Constructed Force Main for Treatment/Disposal at the Bay Park STP**

A hybrid of Options 1 and 2A, Option 2B would allow the City to remain in the wastewater business and therefore the City would continue to bill its residents for sewage disposal. Under this scenario, the City would decommission its treatment plant and construct a new pump station. A connecting force main from the new pumping station to the County's interceptor sewer in Oceanside would be constructed by the County. The future operation and

maintenance of the City's wastewater collection system including the newly constructed pump station would remain the City's responsibility.

The City would negotiate a fee with the County to convey the wastewater to the Bay Park STP for treatment. In the 2007 Report, a rate of \$.89 per 1,000 gallons was reported as a charge to Atlantic Beach (GABWRD) for pumping its wastewater to Bay Park for treatment. Similar to this scenario, the District would decommission their pump station and construct a pump station at their expense. Some negotiation would appear warranted to account for the conveyance of Lido sewage through the Long Beach system.

**Section 7**

## 7.0 COST ANALYSIS

Many variables come into play when analyzing overall costs necessary to compare the feasibility of the various options. While capital costs to construct new facilities can be reasonably projected; long term operation and maintenance costs, anticipated debt service and administrative expenses can vary substantially and annually. Costs associated with intangibles, such as retaining municipal autonomy: providing personal residential sewer service and retaining civil service positions have unquantifiable local impact. However, in the current economic climate the merits of consolidating services among governmental entities are financially enticing. The freeing up of valuable waterfront property for City use under the consolidation scenario offers the City economic implications/opportunities that go beyond this analysis.

Based upon the cost evaluation performed (Tables 7-1 through 7-4), projected long term capital costs associated with retaining treatment plant operations or decommissioning the plant and constructing a pumping station appear “relatively” comparable.

Under Options 1 and 2B, the City will continue to bill its residents for sewer service. Option 2A has virtually no capital cost to the City since the City will be ceding all wastewater collection and treatment responsibility to the County. Under this scenario, the County would be responsible for maintenance and emergency response services necessary to operate the City’s 50+ miles of sanitary collection system. Any future replacement of sanitary sewers in conjunction with City road reconstruction projects would have to be coordinated with the County to insure that funds will be budgeted.

The greatest uncertainty, however, remains the ultimate fee imposed upon the residents for the disposal of sewage. Under the complete consolidation scenario (Option 2A), sewage rates would no longer be tied into water usage, but would appear as a special assessment on County tax bills, calculated based upon the assessed valuation of individual properties. The rate imposed will reflect the annual budget necessary for Nassau to operate and maintain its County-wide network of sewerage facilities including treatment plants, sewer and service collection lines as well as pump stations. The County has indicated in the past that the initial rate to residents

Table 7-1

**OPTION 1 – CITY OF LONG BEACH CAPITAL COSTS**

**REHABILITATION AND MODIFICATION OF  
WASTEWATER TREATMENT FACILITIES BY THE CITY**

**ANTICIPATED PLANT IMPROVEMENTS – PRESENT VALUE COST PROJECTIONS**

Proposed Component	"Year 0" (2012) Construction Cost <sup>(1,4)</sup> in dollars	Engineering & Administration (20%) in dollars	TOTAL in dollars
Eliminate sodium hypochlorite system and install ultraviolet disinfection system in modified chlorine contact tanks <sup>(2)</sup>	1,950,000	390,000	2,340,000
Rehabilitate and expand existing trickling filter process to provide ammonia reduction capabilities	20,126,000	4,644,000	24,770,000
Make improvements /repairs to plant processes consistent with 2001 Engineering Report, including:			
1. Gravity thickener	1,180,000	236,000	1,416,000
2. Permanent sludge dewatering facilities	1,900,000	380,000	2,280,000
3. Primary settling tank rehab	800,000	160,000	960,000
4. Final setting tank rehab	200,000	40,000	240,000
5. Plant drain/water system rehab	500,000	100,000	600,000
6. Digester cleaning	950,000	190,000	1,140,000
Provide "Year 10" modifications (2022) <sup>(3)</sup>	10,400,000	2,080,000	12,480,000
<i>Subtotal</i>	<i>38,006,000</i>	<i>8,220,000</i>	<i>46,226,000</i>
<b>City Collection System</b>			
Sanitary Sewer Improvements <sup>(4,5)</sup>	18,300,000	370,000	18,670,000
Rehabilitate Roosevelt Boulevard Pump Station in 2010	2,400,000	480,000	2,880,000
Rehabilitate Indiana Avenue Pump Station in 2012	2,700,000	540,000	3,240,000

Table 7-1 (continued)

**OPTION 1 – CITY OF LONG BEACH CAPITAL COSTS**

**REHABILITATION AND MODIFICATION OF  
WASTEWATER TREATMENT FACILITIES BY THE CITY**

**ANTICIPATED PLANT IMPROVEMENTS – PRESENT VALUE COST PROJECTIONS**

Proposed Component	“Year 0” (2012) Construction Cost <sup>(1,4)</sup> in dollars	Engineering & Administration (20%) in dollars	TOTAL in dollars
Provide modification of 3 pump stations in 2022 <sup>(6,7)</sup>	By County (est. to be \$25,000,000+)	By County	By County
1. New York (2009)	1,900,000	380,000	2,280,000
2. Roosevelt (2010)	1,900,000	380,000	2,280,000
3. Indiana (2012)	1,900,000	380,000	2,280,000
<i>Subtotal</i>	<i>29,100,000</i>	<i>2,530,000</i>	<i>31,630,000</i>
<b>TOTAL Option 1</b>	<b>67,106,000</b>	<b>10,750,000</b>	<b>77,856,000</b>

- (1) Includes allowances for typical project management, overhead and profit, bonds, a construction escrow (during construction phase, and design contingencies (30%) consistent with County’s 2007 Report.
- (2) Based upon cost data generated for the Port Washington WPCP – ultraviolet disinfection system installation.
- (3) Projected to be approximately \$5,000,000 in 2007.
- (4) \$1,000,000 annual allotment inflated by 5% per annum for a 20-Year Horizon.
- (5) Annual construction escalation of 5% and discount rate of 6%.
- (6) Assumed New York Avenue Pump Station rehabilitated in 2009 (\$2,000,000).
- (7) Assume \$1,000,000 per station in 2009 dollars.



Table 7-3

OPTION 2B – CITY OF LONG BEACH CAPITAL COSTS

CONSOLIDATION SCENARIO 2

CITY CONSTRUCTS PUMP STATION AND DIVERTS SEWAGE  
TO A COUNTY CONSTRUCTED FORCE MAIN  
FOR TREATMENT /DISPOSAL AT THE BAY PARK STP <sup>(1)</sup>

Proposed Component	“Year 0” (2012) Construction Cost <sup>(1, 3)</sup> in dollars	Engineering & Administration (20%) in dollars	City Total in dollars
<b>Wastewater Treatment Plant Decommissioning</b>			
Remove site structures and piping over 5+ acres	2,000,000	200,000	2,200,000
Construction head works to provide debris and grit removal and a 7.5 mgd pump station at influent wet well location for flow diversion to the Bay Park STP. Based upon 2007 Report data.	16,600,000	3,320,000	19,920,000
Construct 12,000 linear foot force main (24-inch dia.) with 2 water crossings to Oceanside (Long Beach Road interceptor sewer)	By County (est. to be \$15,900,000)	By County	By County
Modify and expand Bay Park STP	By County (est. to be \$25,000,000+)	By County	By County
<i>Subtotal</i>	<i>18,600,000</i>	<i>3,520,000</i>	<i>22,120,000</i>
<b>City Collection System</b>			
Sanitary Sewer Improvements <sup>(2, 3)</sup>	18,300,000	370,000	18,670,000
Rehabilitate Roosevelt Boulevard Pump Station in 2010	2,400,000	480,000	2,880,000
Rehabilitate Indiana Avenue Pump Station in 2012	2,700,000	540,000	3,240,000

Table 7-3 (continued)

**OPTION 2B – CITY OF LONG BEACH CAPITAL COSTS**

**CONSOLIDATION SCENARIO 2**

**CITY CONSTRUCTS PUMP STATION AND DIVERTS SEWAGE TO A COUNTY CONSTRUCTED FORCE MAIN FOR TREATMENT /DISPOSAL AT THE BAY PARK STP <sup>(1)</sup>**

Proposed Component	"Year 0" (2012) Construction Cost <sup>(1,3)</sup> in dollars	Engineering & Administration (20%) in dollars	City Total in dollars
Provide modification of 3 pump stations in 2022 <sup>(4,5)</sup>	By County (est. to be \$25,000,000+)	By County	By County
1. New York (2009)	1,900,000	380,000	2,280,000
2. Roosevelt (2010)	1,900,000	380,000	2,280,000
3. Indiana (2012)	1,900,000	380,000	2,280,000
Provide "Year 10" modifications to new pump station at plant site	2,400,000	480,000	2,880,000
<i>Subtotal</i>	<i>31,500,000</i>	<i>3,010,000</i>	<i>34,510,000</i>
<b>TOTAL Option 2B</b>	<b>50,100,000</b>	<b>6,530,000</b>	<b>56,630,000</b>

(1) Includes allowances for typical project management, overhead and profit, bonds, a construction escrow (during construction phase, and design contingencies (30%) consistent with County's 2007 Report.  
 (2) Annual construction escalation of 5% and discount rate of 6%.  
 (3) Assumed New York Avenue Pump Station rehabilitated in 2009 (\$2,000,000).  
 (4) Assume \$1,000,000 per station in 2009 dollars.

Table 7-4

**PROJECTED EXPENDITURES  
PROJECTED CAPITAL COST FOR CITY OF LONG BEACH**

(Present valued based upon 2012 being 'Year 0' of a 20-Year Period)

	<u>OPTION 1</u>	<u>OPTION 2</u>
Component	Rehabilitation & Modification of Wastewater Treatment Facilities by the City (in dollars)	2A: Consolidation Scenario 1 County Takes Over City Wastewater Collection & Treatment Systems (in dollars)  2B: Consolidation Scenario 2 City Constructs Pump Station & Diverts Sewage to a County-Constructed Force Main (in dollars)
<b>Wastewater Treatment Plant Modification/Rehabilitation</b>		
Eliminate sodium hypochlorite system and install ultraviolet disinfection system	2,340,000	-
Rehabilitate/expand trickling filter process to provide ammonia reduction capabilities	24,770,000	-
Make improvements to plant processes consistent with 2001 Engineering Report	6,636,000	-
Provide 'Year 10' modifications	12,080,000	-
<i>Subtotal</i>	<i>45,826,000</i>	1,920,000
<b>Wastewater Treatment Plant Decommissioning</b>		
Remove site structures and piping		2,200,000
Construct head works to provide debris and grit removal and a 7.5 mgd pump station at influent wet well station		By County \$19,920,000
Construct 12,000 linear foot force main (24-inch dia.) with 2 water crossings to Oceanside		By County By County

Table 7-4 (continued)

**PROJECTED EXPENDITURES  
PROJECTED CAPITAL COST FOR CITY OF LONG BEACH**

(Present valued based upon 2012 being 'Year 0' of a 20-Year Horizon)

Component	<u>OPTION 1</u>		<u>OPTION 2</u>	
	Rehabilitation & Modification of Wastewater Treatment Facilities by the City (in dollars)	2A: Consolidation Scenario 1 County Takes Over City Wastewater Collection & Treatment Systems (in dollars)	2B: Consolidation Scenario 2 City Constructs Pump Station & Diverts Sewage to a County-Constructed Force Main (in dollars)	
Improvements/modifications to Bay Park STP				
<i>Subtotal</i>		1,920,000	22,120,000	
<b>City Collection System <sup>(1)</sup></b>				
Annual Sanitary Sewer Replacement Program	18,670,000		18,670,000	
Rehabilitate Roosevelt Boulevard Pump Station	2,880,000		2,880,000	
Rehabilitate Indiana Avenue Pump Station	3,240,000		3,240,000	
Provide 'Year 10' modifications to 3 pump stations	6,840,000		6,840,000	
Provide 'Year 10' modifications to new pump station at plant site			2,880,000	
<i>Subtotal</i>	31,630,000		34,510,000	
<b>TOTAL</b>	<b>77,456,000</b>	<b>1,920,000</b>	<b>56,630,000</b>	

would remain consistent with current fees for the first 5 years of an intermunicipal agreement. This charge is incorporated as part of the County's property tax bill.

The modified consolidation approach presented in Option 2B, would allow the City to continue existing sewer billing practices. Fees to City residents would reflect a compilation of City expenses associated with the maintenance of its collection system as well as the annual charge billed by the County to transport to and treat wastewater at the Bay Park STP. While the 2007 Report indicated that a \$.89/1,000 gallon rate would be offered to communities diverting wastewater to County STPs, this fee appears to be very low when compared to the projected \$2/1000 gallon rate suggested in the 2005 Report. In the 2007 Report the Year 2006 operational and maintenance budget for the Bay Park STP and collection system was approximately \$30,000,000. Based upon this plant's design flow of 70 mgd, an approximate treatment cost of \$1,200/MG or \$1.20/1,000 gallons can be estimated. Adding indirect cost (administrative) and debt service expenses associated with future plant modifications/improvements it may be reasonable to expect a fee of \$1.50–\$2.00/1,000 gallon. This rate compares favorably with the City Controller's 2008 fee calculations (\$2.084/1,000 gallons) for accepting wastewater from the Lido Beach Collection District agreement (see Table 7-5).

**Table 7-5**  
**LIDO BEACH SEWAGE FEES**  
**(Extracted from the City Controller Annual Analysis)**

Budget Code	Title	July 1, 2007 Thru June 30, 2008
G8130	Water Pollution	\$1,648,200
G953	Risk Retention Fund	\$245,000
G9955	Debt Service	\$1,101,950
G1910	Insurance	\$130,000
	<i>Sub-Total</i>	<i>\$3,125,150</i>
G0024	Interest Earnings	\$38,116
	<i>Sub-Total</i>	<i>\$3,087,034</i>

Budget Code	Title	July 1, 2007 Thru June 30, 2008
	Indirect Costs (@16%)	\$493,925
	<i>Total</i>	\$3,580,959
	Total Sewage Processed (MG)	1,718,000
	Cost of Sewage Processing (\$/MG)	\$2.084
	Lido Beach Sewage (MG)	251,602.700
	Cost of Lido Beach Sewage	\$524,419

When calculating its annual sewer fund obligations, the City will have to take into account the fee imposed by the County as well as the operational and maintenance costs and annual debt service payments associated with its collections system. The costs will be offset to a degree by sewage revenue generated from the Lido Beach Collection District and non-metered Lido Beach Area (approximately 13–15% of plant flow) and potentially Atlantic Beach and Point Lookout (potentially an additional 15–18% of plant flow).

An analysis of operational costs associated with maintaining sewer services in the City was provided in the 2007 Report. The breakdown provided serves as a relative assessment of typical annual expenditures. The improvements that will be required either to modify the plant or construct a pump station will impact these annual costs significantly. Table 7-6 provides an approximate breakdown of the City's \$4.8 million adopted sewer fund budget for 2007 (as presented in the 2007 Report). A estimate of the percentage associated with the various sewer budget elements was calculated and presented.

**Table 7-6**  
**CITY SEWER FUND BREAKDOWN – OPERATING COSTS**

	Approximate Expense <sup>(1)</sup>	Percent of Annual Budget
Treatment plant component <sup>(2)</sup>	\$2.1 million	44%
Collection system component	\$1.1 million	23%
Debt Service and Administration component	\$1.6 million	33%
TOTAL	\$4.8 million	100%

<sup>(1)</sup> Utilizing Adopted 2007 City Budget

<sup>(2)</sup> Treatment plant staff currently maintains City's pump stations

For Options 1 and 2B, a substantial sewer fund budget will still be required. Annual operating costs for the treatment plant will increase primarily due to the added personnel required to operate the added processes at the facility. For Option 2B, the annual cost will be reduced substantially since the cost of maintaining the one additional pump station will be substantially less than the operations of a treatment plant. It is difficult to compile exact figures for operating costs for each of these options. However, since a consistency in annual spending is observed when reviewing 10 years of City budgetary data regarding sewage treatment operations, a relative comparison can be made. A relative comparison can be made utilizing 2007 Report data and projecting the cost impacts associated with Options 1, 2A and 2B. This comparison is illustrated in Table 7-7. Note this comparison is provided as a general projection of anticipated annual expenditures that may be required under each scenario. Obviously, utility rates, the costs of bonding and possible revenues for accepting additional wastewater, etc., will greatly impact annual expenditures.

**Table 7-7**  
**OPERATION AND MAINTENANCE COST**  
**FOR FIRST FIVE YEARS**  
**TYPICAL YEAR<sup>(1)</sup>**

	<b>OPTION 1 (City Maintains STP Operations)</b>	<b>OPTION 2A (County Assumes All Operations)</b>	<b>OPTION 2B (City Constructs Pump Station at Plant Site)</b>
Existing Treatment Plant	\$2.1 million	-	-
Added improvements and modifications	\$0.4 million	-	-
New 7.5 mgd pump station	-	By County	\$0.4 million
Collection System (sewers and 3 pump stations)	\$1.1 million	By County	\$1.1 million
Existing debt service and administrative costs	\$1.6 million	By County	\$1.6 million
Added annual debt service due required construction <sup>(2)</sup>	\$2.45 million	By County	\$1.5 million
Treatment Costs at Bay Park	-	\$1.57 million	\$1.57 million
Revenues from Lido Beach	\$0.5 million	-	\$0.5 million
<b>Annual Cost Total</b>	<b>\$7.05 million</b>	<b>\$1.57 million</b>	<b>\$4.67 million</b>
<b>Annual Cost per capita<sup>(3)</sup></b>	<b>\$195.29</b>	<b>\$43.50</b>	<b>\$129.36</b>
<b>Annual Cost per household (2.3 persons)<sup>(4)</sup></b>	<b>\$449.16</b>	<b>\$100</b>	<b>\$297.5</b>

<sup>(1)</sup>Estimates are in 2007 dollars

<sup>(2)</sup>Annual rate based on 20 year period at 4% interest rate

<sup>(3)</sup>Based on 2004 population

<sup>(4)</sup>US Bureau of Census

As previously stated, Nassau County has stated that for the first five years, any municipality that diverts its wastewater to one of its wastewater treatment plants, the municipality would be charged \$0.89/1000 gallons of wastewater treated. After the initial five years, the rate would need to be negotiated between the City and the County. This rate could potentially be \$1.50 to \$2.00/1,000 gallons based on current operations at the Bay Park Sewage Treatment Plant and potential modifications.

**Section 8**

## 8.0 REGULATORY CONCERNS

The implementation Option 2 (both scenarios) would require a substantial amount of coordination with local jurisdictions and utilities as well as approval from an array of Federal, State and local regulatory agencies. The following list reflects anticipated stakeholders in such an effort:

Entity	Concerns
United States Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Wetland impacts</li> <li>• Waterway crossings: Reynolds Channel and Barnum Island Channel</li> </ul>
United States Coast Guard	<ul style="list-style-type: none"> <li>• Underwater Construction activities</li> </ul>
New York State Department of Environmental Conservation	<ul style="list-style-type: none"> <li>• Possible Bay Park STP permit (SPDES) modifications</li> <li>• State Environmental Quality Review (SEQR) review</li> <li>• Tidal wetlands issues</li> <li>• Stormwater Pollution Prevention Plan (SWPPP)</li> </ul>
New York State Department of State	<ul style="list-style-type: none"> <li>• Waterway coordination</li> </ul>
Town of Hempstead	<ul style="list-style-type: none"> <li>• Easements for Waterway Crossings</li> <li>• Roadway permits</li> </ul>
Long Island Power Authority	<ul style="list-style-type: none"> <li>• Utility conflicts</li> </ul>
National Grid	<ul style="list-style-type: none"> <li>• Utility conflicts</li> </ul>
Long Island Rail Road (MTA)	<ul style="list-style-type: none"> <li>• Easement conflicts</li> </ul>

**Section 9**

## 9.0 ENVIRONMENTAL AND PUBLIC CONCERNS

It is anticipated that the implementation of Option 2A or 2B will require a substantial level of environmental study and public involvement. Due to the level and extent of anticipated environmental and social impacts the preparation of an Environmental Impact Statement (EIS) will likely be required to comply with New York State's SEQR permit process. This could be a time consuming and controversial process, seriously influenced by the residents in the environs of the Bay Park STP, especially if plant capacity must be increased to accommodate projected Long Beach flows.

The potential installation of an ecologically preferred ocean outfall remains in question. In the current economic climate, the commitment of funds to construct an ocean outfall that would extend from the current Bay Park STP outfall in Reynolds Channels approximately three miles south through Long Beach and into the Atlantic Ocean (could exceed \$300M) may be years away. If the City elects to rehabilitate/improve its wastewater plant (Option 1) it may be possible to ultimately re-direct its effluent into this outfall pipe.

**Section 10**

## 10.0 CONCLUSION

Five scenarios were evaluated as potential options for the City to comply with its modified SPDES permit requiring compliance with new discharge limits for ammonia and total residual chlorine. At the present the most feasible alternatives are:

1. The City rehabilitates and upgrades its Sewage Treatment Plant to include nitrification and ultraviolet disinfection facilities.
2. Nassau County takes over the operation of the City's wastewater collection system, constructs a new pump station and force main to convey the City's wastewater to Nassau County's Bay Park Sewage Treatment Plant for treatment.
3. The City operates its wastewater collection system, constructs a new pump station and diverts its wastewater to a County constructed force main to convey its wastewater to the Bay Park facility for treatment.

During the first five years of operation, the cost to the City's residents would be lowest if the County assumes complete operation of the City's sewer collection and diverts all wastewater flows to the Bay Park plant for treatment. After the initial five years a new rate structure would need to be negotiated. If the rate is double, this option would still be lowest cost alternative to the City's residents.

To comply with the new SPDES permit, the City should issue a Request for Proposal to develop a preliminary engineering report. This report would further evaluate the alternatives to upgrade its sewage treatment plant to provide nitrification and ultraviolet disinfection facilities, and to divert the City's wastewater to the Bay Park Sewage Treatment Plant. During the development of the report, the City should continue negotiations with Nassau County on an agreement to divert its wastewater to the Bay Park facility.

## Appendix A

**APPENDIX A**

**MODIFIED CITY OF LONG BEACH SPDES PERMIT**

**New York State Department of Environmental Conservation**  
**Division of Environmental Permits, 4<sup>th</sup> Floor**  
625 Broadway, Albany, New York 12233-1750  
Phone: (518) 402-9167 • FAX: (518) 402-9168  
Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Alexander B. Grannis  
Commissioner

December 30, 2008

Mr. Robert Raab, Commissioner  
City of Long Beach  
1 West Chester St  
Long Beach, NY 11561

RECEIVED  
DEPT. OF PUBLIC WORKS  
9 JAN -2 10:42  
CITY OF LONG BEACH  
NEW YORK

Re: Long Beach Water Pollution Control Facility  
DEC #: 1-2809-00045/00001 SPDES #: NY 002 0567

Dear Mr. Raab:

As a result of an October 3, 2008, request for a permit modification received by the City of Long Beach, enclosed is a final modified State Pollutant Discharge Elimination System (SPDES) permit for the above referenced facility. A fact sheet narrative has been prepared and is enclosed outlining the requests and corresponding responses.

The following changes to the permit have been made:

- The compliance schedule has been modified for ammonia and TRC.
- The due date for the submission of the short term, high intensity monitoring program has been modified.
- The Infiltration and Inflow Reduction program has been removed. However, the annual report remains in the Collection System Monitoring and Maintenance program.

Should you have questions on the administration of this modification, please feel free to contact me at the address or phone number listed above. Should you have technical questions on permit content, please contact the permit drafter, Jean Occidental, at (518) 402-8116, or the Regional Water Engineer, Bill Spitz, at (631) 444-0405.

Sincerely,

Teresa Diehsner  
Division of Environmental Permits

Enclosures

c: R. Evans, RPA/B. Spitz, RWE  
J. Occidental, Permit Writer  
DOW-BWP Permit Coordinator  
M. Josilo, EPA-Region II  
N. Regels, NYSEFC  
R. Brady, IEC



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
**State Pollutant Discharge Elimination System (SPDES)**  
**DISCHARGE PERMIT**

Final 3.00

Industrial Code: 4952  
 Discharge Class (CL): 05  
 Toxic Class (TX): N  
 Major Drainage Basin: 17  
 Sub Drainage Basin: 02  
 Water Index Number: MDB-RC (portion)  
 Compact Area: IEC

SPDES Number: NY- 0020567  
 DEC Number: 1-2809-00045/00001  
 Effective Date (EDP): 9/1/2004  
 Expiration Date (ExDP): 9/1/2009  
 Modification Dates:(EDPM) 8/20/2008, 1/12/2009

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 et.seq.) (hereinafter referred to as "the Act").

**PERMITTEE NAME AND ADDRESS**

Name: City of Long Beach  
 Street: 1 West Chester Street  
 City: Long Beach

Attention: Commissioner Robert Raab

State: NY Zip Code: 11561

is authorized to discharge from the facility described below:

**FACILITY NAME AND ADDRESS**

Name: Long Beach Water Pollution Control Facility  
 Location (C,T,V): Long Beach (C)  
 Facility Address: National Blvd. And Bay Dr.  
 City: Long Beach

County: Nassau

State: NY Zip Code:

NYTM -E:

NYTM - N: 4

From Outfall No.: 001

at Latitude: 40 ° 35 ' 38 " & Longitude: 73 ° 39 ' 59 "

into receiving waters known as:

Reynold's Channel

Class: SB

and; (list other Outfalls, Receiving Waters & Water Classifications)

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth this permit; and 6 NYCRR Part 750-1.2(a) and 750-2.

**DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS**

Mailing Name: Long Beach Water Pollution Control  
 Street: 1 West Chester Street  
 City: Long Beach

State: NY Zip Code: 11561  
 Phone: (516) 431-5691

Responsible Official or Agent: William Notholt, Chief Operator

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

CO BWP - Permit Coordinator  
 RWE I  
 RPA  
 EPA Region II - Michelle Josilo  
 NYSEFC  
 IEC  
 BWC

Deputy Chief Permit Administrator: Stuart M. Fox	
Address: Division of Environmental Permits 625 Broadway Albany, NY 12233-1750	
Signature: <i>Stuart M. Fox</i>	Date: 12/31/08

### PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING		
	This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water.	This cell lists classified waters of the state to which the listed outfall discharges.	The date this page starts in effect. (e.g. EDP or EDPM)	The date this page is no longer in effect. (e.g. ExDP)		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQ.	SAMPLE TYPE	
e.g. pH, TRC, Temperature, D.O.	The minimum level that must be maintained at all instants in time.	The maximum level that may not be exceeded at any instant in time.	SU, °F, mg/l, etc.			
PARAMETER	EFFLUENT LIMIT	PRACTICAL QUANTITATION LIMIT (PQL)	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE
	Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based standards, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change.	For the purposes of compliance assessment, the analytical method specified in the permit shall be used to monitor the amount of the pollutant in the outfall to this level, provided that the laboratory analyst has complied with the specified quality assurance/quality control procedures in the relevant method. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This PQL can be neither lowered nor raised without a modification of this permit.	Type I or Type II Action Levels are monitoring requirements, as defined below in Note 2, that trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, Temperature, concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly.	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

**Note 1: DAILY DISCHARGE:** The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day. **DAILY MAX:** The highest allowable daily discharge. **DAILY MIN:** The lowest allowable daily discharge. **MONTHLY AVG (daily avg):** The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. **RANGE:** The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown. **7 DAY ARITHMETIC MEAN (7 day average):** The highest allowable average of daily discharges over a calendar week. **12 MRA (twelve month rolling avg):** The average of the most recent twelve month's monthly averages. **30 DAY GEOMETRIC MEAN (30 d geo mean):** The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. **7 DAY GEOMETRIC MEAN (7 d geo mean):** The highest allowable geometric mean of daily discharges over a calendar week.

**Note 2: ACTION LEVELS:** Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards. **TYPE I:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results in excess of the stated Action Level. **TYPE II:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results that show the stated action level exceeded for four of six consecutive samples, or for two of six consecutive samples by 20 % or more, or for any one sample by 50 % or more.

**PERMIT LIMITS, LEVELS AND MONITORING**

OUTFALL No.	LIMITATIONS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	Reynold's Channel	1/12/09	9/1/09

PARAMETER	EFFLUENT LIMIT					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Avg	7.5	mgd			Continuous	recorder		x	
BOD <sub>5</sub>	Monthly Avg	30	mg/l	1900	lbs/d	2/week	24 hr. comp.	x	x	(1)
BOD <sub>5</sub>	7 Day Avg	45	mg/l	2800	lbs/d	2/week	24 hr. comp.		x	
BOD <sub>5</sub>	6 Consec Hourly Mean	50	mg/l			2/week	24 hr. comp.		x	(2)
Solids, Suspended	Monthly Avg	30	mg/l	1900	lbs/d	2/week	24 hr. comp.	x	x	(1)
Solids, Suspended	7 Day Avg	45	mg/l	2800	lbs/d	2/week	24 hr. comp.		x	
Solids, Suspended	6 Consec Hourly Mean	50	mg/l			2/week	24 hr. comp.		x	(2)
Solids, Settleable	Daily Max	0.3	ml/l			3/day	Grab		x	
pH	Range	6.0 - 9.0	SU			3/day	Grab		x	
Nitrogen, Ammonia (total NH <sub>3</sub> + NH <sub>4</sub> )	Monthly Avg	9.5	mg/l			2/week	24 hr. comp.	x	x	(3)
Nitrogen, TKN (as N)	Daily Max	Monitor	mg/l			1/quarter	24 hr. comp.	x	x	
Nitrite (as N)	Daily Max	Monitor	mg/l			1/quarter	24 hr. comp.	x	x	
Nitrate (as N)	Daily Max	Monitor	mg/l			1/quarter	24 hr. comp.	x	x	
Phosphorus, Total (as P)	Daily Max	Monitor	mg/l			1/quarter	24 hr. comp.	x	x	
Orthophosphate (as P)	Daily Max	Monitor	mg/l			1/quarter	24 hr. comp.	x	x	
Temperature	Daily Max	Monitor	Deg. F			3/day	Grab		x	
Iron	Daily Max	Monitor	mg/l			1/quarter	Grab		x	(5)
Effluent Disinfection required: <input checked="" type="checkbox"/> All Year <input type="checkbox"/> Seasonal from _____ to _____										
Coliform, Fecal	30 Day Geometric Mean	200	No./100 ml			2/week	Grab		x	(8,9,10)
Coliform, Fecal	7 Day Geometric Mean	400	No./100 ml			2/week	Grab		x	(8,9,10)
Coliform, Fecal	6 Consec. Hourly Mean	800	No./100 ml			2/week	Grab		x	(2)
Coliform, Fecal	Individual Sample	2400	No./100 ml			2/week	Grab		x	(2)
Coliform, Total	Monthly Median	700	No./100 ml			2/week	Grab		x	(8,9,10)
Chlorine, Total Residual	Daily Max	0.5	mg/l			3/day	Grab		x	(4)

FOOTNOTES ON NEXT PAGE

### ACTION LEVELS AND MONITORING

OUTFALL NUMBER	LEVELS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	Reynold's Channel	1/12/09	9/1/09

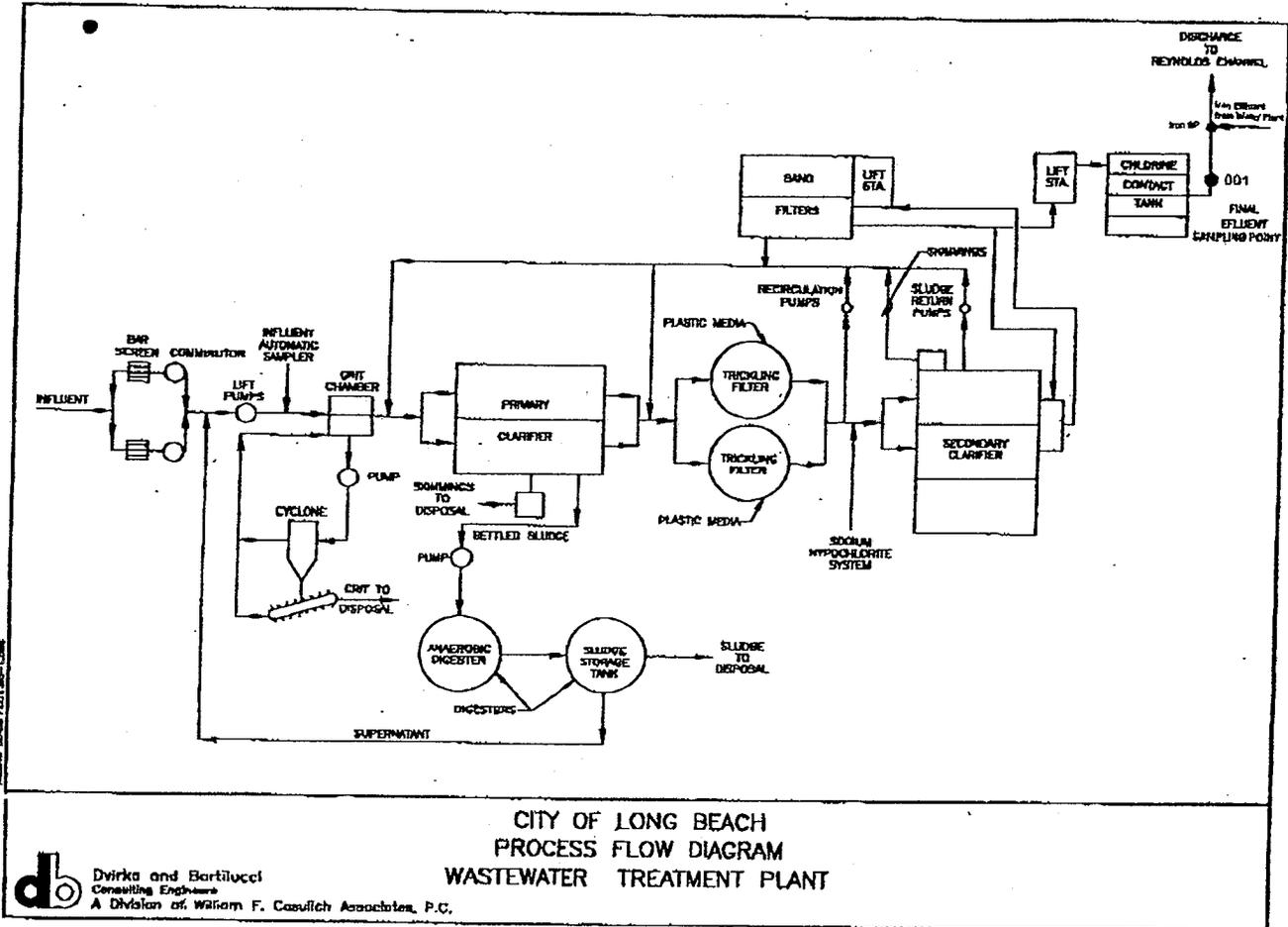
PARAMETER	EFFLUENT LIMIT		PQL mg/L	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
Toluene		Monitor				lbs/day	1/quarter	Grab	(6,7)
Chloroform		Monitor				lbs/day	1/quarter	Grab	(6,7)
Methylene Chloride		Monitor				lbs/day	1/quarter	Grab	(6,7)

**FOOTNOTES:**

- (1) Effluent shall not exceed 23 % and 15 % of influent concentration values for BOD<sub>5</sub> & TSS respectively.
- (2) This is an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.
- (3) An interim limit of 23 mg/l shall be effective until a nitrification system is installed to meet the final effluent limit of 9.5 mg/L in accordance with the Schedule of Compliance on page 9 of this permit.
- (4) An interim Total Residual Chlorine limit of 3.0 mg/l is in effect until the disinfection system is upgraded to meet the final effluent limit of 0.5 mg/l in accordance with the Schedule of compliance on page 9 of this permit.
- (5) Grab samples shall be taken during periods of normally high iron concentrations, at the outfall 001 final effluent sampling location, and when the conveyance of iron sludge discharge from the municipal water supply into the outfall 001, the sampling location shall be the point of admixture of iron sludge.
- (6) Composite samples for volatile organic compounds shall be collected in accordance with 6 NYCRR 750-2.5(a)(2)(iii).
- (7) The Permittee shall report both the mass loading (lbs/day) and the concentration of toluene, chloroform and methylene chloride (µg/l) to the Department.
- (8) Additional Coliform Limitations and requirements:
  - i. The multiple tube fermentation is the only approved fecal and total coliform testing procedure.
  - ii. Facilities may regularly sample on a more frequent schedule than the minimum required by this permit.
  - iii. For facilities sampling less than ten (10) times per month, the estimated 90<sup>th</sup> percentile of total coliform readings shall not exceed an MPN of 3,300/100 ml for the 3 tube per decimal dilution MPN test, nor an MPN of 2,300/100 ml for the 5 tube per decimal dilution MPN test. The estimated 90<sup>th</sup> percentile is calculated using the Guideline in the National Shellfish Sanitation Program Manual of Operations, 1989 revision, page APF-3 or the method found at [www.cfsan.fda.gov/~nss2-42g.html](http://www.cfsan.fda.gov/~nss2-42g.html).
  - iv. For facilities sampling ten (10) or more times per month, no more than 10 percent of the total coliform readings shall exceed an MPN of 3,300/100 ml for the 3 tube per decimal dilution MPN test, nor an MPN of 2,300/100 ml for the 5 tube per decimal dilution MPN test.
- (9) Grab samples shall be taken during the periods which include normally high effluent flow.
- (10) Additional sampling to assure adequacy and consistency of disinfection for the protection of shellfish harvesting; each April and August. Permittee shall analyze Fecal and Total coliform grab samples:
  - i. Taken every two hours, for one day.
  - ii. Taken twice on each of seven consecutive days.
  - iii. Report the above results in a addendum to the applicable Discharge Monitoring Report.
  - iv. Include the above results in applicable Discharge Monitoring Report calculations.

### MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:



## STORM WATER POLLUTANT PREVENTION PLAN FOR POTWs WITH STORMWATER OUTFALLS

1. **General** - The Department has determined that stormwater discharges from POTWs with design flows at or above 1 mgd shall be covered under the SPDES permit. If the permittee has already submitted a Notice of Intent to the Department for coverage under the General Storm Water permit, the permittee shall submit a Notice of Termination to the Department upon receipt of this final SPDES permit containing the requirement to develop a SWPPP.

The permittee is required to develop, maintain, and implement a Storm Water Pollutant Prevention Plan (SWPPP) to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and other stormwater discharges including, but not limited to, drainage from raw material storage.

The SWPPP shall be documented in narrative form and shall include the 13 minimum elements below and any plot plans, drawings, or maps necessary to clearly delineate the direction of stormwater flow and identify the conveyance, such as ditch, swale, storm sewer or sheet flow, and receiving water body. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the SWPPP and may be incorporated by reference. A copy of the current SWPPP shall be submitted to the Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.

2. **Compliance Deadlines** - The initial completed SWPPP shall be submitted by February 20, 2009 to the Regional Water Manager. The SWPPP shall be implemented within 6 months of submission, unless a different time frame is approved by the Department. The SWPPP shall be reviewed annually and shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the SWPPP is inadequate; or (c) a letter from the Department identifies inadequacies in the SWPPP. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All SWPPP revisions (with the exception of minimum elements - see item (4.B.) below) must be submitted to the Regional Water Manager within 30 days. Note that the permittee is not required to obtain Department approval of the SWPPP (or of any minimum elements) unless notified otherwise. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.

3. **Facility Review** - The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases.

The review shall address all substances present at the facility that are identified in Tables 6-10 of SPDES application Form NY-2C (available at [http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/form2C.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2C.pdf)) as well as those that are required to be monitored by the SPDES permit.

4. **A. 13 Minimum elements** - Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify Best Management Practices (BMPs) that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of minimum elements of the SWPPP and BMPs is available in the September 1992 manual *Storm Water Management for Industrial Activities*, EPA 832-R-92-006 (available on-line at <http://cfpub.epa.gov/npdes/stormwater/swppp-msepp.cfm>) At a minimum, the plan shall include the following elements:

- |                                     |  |                                 |
|-------------------------------------|--|---------------------------------|
| 1. Pollution Prevention Team        | 6. Security  | 10. Spill Prevention & Response |
| 2. Reporting of BMP Incidents       | 7. Preventive Maintenance                                | 11. Erosion & Sediment Control  |
| 3. Risk Identification & Assessment | 8. Good Housekeeping                                     | 12. Management of Runoff        |
| 4. Employee Training                | 9. Materials/Waste Handling,<br>Storage, & Compatibility | 13. Street Sweeping             |
| 5. Inspections and Records          |  |                                 |

Note that for some facilities, especially those with few employees, some of the above may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the SWPPP that do not apply to your facility, along with an explanation, for instance if street sweeping did not apply because no streets exist at the facility.

**B. Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters** - As part of the erosion and sediment control element, a SWPPP shall be developed prior to the initiation of any site disturbance of one acre or more of uncontaminated area. Uncontaminated area means soils or groundwater which are free of contamination by any toxic or non-conventional pollutants identified in Tables 6-10 of SPDES application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Manager; nor is such discharge authorized by any SPDES general permit for stormwater discharges. SWPPPs are not required for discharges of stormwater from construction activity to groundwaters.

The SWPPP shall conform to the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual*, unless a variance has been obtained from the Regional Water Manager, and to any local requirements. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity at least 30 days prior to soil disturbance. The SWPPP shall also be submitted to the Regional Water Manager if contamination, as defined above, is involved and the permittee must obtain a determination of any SPDES permit modifications and/or additional treatment which may be required prior to soil disturbance. Otherwise, the SWPPP shall be submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent (NOI)* form shall be submitted (available at [www.dec.state.ny.us/website/dow/toolbox/swforms.html](http://www.dec.state.ny.us/website/dow/toolbox/swforms.html)) prior to soil disturbance. Note that submission of a NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges, nor are any additional permit fees incurred. SWPPPs must be developed and submitted for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP is properly implemented.

5. **Facilities with Petroleum and/or Chemical Bulk Storage (PBS and CBS) Areas** - Compliance must be maintained with all applicable regulations including those involving releases, registration, handling and storage (6NYCRR 595-599 and 612-614). Stormwater discharges from handling and storage areas should be eliminated where practical.

A. **Spill Cleanup** - All spilled or leaked substances must be removed from secondary containment systems as quickly as practical and in all cases within 24 hours. The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting discharge of pollutants to waters of the State. Following spill cleanup the affected area must be completely flushed with clean water three times and the water removed after each flushing for proper disposal in an on-site or off-site wastewater treatment plant designed to treat such water and permitted to discharge such wastewater. Alternately, the permittee may test the first batch of stormwater following the spill cleanup to determine discharge acceptability. If the water contains no pollutants it may be discharged. Otherwise it must be disposed of as noted above. See *Discharge Monitoring* below for the list of parameters to be sampled for.

B. **Discharge Operation** - Stormwater must be removed before it compromises the required containment system capacity. Each discharge may only proceed with the prior approval of the permittee staff person responsible for ensuring SPDES permit compliance. Bulk storage secondary containment drainage systems must be locked in a closed position except when the operator is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers and must not be reopened unless the transfer area is clean of contaminants. Stormwater discharges from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained

on site noting the date, time and personnel supervising each discharge.

C. Discharge Screening - Prior to each discharge from a secondary containment system the stormwater must be screened for contamination. All stormwater must be inspected for visible evidence of contamination. Additional screening methods shall be developed by the permittee as part of the overall SWPPP, e.g. the use of volatile gas meters to detect the presence of gross levels of gasoline or volatile organic compounds. If the screening indicates contamination, the permittee must collect and analyze a representative sample of the stormwater. If the water contains no pollutants it may be discharged. Otherwise it must either be disposed of in an on site or off site wastewater treatment plant designed to treat and permitted to discharge such wastewater or the Regional Water Manager can be contacted to determine if it may be discharged without treatment.

D. Discharge Monitoring - Unless the discharge from any bulk storage containment system outlet is identified in the SPDES permit as an outfall with explicit effluent and monitoring requirements, the permittee shall monitor the outlet as follows:

(i) Bulk Storage Secondary Containment Systems:

(a) The volume of each discharge from each outlet must be monitored. Discharge volume may be calculated by measuring the depth of water within the containment area times the wetted area converted to gallons or by other suitable methods. A representative sample shall be collected of the first discharge following any cleaned up spill or leak. The sample must be analyzed for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present.

(b) Every fourth discharge from each outlet must be sampled for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present.

(ii) Transfer Area Secondary Containment Systems:

The first discharge following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other pollutants the permittee knows or has reason to believe are present.

E. Discharge Reporting - Any results of monitoring required above, excluding screening data, must be submitted to the Department by appending them to the corresponding DMR. Failure to perform the required discharge monitoring and reporting shall constitute a violation of the terms of the SPDES permit.

F. Prohibited Discharges - In all cases, any discharge which contains a visible sheen, foam, or odor, or may cause or contribute to a violation of water quality is prohibited. The following discharges are prohibited unless specifically authorized elsewhere in this SPDES permit: spills or leaks, tank bottoms, maintenance wastewaters, wash waters where detergents or other chemicals have been used, tank hydrotest and ballast waters, contained fire fighting runoff, fire training water contaminated by contact with pollutants or containing foam or fire retardant additives, and unnecessary discharges of water or wastewater into secondary containment systems.

\* Discharge includes stormwater discharges and snow and ice removal. If applicable, a representative sample of snow and/or ice should be collected and allowed to melt prior to assessment.

\*\* If the stored substance is gasoline or aviation fuel then sample for oil & grease, benzene, ethylbenzene, naphthalene, toluene and total xylenes (EPA method 602). If the stored substance is kerosene, diesel fuel, fuel oil, or lubricating oil then sample for oil & grease and polynuclear aromatic hydrocarbons (EPA method 610). If the substance(s) are listed in Tables 6-8 of SPDES application form NY-2C then sampling is required. If the substance(s) are listed in NY-2C Tables 9-10 sampling for appropriate indicator parameters may be required, e.g. BOD5 or toxicity testing. Contact the facility inspector for further guidance. In all cases flow and pH monitoring is required.

### SCHEDULE OF COMPLIANCE

The permittee shall comply with the following schedules:

**a) Stormwater Pollution Prevention Plan (SWPPP)**

Action Code	Outfall Number	Compliance Action	Due Date
	N/A	The Permittee shall develop and submit to the Regional Water Manager, an approvable Stormwater Pollution Prevention Plan (SWPPP).	2/20/2009

**b) Ammonia and Total Residual Chlorine**

Action Code	Outfall Number	Compliance Action	Due Date
	001	<p>The Permittee shall submit an approvable Engineering Report that identifies the facilities necessary to achieve compliance with the water quality based effluent limitations of 9.5 mg/l for ammonia, 0.5mg/l for total residual chlorine(TRC), and an effluent design level of 2.0 mg/L for dissolved oxygen.</p> <p>The Permittee shall submit approvable final design plans and specifications, as well as a schedule of construction, for the facilities described in the approved Engineering Report. [Note: The schedule shall prioritize the construction of the disinfection system to meet the new TRC limit.]</p> <p>The Permittee shall commence construction of the facilities described in the approved report, plans and specifications in accordance with the approved schedule of construction.</p> <p>The Permittee shall submit progress reports every 6 months detailing the work done in accordance with the approved engineering report and schedule of construction. The schedule of construction contained in the approved report shall, by this reference, be made part of the permit.</p> <p>The Permittee shall complete construction in accordance with the approved schedule, but no later than EDPM + 8 years.</p>	<p>1/12/2011</p> <p>DEC Approval of Engineering Report + 24 mo.</p> <p>DEC Approval of Schedule of Construction + 6 mo.</p>

**d) Short-term Hi-Intensity Sampling (by Detection Level)**

Action Code	Outfall Number	Compliance Action	Due Date									
	001	<p>The Permittee shall conduct sampling for the following parameters in the STP effluent and listed in the permit application. Sampling shall be once per week for a period of 3 months. The permittee shall submit the results of the analyses along with the daily flow.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Parameter</th> <th>Detection Level Required, ug/l</th> <th>Sample Type</th> </tr> </thead> <tbody> <tr> <td>Total Copper</td> <td>4</td> <td>24 hr. Comp.</td> </tr> <tr> <td>Bis (2-Ethylhexyl) Phthalate</td> <td>8</td> <td>24 hr. Comp.</td> </tr> </tbody> </table> <p>After review of the results, the Department may reopen the permit to add additional limits or action levels for these parameters.</p>	Parameter	Detection Level Required, ug/l	Sample Type	Total Copper	4	24 hr. Comp.	Bis (2-Ethylhexyl) Phthalate	8	24 hr. Comp.	<p>Results must be submitted to DEC by 2/20/2009</p>
Parameter	Detection Level Required, ug/l	Sample Type										
Total Copper	4	24 hr. Comp.										
Bis (2-Ethylhexyl) Phthalate	8	24 hr. Comp.										

e) Collection System Monitoring & Maintenance

Action Code	Outfall Number	Compliance Action	Due Date
	001	The permittee shall submit an annual report no later than January 31st of each year detailing the actions taken to improve the City's Collection System.	Every January 31 <sup>st</sup>

When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

- f) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
1. A short description of the non-compliance;
  2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
  3. A description or any factors which tend to explain or mitigate the non-compliance; and
  4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- g) The permittee shall submit copies of any document required by the above schedule of compliance to NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

### DISCHARGE NOTIFICATION REQUIREMENTS

a) The permittee shall maintain the existing identification signs at all outfalls to surface waters, which have not been waived by the Department in accordance with 17-0815-a. The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have minimum dimensions of eighteen inches by twenty four inches (18" x 24") and shall have white letters on a green background and contain the following information:

**N.Y.S. PERMITTED DISCHARGE POINT**

SPDES PERMIT No.: NY \_\_\_\_\_

OUTFALL No. : \_\_\_\_\_

For information about this permitted discharge contact:

Permittee Name: \_\_\_\_\_

Permittee Contact: \_\_\_\_\_

Permittee Phone: (     ) - ### - ####

OR:

NYSDEC Division of Water Regional Office Address :

NYSDEC Division of Water Regional Phone: (     ) - ### - ####

b) For each discharge required to have a sign in accordance with a), the permittee shall provide for public review at a repository accessible to the public, copies of the Discharge Monitoring Reports (DMRs) as required by the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of this permit. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be at the business office repository of the permittee or at an off-premises location of its choice (such location shall be the village, town, city or county clerk's office, the local library or other location as approved by the Department). In accordance with the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of your permit, each DMR shall be maintained on record for a period of five years.

c) The permittee shall periodically inspect the outfall identification signs in order to ensure that they are maintained, are still visible and contain information that is current and factually correct.

## RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- a) The permittee shall also refer to 6 NYCRR Part 750-1.2(a) and 750-2 for additional information concerning monitoring and reporting requirements and conditions.
- b) The monitoring information required by this permit shall be summarized, signed and retained for a period of three years from the date of the sampling for subsequent inspection by the Department or its designated agent. Also, monitoring information required by this permit shall be summarized and reported by submitting;

(if box is checked) completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

(if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 and must summarize information for January to December of the previous year in a format acceptable to the Department.

(if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:  
 Regional Water Engineer and/or  County Health Department or Environmental Control Agency specified below

Send the DMRs with original signatures to:

Department of Environmental Conservation  
Division of Water  
Bureau of Water Compliance Programs  
625 Broadway  
Albany, New York 12233-3506

Phone: (518) 402-8177

Send a copy of each DMR page to:

Department of Environmental Conservation  
Regional Water Engineer  
Building 40, SUNY Campus  
Stonybrook, NY 11790-2356

Phone: (631) 444-0354

Send an additional copy of each DMR page to:

- c) Noncompliance with the provisions of this permit shall be reported to the Department as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2.
- d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- e) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording of the data on the Discharge Monitoring Reports.
- f) Calculation for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- g) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- h) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section five hundred two of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be sent to the Environmental Laboratory Accreditation Program, New York State Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockefeller Empire State Plaza, Albany, New York 12201.

**SPDES FACT SHEET NARRATIVE**  
for Long Beach Water Pollution Control Facility  
SPDES NY0020567  
November 2008

This modification of the State Pollutant Discharge Elimination System (SPDES) is a permittee-initiated modification of the permit. The permittee's letter dated October 3, 2008, requested a modification of the State Pollutant Discharge Elimination System (SPDES) permit NY 0020567, issued on August 6, 2008.

The August 6, 2008 modification included: a requirement to develop a stormwater pollution prevention plan (SWPPP); a compliance schedule requiring the permittee to evaluate and install the facilities necessary to meet a more stringent water quality based effluent limit for total residual chlorine (TRC); a compliance schedule requiring the permittee to evaluate and install the facilities necessary to meet a new water quality based effluent limit for ammonia; a compliance schedule to develop a collection system monitoring and maintenance system to control inflow and infiltration; and a compliance schedule requiring the permittee to monitor total copper and bis(2-ethylhexyl)phthalate once per week for 3 months.

The following are the permittee's requests and corresponding responses to those requests:

1. The permittee notes that the City of Long Beach is a permittee under the New York State municipal separate stormwater sewer system (MS4) general permit. Therefore, the permittee requests that the Storm Water Pollution Prevention Plan requirement be removed from the permit.

DEC has denied this request. As previously noted in the response to comments for the August 6, 2008 SPDES permit, stormwater discharges from POTWs with discharge flow of 1 MGD or more are considered stormwater associated with Industrial Activity, and are required to seek coverage under either an individual SPDES permit or the SPDES Multi-Sector General Permit for Industrial Activity (GP-0-06-002). Please note that the requirements of the MS4 general permit are not the same as the multi-sector general permit.

2. The City of Long Beach has notified DEC that discussions with Nassau County, regarding elimination of the Long Beach wastewater treatment plant and diversion of local sewage to the Bay Park WWTP, are ongoing. Thus, the permittee requests an adjustment of the compliance schedule of the treatment upgrade to meet the new final effluent limit for total residual chlorine (TRC) and ammonia so that they can have more time for negotiations.

DEC has reviewed the proposed schedule and agreed to modify the compliance schedule for TRC and ammonia. The following are the changes in the schedule:

- Submission of the Engineering Evaluation Report of the facilities to achieve the new effluent limits for ammonia and TRC has been extended for additional 12 months.
  - Submission of the final plans and specifications and schedule of construction has been extended for additional 12 months after DEC approval of the Engineering Report. Note: The schedule shall prioritize the construction of the disinfection system upgrade.
  - The complete construction deadline has also been adjusted to EDPM + 8 years.
3. The permittee requests that the schedule for the start of the short term hi-intensity monitoring program as they did not yet start it. The permittee requests modifying the schedule so they would be submitting sampling results 4 months after the effective date of this draft SPDES permit rather than 5 months after the August 6, 2008 SPDES permit, to allow time for start-up, sampling, and results transmittal.

DEC has determined that the due date for the submission of the results will be no later than 2/20/2009. This will give the permittee a reasonable time to contract a laboratory, conduct sample analysis, and submit the results to DEC.

4. The permittee requests that the Collection System Monitoring & Maintenance program be removed from the SPDES permit since an inflow and infiltration program is already in place. The permittee notes that the sewer replacement program has led to flow reduction into the STP. To support this request, the permittee submitted a table showing significant decrease in flow from 2001 to 2007. Also, the permittee included a drawing indicating the areas where repairs have been completed.

DEC recognizes and appreciates the permittee's actions to reduce the infiltration and inflow (I&I) in the City's collection system. The Department has determined that the permittee shall be required to submit an annual progress report summarizing actions taken to improve the City's Collection System. Therefore, the development of an I&I reduction program has been removed but the annual report remains in the CSMM requirement in the compliance schedule of the permit.

## Appendix B

**APPENDIX B**

**DIVISION 2 - RATES AND CHARGES**

## APPENDIX

### DIVISION 2. RATES AND CHARGES

#### Sec. 25-142. Rates generally.

The charges for city water service upon all premises subject to this article shall be the same as the charges imposed by this chapter for water supplied within the city, as now existing or as from time to time amended.

(Code 1957, § 4-215.4, .5; Ord. No. 1773/92, § 1, 3-17-92)

Sec. 25-142.1: Reserved.

**Editor's note:** Section 25-142.1, rates applicable outside the city prior to July 1, 1976, derived from Code 1957, § 4-214.2, and Ord. Nos. 1096/71 and 1276/75 was deleted by Ord. No. 1773/92 in its reenactment of this chapter. See § 25-142.2.

#### Sec. 25-142.2. Sewer rates applicable outside the city on and after July 1, 1976.

- (a) On and after July 1, 1976, real property located outside the city limits using the sewer system of the city shall be charged therefor an amount equal to one hundred twenty-six (126) percent of the water charge that would be charged to each such parcel of real property if it were located within city limits, computed upon the basis of the amount of water actually used or consumed upon each such parcel as recorded by water meters installed for that purpose, or estimated to have been used or consumed upon each such parcel if no meter reading is available, and shall be subject to all of the provisions and conditions of this article. Such charges shall be due and payable when billed and entered on the records of the city and shall be paid within thirty (30) days thereafter. In the event that any such bill shall not be paid within thirty (30) days after it is so billed and entered, a penalty shall be added, charged and collected at the rate of one and one-half (1 1/2) percent for each month or portion of a month from the date it was so billed and entered until such bill shall have been paid. Such charges may be estimated whenever a proper water meter reading is not readily available, as provided by section 121-a.4. of the City Charter.
- (b) On and after January 1, 1977, sewer rents or charges at the foregoing rate for real property located outside the city limits using the sewer system of the city shall be due and payable when billed and entered on the records of the city. In the event that any such bill shall not be paid within ninety (90) days after the date it is so billed and entered, a penalty shall be added thereto and charged and collected in an amount equal to ten (10) percent of the total amount of said bill.
- (c) On and after October 1, 1979, real property located outside the city limits using the sewer system of the city shall be charged therefor an amount equal to one hundred twelve (112) percent of the water charge that would be charged to each such parcel of real property if it were located within city limits, computed upon the basis of the amount of water actually used or consumed upon each such parcel as recorded by water meters installed for that purpose, or estimated to have been used or consumed upon each such parcel if no meter reading is readily available, and bills shall be rendered on the basis of said rate on and after January 1, 1980, and shall be subject to all of the provisions and

conditions of this article. Such charges shall be due and payable, and shall be paid, and penalties shall be added, charged and collected as provided in this section for amounts charged immediately before October 1, 1979.

- (d) On and after May 1, 1992, real property located outside the city limits using the sewer system of the city shall be charged therefor an amount equal to one hundred fifty (150) percent of the water charge that would be charged to each such parcel of real property if it were located within city limits, computed upon the basis of the amount of water actually used or consumed upon each such parcel as recorded by water meters installed for that purpose, or estimated to have been used or consumed upon each such parcel if no meter reading is available, and shall be subject to all of the provisions and conditions of this article. Such charges shall be due and payable when billed and entered on the records of the city and shall be payable on the last business day of the month in which the bill is mailed. In the event that any such bill shall be not paid by the last business day of the month in which the bill is mailed, a penalty shall be added, charged and collected at the rate of one and one-half (1 1/2) percent per month or portion thereof from the date of billing until such bill is paid. A bill shall not be considered paid until payment is actually received by the supervisor. A bill shall be considered to have been mailed by the supervisor as of the date indicated in the records of the supervisor to be the date of mailing. Charges may be estimated by the supervisor whenever a proper water meter reading is not readily available, as provided in section 121-a.4. of the City Charter.

(Ord. No. 1316/76, § 3, 5-27-76; Ord. No. 1330/76, § 2, 9-21-76; Ord. No. 1332/76, § 2, 12-7-76; Ord. No. 1407/79, § 1, 11-27-79; Ord. No. 1773/92, § 1, 3-17-92)

## Appendix C

**APPENDIX C**

**CITY OF LONG BEACH  
NOTICE OF TERMINATION OF AGREEMENT LETTER**



APPENDIX

# City of Long Beach

ONE WEST CHESTER STREET

P.O. BOX 9002

LONG BEACH, NEW YORK 11561-9002

TEL: (516) 431-1000

FAX: (516) 431-1389

GLEN L. SPIRITIS, PhD  
CITY MANAGER

*By Certified & Regular Mail*

May 21, 2004

County of Nassau  
Department of Public Works  
1550 Franklin Avenue  
Mineola, New York 11501-4822

Attn: Peter J. Gerbasi, P.E., Commissioner of Public Works

Re: **Notice of Termination of Agreement to Receive and Dispose of  
Sewage Collected By The Lido Beach Collection District**

Dear Commissioner Gerbasi:

Pursuant to the notice provisions contained in the agreement by and between the City of Long Beach and the County of Nassau, dated November 22, 1982, as amended on May 4, 1992, for the disposal of sewage collected by the Lido Beach Collection District, please be advised that the City of Long Beach elects to terminate said agreement five (5) years from the date of this notice – May 21, 2009.

Very truly yours,

Glen L. Spiritis, Ph.D.  
City Manager

cc.: List attached

## Appendix D

**APPENDIX D**

**DRAFT SEWER CONSOLIDATION INTER-MUNICIPAL AGREEMENT**

Draft November 26, 2007

AGREEMENT BETWEEN THE COUNTY OF NASSAU, NEW YORK, AND THE  
CITY OF LONG BEACH, NEW YORK, FOR THE  
CONSOLIDATION OF SEWER TREATMENT RESOURCES AND SERVICES

THIS INTERMUNICIPAL AGREEMENT (this "Agreement") made and entered as of the date on which this Agreement is last executed by the parties hereto, by and between the COUNTY OF NASSAU, a municipal corporation having its principal offices at One West Street, Mineola, New York 11501 (hereinafter referred to as the "County") in connection with the County Department of Public Works (the "Department"), and the CITY OF LONG BEACH, a municipal corporation, having offices at 1 West Chester Avenue, Long Beach, New York 11561 (hereinafter referred to as the "City") concerning consolidation of sewer treatment resources and services.

WITNESSETH:

WHEREAS, the County currently owns and operates sewage collection and disposal systems that process approximately eighty-five percent of the sewage generated in Nassau County;

WHEREAS, the City of Long Beach currently owns and operates its own independent sewage collection and disposal system;

WHEREAS, the County is the owner and operator of the Bay Park Sewage Treatment Plant (the "BPSTP") which currently has excess capacity;

WHEREAS, the County and the City each represent that the respective municipalities are authorized, pursuant to both Article 9, §1 of the New York State Constitution and the General Municipal Law to enter into intergovernmental cooperative agreements for the collection, treatment and disposal of sewage;

WHEREAS, the County and the City wish to enter into an agreement that will provide for (i) the transfer of ownership of certain real property from the City to the County to be used for the construction of a pump station by the County and (ii) County ownership, operation and maintenance of pump stations and the associated collection system located in the City, (iii) inclusion of the City populace in a County sewer district, and (iv) collection, treatment and disposal of the City sewage by the County;

WHEREAS, Consolidation of sewage treatment and disposal facilities will reduce overlapping services and duplicative responsibilities resulting in more efficient allocation of government resources and cost savings for County residents; and

WHEREAS, the County and the City, believing it to be in the best interest of the taxpayers of their respective municipalities, do hereby mutually authorize inter-municipal cooperation and assistance with and between each other for the consolidation sewer treatment resources and services.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, the parties hereto do agree as follows:

### I. Definitions

1.1 Defined Terms. In addition to terms defined in the Act, and elsewhere herein, the following terms shall have the following meanings in this Agreement, unless the context requires otherwise.

(a) The "Act" shall mean Chapter 685 of the Laws of New York for 2003 which, among other things, provided for Title 10-D of Article 5 of the Public Authorities Law of the State, as it may be amended from time to time.

(b) The "BPSTP" shall have the same meaning as in the recitals above.

(c) The "Collection System" shall mean the pipes, force mains, manholes and all other associated components as described in Appendix "A" attached hereto and hereby made a part hereof, including all easements and access rights relating thereto.

(d) The "Commencement Date" shall have the provided in Section 8.1

(e) The "Debt Statement" shall have the meaning provided in Section \_\_\_\_

(e) The "District" shall mean the Nassau County Sewer and Storm Water Resources District, as created in accordance with the Act.

(f) The "Existing Pump Station" shall mean the parcel of land described in Appendix "B" attached hereto and hereby made a part hereof, including all buildings, appurtenances, equipment, fixtures, improvements above or below the surface and all other associated components, including, but not limited to wet wells, emergency back up power generation facilities and pumps.

(g) A "Party" or the "Parties" shall mean a party or parties to this Agreement.

(h) The "Plant" shall mean the parcel of land described in Appendix "C" attached hereto and hereby made a part hereof, including all buildings, appurtenances, equipment, fixtures, improvements above or below the surface and all other associated components, including, but not limited to process tanks, sewer lines, the sewage outfall pipe, pumps, blowers and site drainage.

(i) "Sewerage Services" shall mean the collection, treatment and disposal of sewage, any services provided by the Sewer System and any other service related thereto.

(j) The "Sewer Rents Schedule" shall mean the current schedule of sewer rents and charges imposed and collected in the City. A copy of the Sewer Rents Schedule in effect as of the Commencement Date is annexed hereto and hereby made a part hereof as Appendix "D."

(k) The "Sewer System" shall mean the Plant, the Existing Pump Station and the Collection System comprising the City's sewage collection and disposal system, collectively including, but not limited to, the material components, any plants, structures and other real and personal property acquired, rehabilitated or constructed or planned for the purpose of collecting, conveying, pumping, treating, neutralizing, storing and disposing of sewage, including but not limited to main, trunk, intercepting, connecting, lateral, outlet or other sewers, outfalls, pumping stations, treatment and disposal plants, ground water recharge basins, back-flow prevention devices, sludge dewatering or disposal equipment and facilities, clarifiers, filters, phosphorus removal equipment and other plants, works, structures, equipment, vehicles, conveyances, contract rights, franchises, approaches, connections, permits, easements, real or personal property or rights therein and appurtenances thereto necessary or useful and convenient for the collection, conveyance, pumping, treatment, neutralizing, storing and disposing of sewage or to provide any Sewerage Service and to the extent not covered by the foregoing, any facilities operated and maintained by the City in connection therewith.

*house  
connect*

(l) The "State" shall mean the State of New York.

## II. The Project

### 2.1 The Project.

(a) In accordance with the terms and conditions contained in this Agreement, the County shall undertake a project (the "Project") to (i) acquire from the City the Existing Pump Station, the Collection System and the Pump Station Lot, (ii) construct the Pump Station, (iii) connect the Pump Station to the Collection System, the Existing Pump Station and the BPSTP and (iv) transition and fully consolidate the City into one or more County Zones of Assessment within the District, including, changing the boundaries of the applicable uniform zone(s) of assessment for Sewerage Services in the District to include the area of the City receiving such services from the County, in accordance with applicable law and, if necessary, establishing one or more transitional zones of assessment within the District covering such area of the City to the extent permitted by law in accordance with, and to facilitate the purposes of this Agreement.

(b) The County shall be solely responsible for the construction of the Pump Station, including any required demolition, and its connection the County sewer system, including, but not limited to the bidding and letting of contracts for all labor and materials in a manner consistent with all applicable Laws (as that term is defined in Section \_\_\_\_\_ of this Agreement), the administration of all Project contracts and more generally, the management and supervision of the construction activities for the Project.

## III. Representations and Warranties

(iii) This Agreement, the execution and delivery hereof and the consummation of the transactions contemplated hereby, do not and will not in any material respect conflict with, or constitute on the part of the City a breach of or default under any agreement or other instrument to which the City is a party or by which it or any of its revenues, properties or operations are bound or subject, including, without limitation, any bond indentures or other financing agreements.

(g) Sewer Rents Schedule. *The Sewer Rents Schedule is a true and complete statement of the sewer rents issued in connection with the Sewer System on the Commencement Date.*

(h) Possession. Except as otherwise provided in § \_\_\_\_, (i) no adverse or other parties are in possession of the Sewer System or any part thereof and (ii) no party currently has any license, lease or other right or interest relating to the use or possession of the Sewer System, or any part thereof;

(i) Condemnation. The City has received no notice of and has no other knowledge or information of any pending or contemplated condemnation action with respect to the Sewer System or any part thereof;

(j) Environmental Conditions.

(i) The City has not received notice of any pending or threatened environmental action, claim, complaint, summons, or citation from any third party (including any governmental agency or authority) ("Environmental Action") relating to the Sewer System;

(ii) The City has not received any notice from any governmental authority or agency indicating that the Sewer System or any real property adjacent thereto has been or may be placed on any federal, state or local list as a result of the presence of hazardous materials or due to historic or existing environmental conditions; and

(iii) The City has provided the County with copies of all reports, audits, studies or analyses of any kind whatsoever in the possession of the City relating to environmental conditions affecting the Sewer System;

(iv) No hazardous materials have been used, manufactured, generated, sold, handled, treated, transported, stored or disposed of at the Sewer System by the City; and

(v) No hazardous materials have spilled, discharged, released, emitted, injected or leaked from, in, or migrated to or from the Sewer System.

(k) Certificates and Licenses. To the extent they are in the City's possession and not conspicuously posted at the Plant, the City has provided to the County any certificates, licenses, permits, authorizations or approvals issues in connection with Sewerage Services and the Sewer System.

3.2 Representations and Warranties of the County. The County represents and warrants to the best of its knowledge as of the date hereof, the Transfer Date (as that term is defined in § \_\_\_ below) and the Transition Date (as that term is defined in § \_\_\_ below) the following:

(a) Municipal Corporation. The County is a municipal corporation of the State, constituting a political subdivision thereof, duly created and validly existing under the Constitution and laws of the State.

(b) Authority and Power. The County has the right and lawful authority and power to execute and deliver this Agreement, to perform the obligations and covenants contained herein and to consummate the transactions contemplated hereby.

(c) Authorization. The County has duly authorized, by all necessary actions, the execution and delivery hereof and the performance of its obligations and covenants hereunder and the consummation of the transactions contemplated hereby.

(d) Enforceability. This Agreement constitutes a legal, valid and binding obligation of the County, enforceable against the County in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization or other laws relating to the enforcement of creditors' rights generally or the availability of any particular remedy.

(e) No Conflicts. This Agreement, the execution and delivery hereof and the consummation of the transactions contemplated hereby do not and will not in any material respect conflict with, or constitute on the part of the County a breach of or default under (i) any existing law, administrative regulation, judgment, order, decree or ruling by or to which it or its revenues, properties or operations are bound or subject or (ii) any agreement or other instrument to which the County is a party or by which it or any of its revenues, properties or operations are bound or subject

#### **IV. Pre-Construction Phase**

##### **4.1 Identification of Pump Station Lot, Access, Due Diligence and Transfer.**

(a) Promptly upon the commencement of this Agreement, the County and the City shall identify a prospective location for the Pump Station (such location, the "Prospective Pump Station Lot") which shall house the Pump Station. The Prospective Pump Station Lot shall be approximately \_\_\_ acres of land currently part of the Plant and must be mutually acceptable to the City and the County.

(b) Upon the identification of the Prospective Pump Station Lot, the County and its authorized representatives and agents shall be entitled to enter upon the Sewer System, including, without limitation, the Prospective Pump Station Lot, at reasonable hours upon notice to the City in order to conduct such reasonable and customary inspections, studies, tests and reviews with respect to the Sewer System, which are necessary in connection with an assessment of (i) the structural integrity and physical condition of the Sewer System (the "Engineering

Review”) and (ii) the environmental condition of the Sewer System, including, without limitation, a Phase I environmental assessment of the Sewer System (the “Environmental Review”; which, together with the Engineering Review, is hereinafter collectively referred to as the “Due Diligence Review”), at the County’s sole cost and expense. Prior to performing any sampling or testing that disturbs the Sewer System, any so-called “Phase II” environmental assessment, the County must obtain the City’s prior written consent. The City shall cooperate with the County and its authorized representatives and agents in every reasonable way, at the County’s sole cost and expense, in connection with the Due Diligence Review.

(c) In the event that the County determines from the Due Diligence Review that the Prospective Pump Station Lot is acceptable in all respects, then the Prospective Pump Station Lot shall become and be referred to herein as the “Pump Station Lot”. The Pump Station Lot shall mean the parcel(s) of land agreed to by the Parties in writing, including all buildings, appurtenances, equipment, fixtures, improvements above or below the surface and all other associated components.

(d) In the event that the County determines from the Due Diligence Review that the Sewer System, or any component thereof, including, without limitation, the Prospective Pump Station Lot is not acceptable, then either (i) the parties will select an alternate location for the County’s review or (ii) the County may terminate this Agreement upon written notice to the City.

(e) Transfer of Title. During the Pre-Construction Phase, the Parties agree to transfer of the Pump Station Lot, the Existing Pump Station and the Collection System from the City to the County, including, but not limited to obtaining or authorizing surveys, subdivisions, easements, access agreements and all requisite approvals so that the City will be in a position to transfer title to the Pump Station Lot, the Existing Pump Station and the Collection System. Deeds for the Pump Station Lot and the Existing Pump Station each shall contain a clause that states the following:

“The Grantee, by the acceptance of this Indenture, covenants and agrees for itself and its successors and assigns that the premises will be used solely for municipal or governmental purposes. In the event that there is a breach of the above covenant herein by Grantee or its successors and assigns, the Grantor may provide written notice to Grantee, its successors and assigns, of said breach, which notice shall provide Grantee with a ninety (90) day period to cure its breach, and in the absence of such cure, at the option of the Grantor, all right, title and interest in and to all of the said premises shall revert to the Grantor and the Grantor shall have the right to enter upon said premises. Grantor’s failure to assert any of its rights under this Indenture, including, without limitation, the right of reversion, shall not constitute a waiver of such rights. In the event that any of the conditions or covenants herein shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the

remaining conditions or covenants shall not in any way be affected or impaired thereby.

It is the intention of the Grantor and Grantee that these covenants and conditions shall run with the land and shall be binding upon its Grantee and its successors and assigns.”

4.2 Conditions Precedent. The following are all conditions precedent to the County’s obligation to proceed to the Construction Phase (as described in Article V below). In the event that any of the conditions below are not satisfied within a reasonable time or waived by the County, the County may terminate this Agreement upon written notice to the City.

(a) Approvals. The parties shall have obtained all necessary approvals, consents and permits from all applicable Federal, State and Local boards, bodies, agencies and authorities as may be required to carry out the Project, including, but not limited to, approvals required by the New York State Environmental Quality Review Act (“SEQRA”).

(b) Financing. The County shall have secured appropriate financing to carry out the Project.

(c) Plans and Specifications. The County shall have bid and let contracts with architects, engineers and other design professionals in connection with the preparation of plans and specifications for the Pump Station and such plans and specifications shall have been prepared and are acceptable to the County in all respects.

(d) Construction Contracts. The County shall have bid and enter into appropriate agreements with contractors to do all the work and furnish all labor, materials, equipment, tools and appliances that may be necessary to perform and complete the Project.

(e) Accuracy of Representations and Warranties. All representations and warranties made by the City shall be true, complete and correct in all material respects at the time construction of the Pump Station commences.

(f) Condition of Sewer System. The Sewer System shall be substantially in the same condition as it was on the Commencement Date at the time construction of the Pump Station commences.

(g) Subdivisions. The Parties shall have obtained all requisite approvals for and completed any subdivisions agreed to by the Parties in connection with this Agreement.

(h) Delivery of Documents. The City shall have delivered to the County: (i) a duly-executed Bargain and Sale Deeds with covenant’s against grantor’s acts for the Pump Station Lot and the Existing Pump Station, subject to exceptions as are approved by counsel for the County (collectively, the “Permitted Exceptions”) so as to convey clear and marketable title to the satisfaction of the County; (ii) all necessary documentation evidencing transfer of all right,

title and interest to the Collection System, including, but not limited to, all sewer lines, manholes, structures and related appurtenances, to the County and given the County any necessary easements or access rights in connection therewith; (iii) an assignment, without recourse or warranty, of all of the interest the City has in any service contracts, insurance policies, certificates, permits, approvals and other documents in connection with the Sewer System which are then in effect and assignable by the City and (iv) such other documentation as is necessary to consummate the transactions contemplated in this Agreement.

(i) No Events of Default. There shall exist no Events of Default under this Agreement.

## V. Construction Phase

5.1 Commencement of Construction. Promptly following the satisfaction or waiver of the conditions set forth in §4.2 above (CONDITIONS PRECEDENT), the County shall commence the construction of the Pump Station and shall complete same with diligence and continuity in substantial conformance with the plans and specifications.

5.2 Access. The City shall grant to the County, at no cost to the County, permission to use and occupy the Pump Station Lot as necessary to perform and complete all construction work in connection with the Project, including, but not limited to unlimited access and use of the Plant and the Collection System as needed.

5.3 Standards. The County shall exercise the same care in administering the Project as the County exercises with respect to similar construction transactions in which the City does not participate. Without limiting the generality of the foregoing, the County shall ensure that all contractors hired to perform the Project agree to complete all work diligently, in a good and workmanlike manner, within a reasonable time and in compliance with all Laws.

5.4 County Right to Take Over Collection System. At any time during the Construction Phase, the County reserves the right, but not obligation, to assume ownership, maintenance or control of all or part of the Collection System if the County determines, in its sole discretion, that the exercise of such right is in the best interest of the County.

## VI. Interim Operation

6.1 Continued City Operation of Plant.

(a) Effective during the period commencing on the Commencement Date and expiring on the Connection Date (such period, the "IOA Term"), the City shall continue to be solely responsible for the maintenance and operation of the Sewer System. The County will have no responsibility to collect, pump or treat and City sewage until the Connection Date, except to the extent that the County exercises its rights under Paragraph (b) below. The parties agree to work cooperatively and use their best efforts to ensure that continued operation of the Sewer System during completion of the Project may happen simultaneously without interruption

or diminished service to the public, and

(b) Notwithstanding anything contained in Paragraph (a) above, at any time during the IOA Term, the County reserves the right, but not obligation, to assume ownership, maintenance or control of all or part of the Collection System if the County determines, in its sole discretion, that the exercise of such right is in the best interest of the County. In the event that the County exercises its right to take over the Collection System prior to the Connection Date, the City agrees to pay to the County a reasonable amount to cover costs associated with the County's ownership, maintenance and control of the Collection System.

6.2 City Indebtedness. The City shall continue to pay debt service on, and otherwise comply with all covenants, terms and conditions in connection with, any outstanding bonds or indebtedness relating to the Sewer System until the Connection Date.

6.3 Standard of Operations. The City shall exercise the same care in providing Sewerage Services and maintaining the Sewer System as the County exercises with respect to similar County operations.

6.4 Adjustments to Sewer Rent Schedule. Throughout the IOA Term, the City shall adjust the Sewer Rents Schedule as appropriate to accurately reflect increases in the costs of operating the Sewer System (including, but not limited to the cost of debt service), and shall impose any such additional charges to the City users. In no event shall the Sewer Rent Schedule be decreased without the prior written consent of the County. In furtherance of the foregoing, the City shall promptly notify the County of any adjustments to the Sewer Rents Schedule.

6.5 Costs and Expenses. All costs and expenses in connection with the provision of Sewerage Services prior to the Connection Date shall be borne solely by the City, except as may otherwise be provided herein.

6.6 Notification of Claims. The City shall promptly notify the County of any claims made against the City in connection with the Sewer System. Notwithstanding the foregoing, the County is not responsible for and the City hereby releases the County and the County's officers, employees, and agents from any and all claims, demands, causes of actions, losses, damages, liabilities, costs and expenses (including attorney's fees), whether known or unknown, liquidated or contingent, in connection with the Sewer System, arising prior to the Connection Date. The provisions of this Section shall survive the termination of this Agreement.

6.7 No Transfers, Further Indebtedness or Modifications. The City agrees that it will not (i) sell, lease, license, mortgage or otherwise encumber or give up any portion of the Sewer System, (ii) incur any additional indebtedness on or secured by the Sewer System, or (iii) make any modifications to the terms and conditions of any bond indebtedness or other financing agreements in connection with the Sewer System.

6.8 Damage or Destruction of Sewer System. In the event that the Sewer System or any portion thereof shall be substantially damaged or destroyed at any time prior to the

Connection Date, the County shall have the right to terminate this Agreement upon written notice to the City.

## VII. Connection Phase

7.1 Connection. Effective on the Connection Date, the County shall connect the Pump Station to the Collection System and the BPSTP (the "Connection") and (i) the County shall provide Sewerage Services within the area of the City as further described below and assume all responsibilities in connection the provision of such services (ii) the City agrees to accept such transition and services from the County.

7.2 The Connection Date. The "Connection Date" shall mean that date which is the earlier of (i) the first business day after all conditions precedent to the transition have been satisfied to satisfaction of the County or waived by the County or (ii) such other date as mutually agreed to by the Parties in writing. Notwithstanding, the forgoing if the Connection Date has not occurred by the end of the date which is the five (5) year anniversary of the Commencement Date, then this Agreement may be terminated by the County, in the County's sole discretion, whereupon the Parties agree to execute any documents necessary to unwind the transactions contemplated by this Agreement and all rights and responsibilities in connection with the provision of Sewerage Services shall revert back to the City.

7.3 Conditions Precedent to Connection. The following are all conditions precedent to the County's obligation to proceed with the Connection. In the event that any of the conditions below are not satisfied within a reasonable time, or waived by the County, the County may terminate this Agreement upon written notice to the City.

(a) Accuracy of Representations and Warranties. All representations and warranties made by the City shall be true, complete and correct in all material respects on the Connection Date.

(b) Construction of Pump Station Complete. Construction of the Pump Station shall have been completed and the Pump Station shall be fully operational;

(c) Approvals. The Parties shall have obtained all necessary approvals, consents and permits from all applicable Federal, State and Local boards, bodies, agencies and authorities as may be required to carry out the Project, including, but not limited to, approvals required by the New York State Environmental Quality Review Act ("SEQRA").

(f) Consolidation. The Parties shall have completed all work necessary to consolidate the City Sewer System into the District including, without limitation, changing the boundaries of the applicable uniform zone(s) of assessment for Sewerage Services in the District to include the area of the City receiving such services from the County pursuant to this Agreement, in accordance with applicable Laws.

(g) Condition of Sewer System. The Sewer System shall be substantially in the same

condition on the Connection Date as it was on the Commencement Date.

(h) No Events of Default. There shall exist no Events of Default under this Agreement.

7.4 Assessment. In partial consideration for the Project, as of the Connection Date, the County shall provide Sewerage Services within the City and the City shall impose and collect charges for Sewerage Services within the City as provided in this Section and pay to the County the amount so imposed [no later than December 15<sup>th</sup> annually] with any collection shortfall therein to be an additional City charge. The County shall be entitled to a pro rata share of the monies imposed and collected by the City in any year that such charges were collected pursuant to this Section for only a portion of such year.

(a) Transition Period. For a period five (5) years beginning on the Connection Date, charges for Sewerage Services to the City shall be fixed, imposed and collected within the City according to the Sewer Rents Schedule, as such schedule has been adjusted in accordance with Section \_\_\_ above, and the County shall provide Sewerage Services within the City. For the subsequent five (5) years following such initial five (5) year period, charges for Sewerage Services shall be fixed, imposed and collected within the City according to the adjusted Sewer Rents Schedule in effect for the initial five year period, except that the adjusted Sewer Rents Schedule may be increased by the County, but in no event shall such increase exceed twenty per cent (20%) per year.

(b) Expiration of Transition Period. Commencing on the (10<sup>th</sup>) anniversary of the Connection Date, (i) if the County has completed the Project, the County shall levy taxes, assessments, benefit assessments, sewer rents, charges and/or other fees from parcels in such area in a uniform manner as permitted by law; or (ii) if the County has not completed the Project (A) the City shall pay to the County an amount equal to the County's operating costs (including but not limited to debt service) in providing Sewerage Services in the City, until such time as the Parties complete the Project, whereupon the County shall levy taxes, assessments, benefit assessments, sewer rents, charges and/or other fees from parcels in such area in a uniform manner as required by law, and the payments from the City to the County for such services shall cease, or (B) this Agreement may be terminated by the County, in the County's sole discretion, whereupon the Parties agree to execute any documents necessary to transfer, unwind the transactions contemplated by this Agreement and all rights and responsibilities in connection with the provision of Sewerage Services shall revert back to the City.

(c) Notwithstanding anything contained in (a) above, provided, that (i) the Project has been completed and (ii) the County may by law directly impose and collect charges for Sewerage Services consistent with the terms and conditions set forth in Paragraph (a) above, henceforth, the County may begin to levy assessments and/or collect charges or fees from such parcels within the City in accordance with the terms and conditions contained in this Agreement and all applicable Laws and the payments from the City to the County for such services shall cease.

7.5 Standards of Service. The County covenants to maintain, operate, repair and improve the Sewer System so as to be capable of providing Sewerage Services in compliance with this Agreement, the Act and all applicable Laws.

7.6 Costs and Expenses. All costs and expenses incurred after the Connection Date in connection with the provision of Sewerage Services to the City shall be borne by the County, except as may otherwise be provided herein.

7.7 City Debt. *Commencing on the Connection Date, the County shall pay or reimburse the City for the amount of principal and interest debt service to be paid on currently outstanding on City bonds, notes or other obligations issued by the \*\*\*\*\* City to finance the acquisition, construction, reconstruction and improvement of the Sewer System, but not for any penalties or interest due to penalties or late payments. Such payments shall be calculated as the amounts needed to pay debt service on bonds of the City then outstanding and having been therefore issued for the Sewer System. The payments shall be made as necessary for purposes of permitting the County to satisfy debt service on such bonds payable until so refunded, or if not refunded at all, until maturity (each a "Purchase Payment" and collectively, the "Purchase Payment"). Each Purchase Payment made for City bonds shall be made directly to the City or its designee, as so instructed by the County Treasurer, at least one (1) business day prior to the date any principal or interest on the City Bonds is payable, subject to the City's full compliance with all County voucher and payment procedures. The debt service requirements with respect to City bonds as set forth in Appendix "\_\_\_" will be updated by the City and furnished to the County at the time of each request for financing or whenever necessary to reflect any adjustments thereto.*

7.8 Transfer of City Employees. On or about the Connection Date, or such other date mutually agreed to by the Parties in writing, City employees substantially engaged in the performance of the functions being transferred from the City to the County on the Commencement Date shall be eligible for transfer on the Connection Date in accordance with all applicable laws, including, but not limited to, Article V of the New York State Civil Service Law. Notwithstanding the foregoing, the base salary of each employee transferred to the County shall not be increased by greater than \_\_\_\_\_ (\_\_\_%) percent per year of such employee's annual base salary as of the Commencement Date. 7

### VIII. General

8.1 Term. This Agreement shall commence on the date on which this Agreement is last executed by the parties (the "Commencement Date") and shall terminate \*\*\*\*\* forty (40) years thereafter, unless this Agreement is sooner terminated in accordance with its terms.

8.2 Cooperation. The Parties shall coordinate and cooperate in a reasonable manner with respect to completing the Project, including, without limitation, obtaining or authorizing surveys, subdivisions, easements, access agreements and obtaining all requisite approvals so that the City will be in a position to transfer clear and marketable title to the Pump Station Lot to the County on or before the Connection Date and that the Parties will be in a position to transition

the City Sewer System into the District in accordance with the terms and condition contained in this Agreement. It is the intention of the Parties to transfer all real estate and material components of the Sewer System, except for that portion of the Plant that has been subdivided from the Pump Station Lot and will be retained by the City, and, in the event that any material component(s) of the Sewer System has been omitted from the descriptions of the Sewer System contained in this Agreement, then, this Agreement shall be deemed amended to include such omitted components.

8.3 Notices. Any notice, request, demand or other communication required to be given or made in connection with this Agreement shall be (a) in writing, (b) delivered or sent (i) by hand delivery, evidenced by a signed, dated receipt, (ii) postage prepaid via certified mail, return receipt requested, or (iii) overnight delivery via a nationally recognized courier service, (c) deemed given or made on the date the delivery receipt was signed, three (3) business days after it is mailed or one (1) business day after it is released to a courier service, as applicable, and (d) (i) if to the County Comptroller, to the attention of the Nassau County Comptroller at 240 Old Country Road, Mineola, NY 11501, and (ii) if to a Party or the Parties, to the attention of the persons who executed this Agreement on behalf of the respective Parties at the addresses first above written, or in each case to such other persons or addresses as shall be designated by written notice.

8.4 Bond Status. The City shall not take any action, or omit to take any action, the result of which act or omission shall have an adverse impact on the tax exempt status of any bond issued by, or on behalf of, the County, specifically including but not limited to, Federal laws, rules and regulations regarding private activity and arbitrage. The City shall consult with the County and the County's bond counsel when appropriate to ensure compliance with such laws, rules and regulations.

8.5 Indemnification; Defense; Cooperation.

(a) Each Party shall be solely responsible for and shall indemnify and hold harmless the other Party, and their respective officers, employees, and agents (the "Indemnified Party") from and against any and all liabilities, losses, costs, expenses (including, without limitation, attorneys' fees and disbursements) and damages ("Losses"), directly arising out of the negligence or willful misconduct of the indemnifying Party or its respective Agents.

(b) The indemnifying Party shall, upon the appropriate Indemnified Party's demand and at the Indemnified Party's direction, promptly and diligently defend, at the indemnifying Party's own risk and expense, any and all suits, actions, or proceedings which may be brought or instituted against the Indemnified Party for which the indemnifying Party is responsible under this Section, and, further to the indemnifying Party's indemnification obligations, the indemnifying Party shall pay and satisfy any judgment, decree, loss or settlement in connection therewith.

(c) Each Party shall, and shall cause its officers, employees, agents, and servants to, cooperate with the other Party in connection with the investigation, defense or prosecution of

any action, suit or proceeding in connection with this Agreement.

(d) The provisions of this Section shall survive the termination of this Agreement.

8.6 Independent Contractor. The City is an independent contractor of the County. The City shall not, nor shall any officer, director, employee, servant, agent or independent contractor of the City (a "City Agent"), be (i) deemed a County employee, (ii) commit the County to any obligation, or (iii) hold itself, himself, or herself out as a County employee or Person (as hereinafter defined) with the authority to commit the County to any obligation. As used in this Agreement the word "Person" means any individual person, entity (including partnerships, corporations and limited liability companies), and government or political subdivision thereof (including agencies, bureaus, offices and departments thereof).

8.7 Compliance With Law.

(a) Generally. The Parties shall comply with any and all applicable Federal, State and local Laws (as hereinafter defined), including, but not limited to the State Environmental Quality Review Act and those laws relating to conflicts of interest, discrimination, and disclosure of information, in connection with its performance under this Agreement. As used in this Agreement the word "Law" includes any and all statutes, local laws, ordinances, rules, regulations, applicable orders, and/or decrees, as the same may be amended from time to time, enacted, or adopted.

(b) Records Access. The Parties acknowledge and agree that all records, information, and data ("Information") acquired in connection with performance or administration of this Agreement shall be used and disclosed solely for the purpose of performance and administration of the contract or as required by law. The Parties acknowledge that Information in the County's possession may be subject to disclosure under Section 87 of the New York State Public Officer's Law. In the event that such a request for disclosure is made, the County shall make reasonable efforts to notify the Parties of such request prior to disclosure of the Information so that the Parties may take such action as it deems appropriate.

8.8 Accounting. The Parties shall maintain and retain, for a period of six (6) years following the expiration or earlier termination of the Agreement, complete and accurate records, documents, accounts and other evidence, whether maintained electronically or manually ("Records"), pertinent to performance under this Agreement. Records shall be maintained in accordance with Generally Accepted Accounting Principles. Such Records shall at all times be available for audit and inspection by the County Comptroller, the City Clerk, and any other governmental authority with jurisdiction over this Agreement, and any of their duly designated representatives. The provisions of this Section shall survive the termination of this Agreement.

8.9 Consent to Jurisdiction and Venue; Governing Law; Jury Trial Waiver. Unless otherwise specified in this Agreement or required by Law, exclusive original jurisdiction for all claims or actions with respect to this Agreement shall be in the Supreme Court in Nassau County in the State, and the Parties expressly waive any objections to the same on any grounds,

including venue and forum non conveniens. This Agreement is intended as a contract under, and shall be governed and construed in accordance with, the Laws of the State, without regard to the conflict of laws provisions thereof. The Parties hereby irrevocably waive all right to trial by jury in any action, proceeding or counterclaim arising out of or relating to this Agreement

8.10 Events of Default. The following events shall be Events of Default (whether any such event shall be voluntary or involuntary or come about or be effected by operation of law or pursuant to or in compliance with any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body).

(a) Either Party shall fail to perform or observe any covenant, condition or agreement to be performed or observed by it hereunder, and such condition shall impair the ability of the non-defaulting Party to perform any obligation hereunder and such failure shall continue unremedied for a period of sixty (60) days after written notice thereof from the Authority; or

(b) Any representation or warranty made by a Party herein proves to be false or misleading in any respect, and such condition shall impair the ability of the non-defaulting Party to perform any obligation hereunder and shall continue unremedied for a period of sixty (60) days after written notice thereof by the defaulting party; or

(c) Either Party shall file any petition for dissolution or liquidation of such Party, or a Party shall commence a case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or a Party shall have consented to the entry of an order for relief in a case under any such law, or a Party generally shall fail to pay its debts as such debts become due, or a Party shall fail promptly to satisfy or discharge any execution, garnishment or attachment of such consequences as may impair its ability to carry out its obligations under this Agreement, or a receiver, custodian or trustee (or other similar official) for a Party or any substantial part of its property shall have been appointed or taken possession thereof, or a Party shall make a general assignment for the benefit of its creditors, or a Party shall enter into an agreement or composition with its creditors, or a Party shall take any action in furtherance of any of the foregoing; or there shall be filed against a Party a petition in bankruptcy which results in an order for relief being entered or, notwithstanding that an order for relief has not been entered, the petition is not dismissed within ninety (90) days of the date of the filing of the petition, or there shall be filed under any federal or State law relating to bankruptcy, insolvency or relief of debtors of a petition against a Party for reorganization, composition, extension or arrangement with creditors which either (i) results in a finding or adjudication of insolvency of such Party or (ii) is not dismissed within ninety (90) days of the date of the filing of such petition.

#### 8.11 Remedies.

(a) Remedies. If either Party shall fail to observe or perform any covenant, condition or agreement on its part to be observed or performed, the non-defaulting Party shall, if such default has not been cured, have the right to institute any action at law or in equity deemed by non-defaulting Party to be necessary or desirable to collect any amounts then due or thereafter to become due or to enforce performance and observance of any obligation, agreement or covenant

of the defaulting Party hereunder.

(b) Remedies Cumulative. The rights and remedies under this Agreement shall be cumulative and shall not exclude any other rights and remedies allowed by law, provided there is no duplication of recovery. The failure to insist upon a strict performance of any of the obligations of the County or the City or to exercise any remedy for any violation thereof shall not be taken as a waiver for the future of the right to insist strict performance by the County or the City or of the right to exercise any remedy for the violation.

8.12 All Legal Provisions Deemed Included; Severability; Supremacy; Construction.

(a) Every provision required by Law to be inserted into or referenced by this Agreement is intended to be a part of this Agreement. If any such provision is not inserted or referenced or is not inserted or referenced in correct form then (i) such provision shall be deemed inserted into or referenced by this Agreement for purposes of interpretation and (ii) upon the application of any Party to Agreement shall be formally amended to comply strictly with the Law, without prejudice to the rights of either party.

(b) In the event that any provision of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(c) Unless the application of this subsection will cause a provision required by Law to be excluded from this Agreement, in the event of an actual conflict between the terms and conditions set forth above the signature page to this Agreement and those contained in any schedule, exhibit, appendix, or attachment to this Agreement, the terms and conditions set forth above the signature page shall control. To the extent possible, all the terms of this Agreement should be read together as not conflicting.

(d) Each Party has cooperated in the negotiation and preparation of this Agreement, so if any construction is made of the Agreement it shall not be construed against any Party as drafter.

8.13 Section and Other Headings. The section and other headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

8.14 Entire Agreement. This Agreement represents the full and entire understanding and agreement between the parties with regard to the subject matter hereof and supersedes all prior agreements (whether written or oral) of the Parties relating to the subject matter of this Agreement.

8.15 Successors and Assigns. The covenants and agreements herein contained shall be binding upon and inure to the benefit of the Parties and their respective permitted successors and assigns.

8.16 No Arrears or Default. No Party is in arrears to any other Party to this Agreement upon any debt or contract and no Party is in default as surety, contractor, or otherwise upon any obligation to another Party, including any obligation to pay taxes to, or perform services for or on behalf of, another Party.

8.17 Assignment; Amendment; Waiver; Subcontracting. This Agreement and the rights and obligations hereunder may not be in whole or part (i) assigned, transferred or disposed of, (ii) amended, (iii) waived, or (iv) subcontracted, without the prior written consent of the Nassau County Executive or his or her duly-designated deputy (the "County Executive") and the Council and City Manager of the City, and any purported assignment, other disposal or modification without all such prior written consents shall be null and void. The failure of any Party to assert any of its rights under this Agreement, including the right to demand strict performance, shall not constitute a waiver of such rights.

8.18 Section and Other Headings. The section and other headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

8.19 Entire Agreement. This Agreement represents the full and entire understanding and agreement between the Parties with regard to the subject matter hereof and supersedes all prior agreements (whether written or oral) of the parties relating to the subject matter of this Agreement.

8.20 Third Party Claims. Nothing in this Agreement shall create or give to third parties any claim or right of action against the any Party beyond such as may legally exist irrespective of this Agreement.

8.21 Executory Clause. Notwithstanding any other provision of this Agreement:

(a) Approval and Execution. No Party shall have any liability under this Agreement (including any extension or other modification of this Agreement) to any Person unless (i) all approvals have been obtained, including approval by the County Legislature and the City Council, and (ii) this Agreement has been executed by the County Executive and the City Manager.

(b) Availability of Funds. No Party shall have any liability under this Agreement (including any extension or other modification of this Agreement) to any Person beyond funds appropriated or otherwise lawfully available for this Agreement, and, if any portion of the funds for this Agreement are from the state and/or federal governments, then beyond funds available to the Parties from the state and/or federal governments.

{The rest of this page is intentionally left blank}

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the date this Agreement is last executed by the parties hereto.

**COUNTY OF NASSAU**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**CITY OF LONG BEACH**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**County of Nassau's Acknowledgement:**

STATE OF NEW YORK)

)ss.:

COUNTY OF NASSAU )

On the \_\_\_ day of \_\_\_\_\_ in the year 200\_ before me personally came \_\_\_\_\_, to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of \_\_\_\_\_; that he or she is \_\_\_\_\_ of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

NOTARY PUBLIC

**City's Acknowledgement**

STATE OF NEW YORK)

)ss.:

COUNTY OF NASSAU )

On the \_\_\_ day of \_\_\_\_\_, in the year 200\_ before me personally came \_\_\_\_\_ to me personally known, who, being by me duly sworn, did depose and say that he resides in the County of \_\_\_\_\_; that he is the \_\_\_\_\_ of the \_\_\_\_\_, the corporation described herein and which executed the above instrument and that he signed his name pursuant to the authority of the New York State \_\_\_\_\_ Law and the Code of the \_\_\_\_\_.

NOTARY PUBLIC

## Appendix E

**APPENDIX E**

**EDWIN L. EASTON MEMORANDUM – SEWER CONSOLIDATION**



## CITY OF LONG BEACH

1 WEST CHESTER STREET  
LONG BEACH, N.Y. 11561  
(516) 431-1000  
FAX (516) 431-1389

### MEMORANDUM

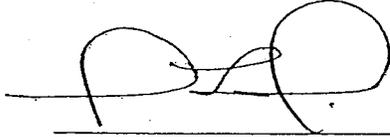
OFFICE OF  
EDWIN L. EATON  
CITY MANAGER

**To:** Hon. Members of the City Council  
**From:** Edwin L. Eaton, City Manager  
**Date:** 12/27/07  
**Re:** Sewer Consolidation

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Please find enclosed some of our thoughts regarding the various nuances of the subject matter.

This report is not meant to be definitive in nature; its sole purpose is to aid in the decision-making process by providing you with some insights into the component elements of this complex issue. Our friends in CSEA have, no doubt, offered you their "micro" point of view. We now offer a more comprehensive or "macro" look of the subject at hand.

---

EDWIN L. EATON

ka  
attachment

In the following section of this report, we will address capital costs, both past and future, relating to the two components of this City's sewage disposal system – the Wastewater Treatment Plant and the collection system.

### History of Wastewater Treatment Plant and Future Capital Cost Considerations

The Long Beach Wastewater Treatment Plant was constructed in 1951 with an original design treatment flow of 6.36 million gallons per day.

The plant has undergone two major upgrades within the last 20 years, the result of a record of chronic violations of effluent discharge standards. In the late 1980's, approximately \$10,000,000 was spent at the plant to make treatment modifications and increase plant capacity to the present 7.5 million gallons per day. The impetus for this action was a Consent Order from the New York State Department of Environmental Conservation (NYSDEC). In 1993, a further mandate from the NYSDEC led to the installation of a chlorine contact tank at a rough cost of \$1,500,000. In the late 1990's, due to continued plant effluent flow violations, the NYSDEC again mandated that certain improvements be instituted to improve treatment capabilities. In 2001, the City expended over \$3,000,000 to address "Phase 1" improvements which reflected necessary upgrades and repairs to meet discharge standards. (Phase 2 of the overall plan, projected to be in excess of \$4,000,000 includes installing a permanent sludge gravity thickener, dewatering equipment and major structural repairs, was never implemented but needs to be done.)

The Long Beach Wastewater Treatment Plant is one of four (4) facilities which discharge into the waters of the South Shore; in our case, Reynolds Channel. As such, it is subject to the NYSDEC management plan for the South Shore Estuary Reserve (Reserve). This plan targets the reduction of chlorine through new total residual chlorine (TRC) limitations that are scheduled for implementation on all dischargers into the waters of the Reserve. Additionally, a Dissolved Oxygen (DO) limitation of 2.0 mg/l will be imposed. The NYSDEC is currently in the process of implementing these limitations through SPDES permit modifications (a NYSDEC-issued document, the SPDES permit sets the operating parameters of the Wastewater Plant). Our SPDES permit is renewable in 2009.

In addition to the above, NYSDEC has advised that ammonia reduction limitations will be forthcoming within a five (5) year window; total nitrogen reduction within the next ten (10). Of more immediacy, NYSDEC has requested the City to undertake the installation of an iron sludge conveyance line running from the Water Purification Plant to the effluent chamber of the Wastewater Plant. This improvement would improve treatment at the latter by diverting the iron sludge which severely impairs operations.

Based on similar projects and existing conditions at the Plant, Malcom Pirnie, the consultant retained by the County, estimates that the above-referenced projects would cost approximately \$30,000,000. Com. Raab believes that figure to be on the high side. Be that as it may, even if there is an error factor of 25-30%, the total number is still quite substantial.

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## History of Collection System and Future Capital Cost Considerations

The City's sewer collection system is comprised of 3 pump (or lift) stations and 51 miles of pipe, which range in size from 6 inches to 48 inches.

### Pump Stations

The collection system has three "pump or lift stations". These facilities are located at Indiana Avenue, New York Avenue and Roosevelt Boulevard. Since sewage flows by gravity, often when the distance traveled gets too far, the wastewater must be elevated or lifted to continue the gravity process. The pump stations created for this purpose therefore become a crucial element in the conveyance of sewage through the system. The City's three stations were built in the 1950's and have undergone minimal improvements over the years. Currently, those outmoded and deteriorating structures are plagued with electro-mechanical and safety issues. A major pump failure, especially at the New York facility would represent a significant health risk for a large part of the community. The upgrade of these facilities is currently under design and it is projected that the necessary improvements would cost \$6-8,000,000. No grant money is available for such work.

### Collection System

The subsurface sewer mains that run throughout the City streets, in most cases are 80 years and older. Average life of a sewer is typically 40 years, however in Long Beach this is reduced due to the adverse conditions created by the high ground water conditions. While efforts to upgrade these lines have been aggressive in the last 20 years, the current rate of repair/replacement cannot adequately address the overall deterioration of these lines. Major sewer failures have escalated over the years and we anticipate that this will only increase exponentially over the next decade.

As indicated in the 2005 "Roadway Evaluation Report" the selection of roadway reconstruction candidates is quite easy, since failed sewers usually dictate the selection. As a general guide regarding cost, to install a new sewer on a street that is to be totally reconstructed costs roughly \$150-200 per linear foot. This equates to \$120-160,000 for an 800 foot street. For an emergency repair where the sewer is replaced and the road restoration is incorporated within the cost, a fee of \$200-250/linear foot is expected. Currently, the City expends approximately \$1,000,000 per year replacing only sanitary sewers, a small fraction of what is needed to keep up with a deteriorating system.

\* \* \* \*

In our view, one of the paramount arguments favoring consolidation is the avoidance of future capital outlays. As noted above, expenditure relating to treatment plant upgrades, pump (lift) station rehabilitation, and sewer line replacement is both broad in scope and substantial in magnitude. All such expenditures will be borne by the local rate-payer.

## Environmental Issues

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The effluent discharged from the Wastewater Plant has contributed to the deterioration of water quality in that section of the Western Bays known as Reynolds Channel. In 1998, the NYSDEC included the latter in its list of impaired waterways for pathogens and listed it again in 2006 for nutrient pollution.

The Plant has been cited for release of high bacteria levels, high levels of suspended solids, and high chlorine residuals. High levels of nitrogen promote excessive algae growth, fostering an environment where many kinds of fish and other aquatic life cannot survive due to severely depleted oxygen levels. High levels of suspended solids block vital sunlight required by indigenous vegetation for photosynthesis, further reducing oxygen levels, killing fish and wiping out marine vegetation.

By law, a "no fishing, clamming, or swimming" zone surrounds the facility. Cessation of Plant operations would eliminate the need for an outfall pipe and would, with time, improve water quality thereby enhancing marine recreational opportunities.

A second environmental issue is the odor problem which is prevalent at the Plant. This has long been a matter of concern to Recreation users as well as residents of Channel Park. Elimination of the Plant would cure this problem as well.

Financial Impacts of Consolidation  
On Current Operations

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While the impact of consolidation is extremely favorable as relates to the avoidance of future capital expenditures, the financial impact of consolidation on current operations is basically a "wash". Operation and maintenance costs of the Wastewater Plant and collection system would be eliminated as would the revenue sources which fund them (the City would cease billing for sewer operations, that obligation would be taken over by the County). Implicit in this conclusion is the understanding that all employees currently on staff would become County employees and/or fill vacant positions in other City agencies (more on the matter of staff later in this report).

The agreement with the County also mandates that payment of all outstanding debt (currently \$18,739,316) will be the responsibility of the County. This, too, is a "wash" as the sum for payment of annual debt service is a component of the operating budget and is funded from current sewer rent charges. As noted above, all expenditure obligations and revenue sources would fall into the County's purview.

## Financial Impacts of Consolidation on

### Local Rate-Payers

How would consolidation affect the local rate-payer? It depends. Permit us to elaborate.

In Long Beach, residents currently pay for sewage based on the amount of water consumed. For every \$1 billed for water use, a like amount is billed for sewage. If consolidation takes place, this formula (and the existing rate) would be frozen in place for a five (5) year period. At the end of that time frame, the County's methodology of sewer billing would be implemented. The latter is based on the assessed value of the individual property times the current rate of \$16.59/per \$100 AV. Comparison of the City's vs. the County's billing approach offers the following:

<u>ADDRESS</u>	<u>COUNTY ASSESSED VALUE</u>	<u>COUNTY SEWER BILL- ONE YEAR</u>	<u>CITY SEWER BILL - LAST 4 QUARTERS</u>	<u>DIFFERENCE</u>
A) 246 W. Bay	\$2,461	\$408.28	\$157.92	\$250.36
B) 236 W. Bay	1,796	297.96	200.69	97.27
C) 617 Lafayette	1,756	291.32	250.04	41.28
D) 667 E. Walnut	1,661	275.56	161.21	114.35
E) 42 Arizona	1,517	251.67	394.80	(143.13)
F) 530 Washington	1,499	249.00	256.00	(7.00)
G) 522 W. Walnut	1,421	235.75	180.95	54.80
H) 30 Virginia	1,383	229.44	463.89	(234.45)
I) 37 E. Fulton	1,343	222.80	786.31	(563.51)
J) 46 Kentucky	1,264	209.70	322.42	(112.72)
K) 111 Taft	1,215	201.57	223.72	(22.15)
L) 545 W. Chester	1,027	170.38	460.58	(290.20)
M) 411 W. Chester	1,025	170.05	276.36	(106.31)
N) 615 W. Beech	984	163.25	335.58	(172.33)

A sampling of 14 out of 8,100 local sewer accounts cannot be considered statistically significant. Yet, even this meager sample provides some interesting insights.

For example, addresses (A-D) and (G) are small households of 2-3 individuals in homes of relatively high value. A changeover to the County billing format would affect these properties adversely. The 2 person household at (F), the Eaton's, should fit in this category as well, but extreme watering of the property accounts for an abnormally large sewer bill.

The remaining addresses are households ranging in size from 4 to 10 individuals. These larger family units use more water thus generating both larger water and sewer bills. As an aside, the 7 person family at (K) appears to have a rather small sewer bill. Inquiry reveals that aggressive installation of water conservation devices (flushometers, showerheads, etc) has drastically reduced their bill from the previous norm.

From this limited analysis, it would appear that, on balance, the smaller households, especially those in higher valued residences, would be adversely financially impacted by consolidation. Conversely, larger households would fare quite well.

## Future Planning Considerations

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Over a year ago, the subject of a Wastewater Plant closure was broached vis a vis development of the Bayfront and future Recreation expansion. The concepts discussed at that time are still valid today.

In my Long Beach experience, two problem areas were (and still are) prevalent – the lack of long-term planning and a shortage of land for the appropriate and efficient siting of municipal facilities. The 5+ acres housing the wastewater treatment operation provides opportunities to address both these issues. Closure of the facility offers the following possibilities:

Relocate Municipal Garage. Why is this facility located on prime commercial property on the primary entry point to the City? Sixty (60) years ago, someone apparently thought it was a good idea. It is not. For many reasons – esthetics, traffic safety, efficiency – the garage can and should be relocated to the site in question. The property on which it currently stands could then be sold for taxable, commercial development.

Relocation of Water Tower(s). Erection of a new tower(s) on the Wastewater Treatment Plant site frees up developable space along the bayfront. Relocation (or elimination) of the neighboring Water Transmission shop, gun range, and Animal Shelter structures would provide additional bayfront land as well.

Development of Bayfront (LIRR Trestle to Bridge). The aforementioned two items impact directly on this one. The potential of this site has been discussed ad nauseum and will not be further belabored here. Suffice it to say, at some point, be it in the near or distant future, this acreage will attract development and generate additional tax revenues.

Marina Development. With the elimination of the sewer outfall, the land and waters north of the Wastewater Plant offer opportunities for the development of a sizeable marina and attendant support facilities.

Relocation of Municipal Departments. Beach Maintenance, Street Maintenance, Sanitation, and Lifeguards are presently housed in 100-150 W. Pine Street. Those agencies, and their equipment would be relocated to new facilities on the Wastewater Plant site. The freed-up space could be utilized as additional parking for the new and improved Recreation Center, Pool, and Playing Field complex. The Auxiliary Police Department and Police Department sign shop are now located in a residential area on Park Avenue. They, too, could be relocated to the site in question and the property currently occupied placed back on the tax rolls.

\* \* \* \*

The aforementioned items would not take place overnight, but are, instead, component elements of a strategic, long-term planning process. Consolidation of municipal departments and facilities “under one roof”, so to speak, makes sense for reasons of economy, efficiency, and supervision; providing additional parking for Recreation users is a “no-brainer”; development of

the Bayfront has been long-envisioned and much commented upon. Closure of the Wastewater Plant is a crucial step in helping to make the above a reality.

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## Personnel Issues

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Perhaps the most nettlesome issue relating to the consolidation concept is that which revolves around the status of the 24 City employees who would be impacted by such a move.

Given our small-town environment, we are not dealing with nameless, faceless personages but with friends, neighbors, and in some cases, relatives. One does not wish to heartlessly cast aside individuals who have provided years of good service to the City. Yet, should 24 individuals thwart a concept which might benefit the City and its 36,000 residents as a whole? Fortunately, there are alternatives.

The proposed turnover of municipal sewage operations to the County is scheduled to take place in January 2011. The intervening time period provides ample opportunity to adjust staffing patterns accordingly. For example, it is anticipated that 2-3 employees will be retiring prior to the turnover date, they would not be replaced; as openings occur in other City departments, priority in filling them would be given to those impacted by consolidation. The most comprehensive alternative is the offer by the County to hire those employees affected by consolidation. Obviously, there are many nuances to this overture. Would employees have the same salary and benefit levels enjoyed here? Are retirement benefits equal? Is there room for advancement, etc.? We are in the process of examining these and other related issues at the present time.

Our preliminary research reveals why some of our employees favor a move to County employ – salaries are higher and it takes a shorter period of time (11 vs. 20 years) to reach top levels. Can our people laterally transfer and automatically receive higher salaries? Would a higher salary level be based on total years of service or years of service with the County only? As noted earlier, these and similar questions have been forwarded to the County for their response (see attached). Until clarification is received, the status and ultimate disposition of our employees is still very much an open question.

**PROPOSED SEWER CONSOLIDATION AGREEMENTS  
BETWEEN  
NASSAU COUNTY AND VARIOUS MUNICIPALITIES/DISTRICTS  
SUMMARY - FOR DISCUSSION PURPOSES ONLY**

Consolidation of sewage treatment and disposal facilities will reduce overlapping services and duplicative responsibilities resulting in more efficient allocation of government resources and cost savings for County residents.

<p><b>PUMP STATION DESIGN AND CONSTRUCTION</b></p>	<ul style="list-style-type: none"> <li>• The County will design and construct a pump station (or upgrade an existing facility) in the Municipality/District, at the County's sole expense, which will ultimately pump sewage generated by the Municipality/District to an existing County sewage treatment plant.</li> <li>• The parcel of land that will contain the pump station and ancillary space (ie driveway, etc) shall be transferred by the Municipality/District to the County at no cost to the County.</li> </ul>
<p><b>OPERATION AND OWNERSHIP OF COLLECTION SYSTEM AND FACILITIES</b></p>	<ul style="list-style-type: none"> <li>• During the pump station design/construction phase, the Municipality/District will continue to maintain and operate the collection system and existing sewage treatment facilities.</li> <li>• At any time during the design/construction phase, the County reserves the right, but not obligation, to assume ownership, maintenance or control of any part of the Municipality's/District's collection system.</li> <li>• When the County pump station is complete, operable and connected to the County sewer system, the County will assume ownership, maintenance and control of the collection system and pump station property. Henceforth, the Municipal/District sewage treatment facility shall be closed and Municipal/District sewage shall be collected by the County and pumped to a County sewage treatment plant.</li> </ul>
<p><b>EXISTING SEWAGE TREATMENT PLANT PROPERTY</b></p>	<p>After the County's pump station is operable, the Municipality/District will retain ownership and control of the property that houses the Municipality's/District's existing sewage treatment plant and is not used by the County for sewage pumping or treatment, however, in the event that (i) the Municipality/District sells this property, the County will be</p>

	<p>entitled to 50% of the sale proceeds after any outstanding bonds are paid or (ii) the property is used for park or municipal purposes, the Municipality/District will pay to the County 10% of the fair market value of the property based on its highest and best use.</p> <p>* Any monies paid to the County in connection with this section shall be used solely for the purpose of sewer rate stabilization.</p>
<p>DEBTS FROM EXISTING SEWAGE TREATMENT PLANT</p>	<p>The County will assume all debt and pay debt service associated with the Municipality's/District's existing sewage treatment plant and collection system commencing upon operation of the County pump station.</p>
<p>BENEFITS TO MUNICIPAL RESIDENTS</p>	<p>There will be no adverse impact on the residents of the Municipality/District.</p> <ul style="list-style-type: none"> <li>• Pump Station Design/Construction Phase – Municipality/District's residents will continue to pay sewer rents/taxes to the Municipality/District.</li> <li>• County Pump Station Operation Phase – Municipal/District residents will cease paying sewer rents/taxes to the Municipality/District and will be taxed by the Nassau County Sewer and Storm Water Authority.</li> <li>• Rate Freeze - the sewage disposal and collection rates charged to any Municipal/District resident by the County shall not exceed the rate collected by the Municipality/District at the time the Pump Station becomes operational for a period of at least five (5) years.</li> <li>• Rate Cap - the County will guarantee a percentage based cap (to be negotiated) on future sewer disposal and collection rate increases after the five (5) year rate freeze has expired.</li> </ul>
<p>MUNICIPAL SEWER EMPLOYEES</p>	<p>Municipal/District sewer employees not retained by the Municipality/District will be given the option to work for the County in a comparable position with no reduction in pay.</p>